

Why Modernizing Software Testing is Critical for SAP S/4HANA Success



If your organization is planning to adopt S/4HANA, your business and IT leaders have likely agreed that digital transformation is a top corporate priority and SAP's vision for the "intelligent enterprise" aligns with your own goals. As you plan for the migration and commit the resources required for project success, it's important to consider the often-underestimated impact of software testing.

Modernized software testing can help you ensure a smooth S/4HANA migration as well as protect the user experience as the company adopts a culture of continuous change and innovation. On the other hand, applying decades-old testing approaches to your reinvented digital business will significantly undermine your speed and success.

Why Modernize SAP Testing?

The industry-average test automation rate is a dismal 18% overall—and we've found that it's actually closer to 8% for large enterprises working with complex systems including SAP. This means that each time the SAP infrastructure or business processes change, they rely on internal business users or dedicated manual testers to click through each critical business process and note whether the expected results are achieved at every step. As you can imagine, this is an incredibly slow and costly process:

- Completing a single test cycle commonly takes weeks or even months
- Testing is routinely cited as the #1 bottleneck to delivery speed
- Testing consumes 30-40% of the average IT budget

Considering that each phase of the SAP migration process typically involves multiple iterations with multiple rounds of testing, it soon becomes clear that manual testing simply isn't an option anymore. For the project to proceed on time and on budget, you need fast feedback on whether each round of changes achieves the desired results—without producing some obscure side effect that could bring your business to a standstill. This requires extremely high levels of test automation.

Additionally, the need for fast, continuous testing persists well after the migration is complete. With SAP S/4HANA enabling more agile responses to rapidly-evolving customer and market demands, change becomes a constant. Moreover, the SAP infrastructure itself will continue to shift as well. Quarterly (or more frequent) SAP updates will be rolled out automatically, and Gartner believes that a "significant" amount of SAP S/4HANA platform development still lies ahead over the next 3-5 years.

If you invest in establishing a resilient, sustainable test automation approach for your S/4HANA migration, you can continue leveraging it to quickly identify and remediate any subsequent changes that negatively impact your core business processes. We've seen that organizations who adopt test automation not only reduce testing cycles from weeks to minutes—they also catch 50% more defects prior to production.

Modernizing SAP Testing: What's Required?

Based on our experiences guiding Global 2000 enterprises through SAP testing transformations, Tricentis offers the following high-level recommendations for modernizing SAP testing...

Seek the shortest path to the most impactful test automation

Few organizations have testing resources to spare, especially in the midst of a massive SAP transformation project. Even if automated tests already exist, they will generally need to be re-created to support the redesigned/reimplemented

business processes. Why spend time creating and updating tests that don't really matter to your business—or, even worse, redundant tests that add no value at all? With risk-based prioritization, organizations routinely cover 80% of their business risk with 20% of the testing effort. Moreover, with risk-based test case design, organizations typically discover that over 2/3 of their existing test cases do not add any value and do not warrant migration.

Ensure that your test automation approach is architected for change

Test automation initiatives often fail because a single requirement change means that hundreds of tests need to be rewritten/re-recorded. To ensure that you can accommodate the frequent change that's endemic to digital transformation initiatives, aim for modular tests that maximize reuse. Also, focus on resilient test automation approaches that can distinguish between real problems and insignificant technical variations—especially for highly-dynamic technologies like those that deliver the “SAP Fiori experience.” This becomes increasingly important to support the *continuous* testing required to meet project deadlines while ensuring that core business processes are not compromised by frequent updates.

Plan for highly-interconnected modern SAP landscapes

Once your organization commits to SAP as your platform for digital transformation, you also commit to building upon the SAP APIs that connect third-party applications to S/4HANA applications. Additionally, you are likely to implement mobile functionality that provides on-demand access to core capabilities, integrate SAP apps such as Ariba, Hybris, Concur, SuccessFactors, and maybe even leverage bots to improve the customer experience. How will you ensure a seamless user experience across this disparate (and highly-dynamic) array of technologies?

Seeking a new set of technical experts and tools each time you add new technical components to your system quickly becomes unmanageable. A more sustainable solution is one that empowers business users to create “end-to-end” test automation across *all* technologies—mobile apps, APIs, SAP S/4HANA, the data layer, connected third-party applications, other SAP applications...

Anticipate—and address—ancillary process delays along with test automation

Once teams get started with test automation, delays associated with test data and test environments often surface as “the next bottleneck” and prevent the team from achieving the expected velocity gains.

Even before GDPR, nearly 55% of testers spent between 5-15 hours per week dealing with test data issues. Further delaying the testing process, it takes 3.5 days and 3.8 people, on average, to fulfill a request for a new test environment. At 1 out of every 5 organizations, it takes over a week. To eliminate the “hurry up and wait” factor, look for a testing platform that integrates test automation with essential enabling practices like test data management and simulated test environments (e.g., via service virtualization).

Ensure results are business-focused and actionable

Companies invest in SAP testing to help IT leaders understand what needs to be fixed before updates can go live. Results like “94% of tests passed” aren't sufficient. What if the 6% of tests that failed happened to cover some of your most financially-critical transactions? More information is needed to make an informed go/no-go decision. As updates become

more complex as well as more frequent, it becomes increasingly critical to eliminate the manual investigation and guesswork involved at every decision point.

Don't just select a tool; look for a partner in test transformation

You can't buy SAP test transformation. It requires a deeper change that impacts people, process, and technologies. When evaluating a vendor's ability to help you achieve this deep-seated transformation, look beyond technical "bake offs." Also consider factors such as:

- Whether the vendor's vision/roadmap aligns with your goals
- The vendor's ability to achieve that vision
- Analysts' assessment of the vendor's vision, direction, and market position
- What resources are available to help you succeed (system integrators, training, certification programs, etc.)

SAP Testing with Tricentis

Tricentis, #1 for "Enterprise End-to-End Testing" in Gartner's latest [Critical Capabilities report](#), modernizes SAP business process testing with the most advanced and comprehensive SAP test automation on the market. Leading enterprises rely on Tricentis to:

- Modernize testing to reduce the risk of change
- Reduce risks and delays in S/HANA migrations
- Accelerate quality processes for Agile speed
- Ensure flawless performance in the cloud

To learn more, visit the [Tricentis SAP Testing resource center](#).