



WHAT IS RECORD AND PLAYBACK TEST AUTOMATION?

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> ABOUT THIS EBOOK

Software development is a continuous race for innovation and speed. Delivering high-quality software consistently requires a robust and efficient testing strategy. That's where record and playback test automation comes in – a powerful tool to streamline testing processes and ensure exceptional software quality.

As CEO of Kornerstone, I'm a firm believer in the power of automation to enhance efficiency and empower teams. Record and playback test automation holds immense promise for the future of software development, and I'm excited to share this comprehensive exploration with you.

This white paper will equip you with the knowledge to understand why record and playback automation should be a key consideration in your testing strategy.

“ This white paper dives deep into the world of record and playback test automation, exploring its functionalities and the significant benefits it offers. We believe this technology has the potential to revolutionize the way we approach testing, freeing up valuable resources and allowing testers to focus on more strategic tasks. ”



**Laxmikant N
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Founder



> ABOUT KORNERSTONE

Kornerstone is a boutique consultancy at the forefront of Application Lifecycle Management (ALM) and Robotic Process Automation (RPA) solutions tailored for SAP and Salesforce ecosystems.

We combine deep expertise in enterprise technologies with a passion for innovation to empower organizations to optimize their digital operations and achieve transformative outcomes.

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WHAT IS RECORD AND PLAYBACK TEST AUTOMATION?

Record and playback is a test automation method that allows testers to record their interactions with the software system and then replay those interactions as test cases. The testing tool recognizes and stores the actions performed by the tester during the recording session, like clicks and key presses. During playback, the automation mimics those actions to run the test on the application.

In modern record and playback tools, the recorded actions are saved as a series of test steps that can be modified in an editor to add or remove steps, insert data, add assertions, and so on, resulting in a test case. Some tools also generate logs of the application's behavior when a specific action is performed.

You may hear record and playback testing referred to as activity-based testing, flow-based testing, or testing the user path or journey across an application.

➤ HOW HAS RECORD AND PLAYBACK TEST AUTOMATION EVOLVED?

Early versions of record and playback testing tools were popular because they allowed testers to quickly create automated tests based on existing manual test cases with little to no training. But they had a few limitations that made them less suitable for teams testing frequently changing codebases. Some of those limitations included:



Limited functionality

First-generation record and playback testing tools were primarily useful for tests that verified basic user paths through the UI, recording simple actions like clicks and text entry. The tools couldn't record more advanced user actions, and they only helped validate that a user could take these actions, not that they produced the desired results.



Limited scope

These tools could only be used on already working versions of the application under test, limiting them to regression testing vs. testing new code.



Limited test case lifespan

Even minor changes in the application would render previous recordings invalid, and it was difficult to predict how and where changes in each development cycle would affect previously recorded test cases. This meant that it was often easier to re-record the broken test cases than it was to update them, minimizing the time-saving benefits of test automation.

➤ HOW HAS RECORD AND PLAYBACK TEST AUTOMATION EVOLVED?

The reality is that record and playback technology has evolved substantially, and for developers and testers looking for scalable ways to extend test automation without having to program each test script, record and playback tools deserve a second look.



Troubleshooting

When a test failed, it was difficult to determine exactly what caused the test to fail, and whether it was because of an issue with the test case or a bug in the application.



Integration limitations

Earlier record and playback testing tools didn't provide easy integration into other tools used in the development process. Tests were kicked off independently, and results were in a separate tool.

HOW HAS RECORD AND PLAYBACK TEST AUTOMATION EVOLVED?

Smarter, modern record and playback testing tools like [Tricentis Testim](#) provide a simple method for Agile teams wanting to prioritize speed of testing over long-term maintenance and come with much more robust feature-sets. These modern tools include capabilities like:

- **Richer, More Accurate Recordings**

Modern recording tools accurately convert UI actions like menu selection, drag-and-drop, and hovers into test steps, so fewer actions are missed. They go beyond recording simple actions like clicks and text entries, allowing users to record more complex actions like scrolling, drag-and-drop, iframe interactions, and multi-tab use cases.

- **Modular Editing**

Rather than one unchangeable recording that can't be adjusted, developers can split a recording into discrete steps that can be deleted, rearranged, or grouped. For example, in Testim, each action is shown as a test step on the Visual Editor screen. From there, the test can be run as-is or modified, and conditions and validations can be added that specify when the test step should be run and that each one produces the expected result.

- **Integration with Dev Tools**

Modern record and playback tools come with integration capabilities that make it easy to keep testing aligned with development. With Testim, it's easy to integrate with tools across the SDLC, including Jira, Git, CI/CD tools, slack, and test management tools like Tricentis Test Management for Jira.

HOW HAS RECORD AND PLAYBACK TEST AUTOMATION EVOLVED?

- **Advanced Reporting**

Teams need to go beyond pass/fail to quickly identify the cause of a failed test case. Modern tools come with advanced reporting capabilities that help teams prioritize work, assess release readiness, and continuously improve testing operations. Testim includes robust reporting capabilities for quick go/no-go decision-making, as well as the ability to analyze test executions and runs over time and tag test failures for trends and analysis.

- **Simplified Maintenance**

Constantly maintaining and fixing broken tests due to application changes is a thing of the past with modern recording and playback tools. Modern tools have added AI to the recorders to capture the elements with stable, multi-attribute locators that can find the elements even when several attributes change. Testim has taken this one step further with auto-improving locators that self-improve when the confidence level decreases and fix tests before they break.



➤ WHERE CAN MODERN RECORD AND PLAYBACK TOOLS BE MOST BENEFICIAL TO TEAMS?



One of the main benefits of record and playback is that it provides flexible, low-code test authoring, which aids adoption for non-technical personas, citizen developers, or developers wanting to quickly validate their code at the unit level.

But you may notice some hesitancy from your team that has nothing to do with preconceived notions of its reputation and more to do with automation and coding. Developers already writing their own test scripts might not see the advantages, and manual testers may find transitioning to automated testing with recorder-based tools to be intimidating.

Record and playback testing is one of the easiest ways for manual testers to train and get familiar with test automation. Record and playback is a solid foundation for understanding coding because it provides actual examples of test scripts generated by the tool. For testing teams, adding a record and playback tool to their stack can help them scale automation more quickly, beyond the few coding experts on their team.

For developers who want to save their coding brain power for building their app, a recording is the fastest way to author a test. They can gain further efficiency with a modern tool like Testim, which makes it easy to share test steps or groups of test steps with other test cases. And less time creating tests means developers are spending spend more time and effort on areas of value to your business.

➤ HOW CAN AN ORGANIZATION USE LOW-CODE AUTHORIZING TO SCALE TEST AUTOMATION RAPIDLY?

Let's look at the example of Pic-Time, an online photo gallery platform for professional photographers and their clients. Pic-Time leverages Testim's record and playback testing feature to minimize the time spent on test creation and maintenance. The team allocates only about 10-20% of its QA time to maintenance, thanks to Testim's auto-improving smart locators, which identify application changes and keep the tests stable.

The Pic-Time team uses Testim's recording capabilities to quickly record user flows to create automated test cases. According to QA automation lead Shai Schcolnik, ***"[The team feels that] the recording function saves them a huge amount of time on examining their user flows and finding ways to optimize their test run design. They just click play, it runs, provides reports, and everything is effortless."***

Schcolnik also appreciates the ease with which new team members can learn and begin using Testim. ***"We recently recruited a new member to the automated testing team. He had experience with Cypress and full code test automation. The learning curve was very quick, and he was up and running with Testim very quickly."*** As a result, he was able to use his coding experience ***"only where actually needed to develop custom logic and not wasting time coding all the simple clicks, waits and validations,"*** Schcolnik recounts.

The Pic-Time team appreciates the simplicity of authoring and automated tests in Testim and feels they can solve most test design issues with just a few clicks. ***"Because of Testim, I spend much more time thinking about the testing logic, flows, and approach than solving test development challenges,"*** Schcolnik says.



MODERN ORGANIZATIONS NEED MODERN TESTING TOOLS



Teams must be able to write tests quickly, minimize maintenance, and ship quality faster. But keeping up with the quick pace of frequent releases can't be done with slow testing methods.

If you're dealing with delayed releases, then it may be time to re-examine your testing tools – including looking at ones like record and playback that you may have overlooked in the past. By shifting to modern tools and letting go of misconceptions, you'll be on your way to faster and more flexible testing.

Kornerstone can be a valuable partner in your journey toward successful test automation implementation. Their expertise, strategic guidance, and support can help you achieve the benefits of automation while mitigating risks and ensuring a smooth transition from manual to automated testing.



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