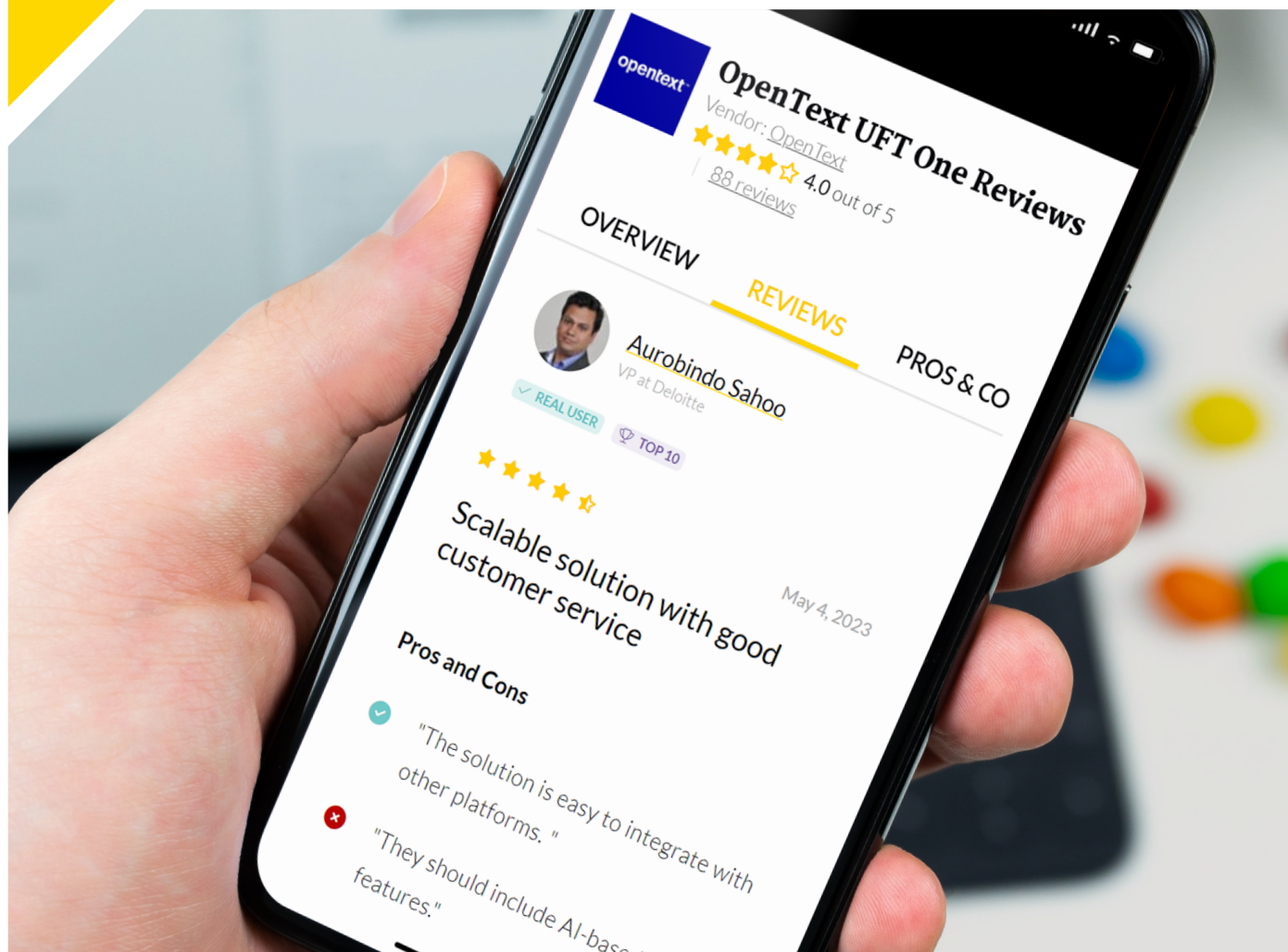


PeerPaper™ Report 2024

Based on real user reviews of OpenText UFT One

How Smarter Testing Improves Efficiency and Speed to Deliver High-Quality Applications



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Introduction

As market pressures make it untenable for software development organizations to tradeoff between quality and speed, it is now imperative that they accelerate their creation of code while simultaneously improving the quality of their testing processes. To achieve these goals, testers are turning to solutions powered by Artificial Intelligence (AI). With the advent of AI in the world of testing, teams are now in a position to improve their efficiency, work faster and save time overall.

This paper looks at the ways that smarter testing improves testing efficiency, and more, to help deliver high-quality applications. Based on real user reviews of OpenText UFT One from PeerSpot, the paper examines AI-powered testing as well as other fundamental smarter testing capabilities like advanced object recognition, synthetic data generation, optical character recognition (OCR) and broken link detection.

Except where noted, the companies mentioned in this paper have over 10,000 employees.

Smarter Testing Use Cases

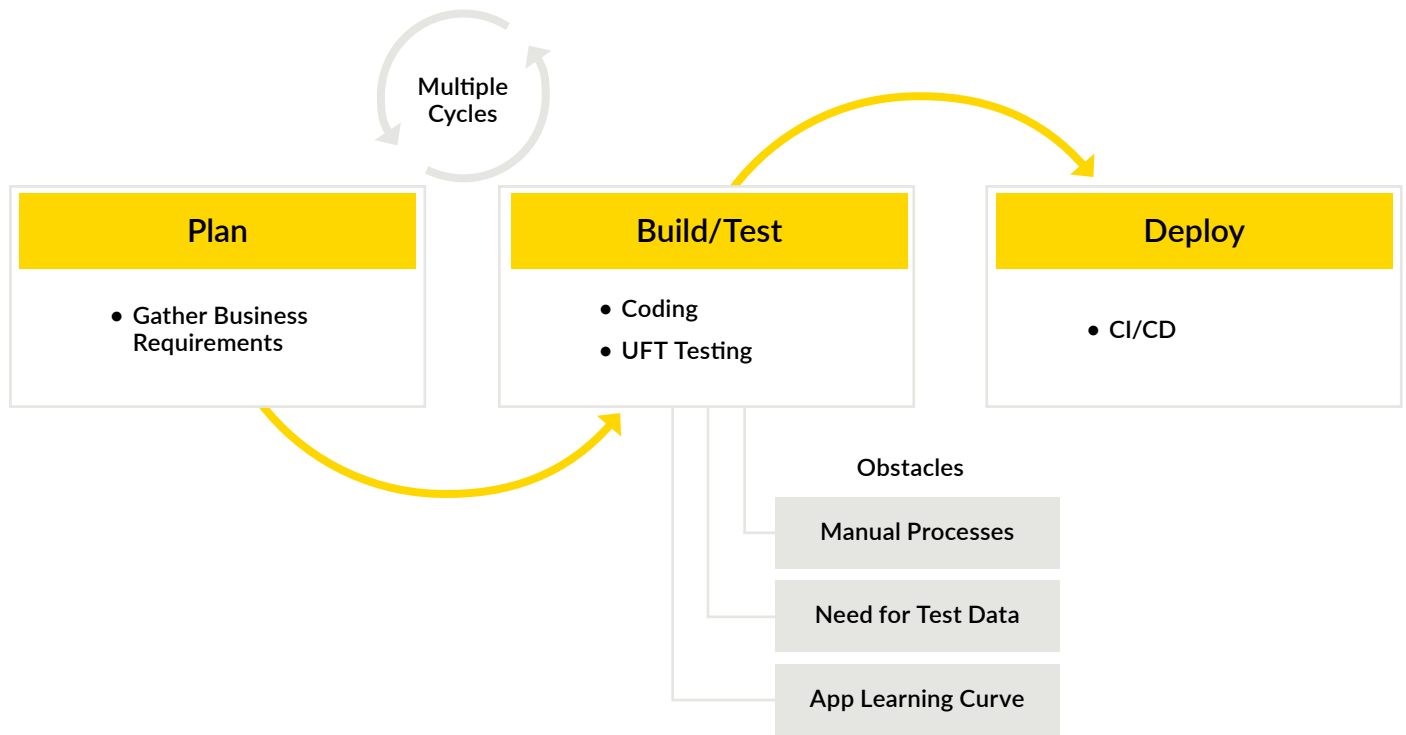


Figure 1 – Traditional development and testing cycle, with delays caused by manual testing processes, the need for test data and a learning curve for the app being tested.



20%
improvement
of efficiency

PeerSpot members are using OpenText UFT One for a variety of smarter testing use cases. For example, the Owner of a small consultancy primarily uses the solution for end-to-end and functional testing as well as for web applications and tunnel-based applications in the testing chain. A Lead Analyst at a computer software company works with a desktop-based application, using UFT One to automate testing of the application. At Cognizant, a tech services company, their Senior Associate uses UFT One for automation. He said, “It helps to automate test scenarios for graphical user use cases.” Figure 1 shows what the development and testing cycle looks like without intelligent testing.

How AI Improves Testing

AI is emerging as a boon to testers, given its ability to remove some of the human thinking that has traditionally gone into the process. It helps with automation, as a Practice Head - Automation at a computer software company explained. He said, "UFT One supports AI features to automate web and mobile applications. For example, suppose, if earlier there was a button in the left corner, which now has been moved to the right corner. In such a situation, we would need to update the script. However, with AI, there is no need to update the script. Within the screen, if that particular button is placed anywhere on the screen, then we can easily handle it and the script will not fail."

"The AI capabilities provide multi-device test abilities without needing platform-development expertise, which is the best part about it," remarked a Test Automaton Architect at Independent Health. He added, "This sounds lazy, but because of what they have done, I don't have to know a thing about it." In his view, what's useful about AI in a testing tool is that he can work with either a hybrid app or a native app. "I don't care," he said. "As long as it is built, then I can push it to one of the devices and test it."

Previously, without AI, he had used the Appium Object Spy app, which involved going through what he referred to as "a laundry list" of things developers were going to have to add for him, even to complete tasks like identifying username fields from password fields. He shared, "That is a terrible way of doing things."

"The AI capabilities provide multi-device test abilities without needing platform-development expertise, which is the best part about it."

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Smart Testing Benefits

The move to smarter testing is delivering a number of benefits to testing organizations. The most significant benefits relate to increases in efficiency and reductions in testing time. OpenText UFT One has also contributed to an improved overall testing work environment, as Independent Health's Test Automaton Architect attested. He said, "It took testing mobile applications from being a headache to being fun. It's cool because you are actually working like a real user."

He offered an example, saying, "You are working with someone who has never really worked with a particular mobile app. You can click on the menu, then click on claims, and now you can see a list of claims. If you want to see just your medical claims or pharmacy claims, click on the filter. If you click on medical, then it should show you that. It is like talking to a human being. There is less code."

For a Lead Software Test Engineer at Excellus Solutions, a small tech services company, UFT One has improved their ability to perform regression tests. She commented, "This frees up the test team to work on only the new portions of the software without having to worry that we are introducing new errors in other areas without knowing it."

"It took testing mobile applications from being a headache to being fun. It's cool because you are actually working like a real user."

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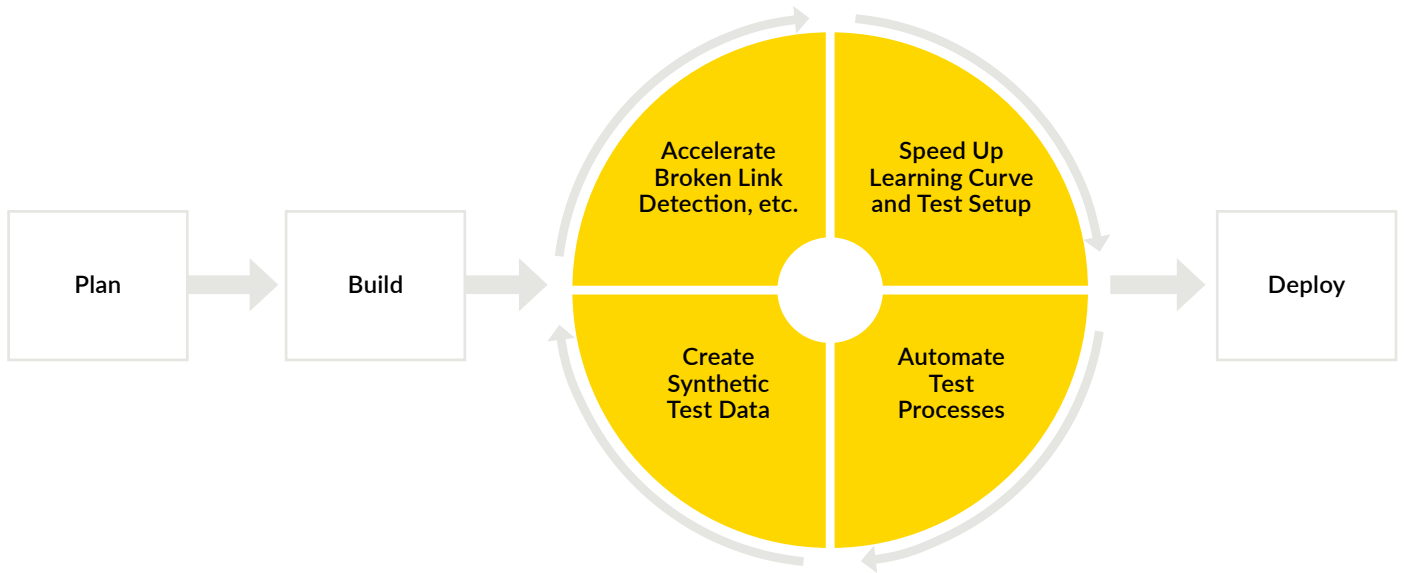


Figure 2 – Some of the main ways that smarter testing speeds up the testing cycle and improves its outputs at the same time.



60-70%
manual effort saved

Scale Up Efficiency

Efficiency is a high priority for testers, who are often under time pressure and short on resources. Smarter testing with UFT One helps in this regard, as a Test Automation Engineering Senior Analyst at a tech services company found. He said, “My advice to anybody who is considering this product is that it integrates well into your environment, is easy to use, easy to maintain, and makes your development efforts more efficient. The entire development chain, including smoke tests, will be improved.”

The consultancy Owner similarly discovered that the solution improved his efficiency for making test cases. A Senior Load Performance Consultant at an insurance company was able to quantify his gains, revealing that UFT One has improved his team’s overall efficiency by 20%. He then

“..it integrates well into your environment, is easy to use, easy to maintain, and makes your development efforts more efficient. The entire development chain, including smoke tests, will be improved.”

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forecast, “Once they have the framework, I think they will be able to operate this framework 24/7 in unattended mode. And that’s when you see 100%, 110% improvement in efficiency.”

A Test Analyst at a tech services company also shared metrics for efficiency improvements. In his case, UFT One helped reduce manual testing efforts and pass the savings along to clients. He shared, “Previously, we were doing manual testing for each sprint, and when we got to an advanced sprint, like Sprint 4 or 5, we would have to stop and test that entire functionality again. UFT has helped us a lot in reducing the manual effort and in passing the savings along to our client. Regression efforts have been reduced by at least 20 percent, if not more.”

He then added, “When compared with UFT and manual execution, we have definitely saved a lot of effort, somewhere in the range of 60 to 70 percent when compared with our efforts to manually test. A script which takes around half an hour to execute in automation takes around 3.5 hours for manual execution, along with documentation, because we execute things in a way that it creates the documentation as well.”

“UFT One saved development time as well as an immense amount of learning time.”

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60%

time of test creation saved



Testing quality improved

Reduce Time-to-Market

A smarter testing process should save time on testing, which cuts time-to-market. Independent Health’s Test Automaton Architect found this to be the case. After implementing UFT One, his testers have been able to free up their time. Previously, they might have been performing mundane, repetitive tasks. With smarter testing, they can then shift those tasks off to automation.

He went on to say, “UFT One saved development time as well as an immense amount of learning time. For example, if I handed somebody a web browser testing tomorrow with traditional automation, and they had never seen the internals of a web page, then they would stumble left and right because understanding what is under the covers of what you are testing is normally incredibly important. With this solution, it’s actually not. You have to stop thinking like a back-end developer and start thinking like an end-user. This is a wonderful position to put yourself in.”

In this user’s experience, the solution’s AI capabilities cut down test creation time for mobile by at least 60 percent. He added, “I am getting to the point where I believe unless the test step is several sentences long, then I can write automation for a test step in 10 minutes or less per step. It is crazy awesome.”

The software company Lead Analyst echoed this sentiment, noting that UFT One has helped them reduce testing timelines. He said, “Earlier, during our manual testing days, it would take 15 days to certify a release, but with UFT One and automation, we are able to achieve that within five days. That’s how important it is. It also improves the quality of our testing.”

Boost Speed and Coverage

The testing process itself should also move faster with smarter testing. “The solution has allowed us to reduce test execution time,” said a Test Automation Consultant at Bundesamt fuer Finanzen, a tech services company with over 1,000 employees. He then commented, “UFT allows us to install our applications much more easily, without our customers having to do anything. Between the normal run mode with debugging, and the fast mode in Jenkins, it can reduce it by about 30 percent. That’s a lot.”

Independent Health’s Test Automaton Architect concurred, reflecting that “the multi-device test automation capabilities have allowed us to get to the coverage that we desired, faster. We can build tests faster, then we can repeat the testing that we are doing faster.”

“The solution has allowed us to reduce test execution time.”

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Reduced testing timelines

Added Benefits of Testing Smarter

Smarter testing with OpenText UFT One also benefited users through its optical character recognition (OCR) features, object recognition, broken link detection and synthetic data generation. Regarding OCR and object recognition, Independent Health's Test Automaton Architect exclaimed, "It is really awesome. You don't have to know the names of objects anymore. The objects can change a million times, and all I have to say is, 'What is the dollar amount next to the label: Available balance,'" and using AI, OCR, and all the different computer vision things that are built into the engine, it just works. It just knows about objects."

Image-Based Processing

The InsightObject feature in UFT One also demonstrated value to a QA Automation Engineer at a consultancy with over 1000 employees. He noted that it can identify any object by taking an image of the object. He was further impressed that InsightObject could read the text off the image of an object.

Object recognition translated into increased reusability for the software company Lead Analyst. It also made his testers' lives easier, because it can identify elements that could be missed by the human eye. For Cognizant's Senior Associate, UFT One's use of artificial intelligence to identify objects visually has contributed to the lowering of maintenance costs.

"It is really awesome. You don't have to know the names of objects anymore."

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Machine-Driven Regression

Detecting broken links is a staple of testing that AI can potentially improve. The consultancy's QA Automation Engineer discussed this capability of UFT One, saying, "We are also able to determine if any of the Web page links are broken by using an instance of MSXML2.XmlHttp. We have a script that does this by retrieving all the links on a page and then reporting the Status for each link. For example, if the Status returned is 404 we know that the link is broken."

"UFT One's use of artificial intelligence to identify objects visually has contributed to the lowering of maintenance costs."

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Synthetic Data Creation

Generating data for use in testing has long been a chore that slowed down the process and tied up people's time. Smarter testing solutions that can create high quality synthetic data contribute to better outcomes and faster testing processes. As the Lead Software Test Engineer at Excellus Solutions put it, "The function library has made automation a much easier process since we do not use record and playback. Our scripts create data and then manipulate the data that has been created."

"The function library has made automation a much easier process."

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The Practice Head - Automation similarly noted, "UFT One has its own feature called Test Combinations Generator to prepare test data. If I have data in an Excel file, then it is very easy to create an object in either Notepad, file system object, or database object. We can easily retrace the data."

Conclusion

Today's software teams must deliver high quality code on a rapid cycle. This puts pressure on the testing process. As PeerSpot members have found, applying AI and smarter testing tools can help realize the desired outcomes in this demanding environment. Using OpenText UFT One, testers have been able to work faster, be more efficient and save time. Through test automation, in particular, smarter testing enables testing teams to save up to 70 percent of the effort that was required for manual testing process. The testing process also benefits from such capabilities as OCR, advanced object recognition, synthetic data generation and broken link detection. Working smarter, with AI-powered testing tools, testers become capable of delivering software that meets business needs on today's accelerated timetables.

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