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Worksoft

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Business Value Highlights

548%
five-year ROI

7 months
to payback

83%
less staff time to test equivalent
business processes

61% faster
less staff time to create and
maintain testing scripts

23% faster
faster completion of major
migrations/projects

\$3.55 million
additional revenue per year



The Value of Automating Business Process Testing with Worksoft

EXECUTIVE SUMMARY

Software drives business innovation and performance optimization and helps enable execution and competitive position. Proactive, consistent quality management for business-critical applications is key for most organizations as a backbone for execution and adaptability. Given the visceral impact of downtime and performance degradations in a volatile worldwide economy and the agility enabled by areas such as ERP and other business software solutions, the demand for effective testing has never been greater. The cost savings of finding software problems early in the life cycle and creating effective business process quality and infrastructure management for quality can be geometric in scale.

As a follow-up to research previously conducted for Worksoft, IDC recently interviewed organizations that use the Worksoft automated business process testing platform for SAP and other business applications. Study participants confirmed findings from the previous IDC study, most importantly, that they generate significant value with Worksoft by reducing the friction associated with testing and lowering the cost of testing in terms of staff time and third-party support. They also cited critical improvements in their ability to execute large-scale projects and migrations and in the quality of applications. Based on interviews with Worksoft customers, IDC projects that these customers will realize benefits worth around an annual average of \$142,877 per application tested (an estimated average of \$1.80 million per organization), which would yield a projected five-year ROI of 548%, by:

- » Reducing the staff time and third-party costs required to carry out ongoing regression and other testing activities
- » Speeding up the completion of significant migrations, business projects, and SAP upgrades
- » Increasing the quality of key business applications
- » Enabling development and regulatory compliance teams by providing visibility into business processes to help automate audits

SITUATION OVERVIEW

As business application vendors modernize their architectures and as organizations seek to take advantage of the cloud, microservices, and parallel processing (e.g., S/4HANA), automation can facilitate speedy transitions to new releases, resilience, and agility. In this way, quality automation (along with improved organizational and process strategies) can help increase efficiency and can augment resources and prioritization of changes. IDC saw growth in the overall automated software quality (ASQ) market in 2017, up 4.1% to \$2.7 billion (compared with merely 1.8% growth in 2016 to \$2.57 billion). For the ASQ market, IDC expects a CAGR of 4.5% for the 2017–2022 period, driven by multimodal software DevOps deployment demands across a range of environments — from new and emerging platforms to back-end systems of record (SOR) on which enterprises are running their businesses, including ERP and business apps.

IDC sees the following key trends driving growth for business application quality:

- » In a volatile economy, as companies invest, agile, “modern development,” velocity, global competition, and innovation are driving commitment to testing automation for core business applications.
- » Small and medium-sized businesses (SMBs), enterprises, and managed service providers are leveraging ERP and business application test automation for cost savings and efficiencies of scale.
- » Large service and solution providers see ERP and automated business application testing as an opportunity to evolve and bundle new, quality services together to target emerging markets for additional value-added and service offerings. This complements the business application quality needs for mobile, security, and other areas (regulatory compliance, etc.).
- » With the advent of agile approaches to both development and product evolution (including apps for mobile environments), software release cycles are faster than ever. Business-critical branding and demand for mobile ERP and other applications necessitate speedy turnaround. Release times that have been compressed from days to hours drive the need for automation. These combined factors and others that push both complexity and the need for speed (without loss of quality) are driving users to adopt automation solutions for business application testing.

WORKSOFT BUSINESS PROCESS TESTING AUTOMATION SOLUTIONS

Company Overview

Worksoft, founded in 1998 and headquartered in Addison, Texas, had about 130 employees, 300 customers, and 30,000 users as of 1H18. Worksoft's product line enables a differentiated portfolio for business process quality validation and ERP testing and a fast ROI in that context. With an intuitive product set that requires no programming and evolving test framework support at comparatively reasonable costs, Worksoft is well positioned in its targeted arena. Worksoft has a broad, loyal customer base and strong partner relationships (e.g., SAP, IBM, Accenture, Cognizant, Experitest, CA Technologies, and Microsoft). We see the company evolving the product line in key ways and being very responsive to customer input in its product road map decisions. We also see opportunities for Worksoft to augment its flexible portfolio with SaaS/cloud and agile capabilities, improving metrics and coordinating with a broader DevOps life-cycle context.

Company Strategy

Worksoft provides code-free technology solutions that can accelerate test and business process automation focused on large, complex packaged applications. Worksoft also offers support for other enterprise technologies and platforms — both SAP and non-SAP systems. This includes Oracle, Salesforce.com, Workday, SuccessFactors, HTML5, Java, and .NET. Revenue is increasingly coming from the need to validate these non-SAP applications.

Worksoft provides software for automated business process discovery and testing. Worksoft Certify validates that end-to-end business processes and their variations work across applications, even when changes are made to the underlying enterprise systems. Worksoft Analyze helps companies understand what their business processes look like in a visual format — this helps capture a more accurate, real-time view of what is happening in an organization and in turn can be used for process optimization and compliance documentation and to help accelerate automated business process testing. Automating business process discovery, documentation, and testing can allow faster innovation, greater flexibility, shorter IT project timelines, and higher quality assurance (QA) in a complex landscape.

Worksoft products are relatively easy to use by nontechnical users and can yield quantifiable benefits in a matter of weeks. Worksoft's automation is responsive to changes in the underlying enterprise application and business processes to help extend value beyond initial projects. These products also provide context for both SAP and non-SAP applications that integrate and coordinate with SAP for more complex quality support across related application portfolios.

Worksoft products are Worksoft Certify, Worksoft Analyze, Worksoft Business Process Procedure (BPP), Worksoft Impact for SAP, and Worksoft Execution Manager. Worksoft augments its ASQ product capabilities and tight integration with SAP's Solution Manager with integration to other testing solutions such as test management products from both Micro Focus (formerly HPE) and IBM. (IBM is leveraging a close partnership with Worksoft as a primary SAP testing solution.)

While Worksoft's depth in SAP- and ERP-specific environments provides differentiation, the company is obviously more bounded with regard to broader ASQ capabilities. Partnerships with other vendors are a core focus for Worksoft to broaden its reach. Beyond integration with the largest enterprise ASQ providers' test management solutions, Worksoft has partnerships with Experitest and Perfecto Mobile (soon to be acquired by Perforce) to target mobile platforms. (Worksoft is in the process of further evolving its ASQ SaaS/cloud testing solution.) Worksoft also has excellent third-party service provider relationships. Worksoft's differentiated, centralized architecture enables the products to be leveraged across departments and business units easily for common functions.

Worksoft's primary focus as an organization is test and process automation for packaged business applications. Support for SAP is a core competency, where Worksoft's portfolio of products offers scalability and depth to help compress software delivery cycles. (As stated previously, Worksoft also supports other business applications such as Oracle, Workday, and Salesforce.)

Worksoft delivered Worksoft Analyze to complement its Certify portfolio and to help business users capture, visualize, analyze, and document business process flows and create automated business process tests. Examples of the ways in which Worksoft Analyze works include the ability to identify transaction paths and flow by execution count for SAP; identify variants of business processes and the reasons for them; see business process flow and variants by execution frequency, including workload statistics data; identify slow-running business processes that can consume both business analyst (BA) and system time; and help prioritize investments in quality assurance and automated business process testing based on the use frequency or risk of various transactions or business processes. Worksoft supports SAP Fiori (SAP's user experience environment) and HTML5 for mobile and web browsers, with plans for continued rapid support of other emerging areas, as Worksoft has done already for SAP HANA and S/4HANA.

THE BUSINESS VALUE OF WORKSOFT

Study Demographics

IDC interviewed five organizations for this study by asking these study respondents a variety of quantitative and qualitative questions about the impact of deploying the Worksoft automated business process testing platform for their IT and application testing and business operations. The organizations surveyed were mostly large companies in the broader manufacturing sector with commensurate IT environments, as indicated by the number and scope of business applications and their annual revenue (see Table 1).

Substantial use of SAP applications was evident, with an average of 13,958 employees using them. In terms of geographic distribution, companies were split between the United States and EMEA (Germany).

TABLE 1

Demographics and Process Automation Manager Use by Interviewed Organizations

| | Average | Median |
|---|---|----------------|
| Number of employees | 87,400 | 14,000 |
| Number of IT staff | 1,935 | 131 |
| Number of business applications | 1,266 | 1,270 |
| Number of users of SAP applications/workloads | 13,958 | 2,500 |
| Revenue per year | \$42.5 billion | \$15.0 billion |
| Countries | United States (3), Germany (2) | |
| Industries | Discrete manufacturing (3), process manufacturing (2) | |

n = 5

Source: IDC, 2018

Worksoft Use by Interviewed Organizations

Organizations today are often hampered by the inability to robustly test their business applications in support of business goals with quick deployment. Too often, this leaves them with limited options: either not testing applications they should be testing because of time and resource constraints or incurring substantial staff time and third-party costs for doing the testing required. The organizations that IDC interviewed were keenly aware of the need to improve testing performance with aggressive turnaround time frames and application churn, and they described some key features that contributed to choosing the Worksoft solution:

- » The benefit of a user-friendly interface
- » Strong capabilities for automating testing processes
- » The ability to test non-SAP applications and workloads

Worksoft customers commented on specific features and attributes of the Worksoft platform, including:

- » **Minimizing friction for SAP testing:** *“The primary driver for choosing Worksoft was SAP regression testing. This testing had been highly manual and expensive, and it was not effective. We started to have enough SAP upgrades that we needed to look at a better process.”*
- » **Supporting the business in a timely way:** *“We have high demand for integration and regression testing because we have annual SAP upgrade projects. We did a HANA transformation project five years ago, and now we have continuous M&A activities. All of these challenges led us to evaluate Worksoft.”*
- » **Extending testing coverage beyond SAP:** *“We looked at another tool, but it wasn’t ready to use. Moreover, the tool was cumbersome and unlike Worksoft could only be used for SAP testing.”*

To get a full picture of Worksoft usage across the five companies, IDC gathered data about how study participants were using the platform. As shown in Table 2, these organizations were involved in testing a substantial number of business processes, on the order of 8,500 annually. The number of users of these applications (3,720) was also substantial. Most of the applications were SAP based. However, non-SAP applications, custom applications, and others related to ITSM and CRM were also in play.

TABLE 2

| Worksoft Environments at Interviewed Organizations | | |
|--|---------|--------|
| | Average | Median |
| Number of business applications | 13 | 8 |
| Tests per release per application | 316 | 325 |
| Number of business processes tested per year | 8,500 | 8,000 |
| Number of users of tested business applications | 3,720 | 1,800 |
| Percentage of revenue related to applications/workloads tested | 47% | 60% |

n = 5

Source: IDC, 2018

Business Value Results

Worksoft has enabled the study participants to substantially reduce the friction that testing exerts face not only in day-to-day development and business activities but also in terms of executing more significant SAP upgrades and deployments and other strategic business initiatives. The result is that these organizations can devote much less staff time to testing activities, can reduce third-party costs, and have more robust testing infrastructures in place. This allows them to complete testing faster and increases the quality of these applications and workloads. As a result, these surveyed Worksoft customers are realizing strong value, which IDC quantifies at \$142,877 per business application tested per year (\$1.80 million per organization) (see Figure 1) in the following areas:

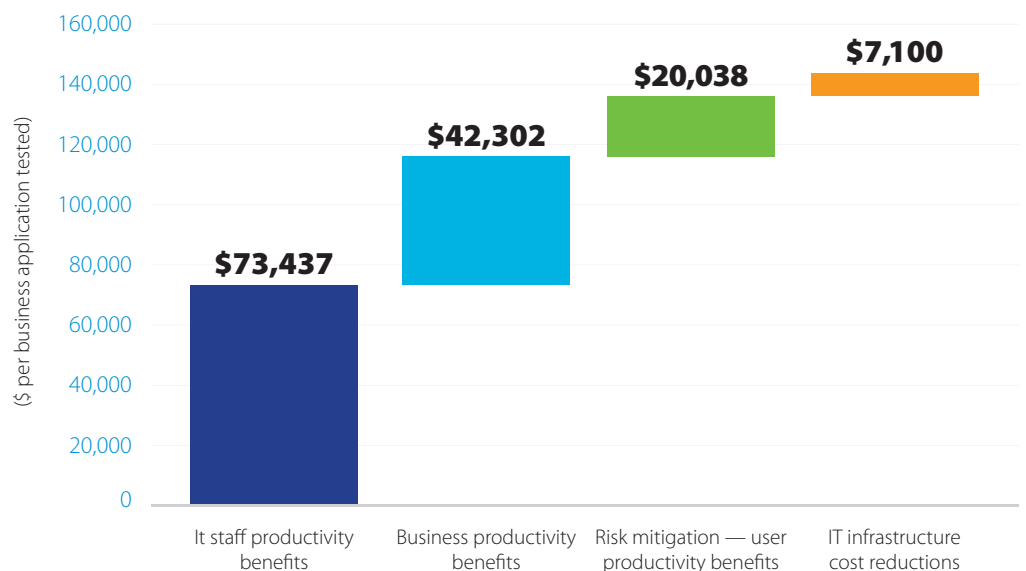
- » **IT staff productivity benefits:** Automated testing means less staff time is required to carry out testing both on an ongoing basis and for more significant one-time projects and migrations. In addition, application development teams benefit from more robust and efficient testing. IDC puts the value of staff time savings and efficiencies in these areas at an annual average of \$73,437 per business application (\$925,300 per organization).

- » **Business productivity benefits:** Faster completion of testing means that major business initiatives and migrations support business operations earlier, helping study participants win additional business sooner. IDC projects that the value of net revenue gains for the five study participants will be \$42,302 per business application per year (\$533,000 per organization).
- » **Risk mitigation — user productivity benefits:** Study participants not only benefit from higher-quality applications with fewer glitches and errors but also maintain regulatory compliance more efficiently because of more thorough testing and better visibility into linkages between applications. Further, they benefit from increased confidence in the continuity of business functions even as changes are executed. IDC calculates that they will realize benefits in higher productivity worth an average of \$20,038 per application (\$252,500 per organization).
- » **IT infrastructure cost reductions:** Several study participants replaced legacy vendor solutions and have reduced spending on third parties to support testing activities. IDC puts the value of cost savings at an annual average of \$7,100 per application (\$89,500 per organization).

FIGURE 1

Average Annual Benefits per Business Application Tested

Average annual business application tested: \$142,877



n = 5
Source: IDC, 2018

Ensuring Robust and Efficient Ongoing Testing Activities

Worksoft customers described how the solution helped them create robust and efficient testing operations on an ongoing basis. Prior to Worksoft, they were not able to conduct sufficient testing or do the testing efficiently. Instead, they had to rely on an ad hoc approach to testing applications and/or rely on manual testing. These approaches prevented them from doing enough testing or moving quickly and efficiently through time-consuming test procedures to meet the schedule and rigors of business demand and competitive

pressures. Study participants specifically described the impact of Worksoft on ongoing testing activities.

- » **More efficient testing, increased control, and greater visibility:** *“Automation with Worksoft saves considerable time and allows us to greatly cut our use of consultants. In addition, we have introduced more testing and have better control and visibility into our processes and software.”*
- » **More testing with less time invested:** *“We have developed over 50 scripts for our business cycle with Worksoft. In the past, we were only able to manually test a fraction of these with a much more significant time commitment.”*
- » **Ability to extend regression testing beyond major projects:** *“Before Worksoft, regression testing would only take place for major changes to the system. Now we can run regression testing along with our normal release cycle, or more often if desired.”*

Table 3 provides key testing metrics that illustrate how these organizations can now conduct significantly more testing and complete testing faster using Worksoft (including Execution Manager). Noteworthy is the fact that there was a 208% increase in the number of applications and processes that these five companies are testing. In addition, automation streamlines testing, enabling a reduction in the time to complete each testing cycle from an average of 7 weeks to 2 weeks, representing a 76% level of improvement.

TABLE 3

| Key Testing Metrics | | | | |
|--|-------------------------|---------------|------------|------------|
| | Before/Without Worksoft | With Worksoft | Difference | Change (%) |
| Business processes tested (%) | 16 | 49 | 33 | 208 |
| Time to complete per testing cycle (weeks) | 7 | 1.7 | 5.3 | 76 |

n = 5

Source: IDC, 2018

In addition to being able to do more testing, Worksoft customers also reported that they are reducing the burden of testing on their staff (refer back to Table 2). Study participants cited Worksoft features and capabilities that have made their testing activities much more efficient, chief among them automation. Other features mentioned by Worksoft customers included ease of use that makes designing tests and scripts less burdensome and more easily accomplished by less skilled participants. The interviewed Worksoft customers also mentioned the ability to send PDF copies of test results, screen shots, and pass/fail indications as being useful for collaboration to obtain input and validation from application users involved in the testing process. Study participants addressed these benefits and also described others, along with the impact on staffing requirements due to automation:

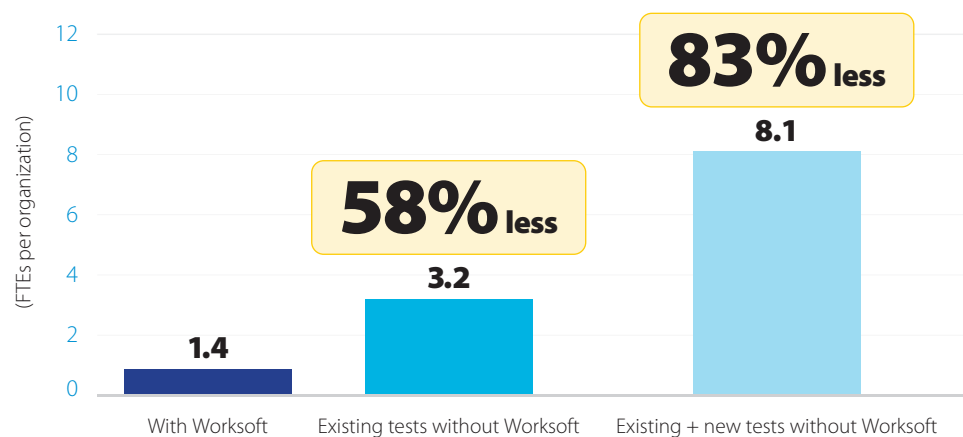
- » **Reduction of staff required for testing:** *“Our initial regression test was usually a 4- to 5-week process involving 30 people. We estimated that to take about 650 staff hours and 4 to 5 weeks. Now that this is no longer necessary; it’s probably saving about 1.5 FTEs per year. We can now run our test set in 3 to 4 hours with no business users required.”*
- » **Validation and history of testing:** *“With manual testing before Worksoft, we were relying on users saying they had tested something. There was no way to validate that they did. With Worksoft, we can now validate testing. We have a history of the scripts of every step and what happened with every step. We now know exactly what was tested.”*

» **Reusable testing scripts:** “Worksoft has improved our testing process . . . end to end. For change requests, the automated tests adjust properly, so there is not just a one-time test. Test scripts are used and adapted through the entire software life cycle.”

Figure 2 shows that the amount of staff time needed by these organizations for ongoing testing has decreased significantly with Worksoft. Further, these organizations have taken on significant additional testing activities without commensurate increases to staff time devoted to testing. IDC calculates that on average, these five organizations have reduced staff time requirements for testing from 3.2 FTEs to 1.4 FTEs for testing activities that were already done prior to Worksoft being deployed (58% reduction in staff time required) and are avoiding an additional 4.9 FTEs per organization for testing activities that they added and that weren’t done before Worksoft was deployed. This represents an 83% improvement in overall testing efficiency.

FIGURE 2

Staff Time Required for Ongoing Testing



n = 5

Source: IDC, 2018

Enabling Migrations and New Projects Through Testing Efficiencies

Study participants emphasized that the testing benefits of Worksoft are not just about day-to-day efficiencies. Organizations also need to test robustly and efficiently in order to complete significant business projects and system migrations. Longer-term projects mentioned by study participants included SAP HANA–related deployments and migrations and other business-critical projects such as:

- » Implementing web-based quoting systems
- » Migrating from legacy applications to SAP-based systems
- » Consolidating and integrating business-specific applications
- » Annual SAP updates and upgrades

Prior to Worksoft, these organizations struggled to free up the necessary resources to test these types of projects or found that they were slowed down by cumbersome testing requirements. However, as shown in Table 4, customers reported that Worksoft enables faster completion of these types of projects (23% faster on average) and that they now require much less staff time for testing (67%).

Addressing the benefit of lower cost and faster completion, one study participant said: *"We're in the middle of a substantial migration now for our biggest revenue-producing business unit ... 98% of the regression testing needed for that implementation has been done using Worksoft. We estimate that the cost would have been five times higher without Worksoft because we would have had to manually test using high-priced onsite and external contractors."*

Another study participant commented on being able to do more frequent upgrades: *"We used to upgrade SAP once a year, but now we can do it up to three times per year using Worksoft's automated testing capability. That represents a lot more functionality delivered to the business."* Another noted: *"With Worksoft, we have shorter test cycles in projects, fewer interruptions in test phases due to already covered common functions using automation, and transparency of testing procedures."*

TABLE 4

Impact on Major Migrations/Projects

| | Before/Without Worksoft | With Worksoft | Difference | Change (%) |
|---|-------------------------|---------------|------------|------------|
| Time to complete per project (weeks) | 28.2 | 21.7 | 6.5 | 23 |
| FTEs per year for testing for major projects/migrations | 6 | 2 | 4 | 67 |

n = 5

Source: IDC, 2018

Worksoft customers also commented on the business benefits of speeding up the completion of major business application projects, including higher revenue. In addition, end users indirectly benefit from upgraded testing functionality by getting earlier access to new technologies and software that fostered business opportunities. This benefit was based on a virtuous cycle that provided a "ripple effect" throughout the entire organization: better testing processes in turn promoted better IT operations, which impacted line-of-business tasks and goals. Addressing this benefit, one study participant noted: *"Had we not used Worksoft's automation feature for data staging, it would have delayed deployment by two months at a run rate of millions of dollars per month."*

Table 5 presents revenue benefits resulting from the acceleration of significant projects and initiatives using the Worksoft solution, with organizations gaining an average of \$3.55 million of additional gross revenue per year (\$282,013 per application).

TABLE 5

Business Impact

| | Per Organization | Per Business Application |
|---|------------------|--------------------------|
| Total additional gross revenue per year | \$3.55 million | \$282,013 |
| Assumed operating margin | 15% | 15% |
| Total net revenue* gain per year | \$533,000 | \$42,302 |

n = 5

*IDC applies a 15% margin assumption to all gross revenue numbers for purposes of the financial model.

Source: IDC, 2018

Improving the Quality of Applications and Services

Worksoft customers also reported that the ability to test robustly leads to higher-quality applications with fewer bugs, outages, and better integration with other applications. Study participants provided specific examples of how Worksoft has positively impacted the quality and performance of the applications they tested:

- » **Helping ensure the overall quality of changes and reducing risk related to change implementation:** *“For every release you need automated testing, especially for the smaller releases. You need to be able to ensure that all the changes being made are running well for all affected users. This is an essential function and Worksoft provides that for us.”*
- » **Avoiding impactful errors and outages:** *“The automated testing feature has identified at least five critical issues prior to moving into production that would have had a huge impact on operations by shutting down our business operations until resolved.”*
- » **Supporting regulatory compliance and auditing teams:** *“We use Worksoft to run finance audits every month. It also checks our own execution reports to make sure we meet compliance requirements for project testing This impacts lots of people. We help SAP people, technical and infrastructure teams, and others. For a big project we are working on, I would estimate that we saved 30% of time for several hundred people supporting the project from an IT perspective, including the data staging, regression testing, and complying with regulations.”*

Table 6 provides the quantified benefits derived from Worksoft involving higher productivity levels for application development and regulatory compliance teams. In both cases, deployment resulted in a 5% level of improvement.

TABLE 6

Impact on the Productivity Levels of Regulatory Compliance and Application Development Teams

| | Before/Without Worksoft | With Worksoft | Difference | Change (%) |
|---|-------------------------|---------------|------------|------------|
| Impacted regulatory compliance teams (FTEs) | 60 | 62.7 | 2.7 | 5 |
| Impacted application development teams (FTEs) | 11.4 | 12 | 0.6 | 5 |

n = 5

Source: IDC, 2018

Lowering Costs Associated with Testing

As discussed previously, organizations are hampered when they cannot robustly test their business applications in a cost-effective manner; they must either forgo some testing or incur substantial staff time and third-party costs that often still leave them short of their testing objectives. The organizations IDC surveyed reported that Worksoft has allowed them to decommission vendor solutions previously in use and/or reduce spending on third-party support for testing, even as they have achieved greater testing coverage, quality, and speed.

ROI Analysis

Table 7 provides IDC's analysis of the value and costs for study participants of using Worksoft's automated business process testing platform. IDC calculates that on average, study participants will realize discounted benefits worth \$507,939 per application (\$6.40 million per organization) over five years compared with total discounted investment costs of \$78,377 per application (\$0.99 million per organization). This would result in a five-year ROI of 548%, with the five interviewed Worksoft customers breaking even on their investment in an average of seven months.

TABLE 7

| Five-Year ROI Analysis | | |
|----------------------------|--------------------------|----------------------------------|
| | Average per Organization | Average per Business Application |
| Benefit (discounted) | \$6.40 million | \$507,939 |
| Investment (discounted) | \$0.99 million | \$78,377 |
| Net present value (NPV) | \$5.41 million | \$429,562 |
| Return on investment (ROI) | 548% | 548% |
| Payback period | 7 months | 7 months |
| Discount rate | 12% | 12% |

n = 5

Source: IDC, 2018

CHALLENGES AND OPPORTUNITIES

Opportunities

Worksoft solutions allow insight into how end users use applications in the "real world" and then generate test requirements and automated tests from that insight. A strength of Worksoft is its support for the needs of both technical and nontechnical users. In addition, the solution provides analytics that help support delivery and process change efficiency. With Worksoft's automation platform, clients test processes critical to their business across applications in the way in which they are accessed by the end user. This goes beyond standard functional testing of new features. Worksoft works across applications, whether they are in the cloud, on-premises, hybrid, or mobile devices, and enables customers to scale, with examples of users testing more than 500,000 business process steps across hundreds of virtual machines on a daily basis.

Worksoft has scriptless fifth-generation automation technology that can make test building and maintenance faster without requiring specialized programming skills. Worksoft's extensibility framework allows field tuning of automation to specific applications without writing code. This further simplifies and speeds up the automation building.

Worksoft automation covers an array of application technologies from legacy mainframes to modern mobile apps. Also, Worksoft software enables collaboration between the business and IT to help ensure that business processes are tested. Business users conduct their normal activity with their set of applications, while Worksoft captures their actions across given applications. This lets QA observe what the business is

actually doing, end to end. QA can get started quickly because the captured information is automatically converted into process documentation and automated test scripts. For agile and DevOps environments, QA or development can create objects as early as the whiteboarding stage when only a drawing of the application or web page has been built but no code has been written. When additional code is written to create changes, Worksoft will update the object definition with the new parameters. These technical strengths can also create efficiencies and improved collaboration between technical teams and business stakeholders, which are key value propositions for Worksoft.

Other opportunities include Worksoft's traction and momentum in collaboration with the digital transformation practices offered by service provider partners, which currently include Accenture, Capgemini, Cognizant, IBM, Infosys, TCS, and Wipro.

Challenges

Challenges for Worksoft include a perception that its capabilities are narrow and SAP specific, based on its public and prior history. This can be limiting to Worksoft as it seeks to grow and expand and requires outreach and clear messaging about Worksoft's broader engagement with its product portfolio. While Worksoft has emerging mobile support; HTML5 and cloud/SaaS support, with partners that include Panaya, Experitest, and CA Technologies; and existing SAP Solution Manager support, additional opportunities remain as Worksoft evolves a "3rd Platform" strategy that encompasses additional digital platforms and social media.

As Worksoft seeks to target the broader end-to-end DevOps life cycle, broader best-of-breed ALM partners to complement systems integrators (SIs) and enterprise ALM integration are needed to execute effectively in emerging environments. Selling to a mixed client base demands more complicated sales and marketing, as Worksoft targets both business users and technical teams. The depth and breadth of the Worksoft offering is also not clear and is perceived as more limited. As other competitors target the space for business process quality, clear articulation of the combined value proposition and new capabilities must be presented, which Worksoft has begun to address with evolving go-to-market strategies.

Evolving Worksoft

Worksoft continues to hone its focus during 2018 to target business process flow capture with Analyze and is leveraging emerging SAP initiatives with S/4HANA, HTML5, and Fiori. Worksoft's agility in addressing needs on the SAP side is complemented by ongoing efforts to support testing for other ERP environments — an obvious need for users and an opportunity for Worksoft. We see additional opportunities for engagement with systems integrators evolving Worksoft's business application testing practices as well as Global 2000 and other organizations seeking to get a handle on the complexities of its ERP system quality in conjunction with the need to manage emerging business process. Additional partnerships to coordinate quality analytics with Worksoft's deep ERP testing offer a range of alternatives for users and Worksoft alike as both continue to execute in this dynamic and evolving market. We see Worksoft customers evolving their use of Worksoft test automation for robotic process automation (RPA). Common use cases include manual repetitive tasks and data loads for configuration of ERP applications. This is another area of opportunity moving forward for the company.

CONCLUSION

Users should engage in gap analysis assessments to determine core needs for ASQ across emerging areas such as business application quality and evaluate and adopt and benefit from appropriate automated technology and testing services. Technology alone is insufficient, however; effective adoption of automated solutions must be accompanied by appropriate organizational and process change to help ensure consistent usage. This is even more the case in emerging business-critical areas such as ERP testing. As customer examples indicated, these are “must-have” business software environments to sustain required corporate operations as well as customer and partner relationships and visibility into the core business processes that drive competitive positioning and execution. Increasingly, these organizations are looking at business application quality as part of a DevOps pipeline that must also incorporate adoption of modernized business application architecture. Moving into 2019, we expect to see increased adoption of automation and effective process change for business applications in this DevOps context to achieve value related to testing activities cited in this study and research conducted with the sample Worksoft customers.

APPENDIX

IDC’s standard ROI methodology was utilized for this project. This methodology is based on gathering data from organizations currently using Worksoft business process testing automation solutions as the foundation for the model. Based on interviews with these five study participants, as well as previous research conducted with Worksoft customers, IDC has calculated the benefits and costs to these organizations of using Worksoft. IDC used the following three-step method for conducting the ROI analysis:

1. **Gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of Worksoft.** In this study, the benefits included staff time savings and productivity benefits, increased revenue, and testing-related cost reductions.
2. **Created a complete investment (five-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of using Worksoft and can include additional costs related to migrations, planning, consulting, and staff or user training.
3. **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations’ use of Worksoft over a five-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- » Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and productivity savings. For purposes of this analysis, based on the geographic locations of the interviewed organizations, IDC has used assumptions of an average fully loaded salary of \$100,000 per year for IT staff members and an average fully loaded salary of \$70,000 per year for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).
- » Downtime values are a product of the number of hours of downtime multiplied by the number of users affected.
- » The impact of unplanned downtime is quantified in terms of impaired end-user productivity and lost revenue.
- » Lost productivity is a product of downtime multiplied by burdened salary.
- » The net present value of the five-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.
- » Because every hour of downtime does not equate to a lost hour of productivity or revenue generation, IDC attributes only a fraction of the result to savings. As part of our assessment, we asked each interviewed organization what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. IDC then taxes the revenue at that rate.
- » Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding.

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