

Industry Report: The State of App Testing

Business Software

| Spring 2021

Today's business software users expect easy and convenient consumer-like digital experiences. Leveraging software testing yields better customer experiences and business outcomes.

By examining testing benchmarks, client data, and engaging industry experts, this report offers insights and best practices that turn software testing into a competitive advantage. Learn how the approach to business software testing varies from other industries and where to refine your testing strategy for customer-centric releases, in less time, at lower costs.

Methodology

Testlio analyzed internal client data to identify benchmarks and compare business software testing approaches to all industries – and combined those insights with secondary research to highlight trends and market opportunities for business software.

Client applications analyzed for this study range across business software categories, including accounting, collaboration, communications, content management, enterprise retail marketing, and security.

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Business software - a growing market opportunity

Market – COVID increased demand for business products

A recent Deloitte study puts 85% of CEOs agreeing that the pandemic has accelerated digital transformation. 76% of CEOs foresee a decreased need for office space in the future, signaling the ongoing demand for collaboration software and remote enablement like cloud-based data solutions.



Competitive advantage: the importance of quality CX

The importance of digital B2B channels to engage, collaborate, and purchase has doubled since the COVID-19 crisis began, according to McKinsey's 2020 B2B businesses survey.

While there are many business software segments, the through-line is an increasing expectation for consumer-like customer experiences.

- 86% of business software customers are willing to pay more for better customer experiences.
- Users perceive only 30% of business software companies as customer-centric.

- CX leaders in the S&P 500 outperformed competitors by 80%
 - › Their customers are 7x more likely to return.
 - › Their customers are 8x more likely to try new features and products.
 - › Their customers are 15x more likely to recommend the product to a friend.

Business software companies are aiming to develop new products and refine the user experience of their product catalog to differentiate their offering and capture demand. A customer-first mindset and thoughtful software testing strategy are crucial in a competitive market.

The relationship between software testing and CX

Business applications are complicated

Providing consumer-like customer experiences in the business space is complicated because business products are more complex:

- **Workforce diversity.** Business products are often created for a diverse workforce of people, not an individual. Developing a product for a business requires network visibility, collaborative functions, and tangible business value to all users.
- **Ecosystem inclusion.** Business platforms like Atlassian, Salesforce and Google's G Suite have a rich API ecosystem, composed of developers, suppliers, third-party providers, contractors, customers, regulators, or even competitors.
- **Domain-specific focus.** Because business apps are sold to companies, they assume a level of user expertise and training requirements.



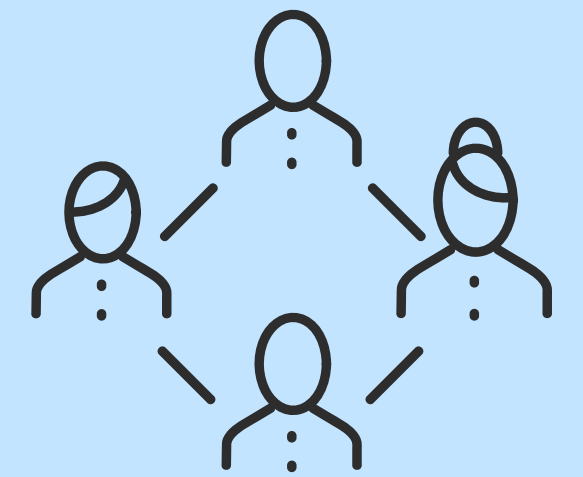
How software testing helps

Software testing reduces overall development costs and prevents security and performance issues. Moreover, it reduces the risk of a flawed customer experience. Human testers using real devices in global locations report on end-user experience and high-priority bugs they encounter before actual customers do.

Catching these issues has a significant impact on growth. According to McKinsey's 2020 study of the digital B2B buying process, businesses that provide seamless digital experiences are more than 50% likely to be chosen as a primary supplier than those who provide poor experiences. The most common buyer pain points and frustrations cited in their study were CX related:

- 36% cited the length of the ordering process.
- 34% cited the difficulty of finding products.
- 33% cited technical glitches with ordering.

Testing diagnoses problems proactively for all three of these pain points. A test case to measure and report load times in different environments, or to measure time spent finding products and report lengthy user flows, or teams of testers conducting tens of orders on different device/ OS combinations to uncover glitches.



Networked testing: On-demand, burstable testers

Networked testing leverages thousands of remote and expert testers to ensure unlimited device and location coverage. With time constraints and large testing scopes, testers swarm the testing surface in short, opportune windows to maintain maximum test coverage in less time.

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Great software testing **isn't easy to pull off**. Your successful software testing strategy can be a competitive advantage in a growing, saturated market like business software. Consider the five best practices that emerged from Testlio's research:

5 best practices for business software testing

We know that software testing will help business software companies win in a growing market - now what?

Via an analysis of anonymized Testlio client testing data, we've identified five best practices to optimize your testing strategy.

1

Take a quality over quantity approach to provide better customer experiences

2

Increase testers per run for faster results

3

Test in between dev sprints for increased release velocity

4

Recruit domain-specific knowledge on testing teams for better quality

5

Prioritize consumer-like mobile testing to enhance user experiences

These best practices have proven effective in increasing release velocity, lowering overall testing costs, and ensuring a flawless user experience.

Best Practice 1 - Quality over quantity testing

Building and selling business software is a high-stakes endeavor. Given its complexities, business software requires more time devoted

to planning and executing an effective test strategy. Combined with larger deals and renewals at stake, it's essential to uncover high-priority bugs and make sure they are fixed before releasing any build.

Increase in project management time	Increase in fixed issue verification time
Business applications require 22% more time on project management - test setup, test cases, test plans - compared to all other industries	Business applications require 80% more time on fixed issue verification - making sure bugs are truly fixed - compared to all other industries

Best practice

Take the quality over quantity approach to testing, including:

- **Project management** - Expect to invest more time on test case and environment authoring to ensure coverage of a complicated product.
- **Fixed issue verification** - Reevaluate reported, fixed bugs and verify that they are no longer causing problems for users.

How to isolate issues in record time

For mobile apps, we recommend instrumented testing to help engineers reproduce and fix issues quickly. After installing an SDK on your mobile app, manual testers record their testing sessions and write bug reports without switching to a separate test management system. Structured data is extracted from key OS and software sources, directly delivering various forms of telemetry, including location, OS

version, network, language, and more. In addition to enabling testers to cover more scenarios while exploring your app, instrumented testing helps developers isolate issues more quickly by removing other variables. Added bonus – with precisely extracted and structured telemetry, session logs can be transformed into automated test scripts and re-testing tasks.

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Best Practice 2 - Increase testers per run

Because planning and executing business software testing requires more time than other applications, each run is more costly.

Larger tester team sizes	More testers per run
Business applications require 29% larger testing pools compared to all industries	Business applications require 50% more testers per run

Best practice

- **Increase testers per run** - Test setup costs incur at the beginning of new runs. It's more cost effective to increase the number of testers per run rather than increasing the number of runs. This allows you to optimize coverage hours per run and decrease your run completion times.

Best Practice 3 - Test continuously in between dev sprints

Because of complicated products, concentrated runs, and an emphasis on regression testing, business software testing is more time-consuming. A standard business software testing cycle takes an average of 12% longer to test and deliver results compared to the all other industries. This is problematic for high-velocity engineering teams that need to ship builds quickly.

Increase in testing turnaround time

Business applications require 12% more time to turn around test results compared to all industries

Best practice

Knowing that results may take longer, optimize your testing strategy for speed.

- **Plan your testing windows:** Get ahead of engineering cycles by employing burstable testing in between development sprints, as soon as a sprint is completed.
- **Overnight and weekend testing:** Take advantage of dev downtime and leverage global testing resources overnight and on weekends to decrease your run completion times.

[Ask an Expert]



How a top-five business app decreases setup costs, improves products, and increases release velocity

Applied best practices: Testing in between dev sprints, with a quality over quantity approach, and a high number of testers per run.

Q&A with Testlio engagement manager Rainer Metelitsa.

How did you initially approach working with this client?

Metelitsa: The client is one of the largest business software providers in the world. Under this account, we cover two product lines, each with subprojects. All in all, we work with nine separate projects and teams—and we engage them as smaller, separate clients. Last quarter we tested for over 4,500 hours to ensure confident releases across their software offerings.

What pain points did the client bring us on to solve?

We conduct a high volume of scalable regression testing that they couldn't conduct in-house. We also provide localization testing and test new features and updates for one of their large file-sharing platforms.

Why did they turn to Testlio for their development model?

The client preferred a large pool of testers and device/OS combinations for massive regression coverage. We add value with a global network of expert testers, ensuring the quality of new, untested features. Plus, we support their test management processes so that they can get coverage with fewer internal headaches.

Additionally, our ability to test overnight and on weekends and deliver in off-hours has become essential, as it matches their sprint cadence.

Has the client reported initial outcomes?

The client has reported peace of mind in terms of regression testing and complete coverage and high-value bug detection for new features. They miss important bugs because they're too deep in development themselves and lack the regular user perspective.

Why does the client have a tester per run range of 1-50?

Some projects have a considerable scope with regression testing plus a few focus areas for every run. One run can cover more than 60 testing hours. And with many different scenarios and combinations, it's common to see 30-35 testers per run. On the low end, we sometimes only need one person to do a quick issue reproduction, smoke test, or fixed issue verification.

Why was our testing mostly concentrated on Saturdays?

We usually test projects from Saturday to Sunday and present results Monday morning. This aligns nicely with this client's Monday - Friday development cycles/sprints and release candidate building cadence. For example, they develop and commit code during the workweek, snap to the release branches, and build on Friday. Then we test over the weekend, and they have the results on Monday. If there are no blockers, they can proceed to roll out the builds to the public. At the same time, a new sprint begins, and on Friday, they have a new build for us.

Best Practice 4 - Maintain desktop and prioritize mobile testing

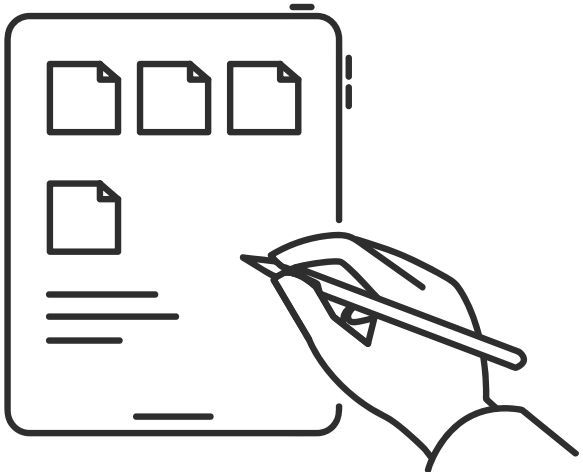
Business software is frequently associated with desktop computer use, but in reality, business

users are increasingly turning to mobile devices – an estimated 70% of B2B queries were made on mobile devices in 2020. Additionally, 45% of business app users believe that providers are failing to deliver satisfactory consumer experiences.

Desktop testing hours	Mobile device testing hours
Business apps require 25% more testing on desktop compared to all industries	Business applications require the same amount of mobile testing as compared to all other industries

Best practice

Maintain existing desktop coverage and expand testing on mobile devices to meet the device diversity demands. By testing and optimizing mobile experiences, a business software company can differentiate itself from competitors that silo mobile devices as consumer-only devices.



Best Practice 5 - Recruit for domain-specific software testers

Business software products are complicated, and not always accessible for the average consumer -- or the average tester. From accounting to collaboration to CRM software, products are built with a specific type of end-user in mind.

Best practice

Recruit and structure teams for domain-specific testing expertise. Here are five things to consider when bringing on new testers:

1) Vet testers for their business application experience.

2) Look for testers versed in QA best practices, testing methodologies, product goals, industry domains, and the app itself.

3) Build a global pool of on-demand testers in different time zones to provide 24/7 coverage and location-specific expertise.

4) Look for a diversity of real device/OS combinations per tester for complete coverage.

5) Ensure at least 50% tester consistency between runs for efficiency, speed, and product familiarity.

[Ask an Expert]



How a leading software company improves quality and UX

Applied best practices: Emphasizing mobile testing, recruiting for domain expertise

Q&A with Testlio engagement manager, Oksana Lang.

How did you initially approach working with this client?

Lang: The client develops 3D models for large car manufacturers. The models are released together with new car brochures. What makes

this engagement interesting is that the car manufacturers control the release dates per country, which requires the client to be ready to release at any given moment.

What pain points did the client bring us on to solve?

The client’s development team is based in the UK but their product is released worldwide. The client was looking for a partner to test the product in different countries and assure consistent product performance despite location. Additionally, they needed product verification on a wide range of mobile devices.

Why did they turn to Testlio for their development model?

Testlio has testers located in 150+ countries, all using a broad selection of devices. This massive pool of expert testing talent can quickly form into teams and complete testing per client needs.

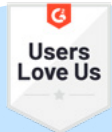
Conclusion

The business software market is growing rapidly, and competition is stiff. One way to differentiate your software is with attention to user experience. With the complex nature of business software products, great user experiences require great software testing to catch issues and ensure efficient, effective, and even joyful workflows.

With the five best practices from this report, your software testing will serve as a key differentiator and driver of great user experiences. As referenced in our case studies, industry-leading Testlio clients are already implementing these best practices for fast, high-quality product releases at low relative costs.

Why Testlio for business software testing

Testlio is the originator of networked testing. Our award-winning combination of platform, freelancers, and services enables you to deliver great customer experiences—fast. In any location. On any device. In any language. Testlio business software clients include 8x8, athenahealth, DataRobot, Microsoft, SAP, and many more. Collectively, they have awarded us an industry-leading 4.7 G2 rating and an NPS of 75. To learn more, visit www.testlio.com.



G2 REVIEW

Administrator from a mid-market computer software client

“They (Testlio) are willing to work with you and adapt to your process. Detailed real people testing the application. Able to support web and mobile. Adaptable and willing to take feedback. We brought them into our Slack and were able to treat them as an extension of our team.”



Ask About Testlio’s Business Software Testing Capabilities

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