

Competing For Solutions

New Approach for Testing Tools

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QA Software Testing and the Benefits of Competing on Solutions

The software testing space is competitive, and by its very nature - dynamic. Trying to be all things to all people is challenging in this ever-changing industry - especially for younger and smaller firms who must prioritize limited resources for maximum impact in the marketplace.

And thus, software testing vendors often must decide where their competitive advantage lies, with most resources being directed towards price, service, or feature differentiation?

1. The benefits of competing on price?

Competitive pricing is a powerful tactic for growing one's user base. This is particularly true when you offer free trials targeted towards fence sitters. "Try before you buy" has understandable appeal amongst the risk-averse.

2. The benefits of competing on service?

Personalized service and fast response times are also valuable qualities - especially for subscription-based business models. When switching costs are low, users can easily shop around for alternatives.

3. The benefits of competing on features?

Features drive much of the innovation in our niche - particularly when these features are user-requested. And when marketed properly, new features can help fuel client acquisition efforts.

In truth, most software testing vendors try to compete in all of the above, with “features” representing the dominant strategy for attracting new business.

However, the following case studies reveal a 4th approach - one in which features, service, and pricing are important assets - but not goals in and of themselves.

With this 4th approach, software testing vendors compete on solutions. When you focus your resources on helping users overcome their biggest challenges, it actually *does* become easier to be all things to all people.

What Competing on Solutions Really Means

It's important to draw a distinction between features and solutions.

- Features represent capabilities - the bells and whistles that round out a platform, making it more versatile.
- Solutions represent the end game - what users *ultimately* want.

For example, software testers don't want video recording capabilities (a feature). They want fail-safe documentation (a solution).

Why is this distinction important?

When you base your business model exclusively around feature requests, the wish list becomes overwhelming. With tens of thousands of potential users out there, it is basically impossible to make everyone happy. Lines get drawn as users rally behind *individual* bells and whistles.

Some will inevitably be happy as they see their wish lists get fulfilled. The majority, however, will be disappointed.

But when you ask users “What are the *biggest* challenges you currently face,” something surprising happens.

You become solutions-oriented.

For any given problem, there may be 10 to 20 potential “features” that could address that challenge - each backed by loyal and outspoken camps.

But when you're solutions-focused, the wish list of features becomes more manageable (or rather - less important). You can direct limited resources towards developing the *simplest* fix. This has the additional advantage of allowing you to control costs, and thus, more easily compete on price.

The following case studies explore how 5 different companies of varying sizes, needs, and resources were able to find precisely what they needed from 1 software testing platform.

CASE STUDY 1

Managing Thousands of Apps for NICE Systems

At any given time, Jerry Welch, a senior Quality Assurance Manager, is responsible for managing up to 5,000 different software specification tests for the Texas-based branch of [NICE Systems](#).

Working in the R&D division, Jerry tests software for the NICE enterprise solutions used by “contact centers of all sizes, branches, trading floors, and back offices.” Part of Jerry’s role is to ensure that NICE Systems’ clients can use these enterprise solutions on web apps, mobile devices, and most notably today - tablet devices.

To fulfill this task, Jerry must simultaneously oversee numerous projects and thousands of various tests. He and his Q&A team rely on Testuff to manage this gigantic responsibility.

“Testuff tracks our [software’s] success and failures and allows us to run a report easily to give to the development department,” Jerry explained. “At any given moment, we can tell what we have tested - and what we haven’t tested, so we know how much coverage we have and how much we don’t have,” he added.

Jerry first discovered Testuff through a simple Google search while he was with his former employer, the Container Store. He implemented a free trial of the Testuff software and the successful trial quickly turned into a full-blown subscription. Even though Jerry has since moved to NICE Systems, his team from the Container Store continues to use Testuff more than a year later.

When Jerry first came to NICE Systems, he presented the testing software to his new team and challenged them to find something better. They could not, and Testuff is now an integral part of the Q&A team's management techniques.

Benefits

Key to Jerry's positive experiences with Testuff is the company's high-level responsiveness to customer feedback. "If 10 is the highest rating, then I would give them an 11," Jerry raved about Testuff's response times. "They are fanatical about their customer service," he said, noting that they fix any bugs he points out to them almost immediately.

Jerry also explained that Testuff's competition – "big dogs" like the HP Quality Center – are more difficult and expensive for him to use because they require that companies become full customers and buy into numerous new software and hardware programs.

At the end of the day, though, it is the quality of Testuff's software and its ease-of-use that make Jerry a happy and satisfied customer. "Being a software with so many integration points is probably the key comparison with anything else," he said.

Key Takeaway

When we first began surveying the key challenges our customers faced, it became clear that ease-of-use was noticeably absent from the marketplace. Bloated packages and complex documentation made it difficult for users to manage even the simplest of tasks. Those responsible for overseeing *thousands* of tests were even more frustrated.

And thus, our goal was simple.

Develop a software testing platform that was both easy-to-use and scalable. In addition, we invested considerable resources in customer service to answer questions and reduce testing downtime as much as possible.

CASE STUDY 2

Prioritizing and Organizing Results at Leica Microsystems

[Leica Microsystems GmbH](#) is a leading global manufacturer of optical microscopes, cameras, and software solutions that aid in the analysis of macro, micro, and nano structures.

Founded in 1869, it has been a subsidiary of science and technology leader, Danaher conglomerate, since 2005. The company employs over 4,000 workers and is represented in more than 100 countries.

Given the company's long history and dominant size, it is important that the Leica Microsystems brand stand behind its reputation for quality. As the company declared – “Our brand is a promise to be fulfilled time and again.” The following story out of Mannheim, Germany represents the company's constant pursuit of quality and better results.

Software Quality Engineer, Yves Nicodem, needed a solution to his boss's new demands. Per his supervisor's instructions, Yves would now be required to issue weekly reports on the state of Leica Microsystems' microscope software preparedness. Leica Microsystems releases new software for its microscopes approximately twice a year, and Yves' boss wanted weekly reports that would help the company determine future release dates for the software.

Because Yves' responsibility is to test the software controlling the scientific microscopes, his boss requested to know at any given time:

- which tests were high priority
- which tests needed to be redone
- which tests could be postponed

Having worked at Leica Microsystems for 15 years, Yves was accustomed to documenting his tests and reporting the results on Excel spreadsheets. He quickly realized, however, that he needed something far more professional to bring to the company's weekly meetings.

Yves spent considerable time on the Internet searching for an appropriate software testing tool that could be used and understood by the major players in his company. He disregarded the free Testlink testing software because it was too complicated for non-software engineers in the company (like the biologists) to use on a regular basis.

Benefit

Together with a colleague, Yves found that Testuff was the *only* tool that could offer the method of reporting he and his boss were seeking. "The key point for us was [Testuff's ability] to report on priorities and times," he explained.

Yves and his team of six software testers have now been using Testuff on a daily basis for over a year. They have discovered some inconveniences along the way, specifically what Yves calls, "lack of version control." Despite this, Testuff is still the only testing software that allows them to report, organize, and prioritize their software testing results in a meaningful way that can aid other divisions within the company.

Key Takeaway

The ability to share results with *non*-testers was another common challenge gleaned from our research. At many companies, decision-making power is decoupled from software development.

Our solution was to create a testing platform whose results could be easily understood by laypeople. Software testing and debugging are inherently complex tasks that use their own separate languages. But with powerful reporting and presentation functionality, even the uninitiated can make informed decisions based on the data.

CASE STUDY 3

Fail Safe Documentation at SRA International

For over 30 years, [SRA International](#) has provided cutting edge technical solutions and management expertise to the U.S. government in areas related to defense, intelligence, civil government, and health.

SRA has a deep understanding and mission-specific domain expertise in a number of highly sought areas within the federal government. Its well trained professional workforce of more than 6,900 experts delivers IT solutions and clients services in the areas of information technology, lifecycle services, cloud and mobile computing, cyber security, solutions development and integration, strategy development, and organizational change management.

The company's global workforce travels the world to offer expertise in intelligence analysis, energy, and environmental consulting. Two-thirds of SRA's workforce has federal government security clearances, and approximately 97% are professionals or managers with technology or domain expertise. SRA's sophisticated professionals require top software solutions that will further their ability to develop creative solutions to complex challenges.

Colleen Blizzard is a seasoned SRA professional who has worked with the company for 10 years. For the past 4½ years, she has operated as a test manager in SRA's health sector, serving such clients as the U.S. military and a Texas-based cancer research firm. She currently oversees a 9-person matrix

team responsible for testing and developing a web platform that filters grant applications and creates opportunities for these grants to undergo peer review.

Colleen first heard about Testuff through “word of mouth.” One of the developers on her team had used it in a previous position and suggested that it might help improve the team’s testing procedures.

For Colleen, the initial key factor in picking Testuff came down to a cost-benefit analysis.

“Our budgets are very tight,” Colleen explained. “We don’t get the opportunity to use that much software to help us out. Testuff is relatively inexpensive and for the amount of help we get from it, I was able to get approval for it,” she said.

Benefit

The testers on Colleen’s team have found Testuff’s video feature to be their most useful asset.

The video tool records the exact movements performed during a test, documenting each key stroke. These recordings then allow developers to watch the actual process and understand exactly how a test might have produced a glitch.

As if they are watching a movie, the developers open the test on their screen and pause, rewind, or play it as many times as necessary to understand how each specific software bug was created.

This feature has not only prevented many misunderstandings between developers and testers, but it has also improved the team’s ability to ferret out software bugs.

“There is a tendency among developers to close a bug and report that the software worked for them,” Colleen explained. “Now we have a video saying the bug actually exists, and it prevents the developers from accusing the testers of having made a mistake.”

Colleen and her team have now been using Testuff for almost 4 years – every day, all day. The software test management platform has become a mainstay of their work procedures.

Having used other testing software in previous jobs, Colleen can attest to the fact that despite their higher costs, none of these other solutions offer the video capabilities that her testers and developers find to be so valuable. The added benefit of Testuff's streamlined reporting system has saved Colleen significant time when reporting to her managers.

SRA, a top government contractor, will continue to use Testuff software as they seek to provide their global clients with technical, operational, and management solutions.

Key Takeaway

Poor communication emerged as a critical roadblock in our survey of key challenges. Testers and developers found it difficult to accurately relay their findings to one another – a problem that created redundancies and errors.

Our solution was to develop fail-safe documentation to ensure that all relevant parties are on the same page. Although we explored many different methods for accomplishing this, video recording represented the easiest way to ensure seamless and accurate reporting of results.

CASE STUDY 4

Niche Market Software Potential at Tribal Data Resources

Tribal Data Resources (TDR) is a small, but established company that serves the niche Native American community. Since 1982, TDR's 8 employees have provided data collection and management software to Tribal governments across the United States.

The U.S. government currently recognizes around 550 American Indian tribes – each of which is recognized as a sovereign nation. As such, every Tribal government is responsible for keeping up-to-date genealogy data, housing and job records, needs analysis, and other key personnel data about the members of their respective tribes.

With decreased federal funding and increased competition for dwindling resources, TDR provides management services that increase the self-sufficiency and administrative capabilities of the Tribes and their respective service organizations.

Ross Hammer has been with TDR for 12 years and serves as the Chief Operating Officer and Head of Development. As is typical of smaller companies, Ross often wears many different hats and assumes multiple duties to ensure the daily and overall smooth operation of the company. At any given time, he has 1 to 3 dedicated testers working on the TDR software. However, members of the sales team often step in to lend a hand as well.

Ross discovered Testuff through ordinary Web research. “I did a bunch of Google searches and started evaluating,” he explained. “Testuff just really met my needs by being affordable and offering a centralized well managed case repository.”

Benefit

Although Ross had considered developing his own system or using a plain Microsoft Excel sheet, he concluded that Testuff offered a much more structured testing environment with control over input data.

The software’s ease-of-use and scalability were the final deciding factors in choosing Testuff over another top contender. “Our sales staff doubles as testers on occasion. I wanted them to be able to run tests at the airport, the hotel, or on a conference break,” he said.

For over 5 years, TDR’s small staff has used Testuff on a daily basis, taking full advantage of the software’s “access anywhere” capabilities. Testuff’s controls and structure provide an organized framework that creates order and prevents non-experienced testers (i.e. sales staff) from inadvertently making mistakes while they are on the go. Testuff’s monthly updates keep the software relevant and useful to TDR.

TDR’s experience with Testuff demonstrates that a small company without many experienced testers can benefit tremendously from a software platform normally used by corporations who employ entire *teams* of testers. Testuff understands the needs of testers and strives to be affordable and usable regardless of company size.

Key Takeaway

In a separate survey, we discovered that users often become frustrated when limited by time zone and geography. This was especially problematic amongst remote teams, but it also affected software testers who traveled frequently.

And from previous research, we already understood the frustration testers have when trying to train *non*-testing colleagues to run reports and collect data.

Our strategy? Develop a scalable platform that testers could securely and affordably use regardless of geography or skill. With cloud-based storage and browser-enabled access, every tester enjoys the same intuitive user experience no matter where they are.

CASE STUDY 5

Requirements-Based Testing at Core Brands

Core Brands is a newly formed subsidiary of Nortek, a technology giant that delivers innovative solutions for lifestyle improvements at home and work.

Nortek, a globally diversified company with thousands of employees, founded Core Brands in 2012 to leverage the product and marketing strengths of its formerly independent audio, power management, and control brands.

Headquartered in California, Core Brands combines 10 of Nortek's top brands to provide home integration systems, including:

- audio, control and power solutions
- digital display mounting solutions
- ventilation products
- heating and cooling products
- air management systems

Core Brands targets residential, commercial, and professional markets and claims multiple distribution channels across the globe.

Dan Emerald has been with Nortek for 4 years and joined Core Brands a year ago as the Director of Product Verification. In this role, he tests and verifies the quality of all the Core Brand software involved in the custom installation market for audio, video, and control solutions. He runs an SQA team with 13 people.

With many years of experience in the testing field, Dan brought Testuff with him to Core Brands from his previous employment in a similar field. As a senior tester, he used to write his own tests by hand until one day, a particularly complex test produced over 300 written pages for review. A change in procedure was needed, and through Internet research, Dan discovered Testuff and hasn't looked back since.

Now, 6 years later, Dan relies on Testuff's unique capabilities for much more than test writing. In his current role, it is critical he ensures that Core Brand's final products include all of the software features originally envisioned by the design teams.

Benefits

Dan utilizes Testuff's requirement-based testing capabilities to certify all of the product's design parameters have been incorporated.

"Ideally, marketing comes up with a set of requirements, engineering responds with a functional set that speaks to those requirements, and the test plan needs to ensure that all of those requirements are covered," Dan explained. "Testuff, with its requirement-based testing options, allows us to tie it all together which is the ultimate goal."

In addition Testuff's superb database allows Dan's team to import and export numerous variables and test the relationships between them. The database components are reusable, giving Dan and his team the flexibility to set up new tests with varying relationships.

Companies typically use software testing products to find bugs and errors within their own IT solutions. The requirement-based testing capabilities provided by Testuff, however, allow Dan and his team not only to confirm that their custom install software is working properly, but that it also includes all of the dazzling features envisioned by the marketing and production teams.

The Core Brands software quality assurance team uses Testuff every day, and it will continue to be an integral part of their ability to create high-level software.

Key Takeaway

No 2 testers will ever have the exact same needs. Every project is different. Every product is unique. And thus, a truly universal software testing platform must be both flexible and responsive.

Our solution was to create a modular and customizable software testing suite that users could tailor for *their* needs. As the requirements of any given project evolve, testers must have the freedom to change course and incorporate whatever new parameters are necessary.

CONCLUSION

When you remain feature-focused, trying to be all things to all people is ultimately a short-sided strategy. Success is still possible, but the logistics of fulfilling competing wish lists can be overwhelming - especially if you serve a relatively diverse user base.

But when you survey the biggest challenges across a broad range of companies, industries, and niches, commonalities begin to emerge, from ease-of-use to universal access.

And you can then leverage limited resources towards addressing those deeper needs.

Rather than focus on features and pricing, you begin with the ultimate goal in mind - i.e. solving the underlying problem.

And as you start mapping out the most efficient strategies for achieving this goal, your product doesn't simply morph into a bloated platform of user-requested bells and whistles. It becomes a solution in and of itself.



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