



CROWDSOURCING

Eight Ways to Launch Higher Quality Applications
and Get to Market Faster with the Crowd

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“Peer production is about more than sitting down and having a nice conversation. It's about harnessing a new mode of production to take innovation and wealth creation to new levels.”

-Eric Schmidt
CEO, Google

The Emergence of Crowdsourcing

Today's Staffing Options for Software Development and Testing

Software executives and corporate IT managers have a number of options for staffing and sourcing the various tasks of software development. Design, development and testing can be accomplished through a combination of three staffing methods:

- In-house staff
- Outsourcing firms
- Crowdsourcing communities

These three options have historically been viewed by some as an “either/or” choice. But because of technology and innovative business models, this is no longer the case. This shift has empowered progressive software company execs to make the best decisions on a per-project basis. Software teams can now build in-house expertise while maintaining the operational flexibility that comes with external providers.

The emergence of crowdsourcing has triggered this increased flexibility. The relative pros and cons of standard outsourcing – which typically involves the displacement of large-scale project resources, lack of accountability, and hidden management costs – are well known to most execs. In this whitepaper, we focus instead on **how crowdsourcing can complement in-house resources at a practical, tactical level.**

The task and opportunity for executives today is to get the most bang for their buck by building in-house strengths around key employees and core competencies, while also tapping into variable resources like crowdsourcing when they can augment in-house personnel and reduce fixed costs.

Driving Forces behind Crowdsourcing

Crowdsourcing enables firms to tap into the creativity and diversity of a global community of skilled professionals. The trend has been adopted across many industries, including graphic design, development, testing, usability and R&D.

Much of the inspiration grew out of the success of the Open Source movement. So it's no surprise that software enterprises have successfully adopted crowdsourcing for the development and testing of *commercial* applications for web, desktop and mobile platforms.

In some cases, including MySQL and RedHat, the pure open-source model has been adopted for commercial purposes. Even more interestingly, online communities such as Guru, or CrowdSpring (for UI and graphic design), TopCoder or Rent-a-Coder (for app development) and uTest (for app testing and usability) have opened the crowdsourcing model to a wide range of software applications.

“Because crowdsourcing is built from the open source template, any company looking to leverage computer professionals has the advantage of an audience already familiar with the basic idea of community production.”

- Jeff Howe
Journalist, Wired.com

By bringing in diverse and talented professionals on an on-demand, pay-per-performance basis, your applications can reach market faster, with higher levels of quality and at a lower cost.

Communities of skilled professionals who bring fresh eyes and ideas, and who care about their online reputations, can be used (and are being used) to complement in-house resources to build, test and launch world-class desktop, web and mobile apps.

Key Benefits from Crowdsourcing

The numerous benefits that can be achieved when adopting crowdsourcing for software development and testing include:

- **Cost containment:** Crowdsourcing allows managers to utilize lower-cost outside support without being tied down by long-term commitments. The fundamental structure of online communities creates competition, making it more accountable and cost-effective than traditional outsourcing.
- **Dealing with increased complexity:** Significant quality improvement is achieved when development and testing is done across a wider set of platforms, locations and languages. Crowdsourced developers and testers can be easily recruited for each OS, browser, plug-in, mobile handset model and language.
- **Faster time to market:** Crowdsourcing enables you to ramp up or down to meet your needs at any given time. This eliminates delays and staffing constraints that often stifle companies around peak release times. This is especially useful for companies that are working with tight budgets and employing short-cycle development processes like Agile.
- **Meeting expectations for higher quality:** Today's customers expect applications to be complete and fully functional from day one. The era of 'beta-testing' as a substitute for QA is long gone. Companies that believe that "good enough" is good enough when it comes to quality and usability do so at their own peril.
- **Keeping your customers (and converting your prospects):** The cost of having bugs or subpar usability has never been higher. Rest assured, if your product has problems, or doesn't meet expectations, it's easier than ever for your customers (and prospective customers) to find your competition.
- **Empowering the user:** Users that feel that they have a hand in the success of a product will have a stronger emotional commitment to the product and the company. Crowdsourcing blurs the line between software builders (designers, developers and testers) and software users, creating powerful connections and an army of fans.

The Eight Essentials: Launching Better Apps with Crowdsourcing

The beauty of crowdsourcing is that it does not require an “either/or” commitment. Software company executives can easily incorporate and experiment with a community on a trial basis, and strike a balance between in-house personnel and community staffing. The following list of tips describes how to maximize the benefits of crowdsourcing for app development and testing.

1. Build your dream team

The best online communities of professionals serve as a perfect complement to in-house teams. Build a team that blends the strengths of your full-time employees (brand, IP, reputation) with those of the community (flexibility, cost-effectiveness, testing coverage across locations, language and platforms.)

Having this blend of staffing allows you to scale your resources up and down in a fluid manner, meeting tight deadlines during peak periods of development and testing, while controlling costs during slow periods. And the end result of this scalable community-driven workforce is faster time-to-market.

"uTest found two "show-stopper" bugs that would have killed our release. In just 12 hours we had the feedback we needed to recreate and fix the bugs and release a stable product that captured significant market share."

- Sagi Richberg
CEO, Group Gain

2. Independent thought is the lifeblood of creativity

With a diverse community of professionals that transcends location and background, you can avoid the group-think that often stifles internal teams. When a community is following a lead, no matter how large the crowd, it will simply reflect the one leadership voice.

Often, the consensus view from inside your company can drown out objections and alternate points of view. This is often an unintended byproduct of strong leadership. Again, a global community brings diverse opinions and experience (as well as fresh eyes), which can result in creative development solutions and more complete testing coverage.

3. Aggregate small bits of information into a knowledge base

The information and feedback that is generated by a crowd of professional testers can be aggregated into high-value business knowledge. Software firms of all sizes can use data tagging and statistical aggregation to identify trends, which is a goldmine for management decision making.

In addition to guiding your product design and development roadmap, companies can expose this information to their customers and prospects. By showing the number of users, platform types, geographic coverage that your product serves, you instantly establish credibility in the market.

"When it comes to real-world application testing, the crowds in Camden Market are preferable to the elite residents of Buckingham Palace. Diversity yields world-class QA coverage."

- Doron Reuveni
CEO, uTest

4. Let their reputation precede them

To get the most out of crowdsourcing, find communities that enable community members to build their online reputation. This increases accountability and performance by rewarding good actors and punishing bad behavior. Performance ratings and recognition levels enable your firm to choose the right professionals, and incent the desired behavior with members of the community.

5. Use crowd diversity to mirror real-world conditions

Forget the fact that you are paying these people to write code or find bugs. While that's the primary job to be done, a secondary (but powerful) benefit is that your product is being validated in the hands and minds of real-world users in real-world conditions. Select the members of the community that best match your customer base: by location, language, expertise and technology platform. The community that works on your app matches the users you hope to target.

Homogenous internal teams – even those comprised of smart, hungry, talented people – are often less effective at generating new product ideas and offering objective feedback than cross-pollinating groups with a variety of backgrounds and perspectives.

Marketers and product managers can use this feedback as another way to solicit ideas and drive usability and new feature design. Of course, the day-to-day tasks of banging out code and testing applications cannot be ignored. But if this is your only goal, you may be missing an opportunity to gain even more from the crowd.

6. Gain more than you bargained for

Companies who view crowdsourcing as just another way to outsource will often experience results similar to those of traditional outsourcing. In and of itself, this isn't a bad thing, as it can still provide tremendous cost savings, increased efficiencies and enable your in-house teams to focus on areas that are mission critical.

But the potential of crowdsourcing is much greater for those firms that 'get it'. Companies that truly engage their online communities and tap into the passion and creativity within them often find that their crowd can become an engine of new ideas, buzz and overall awareness.

"There are two types of currency in an online community: money and reputation. Of course, money talks, but the transparency of crowdsourcing motivates people to build strong reputations. This is the only way they can earn future work and the respect of their peers."

- Matt Johnston
VP Marketing, uTest

"The uTest model lets us scale correctly. I don't have to hire and manage a whole QA staff. We never miss a step, since we start a test cycle when we leave for the weekend, and test results are waiting for us when we come back in on Monday."

- James McElhiney
CTO, Second Rotation

7. Not all crowds are created equal

When selecting a community to work on your products, choose wisely. Some communities tend to be noisy, with lots of opinionating, but not much actual productive work. Choose a community that has proven success and exposes the past performance and reputation of community members. Also look for those communities that can point to clear, demonstrable wins – other customers that they've worked with to solve real business problems.

An important measurement for community sites is whether they include tools that help you manage the ongoing process. It is easy to build a marketplace website that connects an employer with a freelance worker, but this alone does not provide ongoing community-building. It is simply a fancy employment agency.

8. You still call the shots

Crowdsourcing does not change a fundamental truth of software design, development and testing: Effective, detailed communication and project management is key to any successful project. This is true in managing in-house resources or outsourced partners, and crowdsourcing is no exception.

So assign an internal project owner to keep the information flowing and manage the process. While you don't have to micro-manage the crowd in terms of tactical execution and idea generation, strong management and executive buy-in enables processes, plans and deadlines to still remain firm when using crowdsourcing.

Dig Deeper & Take Action

Want to capture the power of crowds to launch higher quality apps faster?

- Design: Need help with UI or graphic design?
 - Guru – www.guru.com
 - CrowdSpring – www.crowdspring.com
- Development: Want to get your app built with the help of the crowd?
 - TopCoder – www.topcoder.com
 - Rent-A-Coder – www.rentacoder.com
- Testing & Usability: Want to make sure your new app or version is ready for primetime?
 - uTest – www.utest.com

Other inspirations for this paper and valuable resources about crowdsourcing:

- Wired Magazine – [Crowdsourcing article](#) by Jeff Howe
- Jeff Howe – [Crowdsourcing blog](#)
- ReadWriteWeb – [Crowdsourcing review](#)
- BNet – [Crowdsourcing review](#)
- Crowdsourcing Links – [Crowd-driven companies & news](#)

About uTest

Headquartered near Boston, uTest is the world's largest marketplace for software testing services. The company provides real-world QA services through its community of 14,000+ professional testers from over 150 countries around the world. To date, more than 400 companies - from web start-ups to enterprise software firms - have signed up to get their apps tested by the uTest community.

uTest enables companies to launch higher quality products; get their desktop, web and mobile applications to market faster; and control the cost of testing. Customers specify their QA requirements for tester experience, location, language, OS and browser, and uTest selects the right testers for each project. Companies pay only for those bugs that they approve.

A brief online demo is available at www.utest.com/demo. uTest can be contacted at:

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