

APPLAUSE^o

WHITE PAPER

THE ESSENTIAL GUIDE TO MOBILE APP TESTING

AN UNFORGIVING EVOLUTION

Yo, a mobile app that served a single function – to send the word “Yo” as a text or audio notification – was one of the most popular apps in the world in June 2014. By the end of September 2014, it had fallen 1273 spots in the US App Store rankings.¹

Let’s face it - Yo was never going to remain a top app, but it does point to the unpredictable and unforgiving nature of the mobile app landscape. The mobile app landscape changes quickly. For established brands, it’s essential to keep up. New OS versions are released. New devices hit the market. Cool new apps go viral, setting new standards in user expectations.

Despite the ever-changing mobile landscape, there are some constants in mobile app quality that organizations of all sizes – from startups to global enterprises – can study, understand and use to their advantage. In the following pages, we’ll discuss the mobile landscape, dispel some common myths and outline proven strategies for mobile app testing.

WHY APPS FAIL

Short attention spans – 3...2...1. If your app didn’t open in that time frame, the majority of users will have moved on.² That’s all you get. Three seconds. Users will find an alternative and many will never return if your app doesn’t open quickly enough.

Poor customer experience – A poorly performing digital property can have a negative impact on a user’s overall opinion of your brand. A recent survey found that 60% of consumers indicated a poor website or app performance would cause them to be less loyal to a brand.³ Right or wrong, users have incredibly high expectations when it comes to digital quality.

The X Variable – You have a vision for how customers will use your app. But that doesn’t mean customers will share that vision. When customers engage with your app in a way you didn’t plan for, it will create an inadequate user experience.

Fragmentation – The proliferation of devices, operating systems and mobile carriers has created a fragmented mobile ecosystem. Though the iOS device matrix is growing more than ever, device fragmentation is especially an issue for the Android operating system. At last count, there were more than 24,000 separate Android device models.⁴ Not only do developers have to keep up with the latest devices, they need to ensure apps work on the newest OS version as well as several past versions that are likely still in use, as users are not always quick updaters. And differences in carriers can often lead to unexplained performance inconsistencies – something that is practically impossible to discover in the confines of a testing lab.

Invasions of privacy – Companies that violate user privacy run the risk of making headlines for all the wrong reasons. Users expect their personal data to remain private, and their digital properties to be completely threat-free.

Slowing connection speeds – Does your digital property run the same on 3G, LTE and Wi-Fi connections? If the answer is no, expect upset users. In some instances, a poor connection can be the difference between a five-star and one-star review.

Data drains – Users are wising up to the fact that some apps drain battery faster than others – and they’re abandoning those offending apps in favor of more economical ones.

THE COST OF FAILURE

The rise of social media has made the cost of failure more expensive. Only a few years ago, one bad customer experience could spread via word-of-mouth and reach a few prospective customers. Thanks to social media, that same word-of-mouth now reaches hundreds, thousands or even millions of users in an instant.

App store ratings have done much the same as social media. Your app's rating is your first impression on a user. Think of the apps and products you use: would you purchase a product with a one- or two-star rating? How about a three? Probably not. If you're looking for something you can reliably use on a consistent basis, you want something that has a four- or five-star rating.

Low app ratings and negative public sentiment can be the death of your app. In fact, 80% of apps are abandoned after three months,⁵ and 25% are abandoned after just a single use.⁶

Abandonment and the subsequent lower app ratings is a downward spiral. In today's mobile app landscape, if your app doesn't have a top rating, your ability to reverse the trend and break the spiral quickly diminishes.



Much as we love freedom and choice, we also love things that just work, reliably and seamlessly.”

CHRIS ANDERSON, WIRED

TESTING FOR MOBILE APPS

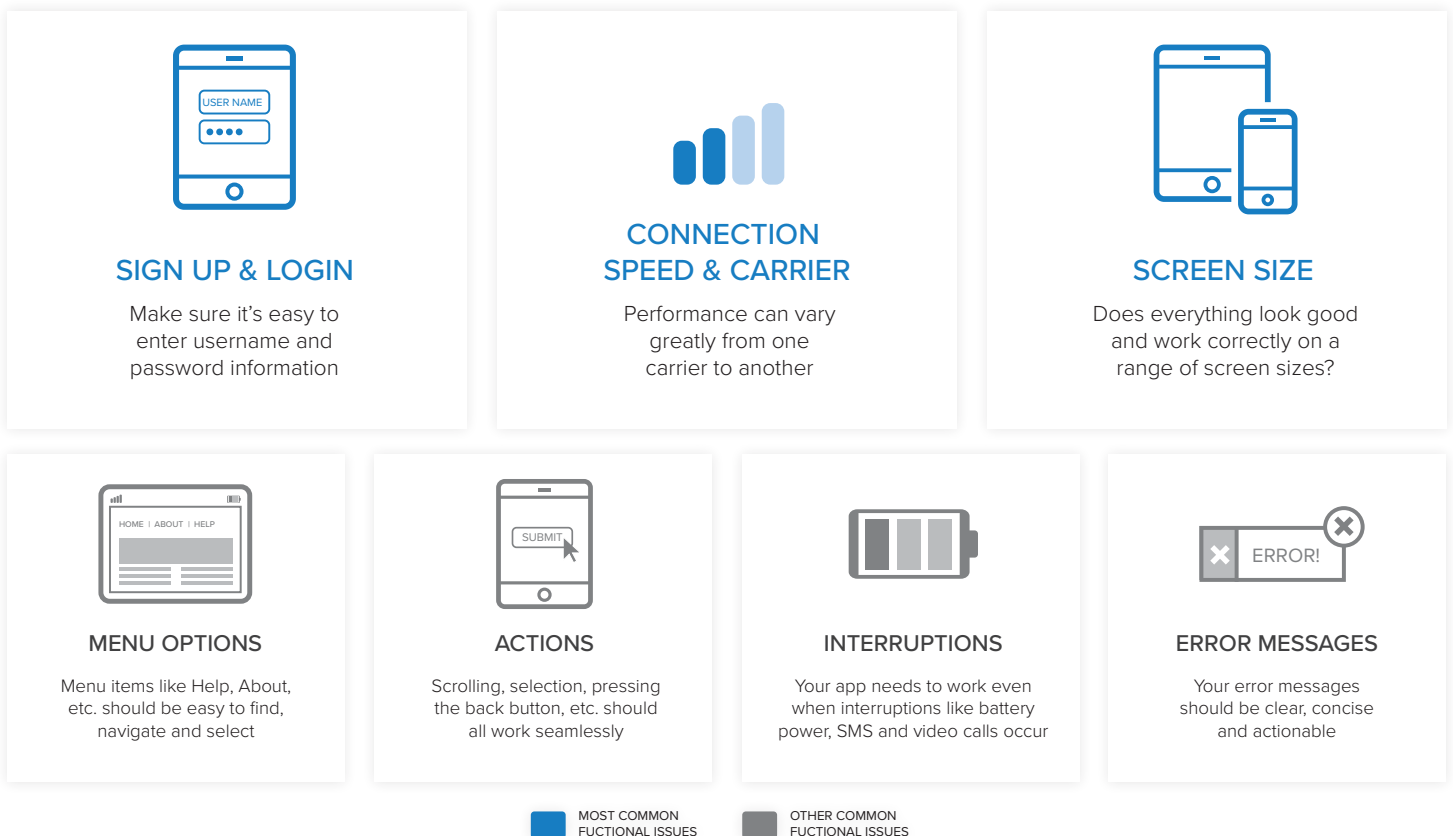
Historically, when companies wanted to improve their digital quality, they did so within the sterile environment of a lab – far removed from where their users live, work and play – or they used a combination of feedback from employees, friends and family. The evolution of mobile eliminates these options as effective solutions on their own.

If testing for mobile apps is conducted exclusively in a central location, teams can't really be sure apps will work in the hands of their actual users in the real world. There are just too many things that could go wrong in the real world when your app is given to real customers on real devices in locations all across the globe.

So what's a tech leader to do? Hire testers in key geographic markets? Construct an elaborate QA lab? Declare their digital quality “good enough?” These options are all expensive, time-consuming, and worse, may not actually be a perfect solution. The reliable thing to do is build your development and testing strategy to leverage the strengths of different testing strategies, including crowdtesting for manual testing, and automation for stable code.

COMMON FUNCTIONAL ISSUES

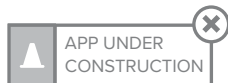
According to a survey of QA experts, the most common functional issues were also the most severe. The experts reported that issues with Sign-up & Login, Connection Speed & Carrier, and Error Messages not only occurred most often in-the-wild, but these are also the most severe of any regularly occurring issues.



Test early and test often – combining automated and manual testing to cover your digital property from every angle. It is exceptionally important to test the functionality of your app on a range of devices. If an app doesn't render correctly, it can mean navigation or other actions are entirely impossible – making your app essentially useless. And don't forget regression testing any time you change, remove or add a feature. Use the app like you expect a new user to, revealing potential problems.

COMMON USABILITY ISSUES

Likewise, the most common usability issues were also the most severe. According to the survey of experts, functionality led the way in terms of issue severity and frequency.



FUNCTIONALITY

Functionality should be adequate and complete



LAYOUT & DESIGN

Good layout and design allow a user to easily complete tasks



INTERACTION

The flow of a digital experience must be natural and interactions should be easy

Not all users are created equal. If you want to get a true sense of your mobile app's usability, be sure to select participants that closely mirror your target audience. It's important for you to separate minor feedback from recurring issues that hinder the app's usability for a large portion of users. If you need help navigating the usability landscape, consider working with a professional usability expert. Experts can craft surveys, analyze the raw data for meaningful takeaways and give you recommendations based on an understanding of user expectations and current mobile standards.

LOCALIZATION

The worldwide proliferation of mobile apps requires your products to be accessible and contextual for users in a variety of markets and regions. But without proper localization, companies can exclude, confuse or offend entire subsets of users without even knowing it.

Relying on translation software or outsourcing firms is not the same thing as proper localization. If your app isn't being reviewed by native speakers or people who know the local area, you could be missing major mistakes. Apps that fail to fully account for different cultural understandings will not survive and thrive.

CROWDTESTING

Crowdtesting gives brands access to experienced testers around the world who will test your app in the same scenarios your users will actually experience it. Testers use real hardware, with real software, on imperfect connections. In short, they test under real-world conditions. Crowdtesting covers all types of testing, from usability to exploratory to security to localization. Use crowdtesting to give you that in-the-wild reach you can't get in a lab environment.



Our global customers have different demands. We want products to ‘feel local’ and to support features that may be unique to specific markets. As we specialize our products for certain markets, it introduces more challenges for testing – like requiring special cultural knowlege.”

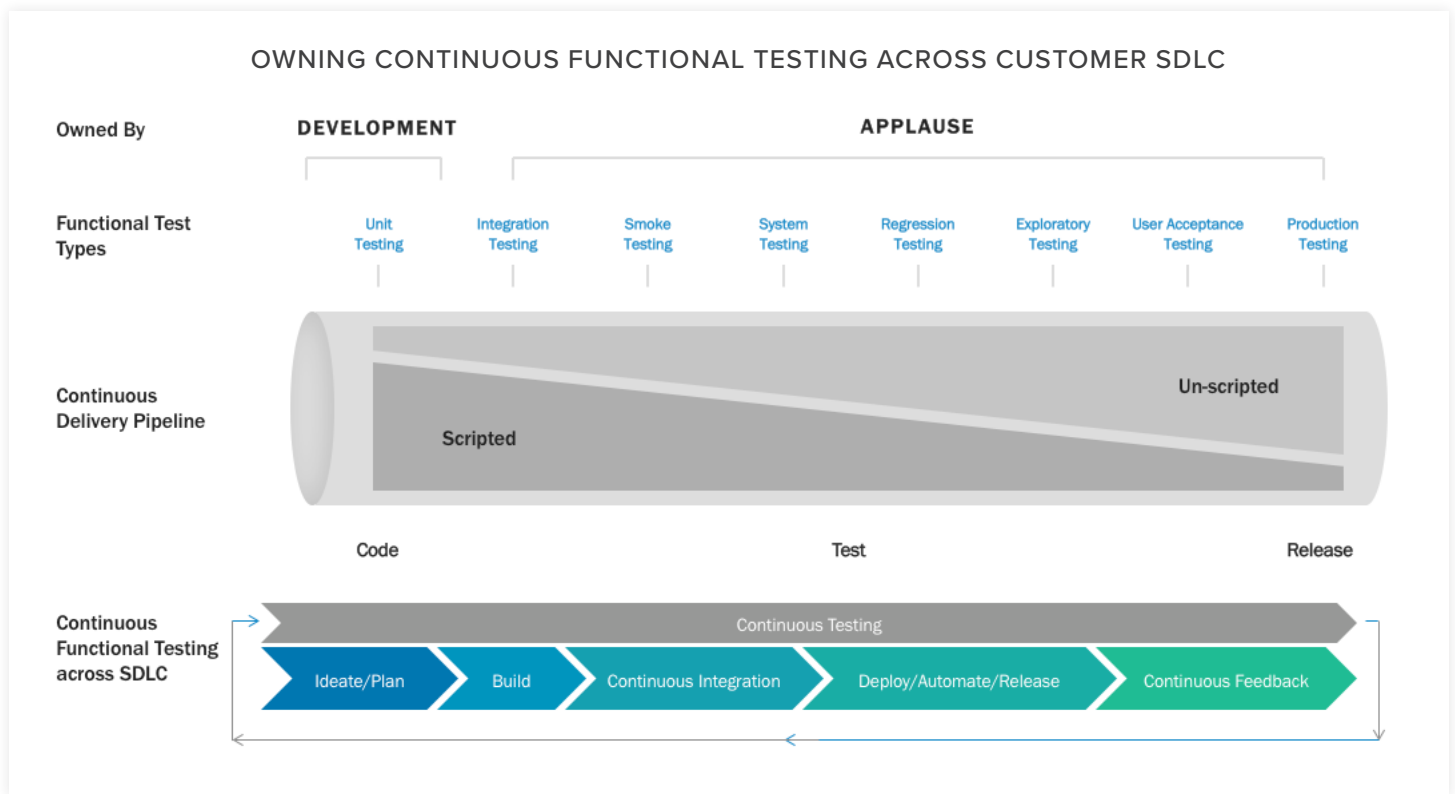
PATRICK COPELAND, SENIOR ENGINEERING DIRECTOR, GOOGLE

AUTOMATION

Automation in some form is being used by every development team at this point. For mobile app testing, it can be very effective – especially when paired with manual testing efforts.

Automation testing is an important tool which enables developers to verify general functionality and perform regular regression testing. It is best used to test the execution and functionality of stable code. Automation can act as the groundwork of quality assurance for your mobile app, while manual testing fills in the gaps.

That's why brands need to find the right balance between manual and automated testing. After all, automated tests won't deal with rush hour in LA, testing in the fields of Iowa or holding a device in one hand and a hot cup of coffee in the other. Using automation in tandem with real-world testing will provide the best results.



Crowdtesting fits seamlessly into agile Software Development Lifecycles - from integration to production, and ideation to feedback.

“

In-the-wild testing truly can be an extension of your QA, and not a replacement. We talk about it in terms of a ‘force multiplier.’ It allows our QA team to project a much broader coverage path. It becomes an extension of what they’re doing.”

BRAD SCHNEIDER, DIRECTOR OF APPLICATION DEVELOPMENT, THE CONTAINER STORE

THRIVING TODAY, PREPARING FOR TOMORROW

There are many testing strategies and tools available to make your mobile app stand out from the rest. The important thing is to use the right tools for the right job. A mix of different testing approaches that are closely tied into the software development lifecycle will provide the best results. More than anything, it's important to test early and test often.

As the mobile market continues to grow, those brands that emphasize quality and pay special attention to real-world test coverage and feedback will enjoy increased market share, profitability and – above all – user loyalty and delight. In a time when customer experience dictates brand success,⁷ adapting to the unforgiving evolution of the global app landscape means the difference between prosperity and extinction.

¹ [What's Happened To ~\\$7 Million App 'Yo' Now That The Hype Has Died](#), Business Insider, September 2014

² [The need for mobile speed: How mobile latency impacts publisher revenue](#), DoubleClick, September 2016

³ [Digital Desertion: The Rise of Consumer Expectations on Website and Application Performance and the Impact of Negative Digital Experiences](#), Apica, August 2017

⁴ [Android Fragmentation Report](#), OpenSignal, August 2015

⁵ [The Mobile App Environment Is More Challenging than Ever](#), eMarketer, September 2016

⁶ [One in Four Mobile Apps Are Abandoned After a Single Use](#), Recode, June 2015

⁷ [Gartner Surveys Confirm Customer Experience Is the New Battlefield](#), Gartner, October 2014

ABOUT APPLAUSE

Applause empowers leading brands to deliver flawless digital experiences for their customers on any device, in every location. The company's **market insights, user feedback and digital testing solutions** enable businesses to delight customers, drive topline revenue and innovate faster.

Applause ensures digital experience quality for websites, mobile apps, IoT products and in-store interactions in a way no other approach can – through its technology platform and managed **global community of over 300,000 professional and on-demand testers**. Only real people on real devices in real locations can provide the real issues and feedback that brands need to deliver great digital customer experiences. You can't hire, outsource or automate the increasingly converged digital-physical experience that defines real customer interaction, but you can replicate it with the crowdsourced approach provided by Applause.

Thousands of companies of every size – including Google, FOX, Nike, BMW, PayPal and Slack – rely on Applause to dramatically decrease both the time and the costs of delivering great digital experiences for their customers.

Learn more at www.applause.com

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