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THE STATE OF MOBILE SOFTWARE QUALITY

Full Report



Preface

This survey was designed to establish insight and benchmarks into software organizations that are responsible for testing applications and websites, specifically for mobile. The key objectives of the survey included:

- How mobile tools and process decisions are being made
- The top challenges of testing mobile websites and applications
- 2014 automation goals for mobile

Methodology

Keynote conducted a global online survey from October to December, 2013 in partnership with Software Quality Engineering, the leader in delivering training, support, research, and publications to software managers, developers, test professionals, and quality engineers worldwide.

The findings presented are based upon the aggregated responses from over 1,631+ mobile app developers, QA/testers, and IT managers.

How Mobile Tools & Process Decisions Are Being Made

Although more organizations are structured with individual QA teams within different groups or business units, in general, decisions about tooling are more often made by a **centralized** QA or tools group.

With one exception – **Telecom**. Telecom companies said their decisions were made by individual, or decentralized QA groups.

How are mobile testing tools decisions made within your company? (# of respondents in each column)	All Verticals (1313)	High Tech/IT/ Software (574)	Fin Svcs & Ins (198)	Telecom (122)	Media (113)	Retail* (49)
Decisions are made by a centralized QA or tools group	53.2%	49.8%	63.6%	41.8%	57.5%	59.2%
Decisions are made by individual QA groups (decentralized)	35.9%	40.8%	25.8%	45.9%	31.0%	26.5%
Decisions are outsourced	2.4%	2.4%	1.5%	1.6%	2.7%	0.0%
Not sure	8.5%	7.0%	9.1%	10.7%	8.8%	14.3%

How Teams are Organized

Our survey found that more testing groups are **distributed**, rather than in one centralized group.

Over 56% of respondents said that they were part of an individual or centralized testing team tasked with mobile-specific projects.

When it came to being a part of a mobile-specific team, respondents in the Telecom industry led the industries with **over 65%**.

How is mobile website and application testing organized within your company? (# of respondents in each column)	All Verticals (1590)	High Tech/IT/ Software (661)	Fin Svcs & Ins (234)	Telecom (151)	Media (139)	Retail* (57)
Centralized testing group, mobile-specific	19.7%	20.3%	20.9%	19.9%	22.3%	17.5%
Centralized testing group, not mobile-specific	12.6%	12.0%	12.8%	9.9%	18.7%	10.5%
Individual QA groups within business units/divisions, mobile-specific	35.8%	38.1%	36.3%	44.4%	36.0%	36.8%
Individual QA groups within business units/divisions, not mobile-specific	20.8%	22.5%	20.5%	13.9%	14.4%	17.5%
Testing is predominantly outsourced	3.5%	2.6%	3.4%	2.6%	3.6%	8.8%
Currently not testing any mobile apps or websites	7.5%	4.5%	6.0%	9.3%	5.0%	8.8%

* Retail vertical sample size <100

The Top Challenges of Testing Mobile Websites & Apps

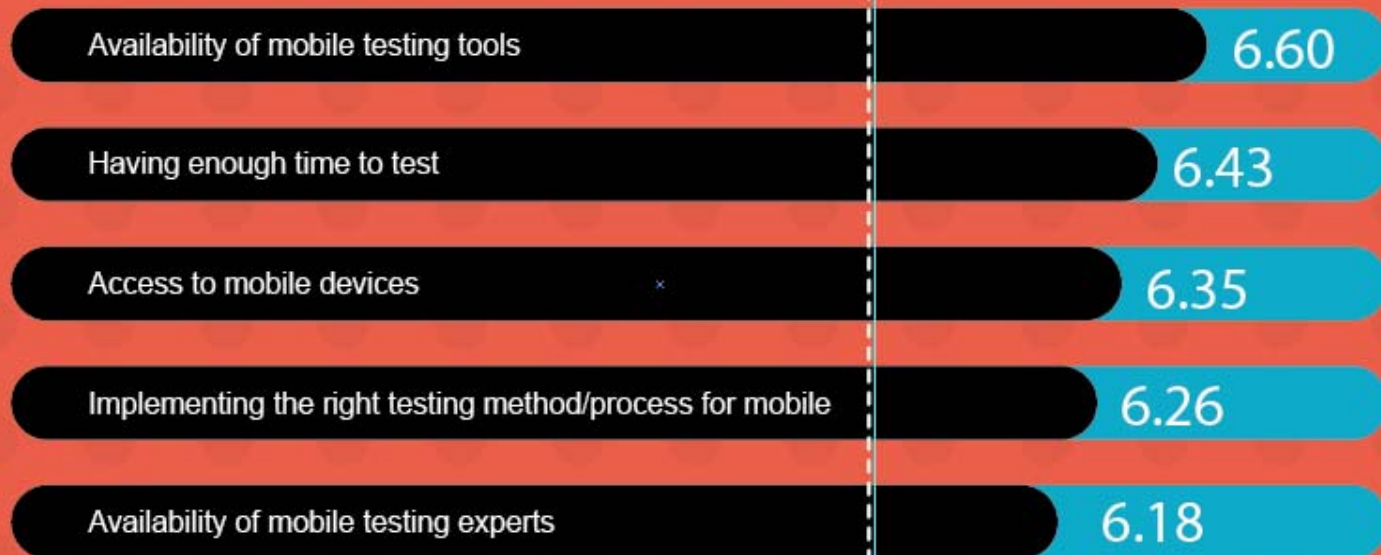


What is the greatest challenge facing QA organizations today?



The availability of mobile testing tools.

When it comes to testing mobile applications and websites, please rate the following challenges on a scale of 1 to 10.



*These scores are based on a scale of 1-10, with 1 being not at all important and 10 being extremely important.

Functional Testing Continues to be a Problem



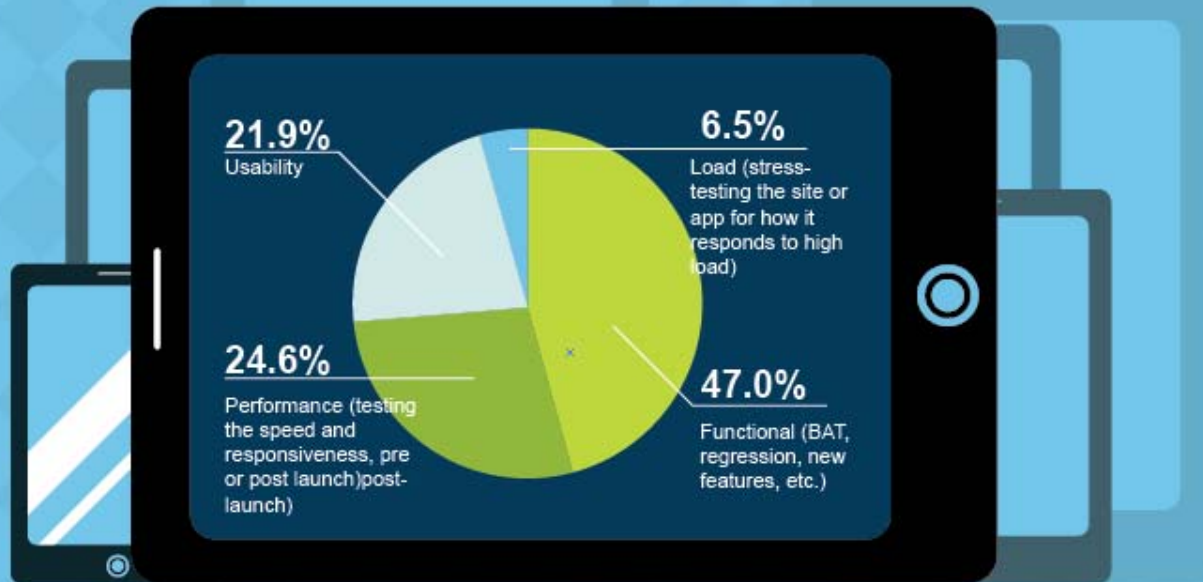
Top Testing Headaches



Which area of testing gives QA the most headaches?



Functional (BAT, regression, new features, etc.)



Which area of testing are you most concerned about when testing mobile websites and applications?

2014 Goals for Mobile Testing



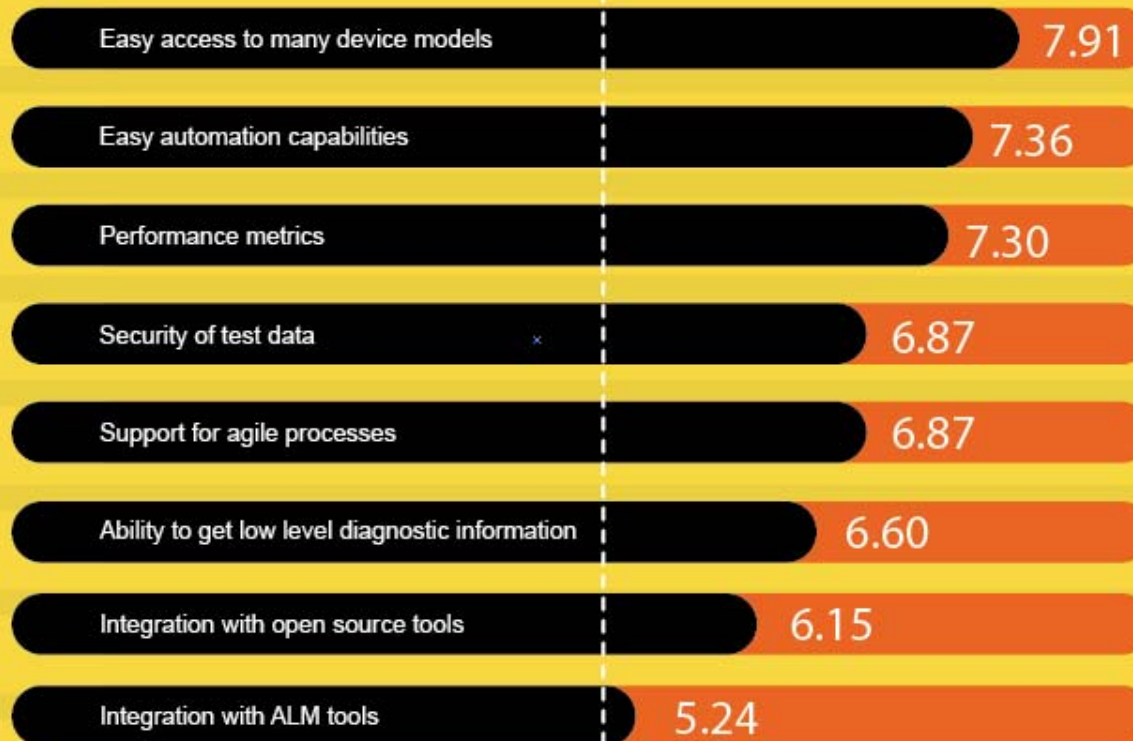
Within functional testing, what are the main priorities for QA?



Easy access to a variety of device models was rated the most important functional testing feature across all verticals.



When it comes to the most important features needed for functional testing of mobile apps and websites, please rate the following on a scale of 1 to 10.



2014 Goals for Mobile Testing

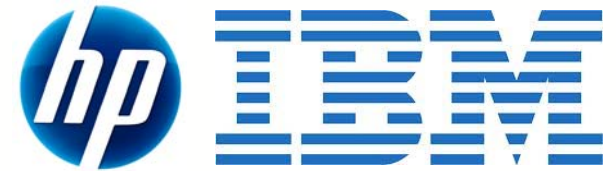


Were there any other vertical-specific challenges that also rated high?



Yes, as you might suspect 'security of test data' rated extremely high for financial services companies.

Integration with ALM (Application Lifecycle Management) tools were also highly rated for **financial services companies**.



We also found that having an 'integration with open source tools' (such as Selenium, Robotium, etc.) was rated very high for **retail companies** as they traditionally have been more e-commerce focused and would already be developing using open source web-based tools.



Jenkins



Robotium



Other Takeaways



of respondents said that most of their mobile testing (app/web) is done on real mobile devices.



Less than 25% of mobile web tests are automated.

These stats underscore the need for testing mobile apps and websites on real mobile devices.

Other Takeaways - Desktop VS Mobile

When looking at mobile releases compared to desktop in terms of expectations, allocated testing time, and the number of QA resources, we found that:



Quality expectations of mobile apps and websites were **higher** than desktop



Testing time allocated to mobile releases was the **same** as non-mobile releases



Quality assurance resources for mobile were **slightly lower**

Other Takeaways – Mobile Web vs App Testing

Mobile Web Testing

26% test on MORE than 10 device models.

35% are doing most of their testing on real mobile devices.

Less than **25%** of testing is automated, but this is more than app testing.

VS



Mobile App Testing

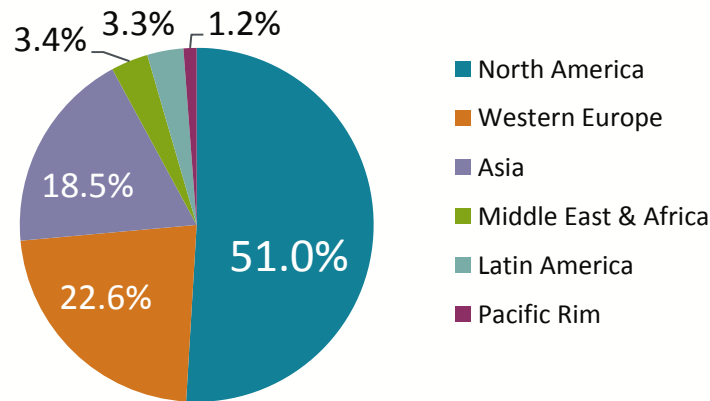
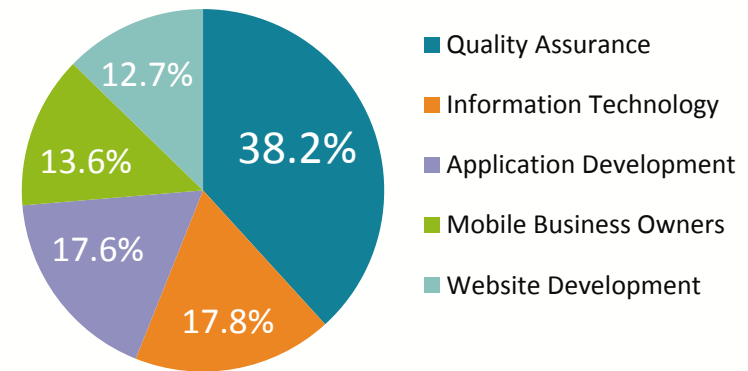
34% test on MORE than 10 device models.

37% are doing most of their testing on real mobile devices.

Less than **20%** of testing is automated.

So Who Responded?

This survey was the largest survey performed of its kind, specifically dedicated to professionals in quality assurance, mobile app development, website development, and IT organizations. Of which, **over 38%** was in quality assurance, over 17% in app development and IT.



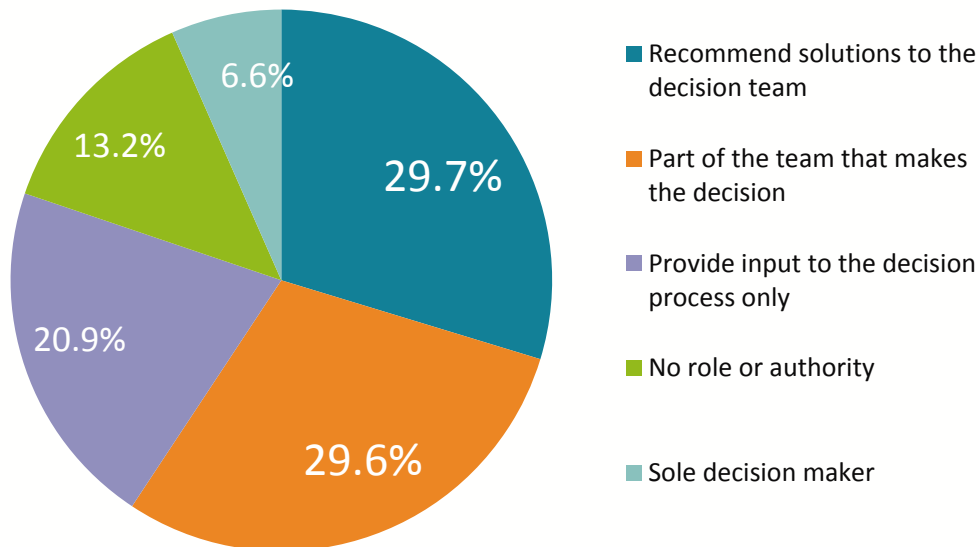
While it was a global survey, **over 60%** said they were based in North America.

It was well represented from every major vertical industry with the top 5 being: **Software, Financial Services/Insurance, Media, Retail, and Telecom.**



So Who Responded?

This survey provided a balanced perspective including respondents from the **smallest start-ups (27%)** to the **largest multi-national companies (27%)** including many in the Fortune 2000.



And, a majority of respondents – **almost 60%** had input or decision making authority on selecting which tools they are going to purchase.

Market Data



102 BILLION
APPS

DOWNLOADED IN 2013¹

#1 PRIORITY:
MOBILE

RETAILER TECHNOLOGY PRIORITIES²



2 OF 3 BANKS

PREDICT 100% OF THEIR CUSTOMERS
WILL USE MOBILE SERVICES BY 2017³



77
BILLION

ANTICIPATED REVENUE
GENERATED THROUGH
MOBILE APPS BY 2017¹

Market Data



ONLY 16%

CONSUMERS SURVEYED WILLING TO GIVE
A PROBLEMATIC MOBILE APP
MORE THAN ONE ATTEMPT¹



USERS EXPECT A MOBILE APP TO BE RESPONSIVE IN

3 SECONDS³

A MOBILE FRIENDLY
SITE MAKES

2 OF 3 USERS MORE LIKELY TO BUY

A COMPANY'S PRODUCT
OR SERVICE²



Make the RIGHT choices to drive the BEST results

1. Implement agile processes for iterative development and testing.
2. Choose tools that use automation.
3. Perform testing using real mobile devices.



Keynote's mobile testing platform allows QA, IT, and Developers to perform cloud-based testing and monitoring of any app or website on the largest library of real mobile devices.

CLICK [HERE](#) TO
LEARN MORE



With Keynote's Mobile Testing Platform You Can:

- Perform manual, functional testing of any mobile app or website on real mobile devices.
- Run automated functional test recording and playback.
- Perform cross-browser web testing.
- Assure quality of service with 24x7 monitoring of your mobile apps or websites in production.



Click image to view a demo!