MOBILE BANKING

Testing times for apps development

A SNAPSHOT ABOUT THE DEVELOPMENT OF MOBILE BANKING APPLICATIONS

The aim of this survey, conducted in February 2014, was to get a snapshot of how banks are managing the development lifecycle for mobile applications (both downloadable and web-apps), what their priorities are for this increasingly dominant channel, and how this informs their approach to the crucial area of testing.

This online survey received 104 responses from 74 different financial groups across 25 countries, with the UK having the largest number of respondents. Where there have been multiple responses from one group, they usually represent different divisions or country operations.

Respondents were senior management from the business or IT groups within banks. Sample job titles include:

● Chief information officer
● Chief marketing officer
● Electronic channels director
● Head of digital
● Head of direct channels
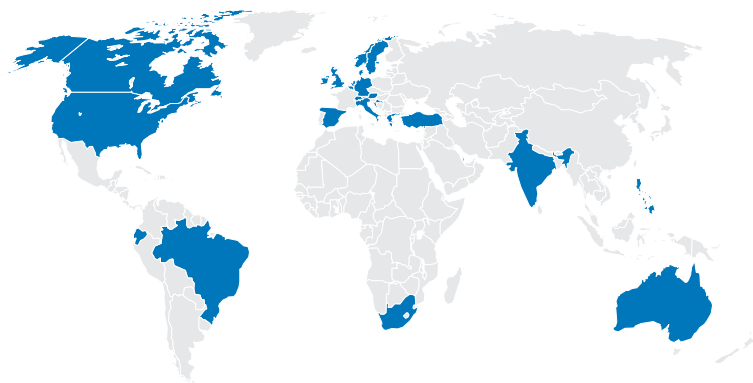● Head of innovation
● Managing director

Responses

104

Financial groups

74

Countries

25

MOBILE DEMAND IS EXCEEDING BANKS' EXPECTATIONS

The results of the survey show that banks are prioritising security and customer experience when developing their mobile banking apps. Banks are overwhelmingly looking for quality in their mobile applications. However there is evidence to suggest that banks should review prioritisation of platforms/devices as well as their sourcing strategy when it comes to testing.

There is also evidence that the growth in mobile banking usage by customers has exceeded even the banks' expectations. Mobile banking apps from a number of UK banks all experienced service outages in February 2014 caused by the high number of concurrent users checking balances and making transactions.

There are opportunities, given the growing importance of the channel, to invest in more efficient IT development practises, remove constraints and improve time to market.

- 55% of banks say that more than 5% of their current IT budget is allocated to mobile application development. 17% are spending more than 26%, which indicates there are a significant number of new apps in development.

- The ability to make small payments, whether to peer-to-peer or bill payment, is considered by banks to be a more important customer requirement than the ability to manage personal finances or make merchant payments. Only 15% of banks require their mobile banking products to be seen as innovative in the market.

- 45% of respondents to this survey say they are able to develop and launch a new mobile application within six months to one year, with 22% saying it would take more than a year. Those organisations that outsource all or part of their mobile application development were less likely to take more than one year to release an app.

- Only 22% of banks are outsourcing their mobile app testing, with an additional 10% making use of cloud-based testing services. In-house resource availability and productivity in general is seen as the greatest constraint to achieving better time to market. 65% of respondents rank in-house resource availability as having the most or second-most influence on time to market.

- Surprisingly, 10% of respondents say they do no prioritisation of testing efforts according to their customers' device usage, despite clear indications that managing device and operating system proliferation is the biggest challenge when it comes to ensuring a satisfactory customer experience.

A SPLIT OF OPINION ACROSS JOB ROLES AT VARIOUS ORGANISATIONS

There is a fairly even split between those respondents who see mobile application development as a critical part of overall digital strategy (46%) versus those who see it as a niche area within the wider IT department (40%). As the rapid rise in mobile banking users becomes recognised as the norm by banks' decision making levels, this will likely change.

Bank of America announced in October 2013 that its customers are logging into its mobile platform more than its online platform. Similar reports of a tipping point have emerged from banks in Sweden and New Zealand. As it becomes the dominant digital channel in more and more countries, mobile development must be considered strategically, and future surveys are likely to reflect this shift. The split in opinion on the subject in this survey carries across job roles and
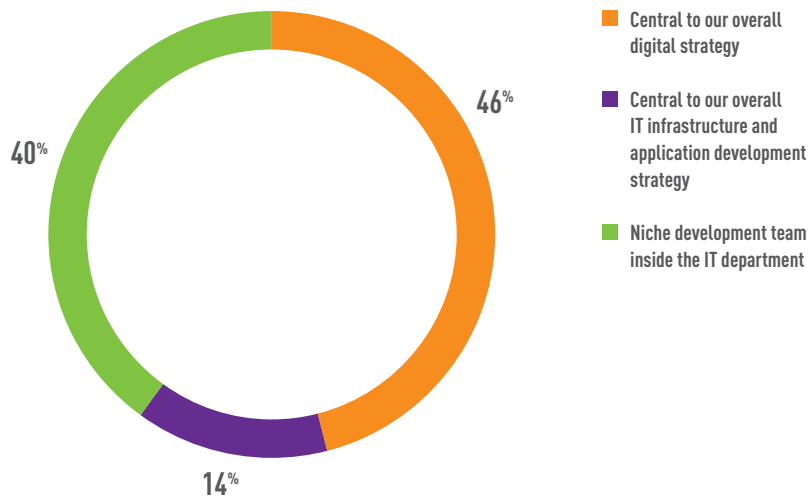
organisations. Some respondents directly involved in development or managing development teams feel they are making a critical contribution to overall strategy, while others see themselves in a niche. There is a similar mix of opinions across business unit leaders and heads of innovation and channels.

This result is quite consistent with other industries and is dependent on a number of factors: whether the IT organisational structure reflects the importance of the channel and the alignment of business and IT priorities, and what stage the bank is at in its product release schedule. A bank that has just released a major mobile application and is now in maintenance and upgrade mode will have a different view about current strategic objectives to one that is in the early stages of bringing a new mobile product to market.
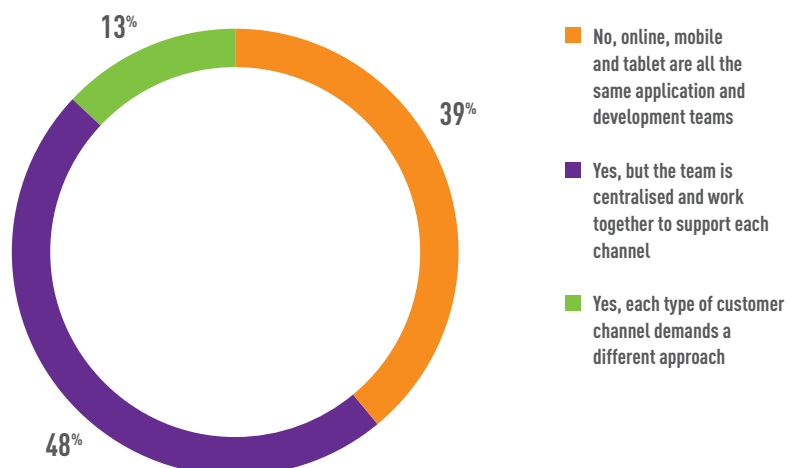
01

How would you describe the mobile banking application development inside your bank?

- Central to our overall digital strategy
- Central to our overall IT infrastructure and application development strategy
- Niche development team inside the IT department

46%

40%

14%

02

Do you have separate development teams for online, mobile and tablet banking applications?

- No, online, mobile and tablet are all the same application and development teams
- Yes, but the team is centralised and work together to support each channel
- Yes, each type of customer channel demands a different approach

13%

39%

48%

Mobile development: strategic or niche?

The structure of development responsibilities will often reflect the extent to which significantly unique features are being developed for the mobile channel. Where features mirror closely what is available in the existing online banking channel, it is more likely that mobile will be considered just a separate presentation layer to be dealt with by a common development team.

Current IT budget allocation towards mobile channel development also gives an indication of how many banks are actively developing new products. 55% of respondents say that more than 5% of IT budget is now allocated to this area. Where first and second generation mass-market retail banking applications have already been deployed by banks, development efforts have shifted to more niche mobile applications targeting particular customer segments, for example high-net-worth individuals.

However 45% of respondents say less than 5% of overall IT budget is going to mobile development. This suggests that these banks are just maintaining existing mobile apps with small feature upgrades and regression testing against new devices and operating systems.

Given the migration of customers to the mobile channel, investment is likely to rise from this level, probably at the expense of physical branch networks. Those banks that continue to spend less will have to ask themselves if they are doing enough to serve their customers via this increasingly preferred channel.
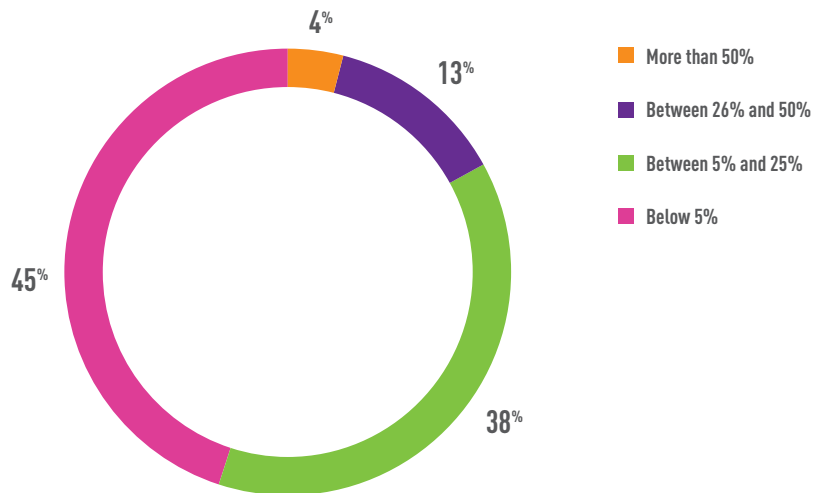
Mobile development is much more likely to be located in-house at corporate headquarters or a regional specialist centre, than offshored. The concept of regional specialist centres for development is more predominant in the UK, where 42% of banks employ this structure compared to 29% of the entire survey group.

The fact that 12% of respondents say their mobile development is offshore points to a growing maturity of mobile development within some organisations. Mobile channel responsibility and structures are moving away from being separate 'skunk works' projects internally, perhaps as part of innovation or other niche teams. They are becoming more integrated into longstanding structures and practises at the bank for development and product deployment. As this happens the number of banks using offshore resources or outsourcing to a captive or third party partner will likely grow.
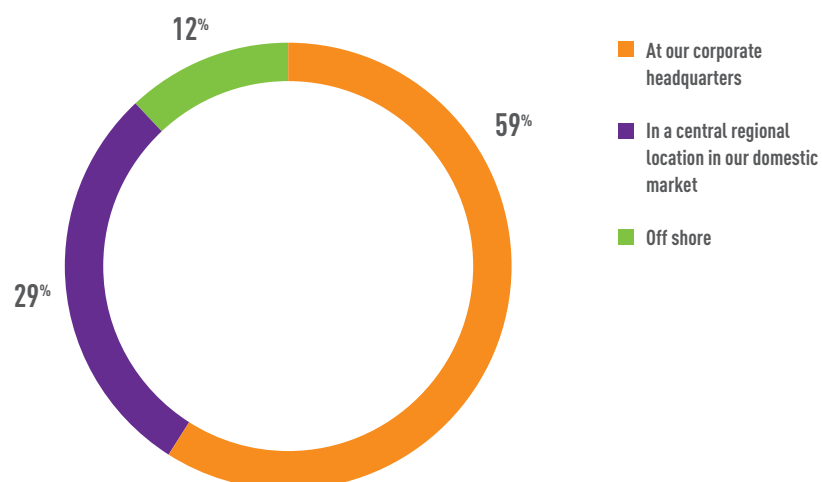
03

What percentage of your overall IT budget is dedicated to mobile development?

4%

13%

45%

38%

- More than 50%
- Between 26% and 50%
- Between 5% and 25%
- Below 5%

04

Where is your mobile development team located?

12%

59%

29%

- At our corporate headquarters
- In a central regional location in our domestic market
- Off shore

IT'S ALL ABOUT CUSTOMER SATISFACTION AND SECURITY

The ability to make small payments, whether to peers or to settle bills, is considered by banks to be a more important customer requirement than the ability to manage personal finances or make merchant payments. 51% of respondents said making small payments was the most or second-most important feature, compared to just 14% who attributed the same importance to merchant payment capability.

Only two respondents thought that customers considered it important to be able to explore retail banking products such as loans or mortgages from their mobile device.
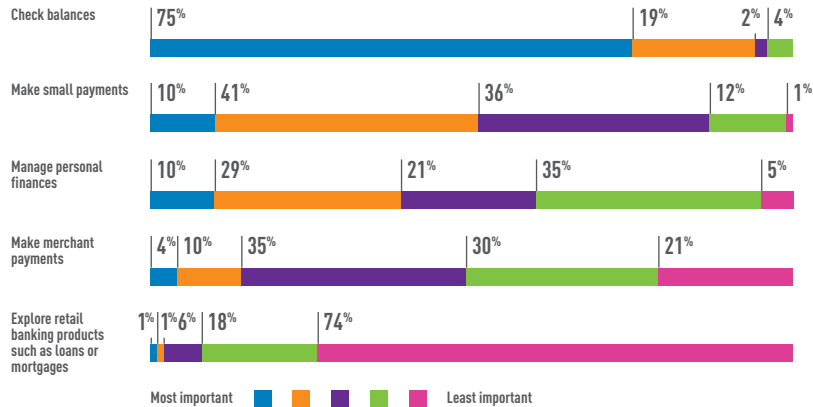
When it comes to what banks themselves see as the priority for their mobile banking apps, it's all about customer satisfaction and security. 38% and 31% of respondents respectively chose these as their highest priority. But across the other options provided in this question, opinion was fairly divided.

That was particularly the case for the question of whether it's important for a mobile banking app to have a reputational impact, causing the bank to be seen as innovative. 15% of respondents considered this the most important priority, compared to 38% who ranked it the lowest.
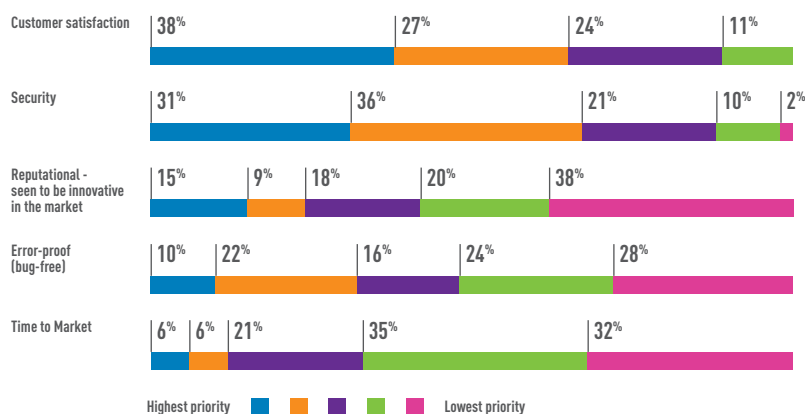
05

What do consumers consider most important in a retail banking application?

Check balances
75%   19%   2%   4%

Make small payments
10%   41%   36%   12%   1%

Manage personal finances
10%   29%   21%   35%   5%

Make merchant payments
4%   10%   35%   30%   21%

Explore retail banking products such as loans or mortgages
1%   1%   6%   18%   74%

Most important ▣ ▣ ▣ ▣ ▣ Least important

06

Which of these qualities in a mobile application do you see as a priority?

Customer satisfaction
38%   27%   24%   11%

Security
31%   36%   21%   10%   2%

Reputational - seen to be innovative in the market
15%   9%   18%   20%   38%

Error-proof (bug-free)
10%   22%   16%   24%   28%

Time to Market
6%   6%   21%   35%   32%

Highest priority ▣ ▣ ▣ ▣ ▣ Lowest priority

THE TRADITIONAL DEVELOPMENT APPROACH CAN SEEM QUITE GLACIAL

Given the fast pace of developments in the mobile world in terms of devices, operating systems and new app trends, the traditional development approach within many financial institutions can seem quite glacial.

Despite the existence of small, agile productive teams working to innovate in service delivery, wider IT policies such as scheduled quarterly releases can come into play.

Banks are right to take a thorough and somewhat cautious approach to new channel delivery in order to achieve critical security and reliability goals. Anecdotally, some banks that have taken their time to get it right have quickly moved from being perceived as behind the curve in launching innovative second generation downloadable and web-apps, to being industry leaders.

07

How long does it take, internally, to develop and launch a mobile banking application at your bank?

- ■ Less than 6 months
- ■ Less than 3 months
- ■ More than a year
- ■ 6 to 12 months

28%

5%

22%

45%
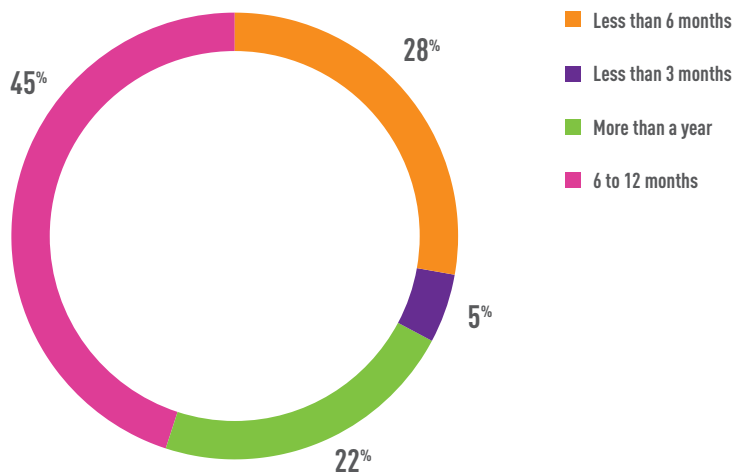
But a balance needs to be achieved with the increasing expectations of functionality from customers. If banks want to use mobile channel innovation and improved customer experience as a competitive differentiator, and means of attracting new customers, they can't be too slow with their development and release processes. They also have to bear in mind the additional development costs that can arise when the mobile platforms are changing much more frequently than the bank is releasing new features and apps.
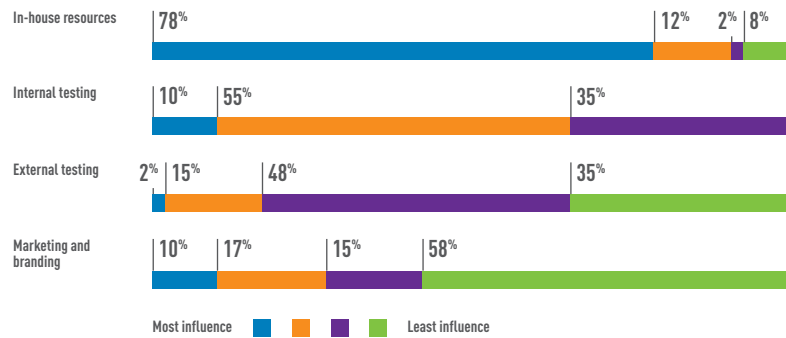
45% of respondents to this survey say they are able to develop and launch a new mobile application within six months to a year, with 22% saying it would take more than a year. UK banks were more likely than their global peers to take more than a year (32% compared to 22% for the whole group).Those organisations that have

an offshore component to their mobile application development (Q4) were less likely to take more than one year to release an app (8% compared to 24% for those that develop purely in-house.) Similarly, of those that outsource testing (Q11) only 8% took that long.

In-house resource availability and productivity in general is seen as the greatest constraint to achieving better time to market. With many projects within the wider IT organisations competing for funding, business analysts, developers and managers, this is to be expected. But internal testing specifically can also be a bottleneck. 65% of respondents ranked this as having the most or second-most influence on time to market.

08 What most influences the development time?

In-house resources

| 78% | 12% | 2% | 8% |

Internal testing

| 10% | 55% | 35% |

External testing

| 2% | 15% | 48% | 35% |

Marketing and branding

| 10% | 17% | 15% | 58% |

Most influence ⬛ ⬛ ⬛ ⬛ Least influence

THE USE OF CLOUD SERVICES FOR TESTING IS UNDERUTILISED

Security is the most important consideration for testing of mobile applications for banking because the stakes are so high for customers, but also for the banks who risk more than just reputational damage if their apps are found to be insecure.
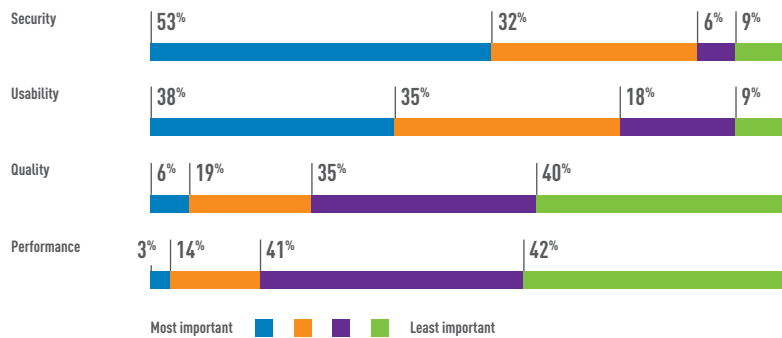
Despite this, in January 2014 a security analyst report found that 40% of the iOS mobile banking apps tested contained data transport mechanisms that were vulnerable to 'man in the middle' attacks. This demonstrates the need to extend testing beyond the pre-launch process, and consider a testing lifecycle for mobile products that takes into account not only new operating systems and devices, but also new security vulnerabilities as they emerge.

The use of cloud services for testing is underutilised. Just 10% of survey respondents are taking this approach to manage server capacity cost effectively, create test environments quickly when required and benefit from more comprehensive device and operating coverage. Interestingly, UK banks were twice as likely as their global peers to be using cloud services in this way. This is a growth area, with more and more banks worldwide expected to look for ways to make the diverse mobile ecosystem easier to keep up with and test against.
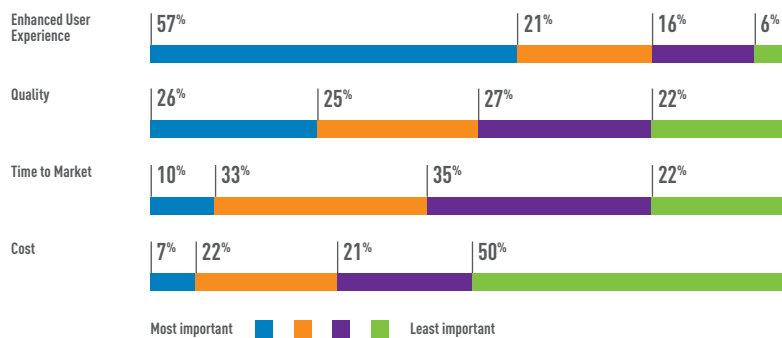
09

In terms of testing what aspects of mobile banking applications are very important to you?

|	Most important			Least important
Security	53%	32%	6%	9%
Usability	38%	35%	18%	9%
Quality	6%	19%	35%	40%
Performance	3%	14%	41%	42%

Most important ■ ■ ■ ■ Least important

10

What drives your test strategy when testing the mobile banking application?

	Most important			Least important
Enhanced User Experience	57%	21%	16%	6%
Quality	26%	25%	27%	22%
Time to Market	10%	33%	35%	22%
Cost	7%	22%	21%	50%

Most important ■ ■ ■ ■ Least important

11

What is the strategy for Test Infrastructure (device, hardware and tools) when testing your mobile banking applications?

10%
22%
68%

■ Cloud-based/Device Cloud
■ In sourced
■ Out sourced

17
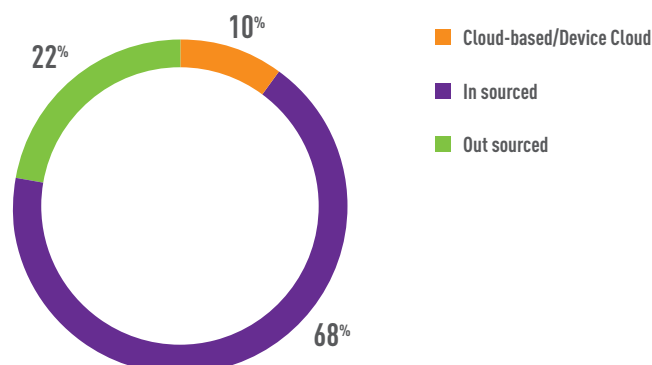
PROLIFERATION OF OPERATING SYSTEMS IS THE MAJOR CHALLENGE

The pace of change in the mobile world is dramatic, even compared to the wider web and IT sector. For nearly half (49%) of respondents, supporting multiple operating systems and versions is seen as the major challenge for testing. When you consider that apps and web-apps in the market today will likely have to support at least Apple operating systems from iOS5 to iOS7, and Android 2.2 to 4.4 it's quite clear why this is a headache.

And this is without taking into account the wide range of device manufacturers and specifications, from barely smart phones, through 'phablets' to hi-spec tablets.
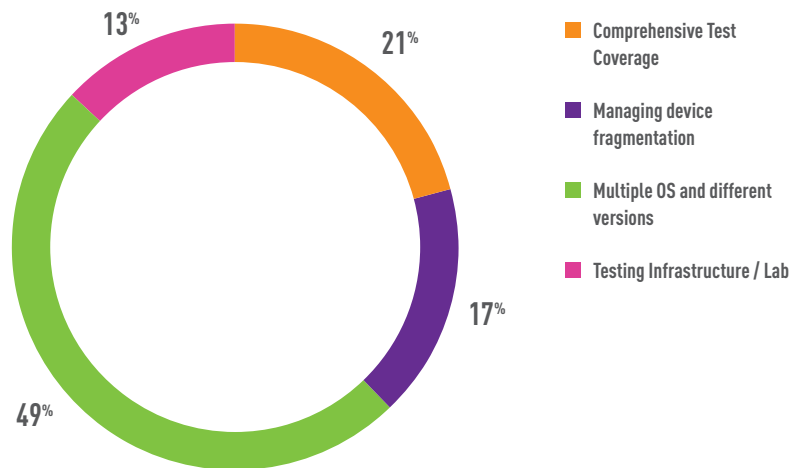
For downloadable rather than web apps, there is also the process of releasing to multiple app stores to take into account.

Because it is not feasible to test on every mobile device that a customer might try to use, it is important to always have current data to show what your customers are actually using, and prioritise testing efforts to these devices and operating systems. Surprisingly, 10% of respondents say they do no such prioritisation of testing efforts.
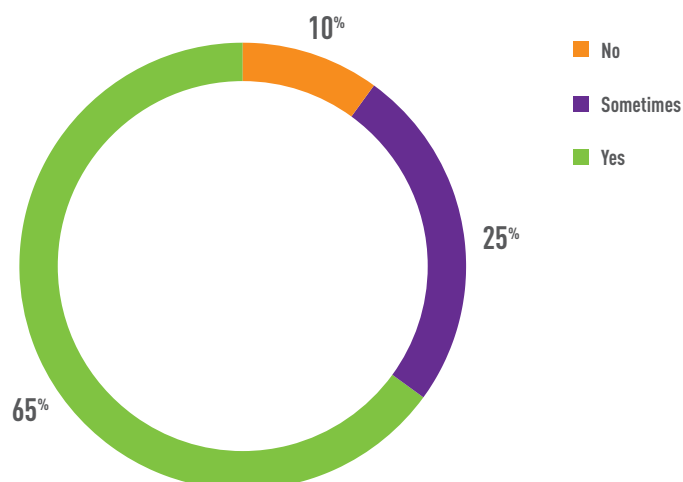
12

What do you believe is your key challenge during testing your mobile banking applications?

13% 21%

- **Comprehensive Test Coverage**
- **Managing device fragmentation**
- **Multiple OS and different versions**
- **Testing Infrastructure / Lab**

17%

49%

13

Do you prioritise testing on devices, based on what your customers are using?

10%

- **No**
- **Sometimes**
- **Yes**

25%

65%

Perhaps they are presuming that covering iOS and Android is enough, without considering the multiple versions and device capabilities within this duopoly.
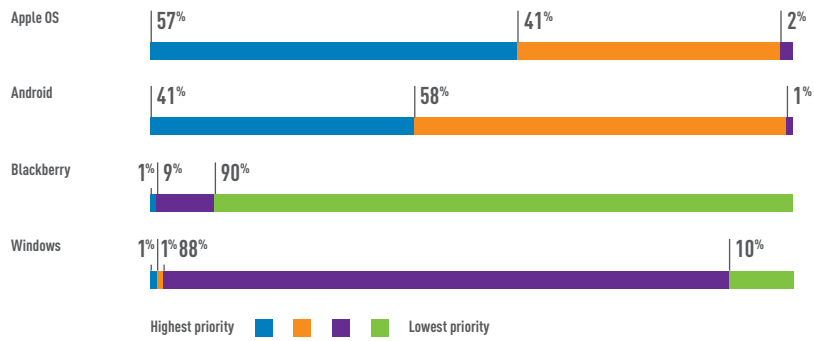
That said, the top of the banks' priority ordering for target mobile operating systems does closely mirror actual market share today. According to Netmarketshare figures for January 2014, iOS accounted for 54.5% and Android 34.6% of the market.

90% of respondents selected Blackberry as the lowest priority. While current market share for Blackberry sits at 1.5% compared to Windows 0.5%, they are moving in opposite directions. Banks obviously believe that Microsoft's deep pockets and improved device shipment rates after its Nokia tie-up are more likely to see it carve out some kind of ongoing existence in the mobile ecosystem.

14

Please rank devices in order of priority

Apple OS
57% | 41% | 2%

Android
41% | 58% | 1%

Blackberry
1% | 9% | 90%

Windows
1% | 1% | 88% | 10%

Highest priority ■ ■ ■ ■ Lowest priority

5

ACTIONS
EVERY
BANK
SHOULD
CONSIDER

Monitor and evaluate

1 Monitor mobile banking usage and evaluate your current roadmap and digital strategy to ensure the channel is given the attention your customers deserve. This includes making sure that existing IT and business processes are aligned toward your strategy, and are not throwing up obstacles to satisfying and delighting mobile banking customers.

Outsourcing

2 The survey findings show that doing all mobile development in-house takes longer. Review the options for outsourcing and assess the parts in the process that may be suitable for offshoring.

Customer experience

3 Customer experience remains the top priority. Therefore gather current data to understand what your customers want from your mobile channel, and what devices they are using, and prioritise testing efforts to these devices and operating systems.

Cloud technology

4 Mobile device and operating system combinations will continue to proliferate. Companies should consider adopting cloud technologies to reduce time and cost, and increase development efficiency and coverage of the mobile banking user base.

Agile testing

5 Maintain an agile testing capability that enables you to respond quickly to emerging security threats, quickly evaluate whether your apps are exposed, and escalate to mobile development teams for a fix.

ABOUT

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We are making purposeful investments to ensure market leadership and to create a distinctive market position - most recently acquiring ServiceMesh, a leading edge cloud management platform; partnering with Amazon Web Services to establish a Cloud Centre of Excellence, and with HCL to expand our global capability in applications modernisation. All are designed to accelerate the business value from technology investments for our customers.

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