

Appcelerator / IDC

# Q2 2012 Mobile Developer Report

A platform interest survey of 3,632 Appcelerator application developers from May 11-18, 2012



Survey Finds Apple Leading the Charge in the Enterprise;  
Developers See Android as a Consumer Opportunity and  
Express Interest in Windows 8, Cloud Continues Momentum



# Q2 2012 Mobile Developer Report

## Summary

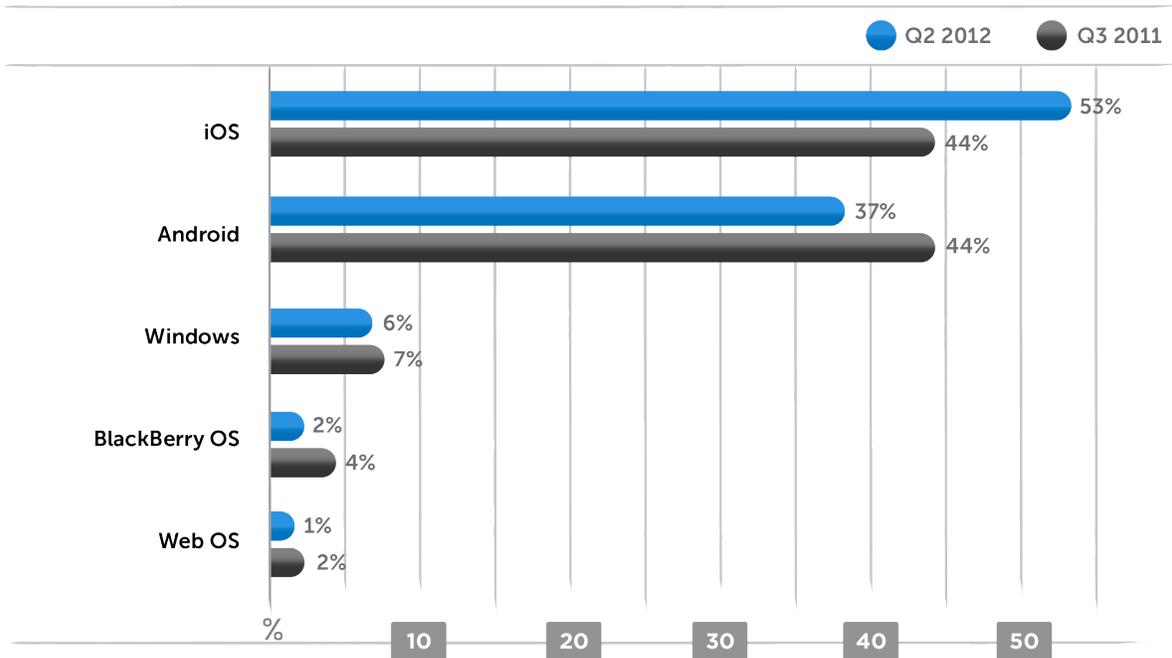
Appcelerator and IDC surveyed 3,632 Appcelerator Titanium developers from May 11-18, 2012 on their plans and development priorities, as part of the ongoing Appcelerator/IDC Mobile Developer Survey Report Series. The key theme that emerged in the Q2 2012 survey is the changing dynamics in the mobile enterprise app space, which are discussed throughout this report.

## Apple iOS Opens Dramatic Enterprise Lead over Google's Android

The most significant finding in the Q2 2012 Developer Survey is Apple opening a dramatic 16% lead over Google's Android as far as which OS will win in the enterprise marketplace, with 53.2% of developers saying iOS will win vs. 37.5% saying Android will win. This is a very significant change over only three quarters: in Q3 2011, developers viewed iOS and Android in a dead heat at 44% each. Appcelerator and IDC attribute this change to the growing strength of Apple in the enterprise, especially considering several factors: the popularity of the iPad; frequent reports of Android malware; enterprise challenges in dealing with Android fragmentation; and resultant anecdotal reports of enterprises re-evaluating widespread Android deployment outside of particular business vertical implementations like M2M.

### Which OS is best positioned to win in the enterprise long term?

#### Q2 2012 vs. Q3 2011



N=3098 responses

Source: Appcelerator / IDC - 05/2012



## Android Interest Levels Stabilize

However, the Q2 2012 Survey Report contains some good news for Google. The noticeable erosion of developer interest in Android over the last four quarters, noted by Appcelerator and IDC in the Q1 2012 report, seems to have been arrested. The huge growth in Android device shipments—especially handsets—and more affordable price points are outweighing steadily increasing Android ecosystem fragmentation and monetization challenges.

## Microsoft Competitive on Entry into the Enterprise

Developers are cautiously optimistic about Windows 8 tablets, and find Microsoft's Metro UI especially compelling. Therefore a key dynamic to watch going forward will be Microsoft's opportunity to eclipse Android as the Number Two OS priority for mobile enterprise app developers, especially given Microsoft's strengths in the enterprise market through Office and Windows. This Survey Report also shows the path forward for Microsoft and its software partners in terms of engaging developers to port ARM-based apps for smartphones to x86-based PC-like architectures such as Windows 8 tablets.

## Developers Committed to the Cloud

Finally, mobile developers remain strongly committed to the cloud. Apple's iCloud and Amazon's cloud platform offerings are at the top of surveyed developers' plans. Microsoft's Azure trails, with only tepid interest. This again underscores the challenges facing Microsoft in terms of translating its enterprise strengths in Azure, Windows, and Office into the mobile space.

Key findings of the Q2 2012 Appcelerator/IDC Mobile Developer Report include the following:

- iOS has opened a dramatic 16% lead over Android in the mobile enterprise apps space. Developers now think iOS will win over Android in the enterprise (53%-37%); in Q3 2011 iOS and Android were tied at 44%-44%.
- Android has arrested its decline in developer interest. After a noticeable erosion of developer interest over the last year, developers' Android handset "very interested" levels stabilized in Q2 2012 compared to Q1 2012, and Android tablet "very interested" levels ticked up 2.9%.
- Android's perceived weakness in the enterprise is a key Microsoft opportunity. Developers' dropping interest in Android in the enterprise is a key opportunity for Microsoft to displace Android as the Number Two mobile OS in the enterprise as Microsoft pursues its aim of becoming Number One.
- Developers are cautiously optimistic about Windows 8 tablets. 33.3% of developers say that they are very interested in Windows 8 tablets. This is an important data point for Microsoft to leverage by translating its strength in the enterprise into the mobile OS space.
- Developers have distinct needs if they are to port ARM-based mobile apps to x86-based devices like Windows 8 tablets. These needs include: the ability to support consistent user experiences; the ability to reuse code as much as possible; and tools to assist porting between architectures.
- Developer interest in Windows Phone 7 phones dropped sharply. WP7 "very interested" levels dropped from 37.0 % in Q1 2012 to 25.0% in Q2 2012. This was not unexpected given disappointing WP7 handset sales to date and Nokia's recently reported competitive challenges.

- The three data points immediately above demonstrate opportunity and challenges for Microsoft. Developers remain interested in Microsoft's announced Windows OS initiatives, but interest wanes rapidly in light of weak sales.
- Mobile developers remain committed to the cloud. 83% of all developers plan to use cloud services, a percentage essentially identical to Q2 2011 when 84% reported the same.
- iCloud and Amazon lead in developers' cloud platform plans. 50.4% of developers plan to work with iCloud, and 49.1% with Amazon, but only 18.6% plan to work with Microsoft's Azure.
- Push notifications, social integration, and authentication are the top three planned uses for cloud services. These relatively simple uses of the cloud by mobile developers highlight how nascent the mobile cloud still is as of Q2 2012.

## iOS Opens Dramatic Lead over Android in the Enterprise

The most significant finding of the Q2 2012 Appcelerator/IDC Mobile Developer Survey Report is that Apple's iOS has opened up a dramatic 16% lead over Google's Android in developers' views as to which OS will win in the enterprise, at 53%-37% respectively. This is an important development, as the last time Appcelerator and IDC asked this question of developers, in Q3 2011, developers were evenly split at 44%-44%.

Digging deeper into the results, we find remarkable consistency among both business-app-focused developers and consumer-app-focused developers. Among business app developers, the split is 53.3%/35.5% iOS over Android. Among consumer app developers, the split is 53.6%/37.9% iOS over Android.

Which OS is best positioned to win in the enterprise long-term?

### Apple Owns the Enterprise



**53.3%**  
of business app  
developers prefer  
iOS over Android (35.5%)



**53.6%**  
of consumer app  
developers prefer  
iOS over Android (37.9%)

N=3098 responses

Source: Appcelerator / IDC - 05/2012



There are a number of reasons why such a dramatic shift has occurred in such a short period of time. They include:

- Increasingly high levels of Android fragmentation and consequent increasing complexity of enterprise device and software management
- Frequent stories of Android malware, compared to relatively few of iOS malware, which creates concerns among enterprise IT management
- Anecdotal—but increasingly consistent—reports of IT managers re-evaluating potential enterprise-wide support for Android beyond simpler implementations like email access or M2M
- The success of the Apple iPad in a number of industry verticals, which creates a halo effect for iOS devices including iPhone in the enterprise

Appcelerator and IDC note, however, that the mobile enterprise market remains quite fluid, and the full effect of Google's recently-completed acquisition and integration of Motorola Mobility—and its IT management and support assets—has not been fully felt in the market. Of particular interest going forward will be enterprise reaction to, and potential adoption of, Windows-based mobile devices. As Microsoft Windows 8-based tablets begin to be introduced to the market in the second half of 2012 and the first half of 2013, there is the potential to dramatically change the current trajectories of mobile OSes in the enterprise.

## Android Arrests its Recent Erosion in Developer Interest

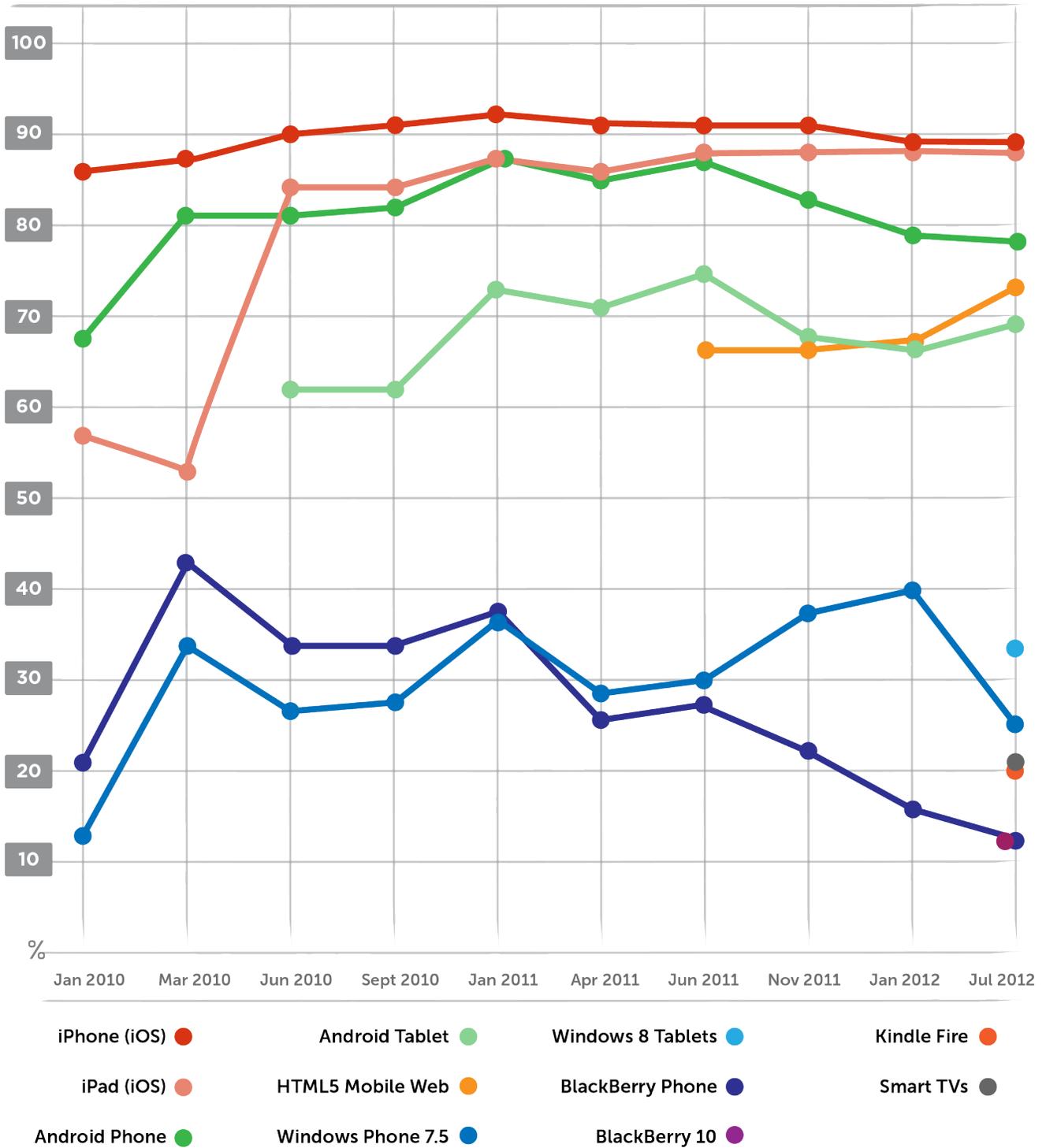
Another significant development in Q2 2012 is that the recent erosion in developer interest in Android appears to have been arrested. Appcelerator and IDC noted in the Q1 2012 Survey Report that the level of developers reporting that they were "very interested" in developing for both Android phones and tablets had shown noticeable erosion over the course of 2011, especially in the last three quarterly Appcelerator/IDC surveys. However, in Q2 2012 this level seems to have stabilized. In Q2 2012 78.1% of developers report that they are "very interested" in developing apps for Android phones, compared to 78.6% who said the same in Q1 2012. And in Q2 2012 68.8% of developers report that they are "very interested" in developing for Android tablets, compared to 65.9% who reported the same in Q1 2012.

Appcelerator and IDC believe that there are several key reasons why this erosion stopped in Q2 2012, including:

- Enormous growth in Android device shipments is largely outweighing developer concerns about fragmentation.
- Lower Android device price points vis-à-vis iOS are creating opportunities to reach broader audiences.
- Rapid Android handset growth in developing markets is demonstrating the importance of Android for global app strategies.
- The recent success of Amazon's Android-based Kindle Fire has demonstrated market opportunities for lower-priced and smaller tablets.
- The integration of Android Market into Google's now broad "Google Play" set of offerings can provide network effects analogous to Apple's iTunes and App Store.

'Very interested' in developing for each platform

2010-2012 Comparison: iOS Continues its Reign at the Top



N=3783 responses

Source: Appcelerator / IDC - 05/2012



## Microsoft's Competitive Opportunity—and Challenge

The Q2 2012 Appcelerator/IDC Mobile Developer Report highlights both new competitive opportunities and challenges for Microsoft. On the opportunity side, Android's erosion among developers vis-à-vis iOS, discussed earlier in this report, presents opportunities for Microsoft. Android's inability to fully develop its enormous enterprise potential as late as mid-year 2012 underscores its potential vulnerabilities in the enterprise. The opportunity to displace Android as the Number Two mobile OS in the enterprise—and potentially become Number One—is clearly there for Microsoft. This is a huge opportunity for Microsoft given that it has not yet been able to fully translate its enormous strengths in the enterprise, including Windows, Office, and Azure, into the mobile marketplace.

Developers are expressing cautious optimism towards Windows 8 tablets, with 33.3% reporting that they are very interested in developing for this device class. This is an objectively strong number for a device class that is not yet commercially available. Yet Appcelerator and IDC note that the challenge for Microsoft and its OEM partners will be to sell sufficient quantities of Windows 8 tablets to translate this nascent developer interest into strong and compelling mobile app offerings through widespread developer engagement.

Also noteworthy in the Q2 2012 Survey Report is a very sharp drop in interest levels in Windows Phone 7 devices, from 37.0% of developers reporting that they are "very interested" in developing apps for WP7 in Q1 2012, to 25.0% reporting the same in Q2 2012. Appcelerator and IDC believe that this is a result of somewhat disappointing WP7 handset sales to date and Nokia's widely reported competitive challenges.

### What factors would most increase your interest level in porting your apps from ARM-based devices to x86-based devices?

#### 6 Ways to Help Developers Port Their Apps to x86-Based Devices

# 65%

of developers want the ability to provide consistent user experiences across smartphones, tablets, and PCs

- 50.2%** The amount of code reuse between the two architectures
- 40.1%** Tools to assist in porting my app between the two
- 35.5%** The overall ease of adapting apps between the two
- 25.0%** Financial incentives to port my app from ARM-based devices
- 25.5%** Assurance that x86-based devices perform just as well as ARM-based devices

N=3335 responses

Source: Appcelerator / IDC - 05/2012



## A Strategic Path Forward for Microsoft's Tablet Strategy

The Q2 2012 Report also shows a strategic path forward for Microsoft to better engage mobile app developers in its tablet strategy. That strategy is to provide a clearer path and tools to help developers port their apps for ARM-based devices (the common chipset architecture for most smartphones as well as the iPad) to x86-based devices (the common chipset architecture for most PCs). Microsoft has previously announced a two-track Windows 8 device strategy: Windows 8 tablets based upon x86 architectures (generally aimed at business users), and Windows 8 RT tablets (generally aimed at consumers) that will run on ARM-based architectures.

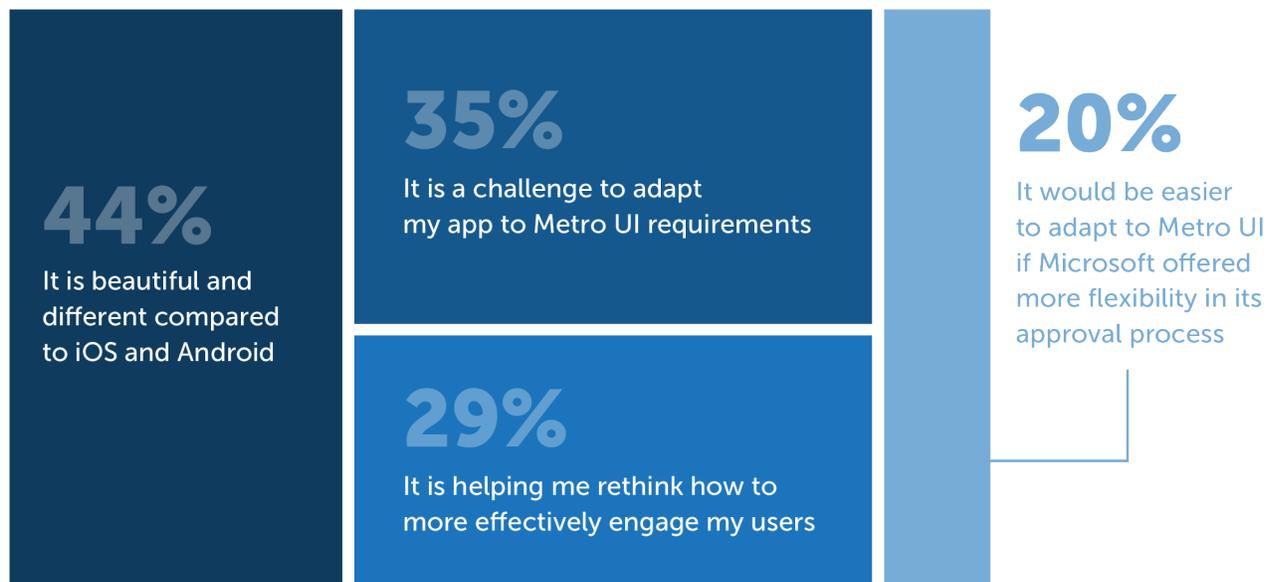
For most mobile app developers, it is believed to be much easier to port from one ARM-based OS (like iOS or Android) to another ARM-based OS (like Windows RT), and significantly more complex to port from an ARM-based OS to an x86-based OS implementation like Windows 8. But developers are also very clear on what they need to help them port from ARM-based devices to x86-based devices: the ability to provide consistent app user experiences and to efficiently reuse code.

## Microsoft's Strategic Differentiation Opportunity With Metro UI

Appcelerator and IDC also note that Microsoft has a strategic differentiation opportunity with Metro UI. 43.8% of developers find it beautiful and different compared to iOS and Android, and 28.5% of developers report that that is helping them rethink how to engage more effectively with their users. The ability to provide new and differentiated app experiences with Metro UI is something that Microsoft and its OEM partners should more fully explore with app developers, especially highlighting early best practices.

### What are your perceptions of Microsoft's Metro UI?

#### Metro UI is Microsoft's Strategic Differentiator



N=2395 responses

Source: Appcelerator / IDC - 05/2012



## The Mobile Cloud's Silver Lining

In this quarter's survey, we continued to explore the utilization of both public and private cloud services for mobile application developers. Developers' responses were remarkably consistent with last quarter's survey results in the level of interest in integrating cloud services into their mobile applications, with fully 83% of those developers (84% in last quarter's survey) saying that they were planning to connect their mobile applications to cloud-based services like Appcelerator Cloud Services (ACS) within the next year.

We believe this high level of interest in connecting mobile apps to cloud services is due to a few factors:

- The difficulty in developing back-end server-side capabilities, particularly for developers focused on client-side activities
- The complexity of the connections that a modern mobile app requires
- The wide availability to mobile app developers of compelling services like push notifications

Of those cloud services that mobile app developers envision utilizing, push notifications remains the highest rated, with 68% of developers interested in that service for their mobile apps, though social integration at 61% is a close second. The top cloud-based services that developers are interested in are:

Which of the following cloud services are you interested in connecting your applications to?

### Top Cloud Services

	<b>1. Push Notifications</b> 67.8%		<b>8. Custom Objects</b> 33.2% (fields)
	<b>2. Social integration</b> 60.0%		<b>9. Clients</b> 32.4%
	<b>3. Users</b> 48.6% (user and password admin)		<b>10. Photo collections</b> 31.8% (storage)
	<b>4. Photos</b> 38.6%		<b>11. Chat</b> 30.3%
	<b>5. Status updates</b> 37.2%		<b>12. Check-ins</b> 29.2%
	<b>6. Ratings, reviews, likes</b> 36.0%		<b>13. Posts</b> 28.5%
	<b>7. Places</b> 35.0% (points of interest)		<b>14. Email templates</b> 22.7%

N=3180 responses

Source: Appcelerator / IDC - 05/2012



When developers were asked about Platform as a Service (PaaS) providers, and their preference for connecting their mobile applications to them, 70% answered the question and showed a clear preference for Apple's iCloud service and Amazon's service (50% and 49% respectively). Products from other vendors, such as Microsoft's Azure and VMware's Spring, had modest showings; both had fewer than 20% of developers expecting to connect their apps. Clearly Apple's and Amazon's pricing strategies, engagement, and focus on delighting the developer pay dividends.

## App Stores

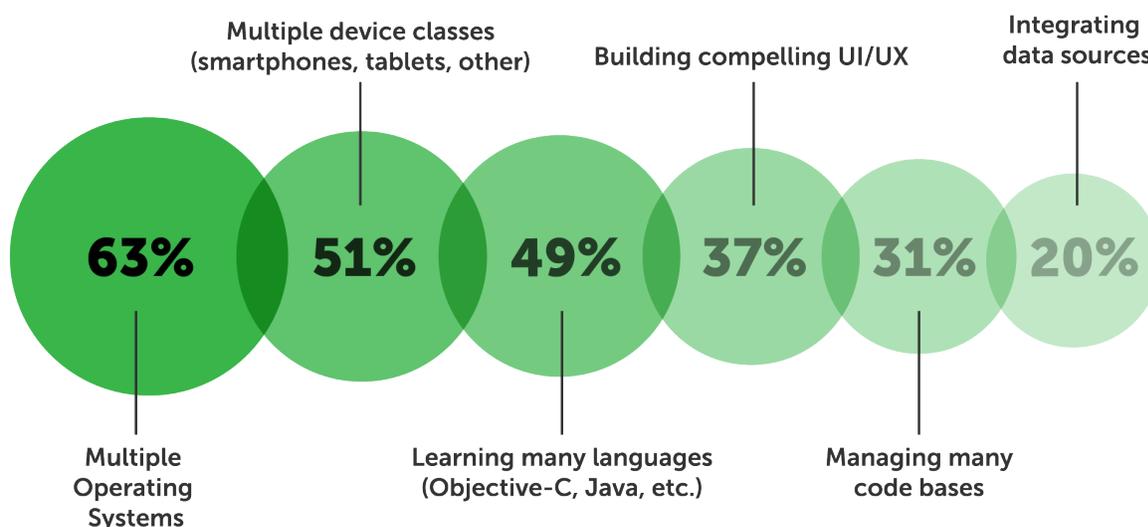
Underscoring their interest levels in the various operating systems and platforms, developers surveyed expressed significant interest in deploying their applications to both the Apple App Store and the Android marketplace (a.k.a. Google Play). 84% expect to launch an application on the Apple store, and 78% expect to launch one on Google Play. Surprisingly, though, 21% of developers expect, in the next year, to launch an application on Microsoft's Windows Phone Marketplace application store. Considering that 91% of developers surveyed had not yet launched an application on the Microsoft store, this points to the cautious optimism that developers are showing about the Microsoft ecosystem and the devices to come.

## Big Challenges for Developers

We continue to survey developers about their biggest challenges when developing mobile applications. Due to the rapidly shifting environments, the popularity of some platforms over others, and highly disparate methodologies (languages, SDKs, code bases, etc.) of client-side development, server-side complications continue to be problematic for even the most seasoned developers. When asked about the biggest challenges they face, developers are very clear that

### What are your biggest challenges as a mobile app developer?

#### Many Operating Systems and Devices Pain Developers



N=3734 responses

Source: Appcelerator / IDC - 05/2012



building applications for multiple operating systems remains the number one issue, with fully 63% of mobile developers citing that as a problem they face. As we continue to see shifts in the landscape of mobile operating systems, including the emergence of Microsoft, the decline of RIM, and the ongoing power struggle between Android and iOS for top mindshare among developers, this is not an issue likely to be remedied soon.

Close on the heels of the multiple-OS problem in developers' minds are issues very much related to it. 51% of mobile application developers are struggling with the variety of device classes (tablets, smartphones, smart TVs) they have to build mobile applications for in order to reach the largest audience and enable cross-device functionality. Additionally, 49% of developers struggle with the many OS-specific languages they have to learn in order to develop in the native SDKs. The ability to build applications that are both multi-OS and multi-device-class, all from the same code base, remains one of the primary reasons mobile app developers utilize platforms like Appcelerator's Titanium. And rounding out the top four issues that a mobile developer faces, 36.9% cite building compelling UI/UX as a real issue in mobile application development.

## Two-Thirds of Developers use Multi-Platform tools

According to the Q2 2012 survey, 66% of mobile application developers use multiple platform development tools to build apps. The primary motivations for using these tools are the sheer number of mobile operating systems that a mobile app must address and the fragmentation of those individual OSes. The number of apps that developers are building for either their employees or their customers amplifies the value of these tools.

## Concluding Thoughts

The results of the Q2 2012 survey show significant shifts in developer intentions and focus, and lay the groundwork for the coming operating system battles. The renewed attention to enterprise applications shows that the pendulum between consumer and enterprise applications is once again swinging to the enterprise side after spending a few years on consumer enablement applications.

Apple's significant lead, reflected both in developer mindshare for those enterprise apps, and in the enterprise adoption of iOS devices, clearly shows the weakness of Android in the enterprise, primarily because of security and management issues on that platform. We expect this focus on enterprise applications and enterprise investment in mobile to continue and accelerate over the next few years as more and more enterprises embrace the transformative power of mobile apps.

Developers' optimism for Windows 8 tablets and phones sets up what will be the next battle among operating systems, and perhaps a reshuffling of the top three OSes for mobile devices. BlackBerry continues to fade from developer mindshare; Android lines up with the consumer market; Apple dominates mobile in the enterprise; and Windows searches for its place. With seismic shifts like these and the numerous issues developers face with supporting multiple operating systems, requirements for cross platform development will continue to play a central role in this rapidly expanding mobile app space.

# About the Appcelerator / IDC Q2 2012 Mobile Developer Report

Appcelerator and IDC surveyed 3,632 Appcelerator Titanium developers from May 11-18, 2012 on their plans and development priorities. Developers were individually invited from Appcelerator's user registration database to complete a web response survey. A raffle for a free iPad 2 was made and only one response per user was allowed. Respondents' answers were given freely with no other incentive or compensation for their participation.

Appcelerator developers represent a uniquely broad spectrum of backgrounds. Thirty-one percent of respondents classify themselves as independent developers, with the other 69% coming from businesses. Appcelerator has a global audience, with 36% surveyed stating they live in North America, 38% in Europe, and 26% throughout the rest of the world. Note also that Appcelerator developers come from a web development background, so although they build applications with Appcelerator Titanium, they are used to working across multiple platforms.

## About Appcelerator



Appcelerator is the leading enterprise-grade, cross-platform development solution on the market today, with over 350,000 mobile developers using its software to power over 40,000 cloud-connected mobile, desktop, and web applications used on 50 million devices every day. The company's flagship offering, Appcelerator Titanium, is the only mobile cloud platform to enable fully native, cross-platform mobile app and HTML5 web development, from a single codebase. Appcelerator's customers can leverage their existing skills and open, industry standard technologies to decrease time-to-market and development costs, increase customer adoption and revenues, and enjoy greater flexibility and control. For more information, please visit [www.appcelerator.com](http://www.appcelerator.com).

## About IDC



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