

# APP DEVELOPMENT STATE OF THE UNION

Mobile momentum continues,  
but desktop and web remain enterprise priorities



# SUMMARY

Telerik surveyed 2,200 developers and IT executives between July 15 and August 1, 2014 to determine the “App Development State of the Union.” The survey’s objective was to determine priorities and pain points surrounding application development—from desktop to mobile—as well as examine developer preferences, methodologies and approaches.

Three findings stand out clearly. First, while mobile is an obvious priority to enterprise decision makers, widespread adoption is slower than anticipated; desktop and web remain their focus areas. Second, developers are not widely collecting end-user feedback to optimize the development process. Third, despite being tasked with heavy workloads, the majority of surveyed developers are not leveraging currently available technologies, such as cross-platform and multi-platform solutions to maximize productivity.

# KEY FINDINGS

- While mobile app development is routinely described as a priority, in both current app development and deployment, adoption is slowly growing. Desktop remains a key priority for the next 12-18 months.
- More than half of respondents are not yet developing for mobile, due to current workload restraints.
- Of those developing for mobile, the majority are focused on Web/HTML5, leaving native and hybrid app development neck-and-neck in terms of adoption.
- Open source technology continues to be an important aspect of the development process, leveraged in more than 80 percent of development projects.
- Respondents seldom collect end-user feedback about app development priorities, though users are involved in app creation more than ever before.
- When asked about Backend as a Service (BaaS), 36% were unfamiliar with the technology and 42% weren’t using it. Yet, 68% of apps created today require real-time data.

# SURVEY RESPONDENT ANALYSIS

Respondents were a mix of developers, dev managers and dev team leads (59%); architects and analysts (12%), C-level executives (10%) and more. Most industries were represented: financial services, healthcare, government, retail, etc. The individuals work for organization sizes ranging from startup (29%) to enterprise/global enterprise (29%), with the largest respondent segment falling within small-to-mid-sized business (SMB) (42%).

There was wide geographic diversity among survey respondents, with 31% coming from North America, 36% from Europe and 23% from Asia Pacific. The survey was available to both the general public, and to users of Telerik tools and technologies.

# MOBILE'S SLOW GROWTH TRAJECTORY

Mobile application development is where the market is going. The media writes about the space daily, the analyst community makes bold projections for its growth potential and new vendors claim the mantle of “mobile application development leader,” seemingly every week.



**Based on anecdotal evidence, about 85% of enterprises have built fewer than five mobile apps, with 15% or so having never built any apps at all.”<sup>1</sup>**

Van Baker, Gartner Analyst

While the world knows that mobile app dev will only grow in importance, the reality of today demonstrates a slow growth trajectory. Developers are overwhelmed with projects focusing on a plethora of other IT needs. During a recent interview, Gartner analyst Van Baker stated, “Based on anecdotal evidence, about 85% of enterprises have built fewer than five mobile apps, with 15% or so having never built any apps at all.”<sup>1</sup>

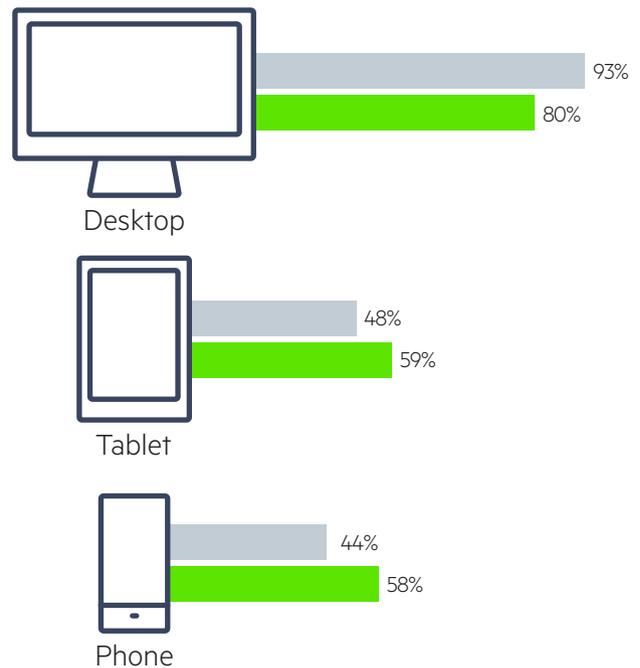
Baker’s commentary is spot on with Telerik survey respondents. Fifty-one percent (51%) of those surveyed are not yet developing mobile applications. In fact, when asked “where do your apps currently run,” 93% of survey respondents noted the desktop is still the primary focus, followed by tablets (59%) and phone (44%).\* Moreover, priorities for the next 12-18 months follow suit, with desktop taking a slightly smaller lead (80%) and tablets falling just ahead of phone with 59% and 58%, respectively.\*

<sup>1</sup> Digital News Asia, “Enterprise mobile developers tuck in old mind set,” August 5, 2014, Edwin Yapp  
\* Results based on multiple selection responses.

## Mobile app dev is the future, but the adoption curve is slow

Where do your applications currently run?

■ Current focus  
■ Future focus of development efforts

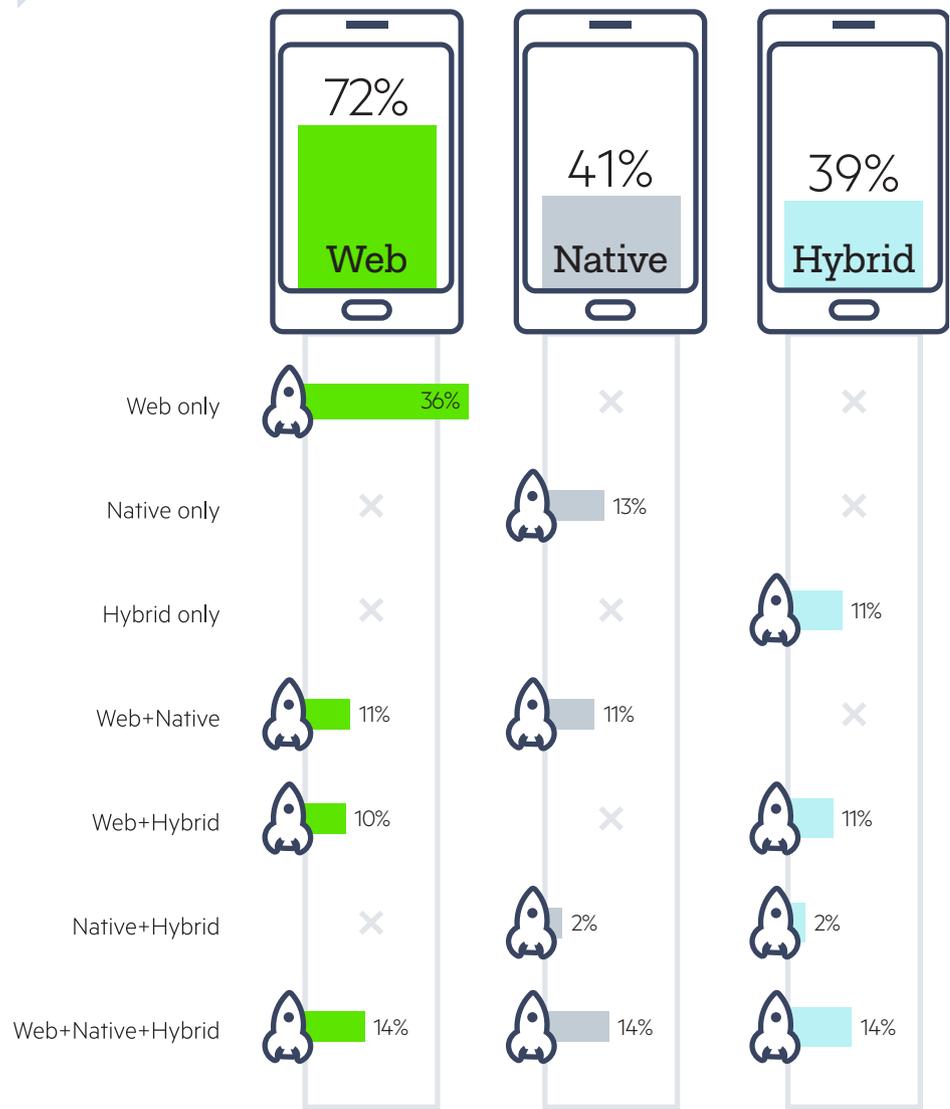


While the market need will undoubtedly catchup with projections, mobile app development is still in its infancy. The market leaders have not been clearly defined—nor have developer preferences or end-user requirements. The mobile app dev landscape, as we know it today, is far from what it will be a mere 18 months from now, when the enterprise catches up with the market trends.

# ARE ENTERPRISES STUCK IN NEUTRAL?

The gap between app development priorities is widening, primarily because enterprises unfamiliar with the intricacies of app requirements are standardizing on web. This is often a less expensive option, but is not always the best option for a given individual app.

What types of applications do you create - native, web or hybrid?



\* Results based on multiple selection responses.

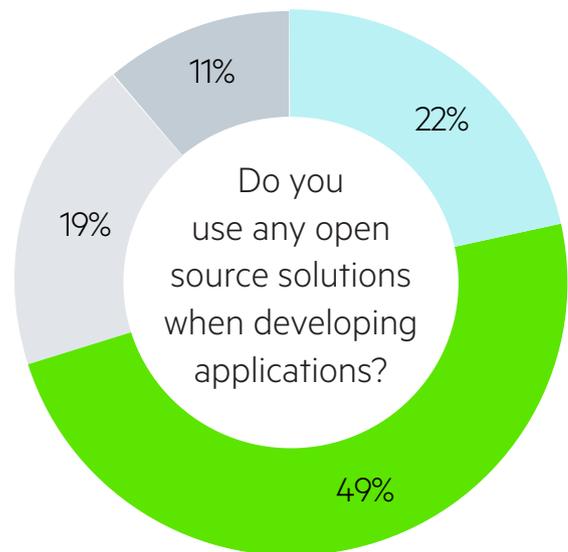
Developers need choice to ensure maximum value and adoption—choice in programming language, frameworks, platforms and a multitude of other needs. It is not about Native vs. HTML5 vs. Hybrid, it is about options and platforms that let developers leverage all form factors. And why? Because developers have preferences. For example, when asked about preferred programming languages, the field was split, with the top four being C# (81%), JavaScript (47%), .NET/Visual Studio (26%) and Java (18%).

In addition, Open Source technologies remain important. More than 80% of those surveyed are leveraging Open Source in some capacity within their app dev projects. An interesting statistic considering that enterprises are still hesitant to fully leverage open source solutions that are not certified and supported.



**The vast majority of developers are leveraging open source in their development initiatives.**

- Yes, always
- Yes, sometimes
- Yes, but very rarely
- No

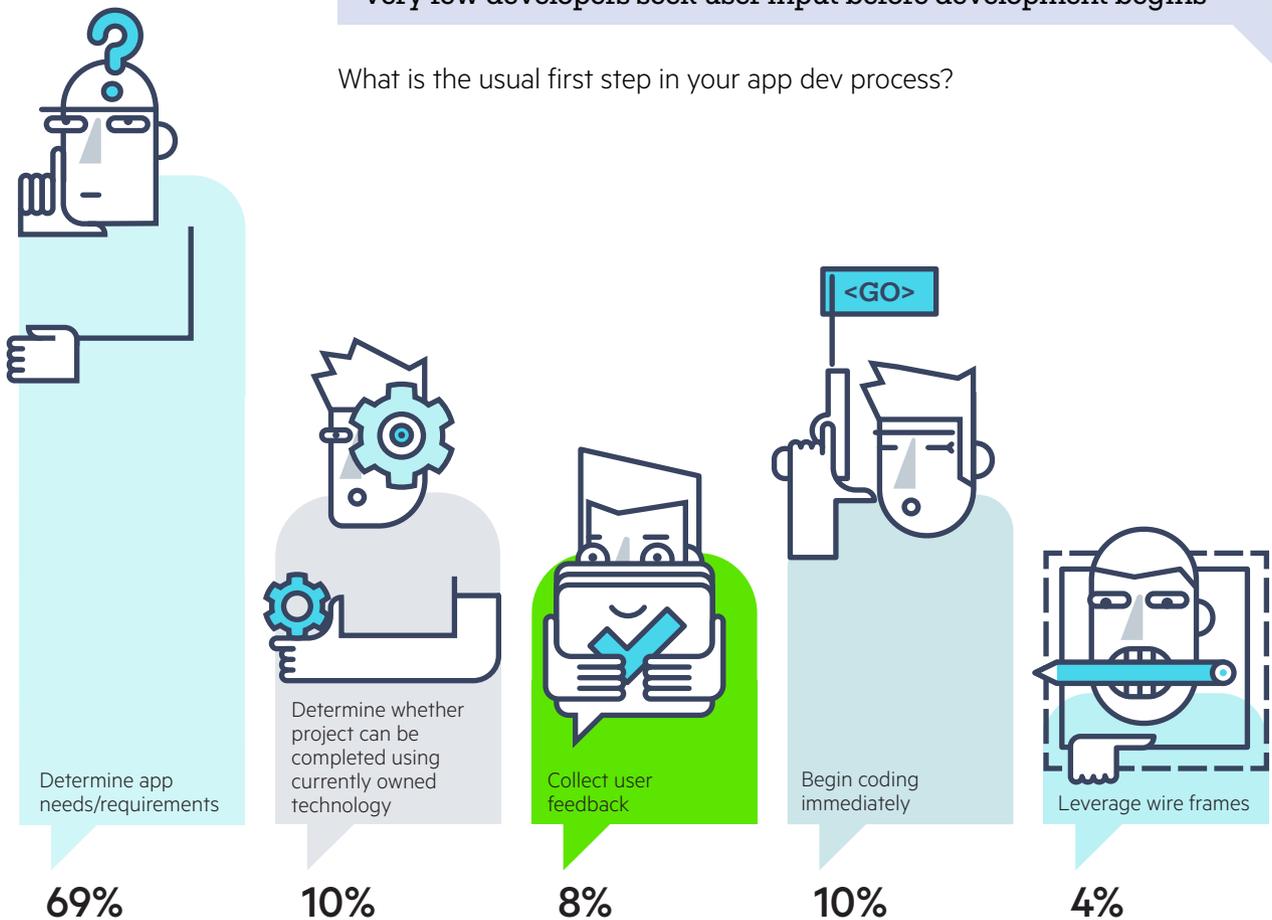


# A USER-FRIENDLY PERSPECTIVE

To get a sense of the developer mindset, Telerik asked about the first steps within the development process. Sixty-nine percent of respondents focus first on determining needs and requirements for apps. Ten percent look to whether the job can be done with tools already in house and a mere 8% seek customer feedback to determine app strategy.

Very few developers seek user input before development begins

What is the usual first step in your app dev process?



As the enterprise evolves to a more mobile mind-set, these practices will be unacceptable. People will want their enterprise apps to run as seamlessly as consumer apps. And while some developers would argue that the majority of enterprise development efforts are focused on internal applications (43%, according to survey responses), there are many currently available work-around apps being brought into the enterprise on a daily basis because of BYOD.

Lack of outside input at the outset is leading to longer development cycles and will be the cause of many app failures. iTunes and the Google App Store are hemorrhaging with announcements of more than 1 million apps, respectively. This gives end-users an immense amount of choice: if an app doesn't perform, there are many more just like it that will.

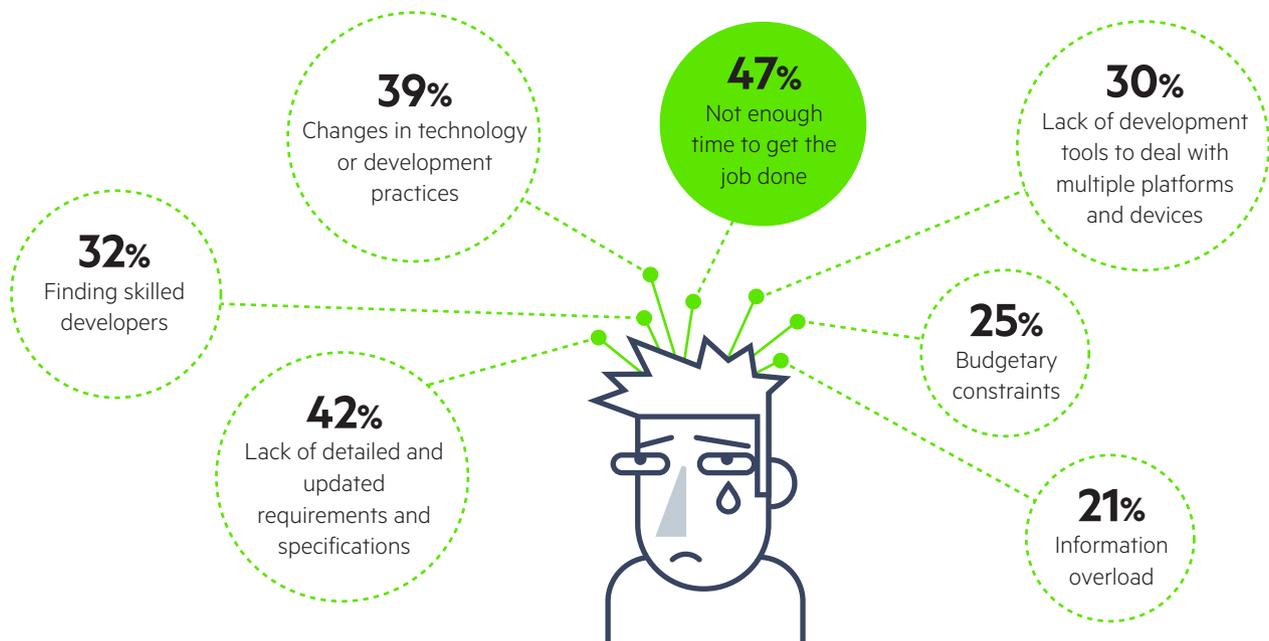
This means the days of launching complex apps built for function, but sporting unattractive UIs—are over. Adoption is now key. App development will soon be more heavily scrutinized at the business level than ever before. If an app is not widely adopted, cost justification will be required at the highest level of the organization—a clear message for development to ensure form and function are on equal footing.

# TODAY'S DEVELOPER ROADBLOCKS

According to Forrester Research, "Increasing expectations from customers and increased competition have raised the stakes for application delivery leaders. Many leaders know they need to improve, but struggle with what to do and where to start. What Fred Brooks said long ago is still true: there is no silver bullet, but there is a proven path of improvement. Different leaders face different challenges, but the patterns are consistent across organizations."<sup>2</sup>

As noted above, end-user input is a must; couple this with other key indicators and it quickly becomes clear that Forrester is accurate in its current developer landscape assessment. For example, when Telerik asked, "What are your top pain points," the answers ran the spectrum:

What is your biggest pain point in application development?



<sup>2</sup>Forrester Research, Inc., "Overcoming Barriers To Modern Application Delivery Assessment: The Modern Application Delivery Playbook," August 4, 2014, Diego Lo Giudice, Kurt Bittner, Christopher Mines, Nasry Angel

# SOME DEVS DON'T KNOW WHAT THEY DON'T KNOW

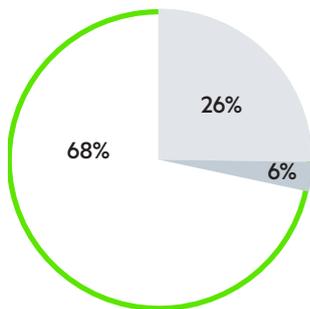
The survey also delved deeper, asking questions about team makeup and skillset, internal versus external team composition, project time constraints and tools being leveraged to complete work. While data surrounding team structure and skillset were in line with industry standards, the means by which apps are developed demonstrated not a lack of skill, but a lack of understanding about currently available marketplace technologies.

Working with outsourced devs is more of an exception than the norm

Full-stack devs are most common

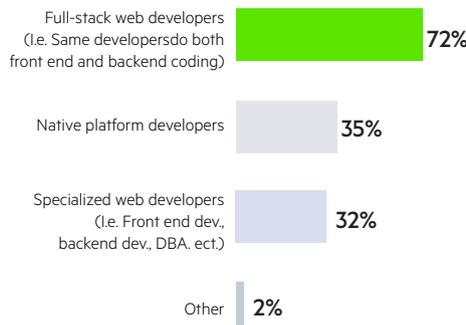
The majority of the projects are executed within 3 months

What is the staff composition of your development team?

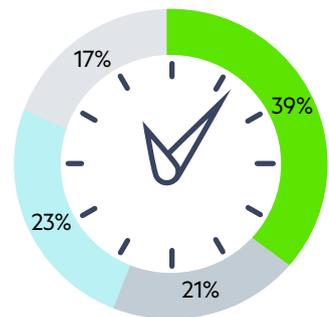


- Internal employees only
- Both
- External contractors/outsourced developers only

What is the skill set of your development team?



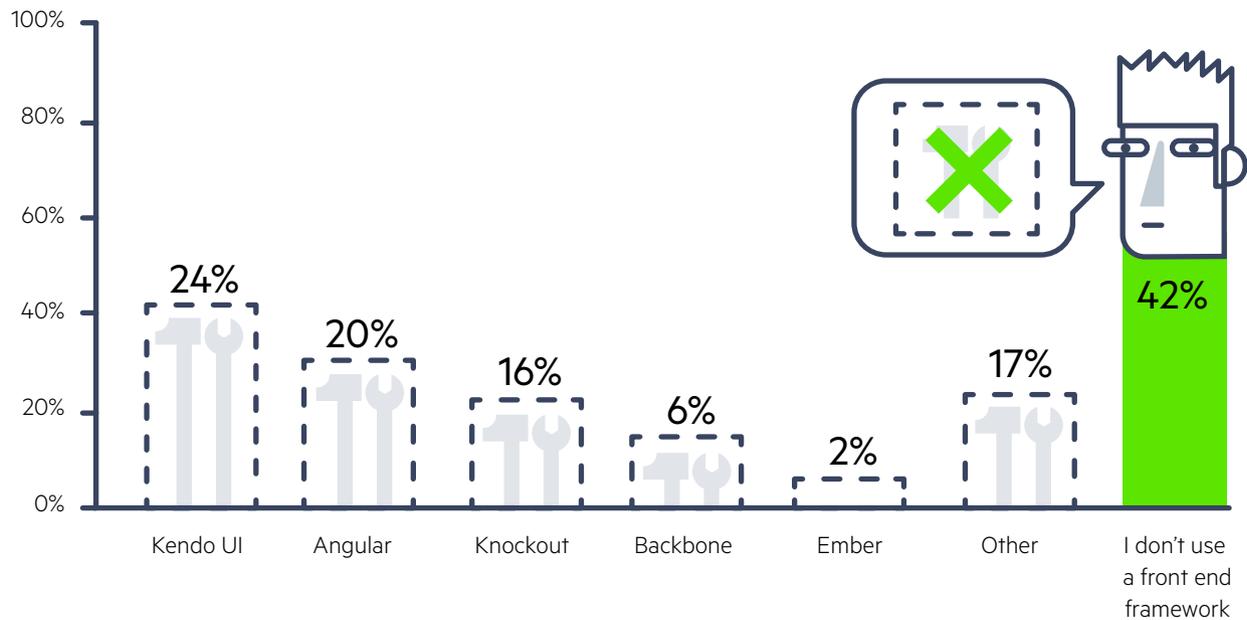
How much time do you get to develop?



- 2-4 Weeks
- 1-3 Months
- 4-6 Months
- More than 6 months

A substantial portion of developers are not leveraging front end frameworks (42%). With the remaining respondents using a wide array of vendors, no one platform has a hold on leadership status: Telerik Kendo UI (24%), Angular (20%), Knockout (16%), Backbone (6%) and Ember (2%).\*

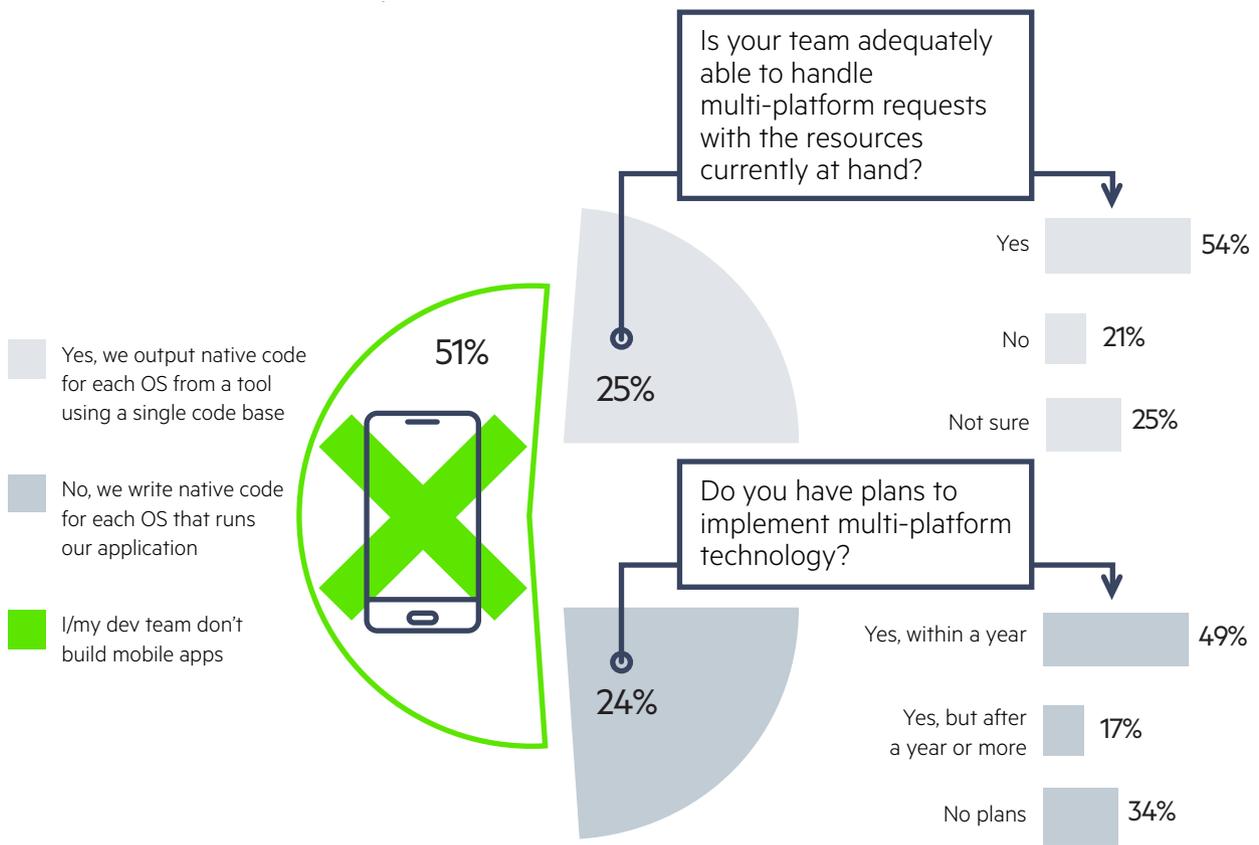
### What front end application framework do you use?



\* Results based on multiple selection responses.

Additionally, while half of the market is not yet developing for mobile, those who have taken the leap are not leveraging technology to ease the development burden. In many cases, respondents are unsure if they even have adequate tools and resources to complete the job. When asked about leveraging multi-platform tools, overall usage is low (25%). While more than half of respondents say they can handle multi-platform requests with current resources, the same respondents noted their biggest pain point is a lack of time to complete projects.

**Half of the surveyed audience don't build mobile apps**



# BAAS, BAAS, BLACK SHEEP?

Based on survey responses, it is evident that while skillsets are strong, many developers need to work smarter, not harder. Oracle recently commissioned a survey of its own in which it identified, “29 percent of IT development time is spent on front end mobile app development, more than 70 percent of their time is spent on integration, security, quality assurance testing and design work.”

The Telerik survey asked about the usage of Backend as a Service (BaaS). This includes the ability to link applications to backend cloud storage while also providing features such as user management, push notifications and integration with social networking services. Forty-two percent of respondents noted that they’ve never leveraged BaaS. Furthermore, 36% of survey respondents were unfamiliar with the technology all together.

These findings come at a time when developers are tasked with creating apps that can run offline—61% of the apps currently in development, according to those surveyed. Respondents also noted 68% of apps require the use of real-time data. Together, these are key indicators that developers can make better use of available technologies to ease their development lot.

## CONCLUSION

Given the multitude of cross-platform and multi-platform technologies available, questions quickly arise about whether the lack of entrance into the mobile app world is more about desktop priorities or about slow adoption of technologies designed to improve developer productivity and app utility.

Regardless of the reasoning, today’s developers have heavy lifting to do; lifting that far exceeds the current understanding of their business counterparts. App development is a complex science increasing in complexity and demand by the day. Business users must better understand what’s required to create a successful app strategy—whether for the desktop, web or mobile. Vendors must improve efforts to educate developers about the methods, best practices, tools and technologies available today, all designed to make their jobs easier. Only then will priorities shift, pain points minimize and the mobile market catch-up to the hype.

<sup>3</sup> Oracle Press Release, “Oracle-Sponsored Survey Finds Enterprises Expect to Boost Mobile-Related IT Expenses More than 50 Percent in Two Years, yet Security and Integration Remain Top Challenges,” July 31, 2014