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Progress Surveys 3000; Reveals Challenges to Embracing Mobile App Development

Findings highlight need for new application development approach

Summary

In June 2015, Telerik, a Progress company, surveyed 3,000 IT professionals to assess the adoption, trends and perceptions around mobile development among developers and IT decision makers worldwide. This survey cuts through the hype across the media, analyst and social communities, and gets to the truth about the current state of mobile app development: developers need the right tools and processes to move forward with their mobile app development efforts. The lack of established best practices for mobile app development and the absence of dominant market leaders have left many developers stuck at the starting line of mobile projects.

Despite setbacks, developers are indeed hopeful about the promise of future technologies such as the Internet of Things (IoT), virtual reality devices and smart watches. This survey also examines which technologies developers have top of mind.

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Key Findings

TIMELY APP DELIVERY SLOW DUE TO LIMITED RESOURCES AND OTHER CHALLENGES: Fifty-seven percent (57%) of developers are still brand new to mobile development or have never built a mobile app. Nineteen percent (19%) found lack of time frustrating, while 16% feel changes in technology or development practices are a major roadblock.
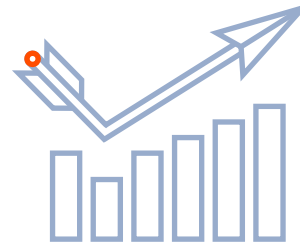
ORGANIZATIONS WOULD BENEFIT FROM A FLEXIBLE, MULTI-PLATFORM APPROACH: Because the business requires many applications and support for multiple device types, developers need a flexible approach. While most mobile app developers don't focus on a particular approach, 33% express a preference for hybrid.
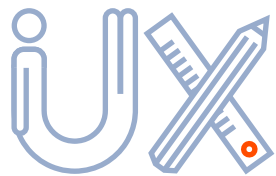
DELIVERING COMPELLING MOBILE APPS IS KEY TO SUCCESS: Strategic drivers are plentiful: efficiency, productivity, customer service and creating revenue all rose to the top of the list. And, 44% of developers find UX to be critical across all drivers; specifically, the ability to access the app rose to the top, regardless of whether the app is geared toward an enterprise or consumer audience.
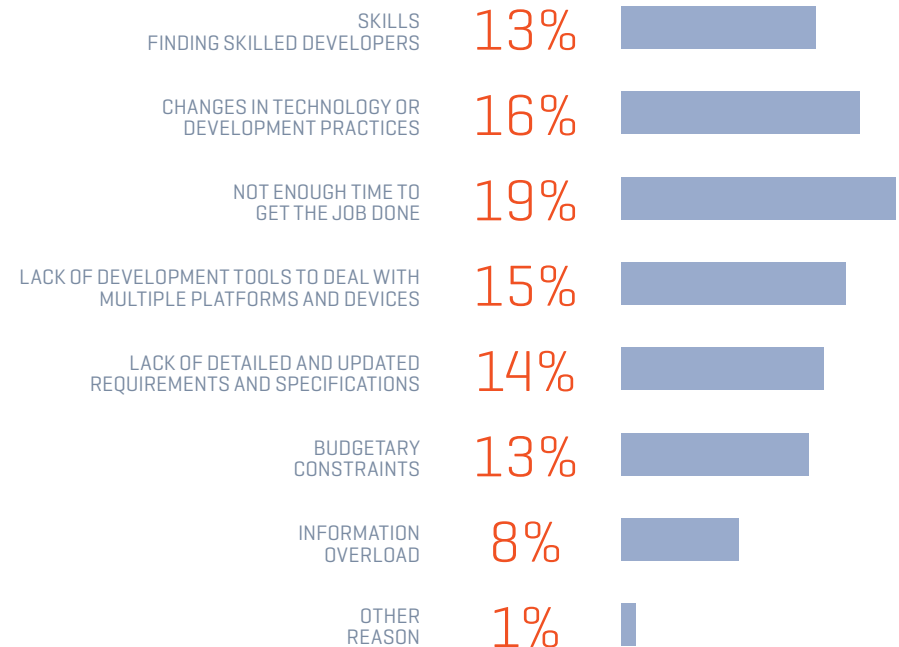
NEW DEVELOPMENT CHALLENGES ARE ON THE HORIZON: While the smart watch was not at the top of the list, there are plenty of additional considerations such as IoT and virtual reality, to address in the future.

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Timely App Delivery Slow Due to Limited Resources and other Challenges

Clearly, interest among consumers and enterprises in using mobile apps continues to grow. According to eMarketer, mobile digital media time in the U.S. is now significantly higher at 51% compared to desktop (42%). And, Nielsen found a consumer preference for mobile apps versus mobile websites, with mobile apps accounting for 89% of media time.

Yet, despite the apparent interest, adoption of mobile application development is slower than expected. Survey responses indicate that 57% of developers are still brand new to mobile app development—47% of developers surveyed develop, on average, just one functional mobile app per year, and some haven't built any at all.

A lack of process may be also getting in the way. Mobile developers expressed frustration over constraints and changing technology and development practices (16%). In addition, they struggle with a range of inhibitors from a lack of time (19%) to a lack of tools (15%) to budgetary constraints.
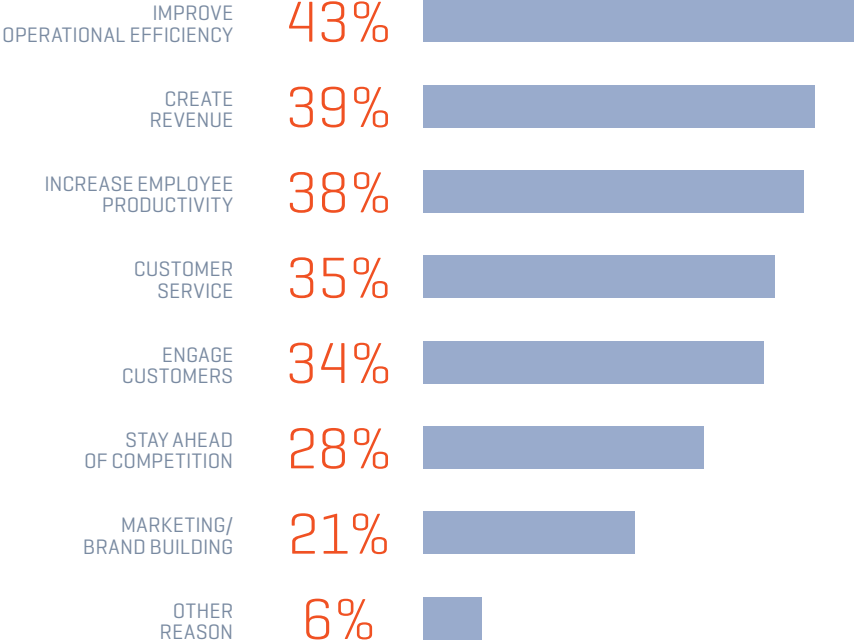
Challenge	Percentage
SKILLS FINDING SKILLED DEVELOPERS	13%
CHANGES IN TECHNOLOGY OR DEVELOPMENT PRACTICES	16%
NOT ENOUGH TIME TO GET THE JOB DONE	19%
LACK OF DEVELOPMENT TOOLS TO DEAL WITH MULTIPLE PLATFORMS AND DEVICES	15%
LACK OF DETAILED AND UPDATED REQUIREMENTS AND SPECIFICATIONS	14%
BUDGETARY CONSTRAINTS	13%
INFORMATION OVERLOAD	8%
OTHER REASON	1%

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Developing Compelling Mobile Apps
# Is Key to Success

Developers have good reasons to fight through these challenges. Improved operational efficiency was cited most often as a key reason for building mobile apps. Other reasons include creating revenue (39%), increasing employee productivity (38%), improving customer service (35%) and to engaging customers in a more meaningful way (34%).

For achieving any of these goals, user experience (UX) is the most important element to consider when developing mobile apps of any type—whether they are external-facing or used for business-critical functions. Forty-four percent of those surveyed indicated UX as the most important part of the apps they build, followed by ease of maintenance (24%), performance (15%) and security (11%).
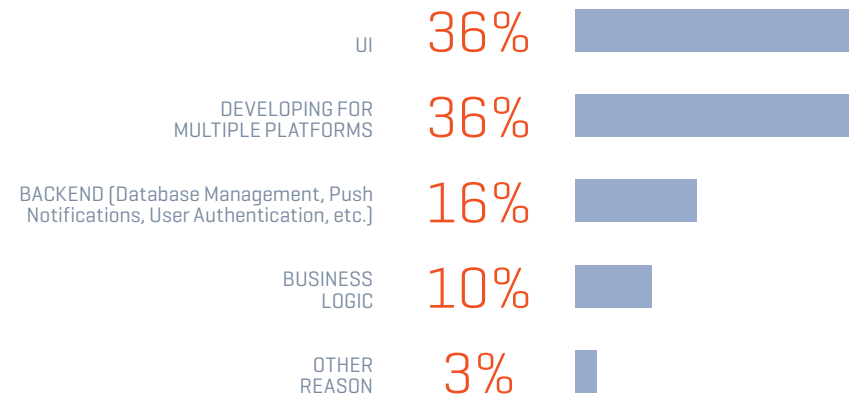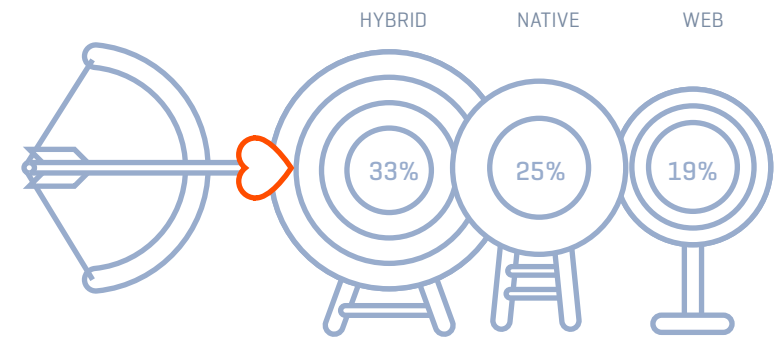
WHY DO YOU BUILD APPS IN GENERAL?

IMPROVE OPERATIONAL EFFICIENCY	43%
CREATE REVENUE	39%
INCREASE EMPLOYEE PRODUCTIVITY	38%
CUSTOMER SERVICE	35%
ENGAGE CUSTOMERS	34%
STAY AHEAD OF COMPETITION	28%
MARKETING/ BRAND BUILDING	21%
OTHER REASON	6%

REGARDLESS OF PLATFORM AND DEVICE, WHAT IS MOST IMPORTANT FOR YOUR APPS IN 2015?

USER EXPERIENCE	44%
EASE OF DEVELOPMENT/ MAINTENANCE	24%
PERFORMANCE	15%
SECURITY	11%
SCALABILITY	6%
OTHER REASON	1%

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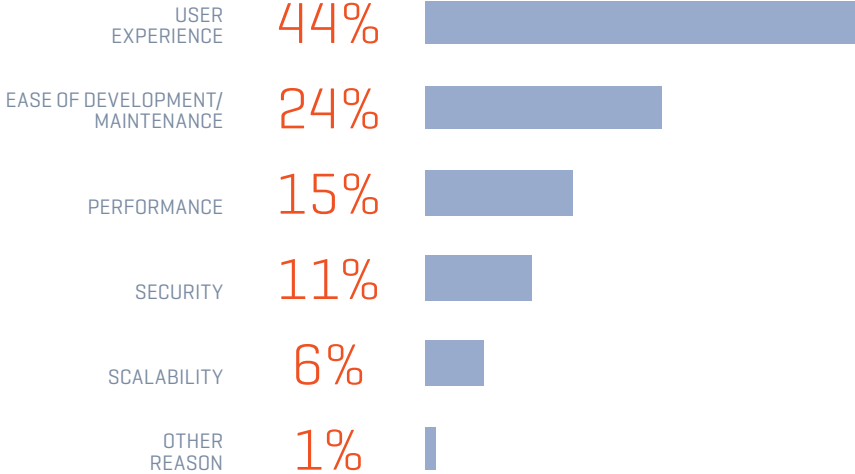
ORGANIZATIONS WOULD BENEFIT FROM A FLEXIBLE, MULTI-PLATFORM APPROACH While there are developer frustrations with a lack of available tools and ever-changing development practices, most developers don't have their hearts set on a particular approach for building mobile apps. Hybrid is the most preferred (33%), followed by native (25%) and web (19%), but the dividing line is in close proximity. In fact, a significant portion of respondents are indifferent, as long as the end user is satisfied.

One thing is certain, however, developers are developing across all platforms. Seventy-six percent report developing for Android, 63% for iOS and 40% for Windows Phone. Of those who develop for iOS, 83% also develop for Android. And, although multi-platform development is a requirement for the majority of B2B and B2E mobile apps, it is one of the greatest challenges—36% of respondents listed it as the most challenging part of the app building process, tied with the need to provide a clean UI. Respondents reported they lack multi-platform and multi-device development tools to help them do so.

HYBRID   NATIVE   WEB

33%   25%   19%

UI	**36%**
DEVELOPING FOR MULTIPLE PLATFORMS	**36%**
BACKEND (Database Management, Push Notifications, User Authentication, etc.)	**16%**
BUSINESS LOGIC	**10%**
OTHER REASON	**3%**

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New Development Challenges Are on the Horizon

Looking forward, respondents reported developing for a mix of platforms other than mobile, including web (87%), desktop (62%), IoT (22%), wearables (6%) and others. This is in stark contrast to a similar survey conducted last year in which 93% of respondents noted desktop as their development priority.

According to our recent findings, IoT trumps wearables, such as the Apple Watch, as the "next big thing" in app development. Smart appliances and virtual reality devices, such as the Oculus Rift, are expected to be more important by 35% and 21% of respondents, respectively. Our recent State of IoT survey provides additional evidence of IoT's growing importance: most respondents expect mass adoption of IoT apps to occur within the next five years, and 45% reported they are currently developing IoT apps.

Only 21% of those surveyed have definitive plans to build apps for wearables in 2015. Of the 21%, 45% will be developing apps for the Apple Watch.
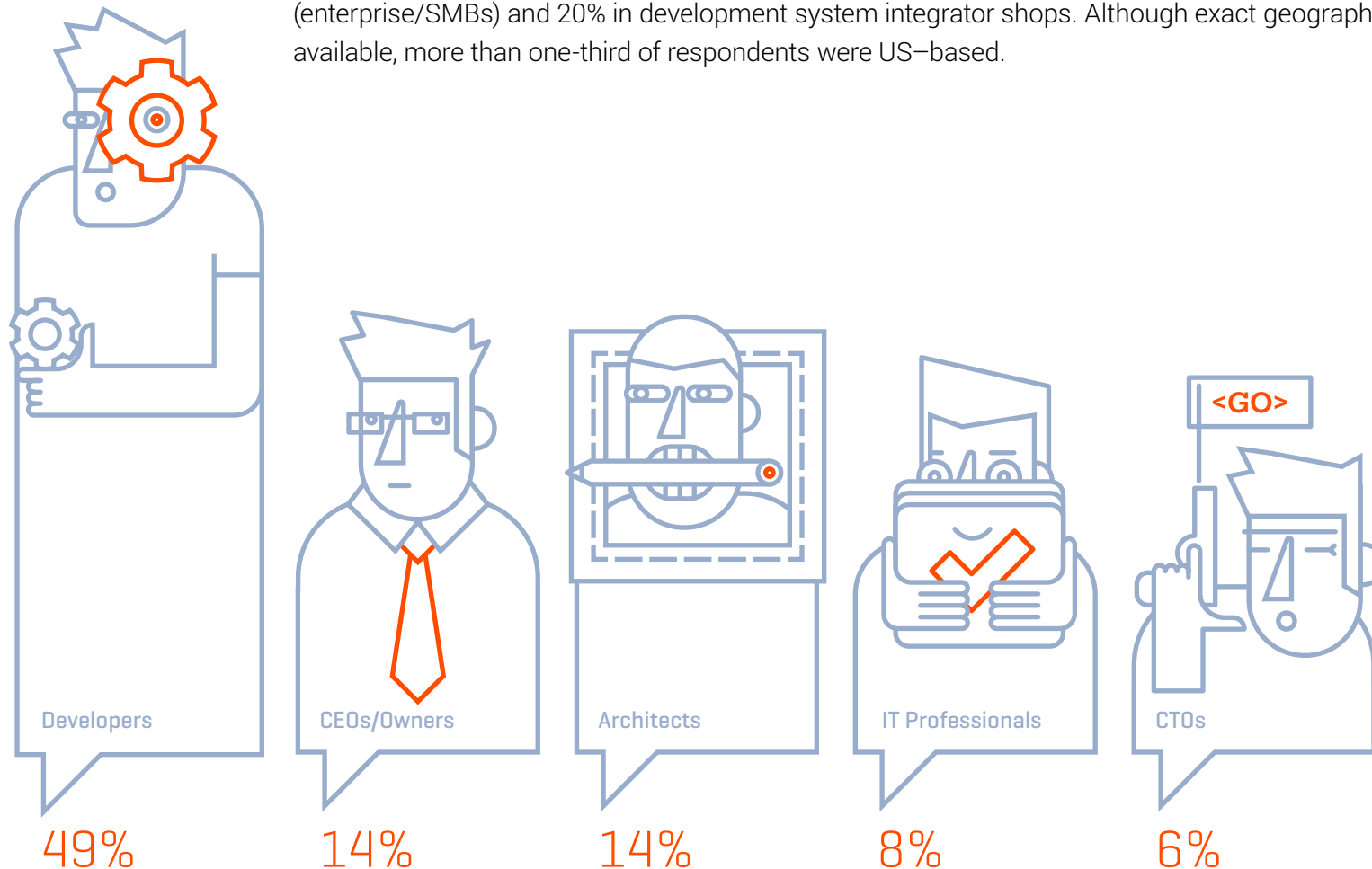
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Recommendations

This survey validates the extensive experience Telerik has in the market, and leads to the solution strategy we've provided, as well as our future product roadmap. From this perspective, here's what we recommend:

1. Adopt a platform than enables rapid app development using existing resources. Not surprisingly, the survey confirms that organizations are struggling to deliver apps on time and within budget. Leveraging Telerik Platform, our approach enables organizations to use existing web skills and be instantly productive building mobile apps—web/mobile, hybrid or native. Progress also provides low-code options that allow GUI style developers and business analysts to effectively prototype and build the initial apps.

2. Continue to use mobile apps to support strategic initiatives. However, to do so, adoption is critical. Development effort is wasted, and a critical business opportunity squandered, if your target users don't adopt the mobile apps. That's why UX is at the heart of our solution, including the ability to include business user input into the design and early development stage. We also provide an effective, easy way to monitor usage and collect feedback in both test and production environments.

3. Use a single platform that supports multiple approaches. One size doesn't fit all; application requirements, users and device coverage, and your developer skillsets should drive your approach to mobile development. Given the breadth of mobile apps most organizations need, different approaches will be necessary. However, managing multiple platforms and backend systems is unwieldy. Progress provides the flexibility to use the right approach for each type of app (web/mobile, hybrid or native), using a single toolset.

4. Mobile isn't the end of the road, so be prepared. Progress has extensive experience keeping ahead of the next development trends and technology advancements. We have technologies applicable to IoT use cases now, and we're working to support wearables and other emerging technologies in the near future. Couple this with our flexible deployment alternatives in the cloud or on-premise, and you have a partner for all of your development needs.

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Survey Respondent Analysis

Respondents were a mix of developers (49%), CEOs/Owners (14%), architects (14%), IT professionals (8%), CTOs (6%) and others. Forty-seven percent of respondents work in software companies or ISVs, 33% in non-software companies (enterprise/SMBs) and 20% in development system integrator shops. Although exact geographical data was not available, more than one-third of respondents were US–based.

Developers	CEOs/Owners	Architects	IT Professionals	CTOs
49%	14%	14%	8%	6%

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About Progress

Progress (NASDAQ: PRGS) is a global software company that simplifies the development, deployment and management of business applications on-premise or in the cloud, on any platform or device, to any data source, with enhanced performance, minimal IT complexity and low total cost of ownership. Progress can be reached at www.progress.com or 1-781-280-4000.

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