



Empowering Mobile Developers in 2015

*A Global Survey of the
Mobile Development Industry*



Marketers, technologists and digital media experts alike have predicted the dawn of the “mobile takeover” for years. In July 2015, eMarketer proclaimed that the anticipation is over, and the mobile era has officially commenced. The analyst group issued the declaration in response to survey findings that revealed consumption of mobile media now accounts for 51% of people’s time, compared to 42% on a desktop and 7% on other connected devices. As consumer and employee preferences for mobile continues to unfold, business decision makers are challenged with creating a comprehensive mobile strategy, in spite of minimal knowledge of industry processes and uncertainty around how to work best with a development team.

Currently on the development side, there are more jobs available than developers to fill them. The unintended consequence of the demand has prompted many aspiring developers to swiftly teach themselves the basics through different resources such as online tutorials, boot camps, textbooks, and developer question-and-answer websites. This lack of standardized education has created several challenges within mobile development teams and among the business units they serve. Many of those challenges will be highlighted in this report.

stablekernel surveyed 497 developers worldwide for this report, which was constructed to share important, data-backed insight on the inner-workings of the mobile development industry. We hope through this report, readers can make informed decisions when choosing a development team and better provide developers the resources they need for seamless and superior execution of deliverables.

Methodology

From July 9 to September 9, 2015, stablekernel conducted a global survey of 497 mobile developers from North America, Latin America, Europe and Asia.



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Who Are Developers?

Despite high-profile initiatives to increase employee diversity in tech including STEM Grants, Intel's Diversity in Technology Initiative and Etsy's Hacker School, the youngest respondents in this survey were actually LESS diverse – both in terms of race and gender – than their older peers. In fact, more than 79% of survey respondents ages 18-24 were male, and more than 60% were white.

GENDER

77% male
22% female

AGE

43% ages 25-34
25% ages 18-24
16% ages 35-44
11% ages 45-53
5% other

LOCATION

61% United States
18% Europe
7% Mexico
5% Asia-Pacific
5% Canada
4% Latin America

ETHNICITY

54% Caucasian/White
33% Hispanic/Latino
8% Asian/Pacific Islander
4% Black/African American
5% American Indian/Alaskan Native

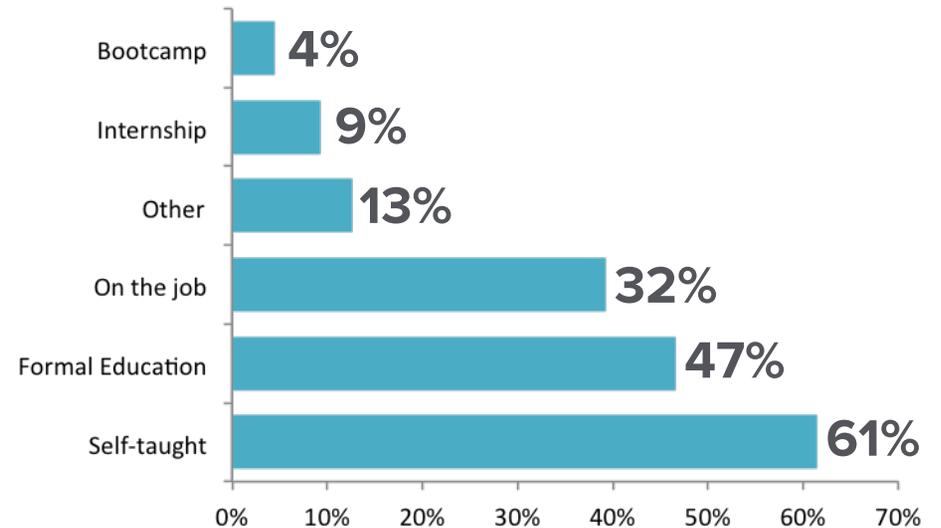
PERSONAL DEVICE

53% iPhone
45% Android

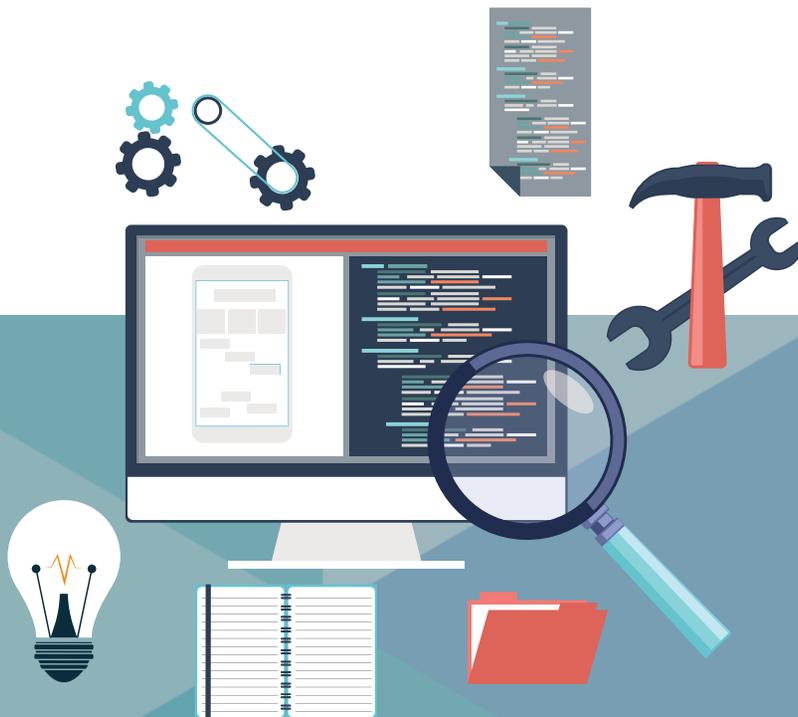


How Do They Learn?

Mobile developers have grit; 61.48% of developers are self-taught. While this statistic emphasizes personal determination, this is also the source of several pain points in the industry according to critics.



Survey respondents were asked to select all training methods that apply.



“Without formal, consistent and standardized education, developers often do not learn the most efficient techniques, and their methodologies vary as a result. With such variation in skills, it’s difficult for employers to know exactly what qualifications to prioritize over others, making it challenging for developers to partner effectively.”

— Joe Conway, CEO of stablekernel

How Do They Work?

Nearly one-half of respondents work on small teams of 1-5 people. While our questions did not seek to understand the "why" behind the team size, stablekernel's leadership team identified two potential reasons.

"First, smaller teams are often more efficient than larger teams. Throwing extra developers on a project doesn't mean the project gets finished faster. Second, smaller teams of experienced developers possessing a wider range of knowledge enables them to build effectively and efficiently without bringing in other developers. Larger teams can actually indicate a greater lack of knowledge."

– Conway



47% on teams of 1-5



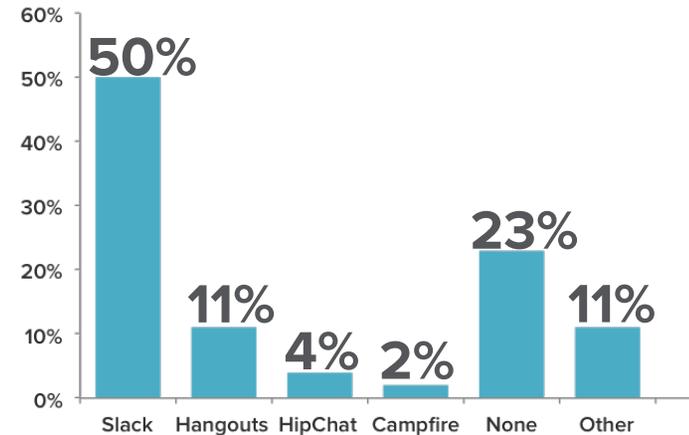
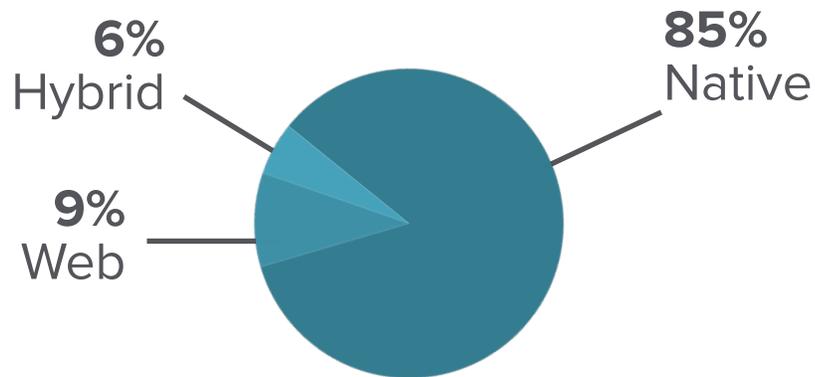
Development of the Internet of Things

With daily media coverage of wearables, smart homes and driverless cars, perceptions are often that the Internet of Things (IoT) is now ubiquitous. In contrast, our survey finds that most developers aren't working on IoT projects yet. The study revealed that 80% answered "no" when asked if they had worked on IoT projects.



How Do They Work Continued...

Next, developers were asked if they prefer native, hybrid or web development. 85.47% chose native, while only 5.59% selected hybrid and 8.94% preferred web. While hybrid application development dominates media coverage, the facts reveal that most developers are not actively using this approach.



Breaking a common misconception that developers are introverted, many developers preferred in-person communication. 50% cited Slack as their favorite in-office communication tool – significant adoption of a social platform only created two years ago.

Favorite Development Tools



IDE
Xcode

Programming language
ObjectiveC

Analytics platforms
Google Analytics

Web service technology
Node

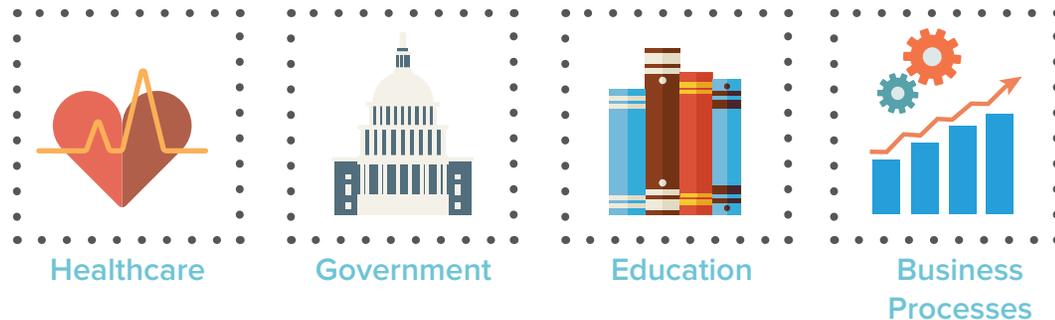
Continuous integration tools*
none

*Developers and employers, take note. Though continuous integration requires some additional upfront setup, it is an indispensable tool in preventing errors and streamlining deployment. Making access to and implementation of these tools easier will improve development teams' output.

How To Empower Mobile Developers

Most mobile developers desire to leverage technology to better the world. From improving enterprise business processes to creating an app that can save a life, developers cite a deep-rooted desire to create technologies that result in simpler, healthier and happier lives.

What problems do mobile developers want to solve?



Management and mobile development teams must learn to work more effectively together. The survey responses shed light on how anyone leading a mobile development team can work more efficiently with developers.

Even with high aspirations, developers can only do so much when inhibited by a lack of resources. When asked what their largest barrier to doing their job was, the most popular answer was **inflexible work conditions**, followed by **time/workload** and **unrealistic expectations**.

These answers demonstrate managers must better understand the needs and processes involved in a development project. Additionally, managers should communicate regularly with their development teams to ensure alignment of expectations.

When asked how company leadership can remove barriers, respondents cited **improved communication, better understanding of the mobile development process, relevant training** and **improved hiring strategies**. Developers perceive their leaders do not understand how software development and team capabilities translate into deliverables.

When asked what can make their jobs easier, developers most frequently answered collaboration and communications tools, which reinforces Slack's growing popularity

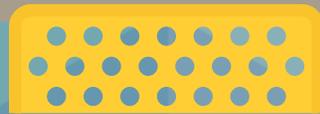
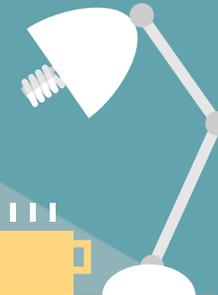
Even in an ever-changing tech environment, age-old business challenges still persist. Working collaboratively, communicating expectations and streamlining process are the key needs of the mobile development workforce.



Conclusion

As the demand for mobile developers continues to increase, providing the resources they need to do their jobs efficiently and effectively is key. Highlights from this study indicate areas that can quickly be addressed, including:

- **The high demand for developers paired with the lack of streamlined education is causing inefficiencies and barriers to industry growth.** Inexperienced developers saw the fast growth of mobile software and entered into the industry without receiving the benefit of mentoring processes practiced by previous generations. These new developers have often learned on their own without understanding best practices established by more experienced developers.
- **As a solution to the pain point stated above, developers want a baseline of knowledge throughout an entire organization so there is less “lost in translation” and work is done more efficiently.** Managers should understand the needs and business processes of mobile development projects, and provide standardized education to achieve those needs. Many developers, especially those who are self-taught, yearn for more mentorship.
- **Better communication is key.** The stereotype of a developer who is an introvert and lacks communication skills is clearly debunked. Like any other industry, more communication can help developers do their jobs better.
- **With constant change in technology, developers need access to experts, learning opportunities with their peers and research time to stay on top of industry trends.** Developers hope that improving the abilities of a team as a whole frees them up to spend time understanding where technology is headed and developing breakthrough technologies in industries such as healthIT, government, business and education.
- **In this survey, the younger generation proved to be less diverse than their older counterparts.** Since studies indicate socially diverse teams are more creative and innovative, managers must focus on creating inclusive cultures, offering training and hiring a more diverse, talented group of developers.
- **Despite lots of buzz around IoT and hybrid applications, fewer developers work in these areas.** Nonetheless, training, especially in the area of IoT, is likely to payoff in the near future as demand for mobile developers who can write code for connected devices continues to grow.



We believe developers who work hard, care about what they are working on, and continually improve their skills can create amazing things. stablekernel provides a foundation for inquisitive talent. Our company invests in the long-term growth of our employees because we believe our clients deserve the best software.

We strive to address the challenges and opportunities found in this survey head-on, not only to keep our fingers on the pulse of the mobile development industry, but also to create the ideal culture where our developers can thrive while pushing our clients to the forefront of mobile technology.

Interested in working with us? Start the conversation here.

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