Brochure

Hewlett Packard Enterprise

Master the mobile moment

Build mobile apps that build loyalty through a great user experience.

Get started >

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Rising user expectations

53%

uninstall or remove a mobile app when it stops responding or crashes.[1]

[1] Dimensional Research, "Mobile App Use and Abandonment," January 2015.

Rising user expectations

49%

expect a mobile app to respond in 2 seconds or less.[2]

[2] Dimensional Research, "Mobile App Use and Abandonment," January 2015.

Rising user expectations

36%

stop using mobile apps because of heavy battery usage.[3]

[3] Dimensional Research, "Mobile App Use and Abandonment," January 2015.

Give them a great experience or they'll give you the finger.

What do users want? Everything, now!

You don't need an analyst report to tell you there's been a seismic shift in the way people use mobile apps. Just look around. People count on mobile apps for everything. They use them everywhere. And they have zero patience for mobile apps that don't work as expected.

But recent studies are putting hard numbers to this "mobile mind shift." Research shows that:

50 percent of U.S. adults now use phones while shopping, 48 percent in the car, 37 percent while on public transportation; 39 percent even admit to using them in the bathroom.[4]

More than 60 percent of U.S. online adults access interactive content on their phones at least daily.[5]

And a new study from Dimensional Research[6] shows why the user experience is everything. It impacts not only the success of the app itself, but also the image of the brand and the business:

69% say mobile app issues caused them to have a lower opinion of the **company** that created the app.

Forrester calls it the "mobile moment"–that instant between the time users load the mobile app and decide whether they love it or hate it. If you want your mobile apps to be successful, you need to master the mobile moment. That means it's time to start measuring and monitoring mobile apps effectively.

[4] Forrester: "US Mobile Mind Shift Online Survey," Q3 2013.

[5] Forrester: "European Technographics Online Benchmark Survey," 2013.

[6] Dimensional Research, "Mobile App Use and Abandonment," January 2015.

Measure what matters

Launch time

UI response time

Crashes

Battery usage

Errors

Cellular data usage

Mobile app measurement: What's the best approach?

Many tools are available to measure various aspects of the user experience—but most provide an incomplete or inaccurate picture.

HPE designed its mobile monitoring software, HPE AppPulse Mobile, to adhere to three core tenets:

- **Measure** from the user's perspective, completely and in real time, and measure everything that impacts the user experience, including performance, stability, and resource usage.
- **Focus** on the most important issues. HPE AppPulse Mobile reports on problems in the context of what the user was doing at the time the problem occurred. You can see at a glance how many users were impacted, with which user action, on what device, operating system, or app version.
- **Improve** what matters most. HPE AppPulse Mobile provides accurate, relevant metrics that can be used to prioritize QA/development efforts for mobile apps according to business impact. You can quickly identify and fix what matters most to the user.

HPE AppPulse Mobile, a mobile monitoring software product, makes it easy to monitor your success with the "Measure, Focus, Improve" approach through a graphical, real-time scoring system called the FunDex. The FunDex gives you a single score, from 0 to 100, that encapsulates all aspects of the user experience measured by HPE AppPulse Mobile. At any given moment, you can see a graphical view of the "FunDex per user" and the "average FunDex of all users" to quantify the average user experience. So you can compare metrics over time, compare results between versions, and more.

"In the end, no number of green lights on a performance management dashboard will matter if end-users are dissatisfied with a mobile app's performance and usability."[7]

– Aberdeen Group

[7] The Aberdeen Group, "First Class Mobile Application Performance Management," August 2012.

61%

expect a mobile app to start up in 4 seconds or less.[8]

Top six things to measure and track

1: Measure launch time, including start time and resume time.
The launch time—when the mobile app was not running in the background already—usually takes longer than a standard action, so it's important to measure both start time and resume time. That way there are accurate metrics about the user's experience, even if the mobile app was already running in the background.

2: Measure the UI response time.
Measure mobile app performance in terms of UI response time, the way it's perceived by users. The traditional approach is to measure it in terms of network request time. The problem with that is a network request often does not impact the user at all. In addition, measure response times by device or OS. This allows the product manager to focus on one platform at a time, see and respond to performance issues, and assign QA and development resources accordingly. Equally important: Measure the speed of all user actions, but rank them by business impact. It is important to draw attention to slow mobile app operations that impact the most users and have the highest impact on the business.

Figure 1: Show which slow actions impact the most users.

[8] Dimensional Research, "Mobile App Use and Abandonment," January 2015.

3: Measure crashes and their business impact.
Of course it's important to track crashes, because they can be fatal to the success of your mobile app. But some solutions track the "exception stack trace" or "error type," metrics that are not directly relevant. Instead, the solution should identify the user actions that caused the crash, then count the number of unique users affected by this crash, then group the crashes according to their impact on the business. This enables mobile product managers to prioritize which are most urgent.

4: Measure errors.
Track the user actions that result in errors, such as an HTTP error from a specific URL. Specifically, capture the total number of users who received an error, the user action that resulted in the error, and the percentage of actions that resulted in at least one error, along with the app version number. In addition, monitor the daily average of users with errors on app launch.

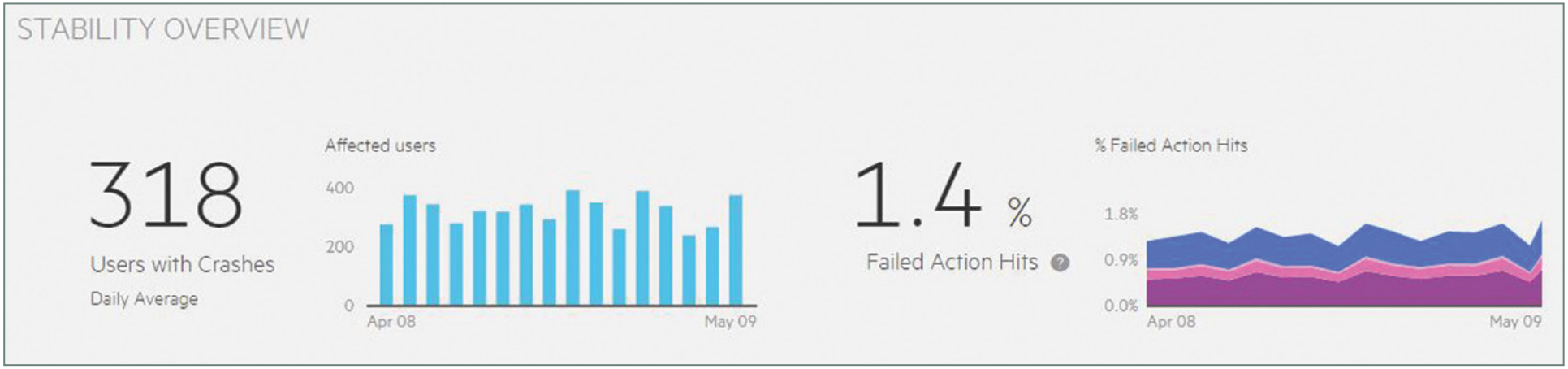


Figure 2: AppPulse Mobile tracks and graphs the user actions that generated errors.

5: Measure the battery consumption.

Users are very sensitive to their battery life; to some it feels almost like oxygen. Everyone has experienced the frustration of knowing that some mobile app is draining the battery way too quickly, but not knowing which one. So make sure to measure the battery consumption of your mobile app, along with other critical resources such as data plan impact and disk space usage. There are many well-known reasons for battery drainage, so if your app is a culprit, make sure you get it into compliance with best practices. And if necessary, re-think your app behavior. Is it really so important to check for new updates every second/minute/hour? Take whatever action is needed to keep power consumption at an absolute minimum—so you can keep user satisfaction at an absolute maximum.

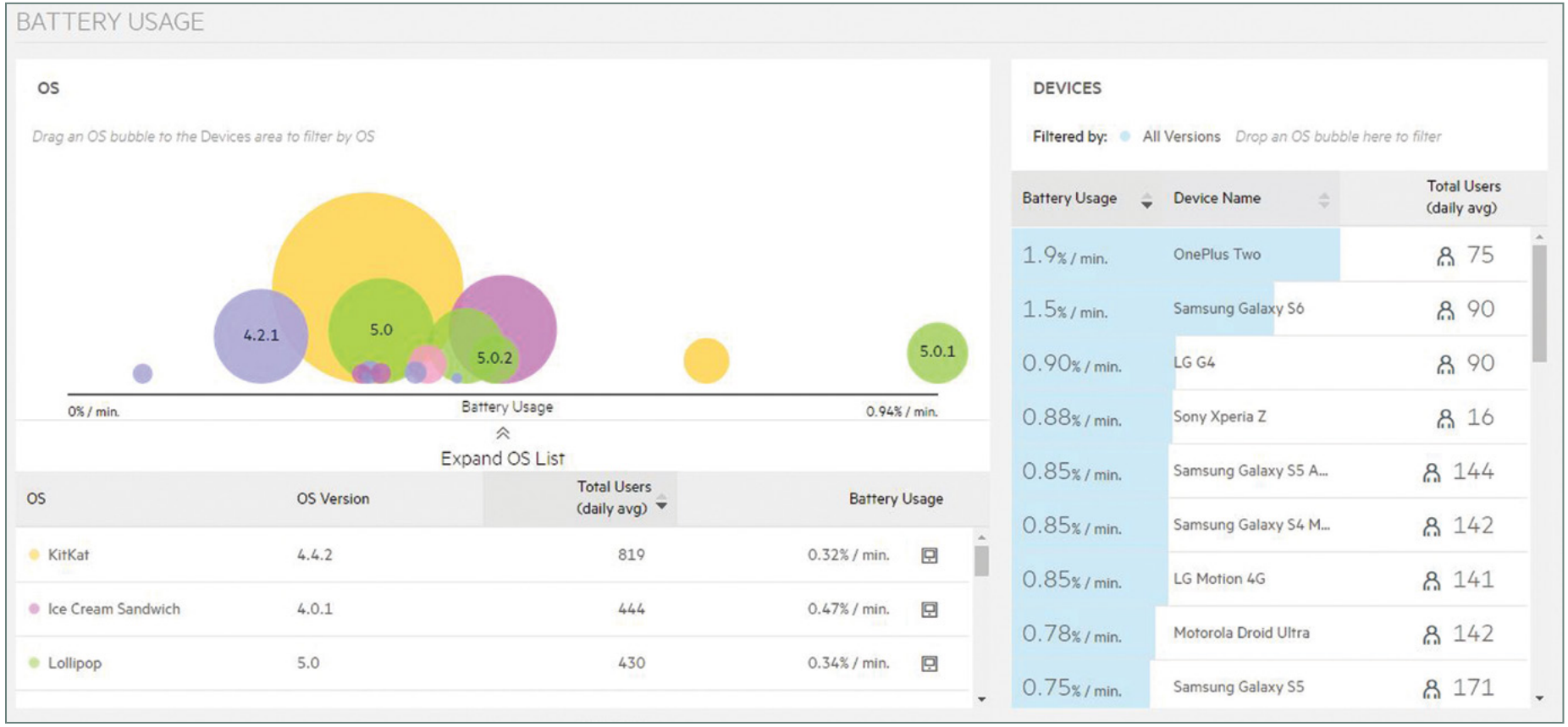


Figure 3: Show which slow actions impact the most users.

6: Measure the cellular data consumption.

If it bothers you when a mobile app devours your cellular plan's data allotment, you're not alone. In fact, 20 percent of survey respondents said heavy data usage has caused them to stop using a mobile app. So it's important to pinpoint which user actions consume the most data. Specifically, you need to measure the kilobytes of data consumed per minute of use, and you need to track the percentage of data consumed by a specific user action, the total amount of data per cellular hit, the consumption by app version, and the total number of users. Equally important, you need to break down cellular consumption by service, so you can tell how much data is consumed by third-party services, such as LinkedIn or Stock.com, as well as the data consumed by your own mobile app.

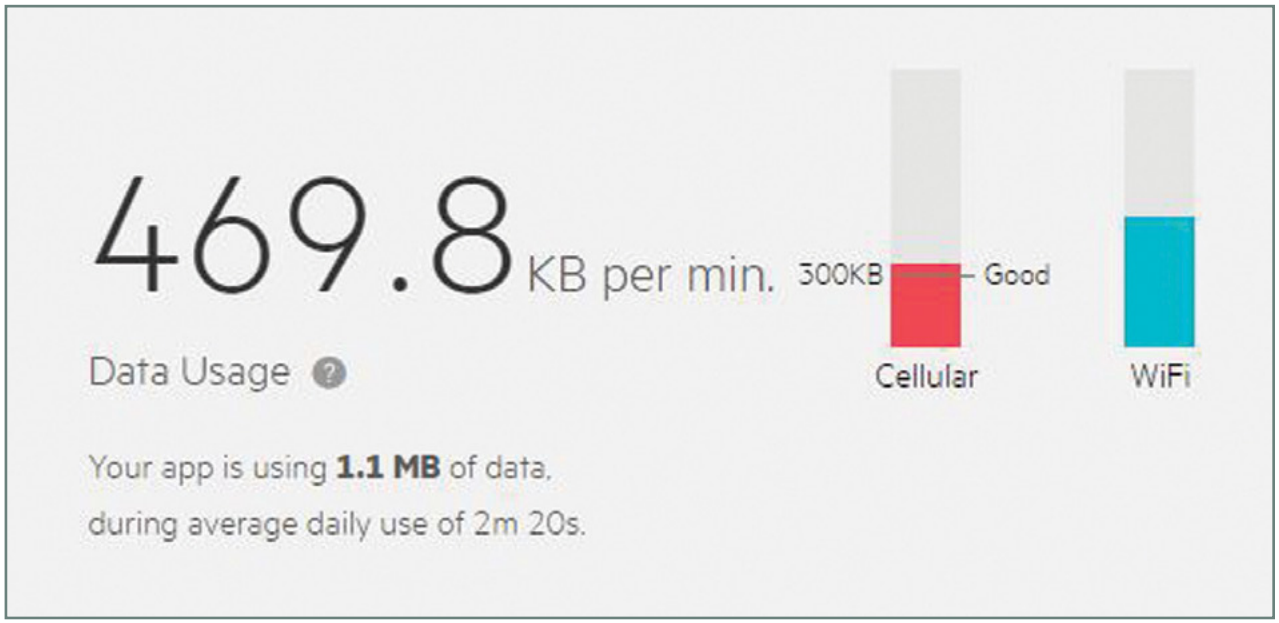
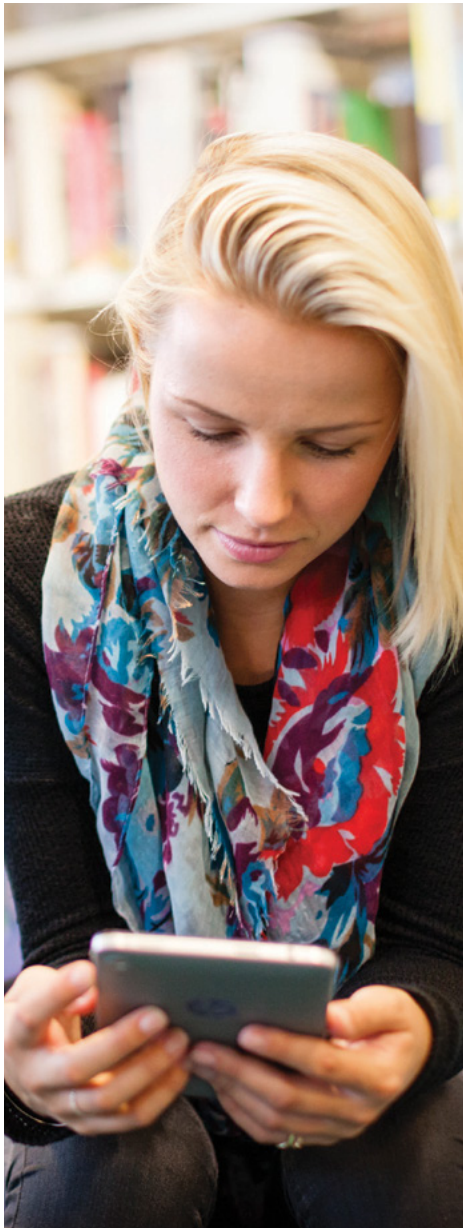


Figure 4: Show how much cellular data your app is consuming.

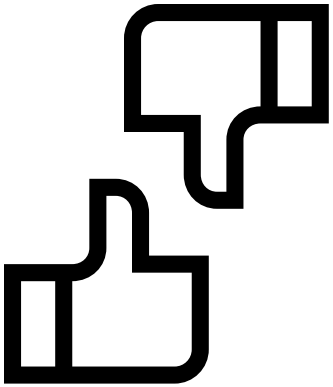


Follow the “User Flow” screen by screen

In addition to measuring each of the “Top six” described earlier, HPE AppPulse Mobile monitoring software tracks the User Flow through the funnel of user interactions with your mobile app. Development and QA teams can see a graphical view of user engagement and see key metrics one screen at a time.

For each screen, it shows you the total number of sessions and the most popular user actions. You can then drill down into metrics such as user actions that were slow, or actions that resulted in error or crashes. You can also see the number of users who exited your app—so you can quickly determine how to optimize the user experience and keep users fully engaged. It gives you the option of seeing data over various time periods, for a particular version number, or for all versions.

Figure 5: AppPulse Mobile tracks and graphs the user actions that generated errors.



It's the moment of truth

It only takes a second for people to give your mobile app a thumbs-up—or a thumbs-down. Make sure the verdict goes your way. Download the HPE white paper **Measure what Matters** and learn how to deliver mobile apps that amaze.

Learn more at
hpe.com/software/apppulsemobile

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