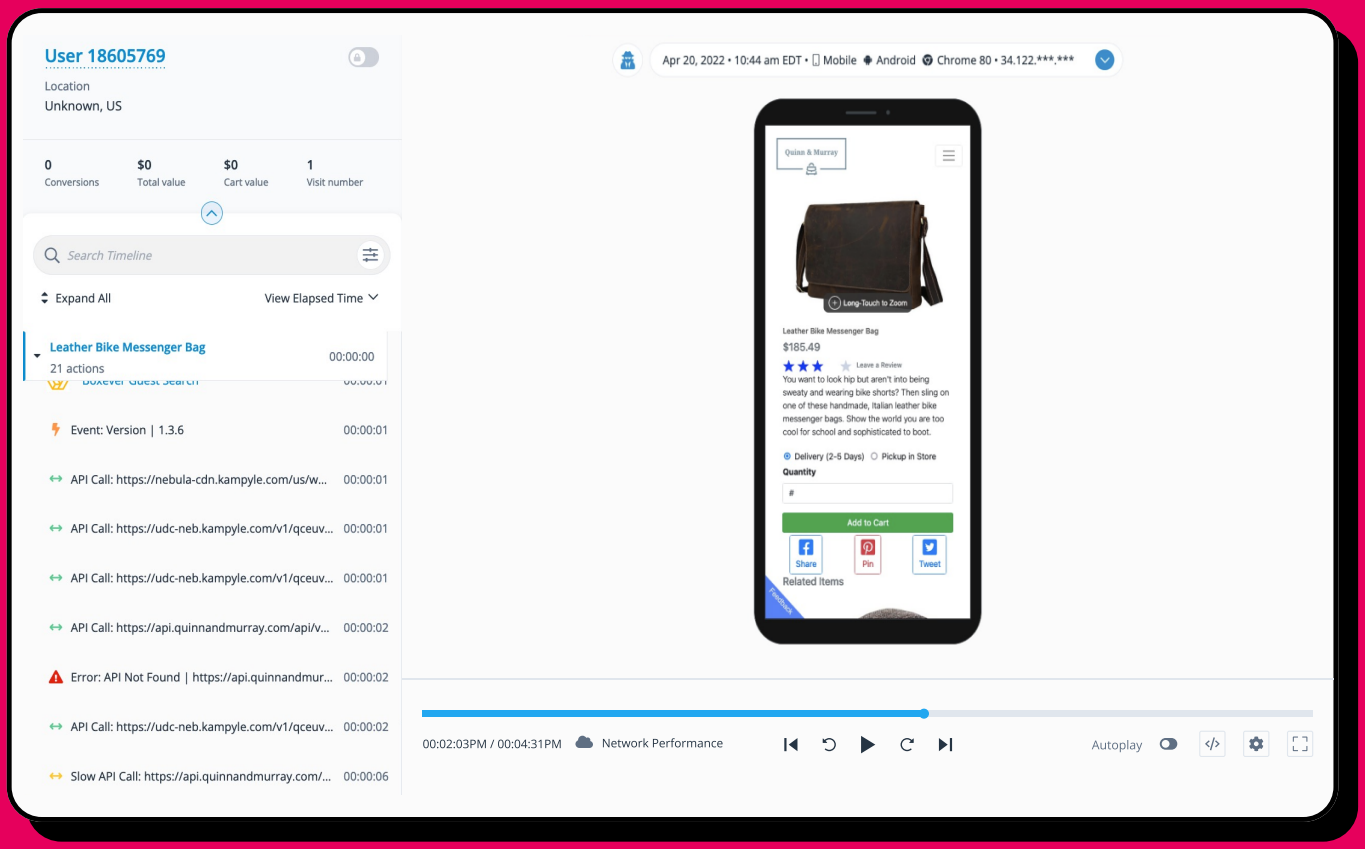
Quantum Metric

The state of mobile analytics.



What is mobile analytics?

Mobile analytics is a category of technology that helps companies understand how customers actually experience their native mobile applications, revealing insights and opportunities to improve those experiences. They capture data from mobile devices so that companies can track user journeys, improve conversion rates, and enhance the overall user experience.

Why is mobile-first design important?

Industries such as retail, travel, QSR, and financial services have seen massive growth in mobile downloads, engagement, and spending.

Whether customers are browsing for new shoes on the couch or filling out an insurance claim on the go, the mobile app is a critical channel to engaging your most loyal customers or converting your high-intent purchasers.

In the last year, more than half of all internet traffic was on mobile devices. Mobile app downloads increased worldwide, across practically every sector.

For these reasons and more, your mobile app needs to deliver on its promises of speed, reliability, and usability. For organizations, this means listening to customer signals, responding rapidly, and continuously iterating and optimizing the mobile experience with a data-driven approach.

Our goal is to help you understand this new world of mobile analytics, how the technology has evolved, and important considerations for buyers to navigate as they look for a solution that's right for their business.

What is mobile attribution?

For digital marketers, measuring mobile attribution is a key component of determining the success of ads or marketing campaigns.

With mobile attribution tools, marketers can determine which touchpoints (especially ads) influenced users to make a purchase or convert. Advanced mobile attribution tools enable marketers to segment users based on operating system, device type, and other factors. This way, marketers can identify which ad or campaign worked best for a specific group of users.

Today's mobile analytics vendors go beyond mobile attribution. They offer companies a more comprehensive view of how large segments of mobile users engage with their digital products.

Tracking mobile devices.

Unlike desktop, mobile devices have smaller screen sizes (4-7 inches) and offer a different user experience. This means that mobile analytics tools track things like taps, swipes, and holds, as opposed to clicks and user commands.

Understand the difference between tracking users on mobile web, native app, and hybrid app.

First, we want to make a distinction between mobile web, mobile (or native) app, and hybrid app. (The remainder of this document will cover mobile analytics for mobile and hybrid apps.)

A mobile website is simply a website adapted to tablet and smartphone browsers (i.e., Safari on iPhone), whereas a mobile app is a program that is installed on a user's mobile device.

Similar to web sites, which primarily use either Traditional/Multipage or Single Page Architecture, mobile apps also have two distinct types of architectures.

These are the two main types of mobile apps:

- **Native apps** are applications developed specifically for a mobile operating system. For developers, that means Objective-C or Swift for iOS vs. Java for Android. For users, native apps generally offer a more rich user experience.

- **Hybrid apps** are essentially websites packaged into a native mobile app wrapper. They look and feel like a native app, but there are some key differences. Fueled by a company's website, hybrid mobile apps exist outside of the basic frame of the application and are typically restricted to the controls/navigational elements of the website. Uber and Instagram are popular hybrid apps. Advantages of hybrid apps include faster development cycles, fewer app store limitations, and more cost efficiencies.

How do mobile analytics tools work?

SDK vs. JavaScript.

Mobile data analytics tools use SDKs to capture user data, whereas websites use client-side JavaScript. Analytics SDKs are small pieces of code installed in the app. Its main function is to capture signals and transmit data for reporting purposes.

Websites and mobile apps are inherently different in architecture, so web analytics tend to focus on measuring “pages,” whereas mobile app analytics measure “views.” This traditionally required teams to make accommodations in reporting and define traffic differently across devices.

However, with a new generation of mobile analytics solutions, it’s now possible to measure traffic singularly across platforms.

With solutions like Quantum Metric, you can get mobile analytics, session replay, and performance all in one view across mobile and web. Now, there’s a common way to capture, visualize, analyze, and alert regardless of channel – and without additional tagging

Performance implications of SDKs.

SDKs can have a negative impact on a mobile app's performance because they sometimes demand more resources than the app can handle. In the past, this meant making difficult trade-offs between delivering great customer experience (fast and personalized) and tracking every engagement.

For example, to replay mobile app sessions, many mobile app SDKs take screenshots of the user experience. This approach will slow your app performance and make it difficult to visualize the UX at a granular level. In addition, taking screenshots of the user experience can introduce security and encryption challenges.

Quantum Metric has a unique and differentiated solution to the screenshot issue. Learn more about our patented, highly performant data capture approach in the sidebar below.

Quantum Metric's mobile SDK: Unparalleled native app performance and visibility.

- **Lightweight SDK (iOS and Android):** Our Android SDK is approximately 200KB. Our iOS SDK leverages bitcode, so it compiles down to less than 1MB in the final build.

- **Patented, highly performant data capture:** We have a patent on translating native app views into HTML (DOM), which reduces memory and CPU consumption, as well as data plan usage.

- **Encrypted at source:** We can block or encrypt data at source, which is much more secure and flexible than other solutions that rely on auto-masking.

- **No perceptible impact:** Your native app UI stays quick and responsive. For most apps, the Quantum Metric SDK adds less than 1% of additional memory.

Quantum Metric supports web and native mobile applications on both Android and iOS. We work out of the box with all modern dynamic content sites, including Single Page Apps (i.e., REACT, Angular, Backbone, etc.), WebComponents, JQuery, AJAX, HTTP/2, HTTPS, SPDY, HTML5, and more.

Finally get that real-time insight into your native app experience while protecting customer data and minimizing performance impact.

Measure what matters with mobile app analytics tools and platforms.

As you consider which mobile app KPIs are relevant to your business, consider that apps are much more than just another channel to generate revenue. Mobile apps can transform your customers into brand loyalists by incentivizing them with hyper-localized features.

Here are a few high-level business goals and questions you may want to answer:

1. How can you engage your audience so they spend more time inside your app?
2. How can you reduce friction so that customers complete desired actions, e.g. purchase, make a transfer?
3. What generates customer loyalty so that customers return over and over?
4. How can you increase app store ratings?

Here are a few mobile app metrics that can help track your KPIs. We've broken them down into key categories, including Customer Experience, Acquisition, Frustration Events, Task Completion, and App Performance.

Customer Experience

- iOS and Android app store ratings
- NPS and CSAT
- Call center engagements

Acquisition

- Entries
- Campaign attribution
- Customer lifetime value
- Average revenue per user
- Customer retention / churn

Frustration Events

- Error messages/ window alerts
- Possible frustration
- Blocked conversions
- Empty search results
- Profanity detected
- Frozen UI

Task Completion

- Time spent alerts
- Sign-ins
- Carts
- Abandoned cart
- Orders/completions/conversions
- Revenue

App Performance

- Crashes
- Network/API speed
- Network/API errors

Mitigate security and privacy risk related to mobile analytics.

Safeguard your customers.

As mobile enters every aspect of our lives, companies should be prepared not only to prevent malicious attacks, but also protect the rights of their customers' data.

Lots of potentially sensitive customer data can be captured through a native app. With new international privacy regulations, such as GDPR and CCPA, protecting customer data is not just the right thing to do. It's required by law, and data breaches can have enormous negative repercussions, both financially and to your brand reputation.

As you evaluate mobile analytics vendors, here are three key questions to ask:

1. From a security perspective, does the vendor provide clear documentation and support around how data is captured, not captured, or captured and encrypted?
2. For privacy compliance, does the vendor provide support for GDPR and CCPA?

1. For privacy compliance, does the vendor provide support for GDPR and CCPA?
2. Does the mobile analytics vendor provide documentation to ensure transparency and communication to your customers, e.g., will your customers have peace of mind that you won't take their data for granted?

Secure your mobile analytics data.

Before implementing mobile analytics, understand and categorize your mobile app data into the three key categories:

Know which data to NEVER capture: As they say, the best defense is good offense. If you don't capture the data to begin with, it's less likely to be the subject of a data breach. Be clear on what data should NOT be captured for analytics purposes. PCI and credit card data falls into this category.

Decide which data to capture that needs no encryption: Collecting public data shown on a mobile view or product search terms is relatively harmless. Still, you want to ensure that this data is transferred and stored securely across networks and servers.

Decide which data to capture & encrypt: Most companies choose not to capture PII (personally identifiable information). However, there are situations where sensitive data needs to be captured, such as the name and address of a user. This identifiable data needs to be encrypted for GDPR and CCPA purposes. In addition, ensure the encryption occurs at the device level rather than just at the network level. As they say, the best defense is good offense. If you don't capture the data to begin with, it's less likely to be the subject of a data breach. Be clear on what data should NOT be captured for analytics purposes. PCI and credit card data falls into this category.

Establish a compliance program.

Establishing a compliance program does not require massive time and resources, but it does demand ongoing attention. When done correctly, you can develop goodwill with your customers while minimizing legal risks at the same time.

- **Audit existing privacy policies and practices:** Identify what data you are collecting currently and if it is meeting your specific needs. If it's not being used, determine if there's enough of a future business case and value to retain.

- **Curtail data collection and retention:** Identify opportunities to slim down on data attributes that may be risky and don't add business value.

- **Ensure data retained is secure:** Work with IT/security teams to safeguard customer data of all types.

- **Develop a strong privacy policy:** This is required by law and easy to do with many templates available that can be customized to your business.

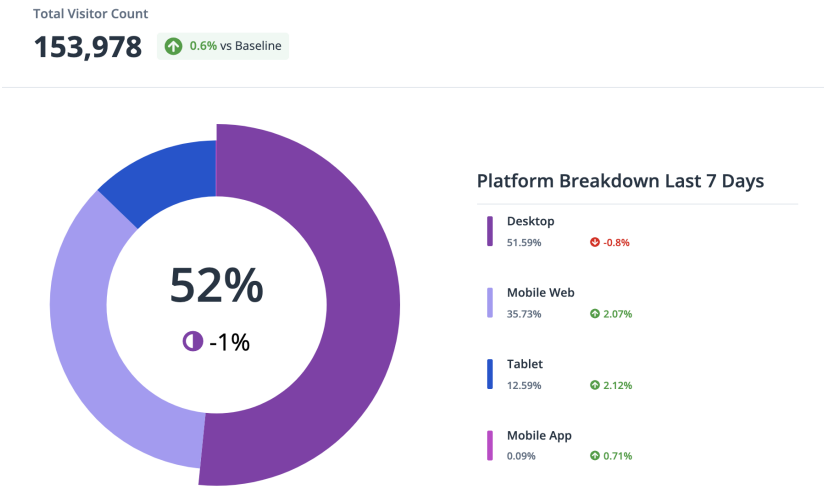
- **Create awareness and communication:** Besides standard privacy policy jargon, take every opportunity to be upfront and explain clearly (and directly) to customers 1) what data you collect and 2) what it is being used for so there are no surprises.

- **Open a forum for feedback and complaints:** Get an email address for customers to address privacy concerns so that you can build trust and loyalty.

Quantum Metric for mobile app analytics and session replay.

Mobile app leaders: The days of worrying about how you will prioritize features and fixes is over.

With Quantum Metric, you can get business, behavioral, and technical data – across all digital products (web, native app, etc.), combined in one platform. And it can be seamlessly sliced and viewed together for a 360 view of the customer.



Why Quantum Metric?

- **It just works.** Capture behavioral, performance, and business-level data out of the box with a lightweight SDK. Once the SDK is deployed, no code-level configuration is required. Be up and running in minutes, not weeks.

- **Data visualization for every team.** Now, you can get analytics, session replay, technical insights, and alerts all in one platform, regardless of mobile or web. Correlate engagement, app crashes, API performance, customer feedback, and struggle with business impact.

- **High-fidelity session replay.** Quantum Metric's session replay is more than a simple screen recording. See 100% of customer interactions out of the box, and create no code precision events directly from any session replay.

- **Automated friction detection.** Detect and alert on mobile frustration in real time. Don't waste time guessing what went wrong, how to prioritize it, and how to fix it. A detailed timeline enables you to easily identify points of struggle, technical errors, and more.

- **Security and performance isn't optional.** Quantum Metric's patented capture technology translates native app views into HTML (DOM), which reduces memory and CPU consumption. This methodology also ensures PII or PCI never leaves the device unencrypted.

- **Customers have spoken.** A top five insurance company was able to deploy our SDK, capture replays, and begin collecting analytics within minutes. Its director of mobile engineering said: "I've been trying to get this level of visibility for 18 months."

Embrace Continuous Product Design.

We know mobile app development takes time and money. So why let all that hard work go to waste, risking your return on your investment? Like any business, the app development process doesn't end after it launches. With Continuous Product Design (CPD), you never stop iterating and improving.

Find the best mobile analytics platform for your organization.

Interested in boosting your organization's mobile analytics strategy but not sure where to begin?

Check out our guide for finding the best mobile analytics platforms and solutions for your organization.