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A PM's Guide to Product Analytics for Complex Applications



What does product analytics really mean?

Product Analytics refers to the process of collecting and analyzing data in order to understand how users interact with your digital products. The data is collected and analyzed with a goal of improving the experience we provide to our users. We can use Product Analytics to answer very broad or very specific questions.

Let's look at a few examples...



How many MAUs does my product have?



What are the most common paths my users take?



What percentage of users complete a flow?



What is my feature retention rate?

These questions are all very different in scope, but each is worth asking and answering. Most teams opt to use a Product Analytics solution to help them answer key queries about user behavior. But as we'll cover in detail, not all Product Analytics solutions are created equal. Here are three things to keep in mind as you evaluate Product Analytics solutions in 2023:

- 1. Complexity of Instrumentation
- 2. Quantitative & Qualitative Data
- 3. Proactive User Insights



Complexity of Instrumentation & Upkeep

In the early days of the web, it was pretty easy to answer just about any Product Analytics question. This is largely due to the way early websites worked. Nearly all logic lived on the server-side, and almost every user action would coincide with a new page being loaded. It was as simple as tracking a series of URLs. Things aren't so simple these days.

Modern web applications work differently. Thanks to the use of frontend frameworks like React and Angular, the majority of logic now lives on the client. Depending on the nuances of your application, a user might even complete their entire session without ever loading a new page. Since we can no longer rely solely on URLs, most analytics solutions require teams to extensively tag page elements and track custom events to understand how users interact with our products.

A New Paradigm - Tagless Product Analytics

Thankfully, solutions like LogRocket have emerged to address these shortcomings. The secret to success? Tagless Product Analytics. Let's take a look at how LogRocket's tagless Product Analytics compares to traditional solutions:



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Blending Quantitative & Qualitative Data

Most Product Analytics solutions focus on delivering purely quantitative insights to their users. While this quantitative data is critical, raw numbers can often raise more questions than they answer. It's not enough to just know what a user did or how a metric trended over time - we need information that tells us why.

Consider a scenario. You check your analytics dashboard and see that a new feature is generating less engagement than expected. What's your next move? Most PMs know their products extremely well, and will quickly put forth some solid hypotheses based on instinct and experience. But at the end of the day, we're still taking a guess-and-check approach.

Point Solutions or a Unified Platform?

Product teams can find the "why" behind the "what" by using a solution like LogRocket that backs up raw numbers with rich qualitative data. Let's revisit our example. You check your dashboard and see unexpectedly low engagement numbers for your new feature. Rather than initiating a guess-and-check approach, you immediately dig in deeper.





See what Issues Impact Adoption

You check LogRocket to see what Issues had a statistically significant impact on adoption of the new feature, and see that a UI bug impacted a sizable cohort of users. You forward a LogRocket session to your engineering team to demonstrate the impact, and a fix is quickly prioritized.

Add Context to the Numbers with Pixel-Perfect Session Replay

By comparing sessions of users who interacted with the new feature and sessions of users who did not, you immediately see what successful and unsuccessful experiences look like. You observe that some users don't appear to notice the new feature, so you introduce a tooltip to make it more obvious.

Timeseries insights	Showing iss	ues for users who are on page	/new-feature-url ~	
Issue	Affected Sessions	Revenue Opportunity	Session Impact	
	6,321	\$694,500.00		-1289
	6,272	\$419,000.00	-8	338
	4,052	\$169,500.00	-339	

Identify which issues impacted a user's ability to interact with a feature



Proactive User Insights with Machine Learning

One of the fundamental limitations of traditional Product Analytics tools is that they can only provide answers to the questions that you know to ask. This can be incredibly limiting because of the sheer volume of factors that can potentially impact a user's experience. We're all human, and nobody can foresee every potential hiccup or bump in the road.

At the end of the day, every analytics tool collects more data than we can possibly hope to manually analyze. But that doesn't mean there isn't significant value hidden away, just waiting to be uncovered. The real question is whether or not your analytics solution does its part to separate signal from noise and point you towards meaningful data.

Applying Machine Learning to Product Analytics

LogRocket Galileo is the first solution that proactively scans your applications to surface the most critical issues impacting your users. Let's go back to our example one last time. Our fictional PM has already fixed a navigation issue that was impacting engagement with the new feature. Mission success, right? Not so fast...



Immediately find meaningful sessions with LogRocket's ML

ML-Powered Recommended Sessions Reveals a New Issue

ML-compiled Recommended Sessions reveal that a frustrating network request was causing rendering issues for a small cohort of users interacting with the new feature.

Issue Name	Histogram	Severity Score	
Rage Click on "Checkout" http://app.logrocket.com/cart/checkout	.altraut.IIII.ho	•	
Network Error 502 POST app.logrocket.com query EventTimelineEntries	alihaadaataan	•	
Dead click on "Chat with support" http://app.logrocket.com/charts			
Network Error 502 POST app.logrocket.com query TimeBarMarketQuery	ويليان المنابطين الماسي	•	

Instantly see what UX and tech issues impact your user experience

Issues Digest Reveals a UX Flaw

Issues Digest surfaces that users were frequently Dead Clicking on an element that isn't actually a clickable button.



Conclusion

A solid product analytics strategy is key to any product team's success, and a big part of that is making sure that your analytics solution is the right fit for your needs. Here's a short checklist of questions to ask prospective vendors:

- □ How complex is the instrumentation?
 - Does this solution require manual tagging?
 - □ Will I need to rely on engineers to configure new queries?
 - Can this solution answer analytics queries retroactively?
- Does this solution capture both quantitative and qualitative data?
 - □ Is Session Replay included? If so, what search and filtering options are available?
 - Can this solution quantify the revenue impact of specific issues?
 - Does this solution track UX frustration issues like rage clicks and frustrating requests?
- Does this solution proactively surface issues and trends without being prompted?
 - How do you help me identify meaningful sessions to watch?
 - Does this solution identify the issues impacting my critical KPIs?
 - □ Can this solution accurately surface issues with critical user impact?

Stop guessing about your digital experiences

LogRocket combines session replay, error tracking, and product analytics – empowering software teams to create the ideal web and mobile product experience.

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