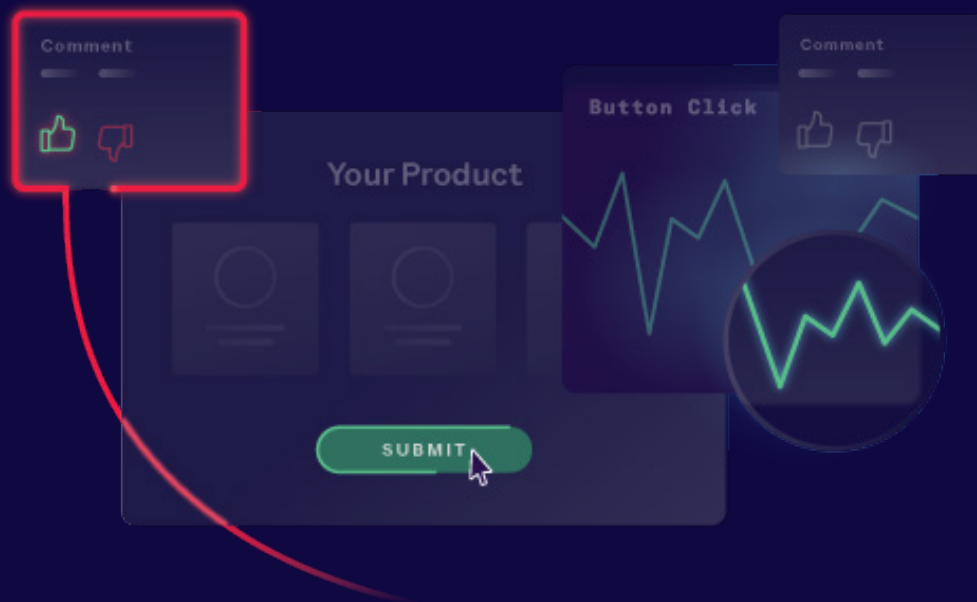




# Product Analytics Buyer's Guide

A guide to choosing the right product analytics solution



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# Who needs product analytics —and why

Presenting a thorough overview of product analytics, with practical considerations for bringing it into your business. Let's go!

## What is product analytics?

**Product analytics** is a set of tools that examine the behavior of users within your product, providing critical information to optimize performance, diagnose problems, and correlate customer activity with long-term value.

For product teams, analytics is like having a crystal ball. Instead of guesses, you can craft and test hypotheses. Instead of relying on customer interviews, which don't always yield usable feedback, you can see how people interact with your site in real time. And with session replays, you can literally pinpoint where they go and what they do...as well as what they fail to do.

**Data science** has recently taken product analytics to the next level with the ability to predictively indicate potential hotspots, logjams, and red flags in the user flow. A product analytics platform that can ingest and process every bit of user data will help steer your teams towards insightful questions and show them where to look to reap maximum gains.

When you truly understand your users' needs, you can evolve your product to anticipate them.

# What kind of companies need product analytics?

All of them! Every business iterates constantly on product-market fit. Small companies need to find it, growing companies want to expand it, and large ones are trying not to lose it.

## Startups need product analytics to create a quality product in the first place.

Addressing product-market fit through product analytics gives you the quickest and most actionable feedback. It also offers quantitative direction towards greater effectiveness as you iterate on your MVP.

## Post-startup companies need product analytics to scale properly.

Product analytics is key to effective growth at this stage. It gives you the ability to develop your data value chain, increase user retention, and maximize conversion rates while reducing customer churn.

## Enterprise companies need product analytics to stay nimble.

Large orgs need to adapt to evolving customer demands, and to stay ahead of emerging competitors looking to disrupt the market. Product analytics not only helps enterprise companies refine their product; it also gives them data they can blend with other sources (finance, HR, supply chain, retail, sales, marketing, etc.) to gain a holistic view of the entire business.

Businesses need to know where customers focus their attention, why they struggle to complete tasks, and which features bring the greatest ROI.

Teams need to leverage the enormous amount of data at their disposal, and create a culture that uses data to achieve better outcomes, while prioritizing their time and resources.

It's the “unknown unknowns” that make or break products, markets, businesses, and fortunes.



## It's worth it!

According to [research from IDC](#), companies that properly leverage digital analytics tools and processes see **2.5x greater business outcomes.**

# Who should read this guide?

Every team in the company can improve performance when they have an easily accessible platform that allows them to run experiments, test results quickly, and document the improvements they make.



**Product managers** looking for ways to increase activation, conversion, and retention, create captivating digital experiences, and tie feature usage to higher-level business metrics.

Guessing is not a strategy, especially at the enterprise level!



**Product leaders** who want to measure the effectiveness of their team, use data to prioritize the product roadmap, and demonstrate the impact of their team to the C-Suite.



**Marketers** who want to know the true effectiveness of their emails, social posts, and promotions, and who wish to improve the site experience to maximize conversion.



**Data Teams** who know that the success of the product is the success of the business. Sharing product analytics creates transparency across departments and greater understanding of what's happening company-wide.



**Customer Success** teams who are tasked with increasing adoption and expansion. Knowing which customers are using which parts of your product can help you quickly know whom to reach out to and who is at risk of churn.

# How can you tell if your business is more nimble than the competition?

*If you can't see for sure what users are doing in your product...*

*If there's no way to measure and record the metrics you are responsible for...*

*If you have to guess at what might improve conversions...*

Then it's impossible to make accurate decisions. You're a pilot flying at night without instruments. And when millions of dollars are at stake, relying on hunches and intuition is more than risky—it's reckless.

You need a way to know what you know—  
as well as what you don't know.

A good product analytics tool lets you see your product as it really is, at any given moment. When you see where users have trouble, you can smooth things out for them. You can find out which features people actually use, and which they don't. You can chart the paths users take through the product to see where abandonment occurs. You can segment users and see how specific groups behave, and easily compare them to other subsets of users. Having this kind of information at your fingertips lets you notice causes and correlations, pinpoint problems, and change workflows accordingly.

A tool can deliver all the data you need, but if it's making YOU put the time in to sift through and find the things you need, it'll never deliver the value you want.



## Staying agile takes constant vigilance

Hard-won ground can easily be lost when you fail to evolve with markets, technology, or social dynamics. Only product analytics takes basic precepts of the scientific method—hypotheses, experiment, and measurement—and puts them in the service of improving product-market fit. The artistry comes from people across your company who ask insightful questions of the data—and reveal answers that transform your business.

Maintaining product-  
market fit is equal  
parts art and science.



# What about the all-new version of Google Analytics?

Did you know that Google Analytics predates SaaS? We'll admit, GA was the OG. Alas, their Universal Analytics was never built for the depth and sophistication of a modern customer journey.

Now GA4 brings major changes: there's now an event-based model, more views, new engagement metrics, more detail across the board, and "codeless tracking" that doesn't require engineers to set up.

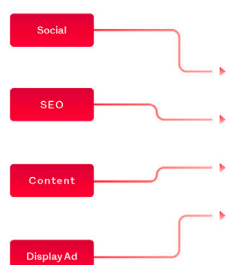
However, you'll still have to decide what events you want to track in advance. This means you'll still end up with an incomplete, biased dataset. And the other limitations are significant:

- **GA4 cannot surface things you're not already tracking.** Alternate paths? Unseen moments of friction? Backtracking? There's no way to see user behavior as it actually happens.
- **GA4 doesn't offer retroactive data capability.** You're limited to collecting data on events from the moment you decide to track them. Whoops, forgot to track something? Too bad.
- **Integrations and customizations are limited.** This is a problem when you're trying to do more things to make your data useful.
- **Users will always have to interact with middleware.** While a free connection to Google's BigQuery is included, you still have to pay for the data you use.
- **GA's "AI and predictive metrics" are basically alerts.** You still have to manually define the conditions to detect trends that you deem important or critical.
- **GA4 doesn't analyze hidden behaviors to find new insights. Ever.** To be fair, results are automated, so they may save you some time. But they don't really reach the level of true insights.

You need a platform that can process 100% of your data.

You can learn more about this and other reasons to upgrade your analytics [here](#).

## What GA is Good For:



## What Heap is Good For:



## PART 2

# How to choose the best product analytics platform

Here are the Top 10 benefits to look for:

## 01 It should save time and resources, not make life more complicated.

The most important thing to know upfront: is implementation seamless, or will it give your devs extra work to do? Two common time sinks with product analytics are (a) needing to code events by hand, and (b) needing to sift through all the data on your own, hoping to figure out what's most useful. (See "The Basics of Data Tracking callout in Part 3.) Manual setup and tracking eats up scarce and valuable engineering time, which can make you less likely to deploy your expensive new toolset. That's a lose-lose.

If your product analytics tool is making YOU do all the work, it's wasting your time.

Similarly, if you have to spend months sifting through data to find the moments of friction or opportunity in your product, you're wasting time. A good tool should automate much of this work for you - it should point you to the key user interactions in your product.

## 02 It should help you become hypothesis-driven.

Product analytics' most valuable application is in discovery. It allows your PMs to sift through data to uncover new correlations:

*Where are users spending their time, and on which tasks?*

*What behaviors most predict long-term retention?*

*How do power users navigate our site, and how can we nudge other users to take those actions?*

*Which channel brings in the people who purchase our large-ticket items?*

*At which part of the funnel do people drop off? Which groups of people drop off more?*

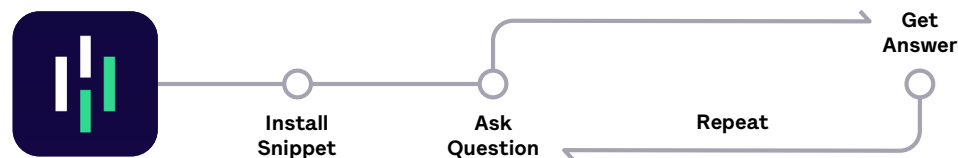
*Which activities do customers do on web vs mobile?*

A good tool makes it easy to formulate, test, and discard hypotheses rapidly until you get the answers you seek.



### 03 It should give you all the data you need.

The only way to be scientific about your approach is to have the data—ALL of it. A complete, meticulously governed set of customer data lets you test any hypothesis you want, at any point in the development process. Answers to questions you haven't even thought of yet are already there. No manual tracking, advance planning, or engineering time required. Now your data becomes a place to go exploring.



FACT: Your data is way smarter than your instincts.

### 04 It should show you what your users see

Quantitative tools are great: the good ones give you endless data on what your users do. Qualitative tools are great, too: they help contextualize all that data and - especially when it comes to session replay - let you view your product through the eyes of your customers. The absolute best are tools that **combine these capabilities**. Currently a Heap exclusive, [integrated Session Replay](#) lets you move back and forth instantly, so you can use quant data to locate problems (which steps are tripping our users up?) then switch to session replay to get the info what's the user experience at those moments?) that helps you solve them.

### 05 Its predictive capabilities should be foundational, not bolted on.

Some tools try to add predictive capacities by combining multiple platforms: one for data collection, the other for data science. [Unfortunately, this doesn't work](#). Only a solution ingest raw events, can mine through the journey data of vast numbers of users and identify meaningful trends and patterns, like suggesting missing steps in a funnel or revealing hidden points of friction. [Learn more here](#)

### 06 It should give you X-ray vision into areas of opportunity and/or conflict.

These are often issues you never would have thought to consider, that arise from data you didn't think to track in the first place!

*How many "invisible steps" are occurring between two points in a funnel?*

*How much time are users spending on the step right before dropoff?*

*Do desktop users convert at a significantly different rate than mobile users?*

## 07 It should keep your data clean and dependable.

All the data in the world is no good if it's impossible to use. For your data to be maximally valuable, it needs to be clear, organized, and consistent. When the dataset is trustworthy to everyone in the organization, teams can work collaboratively and you can scale. You can't do this if your data is a pile of sticky spaghetti. [Learn more here.](#)

What are you not paying attention to—but you ought to be?

## 08 It should be geared toward increasing conversion and retention.

Product analytics is critical for measuring and systematically improving AARRR, aka the Pirate Metrics:

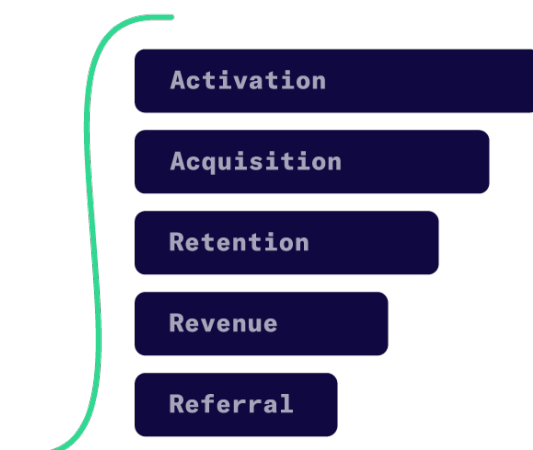
**Acquisition:** *Where do your customers come from?* Which users are the best prospects, which channels they favor, and what are your optimal costs for acquiring each user?

**Activation:** *What steps does a user take in your product?* Each step on their journey to becoming a paying customer is known as a micro-conversion. Wouldn't it be a great idea to optimize the effectiveness of each one?

**Retention:** *Are your customers staying or leaving?* Product analytics helps you make happy users happier, and steer you towards ways to win dissatisfied users back.

**Revenue:** *How do you make money with your product?* Streamlining your sales funnel with product analytics will help you reduce acquisition costs and increase the value of the customers you retain.

**Referral:** *Are purchasers talking up your product or disappearing?* Product analytics helps you measure customer loyalty through their actions, social posts, etc.



You want to explore your data from every possible angle.

## 09 It should give you next-level comparison skills.

**Behavioral Segmentation** indicates who your best customers are and what they like to do, so you can entice high-value users with more of what they like, and less of what they don't.

*Where is the drop-off in the funnel?*

*What sources brought them in?*

**Journey Maps** show you the differing paths and optional steps users take on your product or site, so you can capture the differences in conversion rates between them.

*When users have different paths to the same goal, which converts better?*

*What happens at key forks in the user journey? Which users go which way, and what's the impact?*

**Session Replays** lets you see what individual customers see, so you can identify and reproduce any situation where they encounter friction.

*Are users finding the highest-value features easily?*

*Where are people getting stuck, and why?*

63% of funnels contain a secret path to conversion that isn't being tracked. [Learn more here.](#)

## 10 It should easily connect to your data warehouse.

The larger your organization, the more important it is to centralize your dataset and blend product information with other BI data, while using minimal engineering resources. [A system that automatically pushes behavioral data to your data warehouse](#) while keeping it organized means your data teams can spend less time munging data, and more time generating insights.

### **Important: Not all tools give you this much freedom.**

There are plenty of adequate tools to measure metrics you already know are important. A **great** tool will point out the situations, circumstances, pitfalls, and possibilities of your product that aren't apparent yet. By preparing for what's coming around the bend, you're able to stay several steps ahead of the market and your competitors.

If your product analytics solution is not prepared to do anything and everything you ask of it, it's useless.

## PART 3

# The 4 S's of good analytics

## 1. You want robust **sources** for data.

And you want to collect every bit of it.

**Automatic Data Capture** is a must for getting the most use out of any product analytics tool. Manual tracking requires advance planning and uses valuable engineering time. Metaphorically, with autocapture, there's no need to plot scripts in advance. The cameras are always running and you can look at any footage, from any angle, any time you want.

**APIs** are critical for adding context to the events you track, so you can gain a complete view of user behavior on your site. Being able to pair user data with data on things like in-store purchases, call center interactions, or conversations with sales reps gives you more—and deeper—answers to the questions you have.

**Integrations** enrich your dataset by pulling in data from multiple sources and blending it with behavioral data from your product analytics. Can you connect to Stripe, Shopify, Salesforce, Marketo, and Optimizely? The more integrations your product analytics solution can accommodate, the better.

### The Basics of Data Tracking:

There are two main ways to capture data for analytics:

**Explicit** (aka manual) tracking requires engineers to insert tracking code into each event. Data accumulates from the moment of instrumentation. Any event that is not explicitly tracked does not collect data for analysis. Google Analytics, Mixpanel, Amplitude etc are examples of explicit tracking.

**Implicit** tracking (also called automatic capture or retroactive capture) requires only that a single Java snippet be inserted into the header of a site or application. After that, all activity is tracked automatically: every click, swipe, form fill pageview and more. Heap is the analytics solution powered by autocapture.

**Hybrid tracking** is a new premise that pairs the infrastructure of an explicit platform with codeless, retroactive data collection. It claims to be the best of both worlds. In practice, this approach fails to deliver proactive insights, because only predefined events are available to the system. Without a mechanism for handling raw events that haven't been explicitly 'tagged' within the data capture tool, the onus is still on teams to figure out what the data is trying to say.

It's important to note that with Heap, having autocapture-driven features does not prevent you from designing explicit tracking experiments to your desired level of granularity! **Heap gives you the advantages of both methods, without the deficiencies of hybrid tracking.** Users can 'get under the hood' to tinker and tune, or just put it "D" and steer where they want to go. The choice remains yours.

## 2. You want advanced data science

If your teams were in a race—and let's face it, they are—would you rather give them a paper map to the treasure, or a live GPS feed? Data science helps guide you to discover moments of unseen friction and opportunity.

There's a huge difference between having information, and being able to take meaningful action with it.

**Journey Maps** is the first tool ever that can compare paths leading to the same goal, or measure the impact of optional steps in a funnel.

**Step Suggestions** automatically surface untracked events that exhibit significant dropoff—even if you haven't defined them yet! This way you can build appropriate steps into your funnels to maximize conversion and retention.

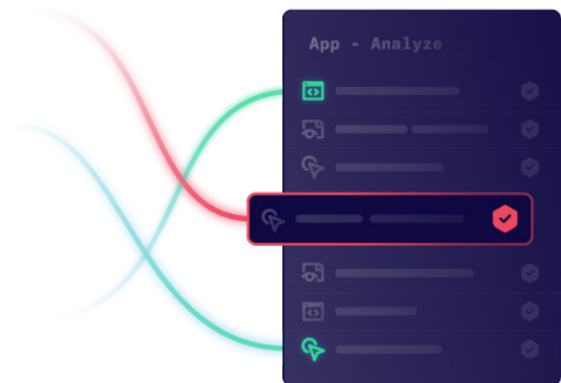
**Effort Analysis** helps quantify the difficulty of steps in the journey. When you understand the degree of friction your customers experience at every point in a given user flow, you can prioritize the fixes that will have the biggest impact on your users' experience.

Heap's powerful data science layer is called **Illuminate**, because that's what it does: searches your dataset to automatically spotlight the insights that lead to the biggest business results—even on untracked events.

In Heap, **Top Events** displays how well paths with different events convert to the next step, so you can understand how that behavior is helping or hurting conversion.

**Group Suggestions** help you identify user cohorts that correlate highly with your outcomes so you can include them as groups for segmentation.

When you have complete understanding of your customers' digital journeys, you can quickly improve conversion, retention, and customer delight.



### 3. You want to view actual user **sessions**

Session Replays are visual recreations of your users' web and mobile sessions that let you see what customers see, understand user frustrations, and identify and reproduce any issues they encounter with your digital experience.

Heap's [One-Click Session Replay](#) brings instant context to your analytics so your teams can immediately find friction, fully understand user behavior, and quickly identify solutions to your biggest challenges. You can see for yourself what users are looking for and whether they can find it easily. (And maybe most important, see where they are NOT finding what they need.) It's literally the next best thing to being the user.

- **Reproduce and solve bugs** by understanding the context as well as the problem.
- **Improve conversion rate** optimization by quickly testing and adjusting features and funnels.
- **Understand the user behavior** by seeing the hindrances and hurdles your customers face.
- **Improve customer onboarding** by giving your users everything they need to succeed from the get-go.

Unlike other session replay tools, Heap's session replays are fully integrated into all of our critical analytics modules, including our data science powered tools like Funnel Analysis, Effort Analysis, and Top Events. Now you can directly perform deeper, more complete analysis.

- Watch sessions from any segment of users—or any individual user.
- Seamlessly expand on interesting discoveries to see how widespread the issue is.
- Define events with visual labeling, then watch instant replays to make sure you're tracking the right thing.
- Understand the moments right before and right after the action you care about.
- Walk users through their specific problems when they call customer support.

And best of all, with Heap your **sessions are cued to the exact moments you want to know more about**. Are you building a funnel? Defining an event? Is Top Events revealing important moments of friction? In Heap, just click and you can see endless sessions, all cued *exactly* to that event. No more going back and forth between different tools, just jump to the exact moments you're curious about. You'll never be stuck knowing only half the answer!

Quantitative tools alone can never tell you why users drop off—or what the fix should be.

## 4. You want true scalability

Be careful! Plenty of analytics tools, even those with lots of bells and whistles, have trouble with scale. When data governance can't keep pace as you grow, users often find themselves in lonely silos, able to answer small focused questions, but unable to work as a team to tackle more important initiatives. That's no way to scale. Ideally, your solution will offer the following features to push your analyses forward, instead of holding your team back.

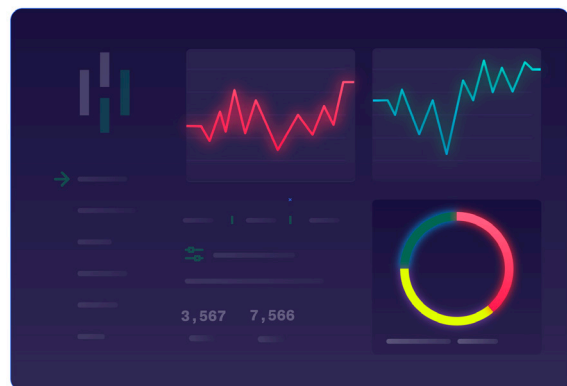
You want everybody looking at the same data in the same place.

**Event repair** alerts admins about stale and/or duplicate event definitions, then guides them through the process of repairing or archiving. There's no confusion about definitions, and your dataset stays lean and mean.

**Custom permissions** give each user the right level of access and control. You can roll out data to everyone the whole company and empower each user to do the most with it.

**Unified views** keep everyone on the same page, reversing the usual trend towards entropy. When everyone is looking at the same data all the time, silos don't get a chance to form.

In short, you want everybody in the org on the same page, and anyone coming on board to access the dataset easily, without worrying if it's trustworthy.



# Conclusion

Extraordinary digital experiences don't just happen. They are created by deeply and intuitively understanding user needs and desires, and evolving your product to meet them. Product analytics is the means to this end. We believe that to be useful, a platform must have two critical capabilities: a comprehensive user data foundation, and an analytics environment that's built to mine through it for hidden insights.

You have lots of choices when it comes to choosing a solution. We hope this guide has been useful.

At Heap, we believe we're best set up to serve your needs, both today and tomorrow. We would love to hear about your data challenges and show you new ways to address and overcome them. To learn more, visit us at [heap.io](https://heap.io).

Maturity with data analytics makes good companies great—and great companies unstoppable.

*Heap is the premier system of insight for digital experience builders. Our mission is to illuminate hidden opportunities for fast-moving digital teams to delight their customers and move the needle on key metrics. Over 8,000 businesses use Heap to increase revenue, improve conversion, accelerate decision-making, and drive business impact at scale.*