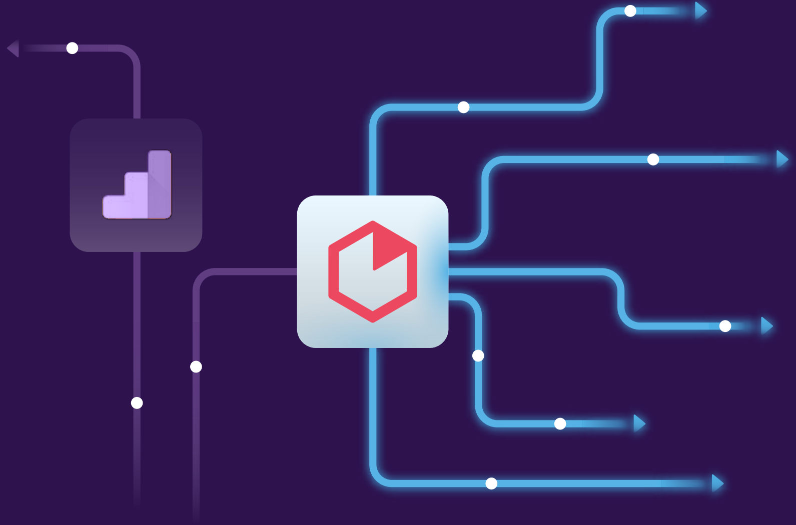
Heap



Heap vs. Google Analytics

For Product Teams

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Introduction

If you’re on a product team, you’ve likely used Google Analytics. Maybe your team decided it wanted to be more data-driven. Maybe you thought, “I wonder if I can see what’s happening in my product?” Maybe a directive came down from above: show us the data!

Facing these scenarios, what do teams do? Well, Google Analytics (GA) is free. And “google” is certainly a credible name. So your team opens up a GA account and spins up some dashboards. Voila! Welcome to your data-driven future!

Except … once you start trying to use the data from GA, you realize it doesn’t do you much good. Sure, your dashboard might be convincing to someone who’s not paying attention. But if you’re looking to understand how users interact with your product, or if you want to improve your product to keep users around, or if you want to increase conversion or better meet user needs … GA just isn’t the place to go.

Read on to learn more about the powers of product analytics!

In this book, we'll explain why GA isn't always the right choice for product teams. We'll walk through the legitimate uses of GA, and show how the data it gives you might be useful. But we'll also cover the many ways GA can't help. The simple fact is that GA wasn't built to handle the needs of product teams. So why should we expect it to?

In the process, we'll show you how a powerful, dedicated analytics tool like Heap can make all the difference to building a superior product. By capturing all the data around how people behave in your product—what they like and don't like, what features and activities they gravitate toward, what actions predict other actions—**Heap makes it easy to improve conversion and retention, to target specific user segments, and to build a product that truly stands out**.

SECTION ONE

What Google Analytics is good for, and what it isn’t

Let’s go back a little bit, to 2005. That’s when Google acquired a tool called Urchin and rebranded it as Google Analytics.

At that point, websites were pretty simple. Most contained a few static pages built with HTML and CSS. HTML 4 was eight years old. Its replacement, HTML 5, was nine years away. Ruby on Rails and Django were both in version 1.0. The first modern front-end frameworks, backbone.js and angular.js, wouldn’t show up for another five years.

SaaS? In 2005, there was no SaaS. Software was still installed via CD-ROM. Business software was entirely on-premise, and even huge enterprise companies waited for yearly updates from the software maker.

Given that most websites were simple and static, the information that mattered to most companies was:

- How many people came to their site
- How those people got there

If a team could use this knowledge to increase the number of people who came to their site, they were gold.

Enter Google Analytics. As a tool to measure site traffic, and in turn to assess the effectiveness of a company’s marketing campaigns, GA was unprecedented. In time, its capabilities grew, and GA is still a powerful tool for calculating ROI for advertising spend. Was this all that product teams cared about, GA would still be the ideal tool.

Why not GA now?

The thing is, the world has changed since 2005. The web exponentially so. Websites now lead visitors through complicated, multi-pronged journeys.

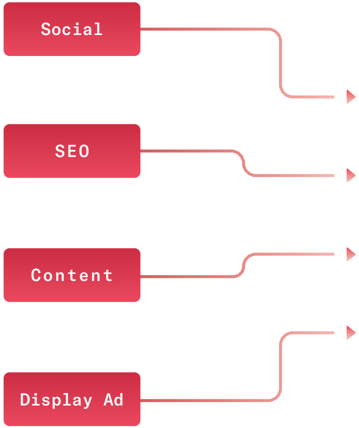
Ecommerce and fintech sites are now as or more important than brick-and-mortar stores. More powerfully, we've seen software overwhelmingly move to SaaS, which literally did not exist when GA was founded.

The major impact of these changes is to have shifted what matters to product teams. While tracking inbound sources is still important, great products are now built from understanding how users behave in your site. What do they click on most often? Which features do they use? What paths do different users take? What behaviors correlate with retention? With conversion? What actions do people tend to do right before an event, and where do they get stuck?

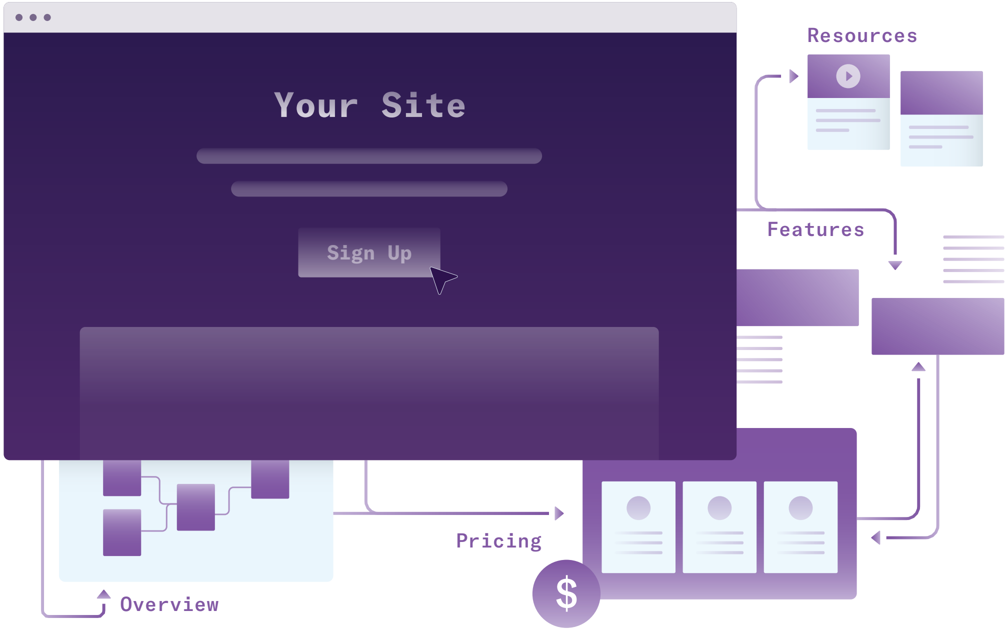
It's by answering questions like these that product teams can make the most impact in their product. The problem is that GA isn't built to answer them. Yes, it's possible with an enormous amount of work to force GA into a facsimile of a tool that does this, but even then, you still won't get all the data you need.

This is not to say GA isn't a good tool. It is—for measuring how people get to your site. For understanding what people do once they're in your site, it is simply not the right solution.

What GA is Good For:



What Heap is Good For:



The next step

Another way of looking at this scenario is as stages in the customer journey. Of course figuring out how to drive traffic to your site is important for any business. But that's the job of marketing. As a product team, your job is to turn those people into paying customers.

*If you're interested in using GA + Product Analytics for marketing, feel free to check out **our ebook** on the topic.*

If Step 1 is to get people to find out what your product or site is, Step 2 is to provide an experience in your product that turns these people into active, paying users. Depending on your business, that may mean different things: purchasing your items (eCommerce site), applying for a loan (Fintech), or understanding how your product can help with their business (SaaS).

This is the difference between a marketing tool like GA and an analytics tool like Heap. Marketing tools have their place, and are extremely useful—if your goal is to increase traffic. Turning that traffic into paying customers—for that you need product analytics.

Step 1
Get people
in the door

Step 2
Turn them into
paying customers

Vanity Metrics

When teams turn to GA, we often say that they're working with **vanity metrics**. These are metrics that look good on paper, but aren't particularly useful. Here are some of the vanity metrics you'll see in GA:

Time on Page

People often want this, but in fact it's an unimportant indicator at best, and grossly misleading at worst. Time on page may indicate that users are engaged with your site. It could also indicate that a user has gone idle. Or that they're confused about your page. Or that they're using your site but have another page open in another tab. Bot traffic can also tremendously skew this metric, as a bot can perform several actions in milliseconds.

Bounce Rate

Bounce rate (the percentage of people who leave your site after visiting only one page) tells you nothing about why people don't stick around on your site. Is your messaging wrong? Maybe. Are you bringing in the wrong people? Maybe. Is your site poorly constructed? Maybe. Bounce rate is also an easy metric to game (find an easy way to bring people to a second page), making it less actionable as a metric.

Number of Sessions

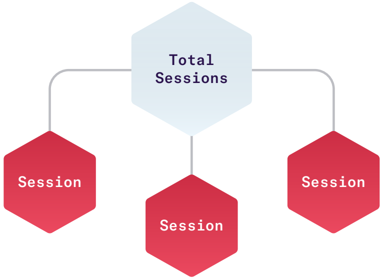
A great indicator of user acquisition, but if you're stopping there you're not properly measuring your product's performance. Is your product a leaky boat (i.e. bringing in lots of users, but unable to keep them)? Are new users understanding how to get the most out of the product? How often do users accomplish what they set out to do in the product? Session count might be a useful metric for marketers, but product teams have more important metrics

“Sessions” model vs. “User-centric” model

Another key difference between GA and a tool like Heap is that GA operates with a “session” model, while Heap organizes data into a “user-centric” model. Sometimes we say that Heap gives you a “holistic view” of your users, or a “360-degree” into what your users are doing.

What does this mean?

In general, GA measures information in **aggregate**. It combines sessions and visit data to give you aggregated numbers. What matters to GA isn’t what an individual user does, or what a segment of your user base does. What matters is simply how many people visit your site from a certain channel, or how many people perform a certain event in your product.



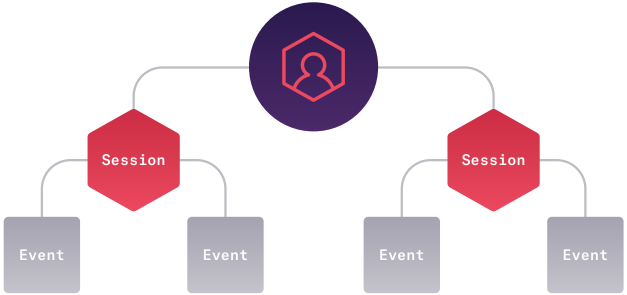
GA’s Sessions Model

Heap, in contrast, assumes that what matters to you is what **each individual user** does on your site. Where do they go? What do they do? Who are they? You can still (and easily) aggregate data in Heap. It's simple to combine individual users to create segments based on job title, company size, channel, average spend, purchase of a certain item, performed a specific action, left a review, and many more.

Crucially—being able to make these segments as granular as you want depends on being able to focus on every individual user. The goal isn't just to tally numbers; it's to analyze user behavior.

For example: when a user visits your site on mobile and web, we automatically stitch those visits together, so you know they were performed by a single user. If a user visits your site, disappears for more than 90 days, then comes back, we group these visits together. GA doesn't.

Another way to look at this: as a product team, what matters to you? If the answer is gross number of people who come to your site, then stick with GA. If it's how different groups of people behave while there, you can hopefully see the advantage of a user-centric data model.



Heap's User-Centric Model

SECTION TWO

Advantages of Heap / Disadvantages of GA

ADVANTAGE

01

Retroactive dataset and real-time reporting

Here's a problem that plagues most product analytics tools: manual tracking. What does this mean? Well, in most analytics tools, gathering data on an event (a click, a form-fill, a swipe) requires you to insert tracking code into your product at that specific event. Manually. (Hence "manual tracking.")

Here's what it looks like in practice: a product manager decides that a certain event should be tracked. So she corrals an engineer into writing tracking code. Then she sits back for a few weeks and waits for data to arrive, hoping all the while that it's the data she actually needs. Forget to track an event? Too bad. Change your website and forget to change the tracking code? Too bad. Have a question you want an answer to right now? Too bad.

Welcome to GA. In GA understanding what users do in your product requires all of these steps. And even being careful with them doesn't guarantee you'll end up with the data you want. (What if you need data from an event you haven't tracked?) On top of this, GA adds a 24-hour latency period to your data. Once events are tracked, it takes 24 hours for them to show up on your dashboard.

Want to answer your questions when you need them? With GA, you can't. What if it's an important question? Um, too bad.

Heap shines in contrast because Heap autocaptures data from every event on your site, then lets you access this data in real time.

Heap collects everything. Every click, every swipe, every page visit, every form fill. Want to know if a new feature's been adopted, and by whom? Got an itch to check conversion rates? Want to run a quick experiment where you change something about your product, and see the results right away? With Heap, the data will always be there.

Retroactive data means that Heap collects everything from the beginning. Even if you haven't analyzed it yet, all the data from every event remains available to you, from the moment you add the Heap snippet to your site. So instead of inserting tracking code and waiting to see what happens, you can easily sift through your huge volume of data and see what did happen.

ADVANTAGE

02

User segmentation

One of the major powers of product analytics is the ability to group users by features or behavior, then compare these groups to see how each behaves in your product. We call this "user segmentation."

Historically, businesses have segmented users by demographic features. The assumption is that users with different job titles, or different ages, or from different parts of the world, might take different actions in your site.

More recently, teams have learned that behavioral segmentation can often be a more productive approach. The idea behind behavioral segmentation is that your data will be more revealing when you group users according to how they act in your site, instead of who they are. In this model, you might ask what do high-LTV users do that other users don't, or what your power users pay attention to when compared to your low-volume users.

The key is that user segmentation affords you many opportunities to improve your product and your marketing. You can adapt your product to nudge users towards the behaviors that predict retention. You can focus your marketing on users more likely to convert. You can personalize your product experience to different types of users. And so on. (The possibilities truly are endless!)

With a tool like Heap, doing this is easy. You can create a segment of users grouped by any characteristic, then run that segment through an endless number of questions. Does a certain segment of users take a certain action more than a different one? Does a certain segment of users tend to purchase more in the product? What behaviors correlate with adoption?

With GA, you can create segments, but you can’t see what actions those segments take, how they move through your product, or compare behaviors across multiple segments. All you can do is see the number of people in each segment. Is that useful for understanding how groups act in your product? The simple answer: no.

ADVANTAGE

03

(A)ARRR

If any set of metrics have become standard in the product world, it’s AARRR. Often called “Pirate Metrics” (“arrrrr!”), they stand for:

Acquisition

Activation

Retention

Revenue

Referral

While lots of product teams have heard of these metrics, many are not quite sure how they apply to their work. Plenty of product teams are unsure about how to measure them, or how to know what levers they can pull to increase them.

Part of the reason for this is that GA doesn’t give teams good strategies for measuring the AARRR metrics.

Acquisition, yes. GA does let you see how many people are coming into your site, and where they're coming from. But the others? Let's see:

	Heap	GA
Acquisition Understanding how many people are coming into your site, and where they're coming from.	**Yes!**	Yes
Activation Measuring whether users find the "aha" moment in your product, and how quickly and easily they do so.	**Yes!**	No way
Revenue Measuring how much different users spend in your product, and knowing what behaviors make them likely to spend more or less.	**Yes!**	Uh-uh
Retention Knowing whether users stick around, and what behaviors predicts that.	**Yes!**	Definitely not
Referral Understanding whether customers recommend your product to others, and knowing what behaviors in your product are likely to correlate to doing so.	**Partially**	Not a chance

Why is this? The simple answer is that to measure any of these, you need behavioral analytics - analytics that show you the widespread actions people take in your product. With behavioral analytics, you can measure all of these. Then when you experiment with solutions, you can assess their efficacy with ... yes, behavioral analytics.

ADVANTAGE

04

Retention

Retention is part of the AARRR framework, but it's worth looking at a little more closely. Why? Because among all metrics, retention best measures product-market fit. Getting users in the door is one thing, but keep them long-term? That's how you show that you're providing ongoing value.

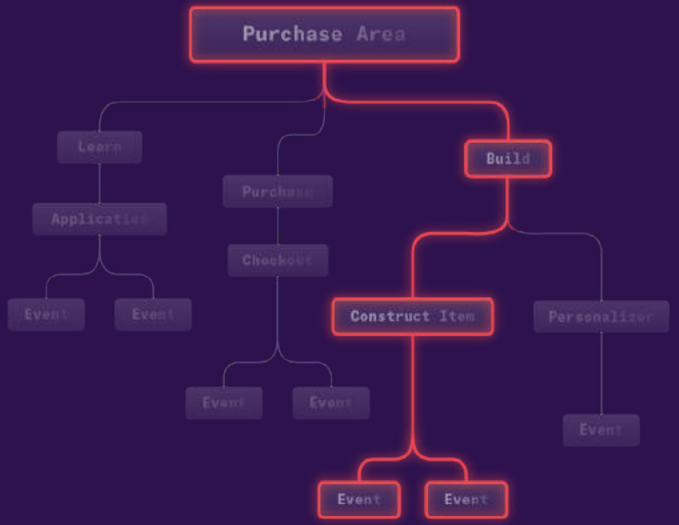
So how do you measure retention? Well, in GA's session-based model, the only way you can track retention is to measure repeat visit numbers. If someone comes to your site more often, you must be retaining them.

This approach sounds reasonable, but it's not hard to see the problems with it. First is that visit numbers don't necessarily equate to *getting value* from your site. After all, people could be coming to your site for all sorts of reasons. They could be incentivized by promotions. Or your product could just be to be the software a client has purchases and is forcing its employees to use. None of these examples equate to users taking the actions that matter.

Second is that this approach makes it very difficult to predict retention. If you're only measuring visits, it's almost impossible to know what behavior indicates that people will keep coming back. Do people who adopt a certain feature tend to stick around more? Do visits to your resources page correlate with long-term use? Is there a relationship between time to activation and continued engagement? With a visit-based approach, you simply can't know.

Hopefully, we can see why taking a behavioral approach is a superior way to measure and increase retention. You choose an action in your product - the action that best indicates getting value - and set that as your retention event. Then you dig in and figure out what other behaviors correlate with that retention event. Then ... you use that information to structure your product, so that users are better directed to the activities that tend to increase long-term retention.

Of course, to choose an appropriate retention event, you need a tool that can actually do behavioral analytics. With GA, you're left with simple session numbers. But if you're interested in driving retention, that's not what you need to know.



ADVANTAGE

05

Collaboration

At Heap, we believe teams should be collaborative around data. That means everybody on the team should trust that the data they're using is clean. Everybody should trust that data is consistently named, and that event data is verified before teams start analyzing it. Above all, it means that everyone understands the data in the same way, regardless of what analyses they'll submit that data to.

With GA, teams have to manually tag events in order to capture data. That scenario tends to produce entropy. Individual PMs can get engineers to tag the events that matter to them. PMs all name events differently. People try to track everything on complicated spreadsheets, but those rapidly get unwieldy. When the site gets updated, PM's forget to update tracking code.

The result? A mess. The minute tracking plans fall apart, it becomes impossible for teams to work on the same data, or to understand it in the same way. Exceptionally responsible PMs may be able to maintain their own data, but larger, team-wide initiatives are simply not doable.

Heap is designed for teams to work together, sharing the same verified data and trusting that everybody else on the team has access to the same data source.

Features like verification flow, naming conventions, versioning, and more ensure that data stays clean and updated, and that all members of a team are always looking at the same thing. There's no need to get engineering involved, and no need for any single PM to go rogue. No massive spreadsheets and no tracking plans.

Just clean, reliable, democratized data. What's collaboration like? With GA, impossible. With Heap, easy.

ADVANTAGE

06

Scale

Teams often choose GA with the intention of moving to a better, more involved solution. Sometime in the future, “when they’re ready,” they’ll invest in a more powerful analytics tool. But GA is fine for now.

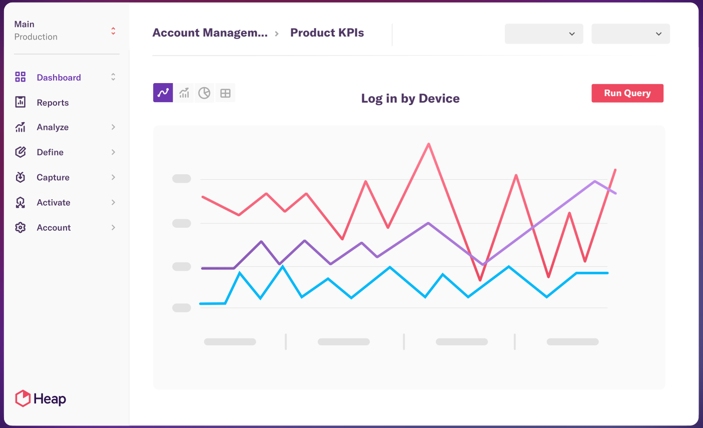
What happens? Well, teams start using GA, quickly realize it’s not useful for what they do, and get turned off of analytics entirely.

Heap was built differently. It was designed to provide insights out of the box. Install the javascript snippet and data starts pouring in immediately.

Easy-to-use dashboards give you near-instant information about how users flow through your site. Even non-technical users can generate powerful insights - the kinds of insights that change the way you do your job.

For these “0 to 1” users, Heap provides a great introduction to analytics. But Heap’s true powers are not limited to introductory analytics. Once product teams get better acquainted with analytics, Heap offers the granularity and power they need for larger, site-wide initiatives. As companies scale, Heap’s clean, reliable approach to data (see Advantage 5) ensures that large teams can collaborate across large, data-driven projects.

Heap: easy for beginners, perfect for advanced users. GA? Mediocre for beginners, and a big pain after that.



Conclusion

There are few substitutes for data-driven analysis when it comes to building great products. Teams can guess all they want, but the only way to make reliable decisions—the only way to know that you're doing the right thing—is to measure your efforts.

As we hope this book has shown, while Google Analytics does have its valuable uses, for product teams GA is simply the wrong tool. To be successful—to increase conversion and retention, to ensure users have valuable experiences—it's imperative that product teams be able to track user behavior, and to modify their product (or their marketing) accordingly.

For more information about Heap, GA, or behavioral analytics in general, we encourage you to visit us at **heap.io**.

We look forward to joining you in the future of product!

Heap