



PRODUCT BENCHMARKS REPORT

2017



INTRODUCTION

“WELL, WHAT IS THE STANDARD FOR OUR INDUSTRY?”

For every new product launch, every test of possible user flows, every roadmapping session, this question inevitably comes up when setting goals. And if the product manager or marketer or analyst doesn't have a good answer, they just sort of ... guess.

At Mixpanel, we hate blind guessing. So we decided to figure out quantitative benchmark metrics for key moments in the user journey. To do so, we aggregated the behavior of almost 1.3 billion unique users who triggered over 50 billion events on web and mobile.

We used this dataset to find industry-specific benchmarks in four key areas of product health: **usage and user growth, retention, engagement and conversion**. Then, we narrowed our focus to four popular industries for product innovation:

- Financial services
- Media & entertainment
- Software-as-a-service (SaaS)
- E-commerce and retail

Caveat: these are broad, nuanced categories that contain many sub-industries, so this is just the beginning! Where should we dig in next? Tweet at us, [@Mixpanel](#), and use [#productbenchmarks](#) to let us know.

ABOUT THIS REPORT

HOW DID WE MAKE THIS REPORT?

The first thing any data analysis requires is narrowing the scope. For this report, that meant aggregating the data from 572 products using Mixpanel in our target industries. This gave us both a clearer focus and enough events to achieve statistical significance. Having captured almost 1.3 billion unique users and the over 50 billion events they performed on web and mobile between June and August 2017, we began our analysis. This is what we found.





TABLE OF
CONTENTS

SECTIONS

06

01



USAGE

14

02



RETENTION

20

03



ENGAGEMENT

28

04



CONVERSION

05

USAGE

Are people using my product?

As the old adage goes, if a tree falls in the forest and no one is around to hear it, does it make a sound? The same could be said for product usage. Even if you build a product that cures diseases or predicts the stock market perfectly, it does not matter until someone actually uses it.



00 — USAGE METHODOLOGY

Daily Active Users (DAU) and Monthly Active Users (MAU) are binary metrics, like whether you're alive or pregnant or a fan of country music—you either are one or you're not. For our purposes, **we counted someone as a daily active user if they recorded an action of any kind in that product over the course of a given day.**

It should be noted, though, that some companies require users to perform specific actions beyond merely visiting the product in order to be counted as active. We recommend this approach. DAU and MAU should track core values—if a user is not doing any activities that a business cares about, they are rightly not counted as active. Because of the scope of this report, we had to use the broader definition.

DAU varies wildly depending on a product's market and maturity. Instead of sharing pure DAU, in this section, we focus on “stickiness”, or how active a product's user base is. This is calculated as average DAU over the course of a month divided by MAU for that month, expressed as a percentage. So, let's say a product's average DAU over the course of a month is 120, divided by its MAU, which is 2000. That would mean its DAU/MAU is 6%.

Percentiles are determined based on the the distribution of products we analyzed. So the 90th percentile stickiness is the DAU/MAU of the product for whom that metric is greater than or equal to the DAU/MAU of 90% of all products in the set. You can think of the 90th percentile numbers to be best-in-class, while the median or 50th percentile are middle-of-the-pack.



— Another way to interpret these numbers is to look at how many days a month users are active. The median product in SaaS gets 2.8 days of activity per user per month, in media & entertainment 2.6, in financial services 2.0, and in e-commerce 1.4.

01 — AVERAGE AND MEDIAN DAU/MAU

What is average product stickiness by industry?

This chart shows the average and median stickiness by industry. We view median as the more valuable metric here, as it is less likely to be skewed by outliers. Overall? Stickiness is hard to achieve. In even the highest-performing sector, SaaS, the median stickiness of 9.4% implies fewer than three days of activity per month per user.

Beware of differences between new and existing users: every day there is a portion of a product's DAU that are new users who will never come back. Because new users usually do not retain as well as current users, they typically increase MAU without providing a sustained increase to your DAU.

02 — 90TH PERCENTILE FOR DAU/MAU BY INDUSTRY

What are the top performers' stickiness numbers?

Stickiness of 25% is the gold standard. For every day of user activity a median product gets, a 90th percentile one gets four. If users are coming back every four days, a product is performing at an elite level.

The outlier here is e-commerce, where even top performers are only getting users to visit once every six days. Even the most dedicated shoppers among us are not buying the same things more than once a week. The differences among the median DAU/MAUs melt away at the 90th percentile. Across the board, stickiness over 20% is good; 25% is exceptional.



03 — AVERAGE, MEDIAN, AND 90TH PERCENTILE DAU/MAU

Why dividing DAU by MAU is more powerful than either alone

DAU/MAU may seem like a somewhat involved metric, but we prefer it to either DAU or MAU alone.

DAU/MAU is more effective for comparing products and companies of various sizes and maturity and allows us to compare both B2C and B2B companies. DAU and MAU measure absolute numbers and have value in their own right, but this make comparisons between different companies more challenging.

The main point: DAU/MAU is a clearer measure of the product itself. Any number of things can bring people to a product, but if the product doesn't deliver for users, it will show in weak DAU/MAU numbers.

— In most cases, product managers should require users to perform specific actions beyond merely visiting the product in order to be counted as active.

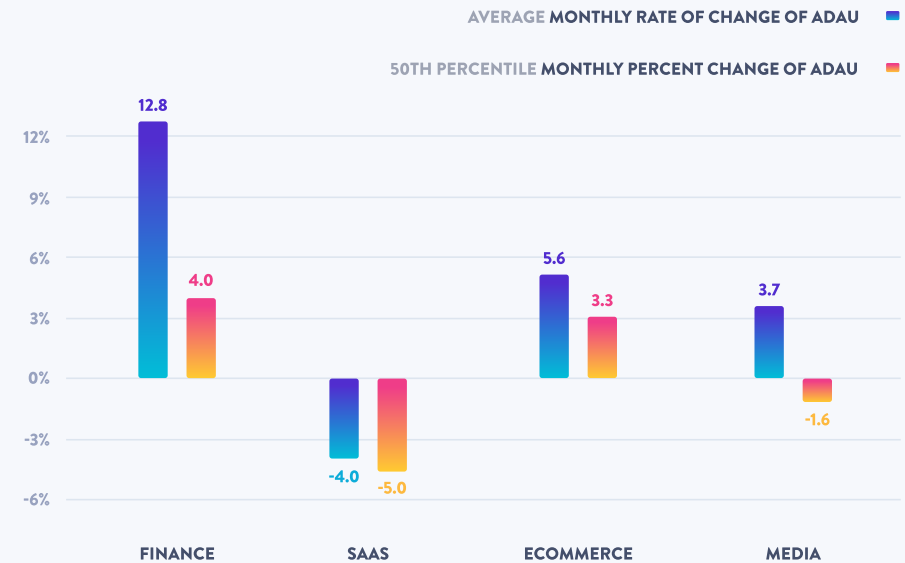
	AVERAGE DAU/MAU	50TH PERCENTILE DAU/MAU	90TH PERCENTILE DAU/MAU
FINANCE	10.5%	6.8%	24.4%
SAAS	13.0%	9.4%	28.7%
ECOMMERCE	9.8%	4.8%	22.1%
MEDIA	11.9%	8.5%	26.1%

04 — AVERAGE ADAU MONTHLY GROWTH RATE

What is average user growth?

ADAU is measured here as the average number of daily active users over the course of a month; this smooths out the kinds of ups and downs we'll see later in the engagement section. This chart measures month-over-month growth in that daily average. These are middle of the pack numbers, and the clear implication is that being in the middle of the pack means modest growth at best.

While ADAU growth is not the only usage metric that matters, in general, flat or negative growth is not a great sign. Not the deepest insight, but it's true: it is exceedingly difficult for a product to generate value without user growth.



— Use [Mixpanel](#) to better understand your own growth patterns and learn how to move from the median toward the 90th percentile.

90TH PERCENTILE MONTHLY PERCENT CHANGE OF ADAU



— ADAU growth is in part determined by what stage a company is at. More mature companies will have a bigger challenge sustaining huge month-over-month growth numbers like these.

05 — 90TH PERCENTILE ADAU MONTHLY GROWTH RATE

What is elite user growth?

The delta between what it means to be at the 90th percentile in ADAU growth and the median is pretty staggering. In business-to-consumer industries in particular, it's clear that you either get busy growing ADAU or get busy dying.

This all goes to show how truly rare explosive growth is. Given that this sample suffers from some amount of survivorship bias (dead companies tell no tales, after all), it's telling that, even here, explosive hyper-usage growth isn't occurring even at the 90th percentile.

THE BIG QUESTION:

IS YOUR USAGE CLOSER TO THE MEDIAN OR THE 90TH PERCENTILE IN YOUR INDUSTRY?

Stickiness and growth metrics, though not the complete picture of a product's health, get at something that matters to companies and, well, human beings on an emotional level: does anyone care about what I'm doing? And the answer, for the most part seems to be "not really."

The picture across industries is of products that get opened maybe a couple times a month by either the same number of people or fewer with each passing day. And that's even counting "active users" as anyone who performed any actions, not just core ones.

At the 90th percentile, the world looks very different. For companies at the 90th percentile, things are good and getting better. Companies are compounding 20% growth month after month and getting multiple visits per week from their users.

A product manager should know where they are and have a plan to move into the elite tier—or to fend off the competition in order to stay there.



RETENTION

Are people coming back?

In life and in business, not everyone is going to love you. And while you might reasonably expect your exes to let you know they're churning from your life (and maybe it was your overuse of business jargon that did it), customers tend not to announce their departure with much fanfare.



00 — RETENTION METHODOLOGY

Retention in this case means: **did a person perform an action—any action—and then come back and perform another action again?**

That means the initial sample is everyone who performed an action on a given day. When calculating retention rates, the time windows matter. The initial measurement unit is the length of time being measured. For a weekly retention graph, that means we start by measuring the number of users who show up in a week, and then we see how many of them come back over the following weeks.

Say you visited a website on June 1st at 2pm. If you return between June 8 at 2pm and June 15 at 2pm, you will be counted as being retained one week later in a weekly retention graph.

If a product's retention number in Week 2 is 27%, it means that out of every 100 users who appeared in the initial week-long measurement period, 27 returned at some point between two and three weeks from the time of initial visit.



01 — WEEKLY RETENTION BY INDUSTRY

What is typical retention?

Building a product that attracts people is one thing. Building one that keeps them is a lot better. In this case, retention measures whether a user who performed an action in a product returned to that same product after a certain period of time.

With one exception, the numbers are surprisingly uniform. Despite differences in function, people are almost as likely to abandon a SaaS app as they are to bail on a media & entertainment product after a week. Take a look at e-commerce, though: the retention after eight weeks is 6%. With numbers like those, attracting new users becomes paramount.

02 — 90TH PERCENTILE WEEKLY RETENTION BY INDUSTRY

What is elite retention?

Keeping 25% of users two months later is table stakes for calling yourself elite at retention. In SaaS and e-commerce, the bar is even higher. Both of their 90th percentile numbers at the end of eight weeks imply retention of more than one-third of both new and

existing users. In e-commerce, this is particularly shocking considering that its median number after eight weeks was 6%. We'll take a deeper look into the schism in e-commerce in the conversion section, but know that this category includes two different models: one based on occasional, more expensive purchases, and one based on regular shopping.



03 — MONTHLY RETENTION BY WEB VS MOBILE

Is retention different for mobile apps than websites?

The caveat to everything in the previous retention graphs: if users are accessing a product overwhelmingly on web or mobile, that will skew the data in a significant way. The retention bar for a successful mobile app is far higher than it is for web. Which also means that while you certainly should strive to improve retention on both web and mobile, you're far likelier to see real improvement in retention numbers on a mobile app.

Something to keep in mind, though: correlation is not causation. While the mobile retention number is much higher, some of that likely results from the fact that it is easier to get someone to click on a web link than to download an app.



— Since mobile and web retention can be so different, use [Mixpanel](#) to figure out product goals that make sense for each platform.

A CLOSER LOOK

B2B VS. B2C RETENTION

Retention has a lot of factors from the most obvious, like whether or not users find value in a product, to subtler ones, like what platform they access a product on. But one thing to keep in mind as you look at your own retention numbers: do we serve businesses or consumers?

For B2B companies, retention does not necessarily equal satisfaction with the product. If a customer has paid for a service, they are likely to use it whether they're finding the product satisfactory or a nuisance until the point when their contract is up.

For B2C companies, though, retention is vital. When customers can churn at any moment, it is imperative to keep them. Smart companies will pair retention metrics with customer research to better understand what they need to do to make their retention chart flatten out.



ENGAGEMENT

How are people using my product?

Engagement means action. It's where product managers can check the pulse of their product on a fundamental level. Where, how, and when are users engaging with their product? If a product manager doesn't know the answers to these questions, they will soon be a former product manager.



00 — ENGAGEMENT METHODOLOGY

Engagement in this section has a simple definition: **the sum total of all actions performed by users in the product.**

However, these graphs do not show *total* engagement, which is dependent in large part on a product's market, size, and maturity. Instead, they show, by percentage, how much above or below average a given day's total engagement is relative to the entire week. That way, the products' engagement numbers are being compared to their own averages rather than another (vastly different) company's average.

So if you see a bar at 15, it means that on that day, the product saw 115% of its average engagement, and if the bar is at -15, it means that on that day, the product only got 85% of its daily average. If you sum all the bars in any of these graphs together, they'll add to zero (go ahead, we'll wait).

The difference between web and mobile is whether someone accesses the product through a mobile app (i.e. on a phone) or on a web browser (think Chrome, Firefox, or Internet Explorer.) So when we refer to "mobile," throughout this report, we are referring exclusively to mobile app usage.

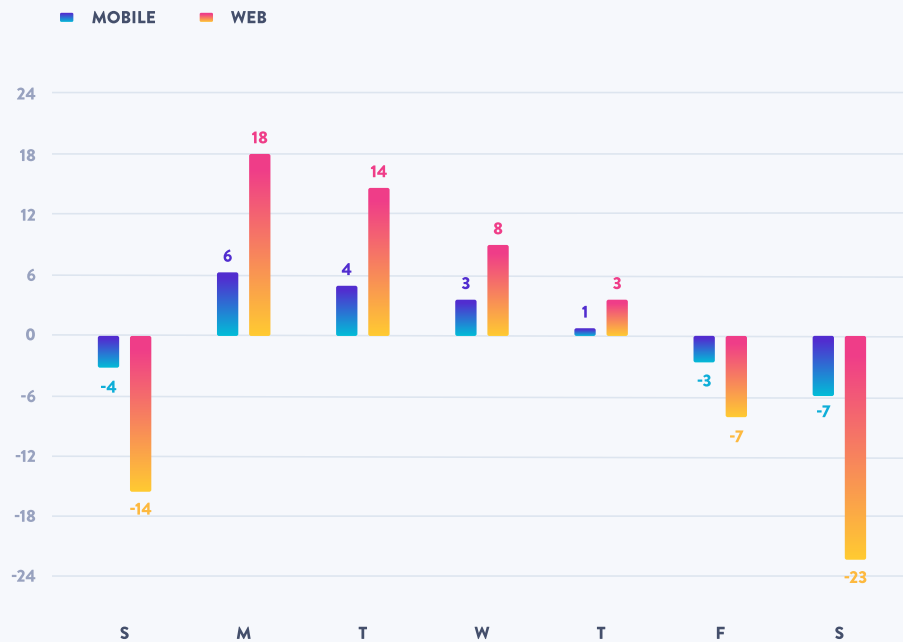


01 — NORMALIZED WEEKLY TRAFFIC BY INDUSTRY

How does engagement change by day of the week?

Companies often want to know when their users are most active or engaged. Here, “engagement” means the total number of actions users perform, and how those actions are distributed throughout the week. In this

chart, “0” represents the baseline average of daily actions, and the y-axis represents the percent change from the average. Media & entertainment products see the least falloff on the weekend. Keep this finding in mind—the mobile vs. web weekly engagement data will make it a lot clearer why media & entertainment apps shouldn’t punt on the weekend.



— For product managers, this data suggests that feature launches might get more visibility on Monday or Tuesday when overall engagement peaks.

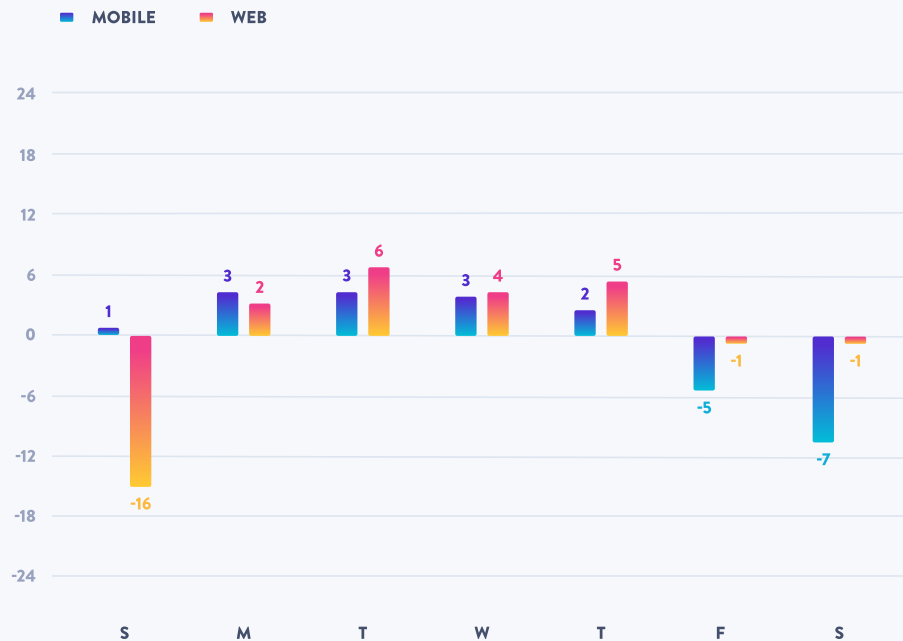
02 — SaaS MOBILE & WEB ACTIVITY BY DAY OF THE WEEK

How does SaaS mobile and web engagement change ?

If you have a SaaS product and you're trying to increase web engagement on the weekend, good luck to you because overall engagement plummets. The bottom line: these products are generally apps that people use for work, and the weekends are not for work.

On the web engagement bars, you can almost see employees losing enthusiasm as the work week progresses. Just look at them, all chipper on Monday, using the app 18% more than average, and then steadily engaging less and less as the week slips away.

— E-commerce product managers should carefully consider whether to send promotional emails out on Sundays, especially if the promotion's UX flow is website-centric.



03 — E-COMMERCE MOBILE & WEB ACTIVITY BY DAY OF THE WEEK

How does e-commerce mobile and web engagement change?

Where there's a will, there's a way, and there are both when it comes to avoiding doing work during the week. At least, that's one way of looking at the robust mobile and web engagement numbers in e-commerce during the work week. In either case, Monday-Thursday is where e-commerce products are seeing the most engagement.

The web engagement numbers are skewed by well below-average numbers on Sunday. E-commerce product managers should keep that in mind as they are planning releases, promotions, and anything else intended to drive engagement.

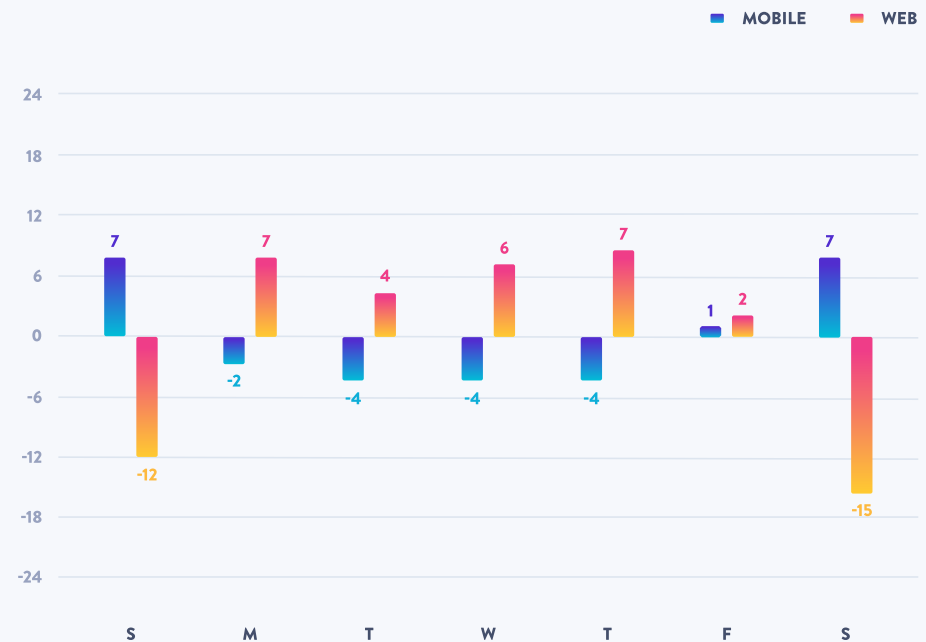
04 — MEDIA MOBILE & WEB ACTIVITY BY DAY OF THE WEEK

How does media mobile and web engagement change?

It turns out fewer people are watching videos, playing games and listening to music on their phones during the work week—they have computers with big, high-resolution screens for that. That's what we see when we look at the media mobile and web app engagement graph, anyway.

The spike in mobile use on the weekend has interesting implications for product managers. PMs working on mobile games, for example, could expect totally different engagement patterns than a news site with a more web-heavy user base.

Product managers in media & entertainment products need to have an experience that is optimized for both web and mobile platforms—and a product analytics tool like [Mixpanel](#) capable of tracking users across both.

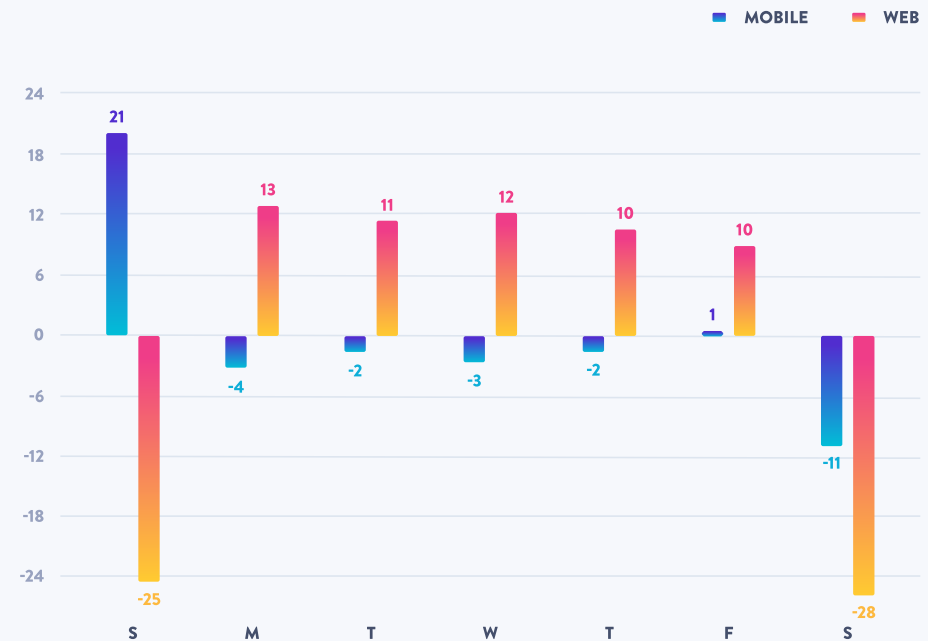


05 — FINANCE MOBILE & WEB ACTIVITY BY DAY OF THE WEEK

How does finance mobile and web engagement change?

Financial services products see an obvious week-end/weekday engagement dichotomy on web. Similar to SaaS, there is some web engagement tail off toward the end of the work week. Mobile engagement is relatively steady throughout the week.

The notable outlier in finance is Sunday's mobile number, which is 21% higher than average. While Sunday numbers are for the most part below the weekly average, it would seem people like to get their books cooked via their phones before the work week starts.



Product managers should consider running push notifications on Sundays. That way, they can take advantage of high mobile engagement.

A CLOSER LOOK

THE VALUE OF CROSS-PLATFORM TRACKING

Tracking users across platforms is the only way to make sense of some of these graphs. We can confirm some things we intuitively know: people will use “fun” apps (media & entertainment, e-commerce) on their phones at a higher rate relative to web than they will their “work” apps (SaaS, finance). Mobile gets a higher share of weekend activity than it does of weekday activity. People do not use work apps on Friday.

Cross-platform tracking allows product managers to see the full picture of user activity and know how to build products that will create a cohesive user experience.

They can see that, while overall SaaS engagement is relatively flat during the work week, SaaS web engagement steadily declines. They can see the unusual way finance mobile engagement increases and web engagement decreases on Sundays. And they can see the way media usage on web and mobile are almost inversely correlated. The next question, of course, is how to take action on those insights to meet users where they are in their daily lives.



CONVERSION

Are people doing what we want?

There's a reason for the quasi-religious language around conversion metrics. The leap of faith required to move from non-believer to an adherent is an enormous ask of any would-be customer. It's one that requires knowing the customer well enough to have built a product they want and to present it in a way they cannot resist.



00 — CONVERSION METHODOLOGY

For conversion, the most straightforward definition is that **the user completes a goal action, often related to revenue. For e-commerce and SaaS, that generally means a one-time purchase or a subscription purchase. For financial services products, we measured transactions.** The general idea for all three is the same: if a money-generating action occurred within 30 days of usage, it's a conversion.

For media & entertainment, we defined a conversion as “viewed media.” Because many companies in this space do not take direct payments, we tried to make the conversion close to the business outcome of “content consumption.” By focusing on the more common “viewed media” event, the media & entertainment products tend to have the highest conversion rates by a wide margin.

On the other end of things, for SaaS, we did not start measurement from a session, but rather from a signup. The reason is twofold: first, in SaaS, the “free signup to paying subscriber” funnel is one that product managers generally look at very closely. Second, the numbers for “session to paying subscriber” are so small that they'd fail to show up on our graph. The good news for SaaS? The reason that they are not included in the “second conversion” chart is that once someone has subscribed, there is no need for a second purchase conversion.

When we refer to “median” in this section, we mean the median products, not the median user. So if there were five products in the data set, we'd be showing you how the third-best one measures up.

01 — MEDIAN CONVERSION BY INDUSTRY

What's a normal conversion rate?

In the end, visits aren't enough—what good is a window shopper? Media & entertainment companies want viewership, e-commerce wants to sell products, finance apps want users to complete transactions, and SaaS apps want paying subscribers. For e-commerce companies, converting one in twelve visitors into a sale puts them firmly in the middle of the pack.

Because SaaS is asking businesses to subscribe to a service, its conversion numbers are unsurprisingly lower than the other sectors; even starting from “signup” rather than “visit” only pushes the numbers up to 3%. The benefits of this approach are clear, though: once a customer has bought a subscription, all they have to worry about is renewal.



— [Mixpanel](#) can help you manage conversion funnels and find key actions that lead to conversions in your data.



Once a product manager has identified repeat customers, they can target them with personalized emails, push notifications, and in-app messages through [Mixpanel](#).

02 — MEDIAN REPEAT CONVERSIONS BY INDUSTRY

How do repeat conversions compare across industries?

What's better than a customer? A repeat customer, of course! This table shows how often customers who converted—that is, viewed media, purchased a product, or completed a transaction—then complete the same conversion again.


You can see how difficult it is to convert a visitor into a repeat customer. Getting even one in fifty visitors to make a second conversion puts a company ahead of the median in finance and e-commerce. All the while, SaaS products, having gotten past low initial conversion rates, just get to watch those subscription payments roll in on a monthly or annual basis.

03 — CONVERSION RATE OVER TIME

How quickly do users convert?

Think of this table as a story you know the ending to. Everyone in it will convert—that is, view media, buy something online, complete a transaction, or subscribe to a service—but the question is: when? This table shows the window of time needed to achieve

the vast majority of the conversions for that industry. For product managers in e-commerce and media & entertainment, focus on immediate conversions, and check your conversion funnels daily to see how healthy they look. For financial services and SaaS products, expect to wait more time between the start and end of your conversion funnel.

	 FINANCE	 SAAS	 ECOMMERCE	 MEDIA
1 DAY	46.0%	46.0%	76.0%	89.0%
1 WEEK	69.0%	69.0%	90.0%	94.0%
2 WEEKS	84.0%	87.0%	94.0%	99.0%

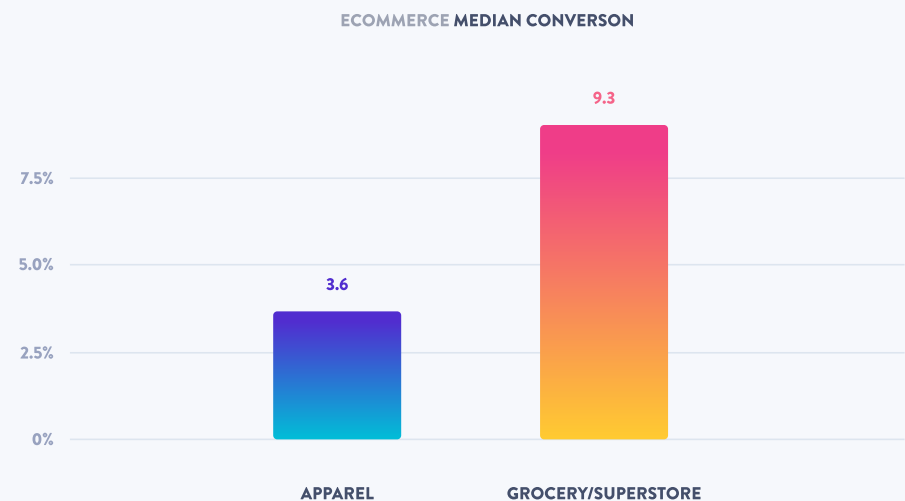
04 — MEDIAN CONVERSION WITHIN E-COMMERCE

What's a normal conversion rate?

As a peek at some more possibilities in the data set we have, check out these more granular conversion numbers for e-commerce. We broke part of the full e-commerce sample into smaller sub-categories of apparel and grocery/superstore.

As you would expect, apparel, with a higher price point and greater likelihood of attracting window shoppers, has a lower conversion rate. E-commerce companies should understand where they are along the price spectrum and adjust their conversion expectations accordingly.

— What industries and sub-industries should we dig into in the next benchmarking report? Let us know on Twitter, Facebook, or at benchmarks@mixpanel.com.



A CLOSER LOOK

DON'T CHASE THE METRICS FOR METRICS' SAKE!

The idea behind tracking the metrics in this report is that they are indicators of increasing growth and profitability. Taken together, they should paint a pretty good picture of whether or not a product is succeeding.

But let's be clear: usage, engagement, retention, and conversion are each pieces of the puzzle, not the whole picture.

Take conversion rate: a low conversion rate may well be inversely correlated with other outcomes such as the marketing team paying for more people to try the product, or shifting upmarket where there is more competition but bigger rewards for success. And it is always going to be harder to sell something more expensive than not. But that doesn't mean slash prices. It means having a data strategy that accounts for where your company fits in the market.





“At any moment, I can go into Mixpanel, get real-time insights, and see if there are any pattern changes in our data, without having any issues or worrying about the system going down.”

VURAL CIFCI, VICE PRESIDENT OF DIGITAL MARKETING, STARZ

CONCLUSION

THE FUTURE IS JUST DATA WE HAVEN'T SEEN YET

Although this report is filled with industry-specific benchmark metrics, we hope it spurs more questions than answers for you. Even though we looked at the behavior of more than one billion unique users, we still barely scratched the surface—and we have the whiteboards filled with “V2” metric ideas to prove it.

In fact, we'd like to follow up on this initial report with deeper dives into specific industries and metric types. Got an idea on what we should tackle next? Reach out on [Twitter](#) or [Facebook](#), or email us at benchmarks@mixpanel.com directly.

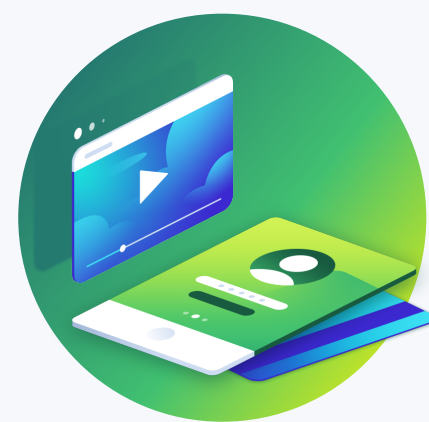
Ultimately, though, even the most granular benchmark metrics are no substitute for a deep understanding of your own business model and users. That's where a product analytics tool like Mixpanel comes in. More than 20,000 customers use Mixpanel not only to develop a fuller picture of user behavior but also to take action on those insights to improve user experiences every day.

Get a [free demo of Mixpanel](#) and a consultation with one of our analytics specialists on how you can use product analytics to manage your key metrics.





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