CHAPTER 03

Analyze user engagement

Questions answered:

→ What is my product usage interval?

→ Who are my power/core/casual users?

→ What is the right definition of power/core/casual users for my product?

→ Besides segmenting by level of engagement, how else can you analyze different groups of users with product analytics?

→ How can I track new users, resurrected users, retained users, and dormant users?

In the previous chapters on value and active usage, you learned what to measure, and how to decide whether your users are active or not based on true value moments.

But knowing whether your users are getting value isn't the end game. The natural next step is to find the dimensions or the texture of the engagement. Why are some users active and others disengaged? Why are some users more active than others? And what can you do about it?

QUESTION ANSWERED

What is my product usage interval?

See the answer in Mixpanel

To group your users based on how engaged they are, we need to know how frequently they typically use your product. Daily? Weekly? Monthly? Every couple of months?

The answer, inevitably, is: "It depends." Take the now-popular "concierge medicine" category and apps like One Medical, Forward, or Parsley Health. The key value

proposition of these apps is the convenience of booking medical appointments, so somebody who books an appointment once every six months on One Medical may well be "very active." And somebody who books an appointment every year is still "quite active."

Now let's flip it and look at the other extreme — a video-hosting social media app like TikTok. The value moment here might be watching a video and "hearting" it. Every night, a typical "active" user can "heart" 10, 20, even 30 videos. That's a far cry from once a year! In short, there's no standard "good" product usage interval, and you will need a combination of your product intuition and data to figure out the right one for your product.

Reforge pioneered this way of thinking about product usage intervals with their "habit zone" framework.
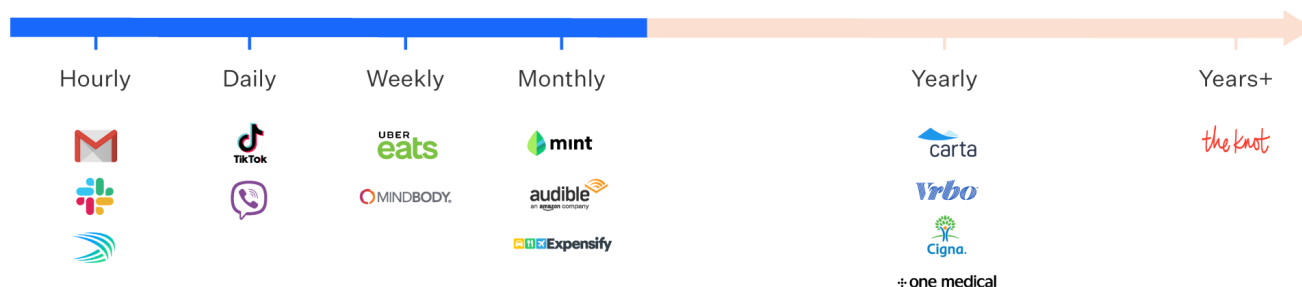
"Fundamentally, the "right frequency" of activity needs to be defined based on a candid assessment of how the product's target user personas can get optimal value out of the product. Highly frequent usage is expected for certain product categories (e.g., messaging, music, fitness trackers) whereas less frequent usage is better for users' success or fulfillment in other product categories (e.g., personal finance, shopping). Great PMs understand how their product should fit into their target users' lives and accordingly decide the right activity metric. As a tactic, great PMs also separate out proactive usage (where the user made the decision to engage with the product) from reactive usage (where a notification or other prompt from your product brought the user to it)."

Shreyas Doshi

Lead PM at Stripe; Former Lead PM at Twitter, Google, Yahoo

QUESTION ANSWERED

Who are my power/core/casual users?

See the answer in Mixpanel

To find your power/core/casual users, start by defining what it means to be "a power/core/casual" user in your product:

▶ In the Insights report, select an event that you define as your value moment (e.g., "watch video").

▶ Highlight "total" to bring up all the different ways you can group your users. Select "total per user."

▶ Select your level of aggregation. Median (50th percentile) will be your core users. 90th percentile will be your power users. 25th percentile will be your casual users. By highlighting the line graph, you can view how many videos each group typically watches hourly, daily, weekly, or monthly.

▶ Customize the date range. Mixpanel will default your line graph over time to a lookback of the last 30 days (from the active day) and a day-by-day count.

Find your power users

▶ **Watch now**

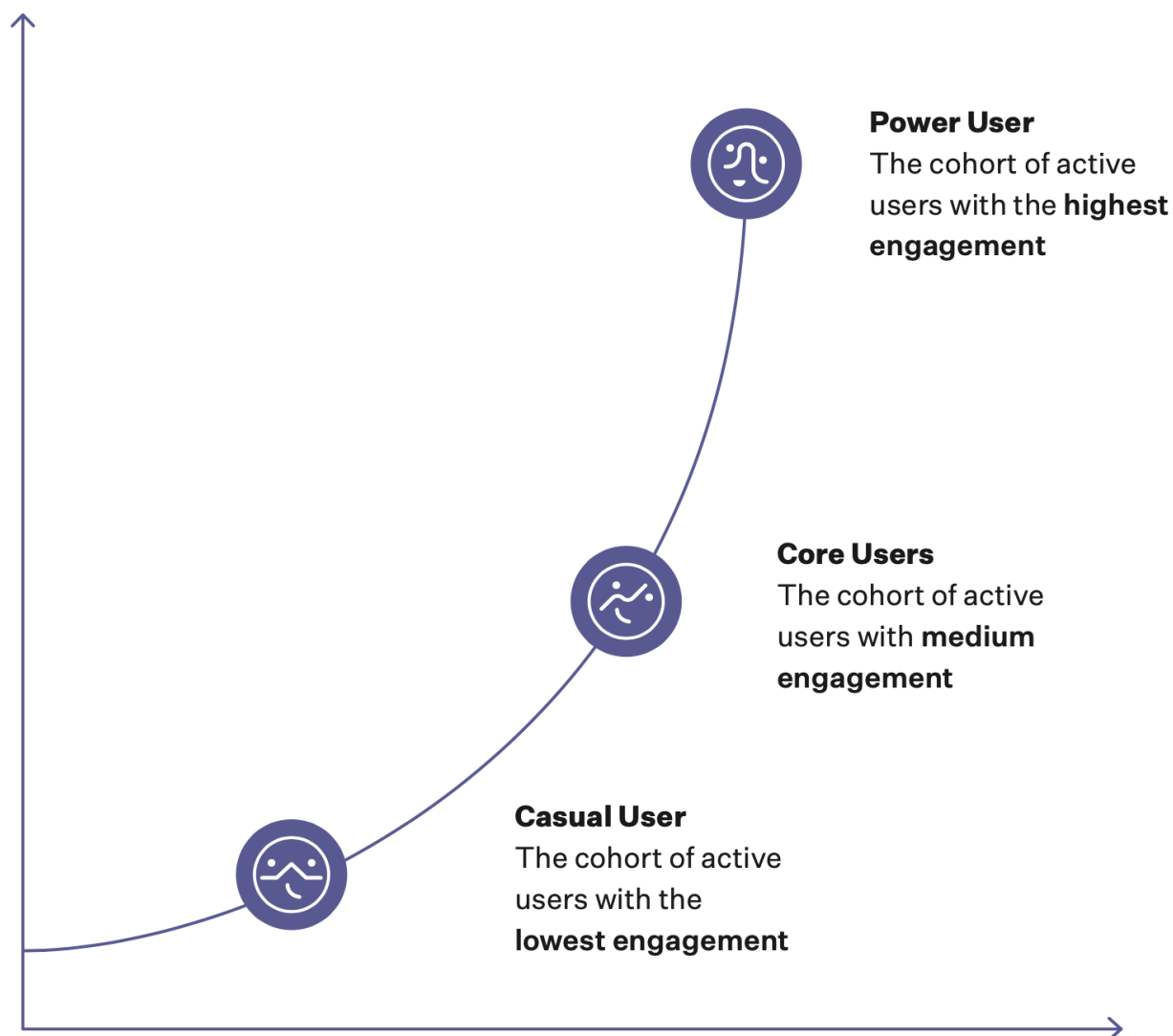**PRESENTED BY**

Kiley Sheehy

Customer Success Manager, Mixpanel

Take it one step further. Build and save your new cohorts.

▶ Click over to "Users" and "Cohorts."

▶ Define what it means to be a power/ core/ casual user. For example, "Users that watched videos 2 or more times in the last 7 days."

▶ Save the cohort.

Power User
The cohort of active users with the **highest engagement**

Core Users
The cohort of active users with **medium engagement**

Casual User
The cohort of active users with the **lowest engagement**

Using the median value as a baseline for your analysis, you can create cohorts to track how different groups of users are changing over time.

QUESTION ANSWERED

What is the right definition of power/core/casual users for my product?

The tutorial above suggests that the more videos people watch (daily, weekly, monthly), the more active they are. This is helpful information to figure out which users are the most valuable, and which ones are likely to churn, but there are more dimensions of user behavior you can take into account:

Frequency

How many days (a week, a month, a year) did people use your product?

For a product where you expect your users to come back weekly, perhaps a power user uses the product 6 out of 7 days, a core user uses the product 3 out of 7 days, and a casual user uses the product 1 out of 7 days.

Breadth

How many different product features or offerings did people use?

For a ride-sharing company, a power user might have used their economy ride-sharing option, deluxe ride-sharing option, and their vanpool option, whereas a core user might have used only their economy and van pool option, and a casual user may have used just their economy ride-sharing option.

When a company extends its products beyond the core use case (e.g., a ride-sharing company adds food delivery), you can measure breadth of usage based on the number of unique product offerings users have tried.

Depth

How deeply have users engaged with your product?

For a video platform company, a depth metric might be the number of videos watched, number of minutes spent watching videos, etc. For a marketplace platform company, it might be the total dollars spent on the platform.

The dimension you end up picking depends on how people get the most value out of your product and what's correlated with engagement and long-term retention of your users.

Rakuten Viber

"Active users are people who are using Viber seven out of seven days a week. From a product perspective, if we're doing something good, active users are supposed to grow and if we're doing something bad, then eventually they're going to drop. We monitor this metric daily."

Idan Dadon

Product Manager, Viber

ro

"To us, an active member is someone who has an active plan—they haven't canceled or their plan hasn't expired. To make sure our members are getting value, we also look at how many of them have continued treatment in the past four months."

Ira Patnaik

Director of Product, Ro

Vrbo
part of **expedia group**

"An active user takes a trip 1-2 times per year. For us, it's a bit tricky because the shopping funnel has distinct phases—dreaming, planning, deciding, and booking. We haven't necessarily cracked the code of how to recognize what part of the funnel a person is in based on the activity that they're doing on the site and what the common actions are that can help us decide that a shopper has officially moved past one phase to the next one."

Jamie Kapilivsky

Data Insights, Vrbo, part of Expedia Group

How can I tie active usage to my value exchange (monetization) model?

Earlier, we covered various approaches to product monetization. If you're a PM early in the development process deciding how to monetize, how often (plus, how broadly and deeply) people engage with your product can be a valuable signal. For example, on social media entertainment apps like TikTok, where users engage and get value daily, showing ads might be a natural fit. On the other hand, for a medical service where once a year engagement is expected, an annual subscription is a more reliable way to monetize.

Besides segmenting by level of engagement, how else can you analyze different groups of users with product analytics?

Rakuten Viber

"We create cohorts based on percentiles of activity (to identify power users), region-based cohorts/breakdowns by countries (there's a lot of cultural difference in how people use the app as well as their data usage). We break it down as much as we can and try to understand users based on their behavior, not the average behavior."

Idan Dadon

Product Manager, Viber

Avira

"We use a lot of cohorts, including: free/paid users, new/existing users, operating systems (Windows 10 versus Windows 7), region, and frequency of use.

Free/paid users: We look at how free users behave versus how paid users behave. Do paid users use the Smart Scan more often than free users, for example, or less often? What features do they use? We can then find behavioural twins in the free segment and push them to become paid.

New/existing users: We define a "new" user as someone using our product for 30 days or less. We've noted that people tend to go from free to paid within the first 30 days. We look at this cohort specifically to see what the free to paid rate is, and how they behave.

Operating systems (Windows 10 versus Windows 7): We've learned that our system speed up cleaning product is more interesting for people who still are on Windows 7, because they are on old hardware, and perhaps don't want to invest in new hardware.

Region: Our marketing is based on different regions: Germany/Austria/Switzerland; U.S./English-speaking countries; and the rest of the world. We use these segments to see how regional users behave differently, and how business KPIs differ in these different countries.

Frequency: On how many days out of the last 28, 48 or 91 days has a user used our product?"

Manuel Eugster

Vice President Data Intelligence, Avira

primephonic

"We've tested whether and how different pricing models—monthly/annual subscription, voucher codes, free trial periods, refer-a-friend—affect conversion. We're able to make cohorts out of those users, and to see whether a user entering through a voucher code is a better or worse converter, two months from now, three months from now, etc."

Henrique Boregio

CTO, Primephonic

SPC

"We've created cohorts based on people who open the app but then don't use it; people that open the app but don't complete registration; people who open the app and do complete registrations; and those who open the app but don't purchase cards."

Ola Dipeolu

Data and Insights Manager, SPC Card

QUESTION ANSWERED

How can I track new users, resurrected users, retained users, and dormant users?

To explore user behavior with lifecycle analysis, create cohorts for each group of users.

In Mixpanel, you can define these groups in two simple steps:

▶ Select a meaningful event (your value moment, such as "watch video").

▶ Check if a user has performed the event within your typical product usage interval (such as 7 days).

For example, to create a cohort for resurrected users, you can select users who:

▶ Performed "watch video" in the last 7 days

▶ Did NOT perform "watch video" between 14 and 7 days ago

▶ Performed "watch video" between 21 to 14 days ago

How to track users throughout their lifecycle
▶ **Watch now**

PRESENTED BY

Kiley Sheehy

Customer Success Manager, Mixpanel

Now let's apply similar logic to other cohorts:

▶ **New active users:** Performed "sign up" in the last 7 days AND "watch video" at least once within the same time window

▶ **Retained users:** Performed "watch video" at least once in two consecutive intervals

▶ **Dormant users:** Performed "watch video" in previous usage interval, but did not in the current one

Period Before		Previous Period		Current Period		
👤 active	→	👤 not active	→	👤 active	→	Resurrected user
		👤 active	→	👤 not active	→	Dormant user
		👤 active	→	👤 active	→	Retain user
				👤 active	→	New active user

Once you create the cohorts you'd like to track, head over to the Insights report in Mixpanel to visualize their growth over time.
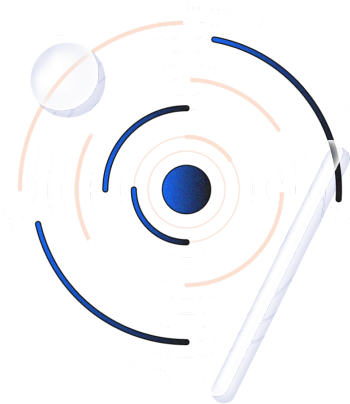
NEXT UP

Retain your users

Read Chapter 4

PRODUCT

Team Boards & Alerts

Interactive Reports

Limitless Segmentation

Group Analytics

Data Integrations

Scalable Infrastructure

Security & Privacy

Integration Directory

SOLUTIONS

Convert

Engage

Retain

RESOURCES

Product Updates

Customer Stories

Blog

FAQs

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