Closing the loop: Understanding the user lifecycle
Introduction

An app user’s lifecycle is far from a linear journey. The end goal isn’t as simple as conversions, but to keep users engaged over time. That’s easier said than done, and chances are, most of these users will churn sooner or later. A quick glance at their typical journey shows how this looks in practice:

- A user installs your app and completes a certain amount of events (opens, purchases, levels played, etc) as they interact with the app for the first time
- Eventually, interest wanes and they’ll stop using the app. Here, users either lapse (keeping the app on their phone) or churn (uninstalling the app)
- They can be re-engaged (perhaps once or several times) with retargeting advertisements
- Ideally, they convert again, continuing on towards a reattribution

Advertisers who don’t track uninstall and reinstall data miss out on crucial insights into the user lifecycle. That’ll also affect their retargeting capabilities – and with retargeted users generating 37% more revenue than new users, marketers need to get re-engagement right.

When we introduced the ability to track both uninstalls and reinstalls with Lifecycle Tracking, it was an industry first. Before then, it was impossible to tell the difference between new users, and those who had uninstalled and then reinstalled. It was also impossible to do any kind of user retargeting or re-engagement campaigning based on uninstall and reinstall behavior.

By closing the loop on lifecycle tracking, we’ve been able to uncover new insights into when and why users churn, as well as when they come back. Want to know more? Read on.
Most users churn, but how many return?

The principal aim of any app marketer is to acquire new users and retain them over time.

As we all know, keeping users engaged is a good benchmark for understanding the success of your app, and also results in higher returns when it comes to revenue. However, churn is an unavoidable part of the equation. There will always be a proportion of users who leave an app, and that number is high, too.

In fact, we estimate that almost 80% of users have churned the day after an app install. Skip to day seven, and only 12% of users are still active.

But does that mean the rest are lost forever, with no hope of opening your app again?

Well, no, as it turns out. Many churned users are likely to come back to an app, whether that’s a couple of months or up to a year after their last session.

Let’s look at this theory in more detail – and drill down per vertical, to see how returning users stack up across different sectors.

Do users return after long periods of inactivity?

An estimated 11% of churned users return to an app after a three-month break.

To find out, we analyzed data over a year period across eight verticals.

The results show the average rate at which churned users will come back, defined as returning after a gap of two or more months, where the user didn’t register a session. It could be that they kept the app on their phone without opening it, or that they uninstalled and then reinstalled the app. The results were encouraging: the number of users returning after a two-month break was equivalent to 17% of all new installs in that period. After three months, an estimated 11% of churned users will return – and even further down the pipeline, at six months, that number stands at 4%.
Comparing verticals

Because churn rates vary across verticals, it’s natural they’ll also have different rates of returning users. Let’s see how these differ. We’ve split the verticals into two different graphs, according to return rates above and below the median.

E-commerce’s rates are especially high. Three months after the last session, the return rate stands at 18%. This isn’t surprising, as e-commerce apps aren’t as conducive to casual browsing or regular interaction as say, social apps.

Often, users only open the app with a specific need: they want to search for or order a product. Unless you’re shopping in particularly high volumes, this is likely to be every few months rather than every few weeks.

On the other hand, it’s important to note that many consumers are daily drivers, which is why e-commerce apps retain so well in the first place.

Utilities tell a similar story. Often, these apps serve one single purpose – take a scanner app, for example – and will only be opened for one particular use. That’s not usually a weekly or even monthly occurrence, but these apps are useful enough for the user to keep on their phone for the next time.

Games also have high numbers of returning users. While other verticals’ return rates gradually fall more or less in line with the average, here, the rate of churned users returning is consistently almost double that of the average.

In fact, the vertical has a particular pulling power: half a year later, almost 8% of churned users will return. Even a year on, an average of 2.3% users come back. While that figure may seem small, when aggregated suddenly your retention analytics would be severely compromised.

Now let’s take a look at the lower part of the graph. While these verticals’ return rates fall under the median, it’s still really valuable to know when users are likely to return to your app: if not, you won’t have a full picture of the user lifecycle, and you won’t be retargeting as effectively as you could be.
Take Travel: the vertical still has noticeably high rates of return, with almost 8% of users returning after a three-month break. That’s not unusual when you consider that online travel agent, airline and hotel apps are the most popular types of travel apps.

These sorts of apps are, for the most part, purely functional – and often designed to serve seasonal, specific purposes, like booking a flight or hotel room, rather than for casual browsing. However, knowing when users tend to open a new session or when they reinstall makes a massive difference when it comes to retargeting: users who typically churn after three months could be targeted with tailored activities or offers to help draw them back in.

On the other hand, Social’s rates of returning users are noticeably low: just look at how closely the purple line touches the horizontal axis, right from the start. Even after two months, only 1.3% of churned users are likely to come back.

This makes sense: while social networks are the cornerstone of modern communication, they’re pretty all or nothing. Either users are engaged right from the start, or their interest dwindles immediately. But the potential pay off – of pulling in highly engaged users – means it’s critical social app marketers know when users typically churn or return, to have as strong a chance as possible at engagement.
Why we work with unlimited lookback windows

For the reasons outlined above, we realized pretty fast the importance of having unlimited lookback windows.

That’s because sessions instigated by users who had already downloaded the app and were now returning after, say, three months, would actually be counted as a fresh install.

Not only that, but they could also be attributed to a paid marketing campaign – costing the advertisers and messing with their data.

If your user records don’t stretch back far enough, your install numbers would be off by around 11% – and you’d be paying ad networks for up to 11% of existing users that look like new acquisitions.

So, how much does all this misattribution cost?

If your user data gets thrown out after three months, how much could these discrepancies potentially cost? Let’s take the games vertical as an example.

Say your app has around 2,000 new users per day, an average 26% of which comes from paid installs. At four months in, the amount of churned users who could come from paid channels – 60 or so – will open a new session. But instead of being counted as returning users, they’ll be seen as fresh installs, and could be attributed to a campaign.

Our benchmark tool puts the current cost per install at $2.26. That means that on a given day, you could be wasting almost $150 on misattribution. That may not seem like a lot, but in a single month, it comes to $4,500 – money that could be much better spent targeting new and existing power users.

Aside from the direct waste of money, misattribution has a knock-on effect on the accuracy of your data and subsequent re-attribution campaigns.

Knowing how many users churn is only half the battle – it’s time we look at those who take the next step, and uninstall an app completely. Adjust’s Lifecycle Tracking gives our clients the ability to track beyond drop-offs, and data we’ve sourced below shows just a fraction of what we’ve been able to see with the tool.

Now, getting to know the reasons behind uninstalls can give marketers new insights into the user lifecycle while boosting their approach to re-engagement. So, when – and why – do users uninstall in the first place?
Unmasking uninstalls

We wanted to find out how long it took for users to uninstall an app, and discover how much time marketers have to draw them back in before they hit the delete button. Using timestamps from users across acquisition types, platforms and verticals, we were able to establish the average time between last session and a subsequent uninstall.

We found that users tend to keep an app for just under six days before losing interest, prompting their last session, and then uninstalling it.

Fortunately for marketers, the numbers are remarkably consistent across acquisition types and platforms.

iOS users tend to leave a little more time before uninstalling compared to Android users, as do users coming from organic sources compared to paid ones – but they all sit just under the six day mark.

High rates of uninstalls are frustrating enough, so it’s heartening to know that such similarities in the data make retargeting a little easier.

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<td>Android</td>
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Why do users uninstall in the first place?

Churn is an unavoidable part of app cyclicality – and there’s a whole host of reasons why.

Sometimes, the explanation is quite simple: it could be down to users not having enough storage on their phone, and so having to rotate the apps they keep downloaded. A buggy app could also lead users to uninstall (and potentially leave an unfavorable review, as well).

But there are more complex reasons that lead to uninstalls: poor design or user experience, an unengaging or ineffective app, or one that doesn’t serve its seemingly intended purpose are all sure-fire ways to end up in the trash. That’s why uninstall tracking is helpful if you’re trying to figure out why and when users churn – particularly if it’s combined with event data, which can pinpoint where exactly people drop off.

Vertical-specific data can also help us find out why users might uninstall after a specific amount of time – and it turns out there’s a big difference between them.

At one end of the spectrum, Entertainment apps are quickly discarded: the average user sticks around just half a day between their last session and uninstalling. If they’re using an entertainment app on iOS, they’ll stay for even less time: just nine hours.

Lifestyle apps have a similar lifespan, with consumers sticking for just over a day before uninstalling. Lifestyle app users coming from paid sources hang around for only three hours. These very low rates could represent a knee-jerk reaction from consumers, who may be so dissatisfied with the app and its user experience that they haven’t just closed it – they’ve actually gone to the effort of deleting it pretty much straight away.
On the other side of the spectrum, E-commerce apps have a lifespan of about 11 days from a user’s last session. One explanation behind this activity might be due to user habits: if someone’s made a purchase, they’re unlikely to delete the app straight after, and risk missing out on post-purchase communication. Keeping the app on their phone means they can easily check back in on their order and its delivery.

The travel vertical has the second longest lifespan, with users hanging around for about 10 days before deleting the app. Given the majority of travel apps serve a single purpose – for example, to rent a car, book a hotel room, or check into a flight – consumers are likely to keep it for the duration of their trip, and then uninstall it once home.

How long do users wait to delete an app?

How many users actually come back?

While most users churn, a high percentage of uninstalled users do come back.

After analyzing over 8 billion installs across 11 verticals, we found that an average 40% of uninstalled users will go on to download that same app again.

Lifestyle, Social and Games have the highest rate of reinstalls, all above the 40% mark. Dating apps, which often fall under both the lifestyle and social categories, could contribute to these verticals’ high rates of reinstalls: they’re likely to be deleted and then reinstalled if those first few dates end up not working out.
How often do churned users reinstall an app?

Games, which as we’ve mentioned above have a particular pulling power, also attract a high amount of reinstalls – in part due to their addictive nature and games publisher’s focus on retargeting. Re-engagement for this category is easily incentivized, as many users will be drawn back in with the promise of extra lives, coins or level ups.

Also high on the list are Travel and E-commerce – which shows that despite a large amount of user churn, a big percentage of consumers do come back eventually.

What’s important to understand, at least for app marketers who want to avoid this cycle of uninstalling and reinstalling, is to make sure that the app is engaging enough to keep users from deleting it in the first place. That might mean investing in diversification, and adding more to the app than its primary purpose.

After all, an E-commerce app might only be used to purchase something every few months. In between those orders, it’s an easy decision to make to delete the app and free up some much-needed memory – particularly if users aren’t notified of new product drops, or incentivized to check back in with discounts. But offering users more content, promotions and interactivity will help inspire loyalty and brand affinity, and make them think twice about deleting.

However, for the many users cursed with limited phone space, you’ll also have to accept that inessential apps are going to be deleted at some point until the next time they need it. That reinstall will only come if they’ve had a good experience with your app – so make sure your app is one that users will want to redownload at some point further down the line.
Uninstall and Reinstall in real life: Two use cases

Travel

Let’s say you’re a marketer for a travel app and you want to run a video ad campaign about your new speedy check-in feature. You want to track how many users trigger the new feature, as well as their subsequent retention.

You know that 90% of your users will uninstall your app after they check into their flight. But those same users are likely to reinstall the app the next time they fly. In this case, if your team ignores uninstalls and reinstalls, the campaign will show a high conversion rate with low retention, which is neither the whole story nor the most important takeaway of the campaign.

By enabling uninstall and reinstall tracking, the travel app can pinpoint the moment users are most likely to uninstall and reinstall, allowing them to take smarter re-engagement actions that better understand their users’ needs.

If you know your user is likely to uninstall just after their flight, you might decide to retarget that user with an offer for 20% off a hotel booking – but make the offer an in-app exclusive. The user is encouraged to keep the app for longer, or even make a second purchase.

Gaming

Given gaming app users are among the most likely to reinstall, uninstalls and reinstalls are a key KPI for the vertical.

Re-engagement strategies will also differ greatly depending on whether, for example, a user abandons the game and then uninstalls the app, versus a lapsed user who simply hasn’t logged a session in a while.

Knowing for certain that a user has uninstalled means marketers can deliver better-targeted re-engagement campaigns than to users who still have the app installed.

It’s also possible to target those users who have deleted an app with a personalized re-engagement campaign that drives reinstalls and rewards users for re-downloading and retaining – for example, offering coins or levels-up for those who reinstall the app, or giving rewards for players who log a session every day for a week.

Precision targeting with Lifecycle Tracking and Audience Builder

Uninstall and Reinstall tracking are powerful tools. But once you have it, what do you do with it?

Our Audience Builder allows app marketers to take control of their retargeting campaigns. Whether you use Audience Builder to build custom segments to deliver to your third-party retargeting partner, or use the tool to plug a list of advertising IDs into Facebook, the end effect is that marketers are in charge of how their data gets sliced, diced and shared. Audience Builder makes re-engagement campaigns more exact, more secure and more cost-effective.

With uninstalls and reinstalls as a new KPI, it’s possible to use Audience Builder to create a custom list of users who have – surprise – uninstalled or reinstalled.

This makes it easy to see and target all of the users who have actually churned, and zero-in on them with direct messaging based on their last interaction.

Are your users uninstalling your app after they make a big purchase? Are they abandoning their cart but keeping the app on their phone? In both cases the user is inactive, but once uninstalls and reinstalls are visible, it’s possible for a marketer to know when to target a user with a great sale or when to hold off.
Putting Lifecycle Tracking into practice: How Viber uses uninstall and reinstall data

According to Moshi Blum, Head of User Acquisition at Viber:

“Lifecycle tracking gives us completely new insights into the user journey which we weren’t able to get before – such as working out the quality of users from different sources, optimizing user reach, and refining engagement campaigns.

From a user acquisition perspective, these KPIs help us identify sources with high quality and retention rates, and to optimize source and campaign offers with excessive churn. We do this by comparing uninstall rates between users coming from organic sources – like invitation links, organic attribution, and Google searches – and from various paid marketing sources.

This helps us understand how the true cost per user acquisition varies, and which sources are worth investing in. We see a huge amount of fluctuation – some paid acquisition sources have four times the amount of uninstalls rate as others do.

We’re also using the uninstall feature as a feedback for our CRM campaigns. The negative feedback exposed by uninstalls means we can correctly calculate the net positive impact of our existing user base communications. That includes fine-tuning the number of updates sent and the quality of marketing messages, and the intrusiveness of different communication options.

Finally, looking at uninstalls rates and drilling down by country has helped us catch suspicious behavior and troubleshoot challenges quicker. If we see an unusually high rate of uninstalls in a particular market, we can investigate and work out what’s causing these large numbers of users to uninstall the app.

Being able to track uninstalls and reinstalls has been a game changer for us – while the full potential of the feature is still unfolding, these new metrics leveraged our audience and product understanding.”
Conclusion

When building Lifecycle Tracking, our aim was to get rid of the user journey black box – and we hope this ebook has given you a firm understanding of how it works, and why it’s so important to mobile marketers.

The bottom line is that if you’re not tracking uninstall and reinstall, you’ll miss out on essential insights into user churn, and also on the quality of users from any source. Knowing when your users leave means you’re better enabled to make decisions about the right optimizations, creating a better customer journey.

At the start of this ebook, we saw that an average 11% of churned users return to an app after a three-month break. Similarly, 40% of users who uninstall will go on to redownload – do you know how your churn and reinstall rates compare?

If you’d like to find out more about how Lifecycle Tracking can help you, you can sign up for a free demo of Adjust here. It’ll kick off our consultation process, where you’ll discover the true impact of mobile measurement and how we can help improve your app’s performance.

We’d also love to hear your thoughts on this ebook and any interesting insights you’ve learned along the way. Keep up the conversation using the @adjustcom handle on Twitter, Facebook and LinkedIn, and you’ll also be the first to know about any ebooks we publish. For more data-led stories, subscribe to our newsletter over on the blog.
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