



Mobile Attribution & Marketing Analytics for Shopping Apps

The Complete Guide



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Introduction

With more products and services ever available, demand from shoppers has driven brands to emphasize mobile commerce, on-the-go and at user's fingertips whenever the need to buy arises.

In fact, App Annie predicts that 75% of all eCommerce transactions will be made on mobile by 2021. The use of retail apps is leading the mobile charge, with 5.7 billion downloads of shopping apps in 2018, which is more than 50% compared to 2015, according to Apptopia. Increased usage has led to a predicted \$270 billion of generated revenue in 2019, growing to \$510 billion in 2022, according to eMarketer, of which roughly 70% occurs in app.

However, despite the explosive growth of shopping in apps, there are still retailers who have yet to focus their attention on this key touchpoint, thinking that a mobile website suffices. But since it has become a significant part of consumers' shopping and buying patterns, retailers must get their mobile app strategy right to:

1. Drive brand loyalty (think home screen icon)
2. Engagement (through push notifications)
3. Sales (native app experience as a conversion enabler with a 3x higher conversion rate compared to mobile web among retailers that have both touchpoints, according to Criteo).

“Mobile retail apps are no longer a nice-to-have, they are a critical piece of the puzzle for any national retailer trying to connect with its customers and deliver healthy bottom-line results.”

eMarketer

Top Challenges

While shopping apps can play a key role in driving brand loyalty and sales, there are also multiple challenges to overcome:



Securing app loyalty and multiple purchases in highly competitive market. With so many eCommerce and shopping brands available, a user has nearly unlimited options for purchasing a single product. What's more, the worldwide shopping heavyweights like Alibaba and Amazon increasingly dominate the market. That's why common shopping marketing methods, such as offering discounts or deals to users, may be effective in acquisition, but don't necessarily guarantee loyalty or ongoing purchase revenue.



Fraud. Among all verticals, shopping is one of the hardest hit categories in terms of fraud due to its massive scale and higher than average payouts (because of high CPIs). In Q1 2019, AppsFlyer recorded a 14% rate of fraudulent installs, and financial exposure in shopping apps alone was around \$222 million, or roughly 29% of total global app install fraud exposure.



Personalization. Driving ongoing conversions and multiple purchases is largely dependent on a personalized user experience. This can be done through deep linking, push notifications, and targeted advertising with discounts and other promotions. However, while the reward of converting shopping users is very high, marketers must balance between respecting user privacy in the era of GDPR and meeting user expectations of a personalized app experience.



Connecting the dots. The journey of a shopping consumer often spans across multiple devices, platforms, and channels given online and offline ad exposure and the availability of multiple touchpoints. A single purchase might start in-store, be researched further on the web, and bought in an app later - and that's only one example.

Therefore, connecting the dots between these different touchpoints and making sure you've linked the right data to your app can be a real challenge. Working with an effective attribution provider can help bridge the gap and give you your true user LTV.

The Solution: Granular measurement as a foundation for... everything

One golden truth of app marketing is that there are no strategies and processes without measurement and optimization, not only of basic KPIs, but also granular metrics which map every stage of the conversion funnel to inform both user acquisition and re-engagement. In turn, marketers are able to hone in on the users they're looking for and uplift their overall marketing performance.

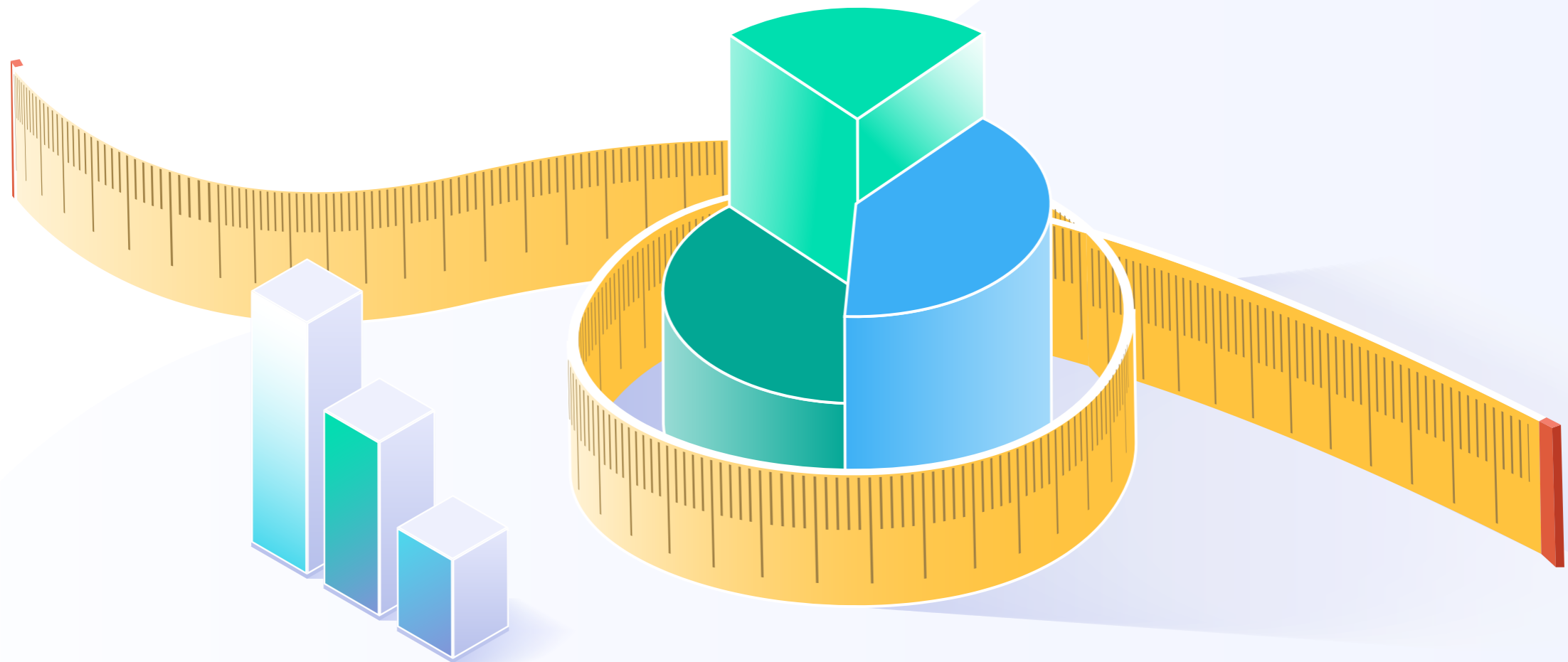
If you're just getting started with mobile attribution and marketing analytics, we recommend reading the [following guide first](#)

Part 1

User Acquisition

Part1 / Chapter 1

What to Measure and Set Up



Before you even get started in setting up your user acquisition (UA) campaigns, you must first have a few capabilities in place to guide your setup in the right direction. Let's take a look at the essentials.

#1 Event Mapping

To begin discussing the importance of granular measurement for successful user acquisition, let's take a deeper look at what that actually means in practice.

The following chart explores some of the main metrics savvy shopping app marketers measure to optimize their efforts and deliver the highest-value users to their apps. You can see that the left column contains vertical-specific goals, while the right column contains the metrics through which these goals can be met.

Goal	KPI
Installs related <ul style="list-style-type: none"> Acquisition Cost 	<ul style="list-style-type: none"> Organic/Non-organic split Month over Month growth (non-organic) CPI/CPA ROAS
Engagement related <ul style="list-style-type: none"> Stickiness Short term loyalty Long term loyalty 	<ul style="list-style-type: none"> DAU/MAU Retention Day 1, 7, 28, and 30 Week 8, week 12 retention rate Uninstall rate day 7, 30, and 60
Purchase related <ul style="list-style-type: none"> Increase first time purchases Increase repeat purchases Increase average order value (AOV) Share of retargeted user orders Cancellations with negative revenue and/or purchases that are returned to origin (when a user demands money back) 	<ul style="list-style-type: none"> Basket size % of users making 1, 2, 3 or 4+ IAPs within 90 days ARPU: Day 1, 7, 14, 30, and 90 First week conversion rate (how many users make purchase within first week) Time between 1st to 2nd to 3rd purchase % growth of AOV between 1st purchase & subsequent purchases First-time purchase vs. repeat purchases Day 0, 7 and 30 purchases, unique user and event count - both cumulative & individual days
Funnel conversions	<ul style="list-style-type: none"> % Install to Registration % Install to Cart Add % Install to Checkout % Install to Purchase
Connecting the dots	<ul style="list-style-type: none"> Unique new users (app brought in, did not interact with other touchpoints) % of users who began journey on web and converted in-app # of users purchasing on more than one platform % of completed multi-platform conversions Comparison of value of users on each platform AOV per platform % of users per platform

Note that, although all metrics above are important to improving the profitability of your shopping app, the top industry leaders specifically focus on Day 0 and Day 7 purchase amounts and rates, as well as Day 0 and Day 7 ROAS.

The why and how of rich in-app events

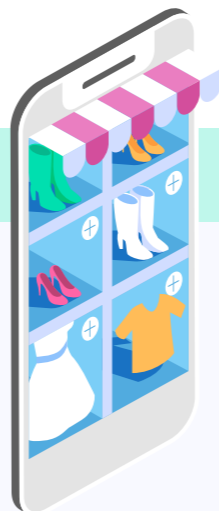
The depth to which we can gather the right data in order to optimize campaigns towards high quality users, as well as generally boost engagement and revenue, is significant. That also means the amount of data we need to handle and analyze is massive, though with the right tech stack, attribution platform, and set up, marketing analytics can be made much easier.

But still... Why do I need to measure rich in-app events and other granular data?

Highly effective user acquisition, engagement, retargeting - all are driven by building audiences and optimizing media sources, channels, campaigns, and creatives based on rich in-app events. These events add layers of both available and measured parameters that map out ideal user behavior.

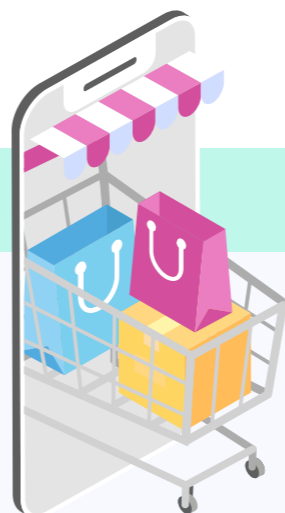
With the raw data you receive from an attribution provider, you will literally be able to see user trends and patterns you might otherwise miss, and get a complete picture of their activity and behavior, no matter the platform, channel, device, and time on and at which they perform actions.

Let's look at two examples to illustrate the difference between standard in-app events versus rich in-app events:



Purchase

- Revenue
- Content Type
- Content ID
- Quantity
- Currency



Content Viewed

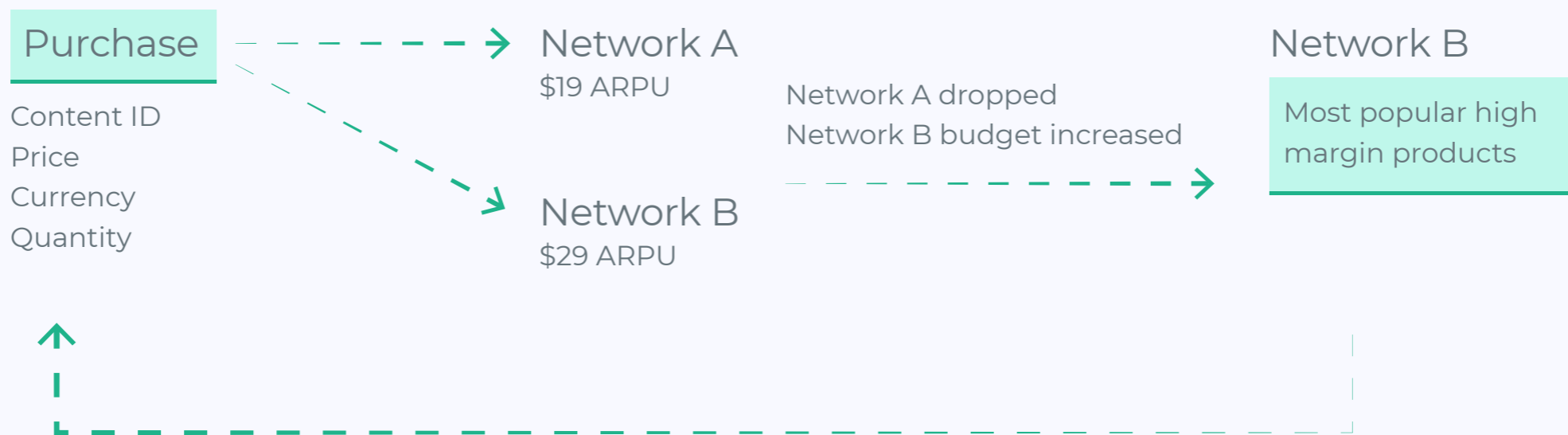
- Search String
- Price
- Currency
- Content ID
- Quantity
- Customer User ID

What was once simply a “purchase” now becomes a content type (e.g. red dress or bluetooth speakers), a specific content ID, quantity, currency, and even a revenue amount. All of these parameters can then be sliced and diced to target audiences who behave similarly to current users who may view a specific type of content, add a specific quantity to cart, or paid in a certain currency, in order to reach different demographics, regions, or valued purchasers.

The granularity of rich in-app events can also be applied to other events, such as Search, Content View, Sign-Up/Login/Register, Add to Wishlist, or Add to Cart, based on where in the conversion funnel you are attempting to engage, or re-engage, users and/or your ultimate conversion goals.

Driving High AOV Users for High Margin Products (Phone Accessories)

How rich in-app event measurement informs UA spend and creative



Setting Up Rich In-App Events

Now that we've shown why you should be measuring on a granular level with rich in-app events, let's talk a bit about their setup. Bear in mind that this process will involve both configuration in the attribution provider's dashboard (on the marketer's side) and inserting code from the provider's SDK into the app itself (on the developer's side). Because of this, there are a few points that your developer should keep in mind:

Before getting started, the developer should look at the support site of your attribution provider, where they will find general configuration instructions and code snippets for each event to add to the app.

To avoid receiving technical advice from non-technical marketers, developers can open tickets directly with the attribution provider for any questions.

Events should be recorded only if they are directly relevant to finding high-value users and/or retargeting. For example, you won't want to record a GPS location event as it has nothing to do with further user acquisition or retargeting. It is possible to overload, so choose wisely!

Developers should have access to your attribution provider via their own individual login, not sharing among team members.

A "sandbox" app (isolated from critical system resources and other programs) can be setup by developers for the testing and development of events before moving to release.

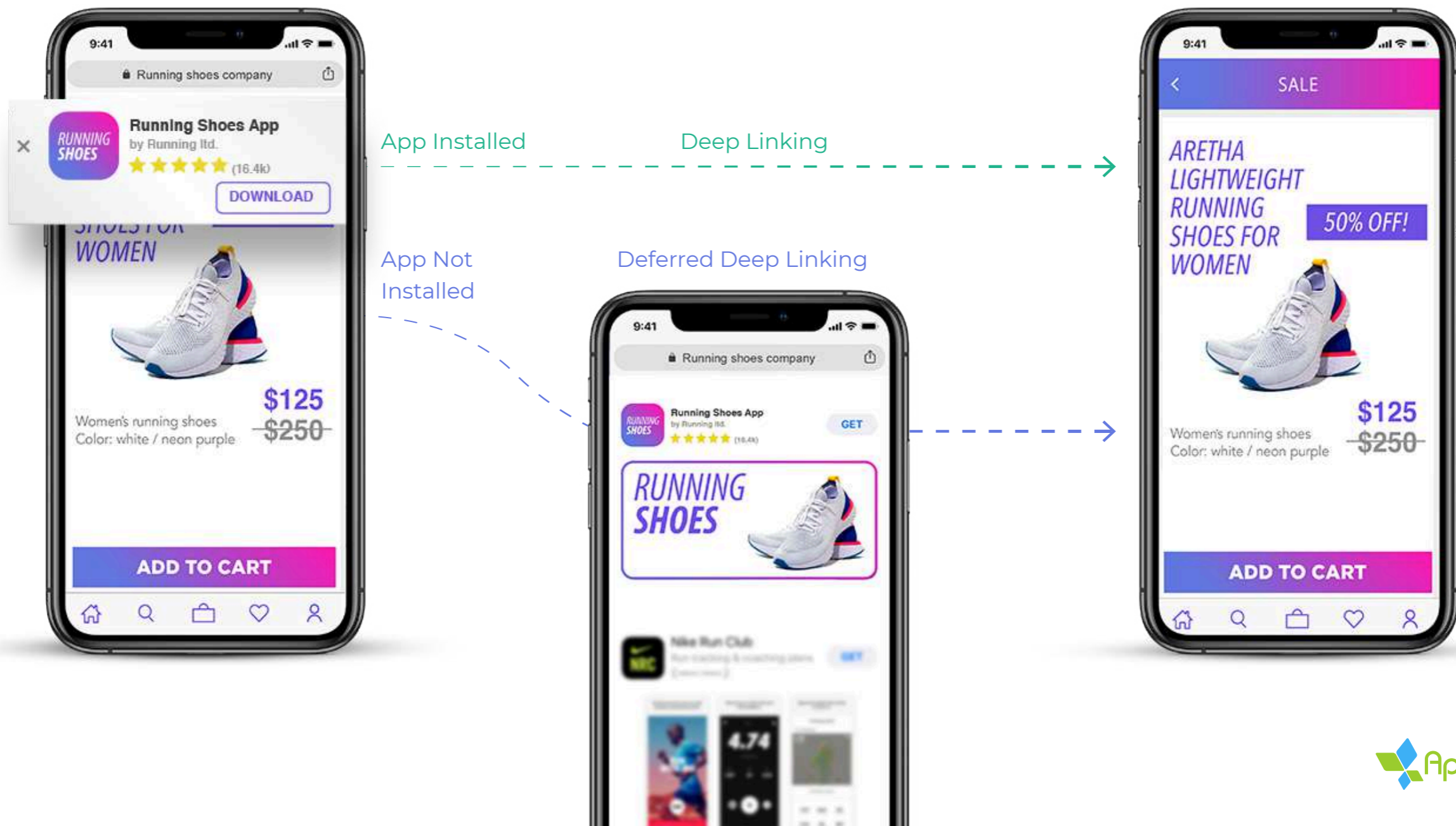
Above all, it is important for marketers to clearly communicate with their developers exactly which parameters to set up for each in-app event being measured.

Once done, your rich in-app events will be synced in real-time to your media sources, and are fully configurable at any time. This real-time integration also means that any new media sources you add will be updated and their existing data synced to your app automatically without adding a new SDK for each.

#2 Deep Linking

One of the most powerful tools in the app marketing tech stack is deep linking, creating a contextually-relevant user experience across channels, platforms, and devices. How is this done? Using the information contained in the deep link, users are brought directly to a specific product or campaign landing page within an app rather than simply the home page, seamlessly moving from promotion to landing page with greater likelihood for conversion.

In the shopping vertical, deep links are most often used to drive customers to product pages based on previous viewing and/or purchase behavior; route users to the app from web (including desktop and mobile web) and email for long-term retention; and communicate important deals and promotions to drive in-app conversion.



You must first configure deep linking in order to begin using it; luckily, this can easily be done via implementing code in your app, or through enabling associated domains, depending on the method used.

Also pay attention to the fact that deep linking is needed for both specific product pages, or product detail pages (PDPs), and broader category pages, or product listing pages (PLPs). To which a user is brought is primarily dependent on a) the deep linking campaign goals and b) the user information (i.e. content viewed, purchase history, location, etc.) previously gathered, which must be decided and understood ahead of time.

For more information, read our [Everything a Marketer Needs to Know About Deep Linking](#) guide.



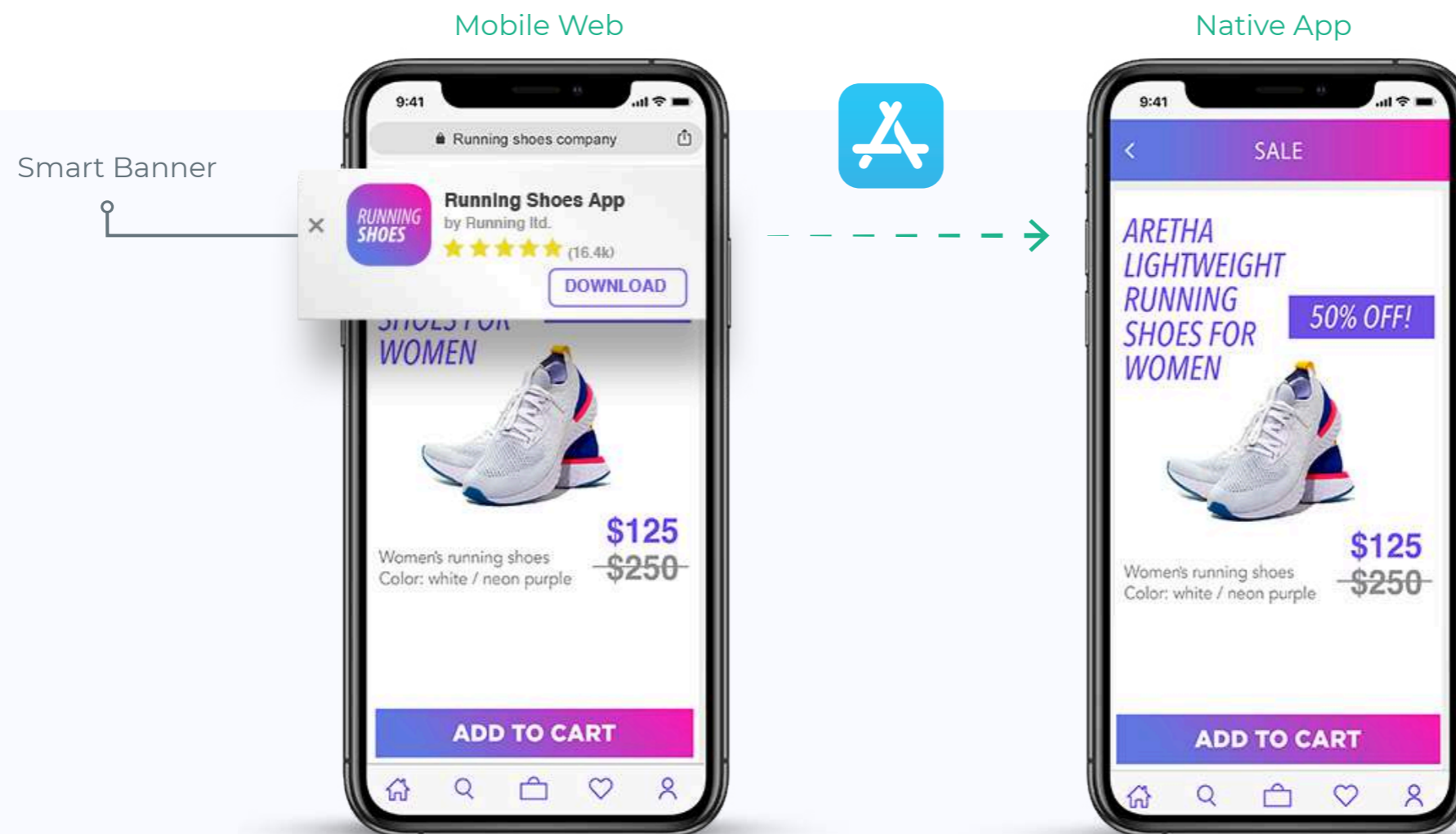
Advanced Deep Linking Strategy

Well-rounded shopping app marketers use deep links to bring users specifically from mobile web to their apps via an 'Open in App' call-to-action smart banner.

These call-to-actions often go hand-in-hand with campaigns offering promotions and deals for in-app users; for example, a 5-10% discount for purchasing in the app rather than the website. Through the deep links placed in these banners, marketers can bring users to install their app (if not yet already), then to the same product or category page previously viewed, and later to a checkout page for purchase.

But why would marketers want to reroute users to their app from mobile web in the first place? Simply put, the app is the ultimate destination because of the data insights and impact on brand it can provide.

When a user clicks on a smart banner popup and follows it to a page in the app, the marketer will receive data on the user's subsequent in-app activities, the IDs of product and category pages visited, and even, retroactively, the attribution data from the user's journey to the mobile website. Beyond the valuable data gathered, however, smart banners also contribute to an improved user experience, increasing the potential of greater brand loyalty and engagement overall.



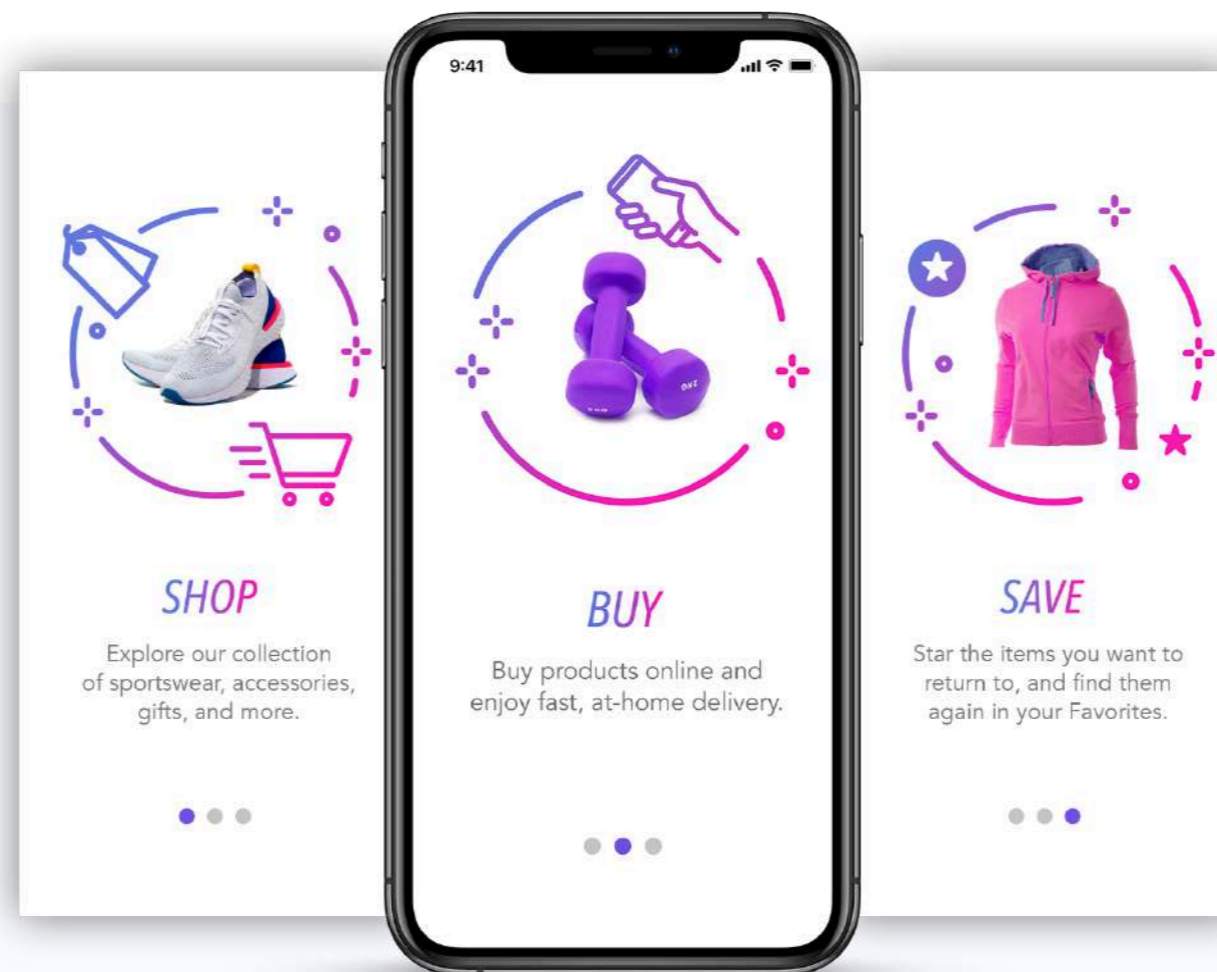
#3 Uninstall Measurement

It's not enough to bring users smoothly to your app, and personalize their experience within it to optimize conversion rates. Marketers must also address the inevitable segment of users who will uninstall the app completely, and either build a strategy to bring those users back to active engagement, or exclude these users from any further targeting.

To do so first requires understanding why, when, and which users uninstall, especially given the rising scale of competition and higher user expectations.

So what are some of the things that can make users uninstall your shopping app?

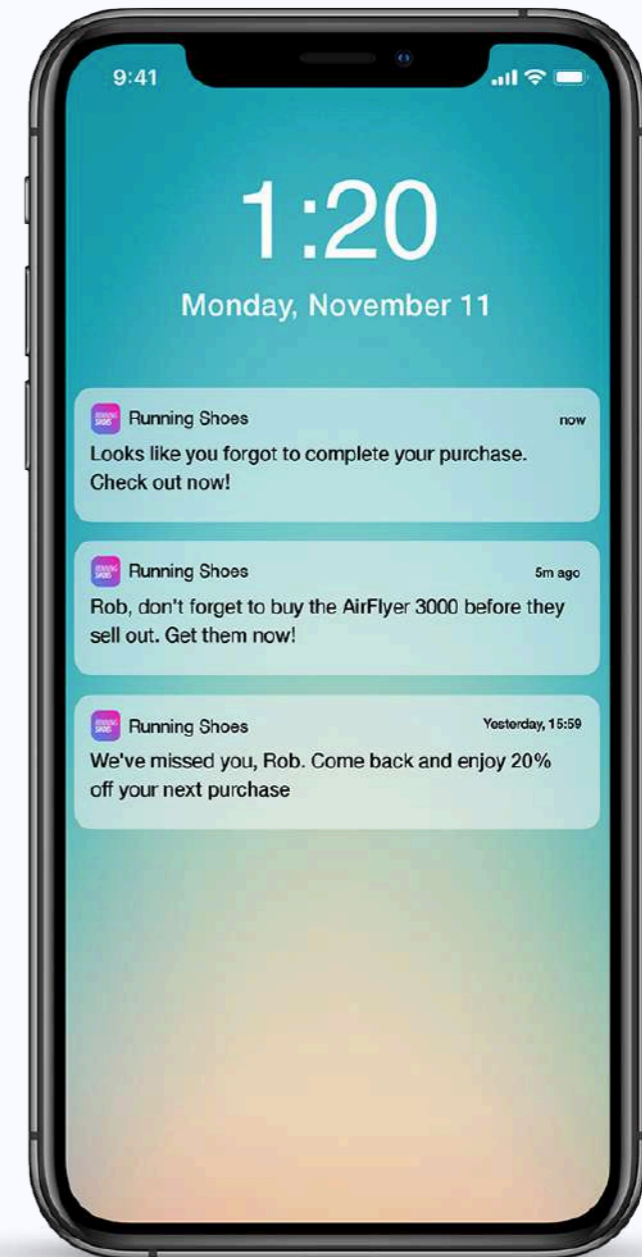
- **Poor in-app functionality and experience.** Optimize your UA campaigns all you want, but it's also important to ensure you have a great infrastructure to support your app's functionality, and ensure a flawless path to conversion.
- **Excessive and/or impersonal onboarding process.** Ensuring that your users move as quickly and smoothly to active engagement as possible means building an onboarding process that is short, simple, and intuitive. It should cover app basics and potentially even offer incentives. One option is to conduct registration and/or sign in via a Facebook or Google account.



- **Irrelevant or overwhelming notifications.** While shopping apps may use push notifications to update users on new products, offer discounts or incentives, share general news, or simply bring inactive ones back to a potential purchase, it is also possible to overdo it. Be intentional about sending only key notifications, at appropriate times, to users who display strong intent and relevant characteristics for each message.
- **Device storage and wifi network limitations.** There is a greater frequency of uninstalls in developing countries compared to developed countries due to device storage and wifi network coverage limitations in these regions, although these numbers are changing as cheap but high end devices and 5G are being introduced.

Given that users can uninstall your app for one, or a combination, of many reasons, it should be clear that understanding your app's uninstall rate is important. But what exactly are the main benefits of uninstall measurement for marketers? There are two:

1. **Compare the overall quality of your media sources** by exploring the performance and retention of users from different media sources, campaigns, single ads, countries, etc.
2. **Protect user privacy** by removing uninstalled users from retargeting segments and discontinuing re-engagement messaging.



Setting Up Uninstall Measurement

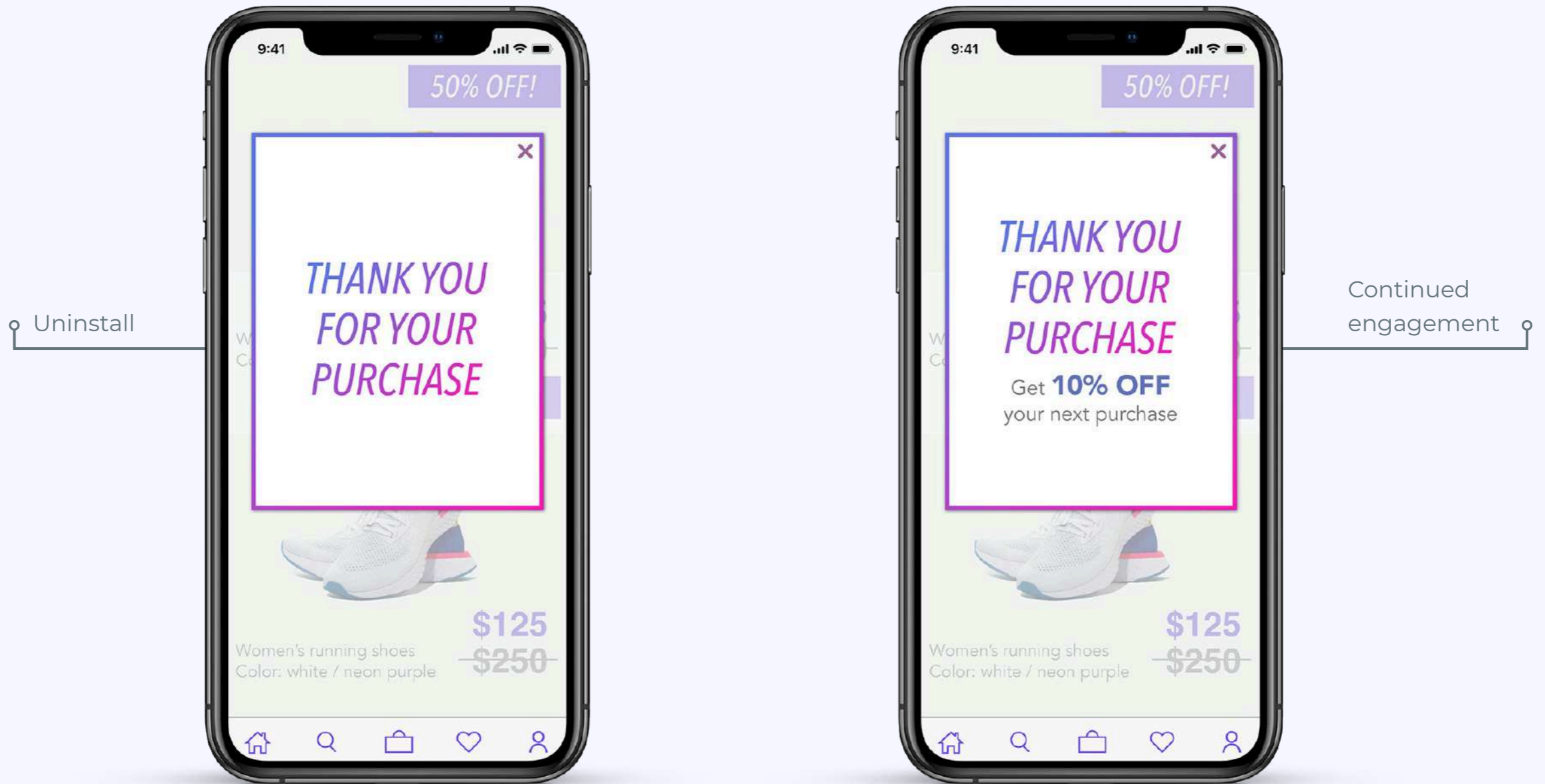
The [setup](#) process for uninstall measurement between Android and iOS varies greatly. Below, we've laid out the basic steps for navigating the differences in each platform.

Android	iOS
<ol style="list-style-type: none">1. Obtain your Firebase/GCM server key2. Enter your key in the attribution provider's platform3. Configure Firebase messaging on your app4. Set sender ID5. Implement attribution provider's uninstall measurement service6. Use ProGuard with uninstall measurement7. Test measurement	<ol style="list-style-type: none">1. Find your app in Apple Developer Members Center2. Generate your certificate3. Renew your certificate, if needed4. Export .p12 file5. Integrate with the SDK6. Add push notifications7. Test measurement

Remember to define your in-app KPI goals ahead of time and be granular in your measurement in order to understand exactly where users drop off at the time of uninstall and how your subsequent re-engagement efforts can be most effective.

For more information about using uninstall data to improve your uninstall rate, check out this [post](#).

Minimize Churn from One-Time Purchases



#4 Determining Lookback Windows

Despite the 7 day default, shopping app marketers are increasingly shortening their lookback windows for multiple reasons, chief among them:

1. Advertisers believe that if an install is happening after many days post-click, then it likely did not occur as a result of that click, but instead because of some other unmeasured touchpoint.
2. To avoid capturing installs generated through click flood fraud, advertisers sometimes reduce windows to one day.



#5 Fraud Protection

As mentioned in the introduction, fraud is a massive problem, particularly for shopping apps because of their scale (second largest category) and relatively high payout. We estimate that it is one of the hardest hit verticals, with a financial exposure of \$222 million in Q1 2019 alone.

Increased fraud has led to much stronger protection, which in turn led fraudsters to up their game with increasingly more sophisticated fraud tactics. This is especially evident in the use of bots that mimic user behavior in an attempt to bypass protection, and/or from device farms: the physical ones we've seen with thousands of actual devices on racks, and the virtual ones with the use of emulated devices.

A good anti-fraud solution uses a blend of supervised and unsupervised machine learning driven by a large scale of data. Given the continued resurgence of bots and increasingly more advanced fraud tactics, real-time protection should actively flag behavioral anomalies, subsequently unmasking new bot signatures and otherwise undetectable fraud behavioral patterns. By analyzing post install behavior, such as event type, volume, and engagement patterns, as well as matching metadata, such a solution automatically identifies emerging anomalies for further validation and blocking.

For more information about how AppsFlyer uses both machine learning and big data to combat fraud, read [here](#).



Advanced Protection

One common myth is that CPA-modeled shopping app campaigns experience little to no fraud due to the lack of install-focused incentive or the difficulty of generating an in-app event (or even purchase) for fraudsters. That simply is not true. For this reason, savvy marketers look at any and all of the following measurements:

Cancellation Rate. The ratio of cancellation events (that is, an order cancelled for any reason) to installs is highly relevant to advanced fraud detection. Imagine that a marketer is paying a CPA of \$5 for each order that is placed. In CPA fraud, an ad network (or one of its publishers or sub-publishers) places an order, receives the CPA payment, and later cancels the order. Unfortunately, this behavior is legitimate, since most eCommerce platforms allow cancellations for a certain period if clients are not satisfied or if the product is damaged, etc.

Since there is usually a steady cancellation rate for most apps, higher rates from specific media sources or site IDs typically signal that these orders are not genuine and only exist to collect CPA payouts. To minimize damage, shopping app marketers should negotiate a penalty clause for networks in lieu of fraudulent activity directly in the contract.

Zipcode Anomalies. It is also important to identify distinct anomalies of order amounts from a specific city or zipcode. When such spikes are detected, these often indicate bulk orders from fraudsters in a single location.

Install-to-Purchase Time. For shopping apps, there tends to be an acceptable limit in the time between an install and purchase. Less than that is cause for suspicion. Because each app's needs are different, however, it is suggested to use attribution data to understand that limit on an individual basis and create boundary conditions accordingly.

#6 Mapping a Holistic Customer Journey

The reality is that, in 2019, there remains a significant divide between user behavior and marketing measurement.

On one hand, shopping end users have increasingly more complex conversion journeys involving multiple devices and touchpoints - desktop web, mobile web, apps, and even offline, in stores. According to Forrester Research, 65% of online purchases now include toggling between multiple devices and Business Insider estimates that, by 2020, more than 24 billion internet-connected devices will be installed globally.

On the other hand, marketers are measuring user actions across different channels and devices, but primarily doing so in silo from one another. Their data remains disparate and is analyzed by different teams; their goals, strategy, and subsequent action are formulated and executed in parallel lines that rarely meet.

However, with mobile as the data-driven heart of the holistic and personalized shopping experience, marketing efforts and measurement technology can, and should, be built and used around the needs of omni-channel customers. The data capabilities of mobile, which has become the most easily measured ecosystem, allow marketers to bridge the gap between on and offline shopping touchpoints, and unite each user across platforms with a single customer ID as part of the overall brand. Especially for shopping apps, personalization, location-enablement, and an integrated camera, all via mobile device, further assist in delivering consumers a seamless experience at every step.

For more information about holistic app measurement, read our complete guide, [From Mobile Attribution to Holistic People-Based Innovation](#).

Part 1 / Chapter 2

Pre-Launch/ Campaign



By this point, you've decided on your company's mission-critical metrics and set them up accordingly. You are aware of both the potential revenue opportunities, as well as the risk associated with fraud, and have assembled your marketing tech stack accounting for both.

Now, it's time to prepare for launching the campaigns. But where do you begin?

#1 Choosing Your Media Sources

Not all media sources are created equal, and especially given the differences between verticals, app goals, regions, and other factors, it is important to choose the right ones in order to yield the greatest amount of high-value installs.

To begin, you will need to be able to answer two questions:

1. **Which** media sources, based on performance and quality metrics, would I like to integrate, advertise, and measure with?
2. **How many** media sources should I run with?

That is, how many media sources you work with is as strategic as which ones you choose. How can you determine the appropriate number for your resources and goals? It is worthwhile to first check global vertical benchmarks: for shopping apps, in Android and iOS, respectively, the highest spenders had roughly 4 and 7 sources; the middle spenders had 2 and 3; and the lowest spenders had 2 for both platforms, according to our data (see next page for full results).



Android

App Group	Overall	Entertainment	Finance	Gaming - Casual	Gaming - Midcore & Strategy	Gaming - Social Casino	Lifestyle	Shopping	Travel
High Spenders	4.5	3.7	6.7	3.8	5.0	6.5	3.1	4.4	7.4
Medium Spenders	2.7	2.1	3.3	2.3	3.3	2.2	3.2	2.3	3.4
Low Spenders	1.7	1.5	2.0	1.4	1.8	1.7	1.5	1.8	2.2



iOS

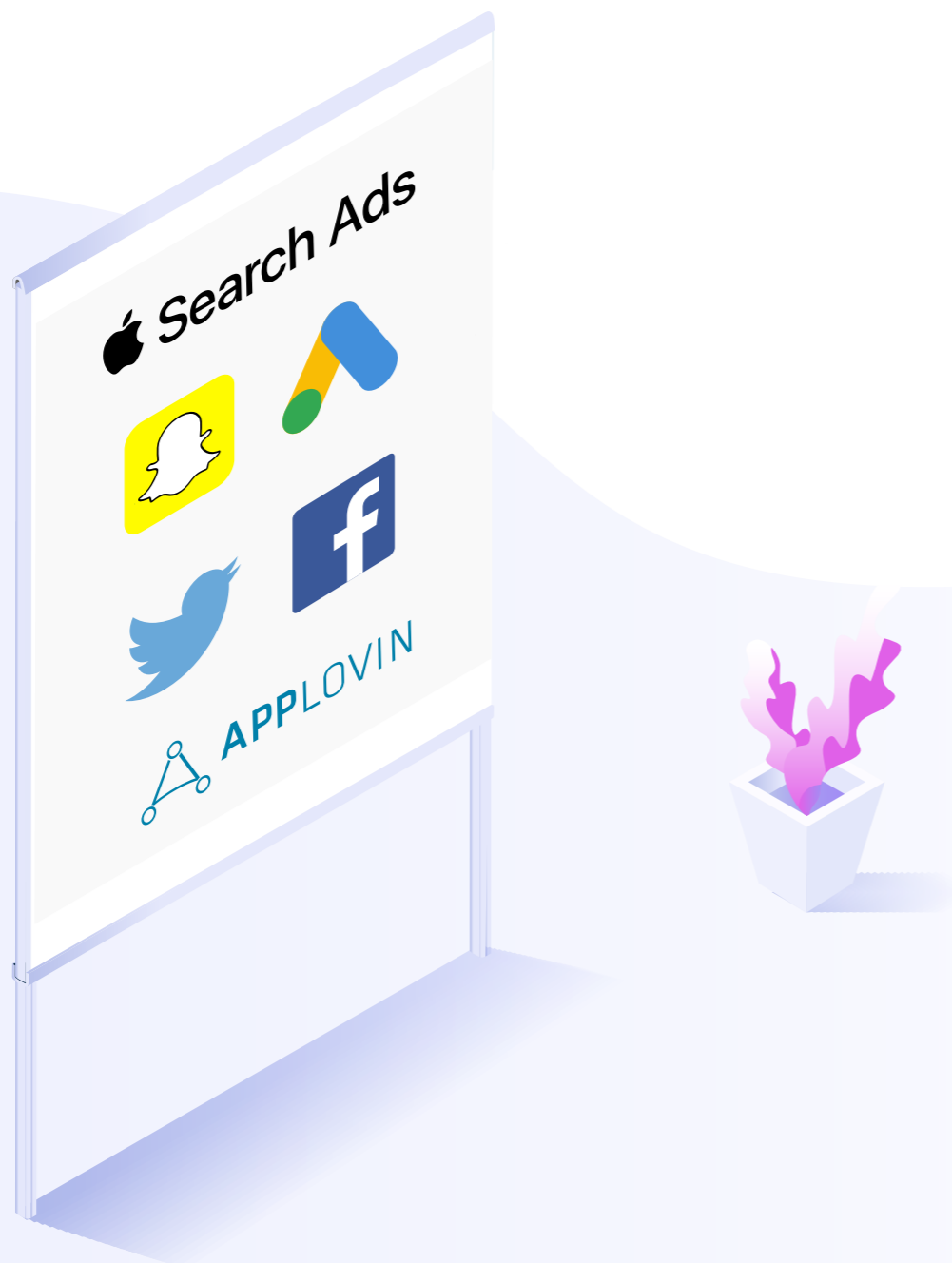
App Group	Overall	Entertainment	Finance	Gaming - Casual	Gaming - Midcore & Strategy	Gaming - Social Casino	Lifestyle	Shopping	Travel
High Spenders	6.2	4.3	9.4	5.8	6.0	11.6	5.7	6.9	6.6
Medium Spenders	3.6	2.4	4.1	3.4	3.4	3.7	3.6	2.6	3.1
Low Spenders	2.0	1.9	2.3	1.8	2.0	2.0	2.1	1.8	2.0

Based on these numbers, it is clear that, first and foremost, greater resources, primarily team members who will be dealing directly with campaigns, and greater budget to spend means more media sources. In marketing teams with smaller budgets, it's not recommended to try spreading it thin across many sources since the media buying engines need scale in order to properly optimize. What's more, with fewer people, companies may simply not have the bandwidth to keep up with the oversight.

On the other hand, operating under a smaller budget with a media source means you will probably be treated accordingly; that is, you get what you pay for, so bear this in mind.

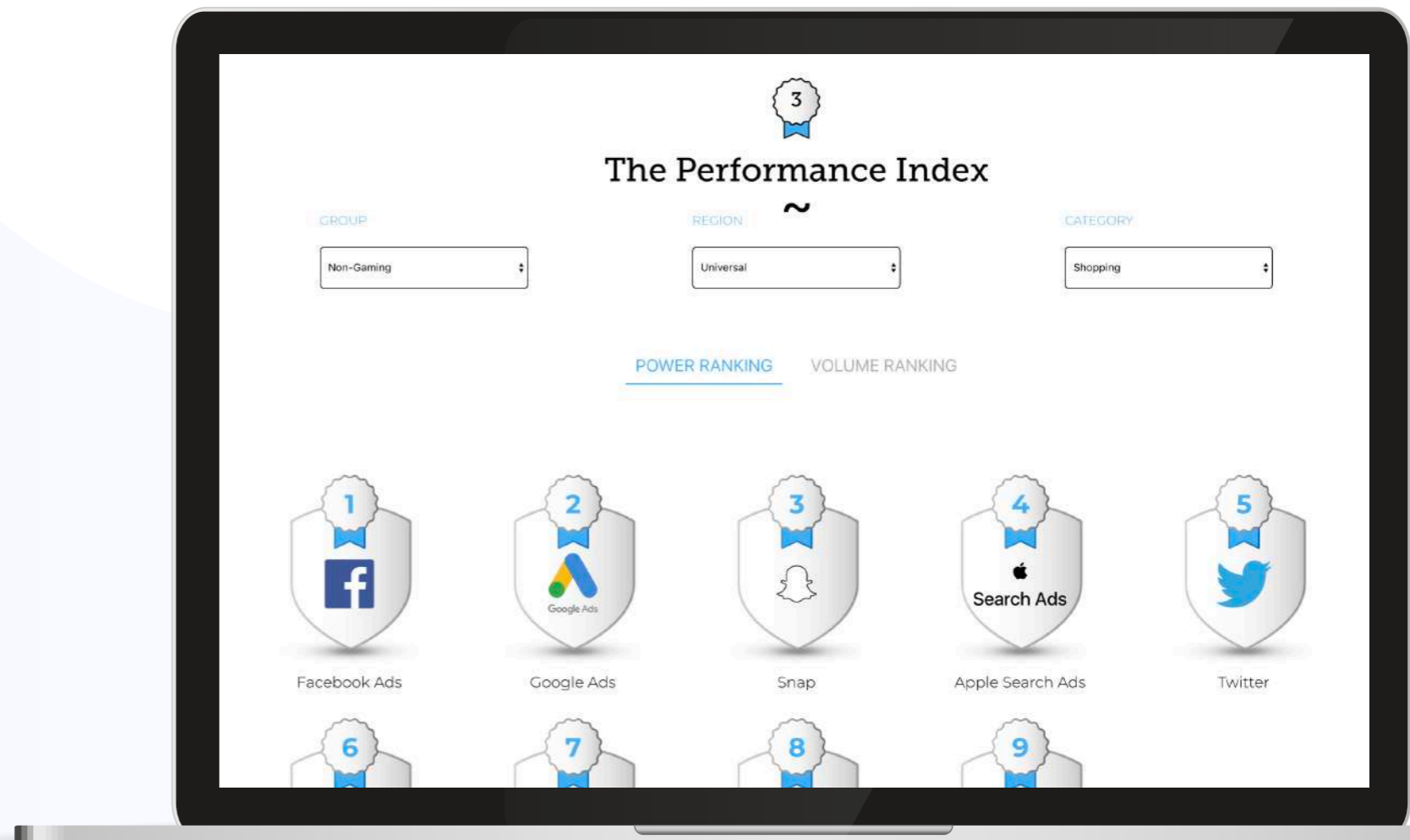
Another factor in determining the amount of media sources you will ultimately work with is the value your media mix and diversification will bring to your app. In an environment where every cent counts, having several different sources from the social, video, ad network, and programmatic worlds means flexibility for optimization, granular targeting, and cross-channel and platform audience segmentation.

Resources such as the [AppsFlyer Performance Index](#), a comprehensive performance ranking of media sources worldwide segmented by region and metric, can also inform which and how many sources you will use. It is important to look to other industry perspectives and thought leadership as well as your own data to stay up-to-date with the latest news and trends.



Lastly, your network choice may be affected by the platform, usually iOS or Android, on which your app is operating and even seasonal occasions. For example, shopping apps and retail, which experience big holiday rushes in Q4 for Black Friday, Cyber Monday, Christmas, and New Year's, may increase their number of media sources during these peaks to accommodate the heavy traffic and boost the likelihood of high value, and shopping hungry, users downloading and converting in-app.

Another factor to consider is the timeliness of conversions generated by the source, especially during the holiday season. Many shopping marketers set an event postback window to appropriately cap the number of event attributions, and subsequent CPA payments, that occur. During peak holidays, this window is often shortened to 7-10 days, or even as low as 1 day. Good media sources should deliver high quality, converting customers during this window, and can also perform under high holiday demand.



Testing Media Sources

Before working with a media source, you must first test, and often test again, for the performance and quality it can deliver for your needs. Marketers have already begun to adopt this process - roughly 30% of all campaigns launched are test campaigns - but not enough of the industry as a whole operates under an 'always be testing' mindset, which is necessary to keep up in mobile's fast-paced environment.

In fact, there are many benefits to testing your media sources before diving in. As a start, test campaign success is not just limited to a few larger sources, but rather, extends to a wide range, more than half of the total number yielding a 40% or higher success rate. That's not even the best part: 43% of all test campaigns launched actually prove to be successful, meaning your chances are higher rather than lower of getting the insights you need for optimization.

Ultimately, it doesn't take more than a few wins to scale your campaigns and see substantial app growth, so with success rates high and lower media costs while performing them, it's worthwhile to emphasize testing as an essential part of your marketing routine.

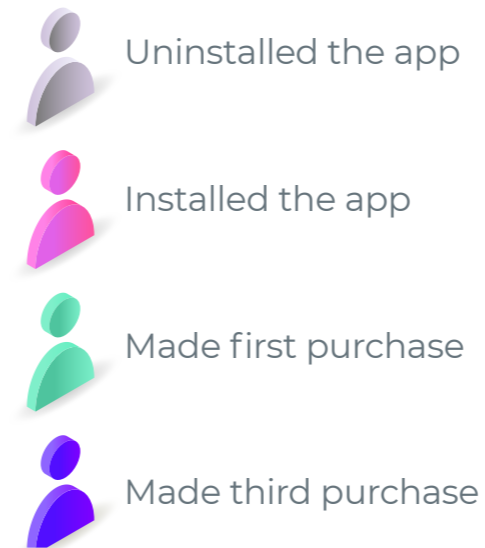
For more information about marketing testing, read [here](#) and [here](#).



#2 Audience Segmentation

After gathering data about your users' pre- and post-install activity, it is important to move from insight to action and prepare specific audience segments that will, first, define your most valuable users and, then, serve as a basis for future acquisition. Audiences can and should be used for many purposes; for example, as a shopping app, you might:

- **Build lookalike audiences.** Improve your user acquisition by targeting prospects who “look” like your best users – those that purchased more than 3 times in the last 30 days.
- **Segment based on exclusion parameters.** Remove users that you are targeting on Network A, and would not like to target on Network B. Or create an audience segment of problematic users (e.g. those who constantly demand refunds) and exclude them from your re-engagement campaigns.



Part 1 / Chapter 3

Best Practices for Effective User Acquisition



#1 Day 7 and 30 Cohort Analysis

With pressure high in the eCommerce space, as well as demand for continuous optimization of their marketing spending, marketers turn to Day 7 and 30 cohort reports to check the number of purchasers acquired 7 or 30 days after install. Use these reports to measure the effectiveness of any new media source.

#2 Long Term ROI

In addition to day 7 and 30 cohorts, check cohorts and LTV for the long term to detect high quality media sources and users. For example, media source A may drive many purchasers in the first 30 days but have a low repeat purchase rate. Conversely, media source B may drive less purchases in the first 30 days, but deliver overall a higher number of repurchases to the point of generating a higher ROI than source A. Only analyzing the performance from the day 7 or 30 cohorts may mean missing these higher quality users.

#3 Seasonal Shopper Audiences

Some of your users may only shop during holidays, given the increased availability of sales and incentives during that time. During your next holiday sale, focus retargeting efforts on seasonal-only shoppers and/or users that bought over the last holiday to convert them to regular engagement.

#4 UA vs. CPI/CPM

To take full advantage of shopping app demand and save more for your marketing budget, time larger user acquisition investments with periods of lower acquisition costs... and fewer CTAs for customers to deal with. For example, September often sees all-time low costs and high install-to-purchase rates, meaning users are more likely to install and convert given well-placed, but not overbearing, UA efforts.

#5 Personalize personalize personalize

Especially critical to retail apps, personalization of your user's experience should be a priority, both in and out of the app. Emphasize a contextually relevant onboarding process that encourages users to create a profile and set their own preferences. You can also use granular in-app event data to populate the home screen with items similar to previously purchased brands or styles for greater upsell and cross-sell opportunities.

Part 2

Re-Engagement

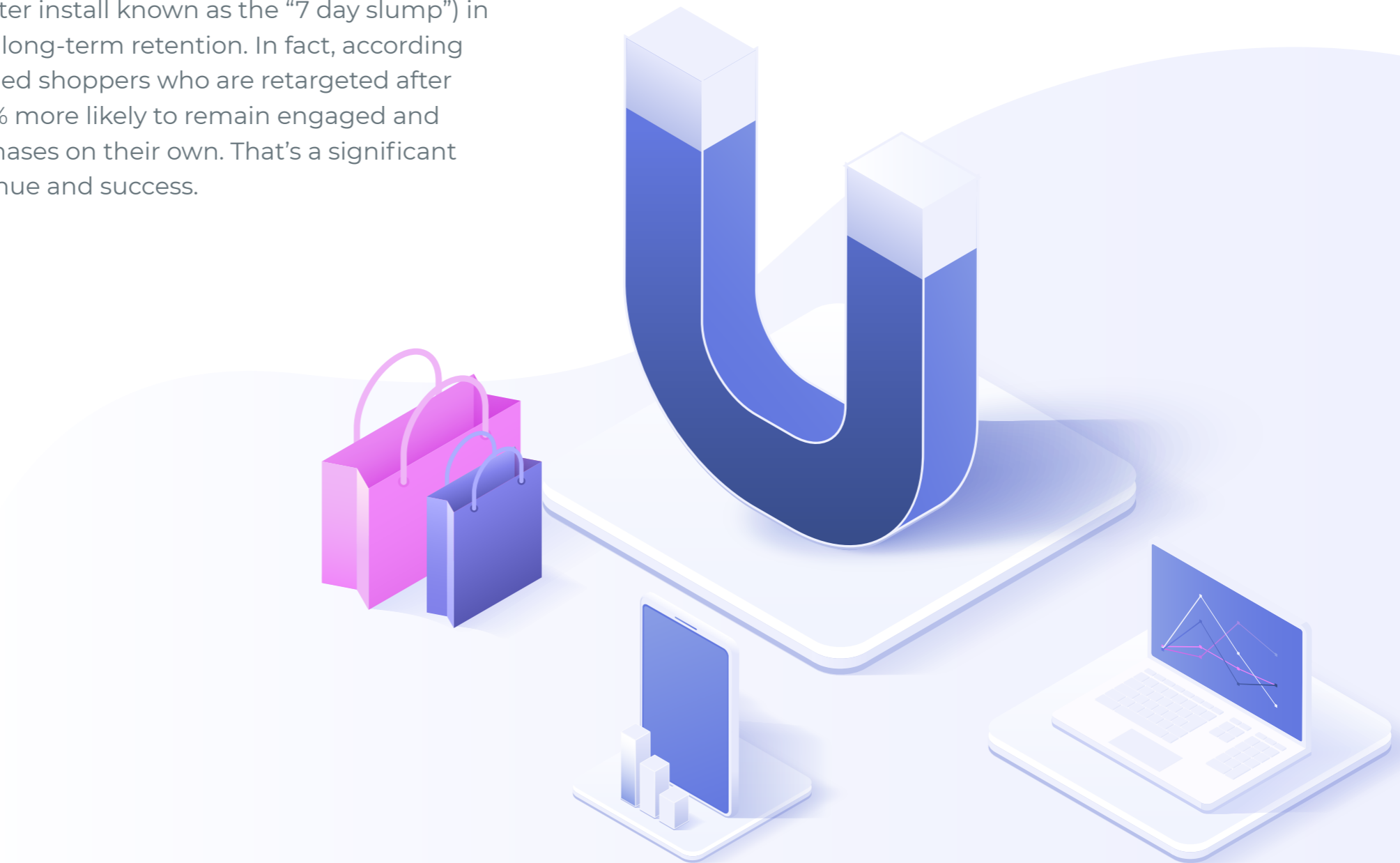
Part 2 / Chapter 1

What to Measure and Setup



Having a successful shopping app is not only about acquiring new users and driving them to conversion; it's also about making sure those who arrive remain engaged over time, ultimately driving revenue, repeat purchases and lifetime value.

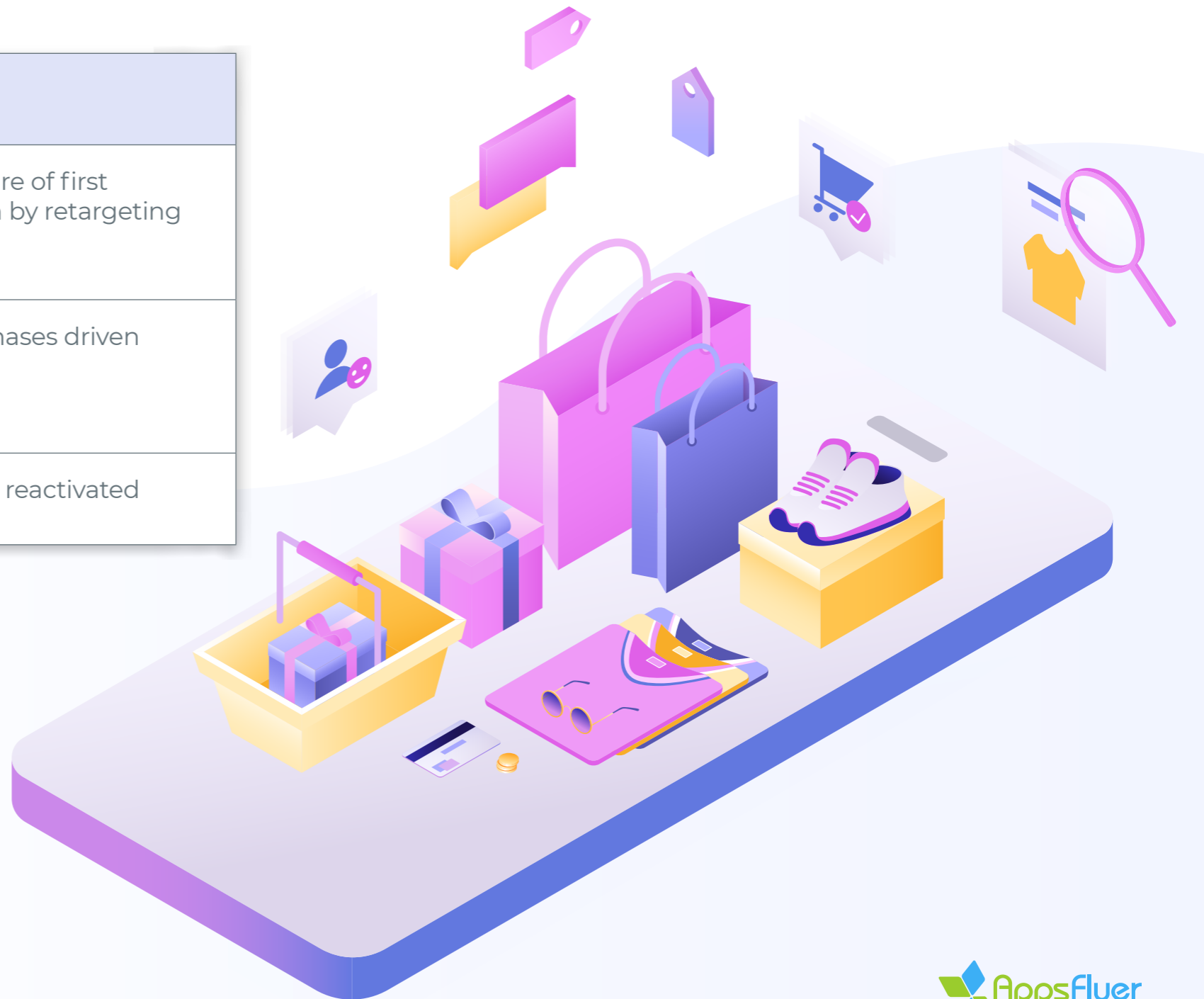
This is especially true for shopping apps, who must not only bring lapsed users back to the app to drive even the first purchase, but also retarget users before they lapse (usually within the week after install known as the "7 day slump") in order to maximize long-term retention. In fact, according to Criteo, re-engaged shoppers who are retargeted after acquisition are 30% more likely to remain engaged and make in-app purchases on their own. That's a significant difference for revenue and success.



#1 What to Measure

Below, we've included a table that presents the main metrics top shopping apps include in effective re-engagement. You can see that the left column contains vertical-specific goals, while the right column contains the metrics that would indicate and drive these goals.

Goal	KPI
First purchase	<ul style="list-style-type: none"> • Number and share of first purchases driven by retargeting • ARPU & ROAS
Repeat purchases	<ul style="list-style-type: none"> • # of repeat purchases driven by retargeting • ARPU & ROAS
Re-activations	<ul style="list-style-type: none"> • # of lapsed users reactivated

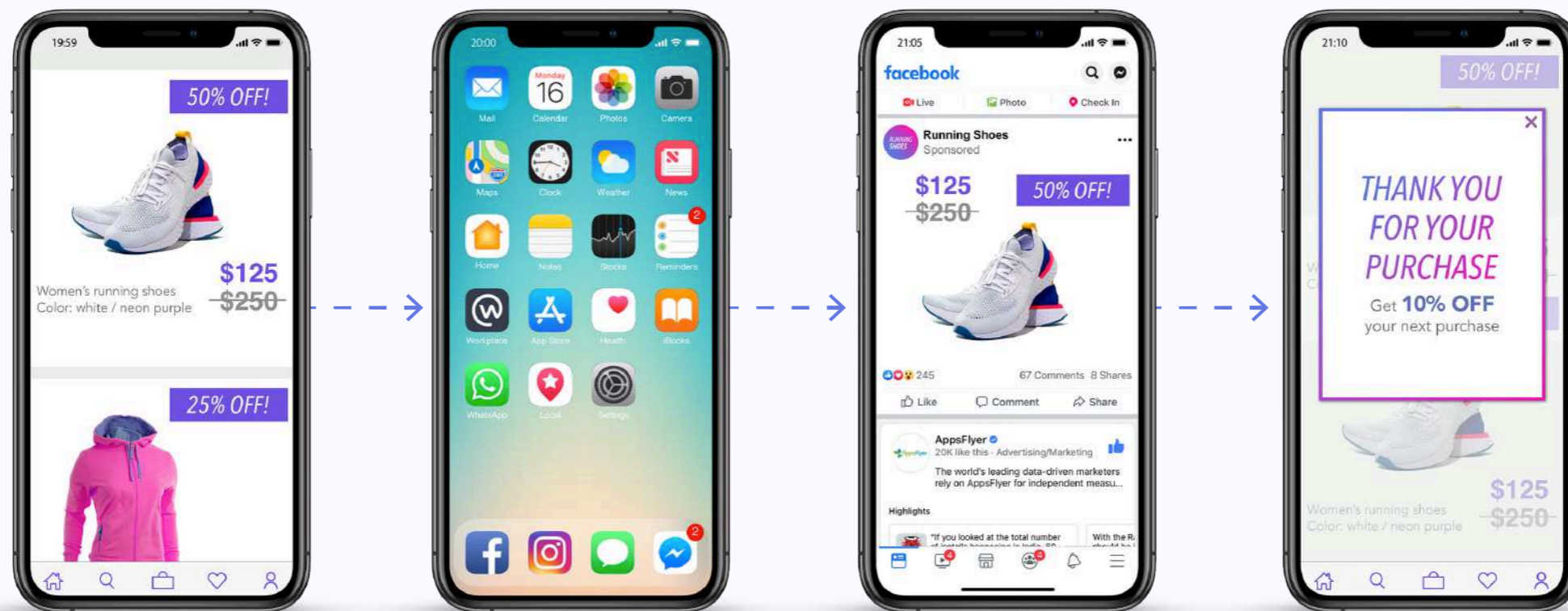


#2 Deep Linking and Personalization

We addressed earlier the why and how of deep linking in acquisition, but in the shopping vertical, deep linking is just as, if not more, vital for re-engagement and retargeting. For shopping apps that tend to have longer and higher-value conversion cycles, it is easy for users to become inactive, or even uninstall, before, and sometimes after, even a single purchase. Marketers must be especially proactive and keep users steadily engaged after install, rather than face the more difficult task of bringing them back after leaving.

Deep linking is also often used in conjunction with email, given that this messaging more critically requires personalization of both content and added links. For example, emails with deep links embedded in CTAs leading to category X product page might be sent to users who visited category X in the app, but did not purchase. Likewise, for users who did purchase from category X, email deep links might bring this segment to category or product pages which pair well with category X, and so on.

Deep Linking to Reduce Shopping Cart Abandonment Rates



Customer views item

Customer leaves app

Deep link:
Personalized retargeting ad
based on user data

Purchase completed

#3 Owned media

Owned media is any marketing asset directly controlled by a company and which requires little to no additional cost to access and use. Most relevant to mobile re-engagement are push notifications, emails, and SMS messages, which allow marketers to reach their existing user base beyond in-app notifications and create a more personal connection.

Let's explore this process. Usually, marketers have a CRM tool which enables the use of such campaigns. These CRM tools receive data in two ways: either through their own SDK, or through an attribution provider, which typically has pre-built integrations with the most popular tools worldwide, allowing them to export their data directly.

Imagine that a user added 3 items to the cart but didn't make a purchase. Based on these in-app events (which the CRM tool receives), the marketer runs both a push and email campaign, but there is still no conversion. At this point, the marketer would typically start retargeting via paid sources in an attempt to convert the user.

If the marketer is savvy, they will use different parameters to run diverse campaigns on push, email, and paid channels. For low ticket value items, push and email makes complete sense because these channels are more or less free. For high ticket value items, marketers also retarget via paid media. Interestingly, despite their widespread use, many marketers are still not fully aware of the long term value these channels inevitably provide.

Why Measure Owned Media Yourself?

Utilize the marketing “hierarchy”

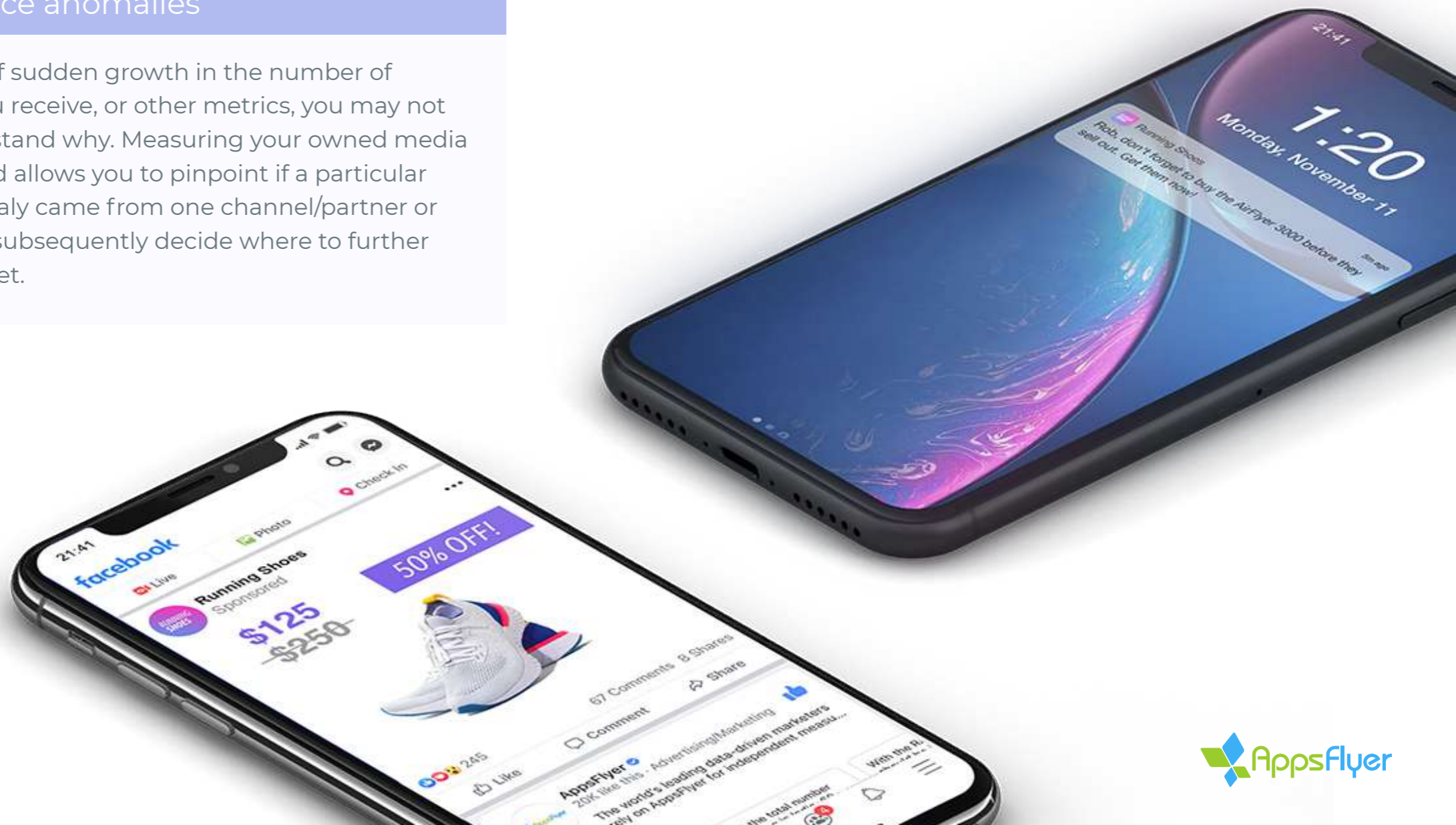
Given the little to no cost of owned media channels, especially compared to paid campaigns, re-engaging users via these channels should be the focus and priority as much as is possible and appropriate.

Creative optimization

Particularly relevant for campaign managers, if a creative or ad is connected via deep link to an email or push notification, measuring these campaigns will specifically identify which ads and/or creatives are delivering the best results.

Performance anomalies

In the event of sudden growth in the number of purchases you receive, or other metrics, you may not always understand why. Measuring your owned media alongside paid allows you to pinpoint if a particular growth anomaly came from one channel/partner or another, and subsequently decide where to further allocate budget.



#4 Determining Retargeting Lookback Windows

The [re-attribution lookback window](#) is the time frame starting from the first install time during which re-installs are not attributed as new installs. Such a window is set to create a holistic view of a single user which may have uninstalled, and avoid duplication and increased acquisition costs. Just like lookback windows used in acquisition campaigns, re-attribution windows are set at a default, in this case 90 days, but can be customized according to specific marketing goals.

On the other hand, marketers also work with a re-engagement lookback window, or the time frame in which an in-app event can be attributed to a retargeting campaign. For shopping apps, two instances of customized re-engagement windows may be as follows:

A longer re-engagement window may be set for users who view or purchase a more expensive item (since a higher value purchase may require a more in-depth user decision making process and, thus, conversion cycle), while a shorter re-engagement window may be set for cheaper items.

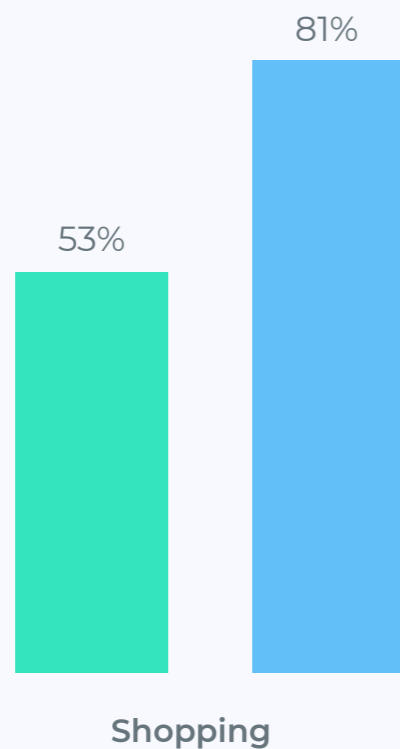
Likewise, a shorter re-engagement window (as low as one hour) may be set to make the conversion timeline of flash sales, while longer re-engagement windows may be set for monthly deals, which will naturally see conversions dispersed throughout the period.

#5 Retargeting

Because shopping apps face longer and higher value conversion cycles, retargeting lapsed or uninstalled users (or at times excluding uninstalls from these campaigns) is necessary for ensuring long-term retention and lifetime value. Additionally, given the challenge of increasing UA costs, it is cheaper to proactively retarget your existing users rather than acquire those that are lapsed, or new.

In fact, according to our recent retention report, we found that there was a 3.3x increase in the number of retargeting conversions among the same apps running campaigns globally in 2017 and 2018. We have also found that:

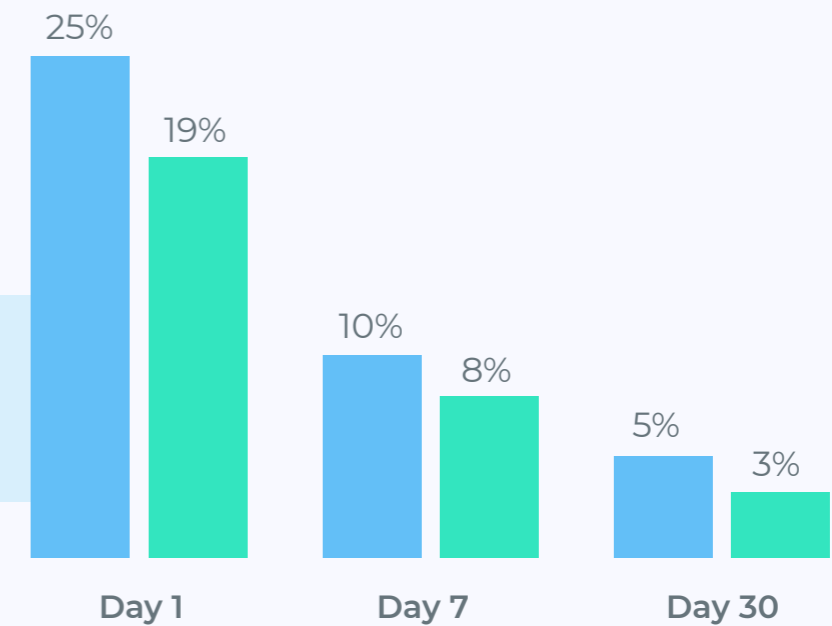
Revenue Increase Rate (2017 vs 2018)



According to our data, shopping apps that ran retargeting campaigns increased their revenue at a rate that was more than 50% higher compared to apps that did not run retargeting campaigns.

Similarly, shopping apps running retargeting improved their retention rates significantly, especially on day 30 with a 47% higher rate.

Retention Increase Rate (2017 vs 2018)



● Not Using Retargeting ● Using Retargeting

● Using Retargeting ● Not Using Retargeting

Setup

Setting up retargeting campaigns is easy; you simply go to your attribution provider's integrated partners page in the dashboard, configure your partner's settings, and toggle the Retargeting Settings button on. Doing so converts a regular acquisition type URL to a retargeting URL, and will provide you with either a standard attribution link (used in a single app) or a deep link (used across multiple apps). Copy the link and use in your retargeting campaign to start measuring.

Timing Retargeting Campaigns

Deciding when to start running retargeting campaigns depends on multiple factors, such as the type of audience segment, the level of engagement, whether you're seeking to recover users or simply re-engage, your budget, and others.

Retargeting campaigns may be launched as early as immediately or 24 hours after install, within the first week, or later. There is no one-size-fits-all formula.

Stopping your campaign also depends on several factors, not the least of which are your expected marketing goals and the limits of your campaign budget. In the shopping vertical, marketing experts tend to end campaigns after 7, 14, and 30 days, though one perspective says that all likely activity will occur within 14 days. It is therefore important to ensure that, however long you run your campaigns, you stop them within a reasonable amount of time and avoid wasting budget.



Dynamic Ad Retargeting

Dynamic retargeting ads take existing user data and use it to serve users contextually and personally relevant ads, whether of products already viewed or those that are similar to their interests. Launching dynamic ads requires the ability of your platform to sync with the following data:

- **Event database**
Information about the targeted product
- **Product feed**
Information about products, brands, prices, images, and product page links
- **Advertising server**
Hosts dynamic content and generates an HTML5 banner

Dynamic ads are part of a real-time bidding process (RTB) (within a lightning fast 100 milliseconds, to be exact) in which:

Once properly set up, the benefits of dynamic ads are significant. On the one hand, the rich media creative of these ads is 20% higher than standard banners, but is ultimately more cost effective due to the CTR and conversion rates. Dynamic ads also allow marketers to display multiple relevant products or services, avoiding the need to choose if a user has expressed intent for several.

For more information about dynamic ad retargeting, as well as recommendations on how to create them most effectively, read this blog post [here](#).



Part 2 / Chapter 2

Pre-Launch/ Campaign



As with acquisition campaigns, you will need to prepare the two main aspects before starting: your media sources and re-engagement audiences.

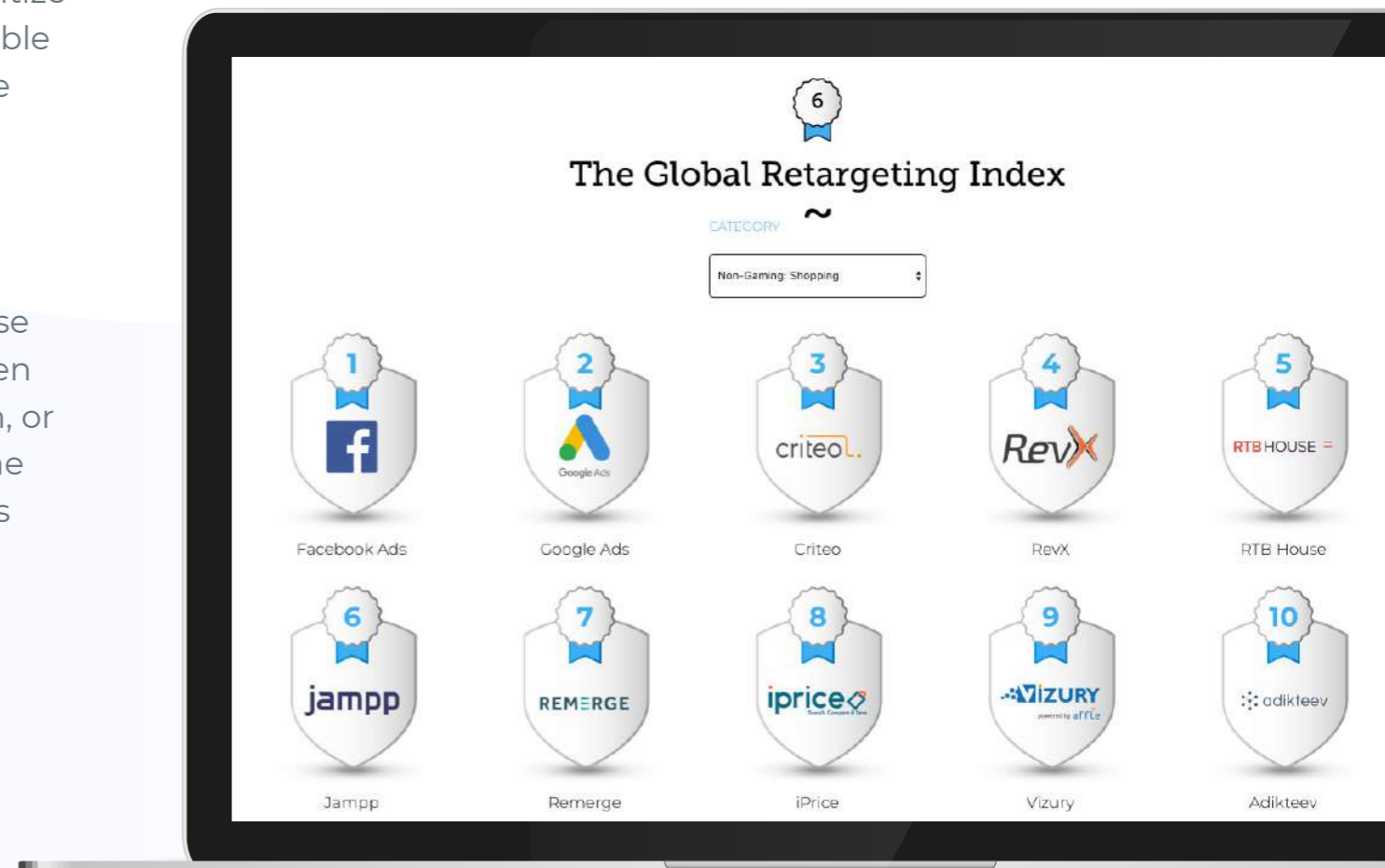
#1 Choosing Your Media Sources

There are three key priorities when running retargeting campaigns. First, and most importantly, marketers must find their users where they already are and create campaigns based on these settings. Second, while retargeting campaigns should be personalized and focused on naturally occurring characteristics, because the user pool is already smaller than for UA campaigns, marketers must also be careful not to overexpose them to ads which may desensitize them from future conversion. Third, marketers must be able to measure the incremental impact of each media source in their retargeting efforts to make smarter performance decisions.

Given the above, after getting it right and testing each source to find maximum reach, it is widely accepted to use only a single media source for retargeting efforts of a given audience. While 2-3 sources may be used to extend reach, or to test the performance of each source against others, one reality is that the reporting of many retargeting platforms cannot specify down to the user level, only providing aggregate numbers of these groups.

Therefore, with limited knowledge of incremental activity on the audience, not source, level, using a single source gives specific insights into the direct performance of your marketing investments and better positions you to make smarter decisions moving forward. Note that, despite its benefits, this practice tends to be used only by the savviest of shopping marketers because of its sophistication.

Additionally, a great resource for choosing retargeting media sources is the [AppsFlyer Performance Index](#), which breaks down the highest ranking by category.



#2 Re-Engagement Audience Segmentation

As in acquisition, your granular in-app event user data can be directly applied to create audience segmentations for re-engaging users. Push notifications, emails, and other owned media are most often used first in re-engagement campaigns given their low costs and ability to reach users more easily than paid methods.

Below are some examples of audience segments for re-engagement:

Retarget and re-engage

Improve your re-engagement by targeting high-value users who made multiple purchases last month, but were inactive this month.

Recover uninstalled users

Target users who made a purchase above \$50 but who recently uninstalled your app with custom creative to drive re-installs.

Cross-sell and upsell

Encourage users with high-purchase intent to complete checkout on items within the same brand or category as others added earlier to the cart.

Retargeting exclusion

An audience who has engaged with a specific owned media source (push, email, SMS, other) is excluded from paid retargeting.

Category mixes

If you're a shopping platform selling multiple brands, optimize the brands displayed to high-paying users to drive more purchases of your most profitable brand(s). Use audience segmentation to find the users that aren't already buying these brands and target them.

Another important use of audience segmentation is the creation of split audiences for determining the incremental performance and growth of each media source, as well as performing A/B testing and pushing product features. For the purposes of incremental and A/B testing, these split audiences can be based on the following factors, among others:



Action

Users who installed the app but did not yet make a purchase



Exposure

Users who clicked an ad but did not install



Geographical distribution

Users located in a specific country

With incrementality and A/B testing, you can create two groups of users, a test and control, across different networks and see which network, campaign, ad, and/or creative results in a more positive business impact. Likewise, incrementality testing informs whether or not adding a new network to your existing portfolio has a true incremental impact.



Part 2 / Chapter 3

Best Practices for Effective Retargeting



#1 Personalization - Not Just For UA

With the sophistication of marketing tech and the numbers of apps available increasing, app users, especially in eCommerce, expect customized experiences from start to finish. Use purchase or view histories to cross-sell and upsell lapsed users. Pair deep links with other in-app event data to reduce shopping cart abandonment rates. Choose ad partners that offer behavior or intent personalization and make this process part of your marketing routine.

#2 Preventative Retargeting

Retargeting campaigns should not only prioritize the classic lapsed users, but also function preventatively to keep users engaged before the possibility of lapsing occurs. If effectively engaged via retargeting campaign within the first week after install, users are nearly 30% more likely to remain engaged and convert, according to Criteo. However, be sure to limit preventative retargeting campaigns to engage without overwhelming.

#3 Simultaneous Creative Testing

When it comes to optimizing ad and creative performance, testing 3-5 different creative sets simultaneously will provide the most profound performance analysis within a reasonable and efficient time period. However, as a general rule, it is better to test several different creatives more frequently than to perform tests on large amounts of creative sets at the same time.



#4 Long Term LTV Segmentation for Retargeting Budgeting

To determine the quality of your retargeted users relative to your goals, create LTV segments for days 30 and 60, measuring for long term value and revenue. Since 30 days is the likely maximum cap for most purchases, these segments will also help you test whether or not to retarget within this 30 day period (if not, then no retargeting will likely occur after 30 days). Remember that the retargeting window for larger shopping brands is likely to be longer than for smaller brands.

#5 Reattributed vs. New Users?

Understand the user-level value of your reattribution efforts by comparing reattributed users to new users. There are two main quality metrics to measure, ARPU and frequency of purchases, which are analyzed in windows of either 30, 60, and 90 days, respectively. This comparison can also be used to determine retargeting spend.



Final Thoughts

In this stage of overall shopping growth, retailers have more factors on their side than less to reach their business goals. Demand from consumers to save both time and money has driven a rise in technologies which have greatly enhanced the shopping experience across platforms. It is now especially easier than ever to make purchases via mobile devices and, combined with promises of increasingly faster connectivity, eCommerce marketers are well-positioned to advance.

Facing this growth, the bottom line takeaway is the importance of granular measurement to carry marketers forward. Follow the suggestions and metrics as detailed above, and you will build the foundation for future profitability, performance, and success.



Jillian Gogel

About the Author

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AppsFlyer's technology is found on 98 percent of the world's smartphones, making it the global leader in mobile attribution and marketing analytics. Data-driven marketers trust AppsFlyer for independent measurement solutions and innovative tools to grow and protect their mobile business. With Facebook, Google, Twitter, Pinterest, Snap Inc., Tencent, and 4,600+ other integrated partners, and clients including HBO, Waze, Alibaba, Skyscanner, Activision, and 12,000+ leading brands worldwide, AppsFlyer has 15 global offices to support marketers everywhere. To learn more, visit www.appsflyer.com.