



# How to Calculate ROI For Your Mobile App



For the first time, mobile advertising, at \$100 billion for 2016, [exceeded 50% of all digital ad spend](#). In 2019, this figure will nearly double to \$195.5 billion, and account for over one quarter of total media ad spend around the world.

The mobile app space becomes more competitive each year with rising costs to play. How much should you invest in your mobile marketing strategy.

Industry benchmarks do not give you an accurate view of how much you should actually be spending to acquire new customers. The efficiency of your marketing spend can only be determined by one thing: the lifetime value generated by your customers.

## Fix the Leaky Funnel

A lot of companies struggle to calculate ROI on their mobile apps because they have a lot more going on than just one mobile app. [81% of marketers](#) would increase spending on mobile if they could better track ROI.

It is often tricky separating revenue generated via mobile from your other marketing efforts. If you're an e-commerce company using your mobile app to boost web sales, you don't necessarily know how much lift to revenue you're getting from mobile app installs, if you simply budget a chunk of revenue for mobile and another for online advertising.

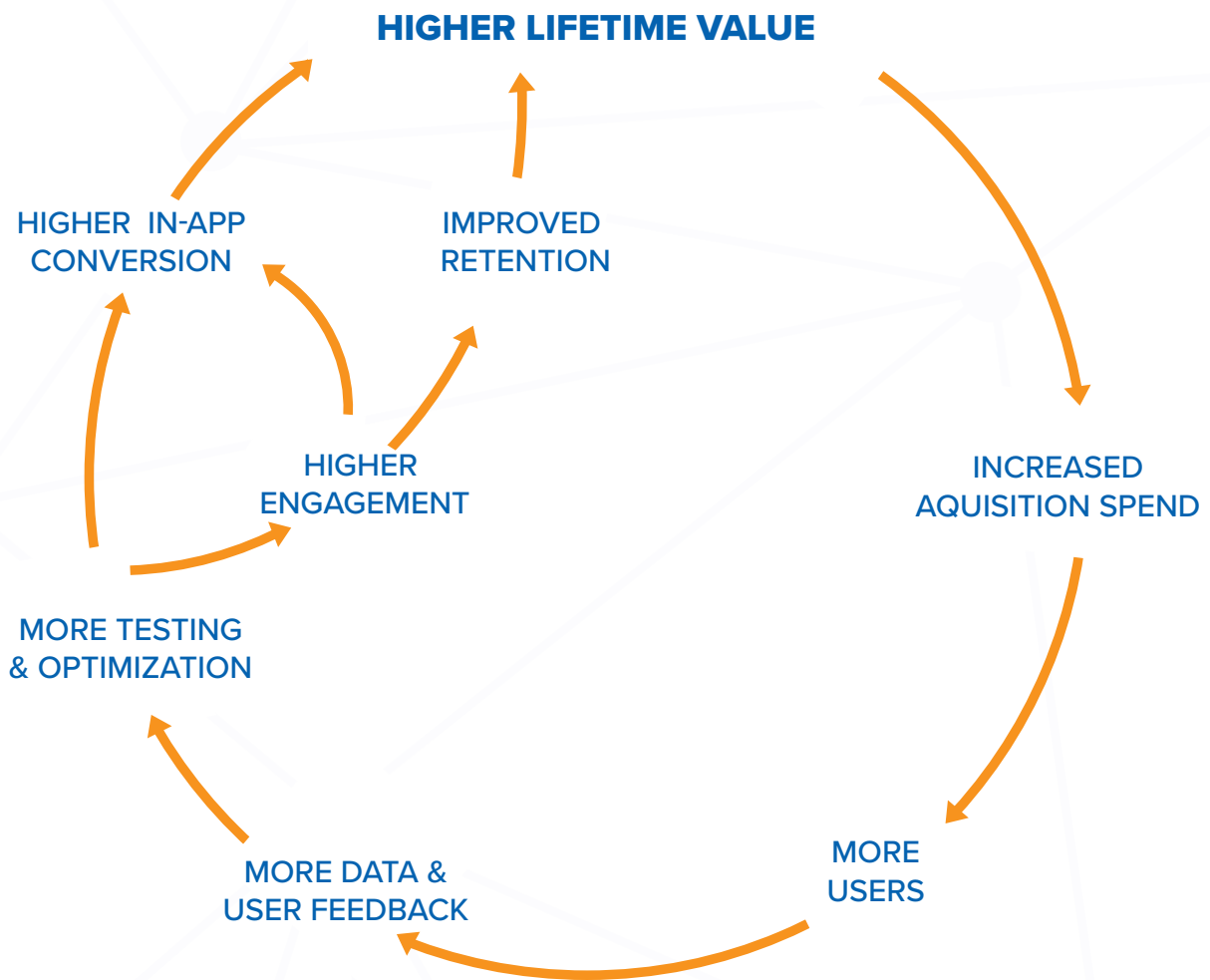
What you need to remember is that your **mobile marketing spend does not exist in a vacuum**.

Tracking marketing ROI on a campaign-by-campaign basis isn't a good measure for performance because you focus on boosting vanity metrics like app installs and downloads. You end up measuring success based on how many new users each campaign brings in, rather than the value of those new users to your business. If a marketing campaign nets you tons of new users, it doesn't help you much if the majority of those users churn out a week later.

To figure out the actual impact your marketing dollars have on your business' bottom line, you have to look at the whole picture.

The only way you can achieve ROI+ marketing spend is this: connect your marketing metrics to your customer engagement and conversion inside your app. More efficient spending on customer acquisition can help you drive up engagement, providing your business with more money to spend on acquisition in a virtuous cycle.

## The Virtuous Cycle of Mobile ROI



In this guide, we'll show you how to create a hyper-efficient funnel for your mobile app by walking you through the crucial metrics you need to know. We'll walk you through the application of these metrics step-by-step, using the example of a hypothetical e-commerce app.

## How much does a customer cost to acquire?

The first step to understanding your mobile ROI is developing a deep understanding of your customer acquisition costs, commonly broken down as CPI (cost per install).

To calculate **CPI**, you need to figure out how much money you spent on acquisition, and how many new customers you acquired within a given period of time.

$$\text{CPI} = \text{Total Costs} / \# \text{ of Installs}$$

**Example:** Say your e-commerce app launches a series of Facebook campaigns over the course of a month to drive installs. We'll assume \$10 CPM (cost per thousand impressions), a 1% conversion rate, and a total marketing spend of \$100,000:

$$\begin{aligned} \$100,000 \text{ marketing spend} / \$10 \text{ CPM} &= 10,000,000 \text{ impressions} \\ 10,000,000 \text{ impressions} \times 1\% \text{ conversion rate} &= 100,000 \text{ new users} \\ \$100,000 \text{ Total Costs} / 100,000 \text{ new users} &= \$2 \text{ CPA} \end{aligned}$$

This means over the course of the month, it costs you \$2 to acquire each new user.

## How much is an acquired customer worth?

Once you know how much each customer costs, you have to narrow down on how much each customer is actually worth. This means narrowing in on the revenue streams generated per user each month, and figuring out how long those users actually stick around. Figuring out the lifetime value (**LTV**) of each mobile customer is a crucial step to understanding your mobile ROI.

To figure out your **LTV**, use the following formula:

$$\text{LTV} = \text{ARPU (Average Revenue per User)} \times \text{Customer Lifetime}$$

**Example:** Let's return to the e-commerce app example. We'll assume that each user sticks around for an average of three months, and spends \$5 a year.

$$\$5 \text{ ARPU} \times 1/4 \text{ year average customer lifetime} = \$1.25 \text{ LTV}$$

This means that over the course of their lifetime, each customer generates \$1.25 in revenue for your mobile app. That's the upper limit you can spend on new user acquisition and remain profitable.

## Where do you focus?

In the simplistic model that we created for measuring the revenue efficiency of an e-commerce app, you can see that the app is unprofitable because your LTV is lower than your CPI at a ratio of 1 : 1.6.

### A Profitable Model



This means that you only get \$10 back for every \$16 you put in—a negative return on your investment. The good news is that by knowing how much it costs to acquire a customer, and how much each customer is worth, you can now isolate inefficiencies in your mobile strategy and hone in.

### Increase Marketing Efficiency

If your cost per install is higher than the lifetime value of your customer, it indicates that your marketing investment isn't paying itself back. Here's how you might lower your CPI:

- **Increase your install conversion rate.** Test a variety of campaigns to see which ads have a higher conversion rate. By increasing your conversion rate from 1% to 2%, you can double the efficiency of your marketing spend and lower your CPA to \$1.



- **Target high-quality traffic.** “*Spray and pray*” marketing campaigns that seek to max out the number of impressions per ad often fail because they attract low-quality traffic that doesn’t stick around. Use your LTV to identify your most loyal users. By doing so, you can target the audiences and segments most likely to actually use your app in your install campaigns.

Reducing your CPA from \$2 to \$1 is enough to make your app break even, with an LTV to CPA ratio of 1:1. Your app is not quite in the clear, but the road to profitability is in sight.

## Increase Lifetime Value by Lifting Engagement

A low LTV for your mobile app means that your users are not fully engaged and they aren’t spending money in-app. After successfully lowering your acquisition costs, you can put yourself in the green by juicing your lifetime value.

Here are some examples of how you can drive up your LTV:

- **Engage users by fixing your funnel.** Isolate the parts of your funnel where you see the highest rate of user churn. For example, let’s say that the majority of users drop off during the sign-up process, churning within the first week of installing your app. By using [feature flags](#), you can test a variety of sign-up flows to see which correspond to long-term retention. A 6% increase in week one retention cascades into a [6% lift across the entire retention curve](#).
- **Users often drop off at the checkout cart.** By using a [visual drag-and-drop visual editor](#) you can get your marketing testing different variations of your checkout flow without taking away resources from engineering. Testing allows you to narrow in on how many steps it takes customers to checkout, what copy to use, and where to place calls-to-action, increasing conversions by 15%.

A 6% lift to retention by optimizing your sign-up flow would increase your average customer lifetime by about 3 weeks, from 0.25 years to 0.31 years, which raises LTV to \$1.55. Increasing checkout conversion by 15% means raising ARPU from \$5 to \$5.75, which raises LTV even higher to \$1.80.

## Juice your marketing funnel

Walking through each step of the funnel through the lens of CPI and LTV, we were able to isolate bottlenecks in the funnel and flip the LTV to CPI ratio from 1:1.6 to nearly 1: 0.6, which means that you get \$10 for every \$6 you put in. In practice, the nuts and bolts of how you apply these metrics to your app will be a lot messier. This is a jumping off point to help you better understand your mobile ROI.

By breaking down your CPI and LTV, you can increase the efficiency of your marketing spend in terms of the actual revenue that it generates for your app. You also align your marketing and product teams around the same measurable objectives, with a real impact on the business. What this ultimately means is more money that you can pour back into the top of your funnel to acquire even more users in a virtuous cycle.

The lesson here is you don't need some knockout marketing campaign and millions of installs to give you return on investment for your mobile app. What is far more important is connecting your mobile efforts continuously around the customer lifecycle.

## About Us

Apptimize is the best-in-class mobile growth platform for enterprise and SMBs. Our platform has powered 1.2 Billion App downloads, across 75 countries.

## Key Features



A/B

### Native A/B Tests

Run experiments within minutes using our drag and drop Visual Editor and programmatic testing.



### Feature Flags

Exercise complete control and manage risks at every stage of new feature rollouts.



### Instant Updates

Launch changes and promotions directly to your app without using any code.

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