

Optimizing for Success

Successful apps use data to optimize on their designs after launch. In this chapter, we explore how to optimize your app to reach your goals.

Now that you've built and launched your app to the world, how do you know whether or not it's successful? It can be tempting to focus on the total number of downloads as the sole metric of success, but in doing so you may be missing most of the story. Having a lot of users is great, but if your goal is to monetize via in-app purchases, or to promote the adoption of a specific set of new features, focusing on total downloads won't give you much insight into whether you're achieving those goals, and what you can do next to improve your app.

In this chapter, we'll discuss how to design and implement an analytics and optimization strategy that can give you deeper insight into how your users are engaging with your app, and how you can use that data to optimize your user experience over the long term.

CASE STUDY

Certain Affinity

The Google Mobile App Analytics was pivotal in identifying and influencing pre- and post-release design decisions for Certain Affinity's first mobile title, Age of Booty: Tactics

Background

Certain Affinity is one of the most experienced independent game developers in the industry. Based in Austin, Texas, with more than 80 full-time employees, they have shipped more than a dozen products with combined sales of more than 75 million units. The most notable among those are co-development on the Left 4 Dead, Call of Duty, and Halo franchises. Most recently, Certain Affinity has been working on their first mobile Title, Age of Booty: Tactics. Age of Booty: Tactics is an asynchronous turn based tactics game hybridized with a collectable card game. Certain Affinity wanted a solution enabling them to measure and analyze specific metrics to influence both the pre-release and post-release designs of the game. They researched a number of analytics solutions, but were frequently frustrated by the cost, size, and limited flexibility offered.



Google Analytics was a vital component of our overall development process. It enabled us to quickly identify areas of needed improvement which would have otherwise limited our potential success once in the market that would not provide the trusted consistency and global reach of AdMob.

PATRICK BERGMAN

Business Development Manager, Certain Affinity

Ramping Up Reporting

Certain Affinity has used Google Analytics for website analytics since 2005, and began talking to mobile partners after becoming aware of Google Analytics' (GA's) application in mobile gaming. Given their existing experience, the relative cost of the platform, and the extensive feature set, Certain Affinity quickly and easily integrated GA into the game. The early inclusion of GA into the design process resulted in easy access to analytics to assist in influencing direction across design, art, and ultimately production.

UI Optimization

Google Analytics provides an intuitive way to understand engagement across multiple screens and events. By leveraging engagement flow and average screen time analytics, Certain Affinity understood when specific areas within the UI were either too complex or buried to drive the desired behavior. They identified that the storefront was overly complex and required significant streamlining to become easily accessible. Additionally, they found that a number of options within the menus were too complex and lead to users looping within the UI prior to engaging in an actual game.

Gameplay Duration

Certain Affinity wanted to better understand the average duration of play to optimize the experience on mobile. Given that users tend to spend less time gaming on their mobile devices than in the console space, it was vital to ensure the game was consumable and enjoyable in the "bite sized" engagement window. Certain Affinity leveraged session durations to understand the existing top-level behavior. In analyzing the data, they found that the typical session was over 25% longer in length than was ideal. They tracked events such as turn submission, undo, and return to main menu to identify any behavior that was artificially extending the average duration of play. Certain Affinity then specifically targeted optimization to the areas requiring the most work.

Custom Dimensions

By leveraging Google Analytics Custom Dimensions, Certain Affinity could measure analytics across a number of key metrics in the mobile gaming space including retention, virality, and monetization. While this data was not widely used until launch, the ability to verify collection was instrumental in ensuring a successful soft launch. "The flexibility GA provides is quite amazing. While no analytics provider will ever have everything you need out of the box, it is great to have a solution that allows us to implement our own requirements [through custom variables], so easily!" explains Certain Affinity's Lead Server Engineer.

The Power of Data

Since Certain Affinity began leveraging Google Analytics, there was a shift in how they develop and implement within their studio. Development is no longer a strictly qualitative process, but is supported and elevated through the use of analytics and data on a daily basis. Reporting is streamlined due to the increased simplicity, fidelity, and accessibility that Google Analytics provides.

About Google Analytics

Google Analytics is the enterprise-class analytics solution that gives companies rich insights into their digital audiences and marketing effectiveness. With features that are powerful, flexible, and easy-to-use, companies large and small can measure engagement to create more effective marketing initiatives, improve user experience, and optimize their digital strategies. Sophisticated conversion attribution and experimentation tools help savvy marketers determine the best allocation of media and resources to drive results. For more information, visit google.com/analytics.

Certain Affinity At a glance

Goals:

Leverage analytics to help inform games design and optimize monetization

Quantify and improve overall retention, monetization, and virality of Age of Booty: Tactics

Provide timely cadence of analytics driven feedback to influence development and live team

Approach:

Establish data driven decisions as a key pillar of the design process starting in pre-production

Integrate Google Analytics to understand and optimize UI flow, customer behavior, and accessibility

Leverage GA for A/B testing to better understand estimated price elasticity and impact of marketing campaigns

Results:

Moved the total time spent in games. Other screens from #4 to #1

Optimized average turn duration from 3.08 minutes to 2.10 minutes

Reduced screens per session from 15.5 to 8 (cleaner UI/less back and forth)

Reduced time per screen from 2 minutes to 1:33

Setting up for Success

Before collecting any data or running any reports, it's critical to spend some time determining what business or user experience questions you'd like to be able to answer. For example:

Are you increasing the rate which users complete an in-app purchase or non-monetary goal (like a sign-up or level completion)?

If the length of each engagement with your app is important, are you improving the average length of a session with your app? Or the average time spent on a particular screen? View Figure 1

If you're running marketing campaigns to acquire more users, which are performing at or under your target cost-per-acquisition (CPA), and which aren't? View Figure 2

List out all the data points you'll need to answer those questions. For example, which screens do you need to measure impressions for? Which user interactions, like button presses, form submits, in-app purchase completions etc. would you need to measure?

If you're running paid marketing campaigns, consider which channels you'll need to measure, and which downstream user activities, like goal completions or in-app purchases, you'll want to measure to gauge the return on your marketing investment.



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ENGINEER

Lead Server Engineer, Certain Affinity

Getting the Data you Need

Now that you're ready to implement a solution for your app, how do you know which third-party solution to use, or whether to develop tools in-house? When considering an analytics solution, whether it be third-party or your own, consider these questions to help you decide what's going to be the best fit for your app and your business:

Will this solution get you the data you need to answer your top acquisition, engagement, and monetization questions?

What is the cost of implementation and maintenance for this solution?

Do the benefits of getting answers to your most pressing user experience and business questions outweigh these costs?

As you think about the costs of deploying and maintaining your analytics solution, consider using Google Tag Manager, which enables you to configure your analytics implementation from the cloud and can dramatically reduce maintenance and deployment costs. View Figure 3

Optimizing Mobile Games with Google Analytics

Measure in-app purchases to understand the value of your users and track progress against monetization goals.

Create Custom Dimensions and Custom Metrics to measure goals and create segments important to gaming, like level completions, character level advancement.

Create user segments that show metrics for players who meet certain lifetime criteria, or who have completed a specific sequence of events.

Use the Engagement Flow report to understand whether and where users are getting lost in your UI.

Use Google Mobile App Analytics to measure effectiveness of paid acquisition campaigns.

Taking Action

Collecting data and building reports adds no value to your business on its own. The value comes from being able to use that data to answer your most important business and user experience questions, and then being able to take action on those insights to improve your app and grow your business.

In order for this to happen, the data you collect needs to get into the hands of those who can do great analysis, and who can actually affect change on the product. Sometimes these are the same person (and maybe it's

you), but in larger companies and development studios, it's important to identify who can do the analysis you need, and who can actually implement changes based on that analysis, like a product or engineering team.

Google Analytics can make providing access to data to the teams to the right people within your company easy. Google Analytics offers flexible, enterprise-ready user permissions, the ability to generate and share custom reports and dashboards, and a Core Reporting API that allows you to export your data into your own visualizations and other internal systems.

Ultimately the real value of gathering data and performing analysis comes from the actions you are able to take as a result of your insights. Are users not using the new feature you just launched? Try making the button or link more prominent, and compare week-over-week or month-over-month adoption. If a particular marketing campaign is driving downloads under your target cost-per-acquisition (CPA), consider increasing investment in that campaign and measuring whether you can acquire more users within your target CPA.

To make changes to your application more quickly based on your analysis, consider using Google Tag Manager for Mobile, which enables you to push updated configurations to your app on the fly, without needing to resubmit your app to marketplaces, or waiting for users to choose to update to the latest version. View Figure 5