



GAMING APP METRICS FOR

🎮 MARKETERS

🎮 DEVELOPERS



START GAME

The mobile gaming vertical continues to grow at an astonishing pace and sets standards for every other vertical on mobile. In 2019, the mobile gaming industry surged to \$68.5 billion accounting for 45% of the global games market. However, 2020 seems to be a different game all together! According to Newzoo, the market is all set to generate a whopping revenue of **\$159.3 billion with a +9.3.% YoY increase**. Projections indicate that ad spend on UA in gaming will rise 120% by **2022**.

The competitive nature of the gaming space has led the marketers and developers like you to embrace data for maximizing profitability. And hence, we've dedicated this guide to help you measure the right metrics in the right manner!

We hope you find it valuable!



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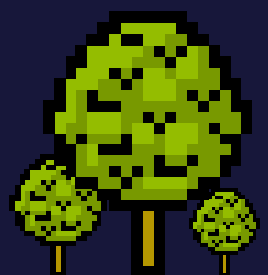
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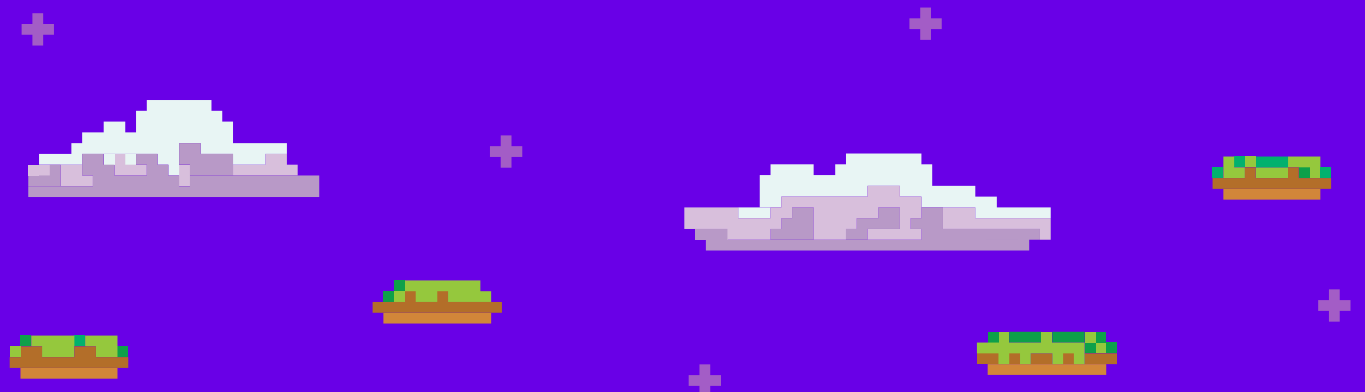
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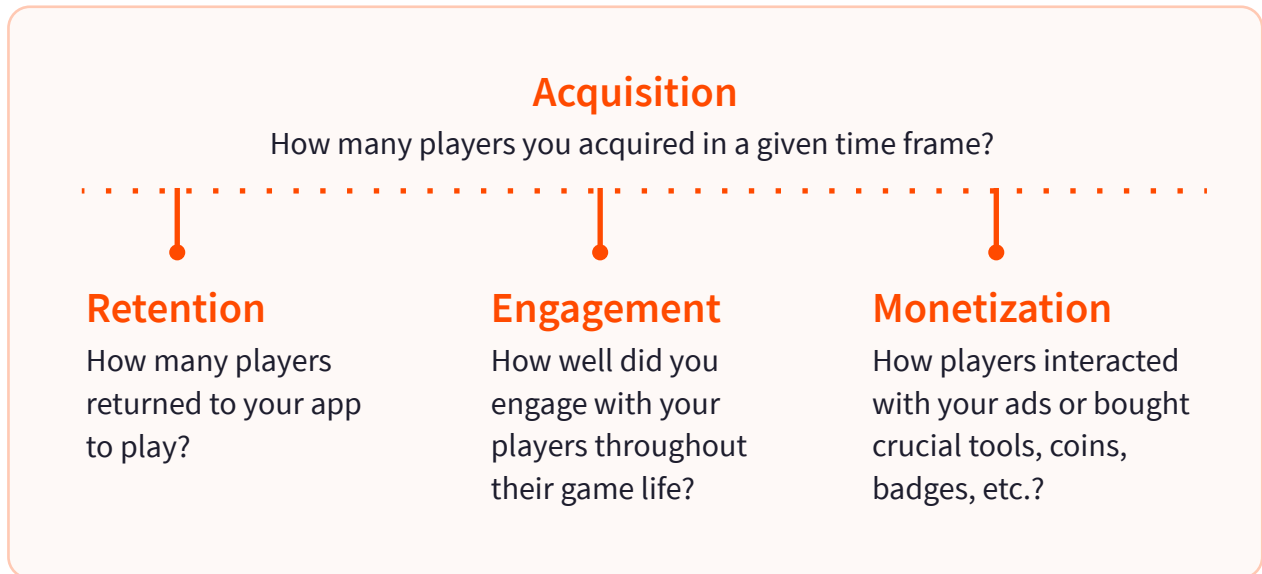
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MEASURING YOUR GAME'S TRUE SUCCESS

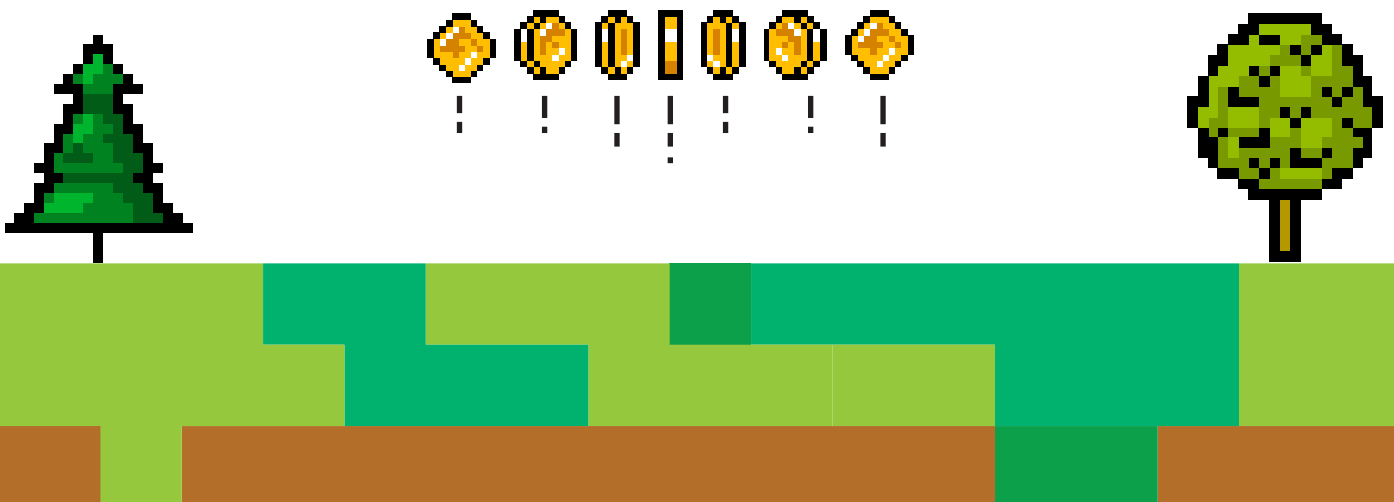


Different games have different ways to define 'success', however, there are four key categories that stand out as areas of optimization across the board:

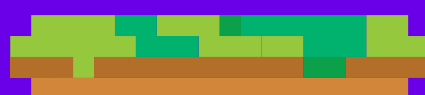
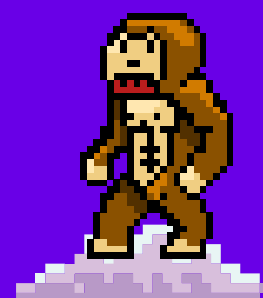


Your ability to foresee the relationship between acquisition, retention, engagement and monetization provide fascinating insights into your game's growth, sustainability and profitability.

Let's understand each elements' role in calculating your game's success code!



GAMING APP METRICS YOU OUGHT TO TRACK

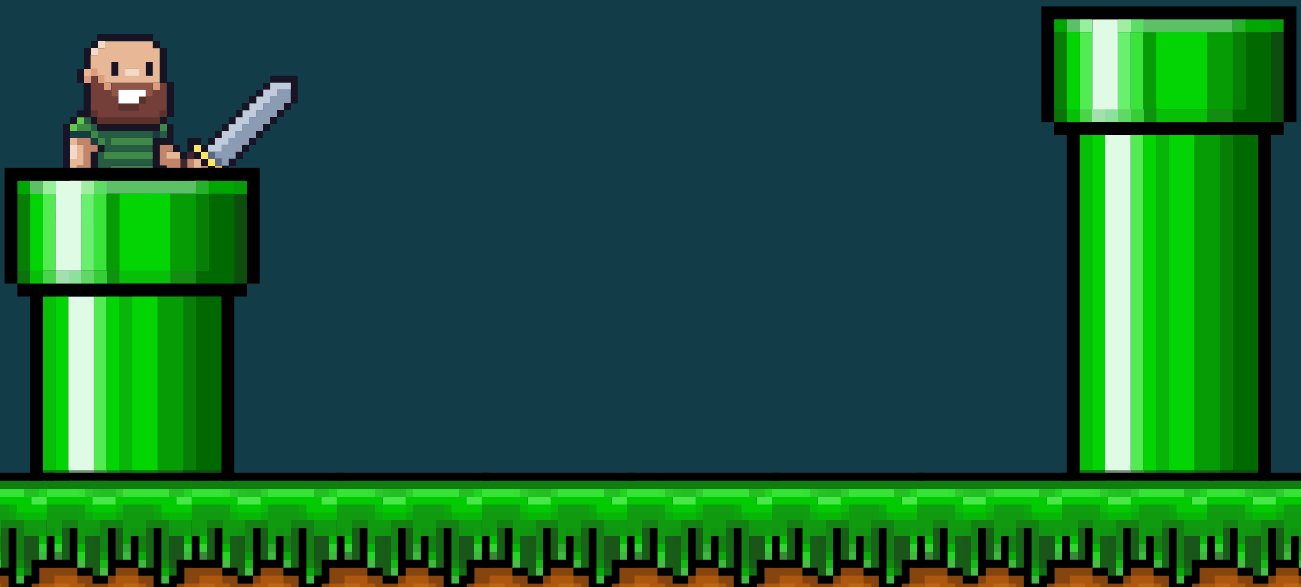


LEVEL

ACQUISITION METRICS

33% of all downloaded apps are mobile games and the world nearly comprises **2.4 billion** mobile gamers. Do you see your mobile game winning hearts globally already? As a marketer or developer in the gaming industry you need to up your acquisition game. More the players, the more challenging the game gets.



So, when it comes to player acquisition you need to precisely track the following metrics.



Cost Per Install (CPI)

CPI is the cost you incur for generating a new game install. This means, when a particular player downloads your game you need to pay the fixed or bid price of that install. Many marketers in the industry also prefer to measure Install Per Mille (IPM) (install per 1000 impressions) along with CPI.

AoE (Area of Effect):

-  You need to pay only when the player installs your gaming app. This helps you to spend carefully.
-  CPI is driven by geography, devices used to install and other factors which determines your CAC. This gives you an opportunity to introduce your game in regions and devices of higher relevance.

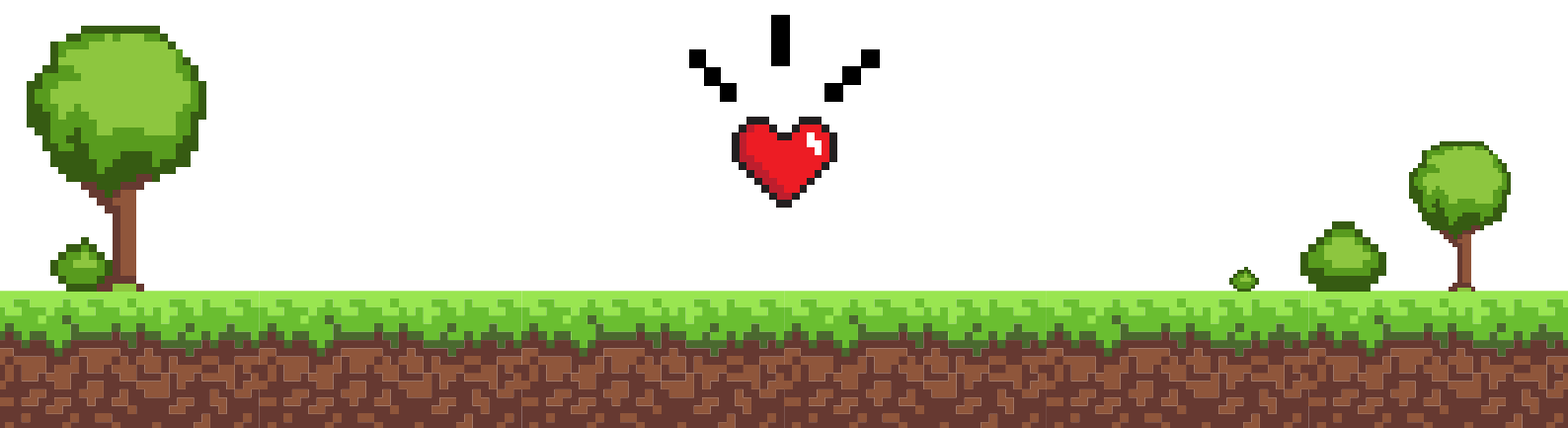
Calculation:

$$\text{CPI} = \text{Marketing spends} / \text{Total game installs}$$

Benchmark:

Average CPIs on iOS are \$1.24 and on Android are \$1.31



(Source: Gamesbrief)



K Factor

This is an interesting metric wherein you calculate the number of organic players referred by one player you acquired through paid promotions. For example, if your game requires a multiplayer setup and the one player (you acquired via ads) invites 3 of his friends who also install your gaming app, then you earned 3 additional players for free.

AoE (Area of Effect):

-  It indicates the virality of your app.
-  Helps to reduce your user acquisition (UA) spend per player.



Calculation:

$$\text{K Factor} = \frac{\text{Number of invites sent by a player}}{\text{Conversion rate of each invite}}$$

Organic Conversion Rate

Yet another important metric in the acquisition metrics camp is the organic conversions. It is the percentage of conversions you've steered via non-paid i.e. organic channels (social media, google search, trade-shows, word of mouth, etc.).

AoE (Area of Effect):

-  It personifies the power of organic distribution
-  It highlights the scope to drive conversions without spending on UA

Calculation:

$$\text{Organic Conversion Rate} = (\text{Organic conversions} / \text{Total visitors}) \times 100$$



FIRST EVENT ? sign-up		RETURN EVENT ? Game_Completion		
FIRST EVENT OCCURRENCE		USERS WHO DID NOT RETURN EVENT		
DATE	TOTAL USERS	DAY 0	DAY 1	DAY 2
All Users	28677	51.6%	8.6%	5.2%
29 July	6793	49.7%	13.7%	11.5%
30 July	3258	49.3%	7.5%	4.2%

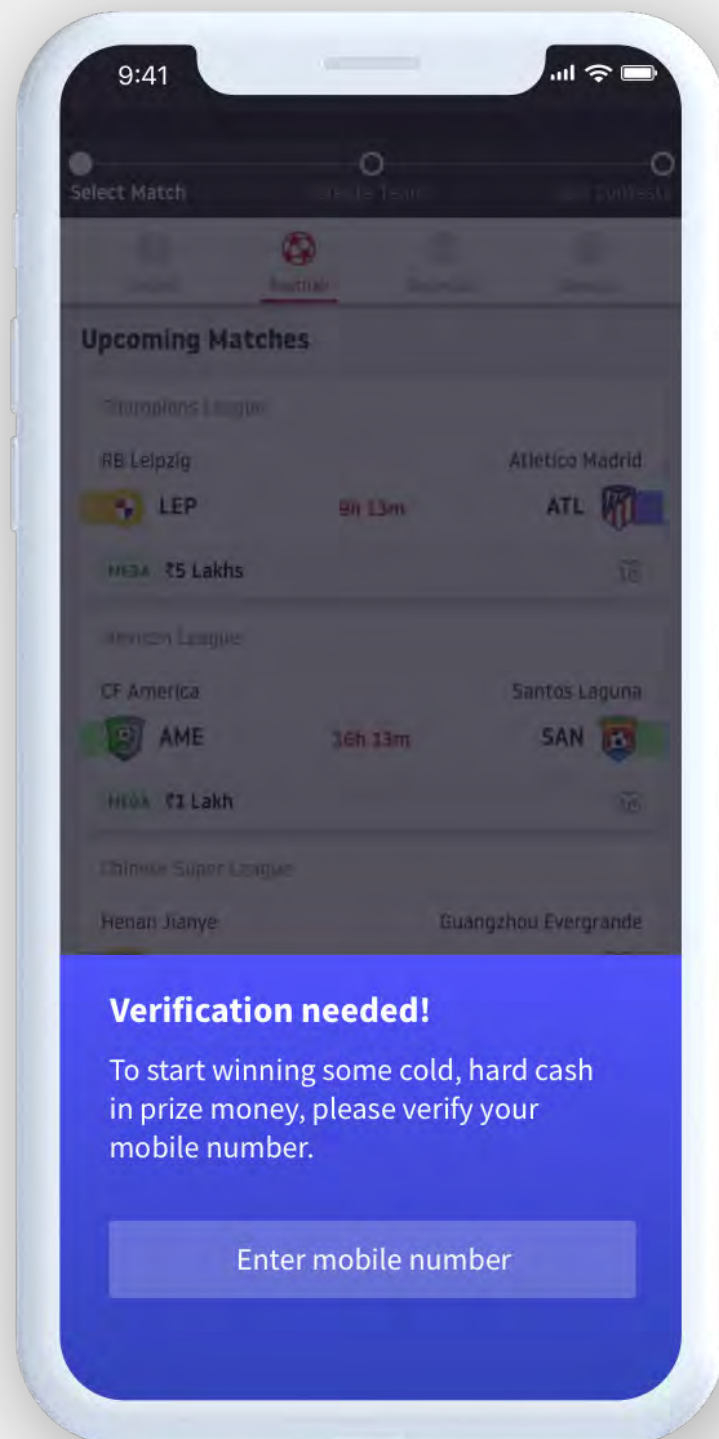
**Indygames**

now

Win big this Independence day!

Only on 15th Aug - Win cash prizes worth Rs 30 lakhs. Pura India khelega! Register for the tournament now.

[Save my seat](#)[Remind me again](#)



LEVEL

ENGAGEMENT & RETENTION METRICS

Measuring your games player engagement levels are as crucial as tracking new players, game installs and so on. If you crack the engagement code here, retaining your players becomes relatively easier. Player retention is essential for garnering insights of your game's likability, players' loyalty and advocacy traits.



Let's unravel the key metrics you need to calculate while working upon your game's engagement and retention strategies.

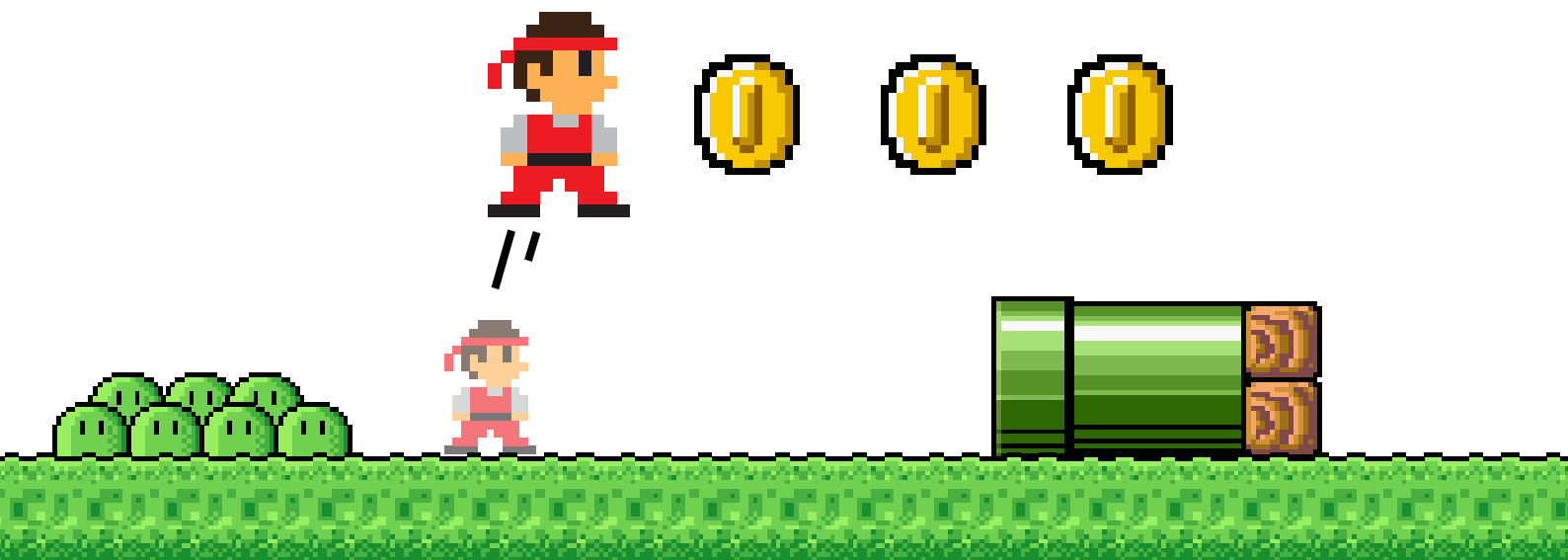


Daily Active Users (DAU) & Monthly Active Users (MAU)

This metric bolsters the number of unique players who use your gaming app at least once per day (DAU) and who engage with your app over 30 days (MAU).

AoE (Area of Effect):



-  Indicates the proportion of users who have installed your game and play it regularly. It helps evaluate the game's potential if you increase player engagement and retention.
-  It helps to evaluate the success of specific new features in the game or displaying the game in the app store.



D(n) Retention Rate

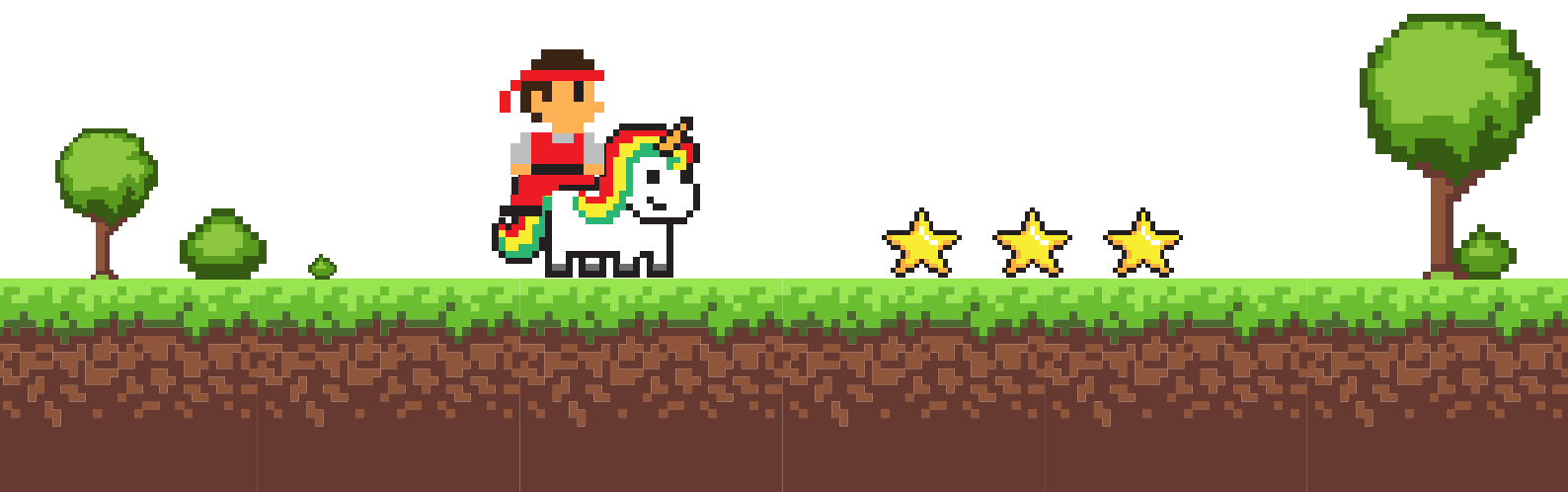
Measuring this metric is paramount. It helps you to apprehend the percentage of players who keep returning to your gaming app within a stipulated time interval. For gaming apps, the time intervals considered are usually D1, D3, D7, D14, D30, D45, D60, D90 and D180, (where D stands for days). Usually, Android games experience lower retention rates than iOS games (Source: Adjust).

AoE (Area of Effect):

-  Day-wise monitoring of your players' interaction with your gaming app sheds some light on what actually makes your players return to your app.
-  It helps you to get a clear picture of the player drop-offs and also estimate the average number of days your players engage with your gaming app.

Calculation:

Retention Rate = Number of players who open and engage with the gaming app on D(n) / Number of players who opened and engaged with the gaming app on D0



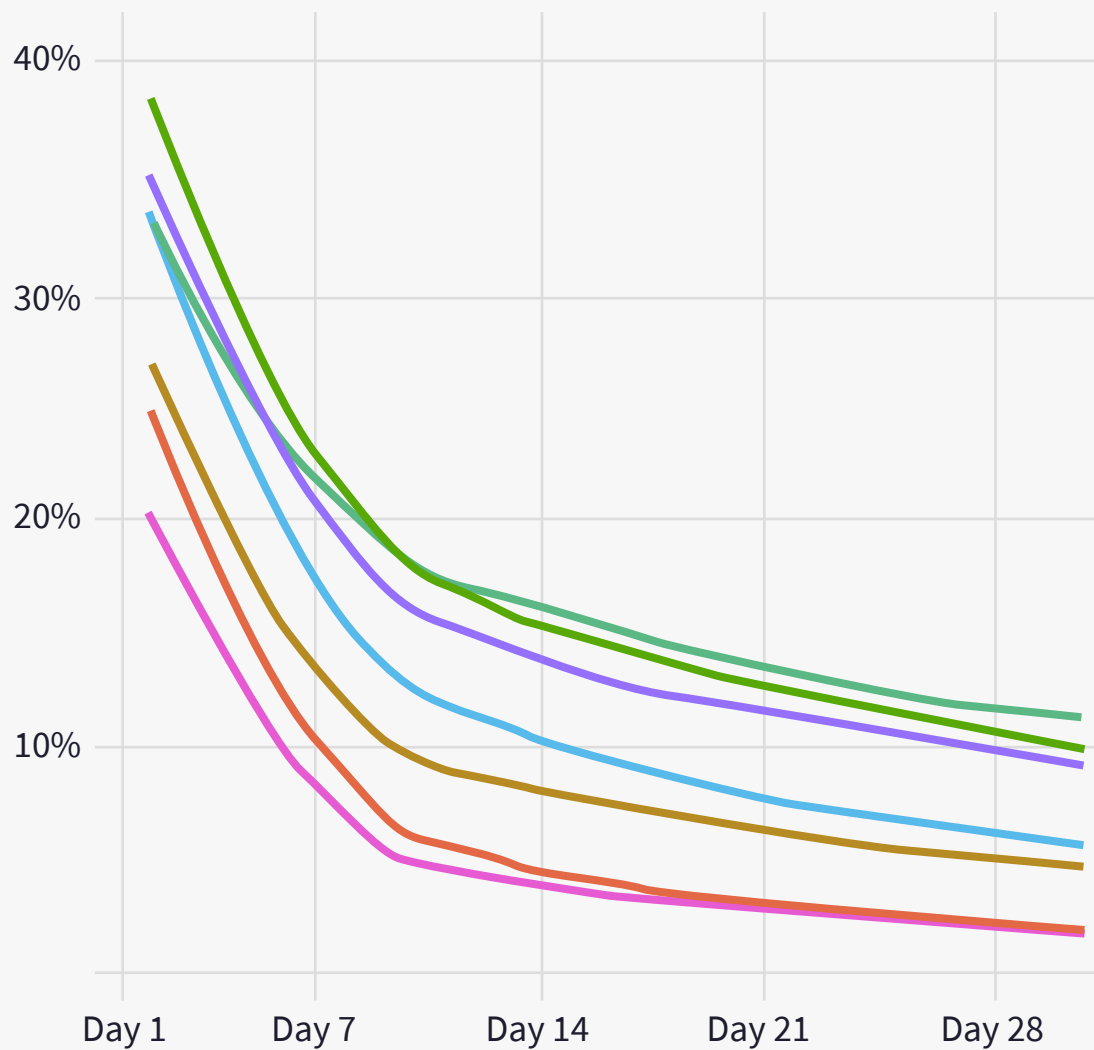
Benchmark:

D1 retention rate nearly is 35% (all genres), D7 retention rate is at 18% (with Word, Casino and Card games in the forefront), D28 retention rate is close to 12% (Word and Card games leading) (Source: Gameanalytics)



Retention rate by Games verticals

% per day-after-install





(Source: Adjust)

- Action
- Family
- Gambling
- Strategy
- Adventure
- Brain
- Cards & Board

Stickiness

If you want to track your player retention with more precision, then calculating the players' stickiness to your gaming app is the way to go! Stickiness is the number of days players visit your gaming app within a timeframe of 30 days. High stickiness reflects players' high interest in your gaming app and further coaxes them to return to the app more frequently. Make sure your stickiness ratio doesn't crawl below the 7% (min) mark.

AoE (Area of Effect):

-  It indicates how addictive your game is.
-  High stickiness means high interest in the game that brings players back on a daily basis.

Calculation:

$$\text{Stickiness} = \text{DAU} / \text{MAU}$$

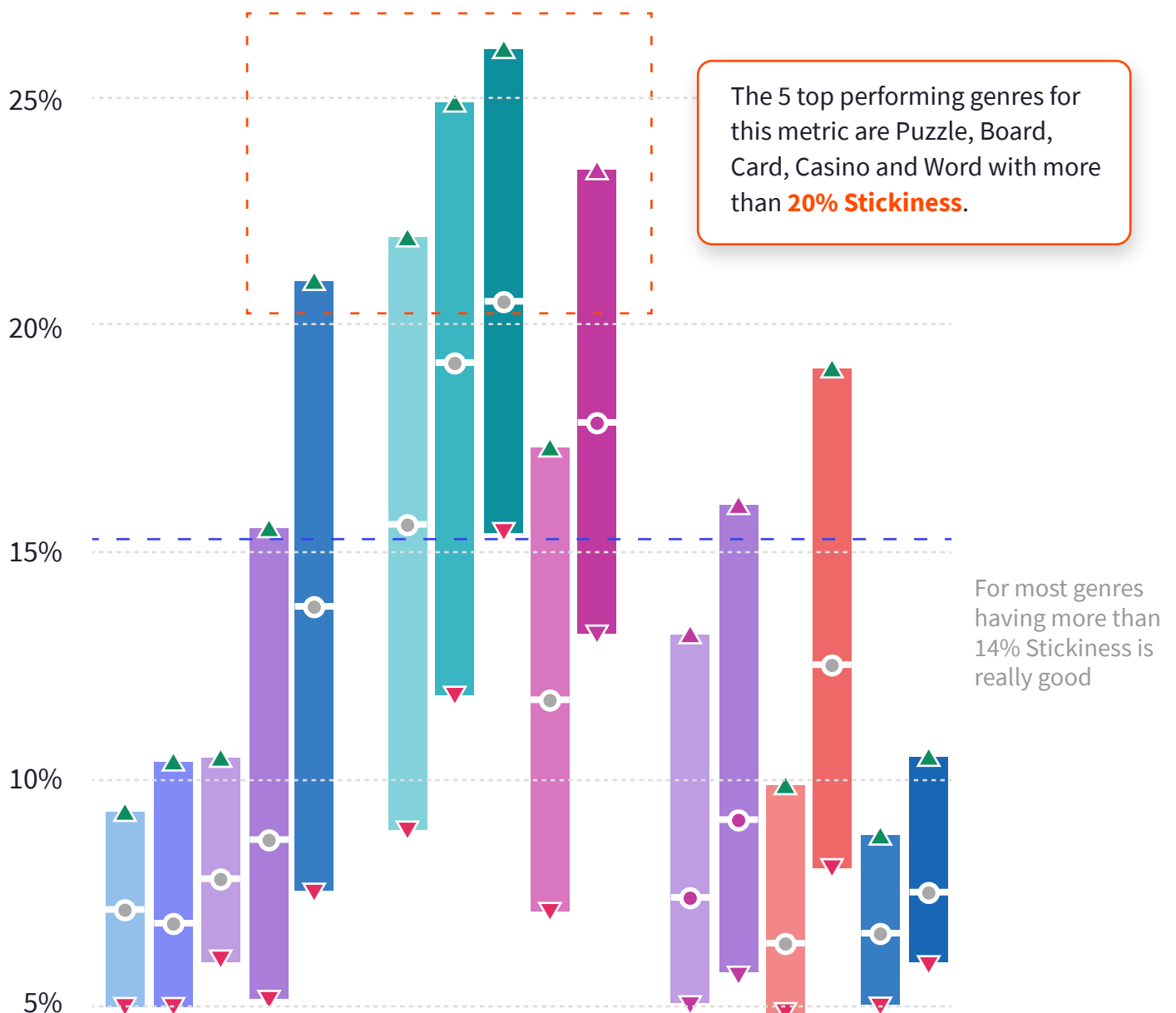


Benchmark:

Board, card, casino, puzzle and word games possess a stickiness ratio of around 20% (Source: Gameanalytics)

Stickiness - Genre Benchmarks

▼ Bottom 25% of games —●— Genre median ▲ Top 25% of games





(Source: Gameanalytics)

Churn Rate

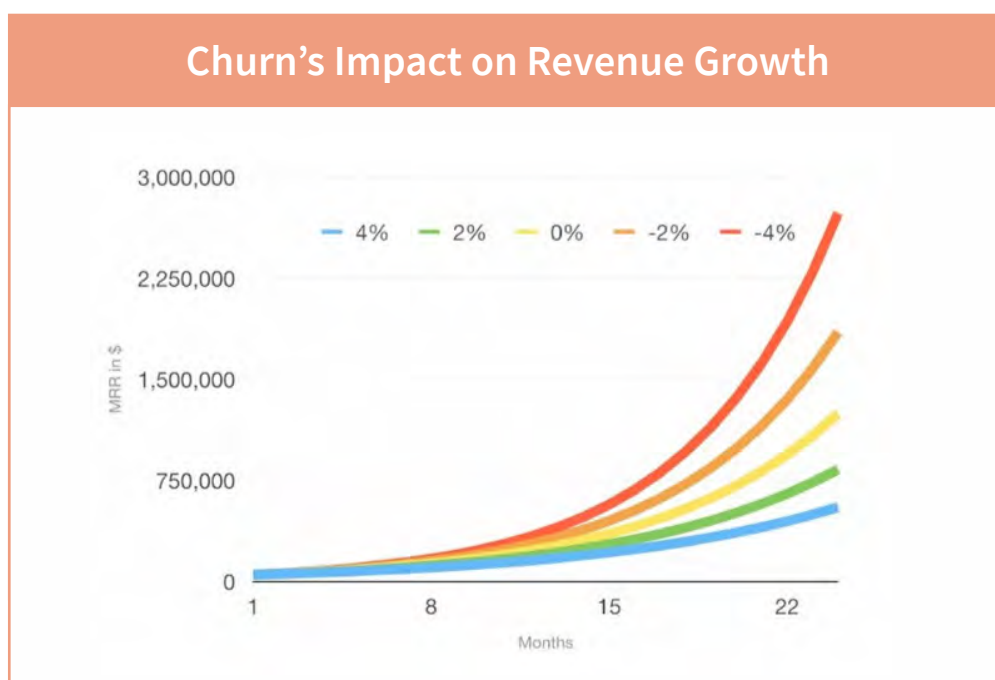
It is also known as uninstall rate. Churn rate is basically the number of players who uninstall your gaming app within a set number of days after installation. Mobile games have the steepest retention curve of all mobile apps as they tend to secure only **6.5% of D28 retention rate**.

AoE (Area of Effect):

-  It helps you to hold your horses and tweak the strategies or game flow or level difficulties that caused the player to uninstall the app.
-  Considers mixing another monetization model to improve performance.

Calculation:

$$\text{Churn Rate} = 1 - \text{Retention Rate}$$




(Source: Process.st)



Conversion Rate

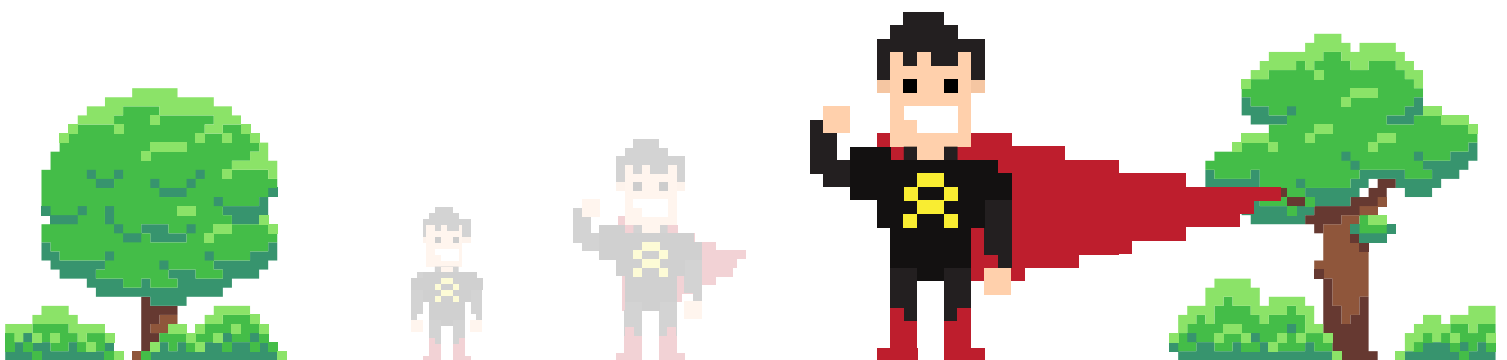
Without conversions, there's no business. Conversion rate is the number of conversions (players who performed a desired action in your gaming app) out of the total number of players who launched the app. Your gaming app can have multiple conversion points or goals eg: click on an ad, in-app purchases, deposit made and so on. This metric is different for different games.

AoE (Area of Effect):

-  It enables you to gauge the success of your app, your campaigns and identify areas of improvement.

Calculation:

$$\text{Conversion Rate} = \frac{\text{Number of conversions}}{\text{Total number of players who launched the app}}$$



Number of Sessions Per Player

This metric helps you to measure the number of times the player plays the game or launches your gaming app on a daily basis.

Session Frequency

This particular engagement metric determines how often the players return and interact with your gaming app post the first install.

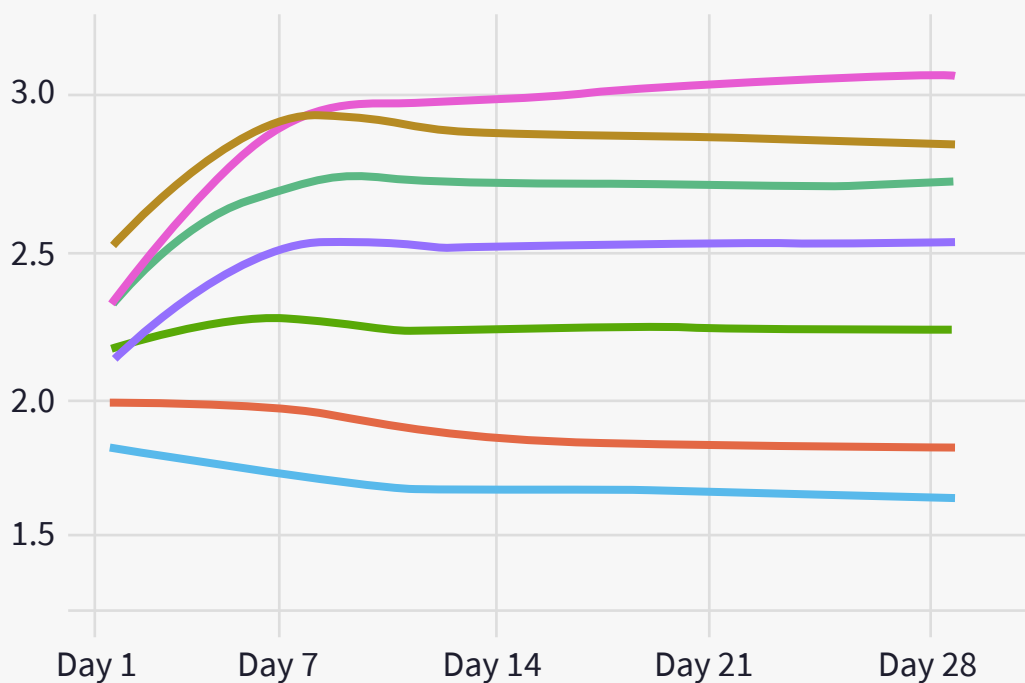
Session Length / Session Duration

Session duration is an important metric as it is liable to help you determine for how long your game can hook the players to your app. It also projects the levels at which your app experiences drop-offs the most. It gives you a closer look at the players' behavior throughout their lifecycle.



Session per users by Games verticals

per day-after-install



(Source: Adjust)



— Action — Family — Gambling — Strategy
— Adventure — Brain — Cards & Board



Start, Fail & Complete

This is a crucial metric to track as it tells you the average number of times the player **starts** a new game level. Further it highlights the number of times the player started the level but **failed** to complete it. And finally, it tells you the number of times the player successfully **completed** the level.

💡 AoE (Area of Effect):

- ❤️ It helps you to analyze which levels in your game are the players most interested in or enjoying it.
- ❤️ It helps you to zoom into the levels of your game that are choke points for the players or the players find difficult to crack.

💎 Note:

These are progression metrics. Clubbing all these three metrics helps you to analyze the depth of your game.

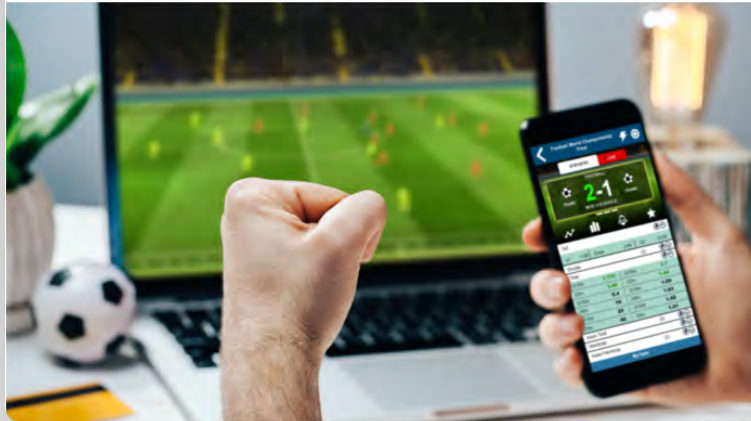


**Footystarz**

now

Round 8 is unlocked!

Hey Joshua! You're through to the round of 8 of FIFA World Cup. Gear up for the Quarterfinals.

[Play now](#)[Remind me later](#)**Did you know?**

Hey Denver! Did you know that every Sunday, one of the rare legendary cards can be found inside the mordor caves?

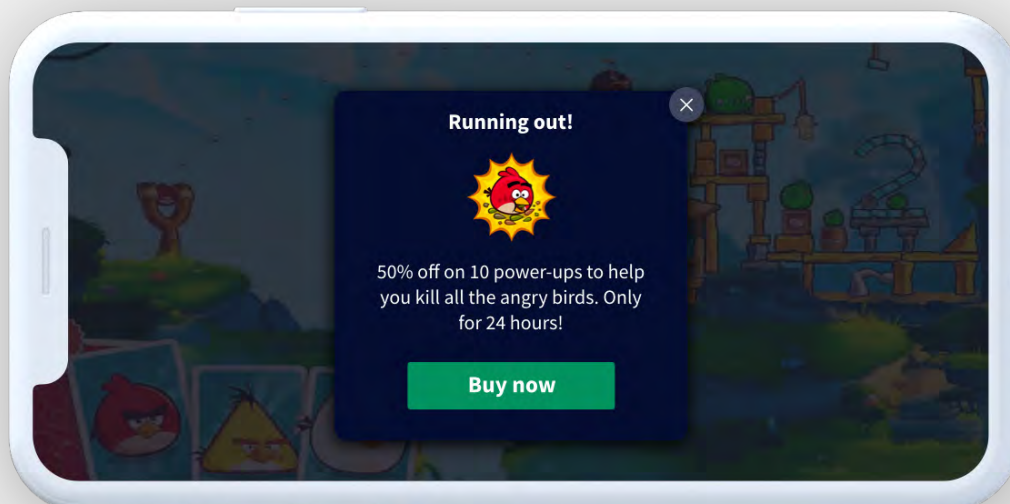
[Awesome](#)

**Farmed**

now

Beat the clock offer!

Marina, hurry. Win bumper prizes by fulfilling orders of the townspeople. You've only 12 hours!

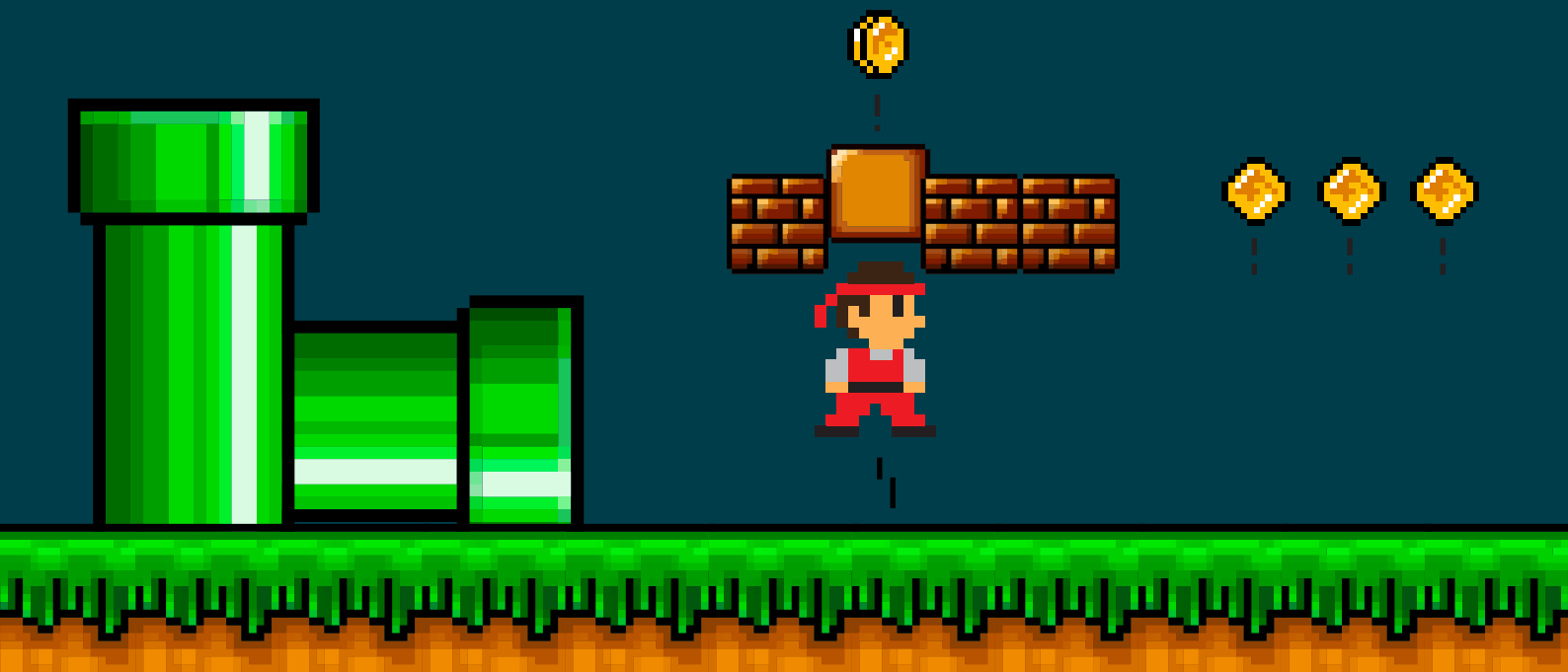
[Play now](#)[Dismiss](#)

LEVEL

MONETIZATION METRICS

After pinning your acquisition, engagement and retention metrics, it's time to focus on maximizing your revenue! Monetization is the key to longevity in an industry plagued by some of the highest uninstall rates. It helps you plunge into the opportunities of garnering optimum profits via your mobile gaming app!

Let's dig into the measures that help you stay ROI-positive



Average Revenue Per User (ARPU)

The average revenue you make from each player (including paying and non-paying customers) in a certain period is calculated as ARPU. Keeping track of ARPU per channel or acquisition source can help you understand which channel is making you more money.

💡 AoE (Area of Effect):

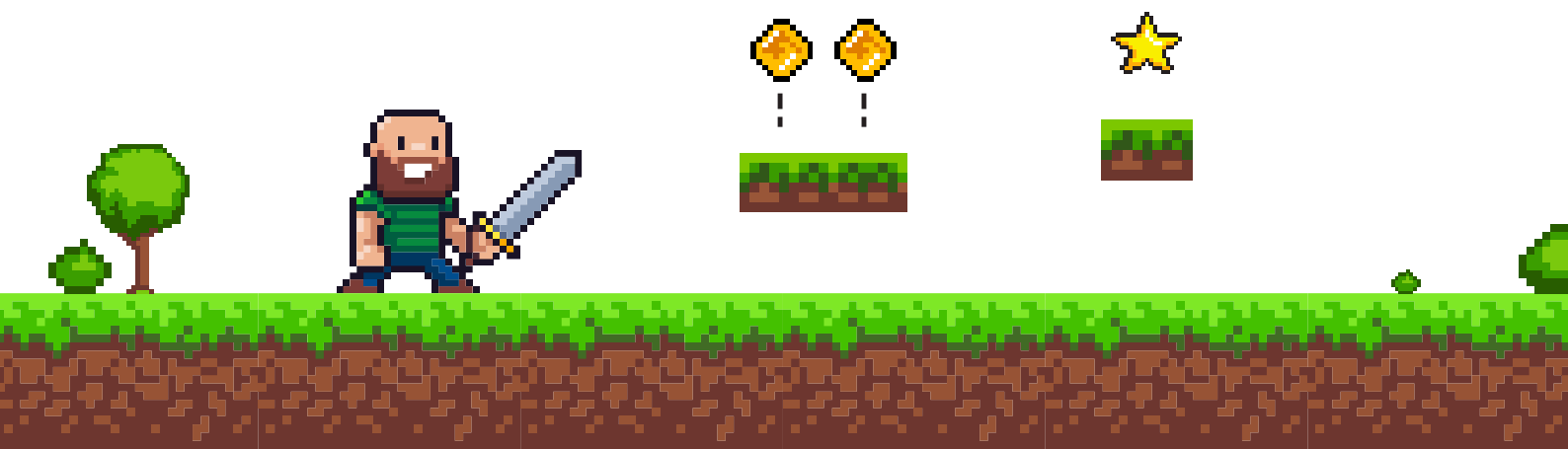
- ❤️ It helps you to allocate your UA budgets wisely and evaluate player performance.
- ❤️ It includes all revenue generating activities such as in-app purchases, ads, etc.

🪙 Calculation:

**ARPU = Total revenue generated in a specific time period /
Total number of players during that time period**

💎 Note:



As long as a game and its community is active, the player's average revenue calculations are models, not exact numbers.



Average Revenue Per Paying User (ARPPU)

There might be many players who have installed your gaming app and are playing the game regularly. But it is not necessary that all these players go ahead and make in-game purchases! ARPPU measures only the paying users or players in a game and helps you to pinpoint high quality user segments who spend money inside your app.

AoE (Area of Effect):

-  It helps you to evaluate the in-app purchases (IAP) through the game flow.
-  It helps you to promote more tools, coins and other perks to the right audience.

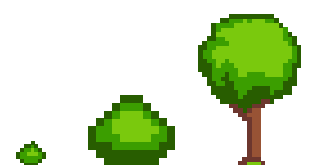
Calculation:

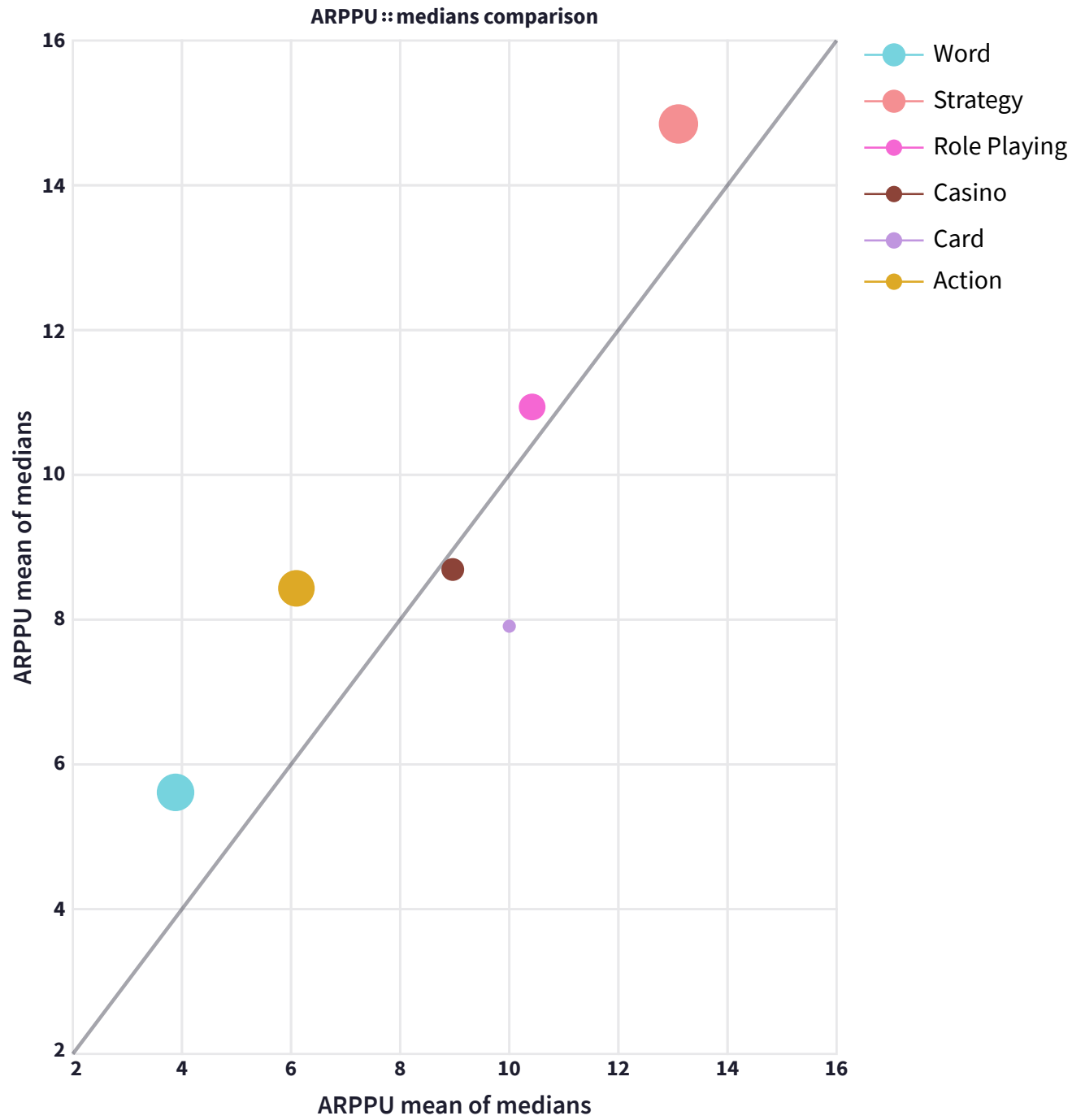
$$\text{ARPPU} = \text{Total revenue} / \text{Total number of playing players}$$

Benchmark:

Action, role play and strategy games take the lead with ARPPU over \$26 (approximately)

(Source: Gamesbrief)







Lifetime Value (LTV)

LTV determines the revenue you can earn from your players throughout their journey with your gaming app. Your LTV needs to be more than your cost of acquiring a player in order to attain success.

AoE (Area of Effect):

 LTV along with ARPU helps to evaluate the total revenue of a game - so you can start working towards prolonging their retention on the app to the point where it offsets the cost of acquiring that user (called the break-even point).

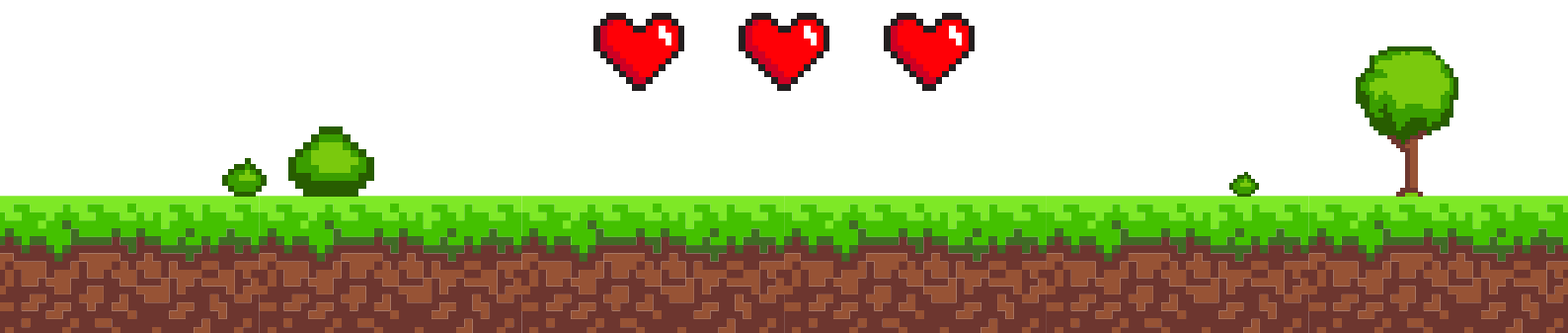
 It strongly indicates how much amount can be spent on UA to meet the condition $LTV > \text{Spends}$.

Calculation:

$LTV = \text{Player's lifetime} \times \text{ARPU}$

Note:

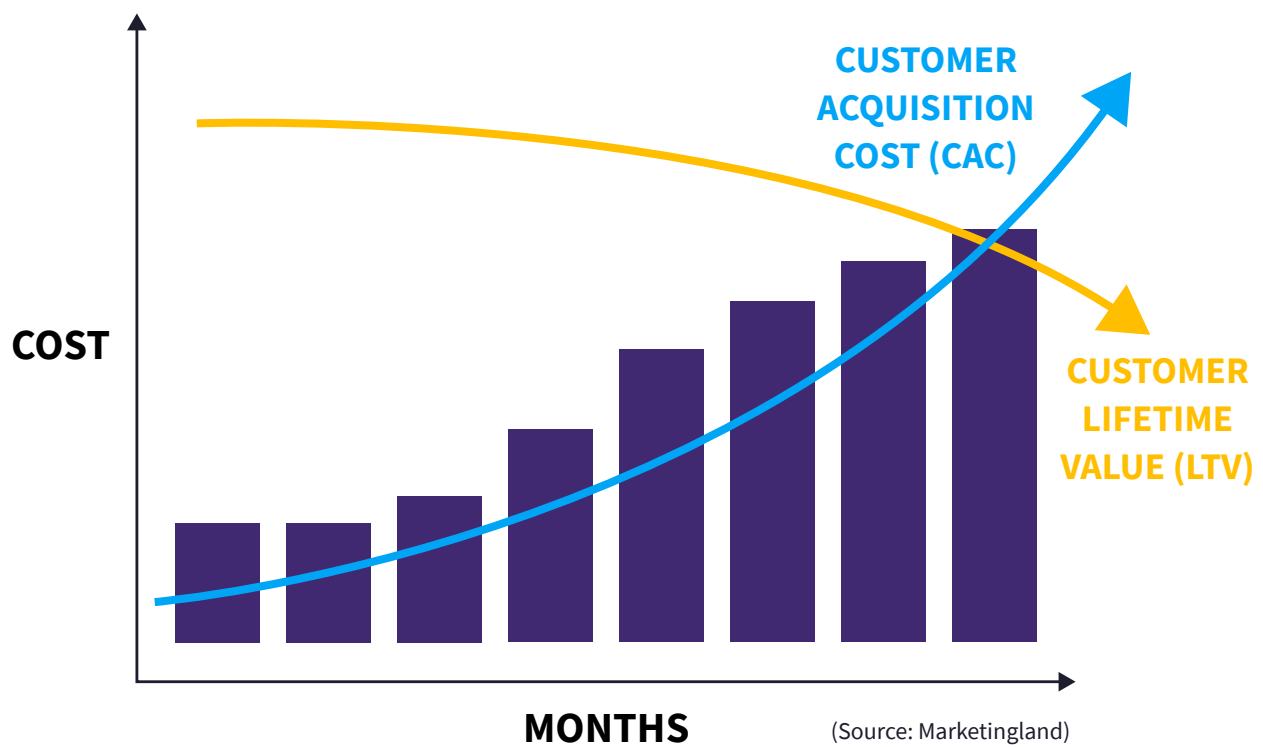
As long as a game and its community is active, the player's lifetime value calculations are models, not exact numbers.



Benchmark:

It is said that an ideal ratio between LTV and CAC should be 3:1

(Source: Klipfolio)

CAC vs. LTV

Average Revenue Per Daily Active User (ARPDau)

This metric is similar yet different from LTV as it enables you to calculate the monetary contribution of your players on a daily basis.

AoE (Area of Effect):

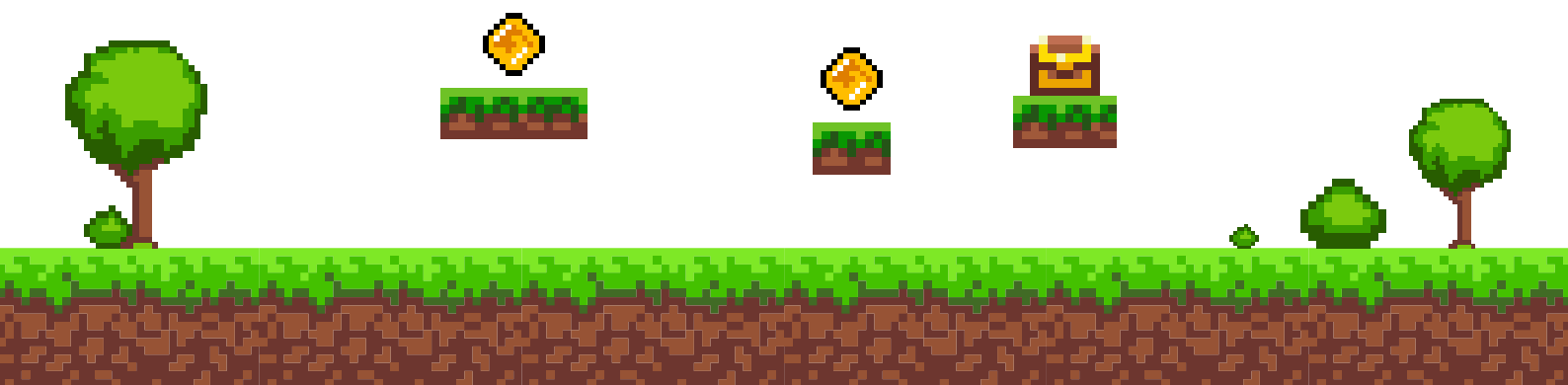
- It helps you to prove whether the monetization tactics - ads, in-app purchases (IAP) - are working.

Calculation:



**ARPDau = Revenue earned from IAP or ads on a specific day /
Number of unique active players on that specific day**

Average Transaction Value (ATV)

This metric gives you an insight into the average amount of money the player is willing to spend for in-app upgrades or currency. You can drive the transaction value or the number of transactions a player makes to increase ARPPU.



AoE (Area of Effect):

-  It helps you to amp up your pricing strategy instantly and measure its impact on the LTV, retention and acquisition as well - this means if you can get users to pay at a higher price point, you're likely to get more revenue from them.
-  It helps you strategize around your bonuses and freebies for play.



Calculation:

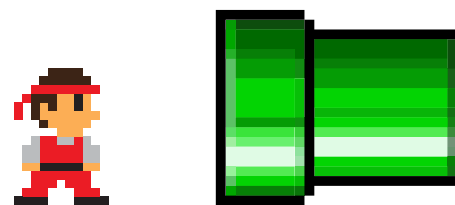
ATV = Total value of all transactions / Number of transactions

Time to First Purchase

This metric is important to measure as it determines the time the player takes to make the first in-app purchase after app installation. By measuring this metric you can get a fair estimate of ATV and ARPDAU as well.

AoE (Area of Effect):

-  It helps you to plan your IAP (or deposits) timing in the game flow accurately.
-  It helps you to understand when and where you need to place your ads in the game interface for higher probability of the purchases to take place.



Percentage of Paying Players

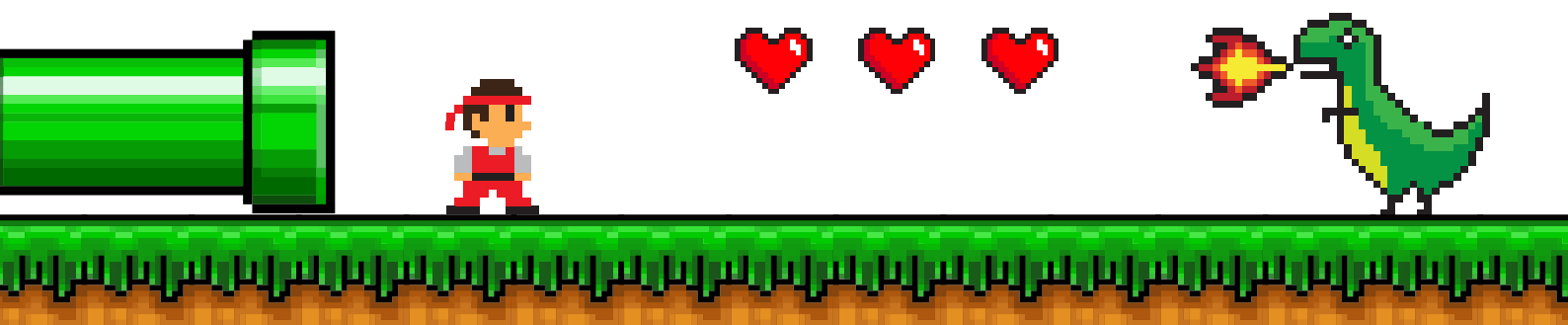
Players who make an IAP over a stipulated time period post app install. It indicates the quality of players you've acquired and measures your monetization model as well.

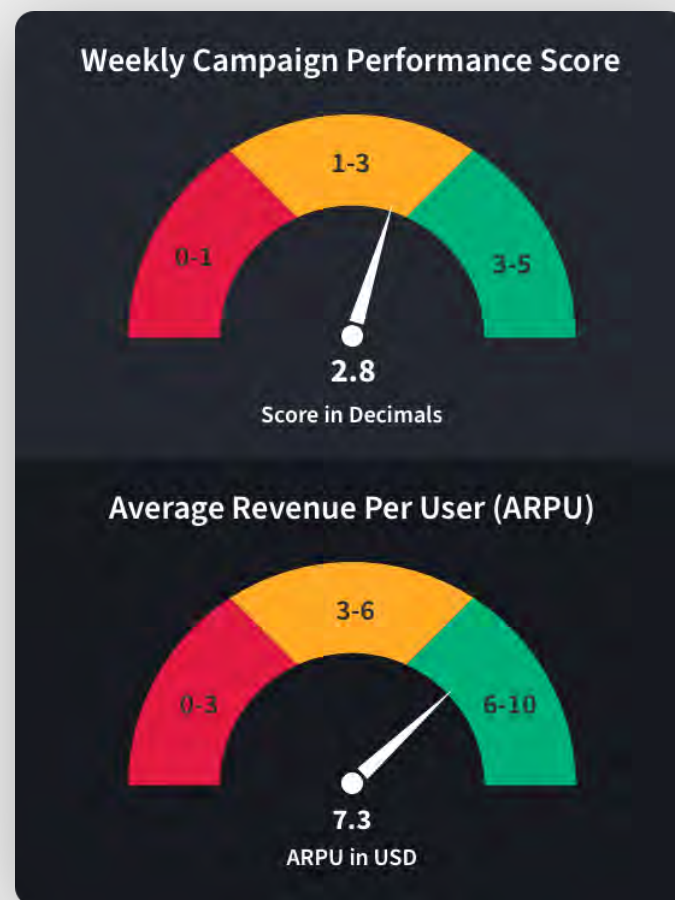
Virtual Currency Purchase Per Day

Purchases made by players via digital money instead of actual money. It may also include exchange of certain powers, tools or equipments between players.

Virality


The number of referrals or organic and paid players you've managed to acquire in a particular and narrow time frame.

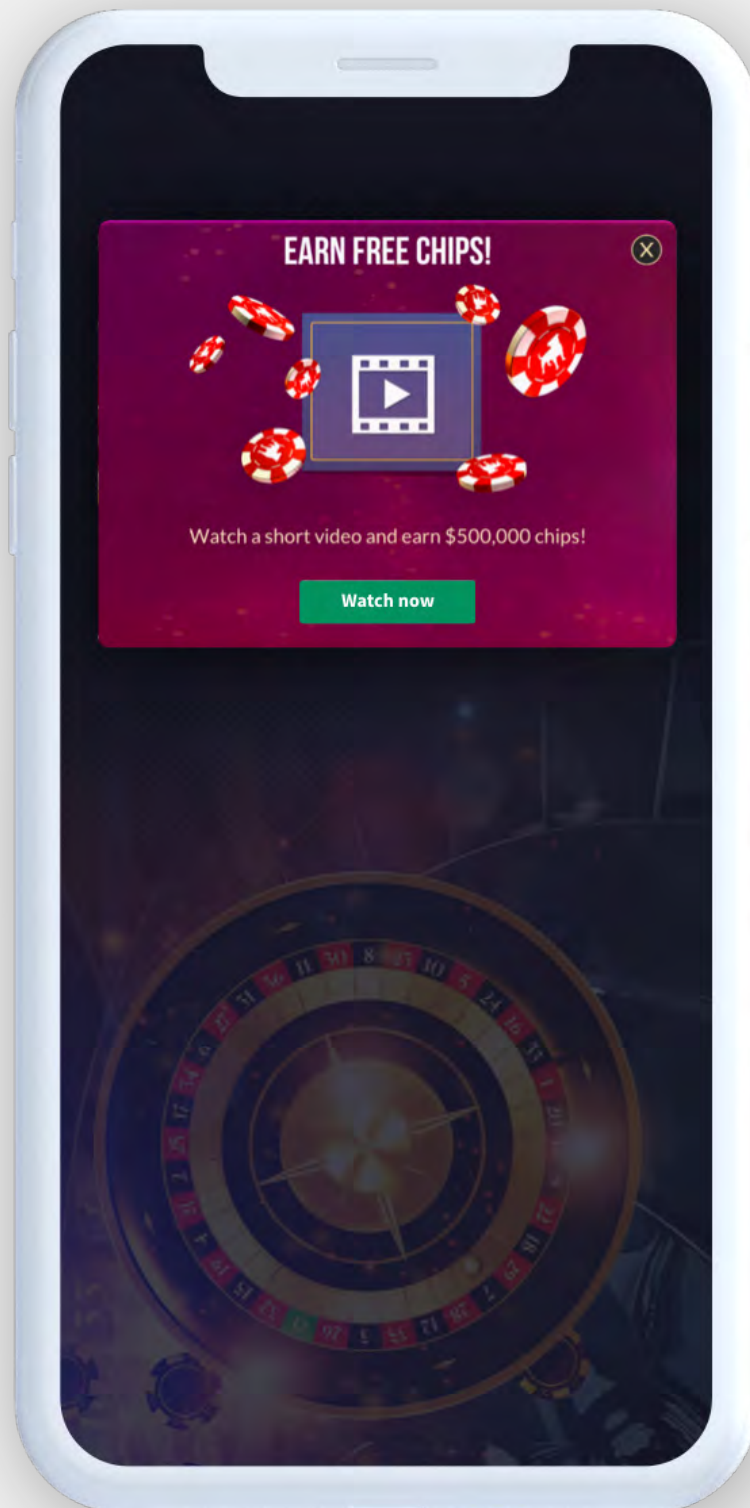




 **Daily Activity: > 2 hours**

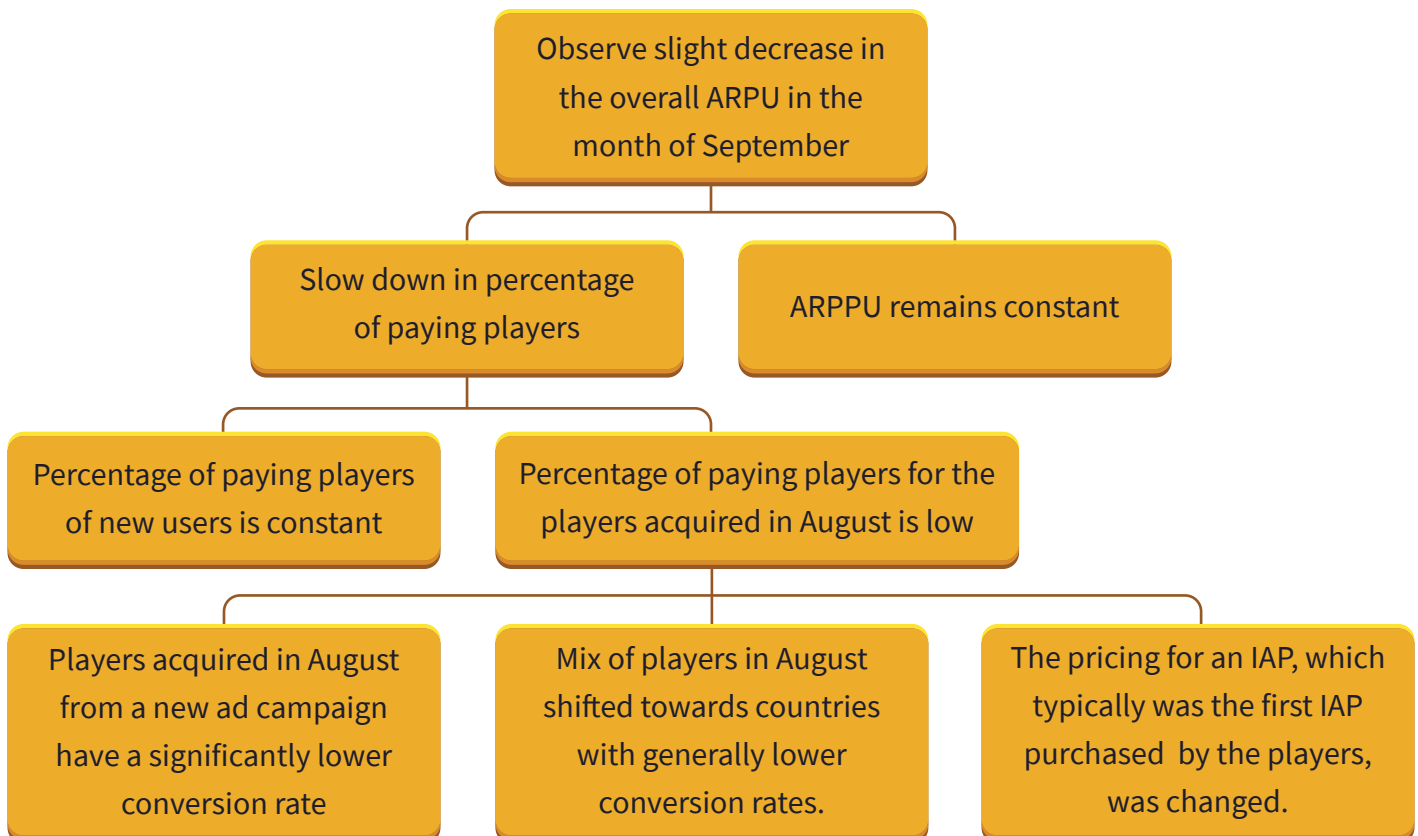
 **Lifetime Purchase Count: <3**

 **Show discounted power-ups notification**



End Game

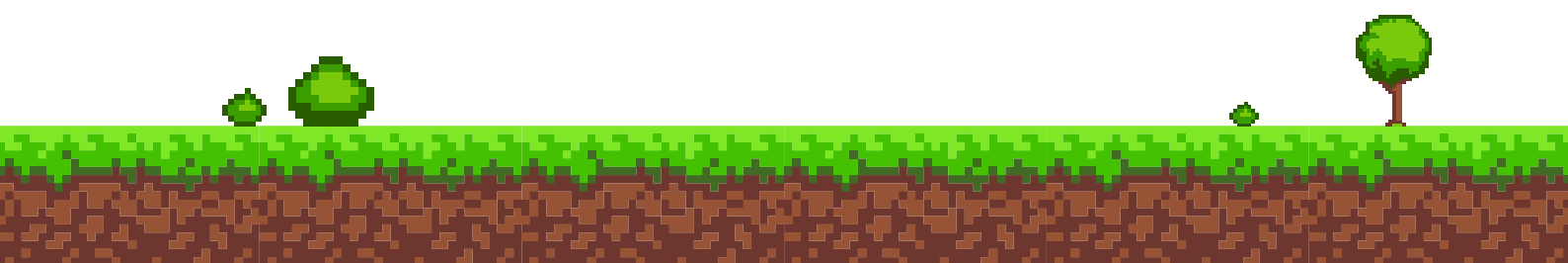
To derive meaningful and actionable insights for your gaming app you need to drill-down each of these metrics. We've shown an example below.



So, while the ARPU remains constant you increase prices, then your ARPPU might rise along with the prices too. However, this does not mean that you'll earn more, as the share of paying users will drop sharply. And here is the formula that links these two metrics:

Calculation:

$$\text{ARPU} = \text{ARPPU} \times \text{Percentage of playing players}$$



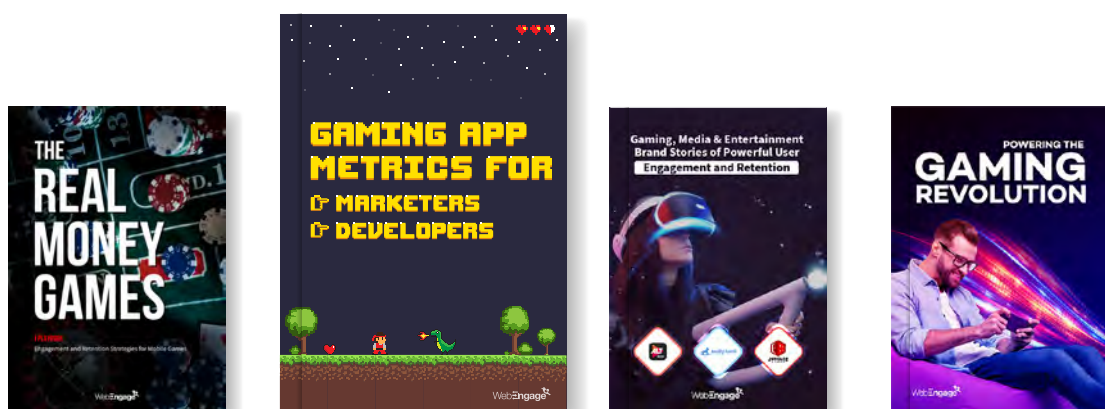
Marketing Automation For Gaming Businesses

We hope that you've gotten a hang of all the key mobile app metrics you need to track to keep your Gaming business soaring high!

However, as shown in the previous example tracking these app metrics isn't as easy. Plug in with a full-stack marketing automation stack to see the true effect of your marketing campaigns on these metrics. So that you can take data-backed decisions and deliver intuitive campaigns to convert and retain your mobile app users.

A multi-channel marketing automation platform has the potential to unify all your players' data in one place, help you segment your players based on their behavioral data, and deliver automated cross-channel communications via lifecycle journeys and campaigns.

Read the next guides and handbooks to find out more about marketing automation and Gaming user engagement.



Create engaging customer experiences that matter

Get in touch for a personalized demo of the WebEngage marketing automation dashboard.

[Schedule my free demo](#)



WebEngage is a full-stack marketing cloud which gives a 360° view of your users & your marketing efforts (& everything else in between). Loaded with cross platform & cross channel analytics, the suite makes it possible to drive user engagement & retention with data driven, personalized campaigns through multiple channels, including the revolutionary Journey Designer.

Thousands of online consumer businesses use WebEngage everyday to improve their user engagement and retention. Why are you still hesitant?

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+1 (408) 890-2392, +91 (022) 6110 2400



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