UNITY FOR GAMES

E-BOOK

HOW TO CHOOSE AN ENGINE FOR YOUR MOBILE GAME

Increase your odds of success while building, marketing, and running your game.

Unity®

INTRODUCTION

Why develop a mobile game today?

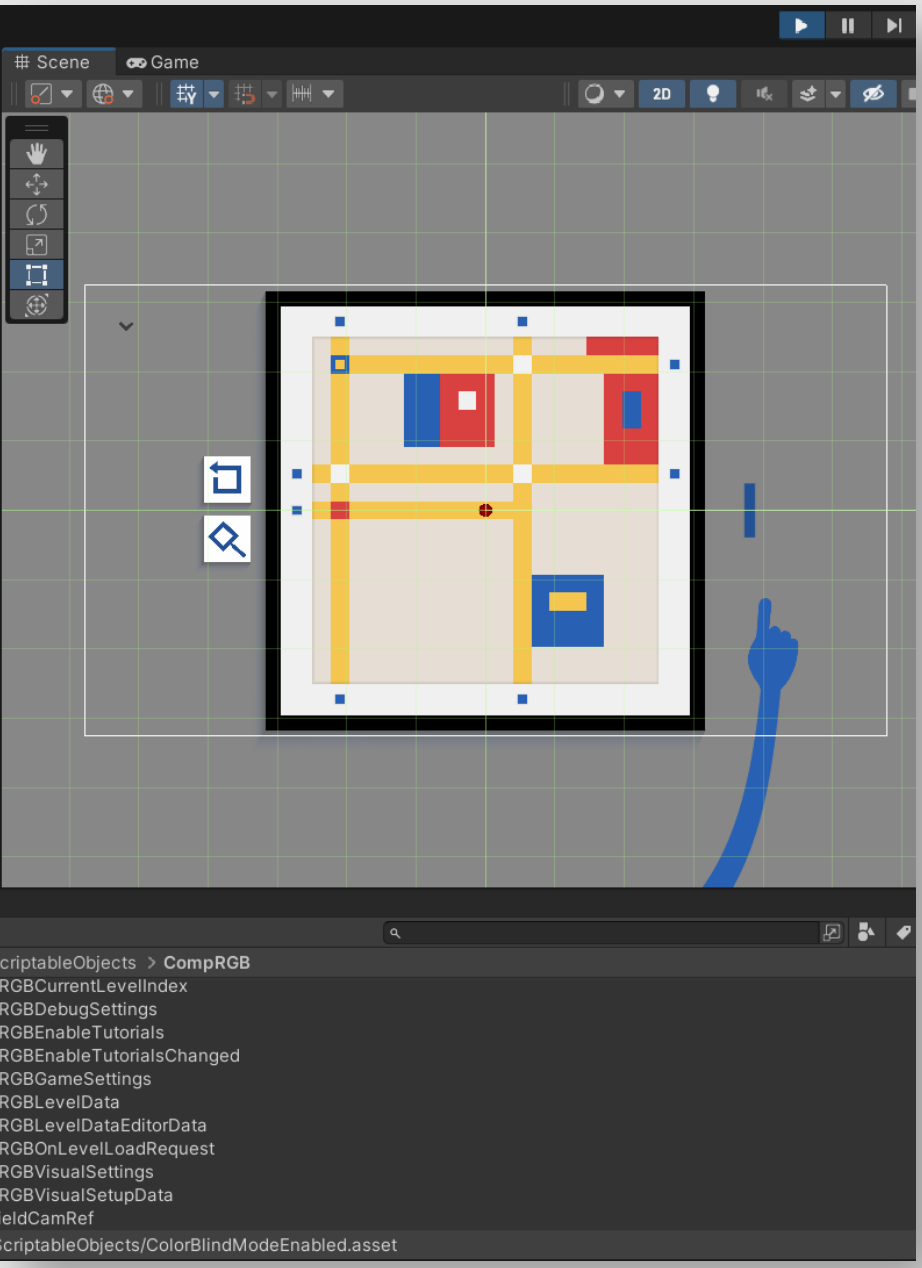
The mobile market is the largest segment in gaming. Games account for more than 61% of the App Store's $86.8 billion store revenue and 77% of the Google Play Store's $42.3 billion revenue. Players from all demographics are engaging with mobile games, and markets for every genre beckon savvy developers.

And the opportunities just keep growing as devices, infrastructure, and technologies evolve. Games that once required a PC's power now excel on smartphones and tablets.

Whether you're a student turning a school project into an income stream or an established developer building your business, your choice of a development platform will make all the difference to your success.

This guide helps you understand five important considerations about how game development platforms differ and the features and capabilities you should look for when choosing an engine for your next mobile game. It covers:

1. **Choosing a game engine that's right for you**: Determine the most important tools for now and later.
2. **Accessing the right resources to get started**: Make sure you can get the most from your tools.
3. **Getting help when you need it**: Ensure you have access to the right level of support.
4. **Keeping your players happy**: Set up acquisition, engagement, and retention strategies.
5. **Driving revenue from the start**: Have monetization options for all your players.



Each topic also includes a section about how Unity capabilities may fit with your plans.

After considering the many factors described in this guide, you might decide that you need a mobile game development platform that's more than just an engine. You'll want a whole ecosystem of tools, support, and a thriving community that gives you all the resources you and your team require to create and launch a successful mobile game.

Please, Touch the Artwork
by Thomas Waterzooi

1. CHOOSING A GAME ENGINE THAT'S RIGHT FOR YOU

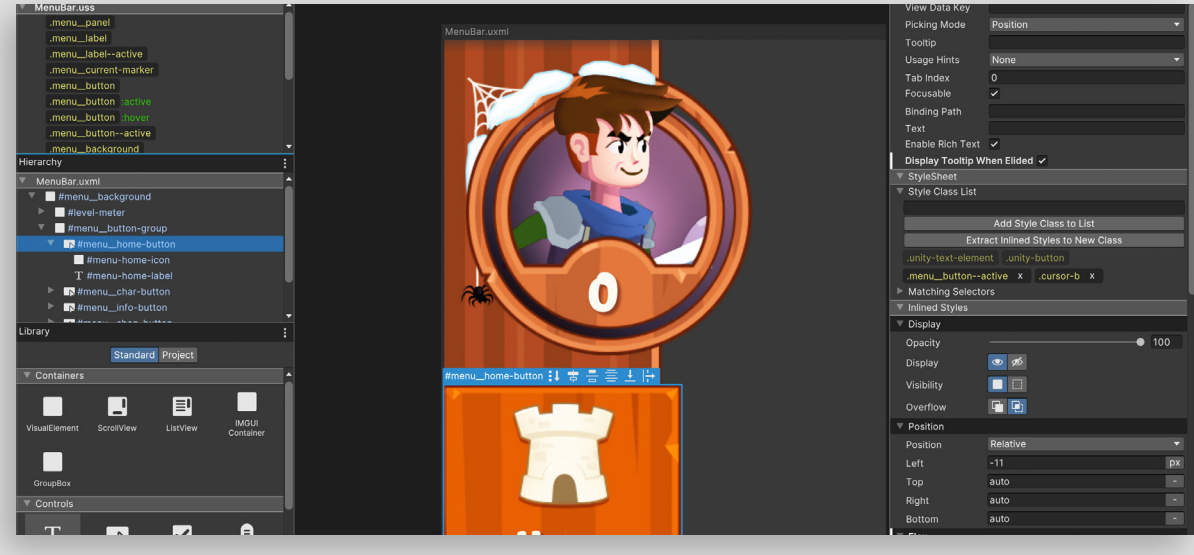
Features you need now and capabilities you'll want tomorrow

When choosing the right engine for your game, consider the tools it offers you – both for the game you want to make today and whatever you'll be creating down the road. The game you imagine right now is likely much simpler than what you'll end up building. As you move into development, you'll inevitably think up additional twists and turns, features and levels, to spice up gameplay.

Likewise, as a game developer, your skills and workflows are going to evolve. If you're starting off with 2D, you may consider 3D or VR for your next project. You'll want to be able to prototype quickly to eliminate ideas that don't work and let those that do spark new iterations.

The point is: Assume you'll be successful and that, as you continue to create games, your needs will grow. It makes no sense to start off with a gaming platform or tool that's technically over your head, but it also makes no sense to limit yourself if you don't have to. Familiarizing yourself with a game engine takes time, and the best game platform for you is one you can work with now that also includes the features you'll need a year or two years from now. If you've built and are comfortable with your own engine, will you want to take time away from better gameplay and graphics, for example, in order to maintain and improve your own toolset?

Consider these important platform capabilities:



- **2D/3D/VR/AR/XR** – Each game is unique, from the aesthetic to its code. Will your toolset support all your rendering and platform plans?

- **Workflows** – The engine you choose should be able to adapt to your specific workflows and needs. If your level design needs to be razor sharp, can you quickly iterate on it to refine your ideas? Can you easily import assets from other commonly used tools like Maya, Blender, or 3ds Max? What about animations, particles, audio, physics, sequencing, UI, and profiling?

- **Coding** – Do you have to know the primary scripting language? Are there alternatives for non-programmers such as artists?

- **Multiplatform** – You'll want to get your game in the hands of as many players as possible. Ease of cross-platform development is an important consideration, so will you be able to quickly port your game for PC or consoles? Does the platform consider mobile-specific development requirements, such as performance and battery limitations of the thousands of different mobile devices?

- **Extensibility** – Your development platform should adapt to the specific needs of your project. If you have tools already built, can you quickly integrate them into the platform? How easily can you adapt your tools or integrate plug-ins that add functionality you need?

- **Ecosystem** – Building a game is just the beginning. Your game might need a backend infrastructure and live ops tools to help you maintain it on an ongoing basis. Look at the game features you want to build and assess service providers that help make this part easier.

A powerful yet intuitive toolset

The Unity Editor gives you a comprehensive feature set for creating mobile games. It's simple to create prototypes and iterate on possibilities. At the same time, its advanced editors, shaders, renderers, and other tools ensure you'll never need another platform. It includes:

- A broad range of capabilities for mobile games, from animation and cinematic tooling to multiplatform porting

- User-friendly collaboration features for engineers, designers, and artists to easily update, share, and manage projects

- Flexible visual scripting that enables creators of all backgrounds to add logic and interactions to your game

- Integrations with Unity Gaming Services to build your game backend and run your live ops without a big team

2. ACCESSING THE RIGHT RESOURCES TO GET STARTED

With a powerful product, learning is built in

When you pick up a hammer, it's pretty obvious how to use it. But software tools perform thousands of different functions, and figuring things out for yourself isn't always easy. An intuitive user interface is a minimum requirement for any production tool, yet intuition will only take you so far. At some point, you'll want to learn more about how to achieve a certain effect or how to solve a particular problem. Fortunately, learning tools can come in many forms, from tool tips and online tutorials to seminars and workshops.

When you're choosing a gamedev platform, it's important to be aware of the quality and availability of useful learning resources. You'll want to ensure that you can efficiently learn how to use any tool you need to accomplish your goals and bring your specific vision to life.

It's fairly easy to evaluate different platforms for the different learning resources that are available:

- Go to YouTube and search: "How easy is it to learn <product name>"
- Go to the product website and get a feel for how important "learning" is to the developers, and read through parts of the user guide
- Download a product trial and run through a tutorial

Third-party assets such as textures, art packs, controllers, and utilities are also important resources to avoid reinventing the wheel and helping to speed up game development. Popular game development platforms have extensive collections of these that you'll want to examine as well, and the resources they offer will be beneficial to your needs as you kick off your mobile project.

People learn the most from their friends and colleagues, and the user community is where you'll get objective, marketing-free guidance on which engine is likely to work best for you. The enthusiasm you find in different online forums should also tell you all you need to know.

An interface and community that builds your skills

Enabling success means not only providing a powerful development platform but also abundant ways for creators to learn how to use it. Unity offers many resources to help you jump into game development, including:

- Extensive, easy-to-understand documentation and online tutorials
- Unity Asset Store – Fill in your knowledge gaps with a treasure trove of prebuilt models, textures, animations, development tools, and more
- Unity Learn – Teach yourself Unity with online courses and tutorials; sign in to track your progress, earn badges, bookmark content, and get personalized recommendations
- On-Demand Training – Level up your skills with hundreds of hours of bite-sized, self-paced training videos, including practice projects, course assessments, and more, designed specifically for working professionals
- Approved content featured on partner platforms like Coursera, Udemy, Pluralsight, and Pathstream
- An enthusiastic, global developer community active in over 50 Unity-hosted forums
- Certifications – Find a full suite of certifications across four difficulty levels and specialization tracks, ranging from programmer to artist

3. GETTING HELP WHEN YOU NEED IT

Support isn't just about processing tickets

In game development, there will always be unexpected challenges. Whether it's a complex configuration or gameplay that you can't quite figure out how to implement, you don't want to miss important milestones or deliverables.

To help you deal with such challenges, knowledge bases, documentation, and forums are the first line of support – free resources that are only a few clicks away. An issue tracker, with a collection of logs from actual support incidents, is invaluable. After that, free and paid options range from standard support calls to year-long engagements that can do a deep dive into any operational issues that your studio may face. What's important for you is the development platform's reputation for support quality and responsiveness, and, as with evaluating learning resources, the best way to reveal the best companies is to simply ask your friends and go online to forums and social media.

The costs of support are relative. You may be confident in your own skills, but if you've got a team, do you have time to mentor/coach others? How much money are you losing when you're troubleshooting issues rather than working on your game? Check for tiered levels of support that scale to your needs, now and as you grow.

Proactive support and guidance, however, can take your development efforts to another level. Can the platform's team reach out with advice on technical implementations? Are there resources where you can offload difficult, time-consuming chunks of work? Do you have access to experienced engineers, including some who've actually developed the platform's code base? If not, is there a plan in place to train your staff so they can evolve their skills as you scale your business?

Visit the website and find out what kinds of customer success resources and professional services a platform offers. You may not need these kinds of services now, but you'll want to build a relationship with the people behind your platform. Remember that

the best software is customer driven – it's built in conjunction with developers listening and working directly with people like you.

Scalable support options for every developer and studio

From extensive free, online resources to paid plans and premium services, Unity is committed to every stage of your success – whether you're a sole proprietor coding at your kitchen table or a burgeoning indie breaking into the big time.

- A Unity Pro subscription, in addition to providing multiplatform deployment capabilities, provides direct 1:1 engagement with a Partner Advisor to identify risks, coordinate and advocate with internal teams, source answers to questions, and provide assistance with Customer Service requests.
- Success Plans help you push your creativity further, from straightforward technical support to strategic guidance and in-depth engineering reviews.
- Consulting engagements help you achieve your most ambitious goals, from optimizing visual fidelity and performance to scaling your success.

4. KEEPING YOUR PLAYERS HAPPY

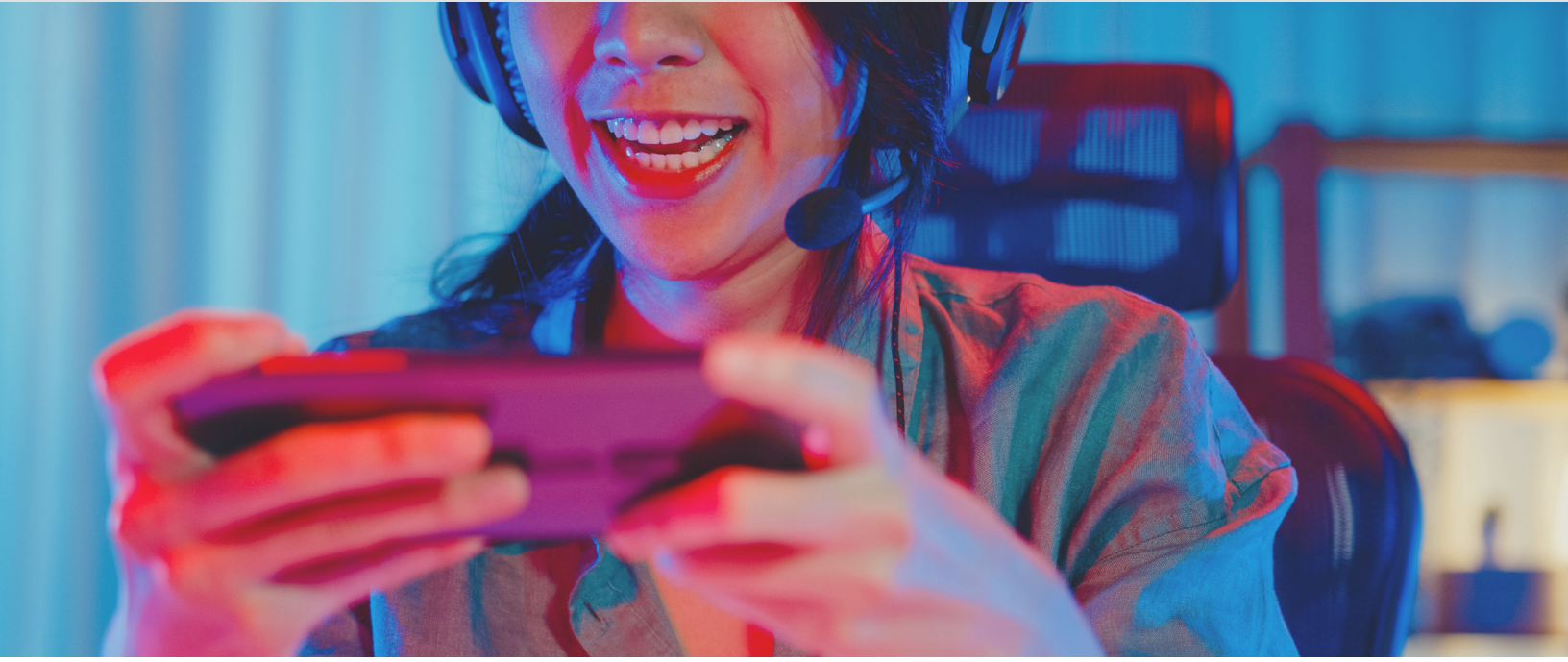
Make data-driven decisions and build communities

You've worked hard to build something that you hope people will enjoy and share with friends. But it can be hard to know if you've hit the mark so your players stick around. With mobile games, you can lose players easily – but you can also have more chances to make changes to your game with the goal of pulling people back in.

If you want to be able to make the right decisions about your game, you need to be able to make those choices based on data that you've collected and experiments you've run with your players. Whether it's game difficulty, the tutorial and onboarding flow, or your game economy, using data to see and understand player behavior is the key to building a game they will love.

Player engagement goes further than just running experiments and using analytics tools. People often forget how powerful community building can be, but adding social and competitive aspects can increase play times and engagements. A friends list, a leaderboard, or limited-duration in-game events are some basic ways to keep your players engaged.

There are other things you can do, too: Sending your players reminders about the game (upcoming events, rewards, item readiness) can help pull them back in if they've lapsed. A more proactive approach is to let your community build its own content, like new items or levels, that they can add to your game.



Adding player communications is the most powerful way to help build a community. Enabling your players to speak, write messages, or leave emoji-style reactions to one another are excellent options to consider. The most important thing to remember when it comes to communities is that your players need to feel safe from toxic behavior before they will engage, so spend time thinking about how you will handle that.

Determine what works for your game and players

Today, running a successful mobile game relies on data that helps studios make informed and accurate decisions about their development. Even with a small current player base, your game could explode into the millions, and you need to be ready to understand those players and keep them engaged.

Unity Gaming Services (UGS) is a platform of backend and live ops products trusted by world-class studios to support some of the most successful mobile games. From dev ops to live ops, including multiplayer hosting and community building solutions, you're covered. And it's free to start.

- Take a free course on Unity Analytics to learn how to collect and use data from your game
- Learn how to run A/B tests in your game with Analytics and Game Overrides
- Check out community building and management solutions to see what will fit your game
- Watch this webinar on how to add User Generated Content to your game

5. DRIVING REVENUE FROM THE START

Finding your players

Acquiring users means advertising, whether it's via app store optimization, word of mouth, or a paid advertising campaign. But how do you identify the right audience? Is your user acquisition strategy right for your game? How do you easily evaluate opportunities and manage your transactions?

Knowing who your players are and identifying where they are most active (such as social media or forums) is a great place to start. Prioritizing App Store Optimization (ASO) by improving your game title, keywords, and descriptions can help with discoverability, as can creating a visually appealing listing and creatives for your game.

If you have a budget to support user acquisition, there are different campaigns that can be set up to help gain new users. Performance campaigns allow you to reach new users while maintaining a profitable return on ad spend, otherwise known as Return On Ad Spend (ROAS). Engagement campaigns are geared towards retaining your acquired players to help support player lifetime value (LTV). Scale campaigns target ideal customer profiles (ICPs) using parameter tracking to increase high-value installs. All of these campaign types aim to help find new players for your game while keeping them engaged.

Plan how you will monetize your hard work

While there are still paid mobile games on the market, the majority of developers make their games free to play and generate revenue by monetizing their players in-game. In-app advertising (IAA) such as rewarded videos, banners, and interstitial ads, and in-app purchases (IAPs) are the two top methods for monetization. Rewarded videos allow players to gain something valuable that helps progression in the game, such as an extra life or points in exchange for watching. IAPs give players the option to purchase items within the game, such as additional game modes, power-ups, or in-game currency.

Monetization strategies vary depending on your game genre. If your game is more hypercasual (like an arcade or word game), then IAA is generally the primary model used. If your game is more strategy-based (like roleplaying or action), then IAPs such as advanced levels make more sense and enhance gameplay. Depending on your genre, certain ad units typically work better than others.

A crucial element of monetization strategy is seamlessly integrating revenue touchpoints into gameplay. This means that ad placements and IAP opportunities are often most effective when implemented during game development rather than after core gameplay has already been determined. In the *2023 Gaming Report*, we shared that 70% of studios implement monetization packages within the first 30 days of development. Integrating monetization strategy at an early stage can help have an impact on how you scale, since you can get learnings sooner in the process.

In addition to development and workflow, it's always good to know about the associated tools offered by a development platform to help manage and grow your revenue over time. This may include dashboards for reporting, controls for setting your prices, transparency in the types of ads shown in your game, and analytics to guide future decisions. While there are third-party tools to manage these aspects apart from your development platform, operating them on the same platform where you build your game can save a lot of time and ensure technical stability.

Easy integration for seamless experiences

To help you maximize revenues while delivering a great player experience, flexible monetization capabilities are built directly into Unity's Grow solution. For IAA, download the Advertisement Legacy package directly from the Unity Editor to receive bids for your ad space from advertisers integrated with the Unity Ads network.

When you're ready to scale your game growth, mediation is an excellent tool to increase competition for your ad space from different ad networks. The Unity LevelPlay mediation solution enables you to work with multiple ad networks to maximize the value of your advertising supply. LevelPlay also reduces the manual work of optimization by automating ad network management. Games can integrate the Ads Mediation package directly from the Unity Editor to increase revenue opportunities.

For easy IAP integration, The Unity IAP package sets up in-app purchases across multiple industry-leading app stores from a single SDK. With just a few lines of code, you can fully understand and optimize your in-game economy.

In addition:

- Unity Analytics lets you discover important player insights. It's natively integrated with Unity, so there's no SDK to worry about.

- Economy helps you design and build a customized in-game economy and offer your players seamless purchases, currency conversions, and more.

CONCLUSION

Why develop a mobile game today?

There's quite a lot to know to successfully create, operate, and monetize mobile games. And unless you're a big studio with experienced staff in every department, there will be gaps in your expertise or in your headcount that risk causing delays and inefficiencies. That's why choosing the right game development platform is so crucially important. The engine and the team behind it can fill those gaps with untold years of collective experience.

We've looked into finding the right:

- Capabilities for the types of games you're targeting
- Learning resources to help you get the most from your tools
- Support for when you need extra help
- Tools for optimizing player acquisition, engagement, and retention
- Monetization resources to generate a revenue stream

Taking all these factors into consideration, it should be clear that you need a mobile game development platform that's more than just an engine. You'll want a whole ecosystem of tools, support, and a community that gives you all the resources you and your studio require to succeed in all your game-development efforts.

GO MOBILE WITH UNITY PRO

Unity powers over 70% of the world's top mobile games. Get robust creation tools for building standout experiences and an ecosystem of solutions to manage your game post-release.

Try Unity Pro for free, or contact an expert to learn how to access support at any stage of your game development – from engineering advice and game server hosting to voice comms, ads, and much more.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