



Going mobile? Top 5 considerations for choosing a game engine

Increase your odds of success when building,
marketing, and operating your game.

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Introduction

Why develop a mobile game now?

Mobile games are the largest segment in gaming, and in the past decade have become integral parts of most people's lives in all demographics. They account for more than 72% of all app store revenue¹ and surpassed \$100B in 2020 app store sales². Seniors are playing bridge with remote partners, toddlers are playing with virtual blocks, and abundant markets beckon savvy developers in every game genre.

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. For example, two years ago, the smartphone version of Fortnite generated nearly \$2M/day³ in the Apple App Store alone. *Harry Potter: Wizards Unite*, and *Pokémon GO* are just the start of a fast-growing augmented reality (AR) segment. What's more, as the nearly limitless bandwidth of 5G rolls out, VR revenues are likely to surpass the most optimistic expectations.

Simply put, it's a great time to be a mobile game developer. And whether you're a student turning a school project into an income or an established indie trying to attain a AAA look-and-feel, your choice of a development platform will make all the difference in crafting 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. **A platform that's right for you** – determining the most important tools for now and later
2. **The right resources to get started** – making sure you can get the most from your tools
3. **Getting help when you need it** – ensuring you have access to the right level of support

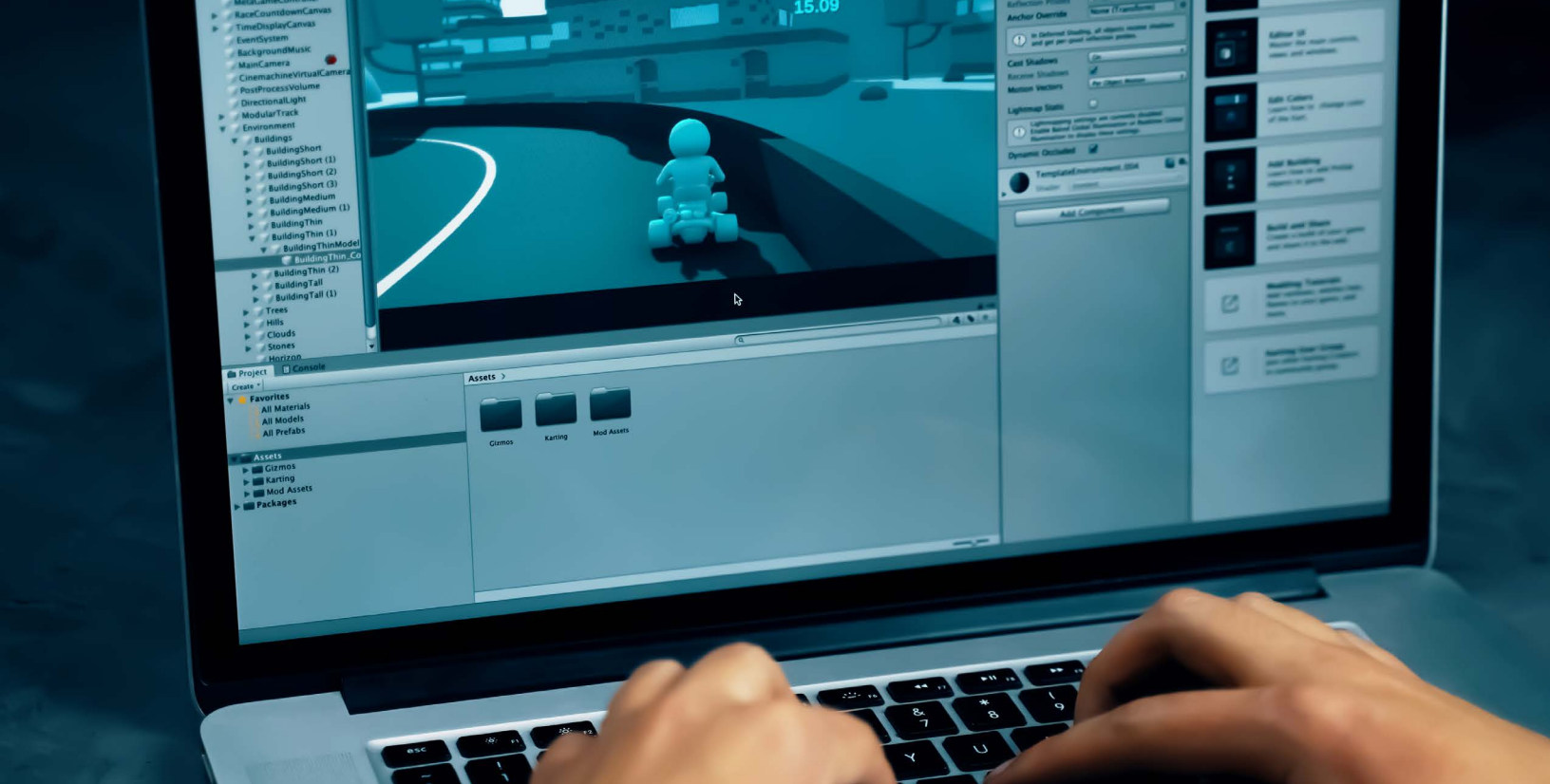
“In life, as in game design, you have to find the fun. There is joy out there waiting to be discovered, but it might not be where you expected. Take action as quickly and repeatedly as possible, take advantage of what you already know, and take liberties with tradition. But most importantly, take the time to appreciate the possibilities, and make sure all of your decisions are interesting ones.”

— Sid Meier, Sid Meier's Memoir!: A Life in Computer Games

1. hookedontech.com/most-popular-mobile-apps-and-games-worldwide-march-2020

2. sensortower.com/blog/app-revenue-christmas-2020

3. wepc.com/news/video-game-statistics/#mobile-gaming



4. **Finding players and keeping them** – setting up acquisition, engagement, and retention strategies
5. **Revenue from the start** – having 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 may 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.

1—

A platform that's right for you

"A good tool improves the way you work. A great tool improves the way you think."

– Jeff Duntemann, programmer and sci-fi writer

Features you need now and capabilities you'll want tomorrow

One of the most important considerations when choosing the right engine for your game is the tools it offers you for both the game you want to make today, as well as what you'll be creating down the road. Even the game you currently have in mind is most likely much simpler than what you end up building and, as you move into development, it's inevitable that you will think up additional twists and turns, features and levels, and generally spice up the gameplay.

Likewise, as a game developer your skills and your 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 the ability to prototype quickly to eliminate ideas that don't work and let those that do spark new iterations. If you're thinking about



The Chinese Room chose Unity for Little Orpheus thanks to its quick prototyping abilities and wealth of artist tools.

integrating some ads and uploading to an app store, you'll probably soon be looking at myriad other opportunities for monetization.

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 but 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 the code. Will your toolset support these various rendering and platform needs?
- **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** – You'll want a platform that adapts 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 the functionality you need?

A powerful yet intuitive toolset

Unity for mobile gaming gives you a comprehensive feature set that you'll succeed with the first time you use it. It's easy to create [prototypes](#) and [iterate](#) 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

2—

The right resources to get started

“One learns from books and examples only that certain things can be done. Actual learning requires that you do those things.”

– Frank Herbert

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 do thousands of different things, 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



A considerable pool of Unity developers, as well as the Asset Store, have proven to be valuable resources for Playkot in developing their mobile games.

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 an important resource to avoid reinventing the wheel and help 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 creator success means not only providing a powerful development platform but also providing abundant ways for creators to learn how to use it. Unity's dedication to this vision is shown by:

- Extensive, easy-to-understand [documentation](#) and online tutorials
- [Unity Learn](#) – live sessions and over 750 hours of free, beginner-to-advanced learning resources
- [Training workshops](#) with certified Unity instructors
- Unity-approved content featured on partner platforms like Coursera, Udemy, Pluralsight, and Pathstream
- An enthusiastic, global developer community active in nearly 50 [Unity-hosted forums](#)

3 —

Getting help when you need it

“Software innovation, like almost every other kind of innovation, requires the ability to collaborate and share ideas with other people, and to sit down and talk with customers and get their feedback and understand their needs.”

– Bill Gates

Support isn't just about processing tickets

In game development there will always be moments where you encounter 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

Choose an engine that can support your needs as you scale. Playspace uses Professional Training to support and upskill their team as their production needs grow.



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 efficiencies 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 not need any hand-holding at all, 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 an entirely higher 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 AAAs.

- A [Unity Pro](#) subscription, in addition to providing cloud diagnostics and monetization tools, lets you skip the lines with priority access to Unity specialists and customer service.
- [Core Support](#) ensures timely technical support with guaranteed response times and an assigned support coordinator.
- [Success Plans](#) add two-hour emergency response times, in-depth project reviews, a dedicated Developer Relations Manager (DRM), and much more.
- [Professional Services](#) let Unity experts assist at any stage of production to help reduce risk and accelerate development.
- [Professional Training](#) gives you access to Unity-certified instructors and courses so your team has the skills to grow alongside your studio.

4 —

Finding players and keeping them

“Business has only two functions – marketing and innovation.”

– Milan Kundera

Sales and marketing are always part of the game

If you want others to enjoy your creativity and you want to succeed as a business, player acquisition, engagement, and retention strategies have to be an integral part of your plan. But there's building a game, and there's playing the game of marketing and selling it – and these skill sets don't always overlap. That's why many developers offload the business end of the game entirely by finding a publisher or partnering with marketing and salespeople who can focus on these tasks.

However, with the cloud, machine learning, and the right development platform, one developer or a small indie studio can use powerful sales and marketing tools



To expand their audience and push their titles into app stores worldwide, Animoca relies on the Unity Distribution Portal (UDP).

in-house without taking away from their primary focus: creating awesome gameplay.

- Acquiring users means advertising, whether it's via word of mouth or a massive ad campaign. The questions are, how do you identify the right audience for your game? Is your user acquisition strategy right for your game? How do you easily evaluate opportunities and manage your transactions?
- Engaging players over time isn't easy even if you've just created a game that could one day be a household name. But you can consistently build long-term relationships by leveraging the data in your game to perfect a user's gameplay experience. For example, you can A/B test game situations as well as different purchase offers. If a player is obviously succeeding, you can decrease helpful tips. "Leveraging data" is, however, easier said than done. The trick is to find a tool that makes it easy to learn how your players behave in the game and apply those learnings effectively.
- Retention is tough with any product, but with mobile games, customer loyalty is often measured in hours. Avoiding churn typically takes a combination of engaging content, rewards, and incentives, and finding the right balance isn't easy. Onboarding with a bang, designing for early player success, boosting morale, and other techniques are both art and science. Fortunately, this expertise is out there and, with the right development platform, quick to integrate.

Stick with what you're good at

Today, acquisition, engagement, and retention strategies for mobile games depend on big data analytics. Your user base may now be small or imaginary, but your target market – the number of players worldwide – is in the billions. And the data concerning their spending, preferences, and behavior is far more than most studios, even a AAA, can leverage efficiently.

Unity offers a number of resources that help emerging developers find the right users and keep them engaged. Its advertising exchange alone accesses over 2.5 billion unique users each month across 295,000+ apps globally.

- [Take a free course](#) in ad monetization and user acquisition for mobile games.
- [Integrate Unity Analytics](#) to understand what your players are doing in-game.
- [Learn how](#) you can take the next step to manage your whole engagement strategy in one place with deltaDNA.
- [Browse through](#) different solutions for reaching your audience.

5 —

Revenue from the start

“Don’t just create art to make money. Make money so you can create more art.”

— Richie Norton, entrepreneur and author

Plan how you will monetize your hard work

While there are still many paid mobile games on the market, the majority of developers make their games free to play and make money by monetizing their players in-game. Rewarded ads and in-app purchases (IAPs) are the two top methods for monetization. With rewarded ads, players can choose to watch an ad in exchange for something in the game. With IAPs, you give players the option to purchase items within the game such as additional game modes, power-ups or in-game currency. Integrating the transaction capability can be done either manually or with a capability that’s part of your development platform.

One of the most overlooked aspects of monetization strategy is integrating



DeltaDNA's capabilities helped Greener Grass test and fine-tune their monetization mix for increased revenue.

revenue touchpoints seamlessly into gameplay. This means that ad placements and IAP opportunities are often most effective when implemented during game development rather than after the core gameplay has already been determined. Ensuring your platform makes it easy to set up monetization early in your development process will save you a lot of time and ultimately can result in a better experience for your players.

In addition to development and workflow, it is 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 develop your game can save a lot of time and ensure technical stability.

Look for monetization tools that are part of the platform

To help you maximize revenues while delivering a great player experience, flexible monetization capabilities are built directly into the Unity platform. For rewarded ads, the [Unity Ads SDKs](#) for mobile games (and other apps) add tools and analytics that help you consistently increase daily users and players' lifetime value (LTV). The [Unity IAP](#) package sets up in-app purchases across multiple app stores using a common API to access all stores for free. 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.
- [deltaDNA](#) is an advanced tool that helps you build intelligent, long-term relationships with players using personalized engagement.
- [Adjust](#), a Verified Solutions Partner, provides measurement, cybersecurity, fraud prevention, and campaign automation features to make marketing simpler, smarter, and more secure.

Conclusion

To successfully create, operate, and monetize mobile games, there's quite a lot to know. And unless you're a AAA studio with experienced staff in every department, there will be gaps in your expertise or in your headcount that will cause delays and inefficiencies. That's why choosing the right game development platform is so crucially important. The platform, 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 acquisition, engagement, and retention of players
- Monetization resources for quickly generating 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.



Create like a pro

Unity is here to help you with [tools and services](#) to make sure you are supported throughout your game development journey, from concept to commercialization. If you're ready to dive in deeper, you can get started with [Unity Pro](#) today or [talk to one of our experts](#) to learn all the ways we can assist you.



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