

A Comprehensive Guide to Mobile App Development

No comments



Investing in a mobile app is a golden opportunity for businesses in today's digital transformation-driven era. According to Google Play, 27.6 billion apps were downloaded from the app store in the third quarter of 2021, while 8.1 billion apps were downloaded from the Apple App Store in the third quarter. Most of the world's population already prefers mobile apps as their preferred touchpoint, so not supporting a mobile app is not a big mistake despite the high level of competition for a new entrant.

What is mobile application development?

The process of developing applications for small, wireless computing devices, such as smartphones and other hand-held devices, is called mobile application development. Mobile application development, like web application development, is derived from traditional software development. However, mobile apps tend to be written to take advantage of the unique features of specific mobile devices. For example, an app for gaming might use the iPhone's accelerometer, while an app for health might use the smartwatch's temperature sensor. In today's world, iOS and

Android are the two most popular mobile platforms. Apple phones and tablets include essential applications, such as a web browser and Apple App Store. Android devices also come preloaded with similar applications, and you can install more using the Google Play Store.

Importance of Mobile App Development

There's no denying that mobile users outnumber desktop users. Consequently, businesses have realized they need to follow the mobile strategy to maintain a competitive edge. Currently, we live in a digital era of mobile apps. Whether it is a large enterprise or a small business, mobile apps have become an essential component of business success. A well-developed mobile app has the power to expand the brand reach and, thus, boost the Return On Investment (ROI) of the brand. Apps not only represent brands to attract customers but also change the way businesses run.

Developing a mobile app for your business has the following significant advantages:

- 1- By attracting the attention of your users, you can create brand recognition.
- 2- Engage your customers by being visible all the time.
- 3- Your brand will be more loyal to your customers if you provide them with value.
- 4- Improves customer experience by providing quick and instant access to business information.
- 5- Allows you to leverage a direct & personalized marketing channel.

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Types of mobile applications

A mobile app development company may ask you what kind of app you would like: native, hybrid, or web. Listed below are the three basic types of mobile apps. Perhaps you don't know these types of apps or wish to learn more about their benefits. So, let's take a look at them.

1- Native applications:

Native applications are developed using integrated development environments (IDEs) and languages for mobile platforms like Apple iOS and Google Android. Native apps can be more expensive than other technologies. However, they allow for the customization of necessary features. The popular apps based on native applications are WhatsApp, Spotify, and Waze.

Pros:

High-performing apps provide users with a fast, responsive experience. Easy access to all device features, such as GPS, camera, compass, microphone, accelerometer, etc. As native apps maintain the UI design of each operating system, they provide a superior user experience. Provides users with reliable data protection through various layers of operating systems. It is less likely that bugs will occur.

Cons:

Developing and maintaining the app is relatively expensive and time-consuming. Each platform requires its codebase.

2- Hybrid apps:

A hybrid application is a web application that acts like a native application. It is developed using HTML, JavaScript, and CSS. Compared to native apps, hybrid apps are more cost-effective and faster to develop, but they lack the same level of functionality. The popular apps based on Hybrid applications are Gmail, JustWatch, and Evernote.

Pros:

It allows you to write only one codebase and deploy it across multiple platforms. One codebase means fewer development costs and time. Takes advantage of a few device features. Because CSS, HTML, and JavaScript are used, it is easy to find developers. Seamless integration with other apps. Providing native experience while keeping the backend simple.

Cons:

Compared to native apps, the performance and the transition between pages are slow. To develop cross-platform apps, you must exploit the platforms' capabilities to their full potential.

3- Progressive web apps:

The purpose of a Progressive Web App is to make a website look and behave as if it was a mobile application. Such applications are developed using web technologies, such as Facebook React. The popular apps based on Progressive web applications are Slack, Google Docs, and MakeMyTrip.

Pros:

Compared to native or hybrid apps, there is no need to download or install. One codebase can run on different platforms, making maintenance easy. Every device receives updates/patches remotely. Apps are launched extremely quickly since app store approval is not required. Provides support for multiple platforms and operating systems. Allows apps to be monetized easily.

Cons:

Due to its direct link to our browser, it operates relatively slower. To run the app, you must always have a reliable internet connection.

Mobile App Failure: Are You Learning From Your Mistakes?

According to a report, 68.07% of android apps failed to pass the 1000 downloads mark. This suggests that while global mobile app revenues continue to grow, a good chunk of mobile apps and endeavors still don't pan outright. The challenge is to catch mistakes in the development of mobile apps that failed and learn from them. In this article, we'll explore the 5 most common reasons for mobile apps failure.

1- Lack of Originality

Just duplicating the competitor's app and hoping for the best is unlikely that your app will succeed, but it is likely that your app will oversaturate the app store. You need to provide a unique value proposition (UVP) through your app to survive in this hyper-competitive world of mobile apps.

2- Poor User Experience

The user interface and user experience of mobile apps have become a more important factors in deciding whether the audience will welcome the app or ignore it. So, you need to pay attention to the user experience of your app to make it interactive, acquainted able, and comfortable for the users.

3- Complex to Use

The truth is with too many or too few features in your app, trust me you're going to make your app complex which will, in turn, confuse and frustrate your users. Get into the shoes of your target audience to decide the right amount of necessary features to bring in a picture and you will see the audience leaning towards your app.

4- Monetization Strategy

Nothing worthwhile ever comes easy. The only way to get thousands of regular customers and avoid your app failing financially is by doing proper research, choosing the right monetization option, and creating a viable monetization strategy for your app. Also, before developing the app, consider developing and following an effective marketing strategy to make people notice and realize the presence of your app.

5- Not Conducting Proper Testing

It's like if you perform a fair amount of testing of your app ensuring there are no major issues and your app is market-ready, you'll be avoiding bugs and crashing of your app. As the QA of an app is so complex that it's very rare that apps will get launched without any bugs at all, you need to do thorough testing of your app.

What is the mobile app development process?

You can develop an app framework using the following steps.

1. Your strategy should be based on the following questions:

- a) What is the purpose of your app? How will it solve problems?
- b) Exist any apps that perform this function? What makes them successful? Is there anything they lack?
- c) Are you planning to hire developers, or will you use an internal team?
- d) Do you have a business model?
- e) How much would you be willing to invest if you were to develop this app? Is there a possibility of investors?
- f) When will this application be built?
- g) How do you plan to market your products?
- h) Do you plan to submit your app to an app store? Have you obtained the necessary licensing agreements and tested and designed your product?

2- Choose your team.

If you're creating the app independently, will you need a developer? Do you need a marketer? Will multiple departments

(i.e., C-level, marketing, sales, IT) be involved in the process if you're creating this app for your organization?

3- Rough draft of your mobile app's features and functions

Create a rough draft of your mobile app's features and functions based on your identified problems. The prototyping process can be as simple as sketching ideas on a whiteboard or using tools such as InVision, Balsamiq, or Adobe Experience Design. When developing your vision, consider the user experience, including design, usability, security, and performance.

4- product roadmap

Organize your deliverables by creating a product roadmap based on your findings from step 1.

5- Decide which app development tools to use based on your needs.

6- App Development

Start developing the app with an agile process. Adopt a DevOps mindset when building the app. DevOps is a modern method of delivering apps that includes key features such as:

- 1- Automating whenever possible.
- 2- The use of cloud services.
- 3- Utilizing open source tools.
- 4- Communicating frequently with the team.
- 5- Testing the code continuously.

7- prototype Development

Develop your prototype to show it to potential investors and other stakeholders. Use their feedback to refine the app and further test it. This includes checking functionality, performance, and ease of navigation.

8- Test App

After the app passes these tests, it's time for users to test it in official beta mode. This involves multiple rounds of

review and incorporating user fixes before a deployable app is created. It is ready for deployment when your app has passed all required testing and review. At this point, provide continuous support and gather feedback from your users.

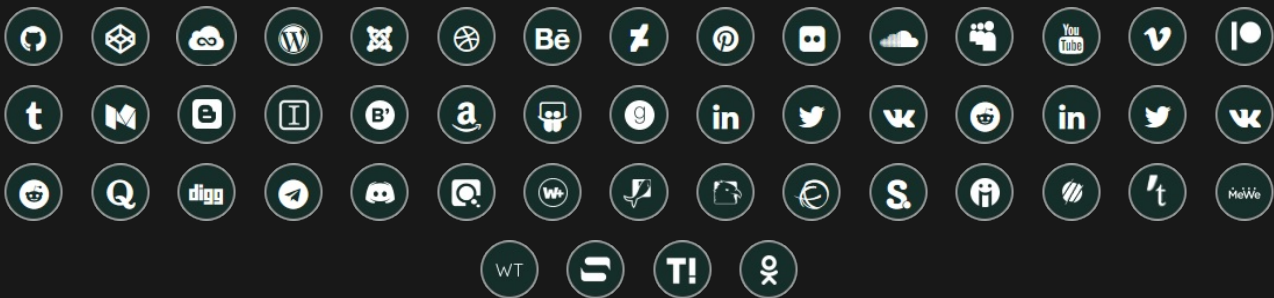
To Sum Up

A mobile app enables businesses to interact directly with their customers, creating a seamless and persistent connection. This is crucial for cultivating customer loyalty. Mobile apps can create a genuine and sincere connection with customers. The importance of mobile app development, their types, and the process in this article can make customers loyal to your brand.

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