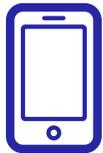


Why You Need a Mobile App for Business

According to experts, by next year smartphones will become 6 times more popular than computers.

Business apps can be divided into two groups:



Mobile software
for internal
corporate needs



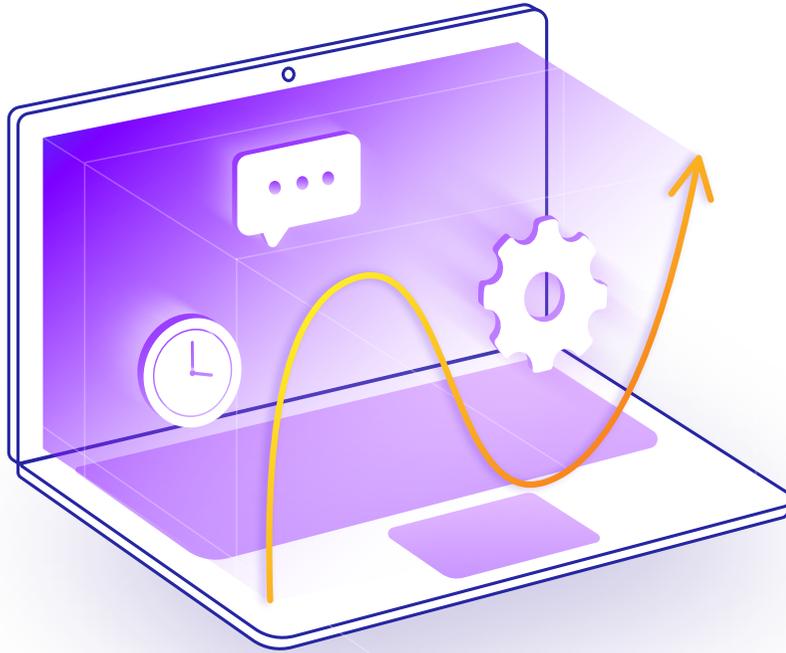
Applications for external purposes, like sales,
marketing, branding, etc

Useful links about mobile application development:

<https://magora-systems.com/best-mobile-business-apps/>

<https://magora-systems.com/mobile-application-developers-london/>

<https://magora-systems.com/mobile-app-benefits/>

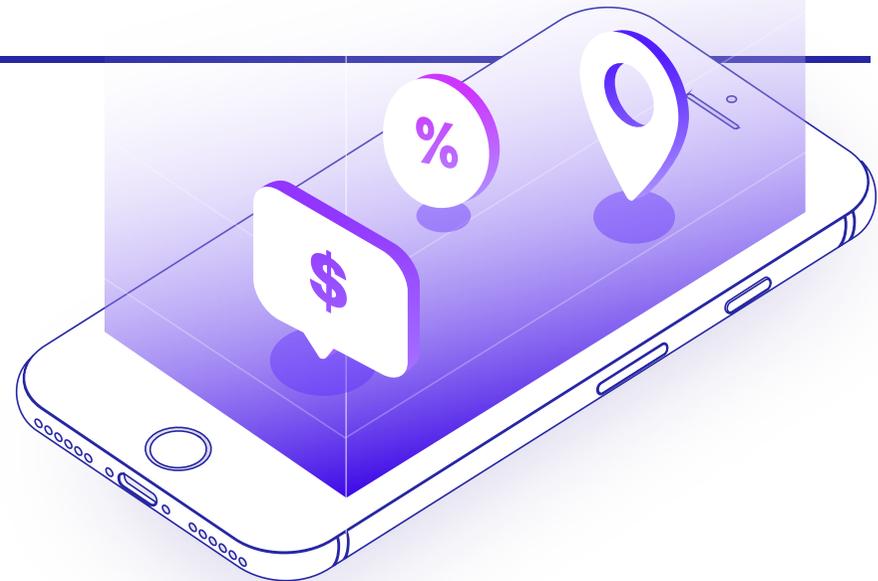


The most popular types of internal business applications:

- Business apps automation (automation of daily routine operations, statistics and reporting, for monitoring of efficiency).
- Applications to increase productivity and improve collaboration: allow you to share files and work with them;
- Simplify internal communication (messaging, trackers);
- Mobile versions of corporate social networks;
- Project management systems.

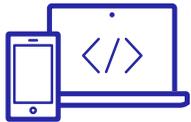
Client mobile programs to advance your business:

- Ticketing apps and delivery status trackers;
- Internet banking and payment kiosks;
- Promo-apps and loyalty software programs
Routers and guides, etc.



Types of Mobile Apps in a Technical Sense

Regardless of the purpose of your app, there are several ways to get it done. Each has pros and cons and should be considered separately depending on your needs and resources.



Native Application Development

For example, to create an app for iOS, you should download and install the iOS SDK and development tools, and write the code in the Objective-C or Swift programming language. Android applications are developed using the Android SDK and written in Java. Thus, to create a native app, you need to know the platform SDK and use a supported programming language.



Web Applications

Web applications, downloaded to a mobile web browser, differ from native ones in their code - it is written using web technologies (HTML, JavaScript, and CSS) that are independent of the operating system. To launch a web app, users enter a URL into the mobile web browser. After that, the web page, the entry point to the web application, is loaded. Web apps are not distributed through app stores; they are normal links which can be included in other web pages, e-mails or even written on paper.



Hybrid Applications

Hybrid apps try to combine the benefits of both types of mobile programs. Hybrid applications, like web apps, are programmed using web technologies, but are packaged as native ones. A hybrid app can be written for several mobile operating systems using a programming language familiar to many developers. Since a hybrid app is actually built-in, you get access to the device functions from JavaScript, which is not yet available for web applications. Hybrid programs can be distributed and installed through app stores, like native software.

Native and Cross-Platform Development Tools

Regardless of the purpose of your app, there are several ways to get it done. Each has pros and cons and should be considered separately depending on your needs and resources.



The app development environment is a special set of tools designed for the most convenient code writing, interface design, debugging, and operation monitoring.

"Native" development tools are provided by the owners of the mobile environment and allow you to get the most from the capabilities of the target operating system, full access to native APIs, optimum performance, but also require a separate development team for each platform.

Programmers use the original programming languages and tools of the mobile operating system:

- Development of iOS apps is carried out in the Xcode environment integrated into OS X and iOS, in Objective-C, Swift, C and C ++.
- Android apps are developed using Android Studio and the Java language.
- Cross-platform frameworks allow to reduce labor costs and accelerate the release of software in case you need your software to support multiple platforms simultaneously. In the long run, cross-platform solutions can save a great deal of man-hours, but for this, you should take into account the features of the selected tool.

Learn more about cross-platform apps:

<https://magora-systems.com/developing-cross-platform-apps/>

Why Your Business Requires Native Development

Native development has a solid list of considerable advantages, such as:



Speed

The compiled code is optimal for the native platform. An app receives full hardware support and uses multithreading for complex tasks. During the mobile app development programmers can measure the speed of all parts of the code and, if necessary, optimise them;



Flexibility in implementation

Native development uses all the capabilities of the mobile operating system;



Support from the App Store and Google Play

Apple and Google set high requirements on the quality of apps in the stores. They are interested in getting the most positive experience for users. The app should be beautiful, convenient and working fast. You will never get approval for placement in special advertising sections (Featured) with a cross-platform application, except for gaming apps.



New software and hardware functionality

Available for implementation immediately after the update release.

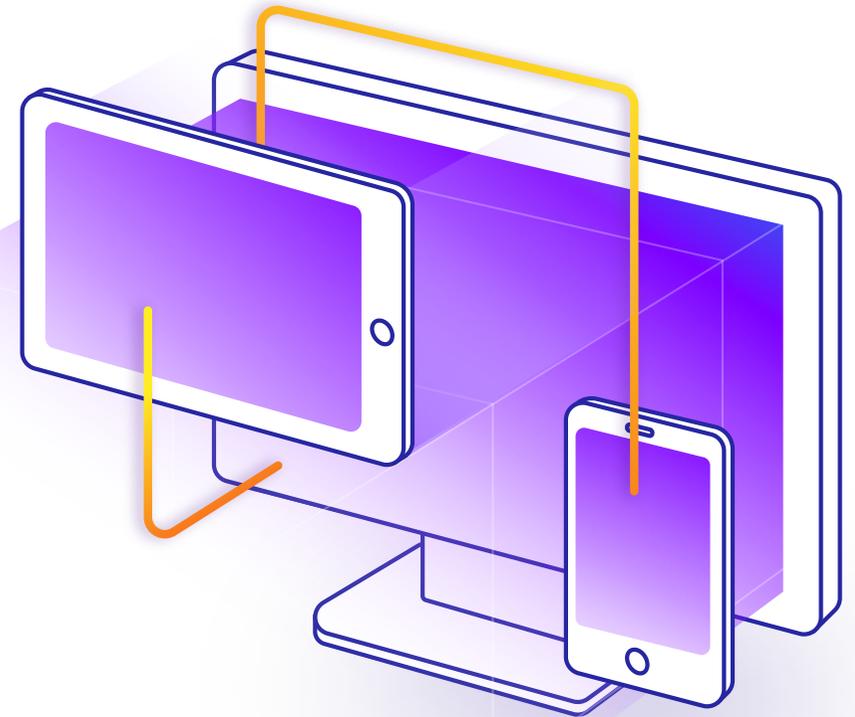


Simplicity of testing

Developers and testers have at their disposal a whole set of technologies which help to control all system parameters. For example, if your app begins to use more memory or CPU resources. In native development, there are ample opportunities for automatic testing. If any part of the app stops working correctly after the code changes, the programmer will immediately see the reason and fix the problem. Native projects has the built-in remote error monitoring functionality, which allows you to see the error and its cause on the user's device.

Grow Fast with Cross-Platform Frameworks

Due to the fragmentation of mobile devices, for most organizations, it becomes economically impossible to create apps for all mobile platforms using the Native SDK. Cross-platform frameworks make a rescue allowing you to develop mobile software using standard HTML5/JS/CSS3/C# web technologies.



Mobile framework is a frame of the software system (or subsystems). It can include auxiliary programs, code libraries, scripting language and other utilities which facilitate the development and integration of various components of a large software project.

All frameworks can be divided into two groups:

HTML5 frameworks

That allow you to create web applications using HTML, CSS, Javascript. These technologies provide a large coverage of the audience (browsers exist on almost every mobile device). Programs use a single code base and are cheap to develop;

Other frameworks, for example, Xamarin

It uses the programming language C#, which is famous for its cross-platform compatibility, but the graphical interface for each platform should be developed separately.

In spite of the apparent convenience and flexibility of cross-platform solutions, they are still not so popular due to:

- Slow and buggy software operation;
- Incapacity of using unique platform features;
- Unusual and perplexing interface.

PRO Testing Vs. Mobile Variables

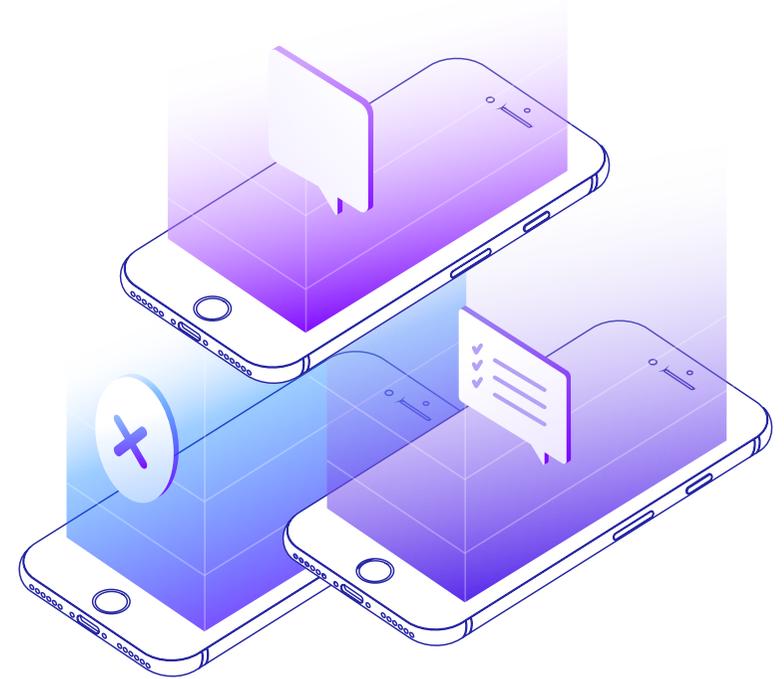
In mobile software testing, there is an obvious difficulty - a myriad of platforms and devices. You can try to count the number of combinations of such variables as OS (Android, iOS, Windows Phone), OS version, screen resolution and sizes, battery capacity, operator, number of SIM cards, presence or absence of WiFi, etc.

Mobile application testers face such challenges every day.

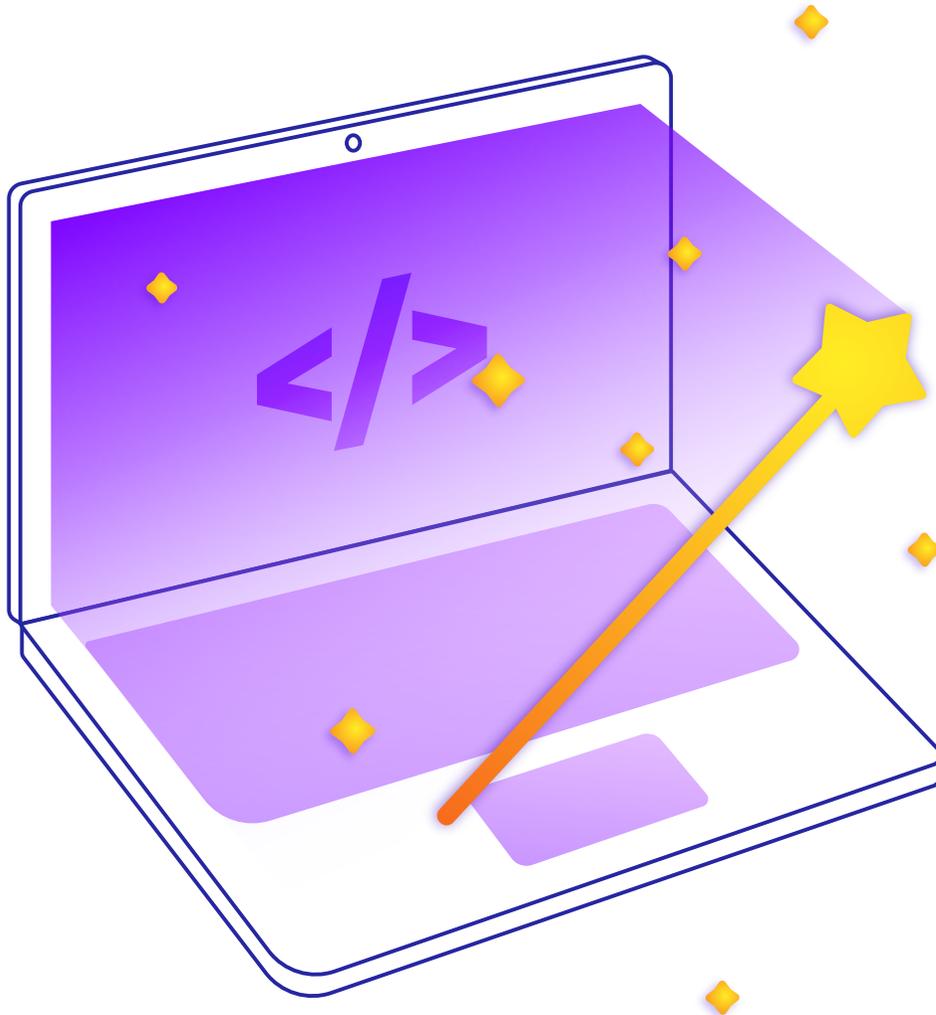
Here are just some of them:

- Installation
- Bug control
- Taking screenshots and videos
- Interface evaluation
- Performance metrics gathering
- Emulation of various interruptions (calls, SMS, device disconnection due to a low battery)
- Modeling of different communication levels

In terms of appearance - there are special guides that describe how a program should look on an OS. For example, for Apple Store and Google Play, when you publish software, you test the appearance for compliance with the guidelines.



Add Some IT Magic: Emulators, Simulators and Remote Debugging



Emulators and simulators are a set of tools that allow you to receive meaningful data from any mobile device and easily test the performance of mobile software on different platforms.

- *Google Android Emulator - an Android emulator that is patched to run on Windows.*
- *The official Android SDK Emulator - a mobile emulator that mimics all of the hardware and software features of a typical mobile device.*
- *iPhone - gives a pixel-perfect web browsing environment powered by Safari. It can be used while developing web sites for the iPhone. iPhone will run on OSX 10.4.7 or later.*

App Stores: Entering the New Arena

App stores are the platforms for software distribution. Apple Store is the only one officially working for iOS; all other app stores are for Android or other mobile platforms. The app store means not only the placement of programs but also the organization of search, categorization, fencing, storage of reviews and ratings. However, when your product is delivered to the store, there is still much work to be done.

Read more about the way, how to develop your mobile app after launch:

<https://magora-systems.com/infographics-app-development-post-launch-activity/>

Increase Conversion with Mobile Deep Linking

A good way to increase conversion when promoting an IT product is to make it easier for users to reach the desired goal. In development, this problem is even more urgent. When using e-mail, push or sms mailings with info about promotions, simplification of access to the functionality of your app is a must.

Launching an application from an external source is not a solution, because a promo action is a special offer in a separate section. To ensure that the user does not have to roam around on the app after it is launched - to frustratedly search around - an additional tool that predetermines navigation is needed. Get in touch with Magora team to create your own system to gain competitive advantages in mobile world.