IONIC Evaluation Guide

Tackling Enterprise App Development with Ionic

Traditional app development is full of problems and limitations — from talent shortages to project silos and split codebases — that slow down the development process and limit what businesses are capable of creating. Ionic offers a new approach.

ionicframework.com/resources

EVALUATION GUIDE

Architects, senior developers, and executives tasked with managing app development need solutions that can accommodate their every need—while also simplifying and streamlining the development process.

This is not as easy as it sounds.

In February 2020, the Iowa caucus app development fiasco showed the problems that can arise from delivering a mobile app without the appropriate support. While our view of the post-pandemic world is still somewhat murky, one of the few certainties is that it will have a lasting impact on how people work moving forward. What we do know is that there were 31 billion new app downloads in Q1 2020, up 15% from the fourth quarter of 2019, and a 20% increase in contactless operations, indicating a shift in digital expectations across virtually every industry, both in-house and consumer-facing.

This evaluation guide offers a look at how Ionic solves many of these problems, by offering a new way to approach app development that streamlines coding, supports in-house developer talent, and enables complete control over the finished product. We'll explain why our cross-platform solution is desperately needed now, and how it can bring significant change to app development for any company, in any industry.

Why Ionic?

Mobile is a critical component of digital transformation, and apps are a fundamental element for attracting and engaging customers, as well as empowering employees and partners. But various challenges have prevented organizations from keeping up with the demand that digital transformation drives.

> "If we look at basic issues companies have now, what we often hear is, 'I can't build applications fast enough and by the time I build them, the specs have changed.' "

— Rob Koplowitz, VP and principal analyst at Forrester

If you've started planning for a new development project, you've likely encountered this and the many other challenges associated with traditional app development methods. But identifying an in-house solution is an essential path to success.

According to Jason Wong, Research Vice President at Gartner, top-performing organizations expect to develop 40% of their new critical solutions in-house. However, these organizations must overcome the challenges inherent to app development.

That's where Ionic comes in.

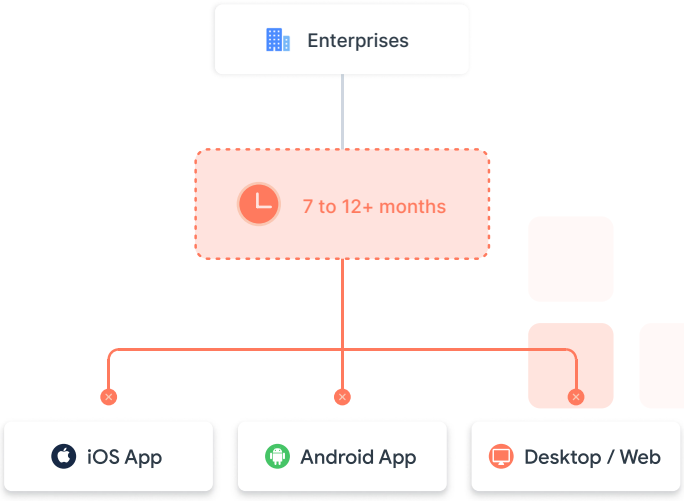
Ionic is an enterprise mobile app development platform that provides everything needed to build, connect, and deliver high-quality mobile and web applications in-house, using familiar web tools, languages, and frameworks.

Challenges We Address

Even when managing successful app development projects, businesses experience friction and challenges that limit development capabilities and have a material impact on overall success. Here are some of the most common business challenges that our customers face before discovering Ionic.

Development speed

According to our research, 23% of enterprises report that it takes them seven to upwards of 12 months to build an app; a clear indication that better support is needed. Companies are looking to release apps much more quickly and regularly, but regardless of the number of apps needed, time-to-market is often the most visible measure of success (along with functionality), especially when dealing with stakeholders and passionate end-users.



Digital transformation

The need to modernize and transform existing legacy apps is driving up demand for multi-experience apps that span mobile, desktop, chat, and conversational touchpoints. Gartner estimates that the demand for mobile apps alone is growing five times faster than internal app dev teams can deliver.

The developer shortage

Of course, a key factor in the supply gap is the shortage of developer talent. In fact, a recent study showed that enterprise executives reported more concern about the lack of developer talent than access to capital.

In subsequent pages, we'll show how we address each one of these challenges and more.

Ionic Benefits

Ionic's unique, web-first approach helps businesses and teams accelerate development and support digital transformation, while empowering their existing roster of in-house web developers.

Faster time-to-market

Ionic dramatically accelerates time-to-market by cutting down the amount of code you have to write. That's because, with Ionic, you write your code once and deploy it across iOS, Android, and the web. On top of that, we make it really easy to build an app, using the web tools and frameworks you already know and love. You don't have to spend time getting up to speed on a new language or coding environment. This alone can save you weeks or months.

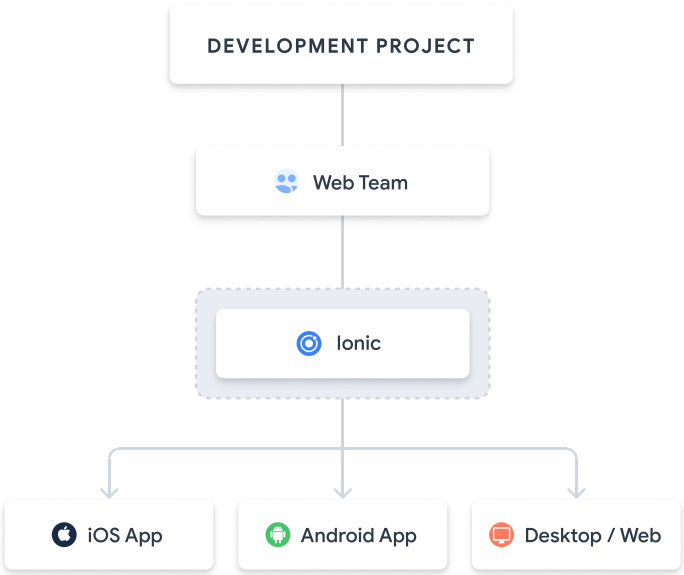


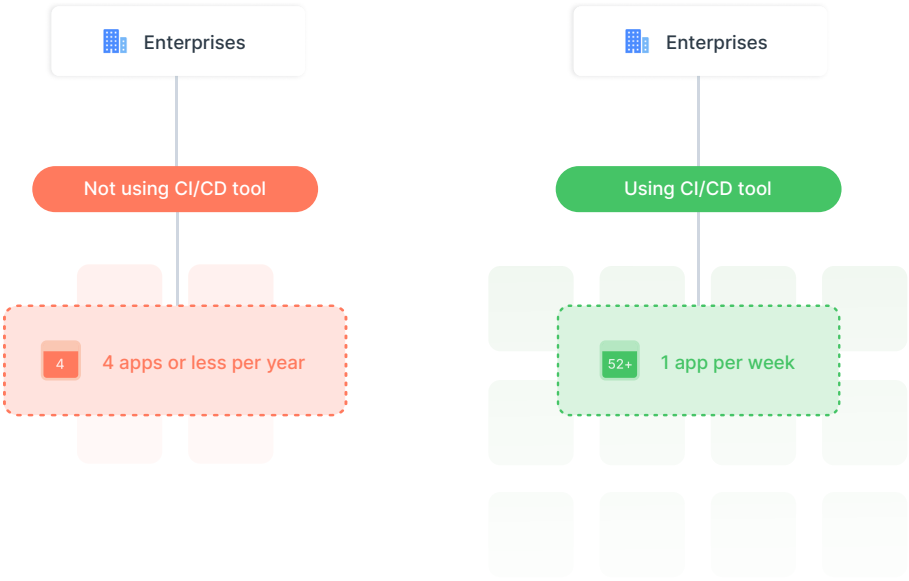
Figure 1 - Ionic Approach to App Development

> "Working with Ionic saved us around 60% in development time compared to native coding, and 80% savings on maintenance versus native coding."

— Aladin El Hedri, Founder & CEO at Siberian CMS

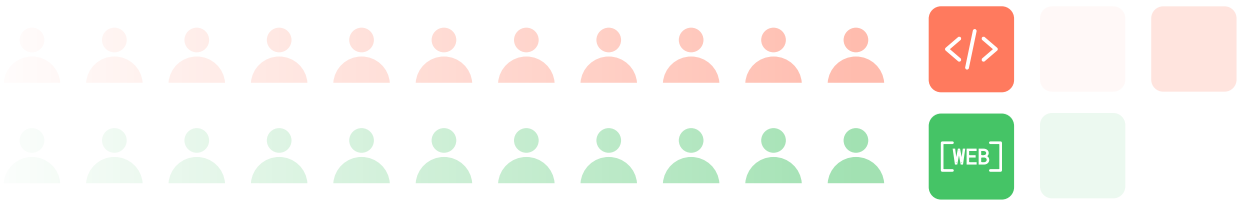
Increased agility

Companies are looking to release apps quickly and regularly, but the average release cadence is measured in months or worse. According to Forrester, a whopping 50% of large enterprises are releasing apps four times per year or less. Ionic supports continuous mobile DevOps, empowering teams to increase agility, app quality, and time-to-market by automating key phases of the development lifecycle. One trend uncovered in our recent research is that the impact of DevOps and CI/CD (continuous integration and continuous deployment) tools when it comes to accelerating the pace and frequency of software delivery is huge. These strategies, and the tools that help teams enact them, streamline software development, testing, and deployment. In short, of the companies releasing apps at least once per week, 90% are using a CI/CD tool of some kind.



Addressing the talent gap

Fun fact: the web developer community is about 10x greater in size than the number of native mobile app developers, according to the 2020 Stack Overflow survey. This means that many development teams already have a deep bench of programmers who understand HTML, CSS and JavaScript. Ionic allows you to empower your existing web developers — the most widely-held developer skillset in the world — to target almost any platform, exerting their influence up and down the stack. Web devs are proving that, with Ionic, they're ready to rise to the occasion and address the developer talent shortage.



Added security and peace of mind

Many enterprise mobile apps use unsecure practices, like storing tokens unencrypted or using weak authentication logic that can be easily compromised. No company can take that chance. Ionic is always updating its powerful, multi-layered front-end security to protect users from data loss and unauthorized access, including advanced solutions for enabling biometrics security, secure single sign-on, and encrypted storage on-device.

How It Works

The core of the Ionic development experience is Ionic Capacitor, a cross-platform native runtime that runs equally well on native iOS and Android mobile devices, as well as any web browser.

You can think of Capacitor as a native container that lets you build web applications that look, feel, and perform the same as native apps -- because at the end of the day, they are native apps. They run as a native binary on an iOS or Android device, have full access to the native SDKs and any native device feature, and they're downloaded in the app stores just like any other native mobile app.

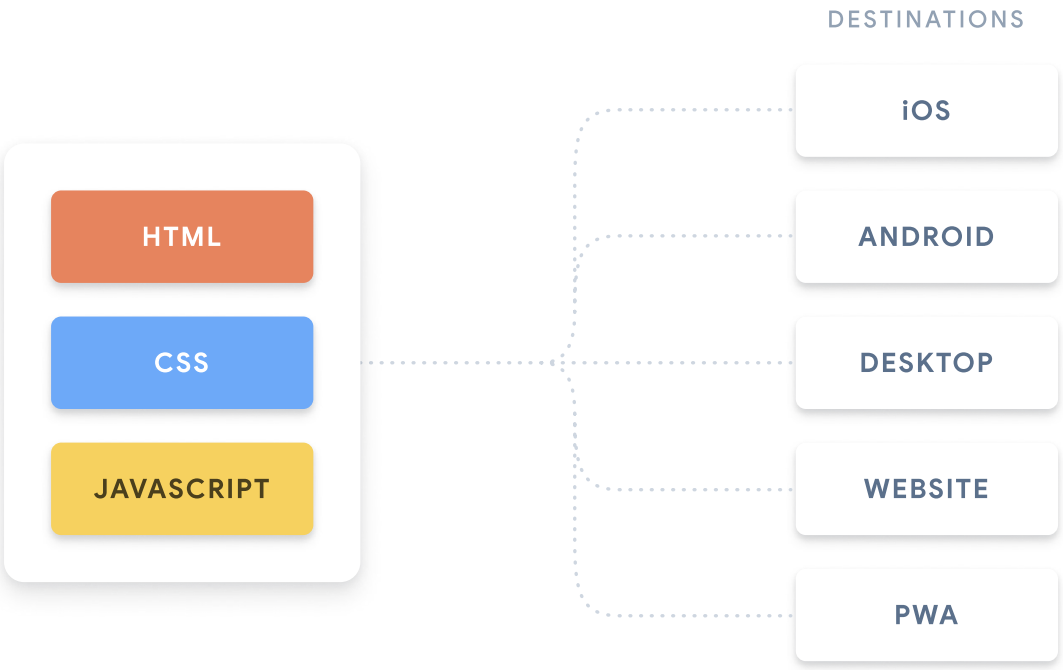


Figure 2 - Use Open Web Tech to Build Mobile & Desktop Apps

The big difference is that, unlike traditional native development or cross-platform approaches like React Native, Flutter, and Xamarin, the UI of a Capacitor app runs primarily in the browser.

This small but important distinction opens up a whole world of possibilities for web developers and teams who want to bring their web skills, experiences, and existing applications to mobile.

The browser used by Capacitor to render your UI, known as a WebView, is invisible to your application users. But the UI components and logic inside the application will run just like they do in a typical web browser. Plus, with Capacitor as the "glue" between your web application and the native mobile device, you can access any native device feature - such as camera or geolocation - by adding some additional coding and logic to your application.

"Capacitor makes it easy to build compelling, modern app experiences that our users want, without having to worry about all the underlying complexity of the native SDKs and iOS and Android specific code."

— Rakesh Gadapa, Application Developer, Blue Cross Blue Shield

Teams building with Capacitor can easily craft stunning mobile front-end experiences with Ionic UI, a mobile UI toolkit that includes over 100 mobile-ready UI components, animations, and gestures. While not required, we encourage the use of Ionic UI for any team building a native mobile app. Our engineers have spent years tweaking and optimizing our components and styling to look and feel great on mobile, including an Adaptive Styling feature that automatically detects and adapts to whatever platform your app is running on, so that the same component looks like an iOS UI control on an iPhone, and an Android UI control on any Android device. It's one of the big selling points of Ionic UI that developers can enjoy out-of-the-box.

On top of that, we offer premium software and services for professional teams and businesses building mission-critical apps. That includes a suite of mobile security solutions and custom consulting services, along with Appflow, an enterprise-ready mobile DevOps platform for enabling continuous delivery of mobile applications.

Addressing Common App Requirements

Below is a look at some of the critical app requirements Ionic is able to address.

Flexible deployment options

An amazing feature of apps built with Ionic is that they can run on virtually any platform: desktop computers, phones, tablets, cars, refrigerators, and more —all from a single codebase. This is due to the combined power of our Capacitor native runtime, and the ubiquity of the web platform.

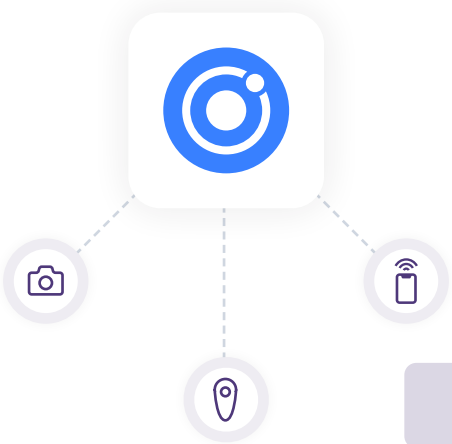
Performance and user experience

Mobile app performance is absolutely critical to delivering a great user experience. So how does Ionic stack up when it comes to load times, scrolling, and other moments when speed is critical? The best way to answer that is to find out for yourself, by checking out the many successful consumer apps built with Ionic—from award-winning apps like Sanvello and Sworkit, to highly popular apps like Shipt and Untappd. Our take? Unless you're building with highly graphic intensive app, such as a 3D game, Ionic will deliver the speed and performance you need.

Mobile device features

If you're new to the concept of using web technology to build a mobile app, it's fair to ask whether such an approach can deliver all the native mobile device features you need.

The good news is that any native feature can be accessed from an Ionic app, using our Capacitor native runtime. That includes everyday capabilities like the camera and geo-location, to more obscure native features like mobile beacons.



Offline access and storage

Your business users are also consumers of popular apps that have been raising the bar for mobile app quality since the early days of the iPhone, and expect high-quality app experiences—features like offline access and storage are table stakes. Including these features is not as easy as it sounds—you must account for all sorts of poor Internet reception situations, including choppy wifi and low signal cellular service on trains, in highrise buildings, and elsewhere.

Whether building native mobile apps or PWAs, Ionic offers several solutions. Ionic Secure Storage is Ionic's gold standard for storing data. It offers high-performance offline storage, protected with military-grade data at-rest encryption, and a variety of syncing options for keeping your data up-to-date.

Security

With data breaches on the rise, security is on every leader's mind. Ionic apps are built on the most open and longest-living technology available: the web browser. Ionic apps run on evergreen browsers controlled by dominant players such as Google, Microsoft, and Apple, so new features and bug fixes are shipped constantly, even daily.

Powering the logic behind Ionic apps, JavaScript libraries and native plugins are open source, so your architects can review them if there are any security concerns. To ensure stability and peace of mind, Ionic Enterprise includes active maintenance, security patching, and next business day response SLAs.

For even great device security and data protection, Ionic builds and maintains several pre-built security solutions:

- Identity Vault for multi-layer native security and biometrics authentication
- Secure Storage for secure, offline experiences and data storage
- Auth Connect to quickly, easily, and securely integrate with your auth providers

The combination of these security measures provides users with a comprehensive security solution that authenticates users and securely stores login credentials.

Compatibility with your existing ecosystem

Constantly embracing new technology is an attractive idea, but as any technology leader knows, it's easier said than done. The ideal platform must support a modernization strategy. It's not enough to be useful only for new projects.

With Ionic, adoption across your organization is very easy and straightforward. First, using Capacitor, you can bring any of your existing web projects and UI components to mobile. Whether you're using React, Angular, Svelte or (pick your framework of choice), your Web Apps and Web UI libraries will work on Capacitor. For those interested in Ionic UI, we've made sure that development of your app is not coupled to any particular JavaScript framework. The latest versions of Ionic UI (versions 4.0 and up), support Angular, React, and Vue. And as new JS frameworks become popular, Ionic will be ready for that too.

In order to truly modernize your applications, a technology newcomer must "plug and play" nicely. Ionic's powerful frontend experience is backend agnostic, which means it's easily connected to your own backends and databases via standardized web protocols such as REST and SOAP. It also integrates with many third-party services, a rich catalog that includes analytics, authentication, DevOps, hardware, payments, and social.

Access to support and services

Building applications is hard. No matter how good the tool or platform you're using might be, the fact is there will be times when you need help. Oftentimes, getting a little advice upfront can save you hours of pain and frustration down the road.

For that reason, it's important to consider the level of support and services available when choosing a solution. This is particularly true when evaluating open source solutions. Many OSS projects are sponsored by companies like Google and Facebook that do not offer any enterprise support SLAs. If you're having trouble building your app, you'll need to find a third-party provider to help out.

> "Ionic has effectively become an extension of our team. They've assisted us through numerous releases and assisted with several critical bug fixes. They've proven to be much more supportive and willing to help than many other software vendors we've worked with."
>
> **— Devin Vail, Lead Mobile Developer, Amtrak**

At Ionic, we partner with our enterprise customers to help them reach their goals. Ionic Advisory is dedicated to helping our customers achieve their business and application development objectives by providing assistance at key phases of the lifecycle - from initial planning and architectural reviews, to rollout and maintenance of your projects over time. We also offer services to help teams tackle specific challenges, such as performance optimization, custom development, and risk and security audits.

When To Choose Ionic

Team make-up and skillset

It's easier to change development platforms than it is to re-staff your team (or learn a completely new skillset), so the first dimension to consider is whether Ionic is a good fit for the skills your team possesses today.

Ionic's development approach is based on open web technology. The languages used when building an Ionic app are the same that you would use to develop any web application: HTML, CSS, and JavaScript. This makes Ionic a great fit for teams that have an existing web-based skillset, and have built dynamic web applications in the past. However, it is not necessary to have any particular knowledge of mobile app development.

Intended usage and types of applications

Ionic applications can match just about any usage scenario: from widely used consumer apps like Sworkit, with over 10 million users, to employee and partner-facing apps aimed at empowering a digital workforce.

The only scenario in which we wouldn't advise an Ionic app is if you're expecting heavy graphics-intensive interactions, like a 3D game. As long as you're not building the next Fortnite, Ionic is a good choice for your next project. Our platform can help any business deliver the following types of applications:

- Natively-installed iOS and Android mobile apps
- Browser-based dynamic web applications
- Progressive Web Apps (PWAs)

How our customers have used Ionic

Ionic now powers apps for major brands like Amtrak, AAA, GE, Burger King, and Target, along with a significant percentage of all apps in the app stores. With several million developers using Ionic all over the world, our platform has become a major way that app development gets done.

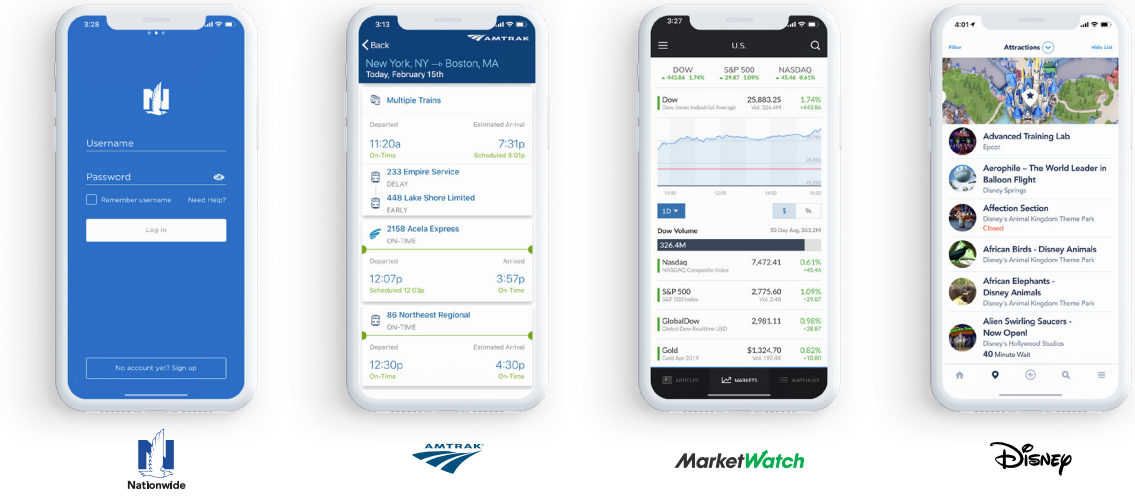


Figure 3 - Examples of Apps Built with Ionic

Ionic has been used to launch app development projects for businesses large and small, and across every major industry, including healthcare, transportation, finance, and education. Please visit our case studies to learn more about how our customers are using Ionic.

The Ionic Difference

Ionic is dedicated to helping our customers achieve their business and application development objectives by providing assistance at key phases of the lifecycle—from initial planning and architectural reviews, to rollout and maintenance of your projects over time.

Enterprise organizations should consider Ionic for Enterprise, a fully supported, premier version of the entire Ionic ecosystem that offers advisory services to help teams tackle performance optimization, custom development, risk and security audits, and other specific challenges.

While other cross-platform frameworks like React Native and Flutter exist, none of them provide the company-backing, professional support, and peace of mind that most enterprises require. Read this post from our CEO, Max Lynch, for more details. On top of that, Ionic's unique web-first approach makes it the only cross-platform solution that fully embraces open web standards, and works with any new or existing web application.

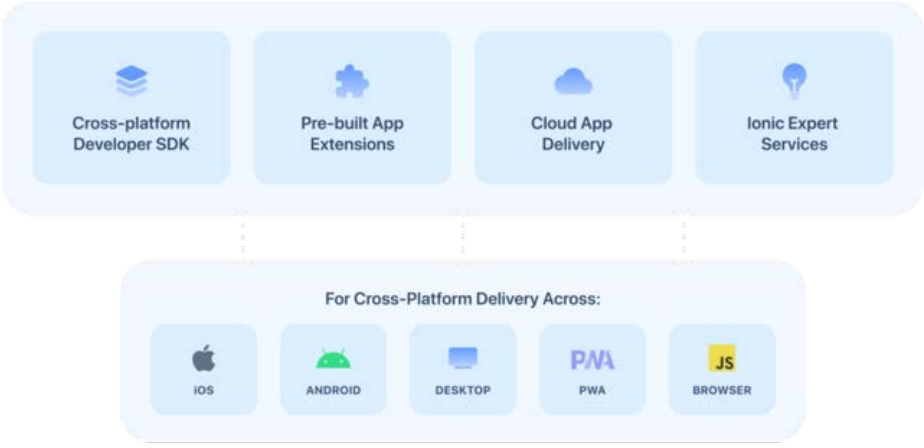
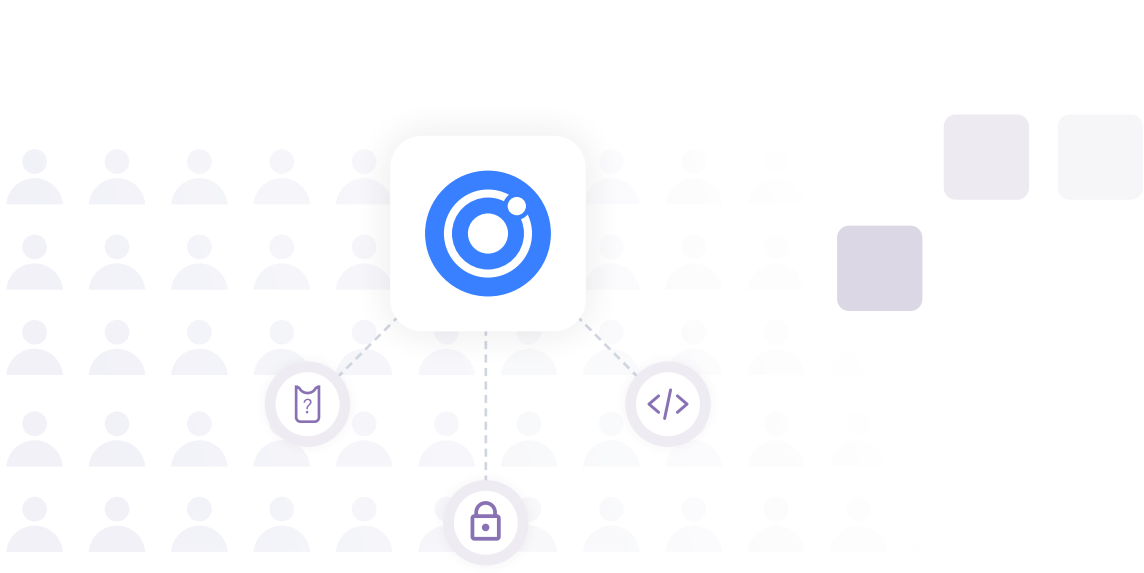


Figure 4 - Ionic App Platform

Backed by enterprise support and services

Ionic isn't just a community-supported open source toolkit or a big company's side project; it's a real and fast-growing business. In a market filled with projects that keep users at an arm's length, Ionic's entire business is helping teams build awesome mobile apps on the Ionic platform.

Today, Ionic has thousands of customers and a dedicated enterprise support and product team. Teams can get access to priority Support tickets with SLAs, access to bug and security hotfixes to production Ionic software, and expert help from the team directly behind Ionic's popular open source projects.



Bring App Development Into the Modern Age

When selecting an app development platform, explore whether it can:

1. Tackle digital transformation by empowering web teams to quickly build beautiful, high-performance apps for mobile and desktop

2. Develop custom, consumer-facing apps like Sworkit and Shipt that scale to millions of users and deliver rich native features and performance

3. Bring the latest in native platform capabilities and mobile device features, security, and performance, to hybrid application development

4. Make it easy to build web apps that run on iOS, Android, and on the web as PWAs using familiar web languages

Total global mobile app revenues are expected to exceed $935 million by 2023, up almost double from 2019 ($461.7 million). Enterprise mobile apps are fuel for business growth, and thousands of traditional organizations are activating mobile technology to compete in our increasingly digital world.

May as well do it right.

Book your strategy session