FIVE REASONS XAMARIN WILL CHANGE MOBILE DEVELOPMENT

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INTRODUCTION

Business users and consumers are demanding better user experiences at work and at home. As more millennials come of age and enter the workforce, they're demanding enterprise apps that look and behave like their favorite consumer apps.

According to Pew Research, there are more millennials in the U.S. workforce than any other generation. 98 percent of younger millennials (ages 18-24), 97 percent of older millennials (ages 25-34), and 96 percent of generation Xers (ages 35-44) own a smartphone, according to Nielsen. Enterprise software teams are responding with mobile-first, cloud-first strategies.

Enterprise developers can't simply abandon existing desktop and web apps, however. Some companies are so busy maintaining those apps and building new ones that there is little time and not enough in the budget to develop mobile versions of those products, especially native versions.

With Xamarin, C# developers can build apps that run across desktop and mobile devices using a single code base. They can also build native Android and iOS apps using Xamarin.Forms, Xamarin.Android, and Xamarin.iOS that are indistinguishable from those written in Objective-C or Swift.

If you want to extend your desktop or web apps to mobile devices and the cloud with confidence, and without breaking your budget, or if you want to simplify cross-platform development while speeding software delivery, Xamarin is for you.

There are five reasons we think you should try Xamarin. Likely, one or more of them will apply to you.

1. DELIVERING APPS FASTER

Mobile devices are a staple of modern business and life. According to Pew Research, tablet adoption grew 1,500 percent from 2010 to 2015, and smartphone adoption grew nearly 200 percent from 2011 to 2015. Meanwhile, desktop and laptop adoption remained flat. As the trends indicate, providing mobile apps is no longer optional. Business users and consumers just expect them.

Software teams don't receive extra budget allocation simply because end user expectations are changing, however. And they certainly can't slow software delivery because more devices need to be supported.

Speed is critical in today's dynamic business environment. The perpetual mandate is to deliver better quality software faster that can run on whatever devices the business needs, which ignores the increasing complexity of modern software development. Competition is so fierce that any software-driven organization that wants to stay relevant has to change with the times despite a limited budget.

Whether you're extending .NET desktop and web apps to mobile devices or the cloud, or adopting a mobile-first, cloud-first strategy, Xamarin enables you to share most of your code among native Windows, iOS, and Android apps, saving at least half the time that it would take to build native apps separately.

Using Xamarin.Forms, you can deliver cross-platform apps with one C# code base and UI across iOS, Android, Windows, and Mac. The UI can be built in C# or XAML.

Alternatively, by using Xamarin.Android and Xamarin.iOS, you can deliver a native app that looks and performs like it was built from the ground up in Objective-C or Swift. Xamarin gives you native access to APIs, so you never have to worry that your app will lack native functionality. Whatever a native app can do, your app can do.

Even if your mobile apps require customized, device-specific experiences, those apps can still share common business logic. In fact, Xamarin enables you to reuse business logic irrespective of the device or operating system.

In addition, Xamarin requires very little training, which means .NET and Java developers can become more productive almost immediately. Since Xamarin uses C#, C# developers need only familiarize themselves with the Xamarin platform. Most Java developers are productive within days, given the similarity between Java and C#. There's no need to have C#, Java, Swift, and Objective-C talent all in one place to build apps across platforms. C# developers are all you need.

Without Xamarin, it takes a lot of time and money to deliver apps that run on many platforms and devices. With Xamarin, you can meet the needs of all your end users quickly and cost-effectively.

2. BEST-IN-CLASS DEVELOPMENT TOOLS

Xamarin apps can be developed using Visual Studio for Windows or Xamarin Studio, an IDE for OS X. Xamarin Studio isn't limited to Mac apps, however. You can use it to build Apple TV, Apple Watch, and Android Wear apps. A preview version of Visual Studio for Mac is also available, which is a mobile-first, cloud-first IDE for Mac that is expected to replace Xamarin Studio.

Visual Studio for Windows is and has been the best IDE for Microsoft developers. Over the years, it has continued to improve, enabling developers to use more languages to develop modern apps for the growing number of device types. Visual Studio's rich, full-featured capabilities enable developers to improve productivity in many ways, including accessing third-party components, libraries, and other tools from within the IDE.

Visual Studio is integrated with Xamarin, and the integration will continue to improve, given Microsoft's 2016 acquisition of Xamarin. In fact, Visual Studio Enterprise now includes Xamarin features for Android, iOS, and Windows app development.

Visual Studio for Mac Preview includes many of the features Windows developers enjoy, including debugging, refactoring, a source editor, and a build system. Over time, Visual Studio for Mac should demonstrate considerable feature parity with Visual Studio for Windows in addition to Apple-specific features.

Another benefit of using Visual Studio is that all the individual SDKs required are packaged into a single installer, which makes getting started easier.

Microsoft now also offers the Visual Studio and Xamarin Mobile Lifecycle Solution, which is ideal for enterprise developers. It includes Visual Studio, Visual Studio Team Services, Microsoft Azure, Xamarin Test Cloud, Xamarin University, and HockeyApp.

3. NO-COMPROMISE END-USER EXPERIENCES

In today's hyper-competitive world, user experience is everything. Nevertheless, developers continue to wring their hands, asking the same old question, "Should we develop a cross-platform app or a native app?" The answer hinges on performance.

If your app needs to provide an experience that requires high performance, such as a game, build a native app. If it doesn't, build a cross-platform app. With Xamarin, you can do both.

If sharing a UI among iOS, Android, and Windows Phone apps is a priority, use Xamarin.Forms. However, if customizing the UI on each platform is a priority, use Xamarin.iOS or Xamarin.Android, which share most of the application logic and also include a platform-specific UI. Xamarin.Forms, Xamarin.Android, and Xamarin.iOS all produce genuine native apps. Your end users won't be able to discern any difference between a Xamarin app and apps written in Java, Objective-C, or Swift. Using C#, you'll simply enjoy the benefit of code reuse.

Xamarin's code-sharing capabilities do not compromise end-user experience. You decide whether to provide a common user interface across all platforms or whether it's better to customize the UI to deliver a certain experience on a particular device. Either way, Xamarin provides the flexibility you need to deliver whatever experience your end users expect.

4. LEVERAGE A MATURE ECOSYSTEM

Microsoft's technology stack is very mature, so you can use Xamarin to build simple consumer apps, complex enterprise apps, or anything in between with confidence.

Enterprise developers have access to advanced tools for continuous integration, automated testing, distribution, and user feedback, which helps Agile teams meet their goals for continuous improvement.

Developing cross-platform apps or developing Android and iOS native apps involves lots of complexity, given the number and types of devices, operating system versions, and browser versions. All of those things, and the combinations of those things representing device usage in the real world, must be tested. Otherwise, there's a high probability of failures that could negatively impact user experience.

With Xamarin Test Cloud, you can test your app on more than 2,000 real devices instead of buying whatever devices you can afford and hoping for the best. In addition, you don't have to worry about device, operating system, or browser versions, since all of that is part of the value Xamarin Cloud provides.

Xamarin has an active marketplace where third-party vendors have published what's estimated

to be more than a thousand extensions that further increase developer productivity. Common UI widgets, including charts, list views, data grids, calendars, and schedulers, are just some of the value-added products developers can find in the marketplace.

Developers building mobile apps or adopting mobile-first, cloud-first strategies can take advantage of the Microsoft Azure App Service, which helps developers build, deploy, and manage web and mobile apps. It greatly simplifies data storage, enabling data to be synced across devices automatically. The service also sends notifications out across platforms automatically. That way, you can focus on innovation rather than app-related communication.

Developers interested in Xamarin training should consider Xamarin University, Microsoft Virtual Academy, Lynda, Udemy, and Mapt. Educational material is also available at the MSDN and Xamarin websites. The developer section of the Xamarin website includes educational information, samples, and access to the vibrant Xamarin community for quick problem-solving assistance.

The entire Xamarin ecosystem is very active and new capabilities are constantly being added to it.

5. ENJOY LOW LICENSING COSTS

Xamarin is available to all existing Visual Studio users at no additional cost. For Windows developers, it's included in every edition of Visual Studio, including the Community Edition. For Mac developers, Xamarin Studio is available as a benefit of a Visual Studio Professional or Enterprise subscription. The Xamarin Studio Community Edition is available for free.
In addition, Xamarin SDKs for Android, iOS, and Mac have been open-sourced. The open source contributions include Xamarin.Forms, API bindings, and basic command-line tools necessary to develop mobile apps.

If you haven't tried Xamarin yet, now is the time to see what it can do for you.

CONCLUSION

Xamarin enables you to build cross-platform and native apps for desktop and mobile using your existing C# skills. Whether you're moving your apps into the mobile world or shifting to a mobile-first, cloud-first mindset, Xamarin delivers the capabilities you need to make a swift, smooth transition.

MORE THAN 90 CONTROLS

FOR XAMARIN.iOS, XAMARIN.ANDROID, AND XAMARIN.FORMS
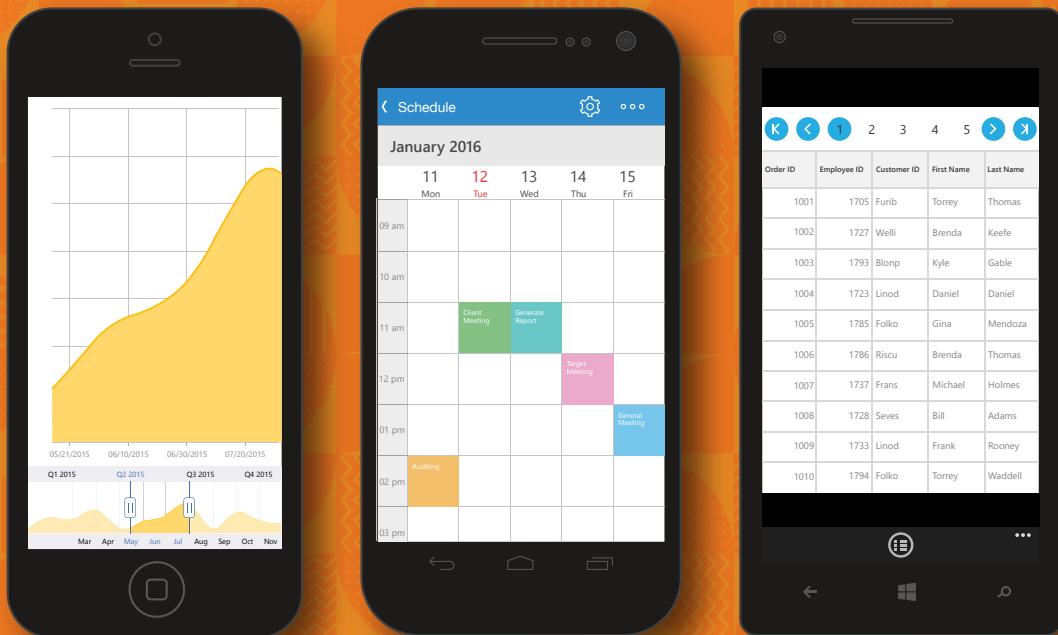
ESSENTIAL STUDIO FOR XAMARIN

- All the essential components like the chart, data grid, scheduler, and editors are available in a single package.

- Includes several unique components like the kanban panel, list view, radial menu, and PDF Viewer.

- The only Excel, Word, PowerPoint, and PDF file format manipulation libraries available for Xamarin.

Also available for free as part of the Syncfusion Community License!

Get started today!

syncfusion.com/products/Xamarin

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