In the name of god

xamarin cross platform

siavash hasanpoor

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What is the Xamarin?

- **Xamarin** is a Microsoft-owned software company founded in May 2011 by the engineers that created Mono.

- Xamarin is cross-platform for mobile applications development
  - The C# code is compiled to native code for each OS
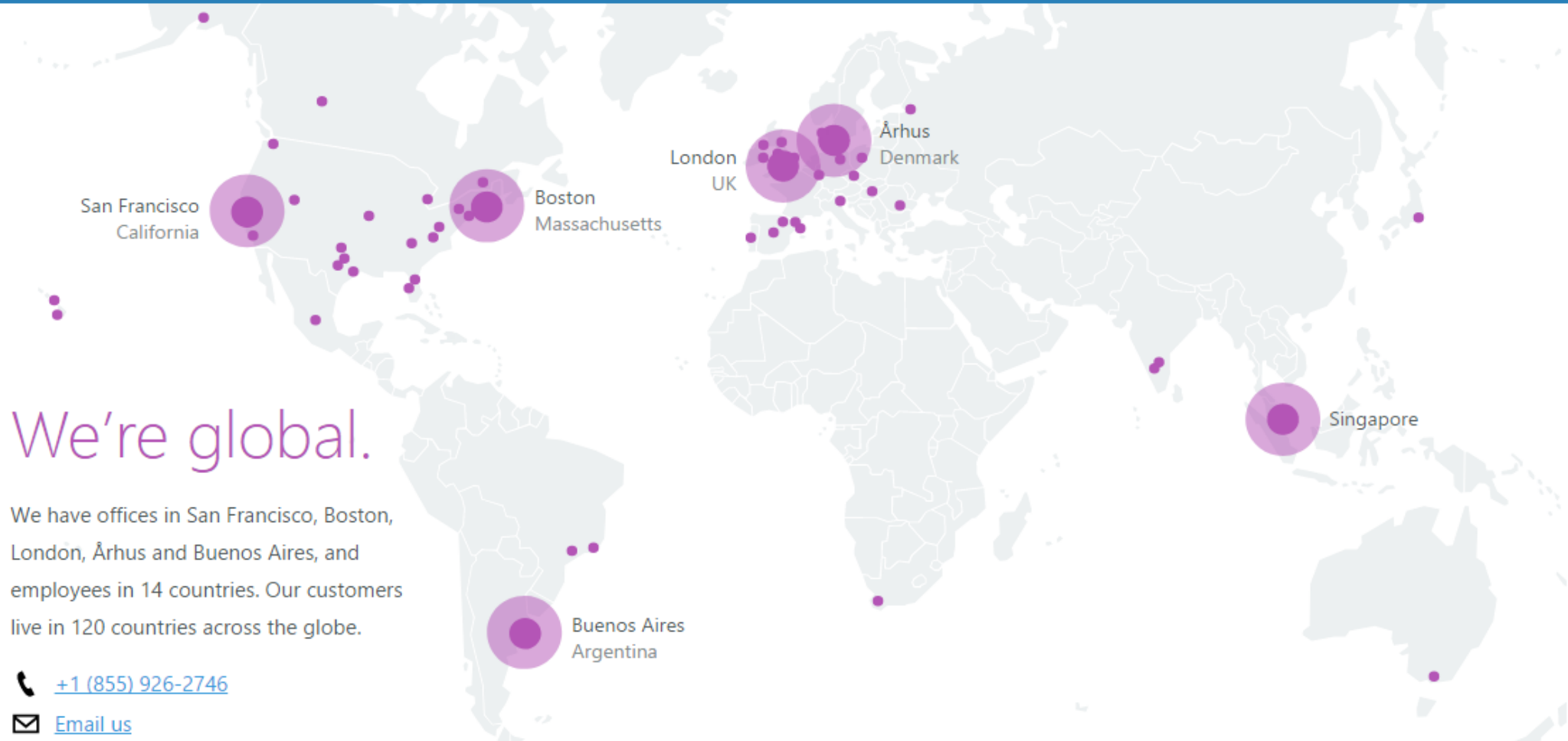   - It works pretty fast
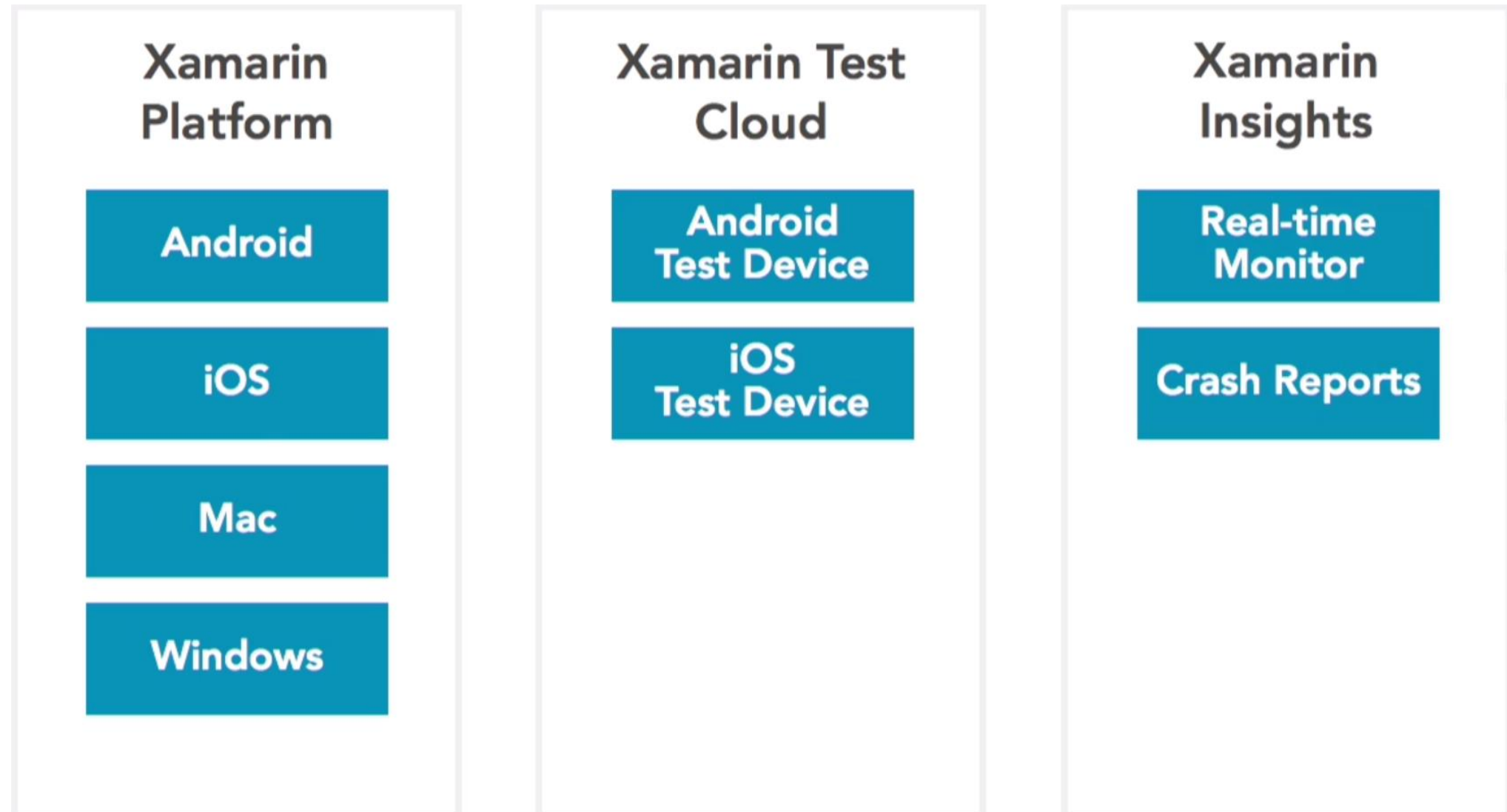
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employees

15,000+
customers

1,400,000+
developers

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Three major part of xamarin

Three part of xamarin

- Xamarin.Android
- Xamarin.iOS
- Xamarin.Forms

Xamarin.Android

Standard Android Development	Xamarin Android Development
• SDK: Android SDK	• SDK: Android SDK
• Code: Java	• Code: C#
• UI: Defined in XML files	• UI: Defined in XML files
• IDE: Android Studio or IntelliJ IDEA	• IDE: Xamarin Studio or Visual Studio

Xamarin.Android

Standard Android Architecture

Java Code

App Logic
Activities
Intents

UI Definition
XML

Java and Android
APIs

Android
Runtime
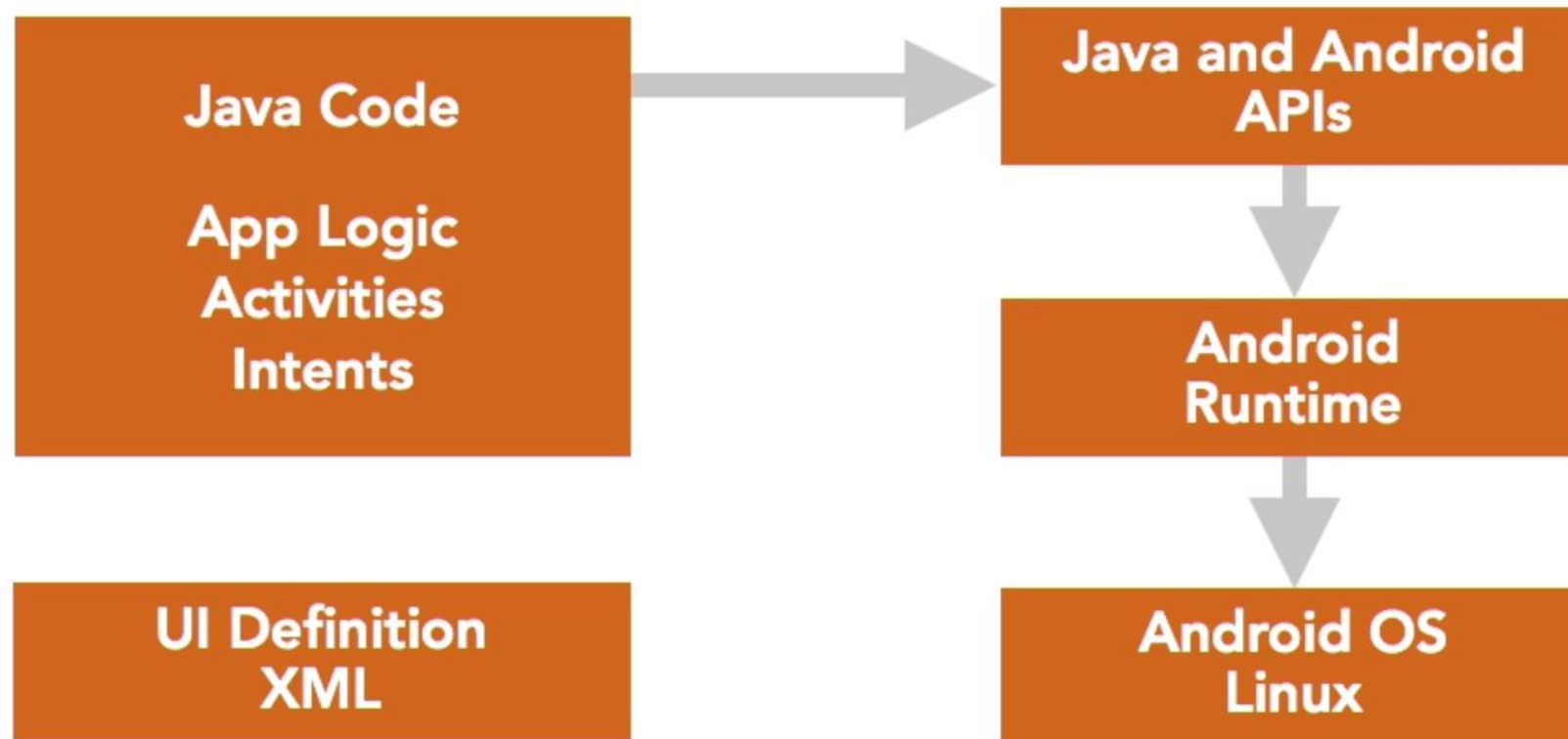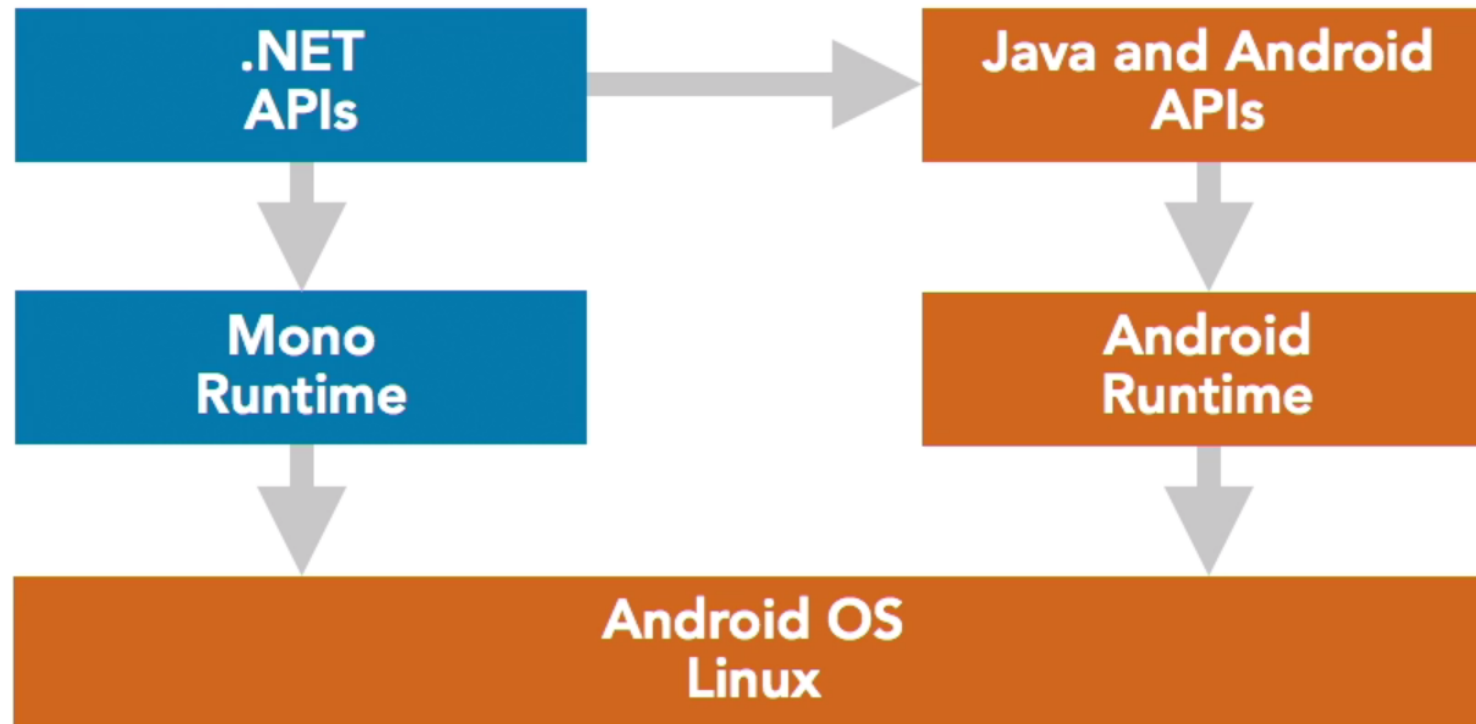
Android OS
Linux

Xamarin.Android

Xamarin Android Architecture

Three part of xamarin

- Xamarin.Android
- Xamarin.iOS
- Xamarin.Forms
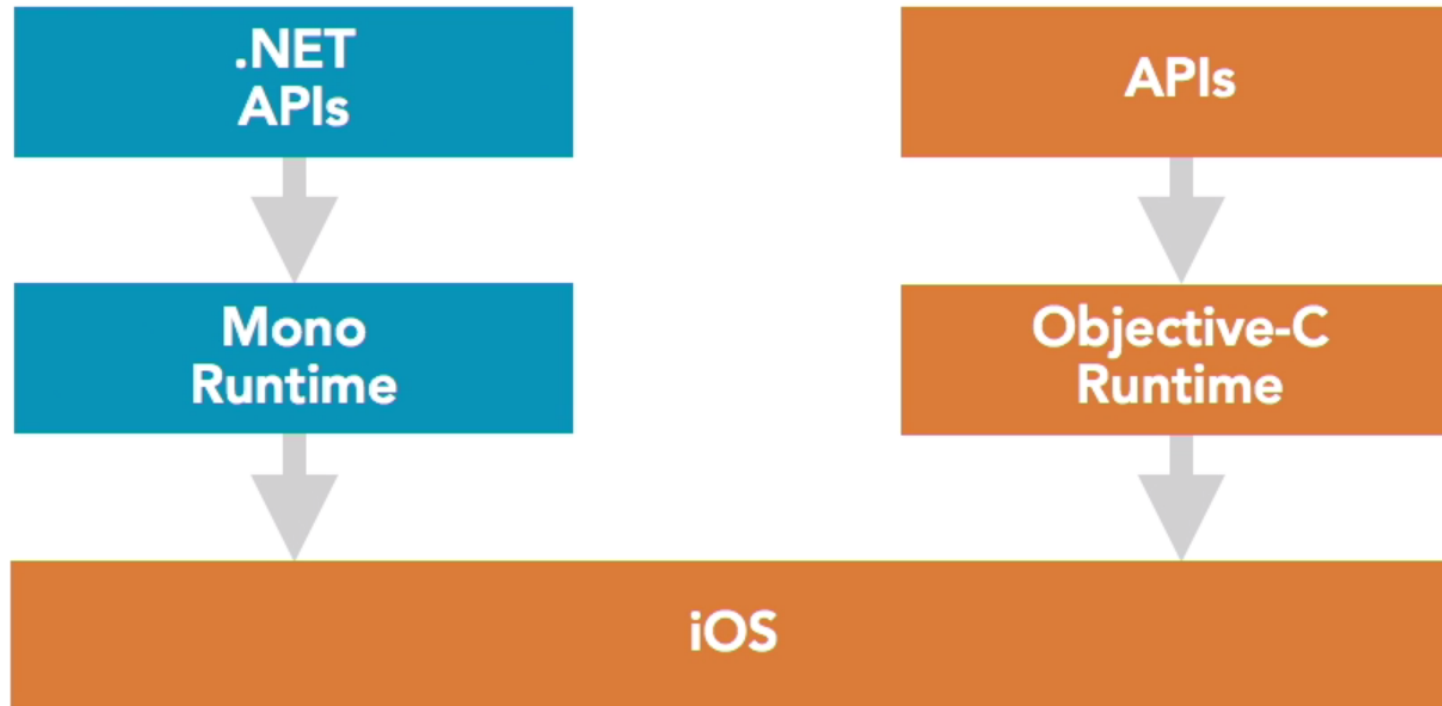
Xamarin.iOS

Standard iOS Architecture

Objective-C or Swift Code	**APIs**
App Logic View Controllers Models	**Objective-C Runtime**
UI Definition XIB Storyboards	**iOS**
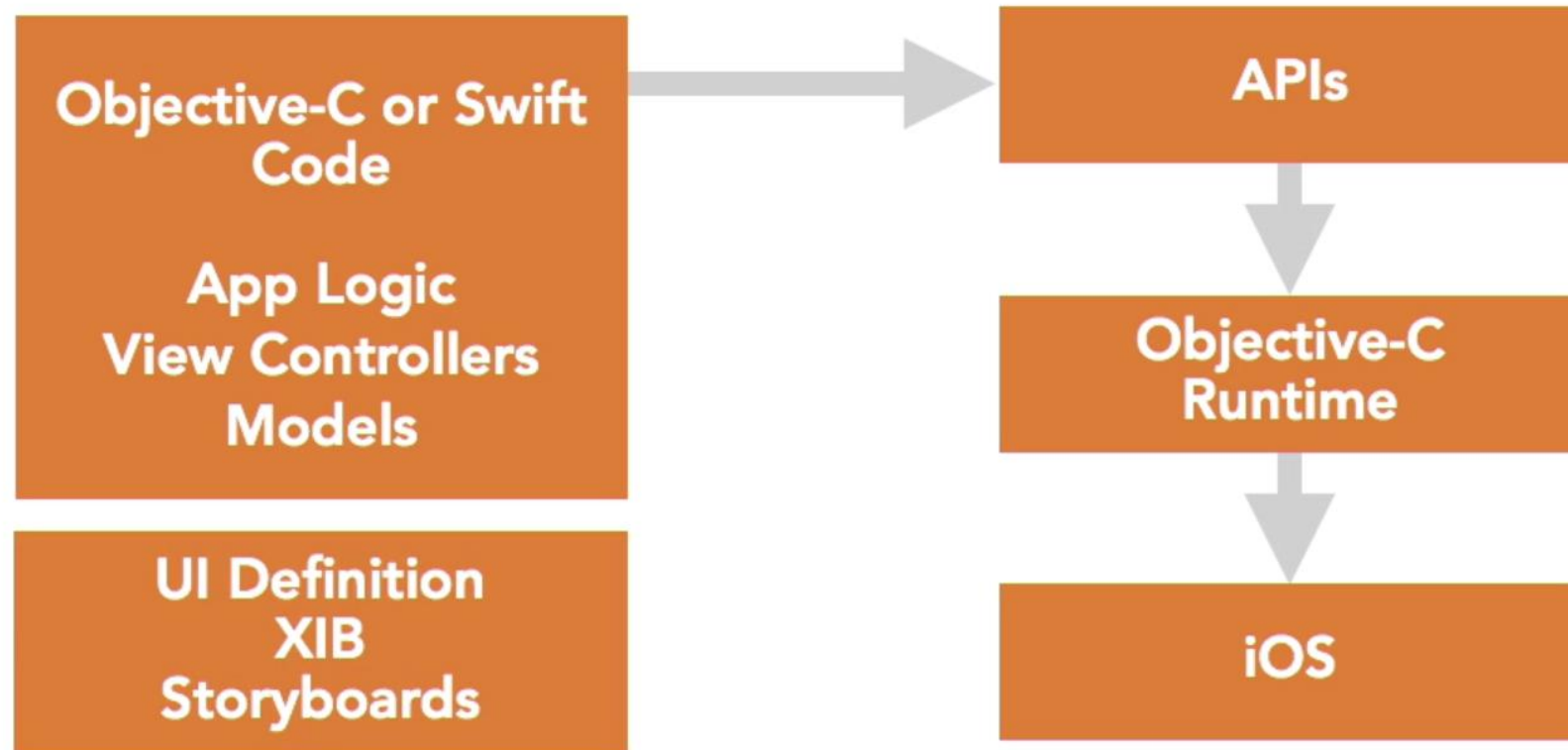
Xamarin.iOS

Xamarin iOS Architecture

.NET APIs	APIs
Mono Runtime	Objective-C Runtime

iOS

Xamarin.iOS

iOS vs. Xamarin

Item	Standard iOS	Xamarin iOS
SDK	iOS SDK	iOS SDK
Code	Objective C, Swift	C#
UI	XIB, Storyboards	XIB, Storyboards
IDE	XCode	Visual Studio, Xamarin Studio

Three part of xamarin

- Xamarin.Android
- Xamarin.iOS
- Xamarin.Forms

Xamarin.Form and difference with traditional xamarin approach

Traditional Xamarin approach

With Xamarin.Forms:
more code-sharing, native controls

iOS C# UI   Android C# UI   Windows C# UI

Shared UI Code

Rectangular Snip

Shared C# Backend

Shared C# Backend

Which Xamarin approach is best for your app?

Xamarin.Forms is best for:
- Apps that require little platform-specific functionality
- Apps where code sharing is more important than custom UI
- Developers comfortable with XAML

Xamarin.iOS & Xamarin.Android are best for:
- Apps with interactions that require native behavior
- Apps that use many platform-specific APIs
- Apps where custom UI is more important than code sharing
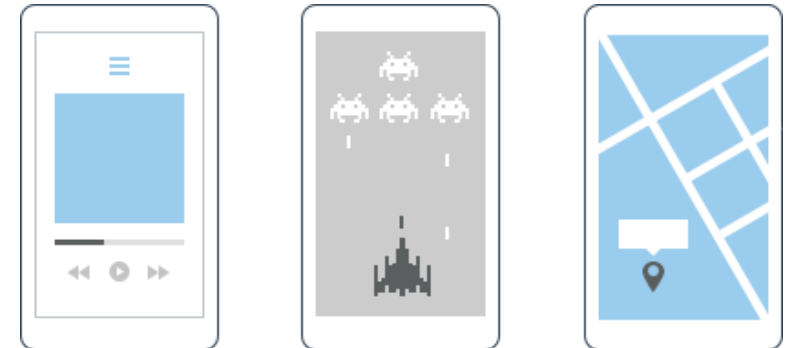
Xamarin Studio VS Visual Studio 2015

Compare IDEs

Xamarin Studio	Visual Studio 2015
Installed with Xamarin	Independent Install
Included in all 3 license plans	Three editions
Indie, Business, Enterprise	Community, Pro, Enterprise

Xamarin Studio VS Visual Studio 2015

Xamarin Studio - Windows	Xamarin Studio - Mac
Android	Android
ASP.NET, .NET	ASP.NET, .NET
	iOS, Mac

Xamarin Studio VS Visual Studio 2015

Visual Studio - Windows
Windows Phone, Windows 10 Universal Windows Apps
Android
iOS

references

- Lynda.com
- wikipedia

Question?

THE END