



# Xamarin DEV DAYS

# **DEV DAYS** Agenda

- Introduction to Xamarin
- Cross Platform UI with Xamarin.Forms
- Connected Apps with Azure
- Lunch – Courtesy of Sponsor
- File -> New App Workshop



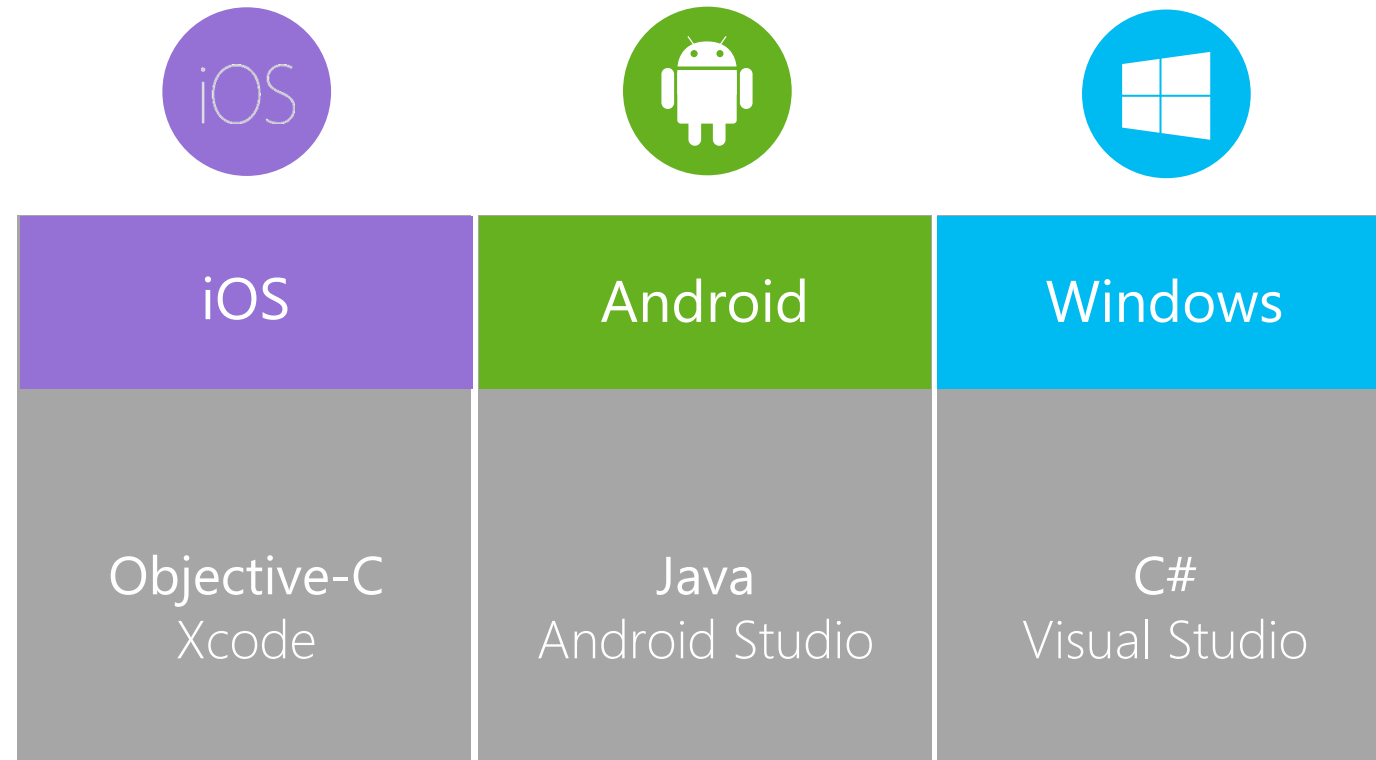
Slides, Demos, & Lab - Clone or Download:  
<http://github.com/xamarin/dev-days-labs>

# Native iOS & Android Development with Xamarin

Presenter Name  
Presenter Twitter  
Presenter Title

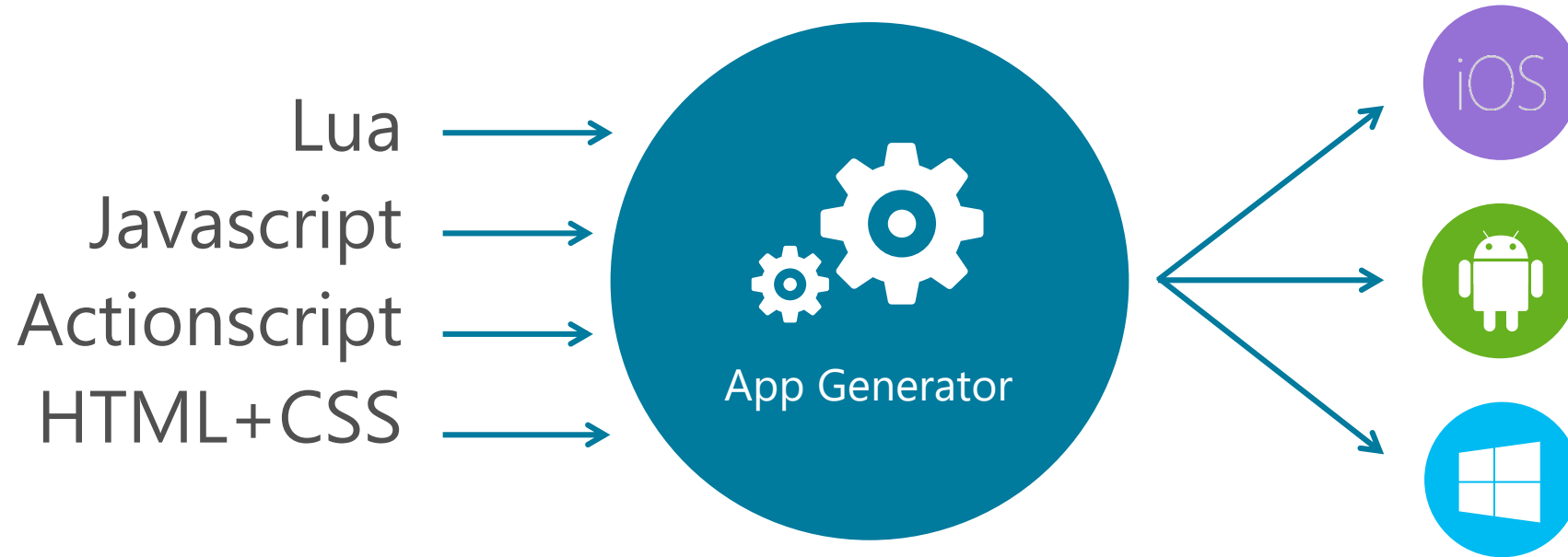
# Architecting Mobile Apps

# Silo Approach



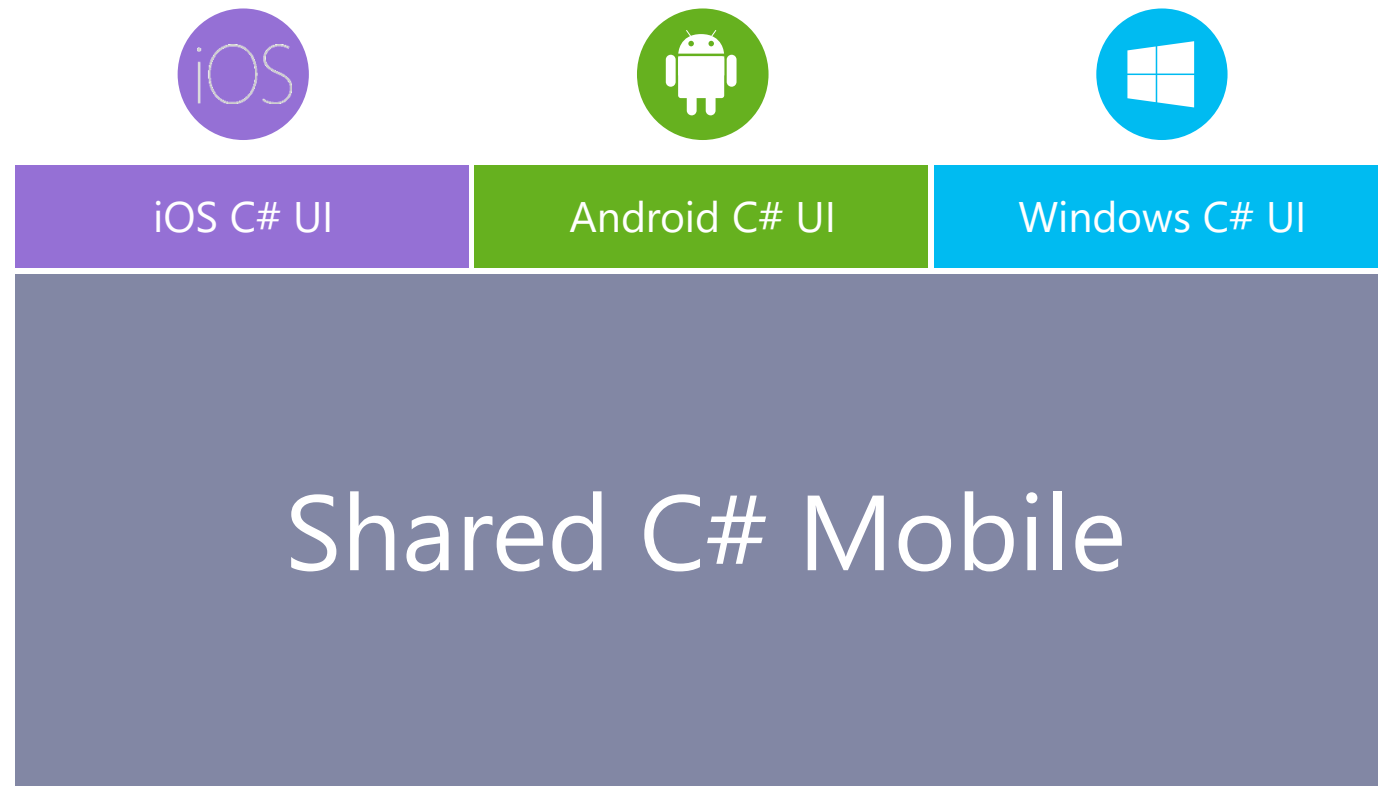
No shared code • Many languages & development environments • Multiple teams

# Write Once, Run Anywhere



Limited native API access • Slow performance • Poor user experience

# Xamarin's Unique Approach




Shared C# codebase • 100% native API access • High performance



# Windows APIs


Microsoft.Phone	Microsoft.Networking	Windows.Storage	Windows.Foundation	Microsoft.Devices
System.Net	System	System.IO	System.Linq	System.Xml
System.Data	System.Windows	System.Numerics	System.Core	System.ServiceModel



C#

# iOS – 100% API Coverage


MapKit	UIKit	iBeacon	CoreGraphics	CoreMotion
System.Net	System	System.IO	System.Linq	System.Xml
System.Data	System.Windows	System.Numerics	System.Core	System.ServiceModel



C#

# Android – 100% API Coverage

Text-to-speech	ActionBar	Printing Framework	RenderScript	NFC
System.Net	System	System.IO	System.Linq	System.Xml
System.Data	System.Windows	System.Numerics	System.Core	System.ServiceModel



C#

# Building User Interfaces

# Traditional UI approach



3 Native User Interfaces  
Shared App Logic



# Xamarin.Forms approach

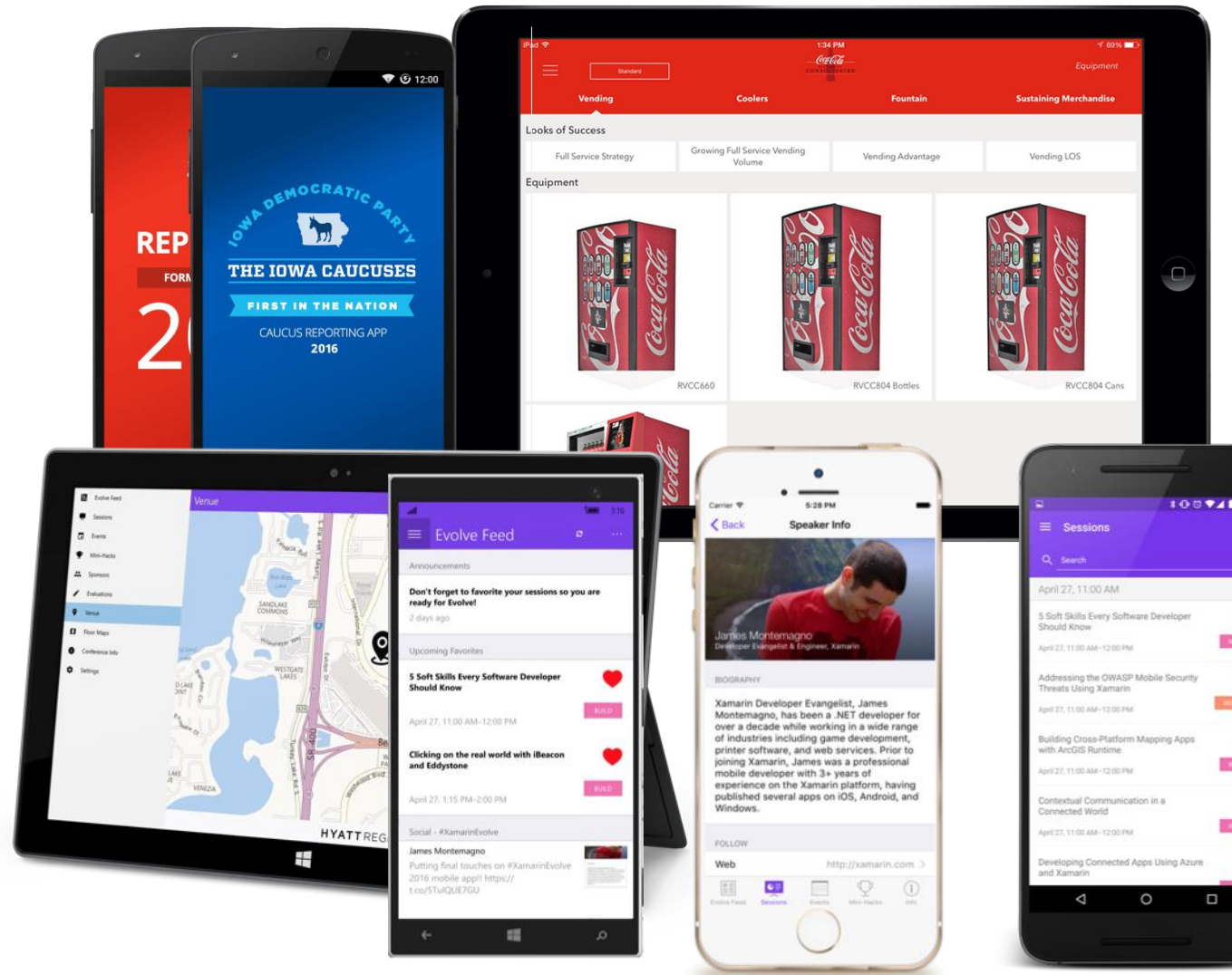


Shared UI Code

Shared C# Logic

Shared User Interface

Shared App Logic





MONO**GAME**



UrhoSharp



**WAVE**<sup>TM</sup>  
CROSS-PLATFORM ENGINE

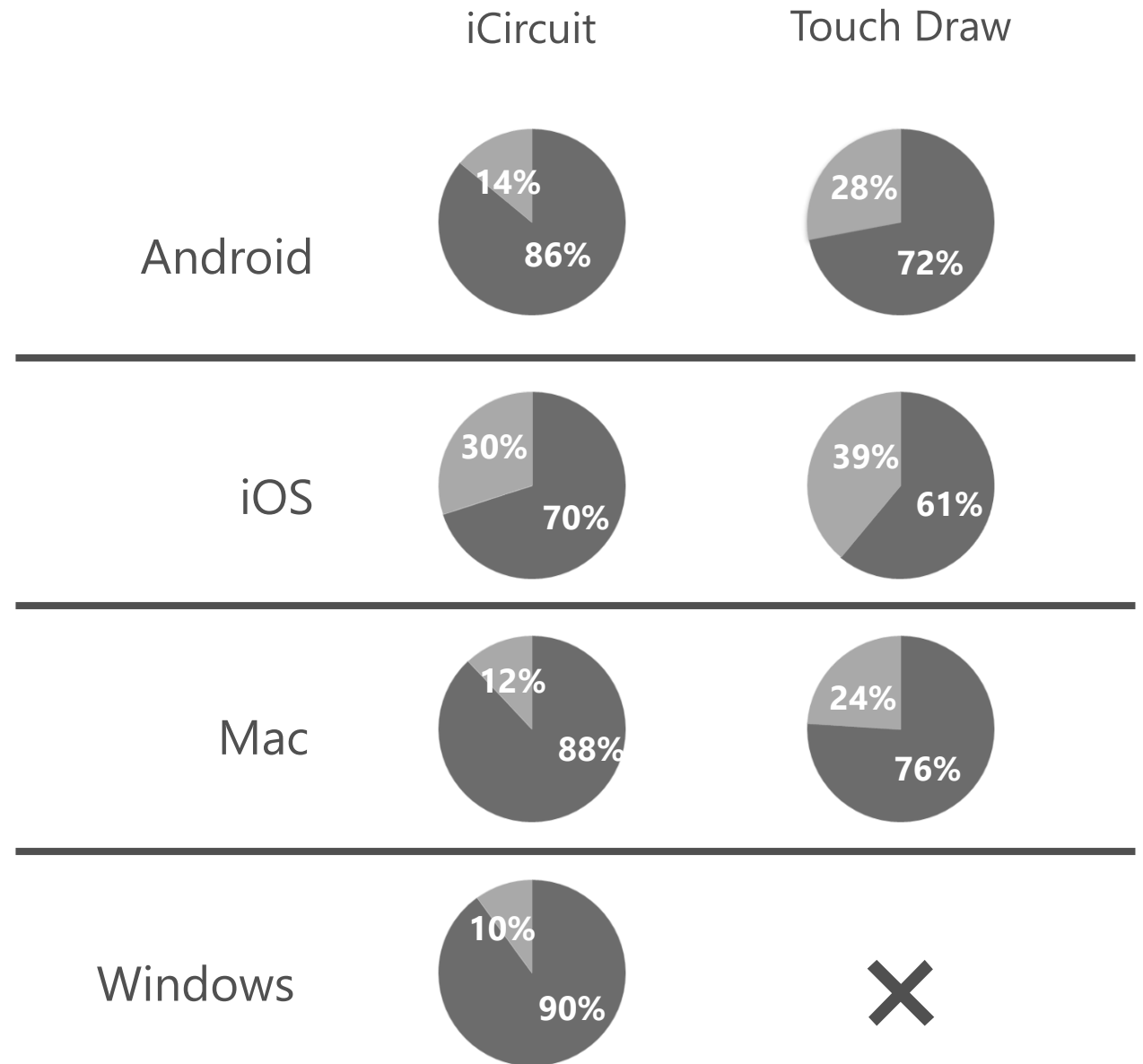


CocosSharp



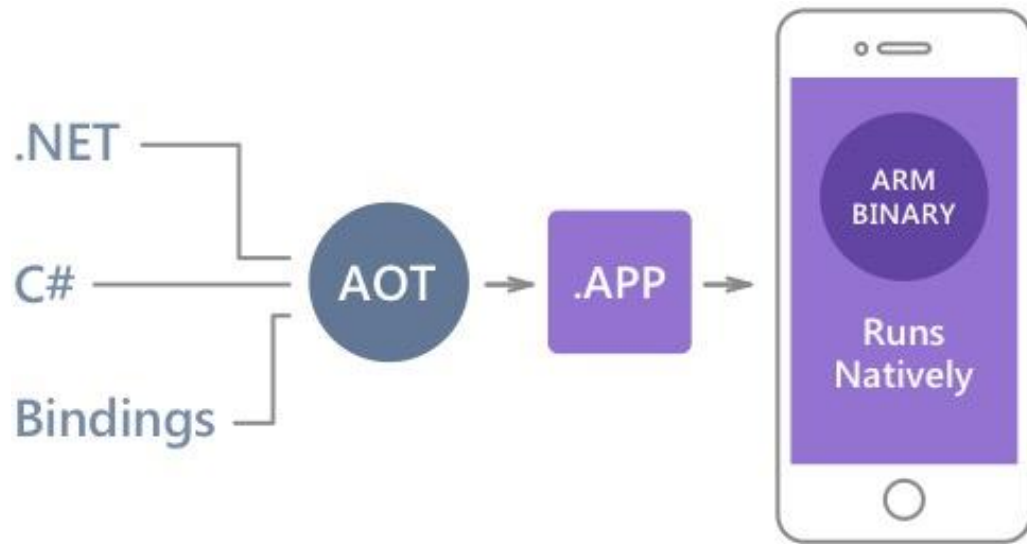
**XENKO**<sup>TM</sup>

# Code sharing stats

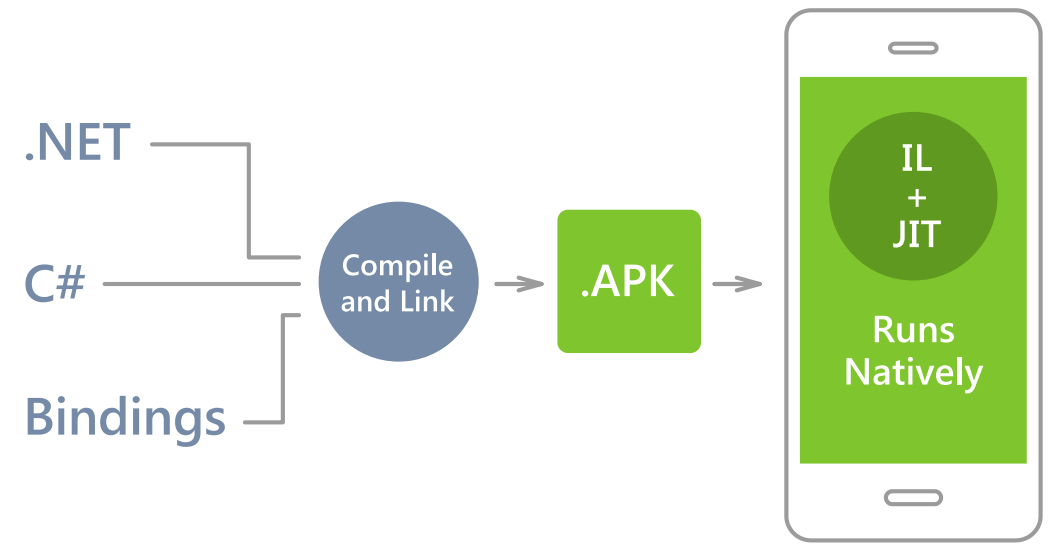




# Native Performance



**Xamarin.iOS** does full Ahead Of Time (AOT) compilation to produce an ARM binary for Apple's App Store.



**Xamarin.Android** takes advantage of Just In Time (JIT) compilation on the Android device.

# ✓ Always Up-to-Date

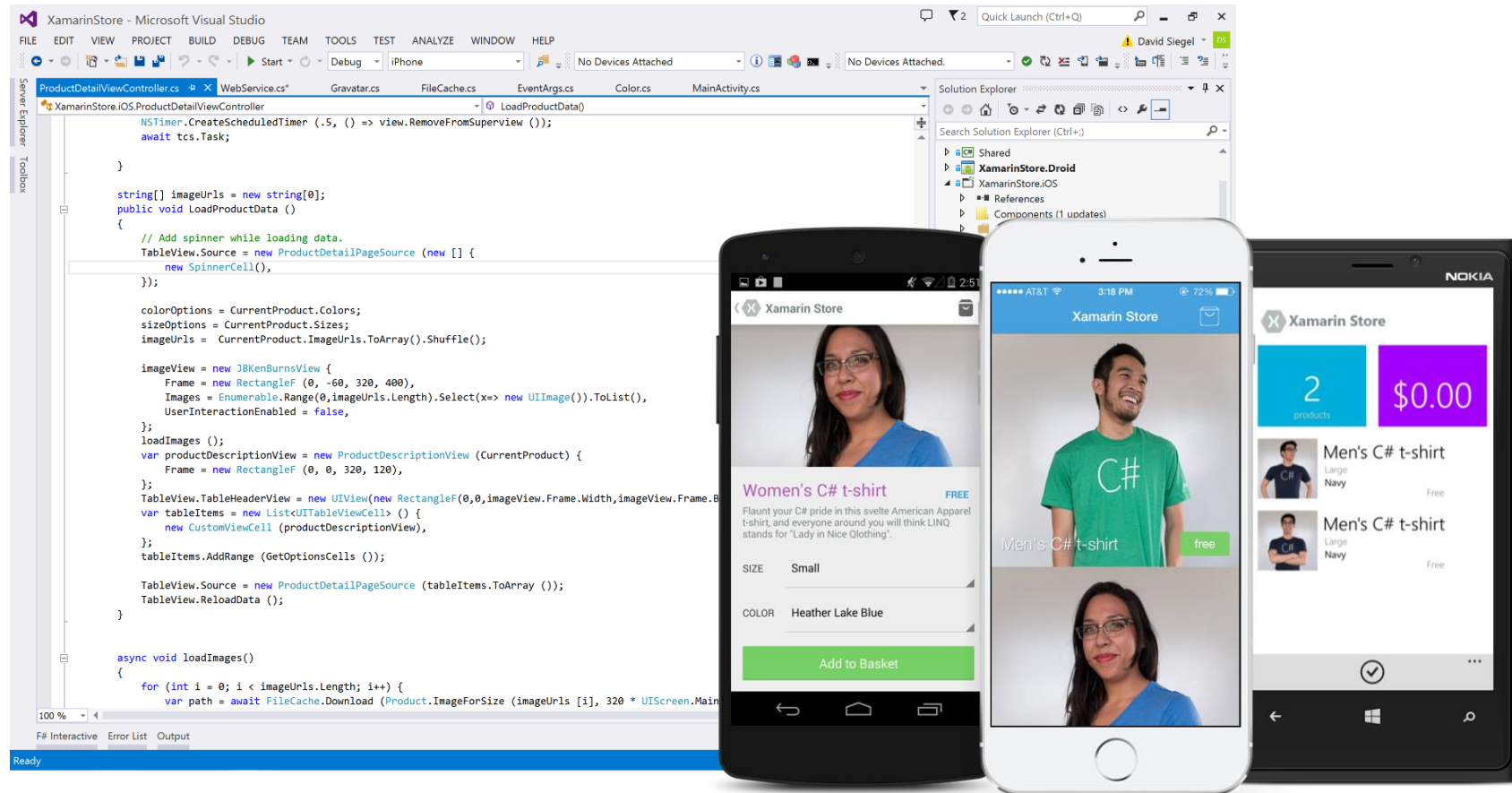
## Same-day support:

- iOS 5
- iOS 6
- iOS 7
- iOS 8
- iOS 9
- iOS 10

## Full support for:

- Apple Watch
- Android Wear
- Amazon Fire TV
- Google Glass
- and much more

Anything you can do in Objective-C, Swift, or Java  
can be done **in C# with Xamarin.**



Let's Build an App

Development Experience

# Xamarin is included in Visual Studio

Including Community Edition!

# Open Source – open.xamarin.com



Xamarin  
OPEN SOURCE

[Xamarin SDK](#)

[Documentation](#)

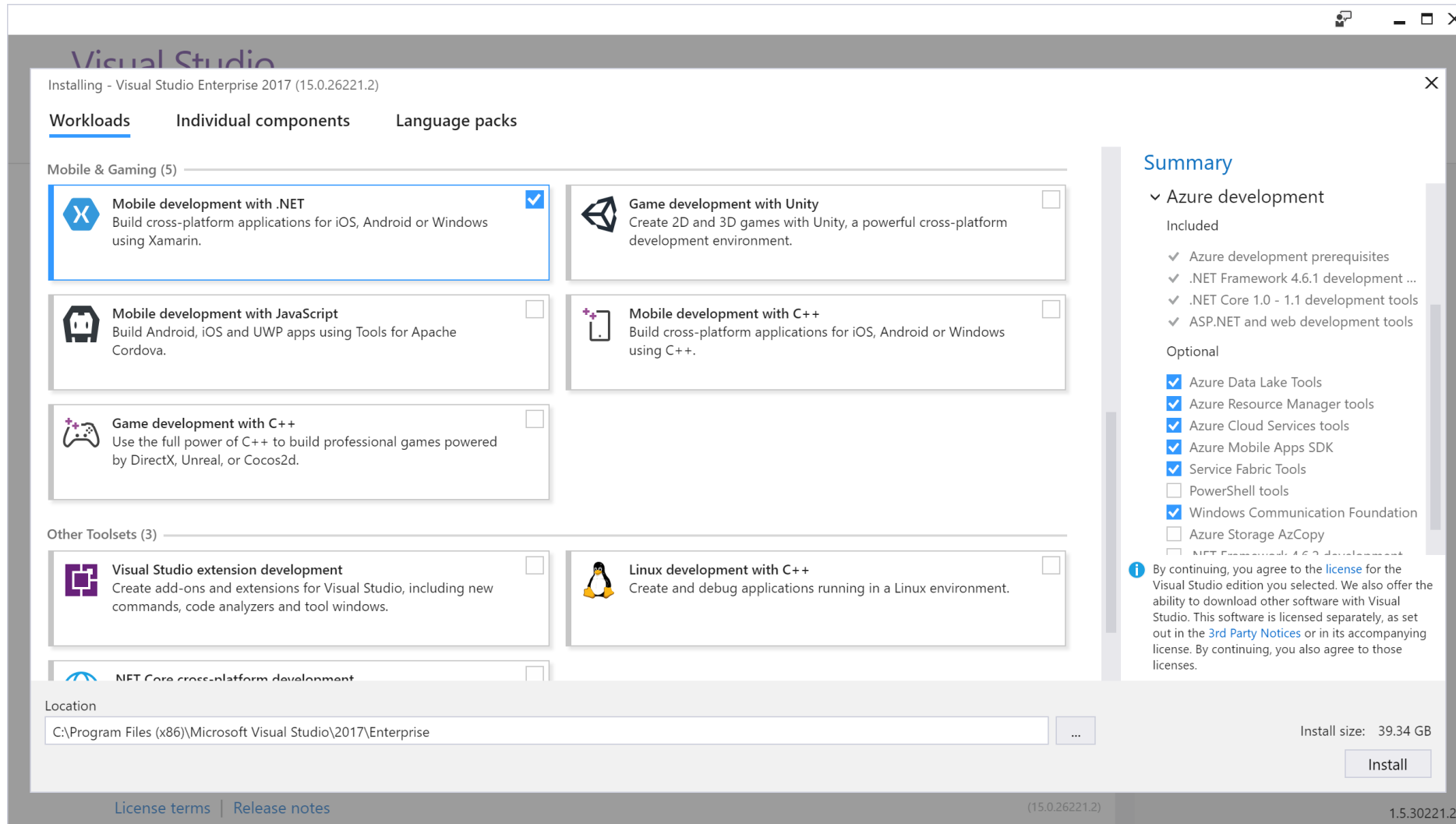
[Community](#)

[Contribute](#)

Build the future of apps  
with Xamarin.

Xamarin SDK is now fully available under the MIT license.

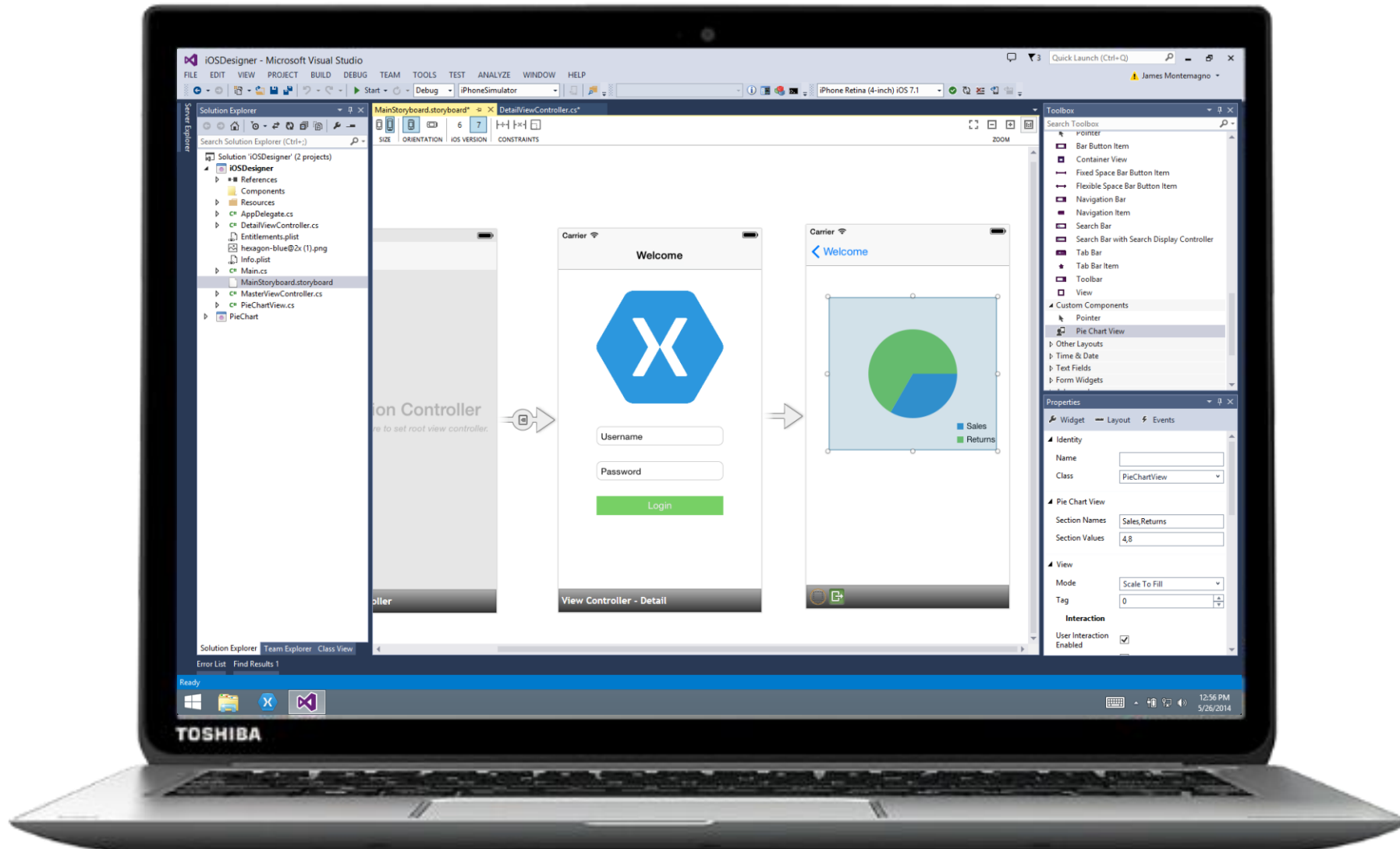
# Visual Studio Integration



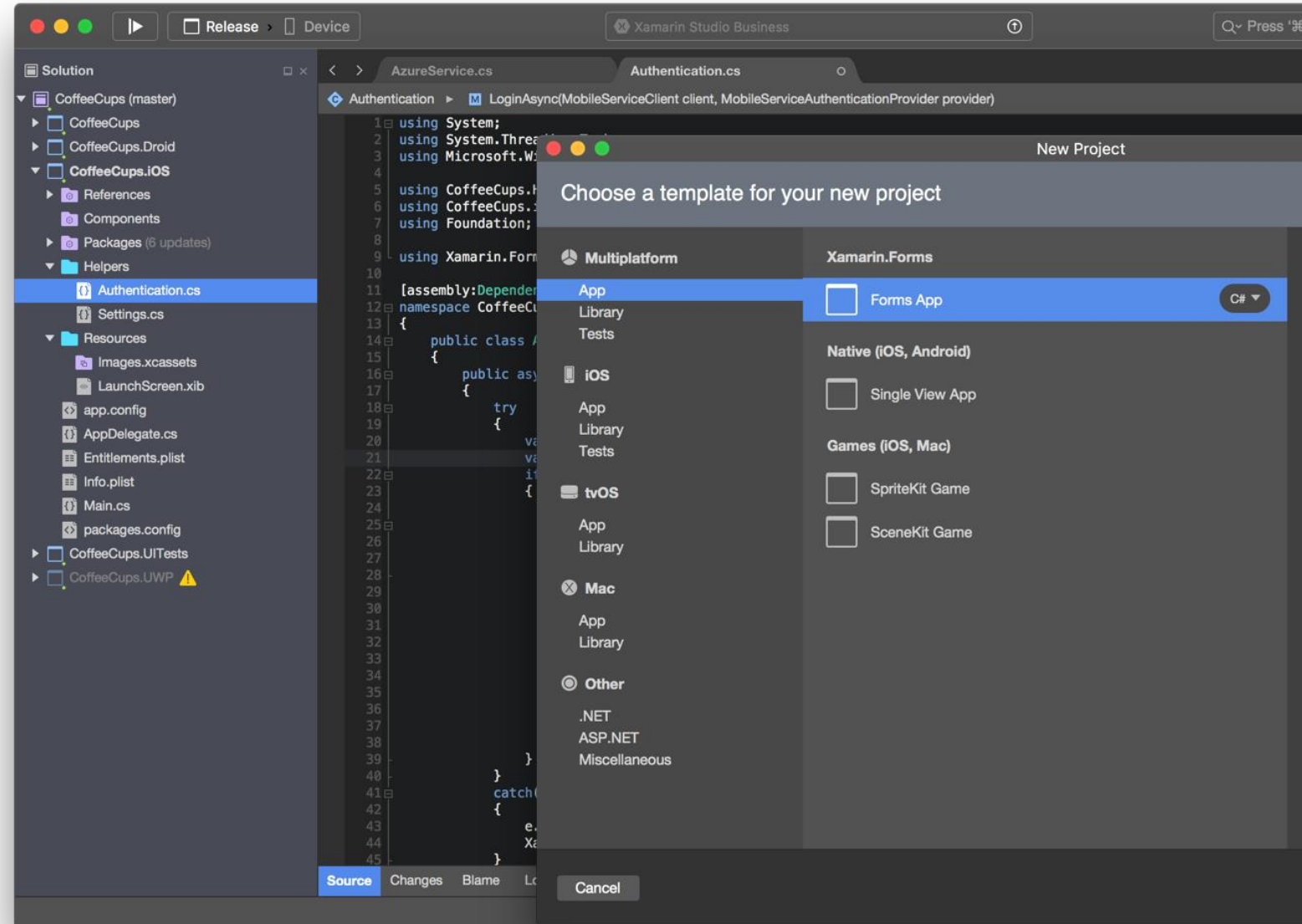
Xamarin.com/Download



# Xamarin for Visual Studio



# Xamarin Studio – Mac



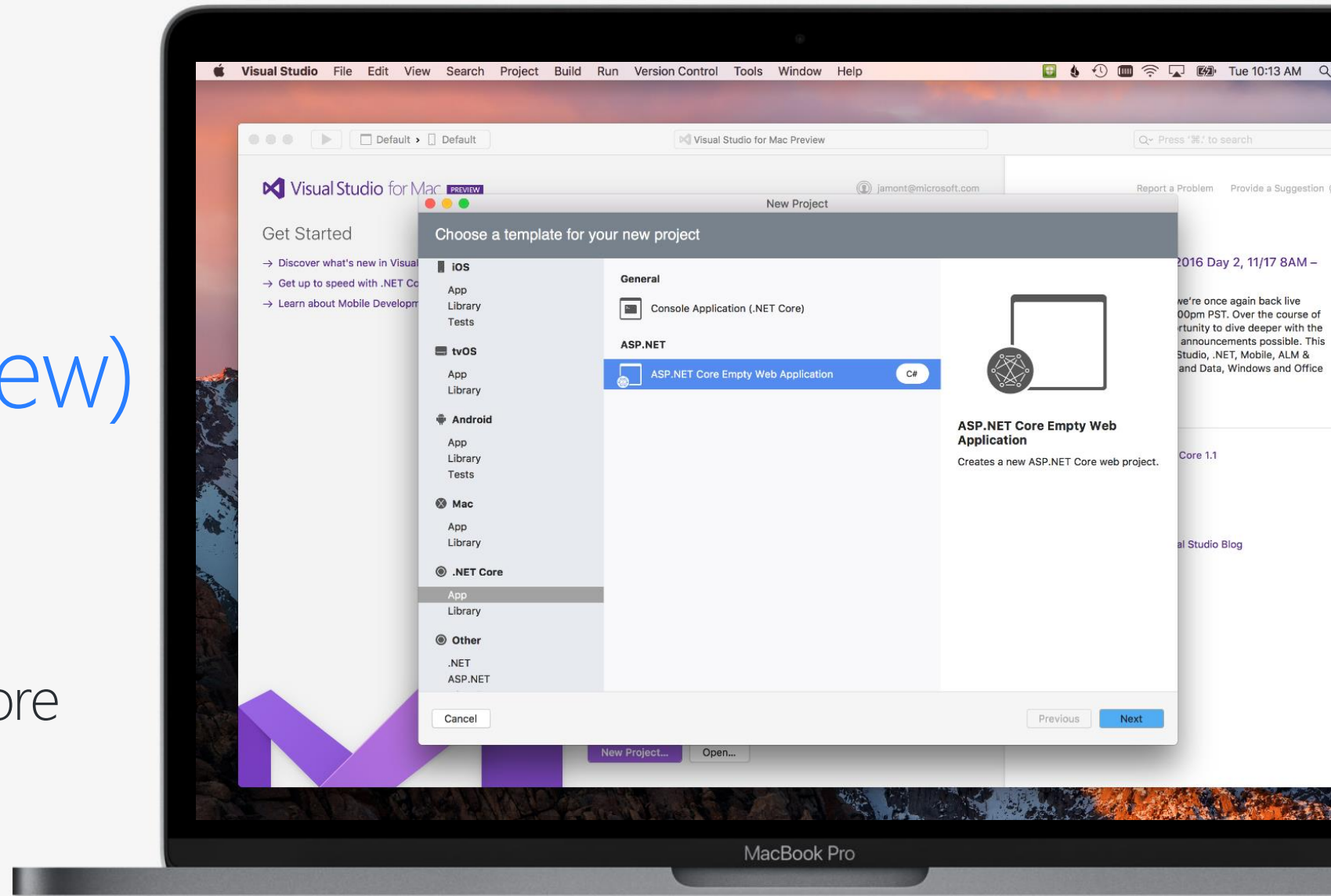
# Visual Studio for Mac (Preview)

iOS, Android, & macOS

.NET development

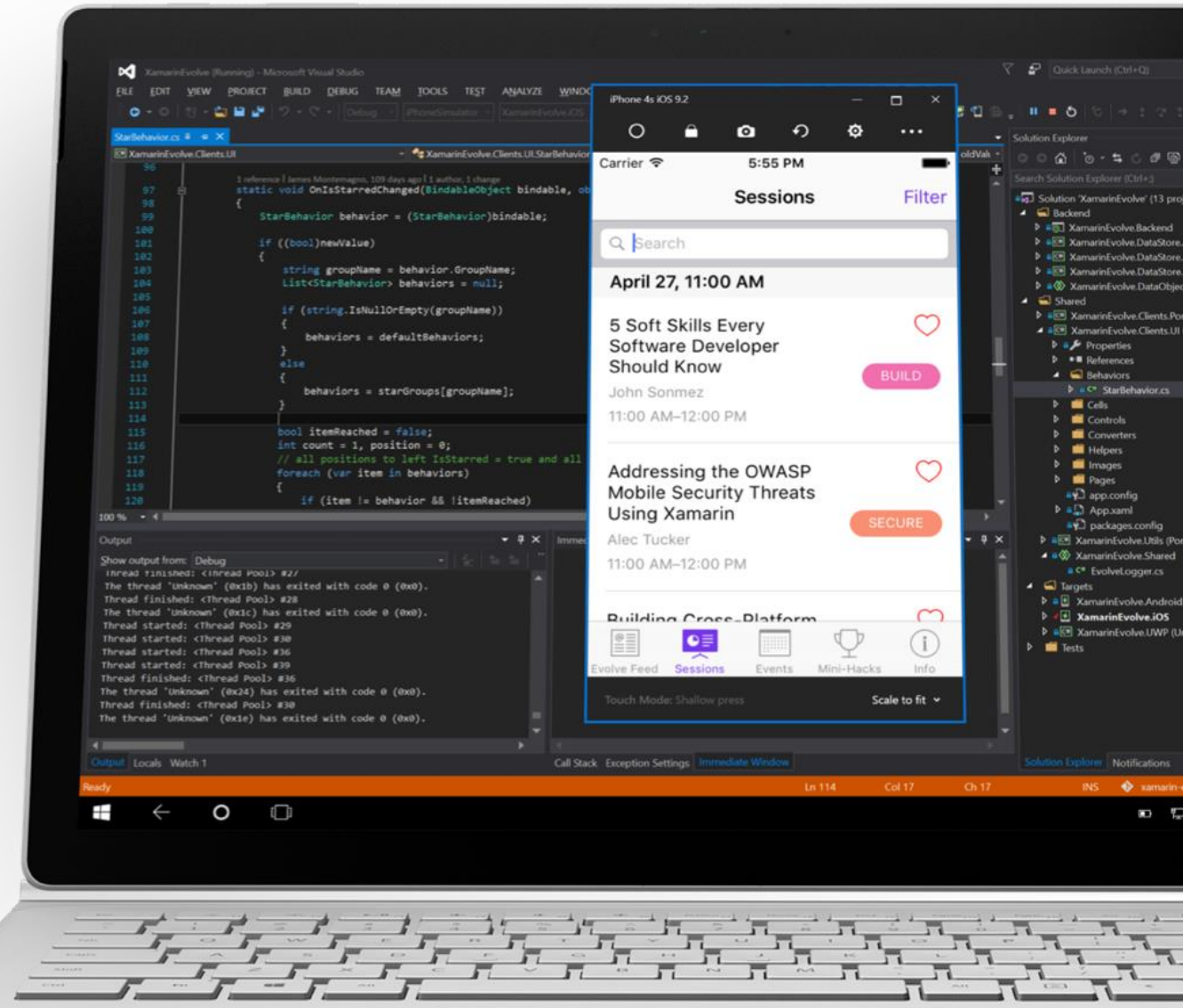
.NET Core & ASP.NET Core

Tools for Azure



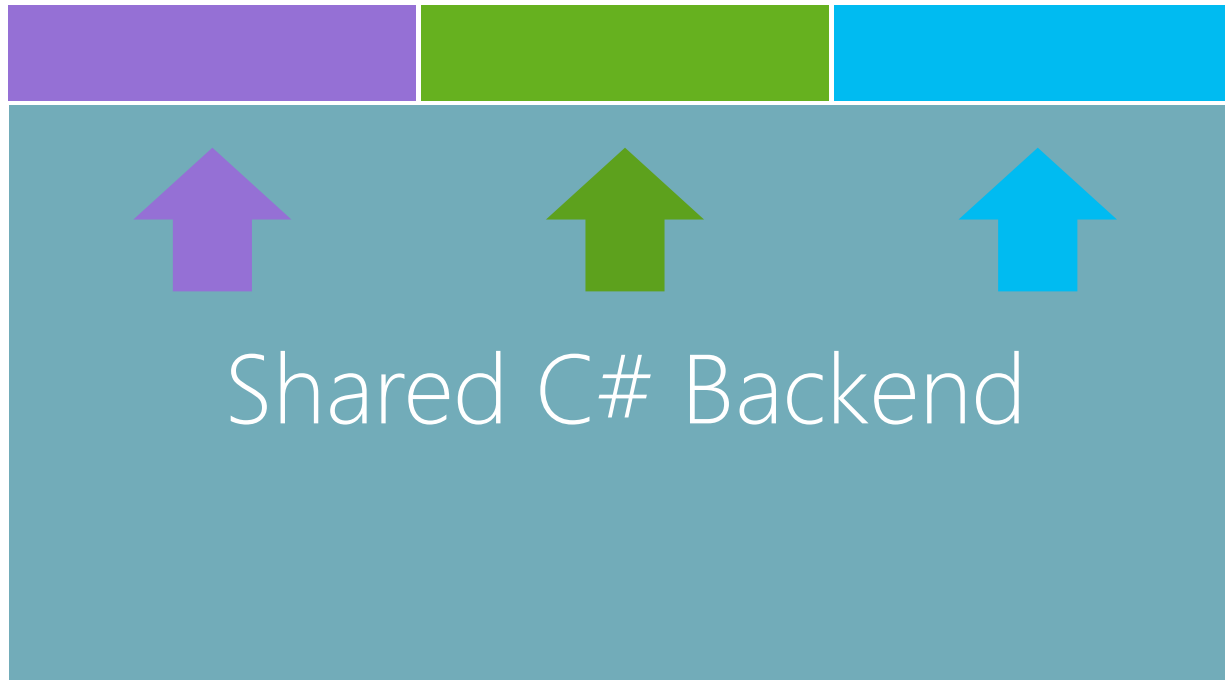
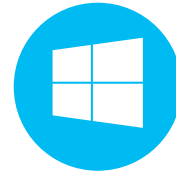
# Visual Studio iOS Simulator Remoting

- Multi-Touch Enabled
- Pressure Sensitive
- Super Fast
- Rotate, screenshots, location changes
- Never leave VS



\*Requires Visual Studio Enterprise

Streamlined Development





UI+APIs

Battery  
GPS  
Lights  
Notifications  
Settings  
Text To Speech

UI + APIs

Battery  
GPS  
Lights  
Notifications  
Settings  
Text To Speech

UI + APIs

Battery  
GPS  
Lights  
Notifications  
Settings  
Text To Speech

# Platform Specific Code

What if we didn't have to  
write this code?

What if we could access  
it from shared code?

Speak("Hello World");

AVSpeechSynthesizer

TextToSpeech

SpeechSynthesizer

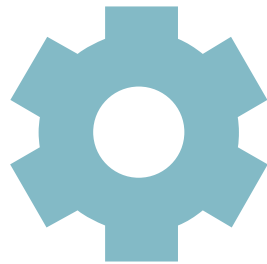




# Plugins for Xamarin

[github.com/xamarin/plugins](https://github.com/xamarin/plugins)

Common API



Let's use a Plugin for Xamarin

# Microsoft's complete mobile DevOps solution



Develop



Test



Build



Distribute



Monitor

 Test

 Analytics

 Build

 Distribute

 Live Update

 Crash Reporting

 Storage

 A/B Testing

 Push Notifications

 Identity

 Tables

 Remote Config.





Build



Test



Analytics



Push Notifications



Distribute



A/B Testing



Crash Reporting



Remote Config.



Identity



Tables



Live Update



Storage

Visual Studio Mobile Center

mobile.azure.com



# 15 Minute Break

Presenter First Name

Presenter Last Name

Presenter Title

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Presenter e-mail

blogs

Twitter