Building Native Apps for Phone, Tablet, Watch and TV with .NET

ASCENDLE

We are a world-class software delivery firm.

Web Development

App Development

Product Strategy

Product Design

Agile Consulting

ASCENDLE

Our clients are market leaders and innovative pioneers.

We are recognized agile software development experts.

Agile & Beyond

Better Software WEST
A TECHWELL EVENT

Microsoft Partner | Silver Application Development

Agile + DevOps EAST
A TECHWELL EVENT

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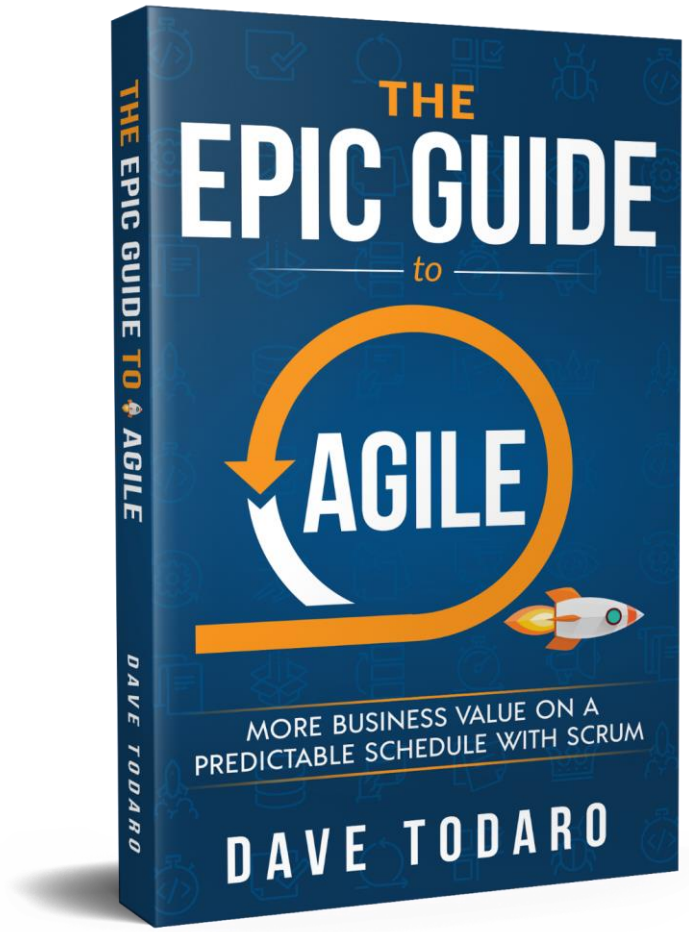

And we wrote the book.

Dave Todaro

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Founder & CEO
Ascendle

Craig
Howard

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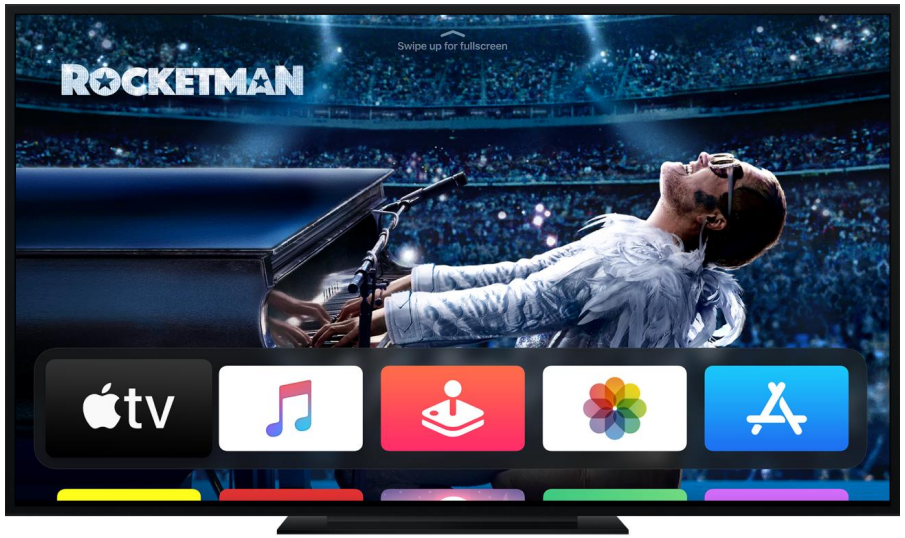
Development Lead
Ascendle

Device Landscape



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Creating Apps for Devices

iOS Developer
Objective-C/Swift

watchOS/tvOS
Developer

.NET
Developer

Android Java
Developer

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Xamarin

Open-source mobile app platform for .NET

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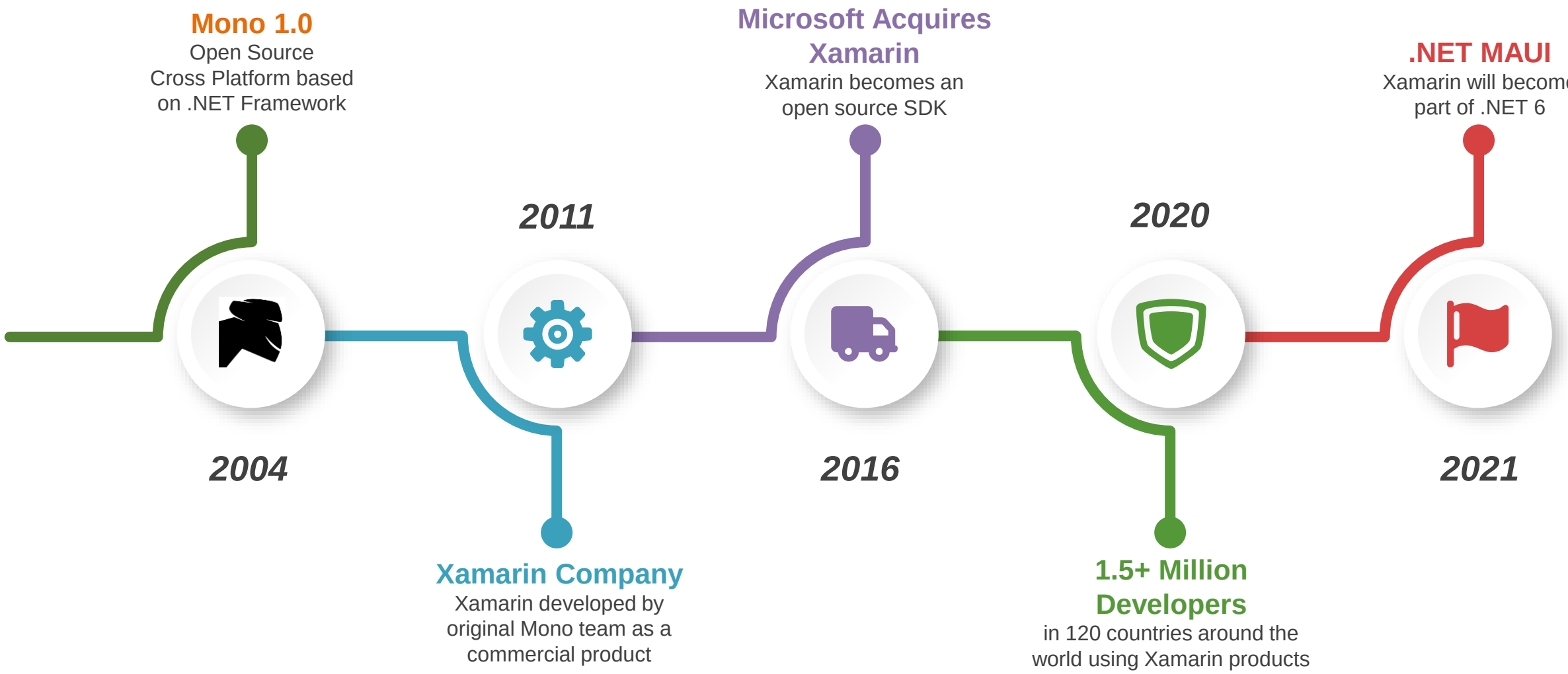
Xamarin Timeline



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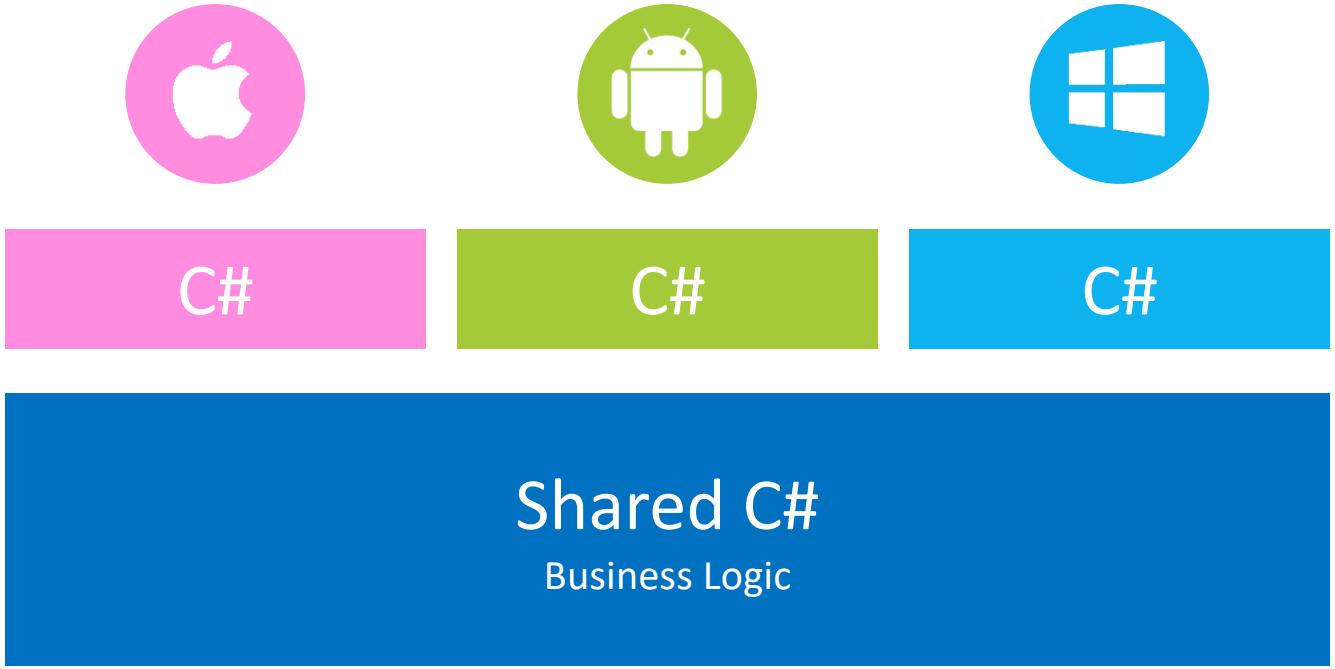
Xamarin Native



Up to 75%
shared code

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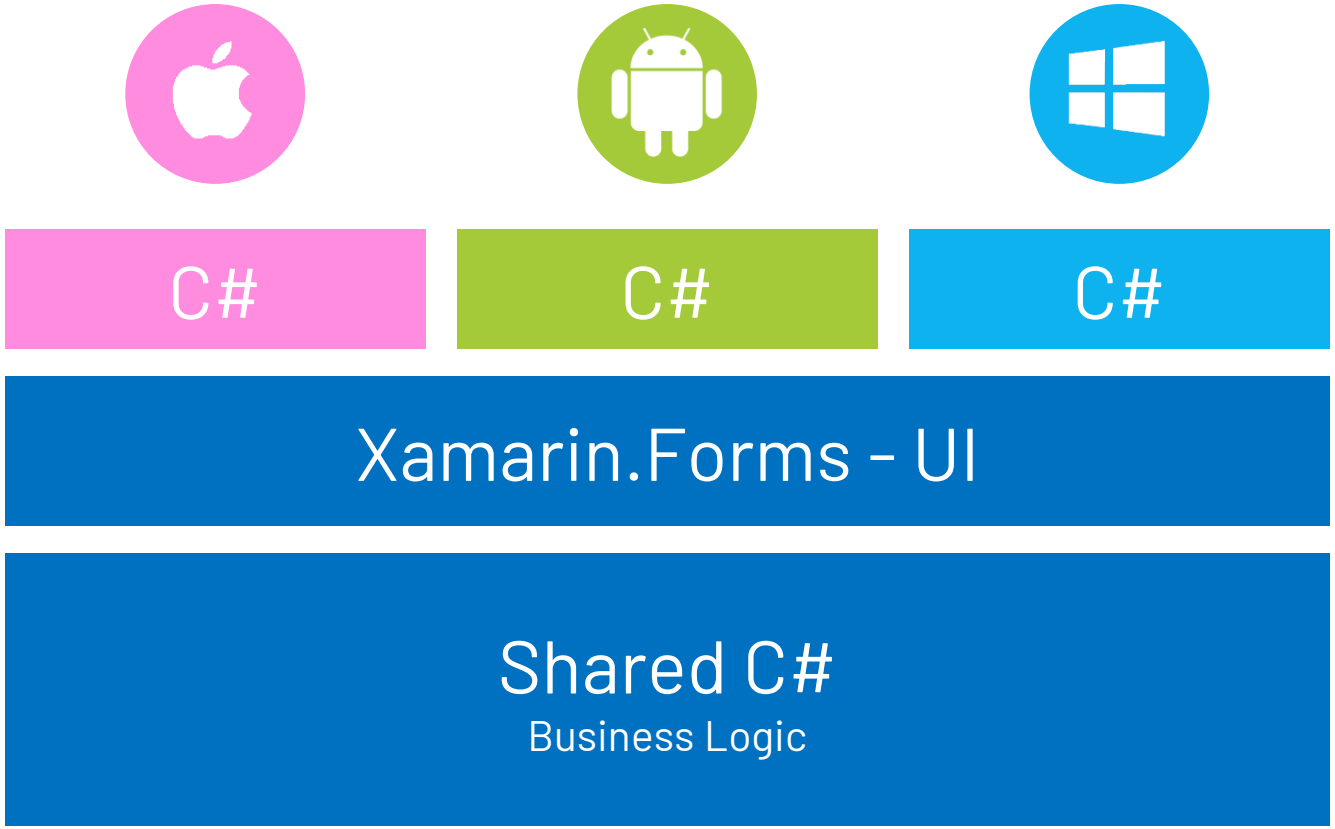
Xamarin Forms



Up to 90% shared code

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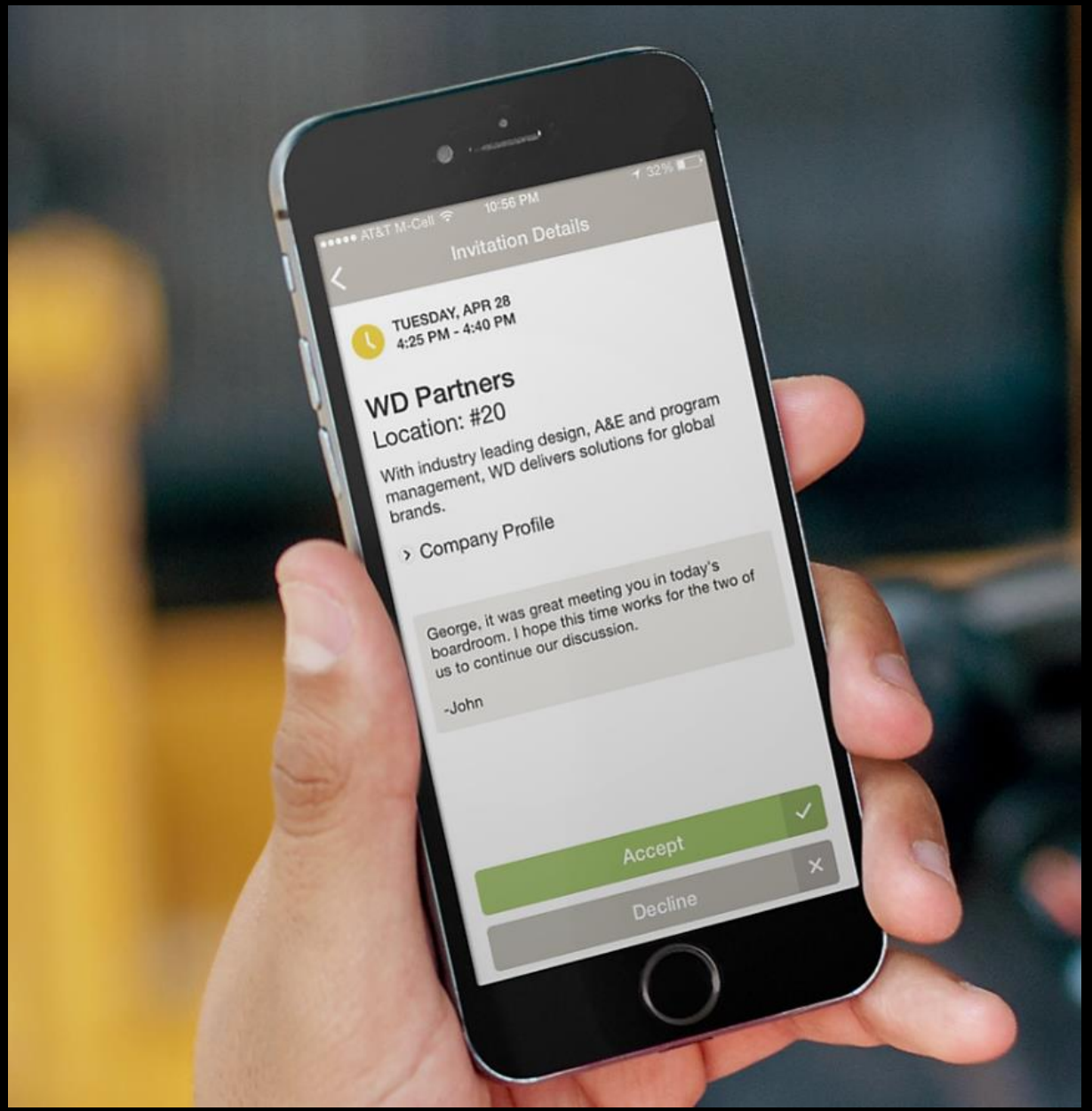
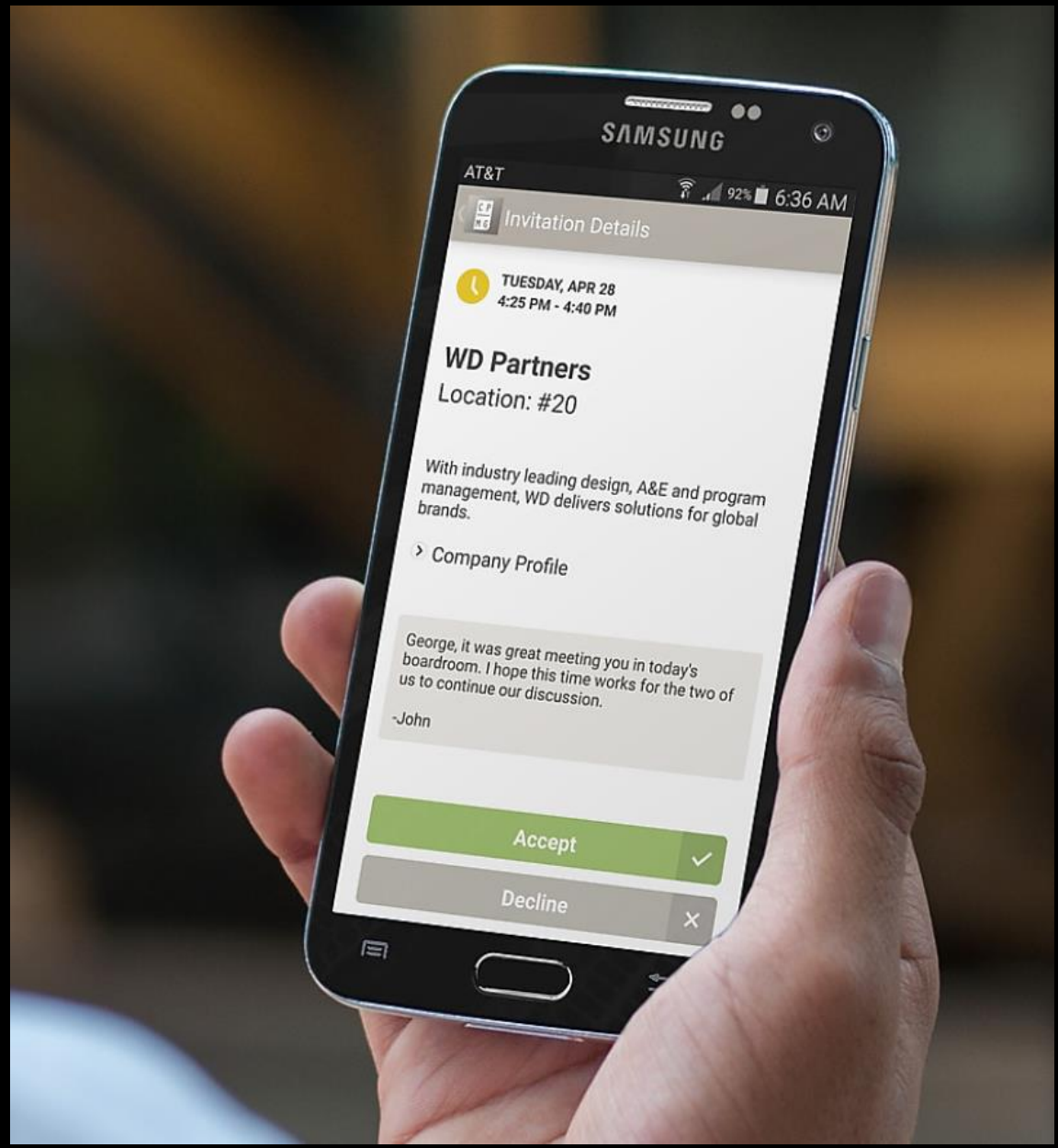

AT&T M-Cell
10:56 PM
32%
Invitation Details
TUESDAY, APR 28
4:25 PM - 4:40 PM
WD Partners
Location: #20
With industry leading design, A&E and program management, WD delivers solutions for global brands.
› Company Profile
George, it was great meeting you in today's boardroom. I hope this time works for the two of us to continue our discussion.
-John
Accept
Decline


SAMSUNG
AT&T
92%
6:36 AM
Invitation Details
TUESDAY, APR 28
4:25 PM - 4:40 PM
WD Partners
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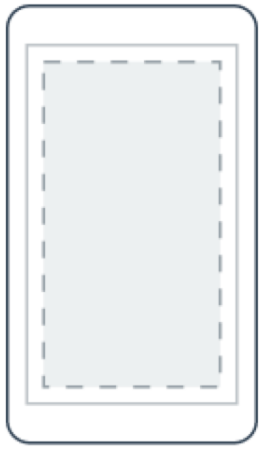
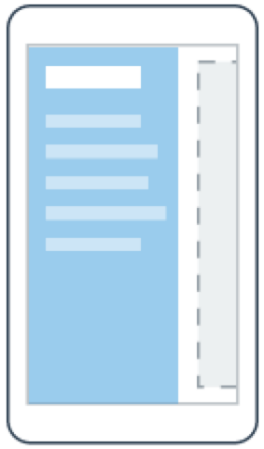
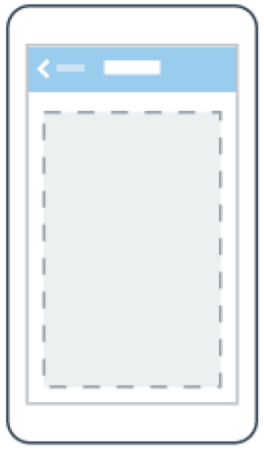
Xamarin Forms Page Layouts



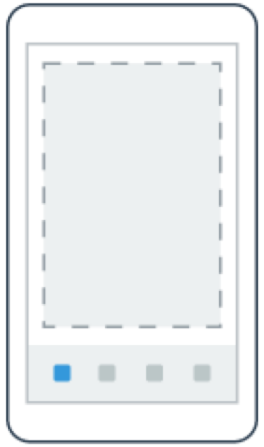
ContentPage



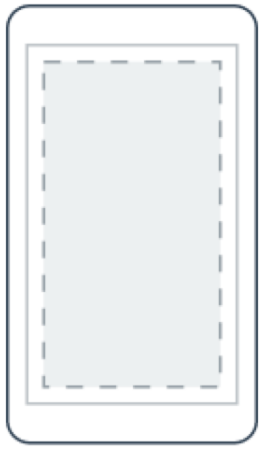
MasterDetailPage



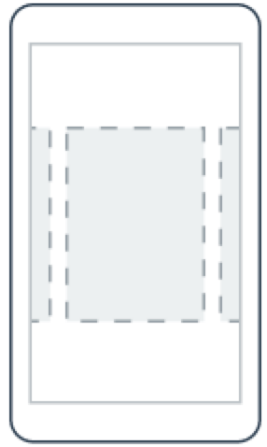
NavigationPage



TabbedPage



TemplatedPage



CarouselPage

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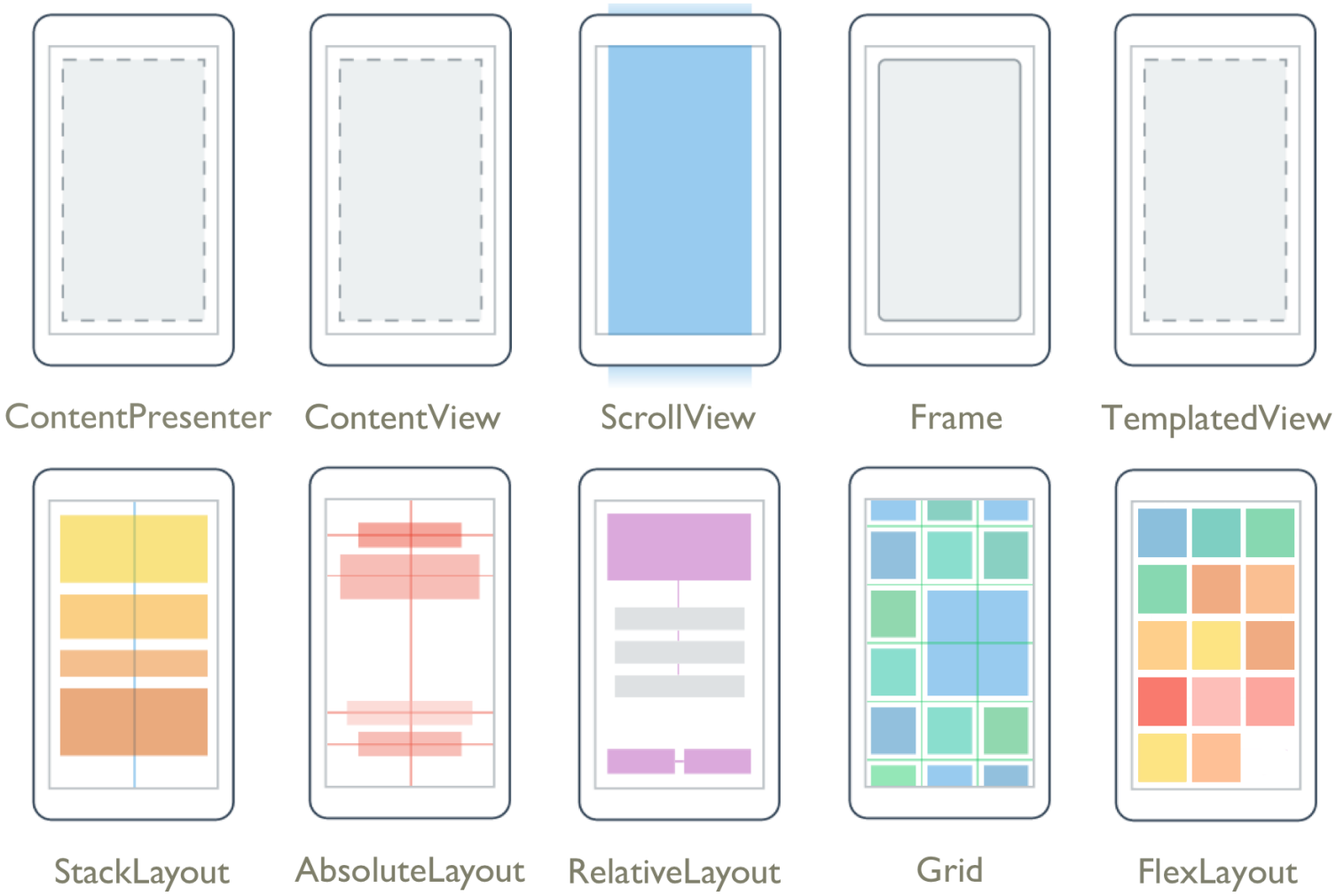
Xamarin Forms Content Layouts



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Xamarin Forms Views

Controls

ActivityIndicator	BoxView	Button	DatePicker	Editor
Entry	Image	Label	ListView	Map
OpenGLView	Picker	ProgressBar	SearchBar	Slider
Stepper	TableView	TimePicker	WebView	EntryCell
ImageCell	SwitchCell	TextCell	ViewCell	

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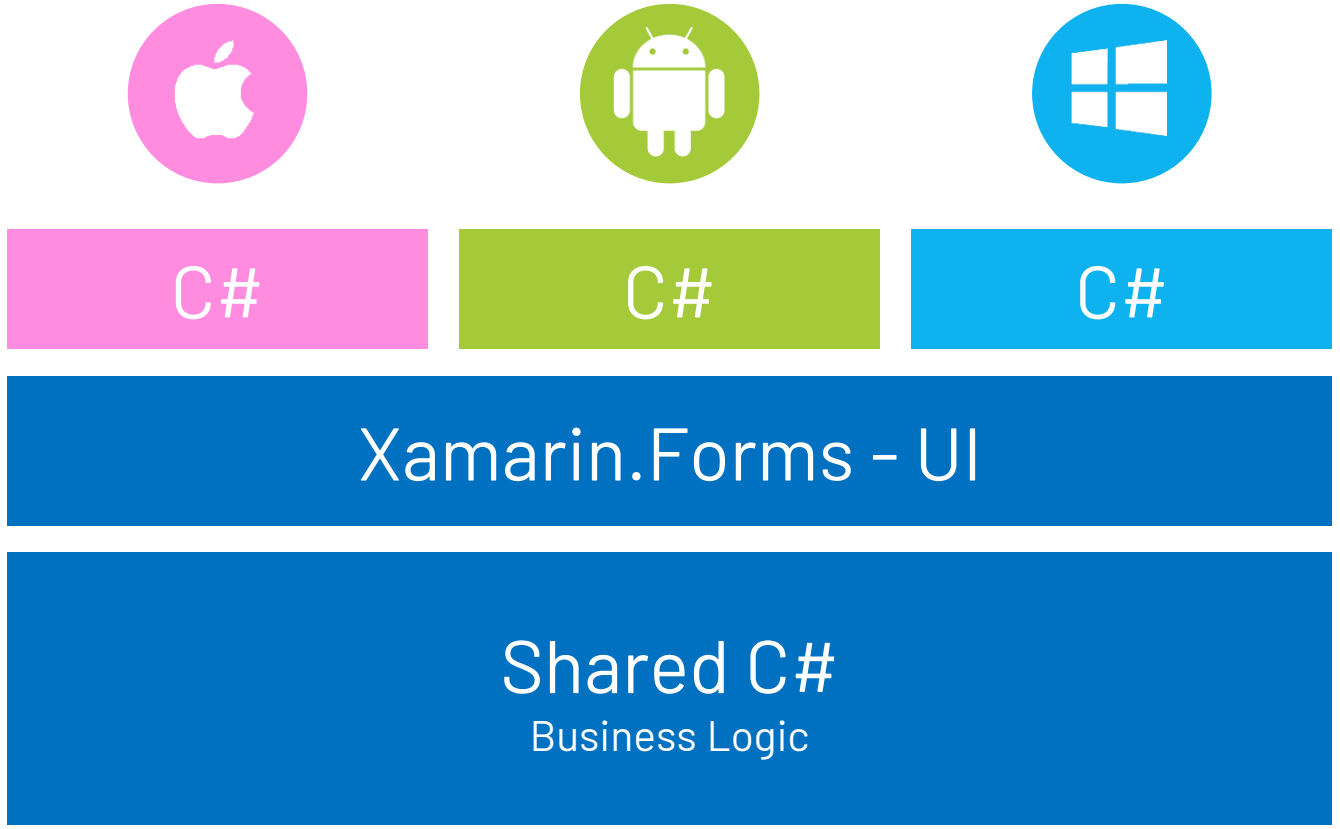
Xamarin Forms



Upwards of 90% shared code

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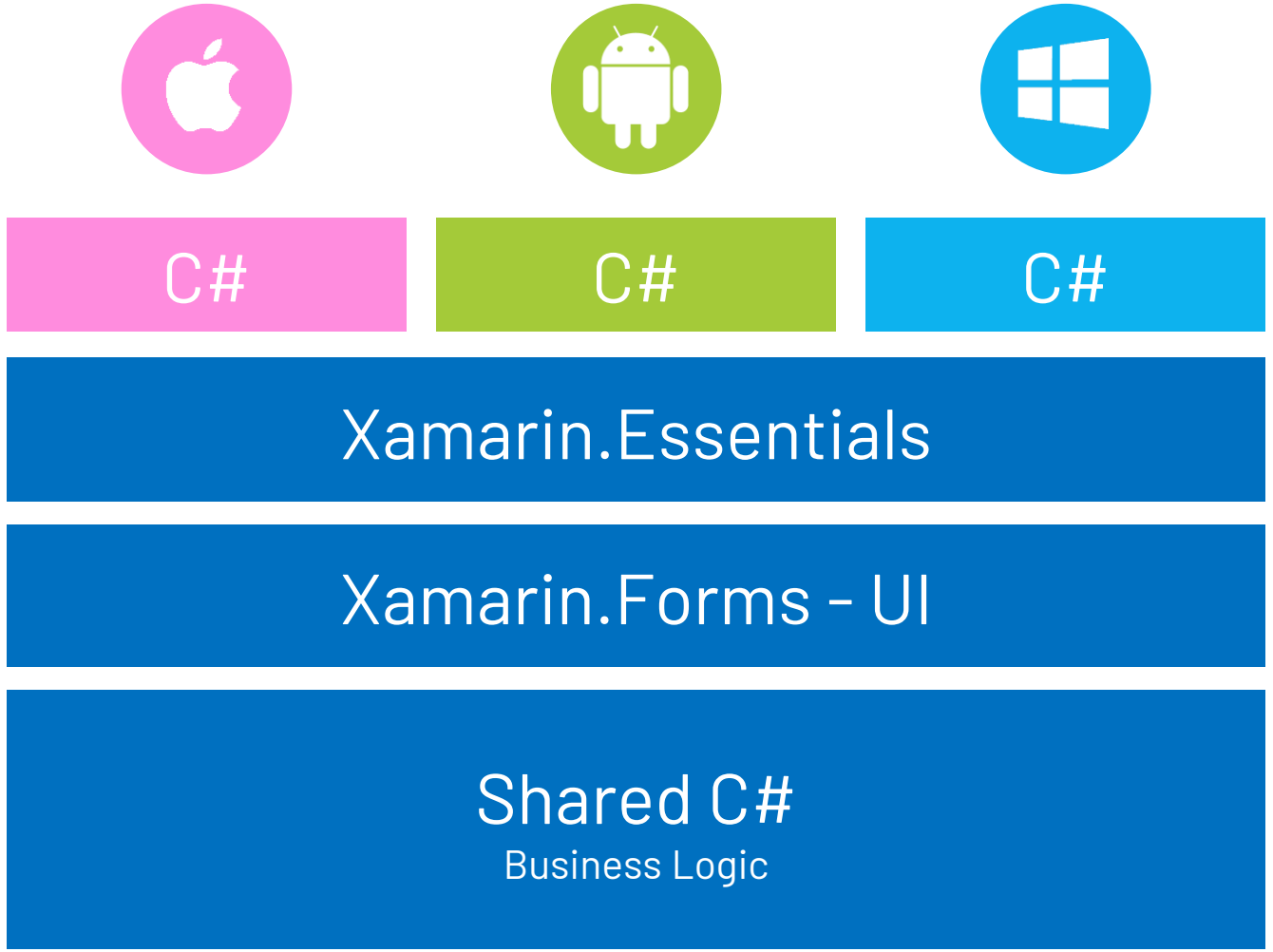
Xamarin Essentials



Upwards of 98% shared code

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Xamarin Essentials

Accelerometer	Color Converters	Email	Launcher	Permissions	SMS
App Information	Compass	File System Helpers	Magnetometer	Phone Dialer	Text-to-Speech
App Theme	Connectivity	Flashlight	MainThread	Platform Extensions	Unit Converters
Barometer	Detect Shake	Geocoding	Maps	Preferences	Version Tracking
Battery	Device Display Information	Geolocation	Open Browser	Secure Storage	Vibrate
Clipboard	Device Information	Gyroscope	Orientation Sensor	Share	Web Authenticator

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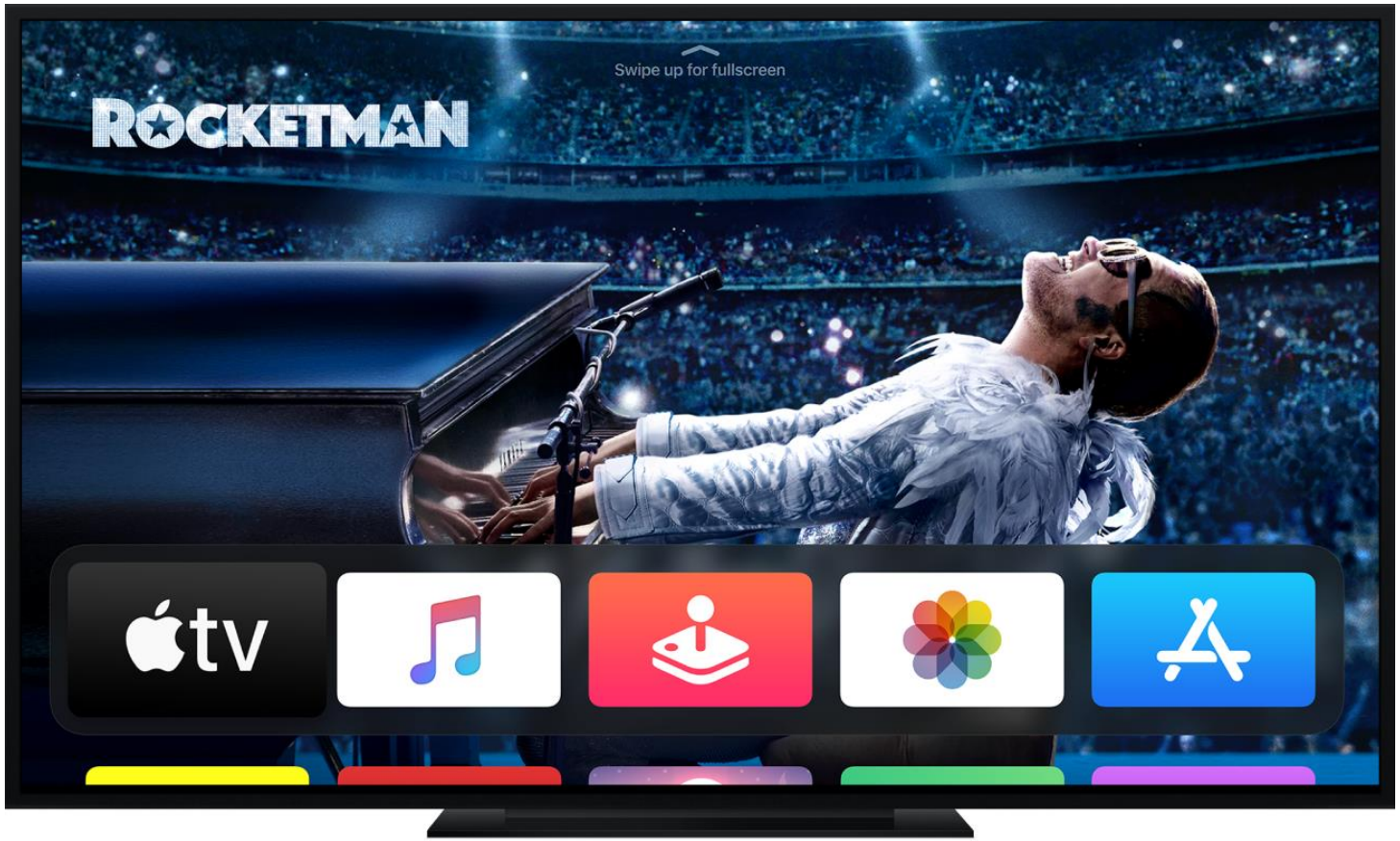
Developing with Xamarin

- One language C#
- Shared code
- Access to all .NET Standard features
- Automated testing
- One editor – Visual Studio
- Compiles Natively for each device
- Increased productivity

watchOS & Android Wear

- C# and .NET
- Xamarin Native and Xamarin Essentials
- Backend code can be shared
- Release through Apple App Store and Google Play



tvOS & Tizen

- C# and .NET
- Xamarin Native and Xamarin Forms
- Full access to Native APIs
- Backend code can be shared
- Release through Apple TV's App Store

Key Takeaways

- Xamarin is a cross-platform, open source technology for developing mobile apps
- Xamarin apps are compiled natively and are highly performant
- Use your existing .NET skills, teams and code
- Share up to 98% of code across platforms
- Target watchOS and tvOS with shared code

Questions?

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References

Xamarin Forms

- https://docs.microsoft.com/en-us/xamarin/xamarin-forms/

Xamarin Forms Controls

- https://docs.microsoft.com/en-us/xamarin/xamarin-forms/xaml/xaml-controls

Xamarin Essentials

- https://docs.microsoft.com/en-us/xamarin/essentials/

Xamarin iOS Samples

- https://github.com/xamarin/ios-samples/tree/main/tvos
- https://github.com/xamarin/ios-samples/tree/main/watchOS