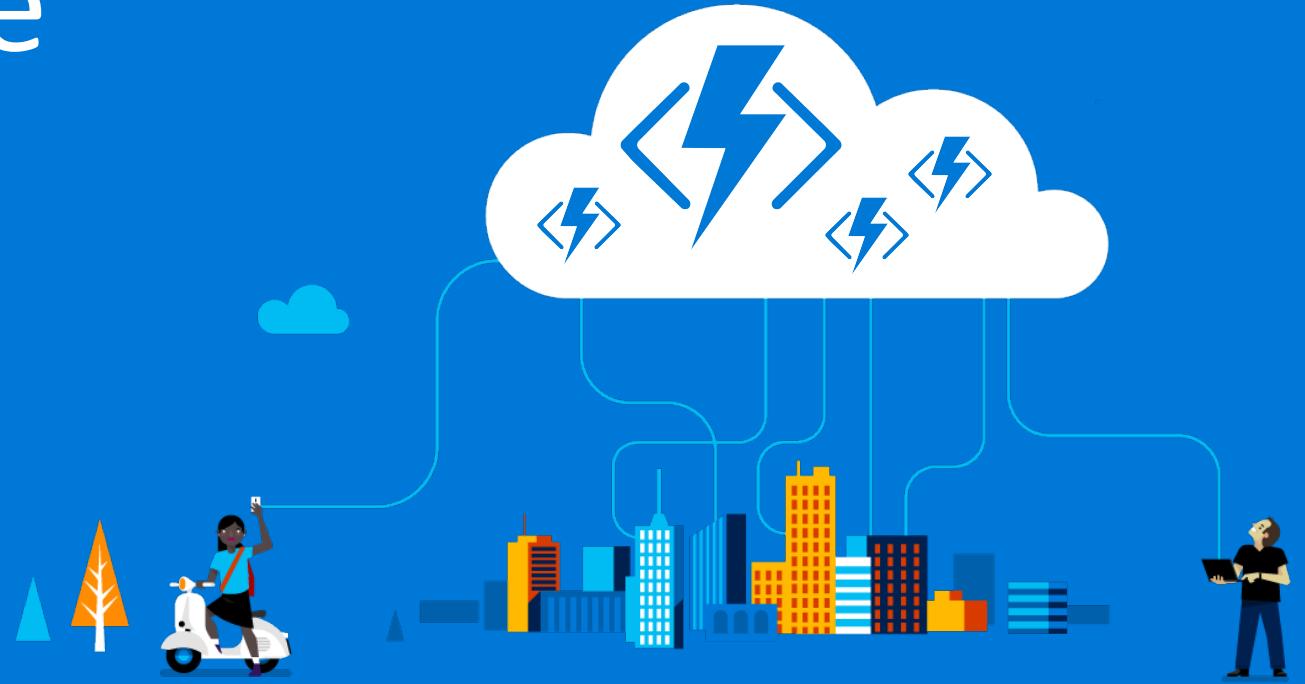


Go Mobile with Xamarin and Azure



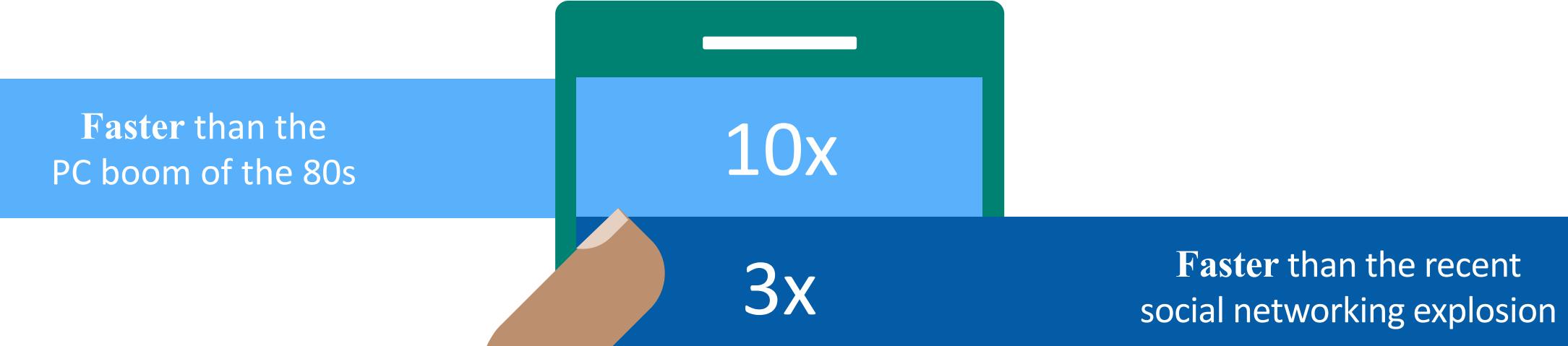
Sarthak Mahapatra
Principal Consultant, Xebia India
@sarthakm

Xebia

Agenda

- Introduction- A Mobile First Future
- Xamarin + Visual Studio
- The power of Azure
- Demos
- More Stuff

Mobile has happened...



We have come full circle

June 29, 2007



Today

The image shows a screenshot of the Google Play Store listing for the "Virtual Zippo® Lighter" app. At the top, there is a large thumbnail showing a flame. Below it, the app's name "Virtual Zippo® Lighter" is displayed, along with the developer "ZIPCORP Lifestyle" and a rating of "★★★★★ 17,819". The app is categorized as "Everyone" and offers "in-app purchases". A note states that the app is compatible with all devices. There are "Add to Wishlist" and "Install" buttons. Below the main image, there are three smaller screenshots showing the app's interface: a Zippo lighter, a flame, and a Zippo lighter with a yin-yang design.

The Virtual Zippo Lighter opens with a flick of your wrist and lights with a turn of your thumb. The windproof flame sways as you move your Android device and reacts when you try to blow it out. Choose from a variety of Zippo Lighter images and customize a handful of selected lighters as well.

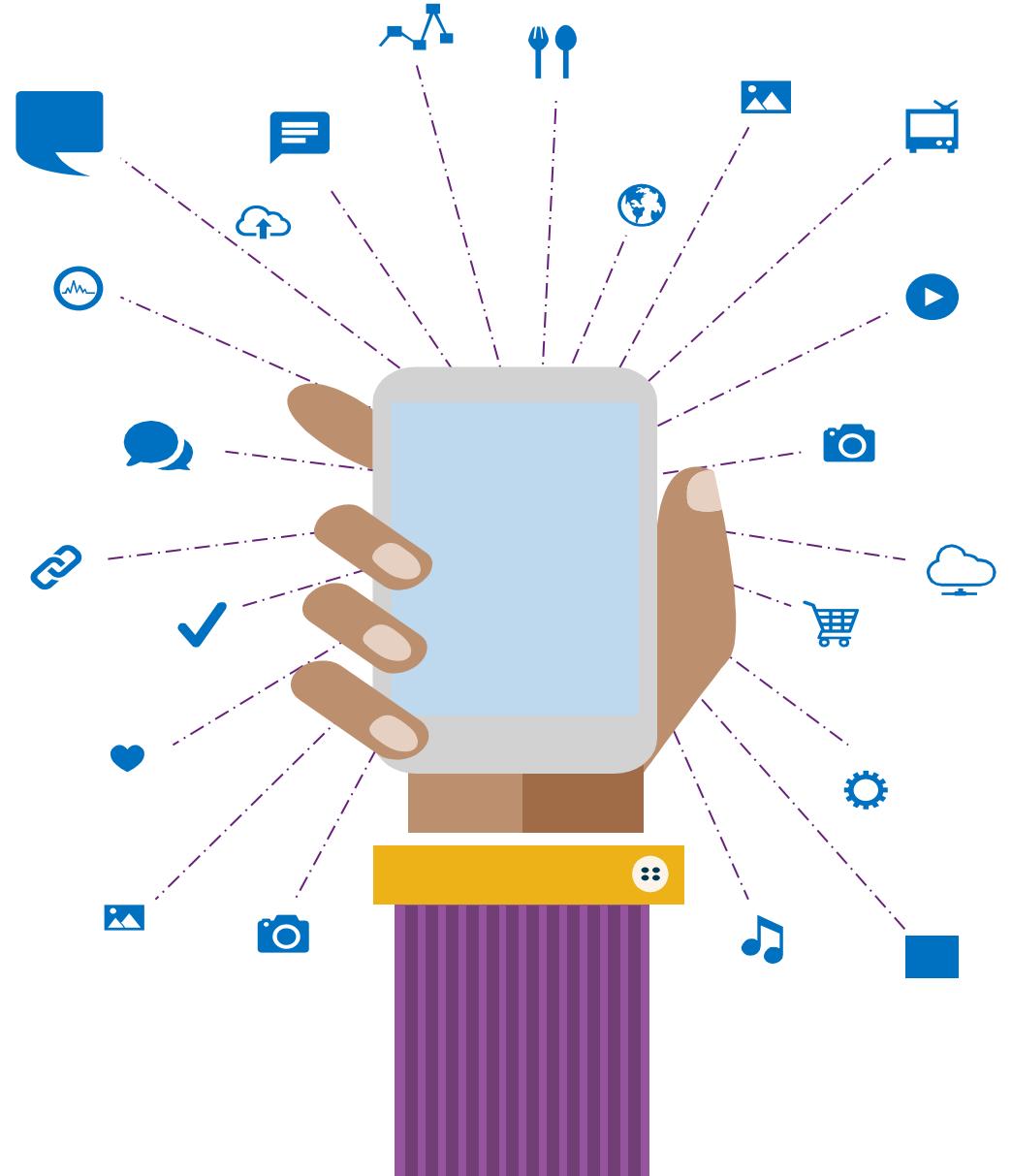
The appification of modern business

Scaling from 1 to 100 apps

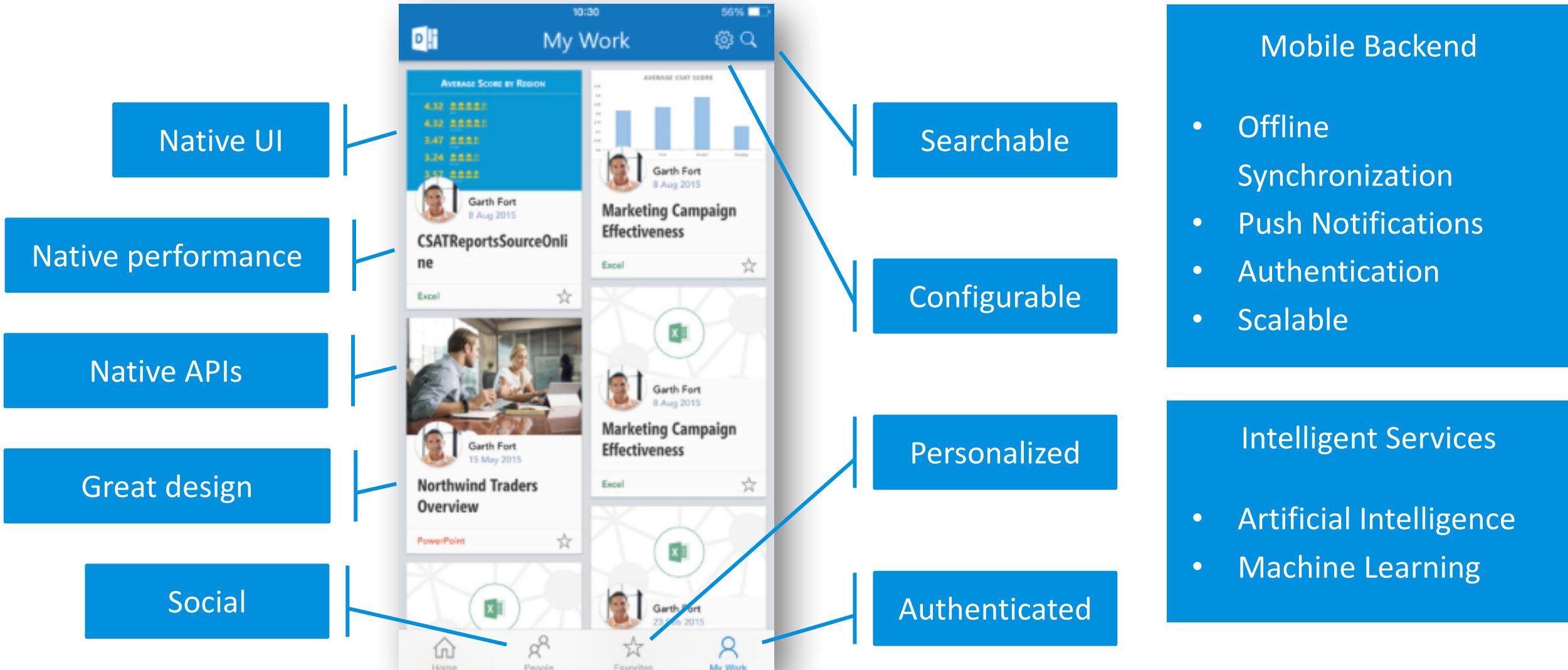
Not an experiment, a must

Transformative for customers,
employees, and partners

The individual is at the center



Anatomy of an intelligent application



Delivering a new customer experience



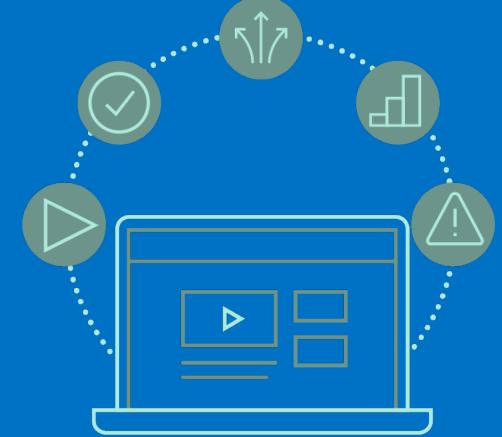
Outstanding
Experiences



Open & Scalable
Cloud Platform



Data-driven
Intelligence

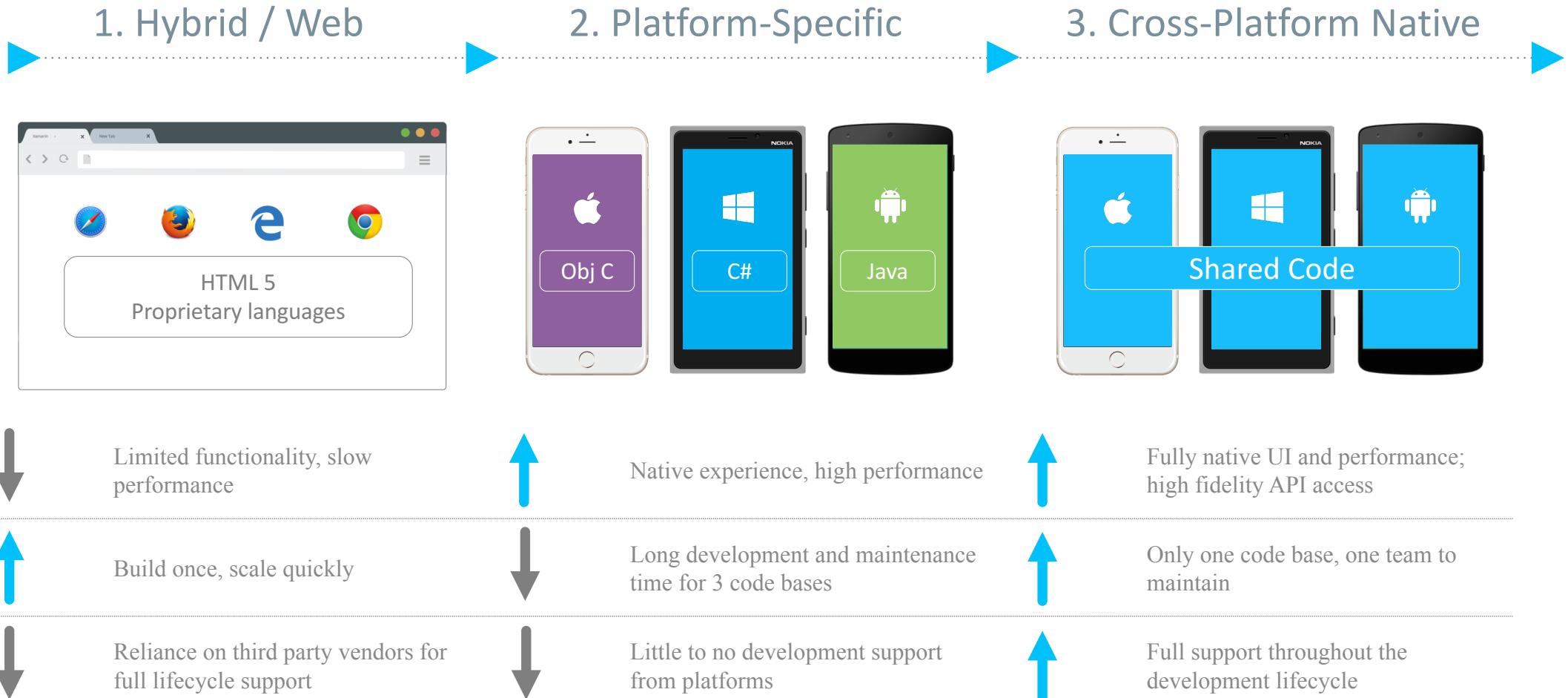


Continuous
Innovation

Xamarin and Visual Studio

Your one stop shop for Mobile Development

Three mobile approaches



Truly native cross-platform solution

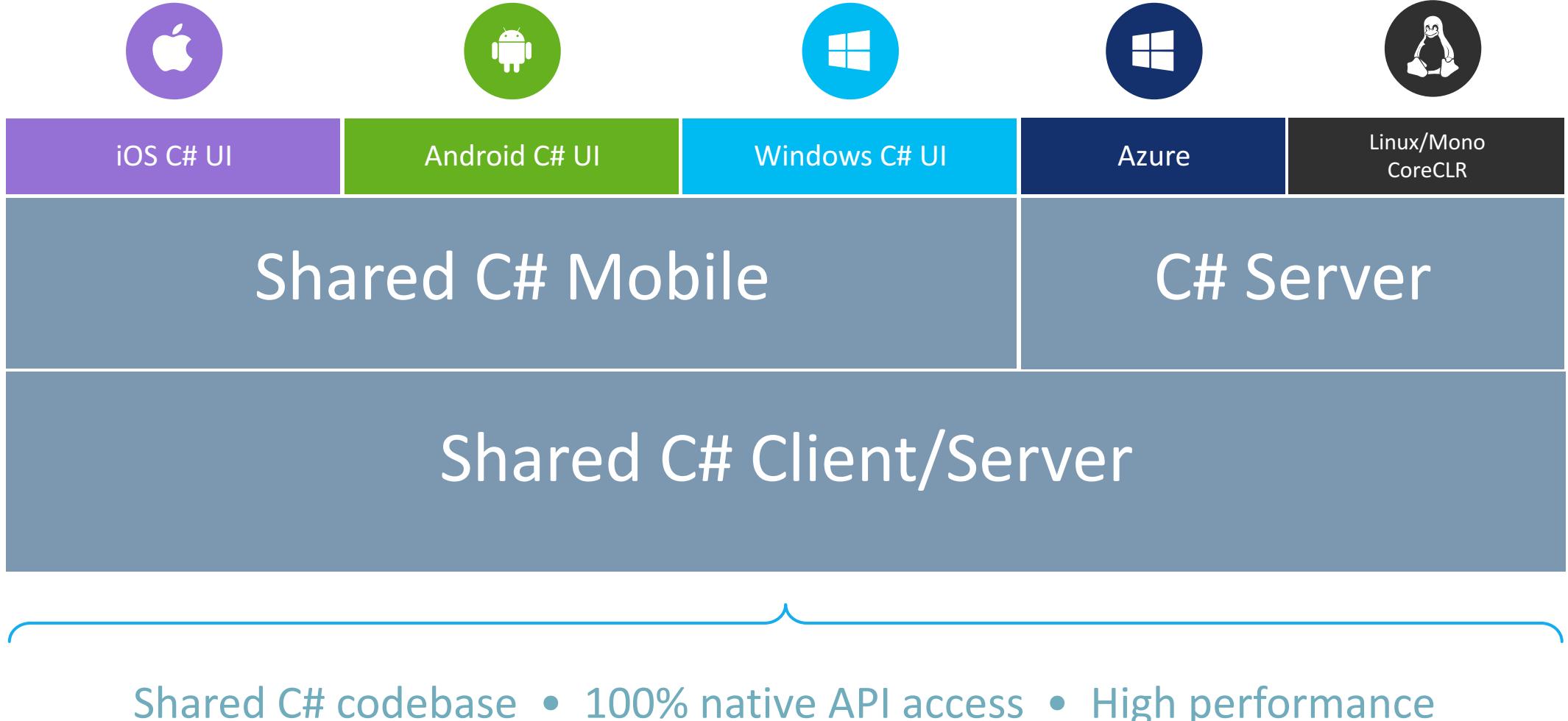
Native user interface

High-fidelity API access

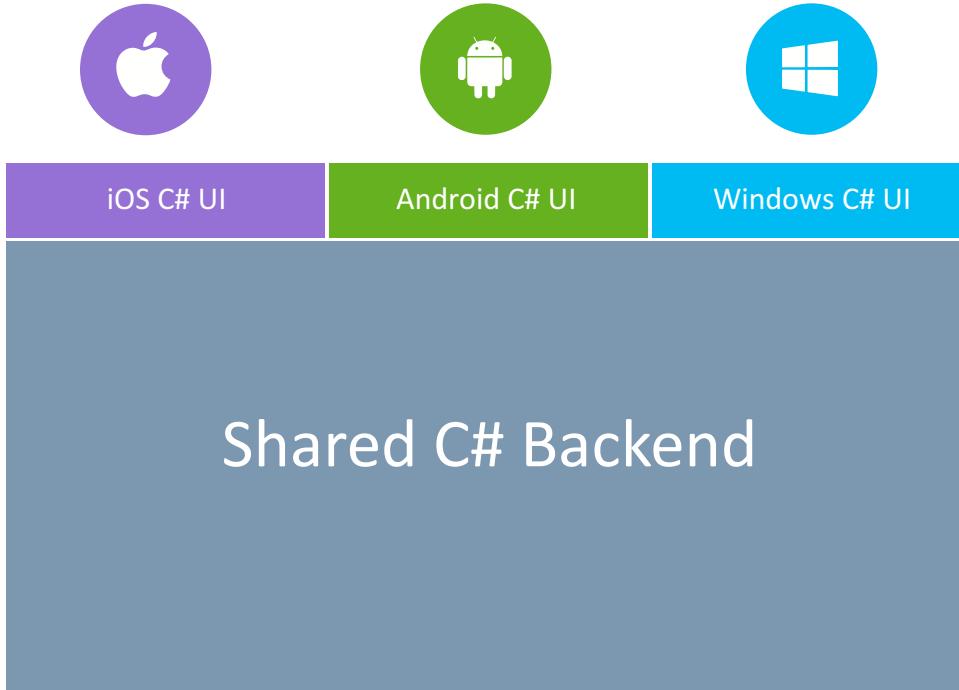
Native performance



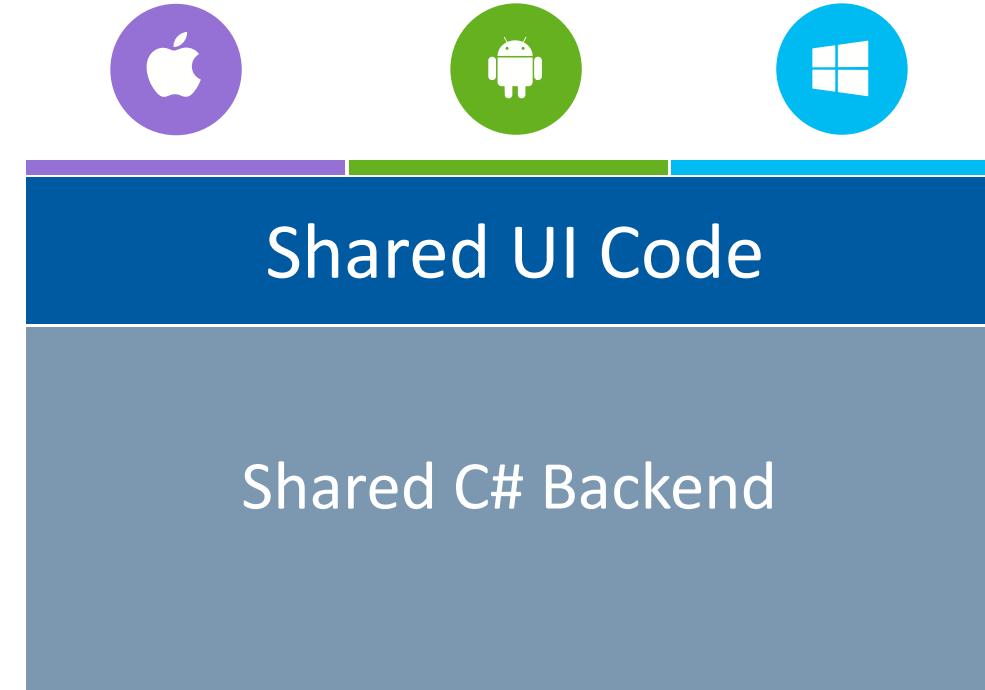
Xamarin's Unique Approach



Xamarin + Xamarin.Forms

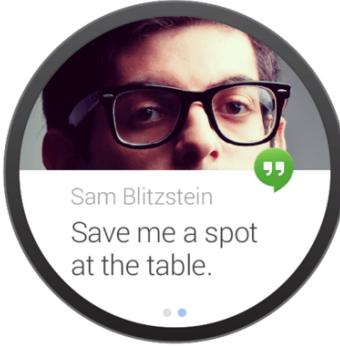


Xamarin.iOS/Xamarin.Android



With Xamarin.Forms:
More code-sharing, all native

Completely up-to-date with device OS releases



- Always up-to-date with Apple and Google API releases.
 - Track record of offering same-day support: iOS 5, 6, 7, 8, 9, 10
 - The only cross-platform solution with support for the Google Glass SDK, Android Wear, Amazon Fire TV, Apple Watch, Apple TV, and Tizen*.

What about the Backend???



Mobile Back-end as a Service (MBaaS)

Quickly build powerful back-end services with high reliability, security, and scalability.



Azure Functions

Run code in response to a variety of events, without having to provision or manage infrastructure, in your development language of choice. Build rich serverless scenarios by integrating multiple Azure offerings.

aka.ms/vs/xamarin/azure-functions



Azure App Service Mobile Apps

Store data in a mobile-friendly data source and provide secure access through Azure AD, social network sign-in, or OAuth.

Make data available offline and sync when online.
Engage your customers with push notifications.

aka.ms/vs/xamarin/app-service-mobile



Azure App Service API Apps

Move your API to production and redirect traffic to the new version without any downtime.

Connect your API to your corporate or local network using on-premises connections with enterprise-grade security.

aka.ms/vs/xamarin/azure-api



Data

Store structured and unstructured data in cloud services that are highly available, secure, durable, and scalable.



Azure Cosmos DB

Build extremely low latency and massively scalable databases that can be transparently replicated worldwide, to always be near your users.

aka.ms/vs/xamarin/cosmos-db



Azure SQL Database

Build high-performance, reliable, and secure relational databases for data-driven apps, without needing to manage infrastructure.

aka.ms/vs/xamarin/azure-sql-db



Azure Storage

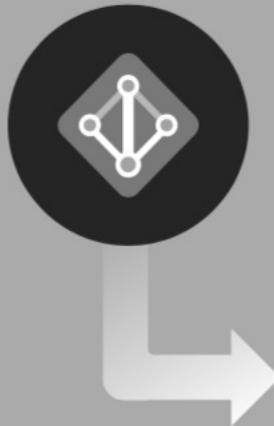
Securely store blobs, unstructured data, and files that can be accessed from anywhere in the world, publicly and privately.

aka.ms/vs/xamarin/azure-storage



Identity

Secure and powerful customer identity
and access management.



Azure Active Directory B2C

Enable your app to authenticate with
social accounts, enterprise accounts, local
accounts, and custom identity providers.

aka.ms/vs/xamarin/azure-ad

Artificial Intelligence

Use Artificial Intelligence to infuse your apps with algorithms to see, hear, speak, understand, and interpret your users' needs through natural communication.



Azure Machine Learning

Use existing data to forecast future behaviors, outcomes, and trends, such as estimating product demand, predicting sales figures, and analyzing marketing returns.

aka.ms/vs/xamarin/azure-ml



Azure Cognitive Services

Use computer vision to identify, caption, and moderate photos and video.

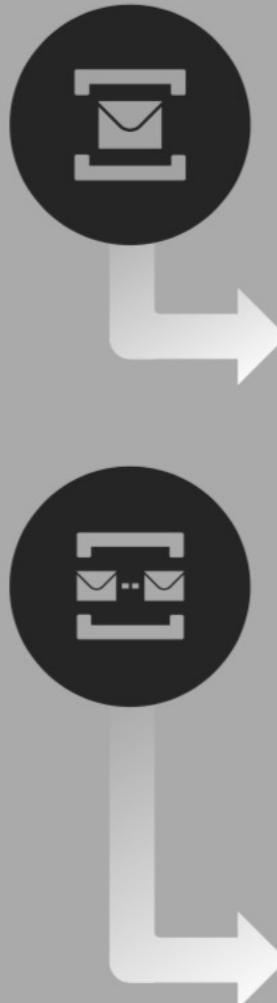
Convert spoken audio into text, add speech recognition to your app, and enable your apps to process natural language.

aka.ms/vs/xamarin/cognitive



Communication

Absorb unexpected traffic bursts, which prevent servers from being overwhelmed by a sudden flood of requests.



Azure Storage Queue

Integrate application components using simple, durable messaging.

aka.ms/vs/xamarin/azure-queue

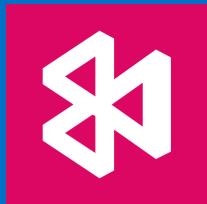
Azure Service Bus

Integrate application components that span multiple communication protocols, data contracts, trust domains, and network environments, while using structured FIFO messaging and publish/subscribe capabilities.

aka.ms/vs/xamarin/service-bus

Let's do Demos

One more thing..



Visual Studio Mobile Center

The image displays the Visual Studio Mobile Center interface across three devices: a desktop browser and two mobile phones (iOS and Android).

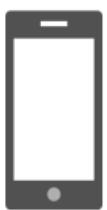
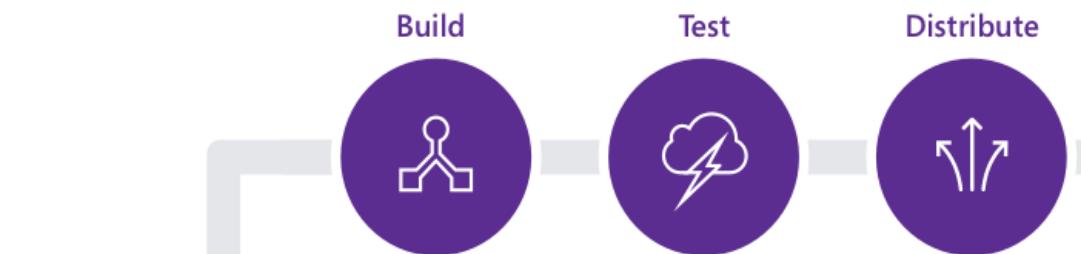
Desktop Browser View:

- Header:** App Center (with a refresh icon), URL: appcenter.ms.
- Left Sidebar:** My apps (Hello, Antonio), Home, Antonio, AA Studio, Fast Technologies, Ganham, Lazzo, Zattoed.
- Main Content:** A grid of app icons categorized by OS (All, Windows, Android, iOS). Examples include Fastchat (Fast technologies), Writer (Lazzo), Annotations 2 (John Pall), News10 (Ganham), News10 (Ganham), Locator (Zattoed), Lazzo (Lazzo), Home controller (John Pall), RemotePlay (John Pall), Switchy (Fast Technologies), Doodle (Ganham), Mailman (Ganham), Wallpapers (Zattoed), MeetSpot (Fast Technologies), and Traffic (John Pall).

Mobile Device Screenshots:

- iPhone (iOS):** Shows the "My apps" screen with a list of installed apps: Fastchat, Writer, Annotations 2, Slack, Home Controller, and Switchy. Each entry includes the app icon, name, developer, version, size, and last update date (21 July 2017).
- Android Phone:** Shows the "My apps" screen with a list of installed apps: Fastchat, Writer, Annotations 2, Slack, Home Controller, and Switchy. The screen also shows a "News10" app card with an "INSTALL" button.

Lifecycle



Backend

Engage

Monitor

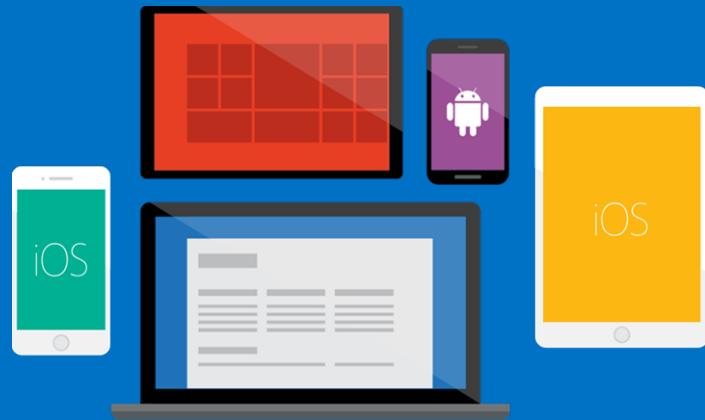
Crash

Monitoring

Summary

Microsoft provides a comprehensive solution for developers and organizations that want to plan, build, test, deploy, operate, and monitor mobile business applications

Create rich, cross-platform mobile experiences



Connect mobile applications to business data and applications

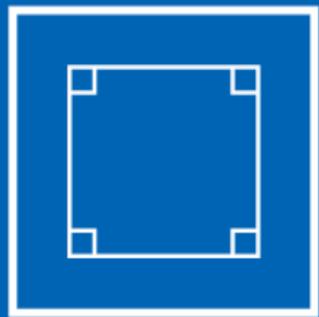


Deliver mobile applications with digital-era agility + velocity



One last thing..

Azure Sphere



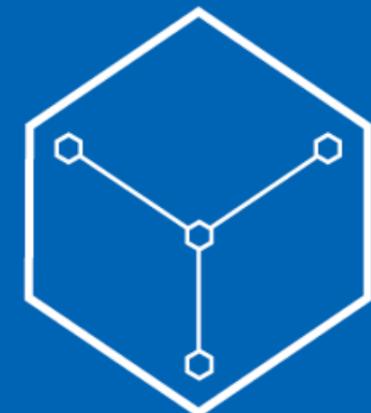
Secured MCU

Secured from the silicon up. Our new crossover class of MCUs combines for the first time both real-time and application processors with built-in Microsoft security technology and connectivity.



Secured OS

An OS purpose built for security and agility to create a trustworthy platform for new IoT experiences. Our secured OS builds security innovations pioneered in Windows into a HLOS small enough for MCUs.



Cloud Security

Protect devices with a cloud built for IoT security. The Azure Sphere Security Service renews device security, identifies emerging threats, and brokers trust between device, cloud, and other endpoints.

The future of Connected devices.

Thank You!

Thank You!

Contact Info

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Email: smahapatra@xpirit.com

Resources

- <https://developer.xamarin.com>
- <https://developer.xamarin.com/guides/cross-platform/azure/Resources/poster.pdf>
- <https://appcenter.ms>