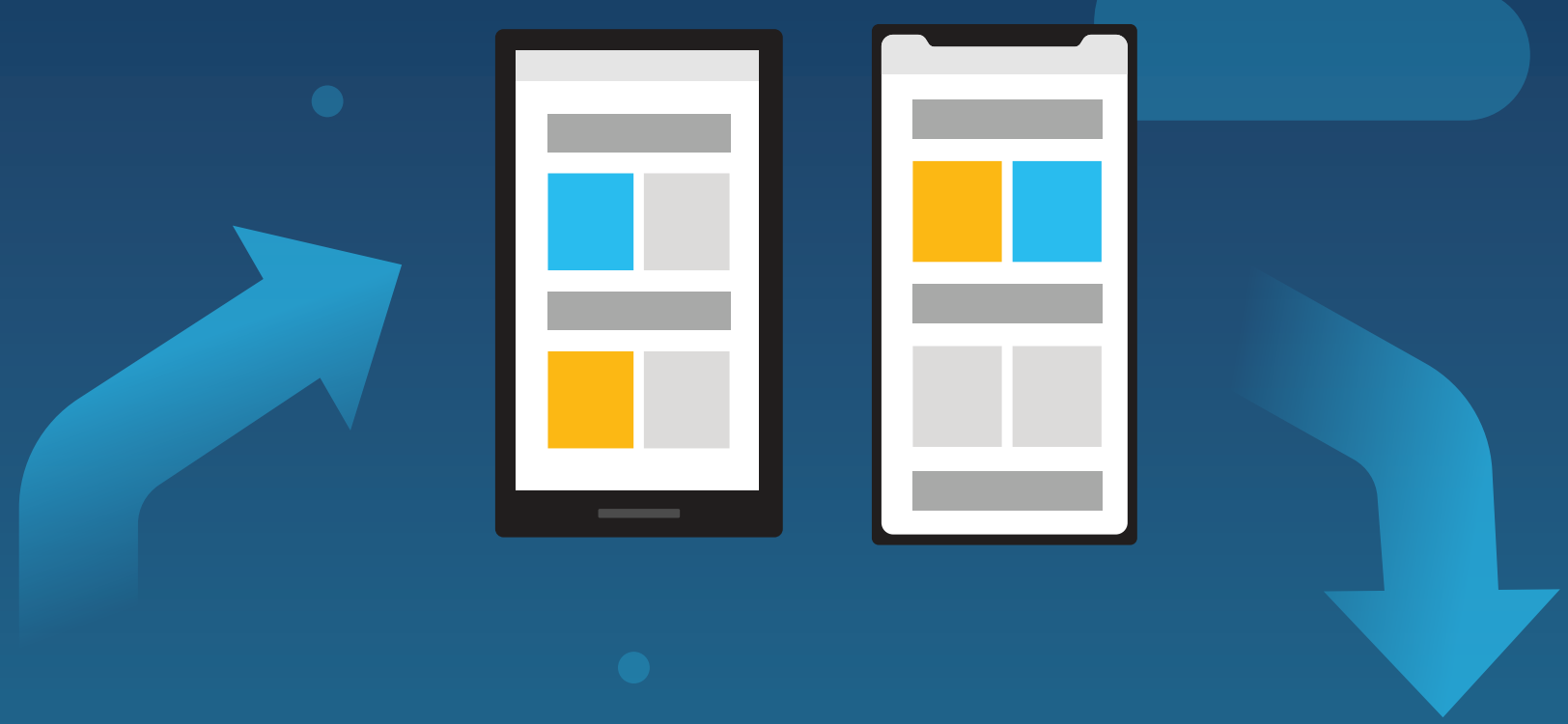# Mobile apps using Xamarin + Azure

Visual Studio

Quickly build, test, deploy, and manage mobile apps with Visual Studio 2017, Visual Studio for Mac, and cloud-powered services.

aka.ms/vs/xamarin

Deliver quality mobile apps
With advanced debugging, profiling tools, unit tests, and UI test generation features, it's faster and easier than ever for you to design, build, and tune native mobile apps for Android, iOS, and Windows.

Collaborate efficiently
Manage your code in Git repos, hosted by any provider, including GitHub and Visual Studio Team Services.

Share projects seamlessly with developers using Visual Studio across Windows and Mac.

Create intelligent services
Visual Studio 2017 and Visual Studio for Mac enable the creation of .NET Core solutions, providing the services that power your apps. Code, debug, and test these cloud services simultaneously with your apps for increased productivity.

Visual Studio App Center

Automate the lifecycle of your apps built with Xamarin. Ship apps more frequently, at higher-quality, and with greater confidence. Connect your repo to build in the cloud, test on thousands of real devices, distribute to beta testers, and monitor real-world usage with crash and analytics data.

aka.ms/vs/app-center

Build in the cloud
Build Swift, Objective-C, Java, React Native, Xamarin, and UWP apps with every commit or on demand, without the headache of managing build agents.

Test on real devices
Test your app on thousands of real devices and hundreds of configurations in the cloud. Automate UI tests for your apps with popular testing frameworks.

Distribute apps instantly
Put apps in the hands of your beta testers and users on multiple device platforms – send different builds to different groups of testers and notify them via in-app updates.

Monitor your app health
Get real-time crash reports, notifications, detailed stack traces, and easy-to-read logs to quickly diagnose and fix problems in beta or production apps.

Analyze and learn faster
Understand your customers' app usage with analytics about your core audience—devices, locations, session info, language, and more.

Engage users with push notifications
Integrate push notifications into your apps in a few easy steps. Segment your audience and engage them with targeted messaging at the right time.

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

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

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

Search

Enterprise-grade search solution for all types of internal data, with fast querying and advanced search options.

Azure Search
Add powerful and sophisticated search capabilities to your app.

aka.ms/vs/xamarin/azure-search

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

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

Microsoft