

Out-mobile the competition

Learn how to set your apps apart
with mobile DevOps and the cloud

What you need to know

We are at the beginning of what some call the Fourth Industrial Revolution. Cloud, data, intelligence, mobile, robotics, IoT, and other new technologies are fundamentally changing the way we work, live, and play. There has never been a better time to be a technology innovator. For traditional businesses, however, “digital Darwinism” is a huge threat.

Mobile is at the center of this shift, making it critical for organizations everywhere to deliver compelling mobile experiences. To be successful and stand apart from your competition, your mobile strategy needs to go beyond just getting apps out the door.

User expectations are sky-high, and there are more than 2 million apps¹ in each of the leading app stores—delivering the status quo is not enough. **You need to reimagine business processes and customer interactions, and meet your users where they are, offering valuable, relevant mobile experiences.**

What’s more, you need to figure out how to keep up when the demands of your business stakeholders and customers exceed your ability to deliver.



TAKE A CLOSER LOOK

It's your turn to start winning with mobile. Whether you have one or millions of users, this guide gives you the guidance and resources you need to create a comprehensive mobile strategy and equip your teams to deliver high-quality mobile experiences for customers, employees, and suppliers.

Part 1: Stay ahead of your users.

Understand users' expectations, and learn how to ship five-star apps that keep them coming back for more.

Part 2: Overcome the challenges.

Explore six key requirements for getting past common mobile development obstacles.

Part 3: Win with mobile DevOps.

See how mobile DevOps simplifies the mobile delivery lifecycle and sets you up for continued success.

Part 4: Add the power of the cloud.

Learn how a cloud backend allows you to connect to internal systems, make your users productive from anywhere, and deepen user engagement.

Part 5: Get inspired by industry leaders.

Find out how three organizations across industries drive customer loyalty, engage employees, and increase productivity with Microsoft's mobile DevOps technology and cloud services.

81%
of global CEOs
see mobile
technologies
as the **most**
strategically
important
for their
organization.²

Part 1:

Stay ahead of your users

Before you can implement a successful mobile strategy, you need to understand what your customers, employees, and suppliers demand from their mobile apps. Basic CRUD (create, read, update, delete) functionality is not enough. Today's users want fast, seamless, and flawless experiences on their device of choice. They expect their apps to be data-driven and predictive, providing real-time, relevant features, suggestions, and more.

In practice, this takes on various forms and differs by scenario, audience, and industry. For example:

- Retailers need to go beyond simple product search and checkout capabilities, offering customers personalized recommendations, integration with mobile payments, push notifications for delivery status, and more.
- For business-to-business organizations, you need to integrate with your customers' processes and systems. In a hospital setting, for example, medical care professionals expect their apps to automatically update patient records, process prescriptions and insurance claims, make patient care recommendations, and send appointment reminders.
- And your employees—who expect the same experiences in their work apps that they get from their personal apps—want features that make their jobs easier, increase efficiency and productivity, streamline operations, eliminate manual processes, and allow them to work from anywhere.

60%
of users will
abandon an
app if it doesn't
load within
three seconds.³

FROM STANDARD TO EXCEPTIONAL

Staying ahead of your users—and the competition—requires you to change the way you think about and approach the mobile delivery lifecycle. You need to transition from simple apps to user-first, integrated mobile experiences that take advantage of the latest APIs and device capabilities. On top of that, you need to proactively release new features that your users want, before they even know they want them.

You also need to move from producing a few isolated apps to building, deploying, maintaining, and improving an entire portfolio of apps for a variety of users and purposes. This means being able to continuously design, code, test, release, monitor, fix, and improve existing apps, while also meeting mounting stakeholder requests and a growing demand for new apps.

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50% of organizations have fewer than five developers in-house, barely enough to field a single mobile team.⁴

FORRESTER

SHIFT FROM NOVICE TO INDUSTRY LEADER

1

Good apps

Amazing mobile experiences

Deliver fully native mobile apps that continuously improve.

2

Data-aware apps

Data-driven intelligence

Turn data into insights, proactively improving user experience and offering actionable business feedback.

3

Individual apps

App portfolio

Go from one-off apps to an innovation hub with streamlined mobile development processes and fast feedback cycles.

Part 2:

Overcome the challenges

For organizations everywhere, six hurdles stand in the way of successful mobile strategies. To compete with your industry-leading peers, your mobile development teams must:



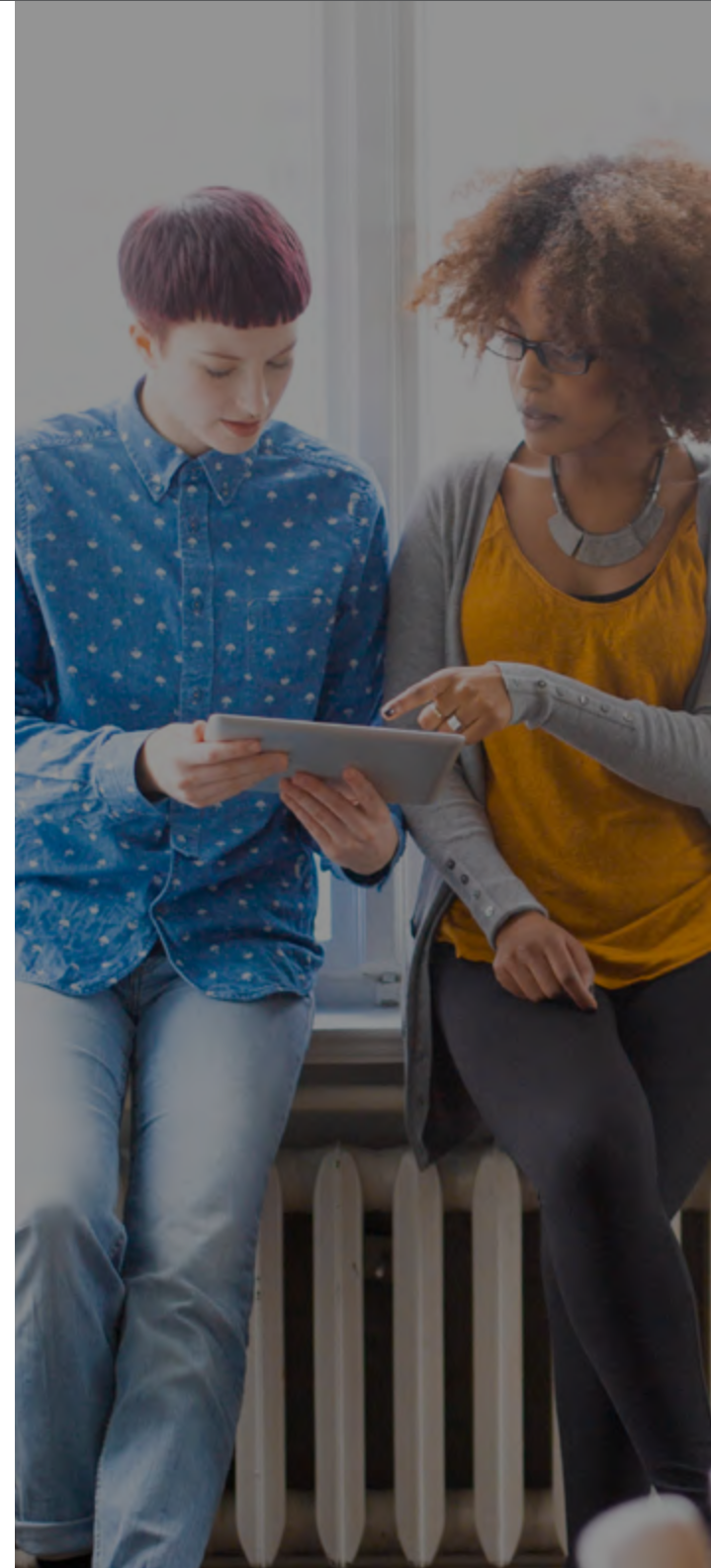
1. Keep up with app volume.

Your teams are faced with building a large number of apps for multiple platforms, users, and purposes. In addition to the demand for consumer-facing apps, your business stakeholders and employees require dozens of role-specific apps, for everything from project management to expense reporting to field sales and beyond.



2. Maximize existing investments and resources.

Meeting the demand for mobile apps may require staffing three specific teams—one for each major platform—or training your existing teams on new languages and tools. You need to examine your current resources and technology investments to determine if you have an adequate number of properly trained developers to cover these needs.





3. Manage device fragmentation and deliver great apps for any user.

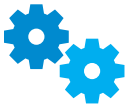
The number of Android hardware manufacturers and form factors, plus the number of iOS versions and various tablet and phone sizes, make it time consuming, difficult, and costly to ensure that apps are working well on users' device of choice. Additionally, operating system manufacturers release new updates at a frequent clip, and your teams must quickly incorporate these new capabilities without affecting your current users' experience.



4. Identify issues and analyze behavior.

If your development teams don't have a way to automatically test and distribute apps to beta testers, they're unable to catch and fix problems before they affect production users. They're building on faulty code and left putting out fires deep into the release process. Additionally, even if apps are tested, your teams need to continuously monitor production apps, analyze user behavior, and collect feedback to understand how they're behaving in the wild with real users.

The number of different Android devices **more than doubled** between 2013 and 2015, and the trend is expected to continue.⁵



5. Securely integrate with existing systems and processes.

Apps need to connect to business systems, some of which may be on-premises. Your teams need to ensure these connections are secure, and that the apps have the ability to scale as their user bases grow.



6. Prepare for fast release cycles and continuous improvement.

Most development teams are focused on getting apps to market, so they're not prepared for continuously releasing new apps that deliver business value, or what it takes to retain users post-launch. Plus, they fail to consider the time and costs associated with maintaining, monitoring, and improving apps.

See how mobile DevOps frees your teams to build better apps, faster than ever.

[Watch webinar recording >](#)



Turn your teams into mobile developers. Our "Enterprise developer's guide to building five-star apps" gives them the resources they need to create outstanding Android, iOS, and Windows apps.

[Get the e-book >](#)

Part 3:

Win with mobile DevOps

Mobile DevOps is essential to overcoming many of the challenges we've outlined in Part 2, and it allows you to implement a successful mobile strategy.

With mobile DevOps, you streamline every stage of the mobile lifecycle, including automated testing, beta distribution, and post-release crash reporting. You also get high-quality apps into your users' hands faster.

Whether you're building apps for customers, employees, or suppliers, mobile DevOps simplifies development, freeing your teams to focus on better user experiences and delivering more value to your users and your business.

Take the DevOps Self-Assessment to better understand your current DevOps practices and where to focus next.

[Get started](#) >

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DevOps provides a set of practices and cultural changes—supported by complementary tools—that automates the software delivery pipeline, enabling organizations to win, serve, and retain consumers better and faster than ever before.⁶

FORRESTER®

MOBILE DEVOPS WITH MICROSOFT

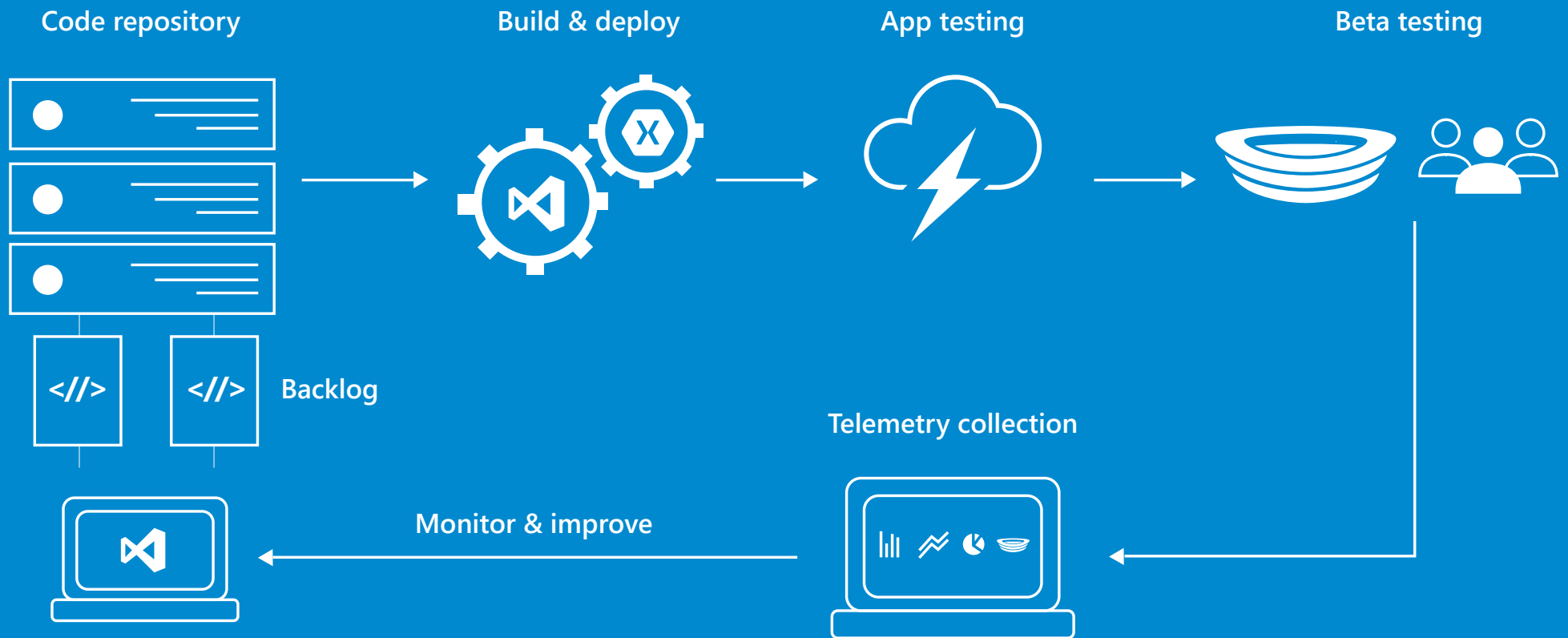
Microsoft's mobile DevOps technology automates the entire release pipeline, from planning to continuous improvement, to solve unique challenges at every stage of the mobile lifecycle.

Microsoft's mobile DevOps technology helps your teams:

- Plan and track mobile projects
- Share 60%-90%+ code across Android, iOS, and UWP
- Connect to a cloud backend for push notifications, authentication, and more
- Create automated test scripts to catch regressions before they affect users
- Distribute apps to beta testers for early feedback
- Monitor production apps and quickly address issues
- Integrate with CI systems to shorten feedback cycles and release faster
- Collect production user feedback to prioritize future features



MOBILE DEVOPS AT A GLANCE



Get your teams started with mobile DevOps today.

[Download the e-book >](#)

Part 4:

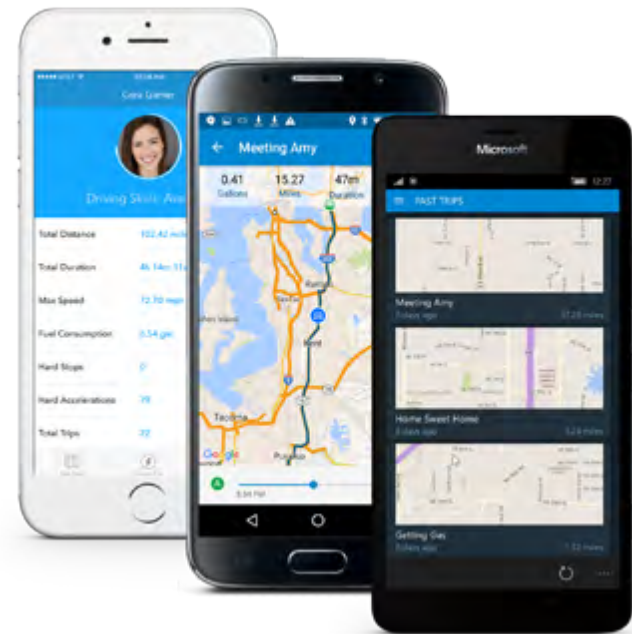
Add the power of the cloud

In addition to mobile DevOps, the cloud is critical to a successful mobile strategy. A cloud backend allows you to quickly deliver the capabilities your users demand, securely connect to enterprise systems, and scale for any scenario.

The cloud brings services to your developers' fingertips. Instead of writing custom integrations, they'll add essential mobile functionality with a few lines of code. In addition to necessary capabilities, the cloud allows your teams to quickly incorporate trending new technology, like bots, machine learning, voice and facial recognition, and more.

With a mobile-optimized cloud backend, your teams can:

- Easily add user authentication from any identity provider, including enterprise directories, custom SSO, or social platforms
- Use offline data sync to allow users to view, create, and modify data, even when there are network issues
- Give your users access to files, images, and videos from cloud or on-premises systems
- Broadcast personalized push notifications in minutes
- Autoscale to support millions of users and reach them anywhere in the world
- Create personalized user experiences, based on context and behavior

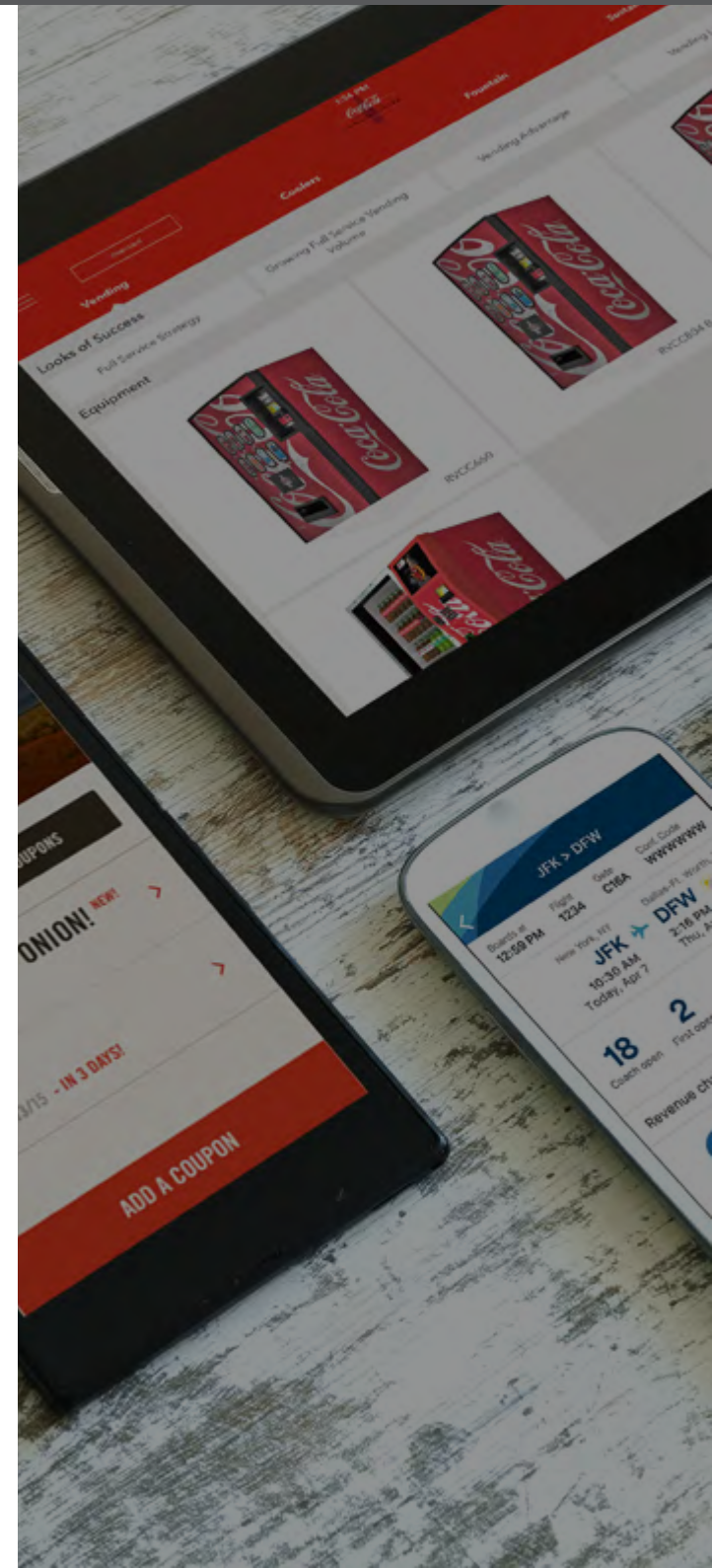


Build powerful, fully native Android, iOS, and Windows apps using Azure and Xamarin. Watch video >

Part 5:

Get inspired by industry leaders

Alaska Airlines, Outback Steakhouse, and Coca-Cola Bottling Co. Consolidated retain their competitive advantage with Microsoft's mobile DevOps technology and cloud services. Explore this section to see how they're creating engaging mobile experiences, building customer loyalty, making employees' jobs easier, and driving sales.



ALASKA AIRLINES



Bringing the consumer experience to employees

Alaska Airlines is on a mission to become the easiest airline to fly. To help fulfill that mission, Alaska uses a fully automated DevOps process that includes Xamarin for Visual Studio, Azure, Xamarin Test Cloud, Visual Studio Team Services, and HockeyApp.

Alaska knows that its team members are critical to its success. With an 80% mobile workforce and a road map of more than 30 employee apps for iOS, Android, and Windows, Alaska treats its employees like consumers. And it's paying off, with a workforce that's more engaged, productive, and customer focused.

Xamarin apps allow Alaska's 15,000 team members to access information from their device of choice, get company news, take advantage of their standby travel benefits, and provide in-app ratings to help the development team make improvements. Hopper, one of their internal apps, allows employees to access their travel benefits from anywhere, and mirrors Alaska's consumer flight booking app UX, with features like automatic check-in and mobile boarding passes.

[See more of the story](#) >

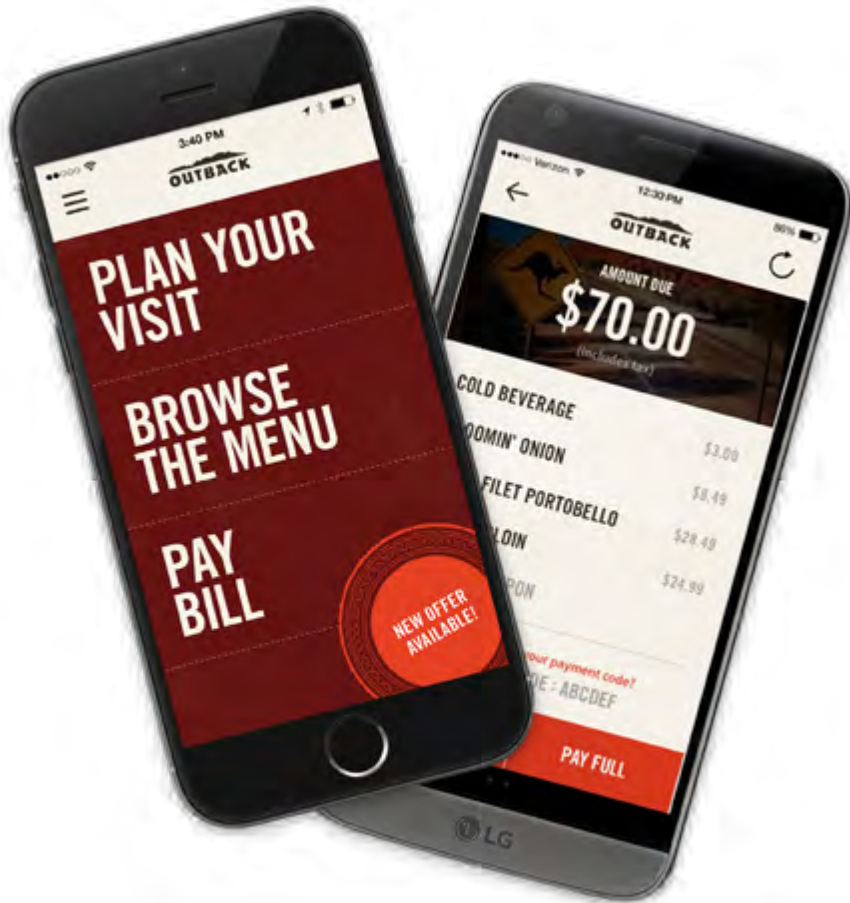
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As we invest in innovation and tools, whether it's mobile or whether it's the cloud, we think about how those things will differentiate us in the marketplace and give customers a better experience.

Chief Information Officer

Alaska
AIRLINES

OUTBACK STEAKHOUSE



Building customer loyalty with a sizzling five-star app

Bloomin' Brands, Inc. is one of the world's largest casual dining companies and operates over 1,500 restaurants, including Outback Steakhouse. By pairing mobile DevOps and the cloud, the development team is pioneering the future of casual dining experiences, making it fast and easy for Outback Steakhouse customers to get seated and pay for their meals.

Customers are able to view nearby locations, add themselves to waitlists, receive push notifications when tables are ready, and pay at their tables—all from the Outback Steakhouse app.

To create this five-star app experience, the team replaced HTML5 apps with fully redesigned Xamarin apps, and started development with Xamarin Client Services teams' guidance and technical expertise. They also use Microsoft Azure to sync seating assignments and customer orders, and automated testing across devices with the Xamarin Test Cloud to catch any issues early in the development cycle, before they affect customers.

See more of the story >

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Our customers really wanted an app that was truly native... Xamarin was just a natural fit for us because we could leverage C#, we could get a shared codebase between our two apps, and really deliver the native experience that our guests enjoy.

Senior Director, Enterprise Architecture



COCA-COLA BOTTLING CO. CONSOLIDATED



Driving sales with dynamic mobile apps

Mobile-optimized DevOps sets Microsoft customers apart. With demanding users and high-stakes delivery timelines, Coca-Cola Bottling Co. Consolidated's (CCBCC) DevOps processes help its developers create apps that users love for their ease of use and business stakeholders love for their impact on sales.

To better serve its sales teams and customers, CCBCC uses Xamarin for Visual Studio, Azure, and Visual Studio Team Services to automate its mobile DevOps lifecycle and get apps into users' hands faster than ever.

CCBCC released its Marketplace app in just four months by managing the entire DevOps cycle in C#. The Marketplace app is designed to support CCBCC's constantly evolving sales and marketing space, as well as facilitate better customer engagement. It gives the field sales team mobile access, allowing them to be efficient from anywhere—which is critical considering they're often in areas with limited service—to close deals faster.

[See more of the story >](#)

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Most of our account reps stay out on the road most days, so we need mobile solutions... that work fast and that can work offline.

Senior Application Architect



Get help from the experts

You've learned what users expect from their mobile experiences, explored the challenges you and your teams face, and learned how to use technology to combat common challenges.

Finally, you've seen how industry leaders use mobile DevOps and the cloud to stay ahead of the competition. Your business is no different. Whether you're building your first app or have a multi-app portfolio, we can help you stand out from your peers with amazing mobile experiences.

Transform your team using DevOps and Visual Studio >

Sources

1. **Statista**, "Number of apps available in leading app stores as of June 2016," <https://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/>.
2. **PwC's 18th Annual Global CEO Survey**, Technology key findings, <http://www.pwc.com/gx/en/ceo-agenda/ceosurvey/2015/key-findings/technology.html>.
3. **Webinar**: "Why Mobile Quality Matters," by Steven Yi, June 23, 2015, <https://blog.xamarin.com/live-webinar-why-mobile-quality-matters/>.
4. **Forrester Report**, "The State of Mobile App Development: Few eBusiness Teams Keep Pace With Customer App Expectations," March 23, 2015, <https://www.forrester.com/report/The+State+Of+Mobile+App+Development/-/E-RES120267>.
5. **VentureBeat**, "Android fragmentation report: there are now 24,093 distinct devices, up 28% from last year," <http://venturebeat.com/2015/08/05/fragmentation-report-there-are-now-24093-distinct-android-devices-up-78-from-last-year/>.
6. **Forrester Report**, "The State of DevOps Industry Adoption for 2016 — Where's the Heat?" January 20, 2016, <https://www.forrester.com/report/Brief+The+State+Of+DevOps+Industry+Adoption+For+2016+Wheres+The+Heat/-/E-RES122101>