



# Modernize Your Web Apps:

Five stories of creating better customer experiences through cloud migration



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## This is for you if:

- ✓ You lead a team of developers or IT professionals involved in building, managing, and securing customer-facing websites and web applications.
- ✓ You are looking for solutions to enhance customer experiences.
- ✓ You want to learn more about the values the cloud can bring to your business, such as optimizing costs and existing resources, operating more efficiently, and speeding innovation.

# Introduction

Customer experience is a key differentiator for businesses today. In 2020, a Gartner survey found that positive customer experiences drive more revenue, higher employee satisfaction, and greater customer retention.<sup>1</sup> While this survey includes all types of interactions, customer experience in the digital realm is just as important as anywhere else. For example, a leading national retailer realized a one percent revenue increase for every 100ms of increased download speed.<sup>2</sup>

Additionally, bounce rates increase 49 percent on pages that take more than two seconds to load, scroll rates are down on the year, sessions have become shallower, and one in three sessions results in frustration.<sup>3</sup> Taking all of this into consideration, organizations should be prioritizing improvements to customer interactions—more and more of which are exclusively happening online.

Modernizing and optimizing apps to the cloud directly and immediately impacts customer experience and convenience. Improving application performance alone is critical. Cloud-based solutions allow organizations to act and execute new features more rapidly, while at the same time ensuring the most economical use of budget, talent, and resources. A successful cloud migration also provides easy scalability, giving developers and IT professionals the flexibility to focus on modernization strategies.

Azure has helped technology partners build, deploy, and manage applications in the cloud using the tools and platforms of their choice. The following customer stories demonstrate how moving from on-premises to the cloud helps improve the customer experience, from speed and performance to overall satisfaction.

# 40%

of people will abandon a mobile site if it takes longer than three seconds to load.

# 47%

of people expect a web page to load in two seconds or less.

<sup>1</sup> 3 Key Findings From the 2019 Gartner Customer Experience Management Survey | Gartner, 2020

<sup>2</sup> Digital Experience Benchmark Report | Contentsquare, 2023

<sup>3</sup> Essential Website Load Time Statistics to Know in 2023 | Moneyzine.com, 2023

# 1 Innovate and increase efficiency

The [National Basketball Association \(NBA\)](#) provides exhilarating experiences for over 400 million basketball lovers around the globe. Data has been instrumental in helping the NBA construct new fan experiences. However, when the pandemic brought in-person events to a standstill, the organization saw an opportunity to improve the fan digital experience and help employees become more efficient.

To deliver on these goals and quickly bring new products and features to market, they needed to improve management of OS patching, performance, and security across the team's app and data footprint.



## Cloud migration journey

The NBA's new cloud-first strategy using Azure would give them the flexibility and horsepower to quickly iterate enhanced functionalities and increase efficiency throughout the organization.

To begin, the development group underwent recoding exercises using Microsoft apps and services, such as [Azure Blob Storage](#), [Azure App Service](#), and [Azure SQL Database](#). Next, the development group consolidated their apps and data into one place to better manage performance, OS patching, and security. The result was a significantly simpler app coding process using low-code and no-code scenarios, allowing the development group to experiment and test new features in their Azure "playground."

The NBA also launched an app called the **Referee Engagement and Performance System (REPS)**, which uses actionable data via video captures and machine learning to improve the consistency and fairness of referee calls. REPS was so groundbreaking it was named the Capgemini Innovation of the Year at the 2022 Sports Technology Awards. The development group also developed the mobile-first employee app, NBAOne, consolidating over 50 apps and giving employees a more efficient, single sign-on (SSO) experience when managing their different tasks.

The NBA continues using Azure services—including [Azure DevOps](#), [Azure Functions](#), and [Azure Cognitive Services Personalizer](#)—to develop and deploy new features and functionalities.



## Key benefits

- ✓ The organization can now develop and deploy internal- and external-facing tools faster.
- ✓ The migration reduced page download times and increased SEO.
- ✓ Customer experiences are now more innovative and immersive across platforms.



## Learn related skills

### Training module

[Learn how to deploy serverless APIs with Azure Functions, Logic Apps, and Azure SQL Database.](#)

### Training module

[Learn how to migrate SQL workloads to Azure SQL Databases.](#)

### Video

[Gain an in-depth understanding of MySQL Developer Essentials.](#)



It was a natural evolution for us, moving from on-premises hosted .NET applications over to the Microsoft Azure cloud environment ... to be able to migrate our applications seamlessly over to the cloud was a hassle-free exercise for us."

### Sahil Gupta

Senior Vice President and  
Head of Application Development  
NBA

## ② Enhance customer convenience

**Valmont® Coatings**, a segment of Valmont Industries, specializes in customized hot-dip galvanizing and coating. With operations expanded to 37 locations, globally, Vice President of Innovation and Demand Creation Mike Michalski realized that the company's traditional processes and on-premises databases were holding them back from creating better customer experiences.

"We decided to undertake a journey to fully replace our on-premises systems and run our entire operation—from quote through invoicing—in a new Azure cloud-based solution," said Rick Cornish, Group President at Valmont Coatings.



### Cloud migration journey

Before migrating to the cloud, Valmont Coatings used an internal project tracking system based in on-premises SQL Server technology. It performed well when tracking the work, but employees found it difficult to access the system outside of the facilities or on mobile devices. Employees also spent a lot of time trying to communicate with customers about the status of their orders using email and phone.

To combat these barriers, the company built the Valmont Coatings Connector® on Azure. This new system gave customers the tools to initiate action items on orders and customize notifications to their preference, as real-time updates keep them consistently in the know with their project's progress.

In addition to improving the customer experience, the Coatings Innovation team perfected their internal coatings processes by optimizing material use and improving efficiency across the organization. The final solution, trademarked as GalvTrac®, was designed and developed internally on Azure to transform the manual process of hot-dip galvanizing—which had traditionally included using stop watches, hand gestures, and even yelling.

GalvTrac allowed the floor teams to align instantly with other employees using a touchscreen tablet and a digital timing board. The result was synchronized collaboration and more precise timing, improving quality and turn-time while saving on its most expensive overhead cost: Zinc.



## Key benefits

- ✓ In the first year of operating, GalvTrac saved the company **\$1.8 million** in zinc optimization in North America alone.
- ✓ Real-time updates reduced manual labor and ensured customers were always connected to their projects.
- ✓ Streamlined operations and increased visibility have provided a competitive advantage.



## Learn related skills

### Learning module

Learn how to build serverless APIs with Azure Functions.

### Learning path

Discover how to accelerate cloud adoption with the Microsoft Cloud Adoption Framework for Azure.

### Video

Learn what Microsoft Azure IoT manufacturing solutions have to offer.



The value of us being on Azure is that we're able to be more flexible and agile, and quickly make improvements based on the voice of our customers."

**Mike Michalski**

Vice President of Innovation and Demand Creation  
*Valmont Coatings*

# 3 Reduce complexity and improve user satisfaction

**Sentara Healthcare** has been committed to improving healthcare for 130 years. The not-for-profit organization encompasses 12 hospitals in Virginia and northeastern North Carolina, with 858,000 members in its Optima Health and Virginia Premier health plans. As their volume of data scaled rapidly, it became prohibitively expensive to keep the data from its electronic medical record (EMR) software, Epic, in on-premises datacenters.

They decided to move from datacenters to the cloud to connect doctors, patients, and data in a single portal. With this cloud-first strategy, the organization would be able to support flexible work scenarios and respond quickly to changing needs.



## Cloud migration journey

Sentara migrated petabytes of data from its datacenters to the Azure cloud platform and began using Azure platform as a service (PaaS) capabilities. The organization moved its mixed Windows Server and Linux environment, including Microsoft SQL Server and Oracle databases, using **Azure Ultra Disk Storage**, a managed disks offering that gives Sentara sub-millisecond latency and extremely scalable performance. To make their workload migration as cost-effective as possible, Sentara also took advantage of **Azure Hybrid Benefit**, allowing them use their existing on-premises licenses with no added costs. So far, Sentara has updated and moved 200 out of 400 business applications.

Sentara began presenting huge volumes of Epic data using **Azure Kubernetes Service (AKS)** and shifting the Epic environment to M-series **Azure Virtual Machines (VMs)**. It also started testing disaster recovery and training in those environments. To support these data projects, the organization used **Azure DevOps** to apply DevOps methodologies and continuous integration and continuous development (CI-CD) practices to its development and delivery processes.

With Sentara's previous on-premises delivery environment, it took 12 weeks for IT staff to make any kind of delivery improvement. After the move to Azure, they could offer services within hours.

Reducing the complexity of their processes had an incredible impact on the healthcare organization's workloads. As Matt Douglas, Chief Enterprise Architect at Sentara Healthcare, said, "Our tests with Azure Ultra Disk Storage have far surpassed our current production system—up to four times our current workload capacity."



## Key benefits

-  Sentara increased savings by minimizing licensing costs, right-sizing applications, and reducing infrastructure overhead.
-  The organization can now support a highly secure, compliant, and efficient remote work environment for employees.
-  Reporting time was reduced from eight hours to 45 minutes.



## Learn related skills

### Article

[Explore Azure Hybrid Benefit for Windows VMs.](#)

### Learning module

[Learn to develop and configure an ASP.NET application that queries an Azure SQL database.](#)

### Learning path

[Get started on the Azure DevOps learning path.](#)

### Article

[Learn to create a VM in Azure.](#)



Moving to Azure is bigger than just a billing impact—it's a paradigm shift on how we manage resources. Now we can dynamically allocate resources based on utilization, availability, and time of day, dramatically changing the cost equation."

**Dan Bowden**

Vice President and Chief Information Security Officer  
Sentara Healthcare

## 4 Deliver e-commerce success at scale

Meaning “channels” in Arabic, **Qanawat Digital** is the leading digital mobile solutions provider in the Middle East and North Africa, and the biggest digital music and online content aggregator in the Pan Arab Region. Founded in 2001 and headquartered in Dubai, UAE, Qanawat Digital strategically partners with over 40 mobile network operators, 10 digital platforms, and over 700 merchants, content providers, and technology companies.

To give their customers the best possible experience—including zero downtime and reliable security for payment procedures—Qanawat decided to migrate its on-premises infrastructure and direct carrier payment platform to Azure.



### Cloud migration journey

Qanawat was expanding its market share in the direct carrier billing payment arena and wanted a reliable infrastructure partner that could provide scalability, security, and availability for its e-commerce platform. The requirement presented a challenge as it was necessary for the payment transaction to occur on time without delay. The transactions processed numbered in the millions every day, and on any given day, the volume could suddenly increase due to marketing activity. Qanawat needed the scalability to support these unpredictable fluctuations in demand without downtime or manual intervention.

After an internal evaluation of different solutions available in the market, Qanawat chose **Azure SQL** to migrate their on-premises infrastructure and direct carrier payment platform to the cloud. The company also took advantage of **App Service**, which helped them build and deploy their apps and APIs with greater speed and confidence. It also enhanced their troubleshooting capabilities, providing them with an all-day monitoring system that sends alerts when action is required. Looking to the future, Qanawat is looking to do more with less using other Azure tools, such as **Data Lake** and Dynamics 365, for running analytical projects.



## Key benefits

- ✓ Payment transactions for digital content buyers are now secure.
- ✓ Digital content buyers now have immediate confirmation of transaction outcomes with zero downtime.
- ✓ Qanawat Digital's troubleshooting capabilities have been enhanced.



## Learn related skills

### Article

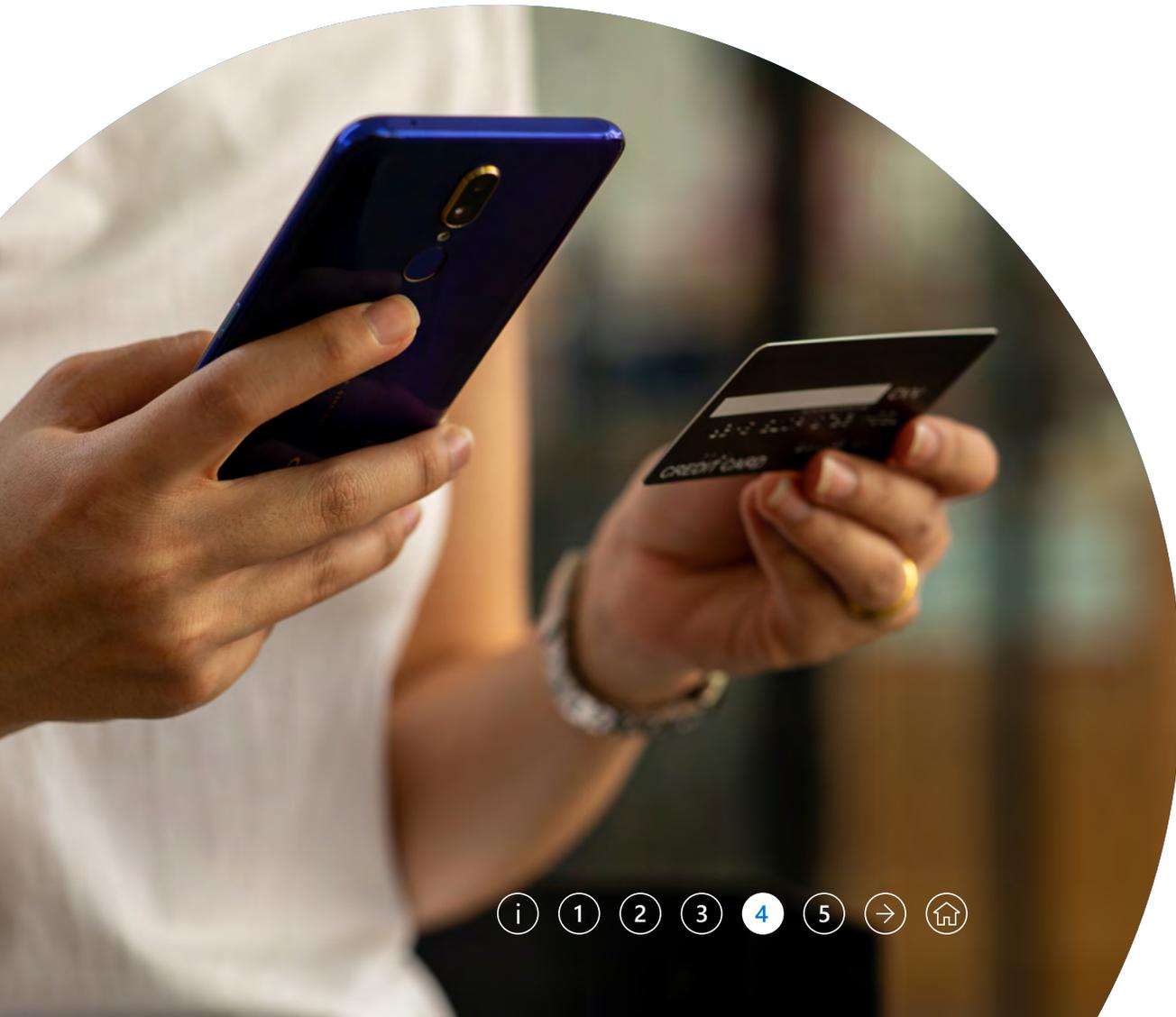
[Build and deploy easier with Azure App Service.](#)

### Article

[Learn how to autoscale in Azure.](#)

### Tutorial

[Secure your Azure App Service app with a custom domain and certificate.](#)



## 5 Meet evolving customer needs with modernization

Angolan bank **Banco Millennium Atlântico (BMA)** was founded in 2006 to provide Angolans with the stability and security to plan their financial futures. In a highly regulated industry like banking, security was a top concern. BMA addressed these risks to become the first national bank in Angola to offer its customers a way to open an account on their mobile device without going to a physical bank.

Following this, the bank recognized that the cloud was the right place to create, store, and scale data and applications. BMA's servers, where the Exchange services were located, were already deprecated, making app modernization a time- and cost-intensive process that couldn't deliver on customer expectations. It would also save them from the hassle of managing four servers, over 12 databases, and daily incremental backups to disks.



### Cloud migration journey

As a bank, regulatory compliance and security were top priorities for BMA. They eventually chose Azure because they felt that Microsoft had the internal processes and security capabilities to protect their customers' financial information.

BMA implemented Microsoft solutions one by one, starting with Teams. Next, the bank created a hybrid connection between its identity manager—Active Directory—and **Azure Active Directory (Azure AD)**. Then the bank connected its entire Exchange environment to the cloud with Microsoft's online Exchange, allowing them to discontinue deprecated local servers.

To support the bank's high-stakes security requirements, they adopted **Azure Information Protection (AIP)**. This update was crucial for classifying, labeling, and protecting their clients' sensitive documents and emails. At the same time, they began to implement **Azure Kubernetes Service (AKS)**, which would help them develop and deploy apps with greater speed and efficiency.

With BMA's cloud strategy in full swing, they now have the power and agility to continually improve the customer experience—while also making the best use of their existing resources. The bank is able to achieve more while doing less and without sacrificing the quality of their customer experience. As Cloud Specialist at BMA, Osvaldo Manuel, put it, "We're much more focused on looking at our infrastructure, innovating, improving processes that already worked in the past, and strengthening our security. In short, we're focused on modernizing."



## Key benefits

- ✓ The operational enhancements gained freed up time to focus on innovation and modernization.
- ✓ Server fails no longer impact the user experience due to the elimination of points of failure.
- ✓ The eliminated need to buy servers and resources to manage hardware and software reduced costs.



## Learn related skills

### Learning path

Discover [Microsoft Security, Compliance, and Identity Fundamentals](#).

### Learning path

Learn how to create cloud-native apps with [Azure and open-source software](#).

### Video

Learn how to optimize your data protection costs with [Azure Backup](#).



We are saving a significant amount of time on processes such as editing, document sharing, and adding security criteria. All of this ultimately impacts the satisfaction levels of our end-users—our customers. It's just fantastic."

**Oswaldo Manuel**  
 Cloud Specialist  
 Banco Millennium Atlântico



# Three-step guide to begin your application migration

Get expert support for each step of your migration journey with the [Azure Migration and Modernization Program \(AMMP\)](#).

## 1. Preparation

- ✓ Use our [Cloud Adoption Framework](#) to develop your migration plan. This will help you align business and IT stakeholders prior to migration, avoiding roadblocks and accelerating implementation.
- ✓ [Create an Azure free account](#) and get a \$200 credit to get started.

## 2. Education

- ✓ Read this [migration overview](#) for the basics on ASP.NET application migration with [Azure App Service](#) and [Azure SQL Database](#), and for an introduction to the free migration tools.
- ✓ Explore the app and database [migration learning path](#) to learn the steps necessary to migrate ASP.NET web applications and data to Azure App Service and Azure SQL Database.

## 3. Implementation

- ✓ Use the [Azure App Service Migration Assistant](#) to assess your readiness and migrate your apps with minimal code changes.
- ✓ Use the [Azure Database Migration Service](#) tool to migrate your data, schema, and objects from multiple sources to the cloud.
- ✓ Assess and discover all of your resources with [Azure Migrate](#), then manage your migration journey with a unified platform.

| Connect with an [Azure sales specialist](#) to learn more.

