



Build a competitive
edge with SaaS apps

Contents

Introduction

Chapter 1

Create a modern customer experience

Chapter 2

Help your customers innovate faster

Chapter 3

Gain business advantage (and more) with SaaS

Chapter 4

Choose the right SaaS partner

Conclusion

Overview

This eBook addresses the opportunities and advantages that application builders gain by adopting a software as a service (SaaS) model for app development.

What you will learn

Learn why SaaS is the right choice for application development companies who are looking to build a competitive edge and deliver remarkable customer experiences. "Bottom line" statements at the beginning of each chapter summarise the takeaways.

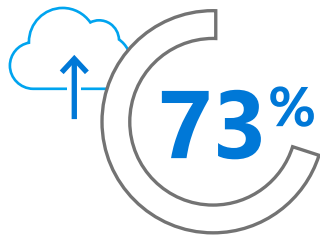
Introduction

Innovate to compete: staying ahead in a cloud-first world

What's the secret sauce that makes your apps stand out from the rest?

As an application development company, staying ahead of your competitors is about innovation. You're in a race for new customers and to keep the customers you have – and the only way to stay ahead is by differentiating your offerings. Your apps need to be secure, flexible, mobile and have the horsepower to deliver deep business insights and analytics.

At the same time, your customers are trying to gain competitive advantage by providing exceptional app experiences to *their* users, while lowering TCO, expanding market reach and increasing sales and revenue.



73% of organisations expect to shift nearly all of their apps to SaaS by 2020¹

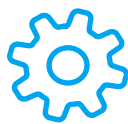
Given the stakes, it's not surprising that app development has evolved from the traditional on-premises model to the cloud. Legacy applications

are no longer able to keep up with the demand for modern, integrated solutions that can deliver at scale and create value for customers and end users alike. And application builders are seeing the SaaS revolution in real time: by 2020, the adoption rate of SaaS content service platforms will rise to 36% from 13% in 2016.²

Agility, your name is SaaS

It's undeniable: the agility found in cloud-based apps gives application developers superpowers that aren't possible with on-premises solutions. Software as a service, or SaaS, is the big idea that allows you to develop scalable and secure apps that deliver a far richer experience to your customers. Using advanced analytics enabled by the cloud, a SaaS approach makes it possible for software development companies to create apps that incorporate predictive analytics, machine learning and an ever-growing list of cognitive services.

Why are application development companies moving to the cloud?



Simplify operational processes



Reach new and niche markets



Improve end-user experience



Usage tracking and reporting capabilities



Shorten time to market

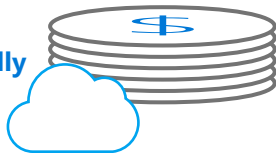
The business benefits of SaaS are also significant. Application development companies who have made the transition to SaaS consider it to be an important growth accelerator, allowing for a quicker go-to-market and iteration cycle that ultimately generates a more predictable revenue stream, as well as lowered costs for the customer and the application developer.



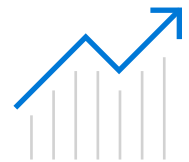
SaaS by the numbers

Gartner estimates that SaaS will increase at a CAGR of 19.7%, reaching **37% of total application software spending by 2021**, while on-premises licensing spending only has a growth rate of 5% over the same period.³

Legacy application developers spent over **\$50 billion annually** to acquire SaaS companies.⁴



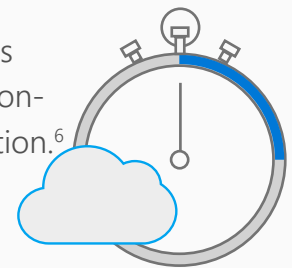
Public SaaS companies **grew at 28.5%** compared to just 7.3% for public software companies that primarily offered on-premises software.⁵



SaaS and on-premises apps: how do they compare?

A traditional on-premises app, by definition, runs as a single instance in a datacentre shared by users that are connected to the datacentre. Users cannot work remotely or access it with their own devices. Maintenance – including patching, replication, redundancy and security – is handled by the IT team.

SaaS implementation takes **75% less time** than on-premises software installation.⁶

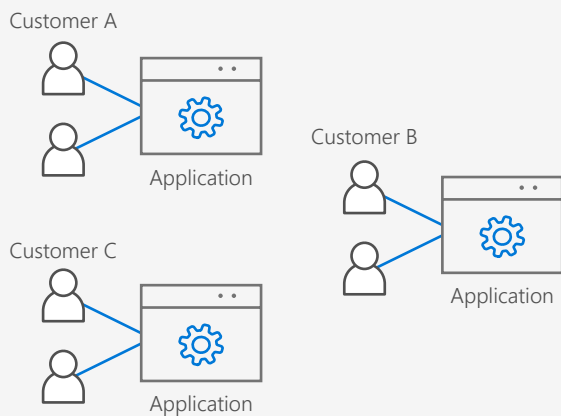


The SaaS difference

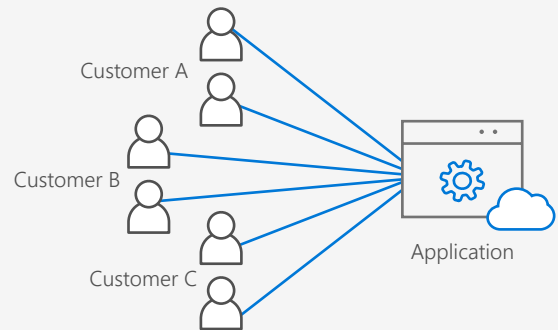
True SaaS apps do not run on-premises – customers share a copy of the application, which lives in the cloud. Setup, backup, and data security are handled by the vendor, as are updates, which are deployed in real time. The application may be shared by one customer (called a single-tenant application), or many (multi-tenant). Each approach has its own set of pros and cons – including degrees of customisability, administration requirements and costs.

SaaS applications are fundamentally different from traditional software as a product applications:

Software as a product

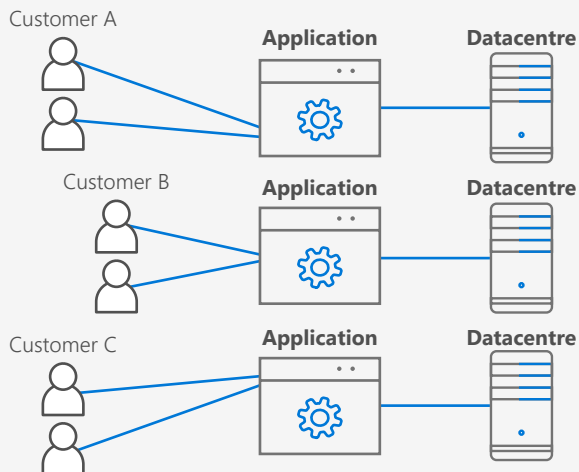


Software as a service (SaaS)

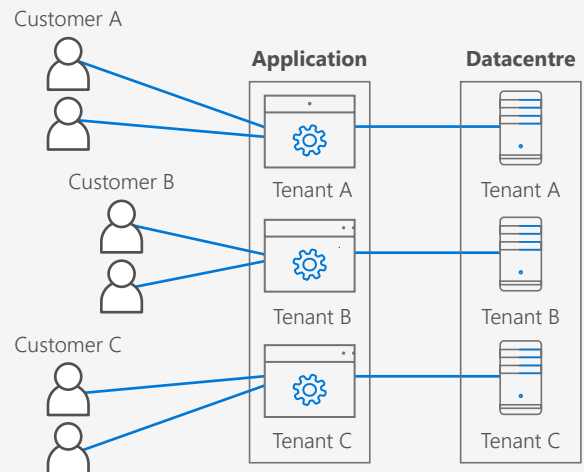


SaaS applications are either single tenant or multi-tenant:

Single tenant



Multi-tenant



In the following chapters, we'll explore why making the transition to SaaS is a win for you – and for your customers.



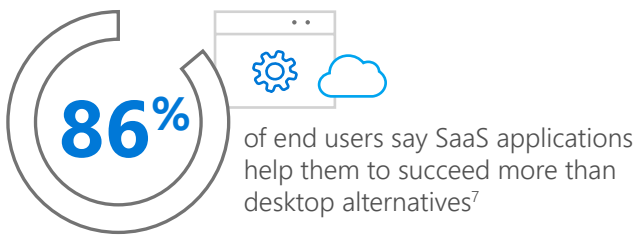
Chapter 1

Create a modern customer experience

Bottom line: customer experience is the killer app that will define success or failure in today's competitive business environment. Increasingly, the most valuable customer experiences are delivered via SaaS applications.

Create a modern customer experience by understanding your customer

As an application developer, one of your most daunting challenges is understanding how to give your customers what they really want. Digital transformation and the rise of a mobile workforce have changed the game substantially. Your role as a “software publisher” has evolved – your customers are looking to you to provide remarkable mobile and integrated services that will give them a distinct advantage over their competition.



Today’s customers expect modern apps to be able to harness big data and business intelligence to provide a more targeted and relevant experience. Granular information such as contextual data, user behaviour and operational analytics is essential. Not to mention that the app must be on a secure and reliable platform that scales according to forecasted – and spontaneous – demand. More and more frequently, the services customers want are found in applications built on a SaaS platform.

Unlock features that matter to your customers

From big data integration to machine learning to artificial intelligence, SaaS apps leverage technologies that can boost your customers’ bottom lines. Let’s take a closer look at three of the most important innovations.

Artificial Intelligence APIs

In the cloud, it’s easy to boost the power of your apps with artificial intelligence. Instead of needing coding expertise, application developers are able to leverage APIs that offer everything from facial recognition to sentiment analysis.

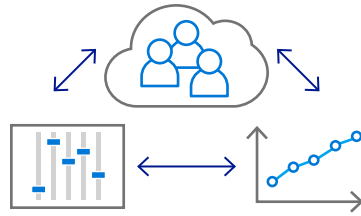
API category	Example features
Vision	Facial recognition, visual search, image classification
Language	Topic recognition, sentiment analysis, intent extraction
Speech	Keyword spotting, voice generation, acoustic analysis
Conversation	Language support, chatbot analytics, social media integration
Knowledge	Queries, cognitive search, knowledge graphs

Embedded analytics

There's a significant opportunity for application developers to add value to their apps with embedded analytics.

Embedded analytics gives your customers

easy access to the information they need for data-driven decision making, while freeing up developers' time to concentrate on creating new features and improving core functionality – instead of hand-coding features or building complex analytics engines.



Forrester predicts that embedded business intelligence (BI) will become **the new normal in three to five years** because of the increase in operational and business complexity⁸

Machine learning

Machine learning allows computers to learn from existing data and experiences and forecast future behaviours, outcomes and trends without being explicitly programmed. A modern SaaS app can leverage many machine learning functionalities, including data mining, data exploration, descriptive analytics and predictive analytics.

Transitioning to SaaS: the big picture and best practices

Of course, there's more to consider beyond delighting your customers with deep analytics or the latest API. Application developers that are interested in transitioning to SaaS should assess how the transition will affect their business – both short and long term. And because SaaS is a technology and business challenge, it's important to take a holistic approach, developing a strategy that reflects your organisation's unique goals and objectives. Regardless of how you choose to proceed, be aware that business, operations and engineering are all impacted by the move.

Questions to ask about your SaaS transition

Business-model challenges

How do we convert from conventional licensing to usage-based pricing without unduly impacting our present revenue stream?

Customer challenges

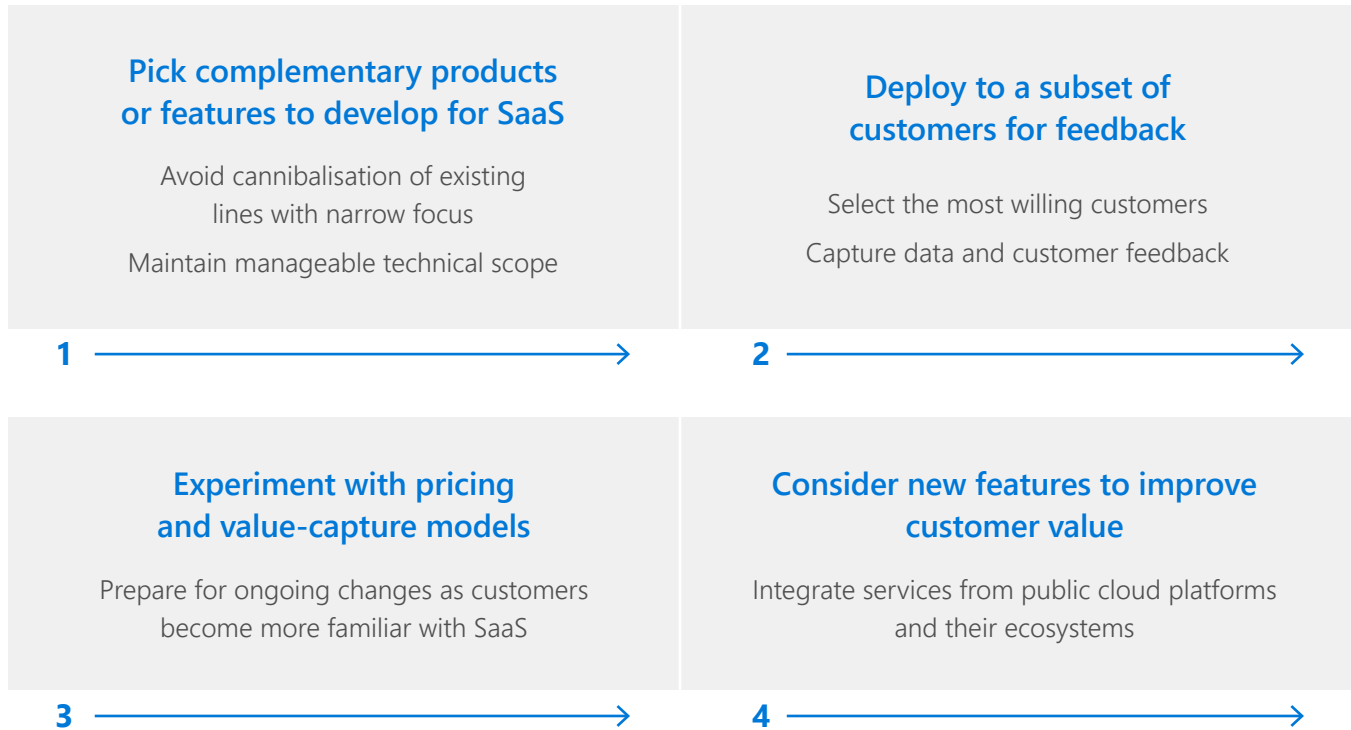
How do we communicate pricing and contract changes?

Technical challenges

How do we migrate our customer apps to SaaS?

Sample road map for moving to SaaS

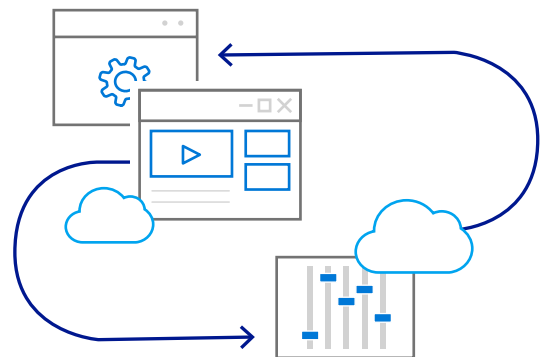
A critical assessment will help you determine which apps will deliver the best return on investment as SaaS apps. The following road map can help you get started.

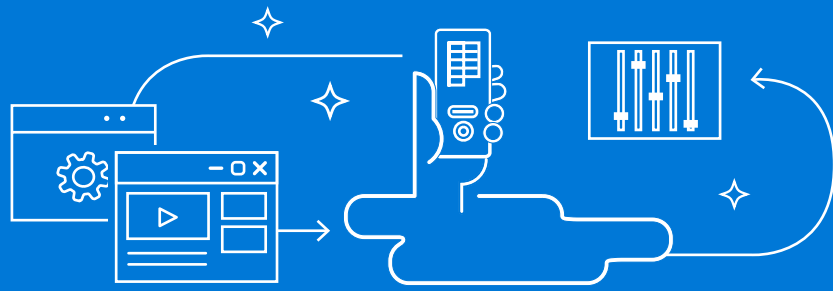


Always be iterating

Once you've made the exciting step to transition to a SaaS model, it's critical that you use the knowledge you gain about how your customers are using your applications to make them even more relevant. Be sure to strengthen your customer partnerships by aligning your pricing to their success – adjusting to reflect usage, adding new light-use customers who can't justify a full licence, and capturing heavy users who are overlooked in a traditional licensing model.

To remain competitive in a highly competitive marketplace, you'll need to meet your customers' ever-changing needs and expectations.





Chapter 2

Help your customers innovate faster

Bottom line: your customer is looking to reduce overall complexity and innovate faster, with modern software that is reliable, flexible and scalable.

From a customer perspective, the calculus is simple: give me innovation – the faster, the better. Cost is a primary consideration, as are security and ease of use. End-user experience must be on point – user metrics are essential and cloud-enabled modern tools, such as AI and machine learning, are expected.

SaaS apps meet and exceed the benefits your customers are looking for. Cloud-enabled apps deliver true consistency and reliability, as well as real-time insights that enable your customers to better serve their own customer base.

SaaS delivers value to your customers



Your customers want:

Less financial risk

With SaaS they get:

- Usage-based pricing
- “Try before you buy” hands-on trials

Lower TCO

- No additional investment in infrastructure or personnel
- Reduced time and resources spent on hardware and software management and maintenance

Data security

- Built-in identity management that protects app data and user privacy

Flexibility & scalability

- Ability to scale up and down as workloads require

Faster, smarter services

- Integrated data analytics and machine learning that produce actionable insights for product improvement
- Deployment directly from the cloud
- Real-time upgrades

SaaS in the real world: the customer perspective

UPS builds a better customer experience in the Azure cloud

The logistics world moves fast. UPS is responsible for ensuring that more than 19 million packages – in more than 220 countries – get delivered every day. To accomplish this herculean task, UPS relies on innovative technology built on SaaS.

UPS, historically a leader in IT innovation, has completed two transformative projects using cloud technologies to create apps that deliver seamless experiences to customers on virtually any device.

The first initiative, a faster, consolidated version of the UPS Mobile app, improves customer experience and reduces the amount of code by nearly half, compared with the previous platform-specific versions. Developers

quickly brought the app to market using Visual Studio Tools for Xamarin.

The second initiative paved the way for a new form of customer interaction, using AI technology. The goal was to improve service levels via a chatbot called UPS Bot, which runs on the Microsoft Bot Framework and Azure. It took UPS about three months to develop, from concept to first release – and within eight months the UPS Bot had already had over 200,000 text and voice-based conversations with customers, helping them get the information they needed about shipments, rates and UPS locations.



The ability to write code once and have that code execute across multiple platforms and digital channels is a tremendous gain in efficiency for our developers. This is critical for us to continue innovating global package delivery services with technologies like UPS Mobile and UPS Bot.

– Katie Duffy, UPS Application Architect

[Read the whole story](#) 

[Play video](#) 



Chapter 3

Gain business advantage (and more) with SaaS

Bottom line: future-facing application development companies are looking at SaaS as the best way to deliver innovation and value to customers, at scale.

SaaS apps are responsible for a lot of heavy lifting in business today. From enterprise CRM to e-commerce and email apps, this shift to the cloud means that the market opportunity for application development companies is growing exponentially. According to a recent Gartner report, cloud-first strategies will drive an increased shift of 2% each year in IT spending from traditional systems to public cloud services up until 2021.⁹ For forward-thinking application developers, creating intelligent, cloud-based applications is no longer a “maybe, someday” conversation – it’s a present-day strategic direction.



According to Gartner studies, **88%** of organisations using cloud services today have a cloud-first strategy¹⁰

Choosing to build SaaS apps helps you drive improved growth and profitability. According to a 2016 report by the Software Equity Group, companies using SaaS grew by 28.5% compared to 7.3% for companies that offered perpetual, on-premises software.¹¹

Trends to watch



Many companies have picked the low-hanging fruit, in terms of apps that could be easily moved to the cloud, and are now evaluating the migration of their next set of larger strategic systems (i.e. ERP, supply chain applications, etc.) to a SaaS model. These projects, coupled with companies’ efforts to embrace digital transformation, will continue to fuel strong SaaS growth.¹²

– Eric Newmark, Program Vice President for IDC’s SaaS, Enterprise Applications and Industry Cloud research practices

Top 7 reasons SaaS is good for your business

1. SaaS drives new revenue and financial predictability.

- Add new light-use customers who aren't ready for a full licence purchase.
- Identify power users overlooked in a traditional licensing model.
- Create recurring revenue streams as you transition customers from traditional licensed models to SaaS.
- Subscription-based pricing makes it easier to predict revenue, compared to the volatility inherent in traditional licence-based pricing.

2. SaaS expands market reach and accelerates sales cycles.

- Explore new markets and attract new customers because of lower adoption and operating costs and reduced technical requirements.
- "Try before you buy" and get hands-on trials with products, accelerating your customers' buying decisions.
- Sell directly to business decision makers instead of IT – IT buy-in isn't required because SaaS apps run in the cloud, with no impact on existing on-premises resources.

3. SaaS helps you iterate faster.

- Gather timely customer feedback, and speed time to market by expediting the pace of product development.
- Plan more structured update cycles through continuous integration and delivery (CI/CD).
- Reduce development cycle time by 50%.¹³

4. SaaS means better integration and a unified deployment environment.

- Built-in data analytics, visualisation and collaboration tools provide a more seamless user experience.
- Unified cloud-based infrastructure streamlines development, testing and deployment – no complex customer hardware requirements.
- Development is easier in the cloud – more accessible and elastic, with on-demand self service.
- Updates are simultaneous to all customers.

5. SaaS provides data-driven insights.

- Product usage data helps you determine how to improve your apps.
- Usage data increases speed of product development by 33%.¹⁴

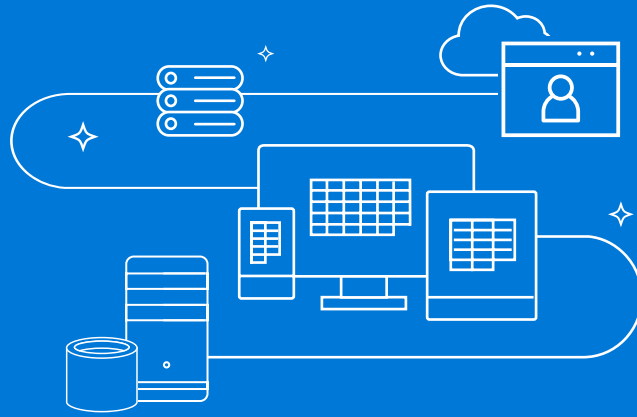
6. SaaS provides built-in security.

- Cloud-based apps have robust layers of protection.

7. SaaS is flexible and scalable.

- It's simple to spin up environments or redeploy resources on an as-needed basis.

Simply stated, in the cloud, your apps get smarter. And that's good news for your customers, too.



Chapter 4

Choose the right SaaS partner

Bottom line: moving to a SaaS model requires broad consideration of your unique business goals and objectives – and the right cloud partner. Azure is a best-in-class SaaS platform, offering application developers an integrated, flexible ecosystem of products and services that can make your app vision a reality.

At the end of the day, your applications are only as strong as the platform they're built on. When you move to a SaaS model, it's essential that you've got a capable cloud partner who can ensure your apps will run the way that you and your customers expect.

Your SaaS platform must be reliable and secure, providing robust uptime guarantees within an environment that has built-in security monitoring and management. As a software company developing apps in the cloud, you need to be confident that your cloud provider can support the "always on" expectations of your customers across their entire digital ecosystem – at a reasonable cost.

The Azure cloud is the most trusted cloud to deliver these services and more. Security and privacy are built directly into the Azure platform, using Azure Active Directory. Easy one-click login lets your users gain access to your app without duplication of effort.



In fact, **90% of Fortune 500 companies** already use Azure Active Directory credentials¹⁵

Using onboard tools and technologies that you already know, you can build your apps, your way. Iterating is easier and faster because Azure supports a broad selection of operating systems, programming languages, frameworks and devices.

Azure helps you create more value by extending your apps to millions of users of Office 365 and Dynamics 365. By integrating business intelligence and automation tools such as Power BI, PowerApps and Microsoft Flow, you can leverage cloud-based data technologies in new and powerful ways.

As your app gains traction, Microsoft is here for you with an extensive network of worldwide datacentres, a direct sales force and partner channels for help expanding your business into over 125 countries. It's possible for your app to achieve truly global scale on the Azure platform.

A closer look at Power BI Embedded

When your app can integrate disparate data – and apply powerful analytic techniques that result in stunning visuals and truly intelligent reports – you’ve created a remarkable customer experience. And that’s the power of Power BI: giving your users sophisticated, actionable insights and visualisations using embedded analytics.

In a world that is saturated with data, Power BI Embedded makes it simple for your customers to extract the information they need and have confidence in their data-driven decisions. From business executives and data scientists to the occasional user, providing relevant, actionable insights to your users is the central value proposition of your app. A complete embedded analytics solution makes data exploration easy by removing the time-consuming burdens associated with

exporting data and creating reports. With Power BI Embedded, there are fewer steps to insight and intuitive self-service.

Microsoft Power BI Embedded is a best-of-breed offering for business intelligence that fits seamlessly into the Microsoft stack of solutions and services. In the Azure cloud, application developers get access to a unified ecosystem of services and a full suite of support features for running Power BI Embedded.

Power BI Embedded is a complete platform as a service (PaaS) offering, designed for the real-world requirements of app developers. Power BI puts the power of custom analytics and visualisations within your application, backed by the security and innovation that you expect from Microsoft.



Power BI Embedded empowered our team with the ability to create detailed and interactive reports in a short space of time. Integrating the reports within our application required minimum effort thanks to simple integration methods.

– Steven Sterzik, Developer, Assimilated Information Systems

[Learn more](#) 

Supercharge your apps: a closer look at Azure services

There are more than 60 Azure services that you can tap in to for developing, hosting, managing, supporting, securing, integrating and extending your app. We've highlighted nine below. [View a complete list of Azure services.](#)



App Service →

App hosting to create better cloud apps for mobile web



Azure Active Directory →

Identity and access management in the cloud



Cognitive Services →

Intelligence to enhance the user experience



Machine Learning →

Powerful cloud-based predictive analytics



Power BI Embedded →

Interactive data visualisation and compelling reports



SQL Database →

A managed cloud database for app developers

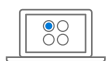


Visual Studio →

Developer productivity tools for faster, greater apps

More to explore

Find more apps or distribute your own.



App Source →

Industry-tailored directory of leading business apps



Azure Marketplace →

Find all the software solutions you need, optimised for Azure

Focus on: Azure open source support

Maximise your existing investment with support for infrastructure as a service (IaaS) on Linux, Java and PHP Web application platforms. Develop and test your Linux and open source components in Azure using the tools and skills you already have. Run virtually any application on your device, using your data source and your operating system.

[Learn more](#) 

Choosing innovation:

Umbraco simplifies its business and delivers improved customer experience with Azure solutions

Umbraco, a popular open-source content management system (CMS), serves customers ranging from Fortune 500 companies to global media websites. To eliminate the need for onsite deployments and reduce management overhead, they decided to move to a SaaS model to turn Umbraco as a service (UaaS) into a reality.



“We wanted to spend our time on solving our customers’ problems, not managing infrastructure,” says Niels Hartvig, founder of Umbraco. We wanted to make it easy for our customers to get the most value.

– Niels Hartvig, founder of Umbraco

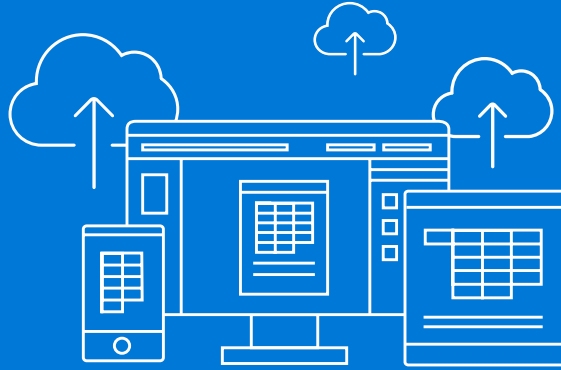
Using elastic pools in Azure, Umbraco optimises performance for its customers, with the ability to scale as needed for any customer ready to deploy a CMS in the cloud.

Umbraco also gives high marks to Azure for reliability and its support for Microsoft development tools – enabling it to reuse as much of its existing code as possible. In addition, Azure has a presence in all of Umbraco’s markets, ensuring quick data access and compliance with regional regulatory requirements.

Since adopting an Azure solution, Umbraco has successfully delivered optimised content management performance without the investment that a self-hosted, on-premises solution would require.

According to Morten Christensen, the technical lead at Umbraco, “Our customers are delighted with the convenience of being able to provision new projects in seconds, instantly publish updates to their live sites from a development environment using ‘one-click deployment’ and make changes just as quickly if they find errors.”

[Read the full case study](#) 



Conclusion

Next steps

As you've learnt in this eBook, transformation to a SaaS model is an organisational decision that impacts everything from the sales process to actual app development, but clearly SaaS is where software is headed.

For application development companies, there's no better time to be considering a SaaS platform. After all, your competitive advantage depends on delivering exceptional experiences for your customers, and by creating modern apps that are infused with the features they crave, you introduce new opportunities for innovation, growth and future success with unlimited scale.

Outperform the competition with Azure



Efficiency

- Ensure consistent performance and reduced operational costs
- Iterate quickly by leveraging real-time insights

Security

- Surface threats and protect data with detection and authentication tools
- Ensure operations with high availability and disaster recovery

Flexibility

- Run your apps anywhere with the largest network of global datacentres
- Expand to new regions with minimal code changes

Intelligence

- Inform decision making with predictive analytics
- Deliver in-app visualisations to illustrate data insights

Your customers are ready to be impressed with your best ideas. Learn more about how you can bring your ideas to life with intelligent SaaS applications powered by Azure solutions.

[View the webinar](#) →

[Visit our website](#) →

[Contact us](#) →

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