Microsoft Azure

The DIY Guide to a Modern IT Environment

Building a Blueprint for Flexibility

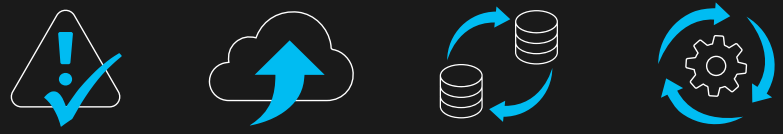


TABLE OF CONTENTS

Shifting to a flexible cloud platform

INTRODUCTION

Processes and applications take time to build and today's IT departments are stretched thin at best. Although the benefits of a cloud solution are clear, getting there may seem too complicated and time consuming. IT departments are constantly tasked with doing more with less money and in less time. That said, you are the architect of solutions. Not only do you enjoy learning about the latest technologies, but you are tasked with understanding their intricacies, and how they may benefit your organisation.

The process of moving to a hybrid IT environment begins with a firm understanding of what your ideal environment looks like. If you could build the ideal blueprint for flexibility, you'd undoubtedly ***extend*** your existing IT, rather than choosing between your datacentre and the cloud. Chances are, this blueprint would easily integrate with your existing IT environment through the largest network of secure private connections and storage solutions with data residency and encryption features—so your assets would stay right where you need them. This eBook explores the requirements of today's IT departments and the opportunities that the latest technologies provide.

Let's begin by defining what your ideal environment looks like, and then this guide will help you build your blueprint for flexibility with **four useful steps**.

Step 1:
Migrate low-risk apps

Step 2:
Migrate dev-test apps

Step 3:
Broaden your offerings

Step 4:
Consider current systems

Design your ideal productivity model

What would it mean for you to have the flexibility to design an infrastructure that increases efficiency and productivity while allowing your systems and processes to run smoothly? How much better off would your IT department be if you could design its environment yourself?

Remember the days of taking things apart and putting them back together in new ways? You were a creator of ideas, a builder of things. You didn't let others tell you what something could do or how it was done, you figured out what you could *make* something do and created new ways to get things accomplished.

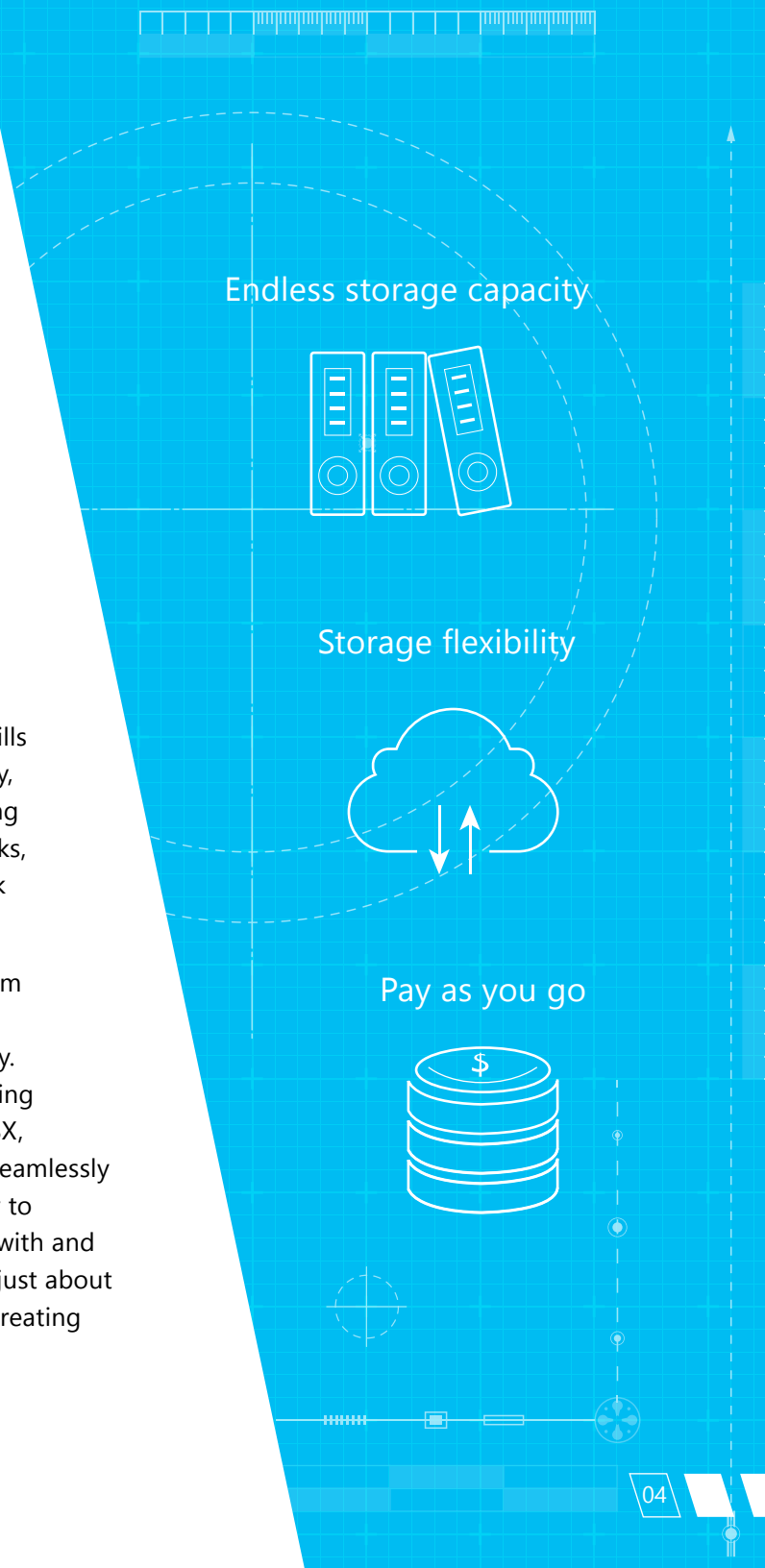
As someone responsible for your company's IT, you're in charge of managing the storage of data. You have multiple applications to develop, test and run. But with legacy systems on-premises, there's simply not enough space or power to get it all finished. It's your job to find solutions, but there's no time to figure out the right hybrid model. ***Or is there?*** Maybe.

If you could design your perfect model, what would that look like? Would it have endless storage capacity? Definitely. Would it have the flexibility to let you decide where to store data—whether that's on-premises or in the cloud—so that you could easily share and collaborate? Surely. Would it give you the ability and security to run applications from anywhere in the world? Probably. What about paying for all this technology? The ability to pay as you go would allow you to change your mind at any time.

It would likely have the tools, templates and managed services that make it easy to build and manage applications faster, using the skills and technologies you already possess. Ideally, it would support a wide selection of operating systems, programming languages, frameworks, databases and devices so that you could pick and choose without being hemmed in.

With a flexible cloud model, all of these dream scenarios are possible; despite conventional wisdom, it can be done quickly and painlessly. You can do it the way you've always liked doing things—on your own terms. Windows 10, OSX, Linux—this do-it-yourself model integrates seamlessly with any operating system and makes it easy to choose which data and applications to start with and how quickly the transition is done. This isn't just about migrating assets to the cloud. This is about creating your dream IT environment.

Let's get started.



Migrate low-risk apps

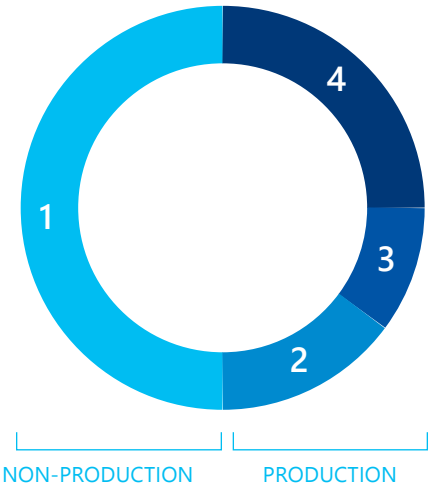
STEP 01

Creating an efficient, productive IT environment doesn't have to be a costly, time-consuming chore. It's actually a fairly simple four-step process that starts with low-risk applications. This is where you'll begin to discover the potential of leveraging a cloud platform. The majority of your application infrastructure (50-70%) is made up of data and projects that are only used 5-10% of the time. These potentially large volumes of data take up valuable space in your on-premises datacentre and, though you must be able to get to them for compliance reasons, you'll rarely need to access them.

Storage of data and backup are both inexpensive and resilient. Migrating these simple, non-production assets to the cloud is very low risk and offers a large ROI.

GETTING STARTED

Your IT portfolio (costs, resources, effort)



1. Application operations

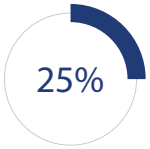
50-70% of your app infrastructure is only used 5-10% of the time. Projects are low risk and can have a large ROI.

2. Apps you purchased

Determine which on-premises apps can be moved to an SaaS model or to Microsoft Azure (365/Exchange/SharePoint, CRM, etc.).

3. Apps you would like to build

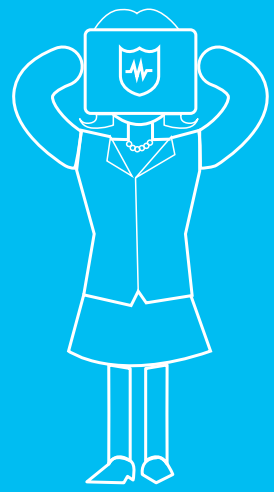
Use the Microsoft Azure PaaS building blocks. They're more productive and require less infrastructure work.



4. Existing production apps you built

Leave 80% of your existing custom apps alone. Migrate those small and high-burst workloads for maximum efficiency.

One of the greatest challenges many IT departments face when migrating large volumes of data to the cloud is improving operational efficiencies while still meeting regulatory requirements. GE Healthcare knew all too well how compliance and privacy concerns impact overall efficiency, and struggled to find a solution that could meet their strict guidelines.



Migrate low-risk apps

STEP 01

GE Healthcare

Case study: GE Healthcare

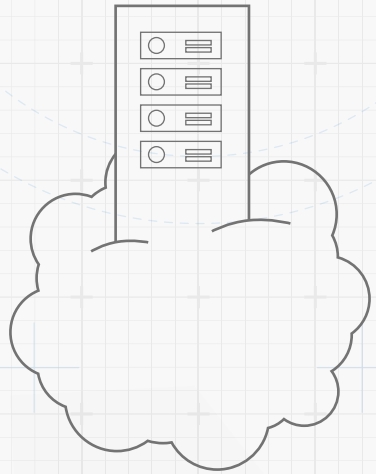
GE Healthcare IT and GE Healthcare Global Services were searching for a solution that would enable them to provide customers with more secure and flexible cloud solutions.

Customers of both business groups required better insight and control over data to improve efficiency and clinical care, but protecting patient information and meeting increasingly challenging regulatory requirements was a critical concern. Moving to a cloud platform allowed GE to meet all of these goals without investing additional time and money in an on-premises infrastructure: Security and privacy-related contractual commitments (part of the HIPAA BAA) ensure that compliance requirements are met. And because the openness of the platform meant GE Healthcare could continue working with its existing tools, the company took advantage of the cloud platform for the entire process, from development through testing and initial customer pilots.

The solution streamlines communication among clinicians, patients and hospital administrators with secure access to real-time scans and reports. For GE, the **Microsoft Azure** platform meant faster innovation and time to market, better flexibility and reduced operating costs.

Cloud storage is inexpensive, expandable and doesn't require much of your time and attention. You want a cloud provider that offers scalable, secure, cost-effective data protection. Bottom line? Start simply. Your mission-critical applications should be the last migration. For now, keep it simple by migrating data storage and backup to the cloud. This is exactly what **Ipanema Solutions** did when they chose a cloud platform to handle their critical backup service—and avoided additional infrastructure costs.

Moving to a cloud platform enabled GE to meet their goals and continue working with their existing tools, without investing additional time and money in an on-premises infrastructure.



Migrate low-risk apps

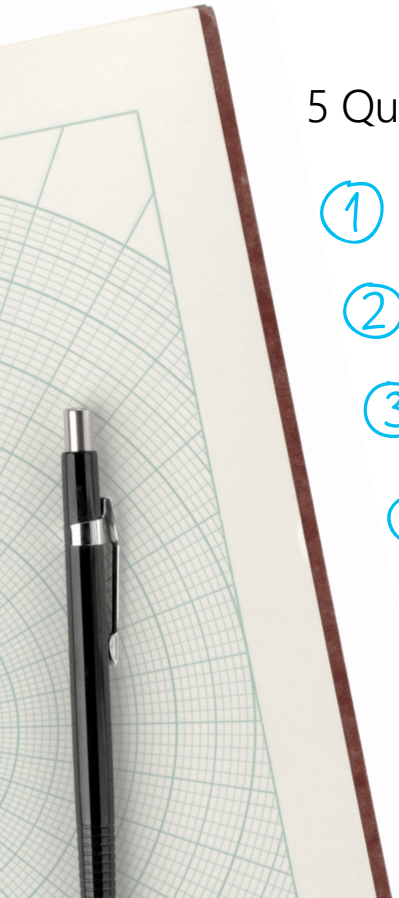
STEP 01

Case study: Ipanema Solutions

To simplify and improve business-critical backup services, **Ipanema Solutions** switched to **Microsoft Azure** Backup, which provides its customers with encrypted and protected data via multiple datacentres around the world. In the event that their primary site goes down, they have rapid access to their data in Azure, without the need to restore data from tapes.

"Azure is a big door opener to winning new clients and expanding our business."

—Geoffrey Wahonya,
Ipanema Solutions Manager,
Network Operations Team



5 Questions to ask potential cloud backup providers:

1. How quickly will we be able to get data back in the event of a loss or disruption?
2. What does the restore process look like?
3. What kind of support can we expect to receive if we run into any issues?
4. Will you send us a hard drive with our data or allow easy data restore, and do you charge extra fees for these services?
5. If we decide to switch providers, or if you go out of business, how will we retrieve our data?

Migrate dev-test apps

STEP 02

Now that you've moved non-production storage data off-premises, the next step is migrating dev-test applications to the cloud. These always-on resources are highly underutilised and they're taking up valuable space in your physical environment.

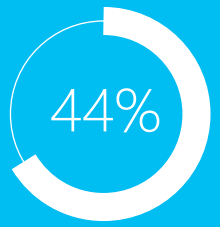
Dev-test environments slow productivity, limit access (via mobile) and stifle both communication and collaboration. According to a 2014 Voke study, organisations require access to an average of 33 systems for dev-test, but have unrestricted access to only 18. Only 4% of participants reported immediate, on-demand access to dev-test lab environments and the majority of participants waited days or weeks to gain access. For 44% of participants, these constraints slowed or stopped the progress of development. For 68%, testing was slowed or stopped. In contrast, the cloud offers a centralised environment that invites communication and collaboration. And users wait just hours for access versus days or weeks. It's no wonder then that app development in the cloud has become so prevalent.

Moving pre-production assets to the cloud lets you replicate real-world scenarios, identify issues—and resolve them—before going live.

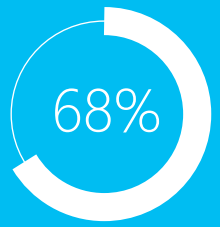
That means no more guessing or wasting money on applications that don't work. Dev-test apps sit idle most of the time. Why not spin them up to the cloud where you can pay for them only during the few hours a day you're testing them? These servers and machines that need to be available for support and production are ideal for migrating to a cloud environment. Once a system is in production, it won't be needed until changes are required. It's another low-risk proposition.

Today's IT departments are tasked with keeping up with the changing pace of business. What used to be a support function is now seen as a strategic differentiator. With competitive pressures and quick adoption demands, the cloud brings new digital business opportunities to almost every industry. Forward-thinking companies are embracing this new dynamic and see it as a way to set themselves apart from the competition.

2014 Voke study for dev-test lab environments



of participants experienced slowed or stopped progress in development due to the constraints of accessibility.



of participants experienced slowed or stopped testing due to the constraints of accessibility.[1]

The cloud offers a central environment, communication and collaboration and just hours to gain access versus days or weeks.

1. Source: https://blog.parasoft.com/dev/test-environments-in-the-cloud

Migrate dev-test apps

STEP 02

easyJet

Case study: easyJet

Case in point: **easyJet's** No. 1 goal is to make travel easier and more affordable for customers, while delivering features quickly and adapting to changing needs.

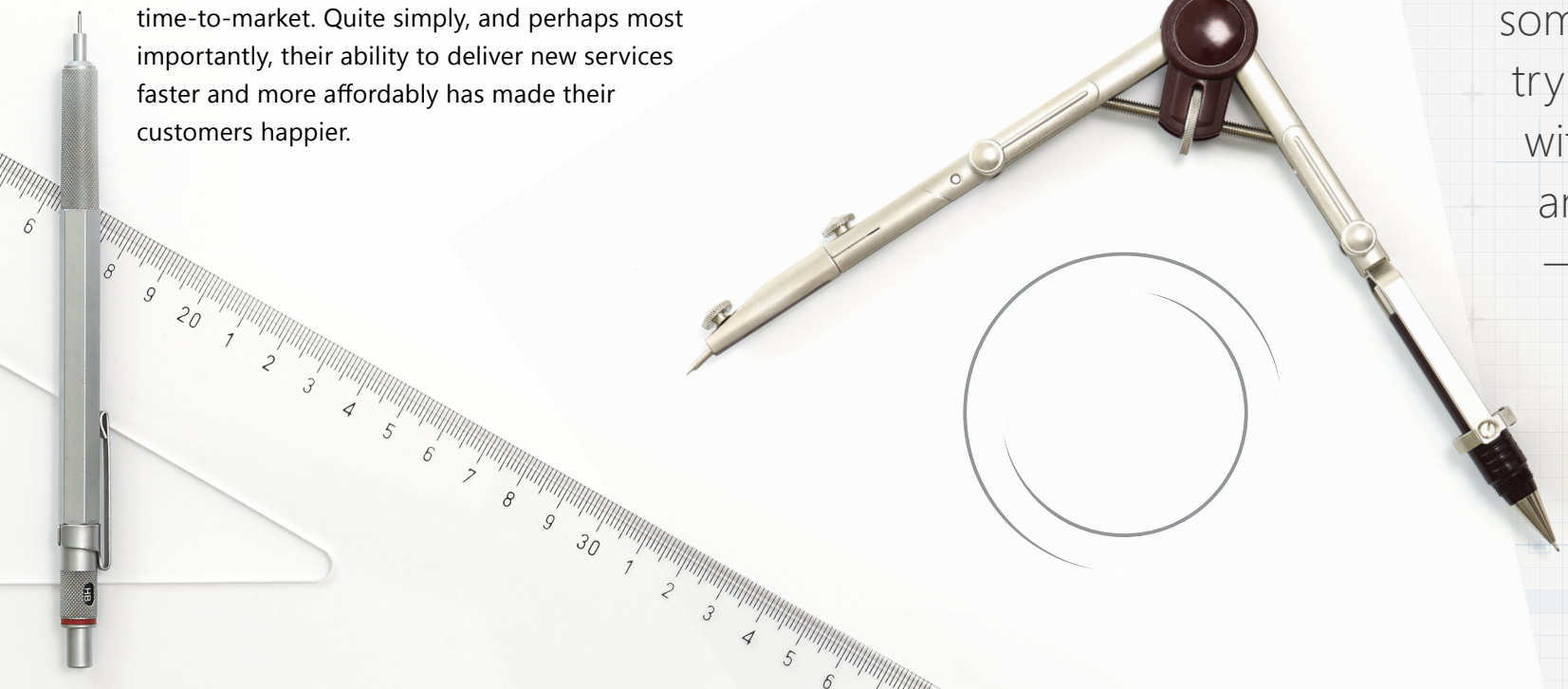
To enhance its registration system without an additional heavy investment in existing on-premises infrastructure, the airline implemented a hybrid cloud solution that includes a seating allocation app that runs on the **Microsoft Azure** platform. Not only does the new platform help them meet their goal, but the ability to develop new applications in the cloud speeds up their time-to-market. Quite simply, and perhaps most importantly, their ability to deliver new services faster and more affordably has made their customers happier.

Another benefit? Once those test environments are in the cloud, and you're familiar with running tests there, you'll be much better informed and prepared to move actual net new applications to the cloud.

Let's do that next.

"It was actually faster deploying to Microsoft Azure than it was to our own internal test environment in some cases. We can try new things quickly, with very low risk and cost."

—Bert Craven, easyJet, Enterprise Architect



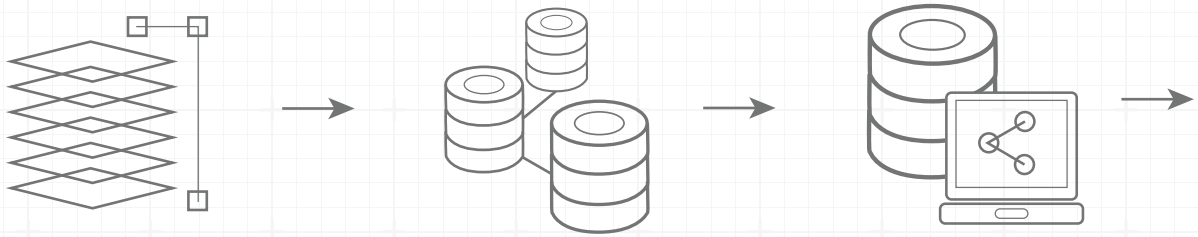
Broaden your offerings

STEP 03

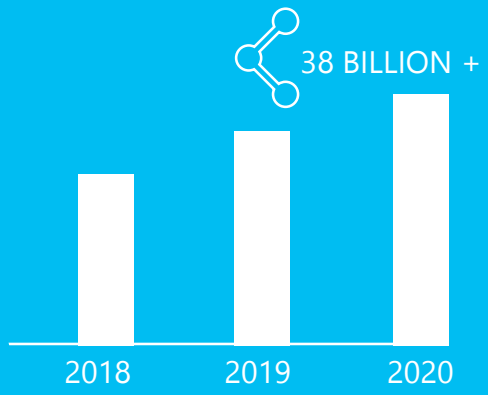
Now that you've been running pre-production in the cloud, you're comfortable working with dev-test apps and are ready to offer new applications that are typically born in the cloud: things like big data and IoT. These are ideal, low-risk candidates that don't carry much upfront cost. Infrastructure can be deployed quickly; the environment is flexible and development is quick.

Big data, IoT and other born-in-the-cloud apps require greater storage capacity and computing power. Azure's cloud platform lets you see all that data you've been collecting through powerful visualisation tools that present business intelligence (BI) in easy-to-read charts and graphs. Because of the sheer volume of data being studied, applications have to offer screaming-fast processing capabilities so that users can manipulate data in real time. That's not something that comes easily—or affordably—to on-premises. HarperCollins realised this, and found a solution that allowed them to utilise big data to improve their business offerings.

Greater storage capacity/computing power



According to **Juniper Research** data, the number of connected devices will surpass 38 billion by 2020.[2]



2. Source: http://www.juniperresearch.com/press/press-releases/iot-connected-devices-to-triple-to 38-bn-by-2020

Broaden your offerings

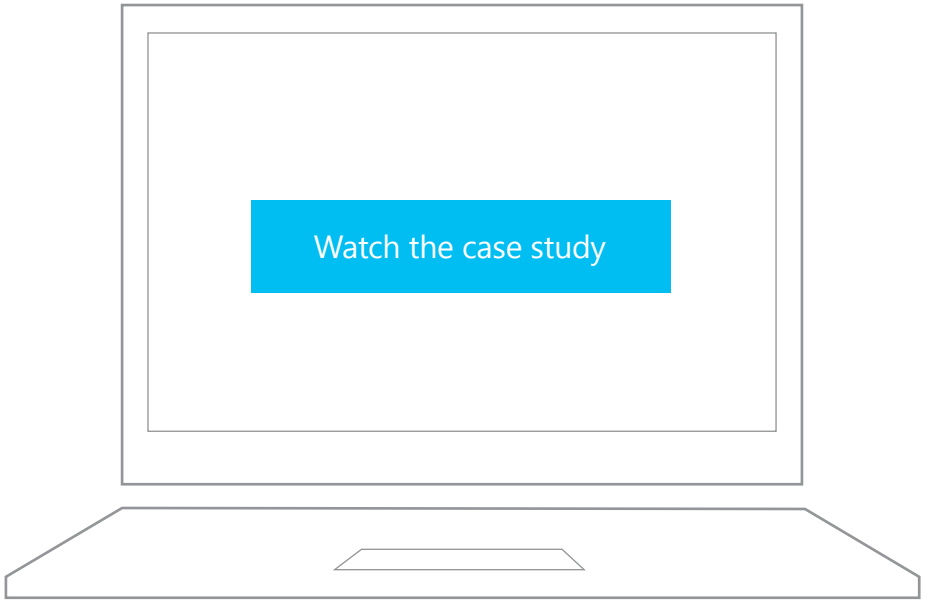
STEP 03

HarperCollinsPublishers

Case study: HarperCollins

HarperCollins Publishers wanted to be more competitive by giving decision makers greater insight into market research data.

The company worked with Microsoft partner Adatis to deploy a business intelligence (BI) solution on Microsoft Azure in only two weeks. Employees access the web-based solution from their desks and can view and customise reports on demand. As a result, HarperCollins has given employees control over market research data, gained valuable business insight, enhanced decision-making, increased efficiency, improved author services and boosted business and IT agility.



Protection and privacy of data.

Many organisations choose to trust cloud services with their confidential data. As you consider migrating confidential data to the cloud, keep in mind a few key factors in choosing a cloud provider that will ensure your data is kept secure, private and protected.

1. Own your data.
Not only should you have ownership of customer data, but you should also be able to access that data at any time, for any reason.

2. Know its purpose.
Your customer data should never be used for advertising or data mining.

3. Stay in control of your data.
Regardless of where you host your data, it belongs to you, and you should have control over where it's stored and how it's securely accessed and deleted.

4. Understand the laws.
Your cloud provider should always notify you if and when law enforcement requests access to your data through a legal process.

Consider current systems

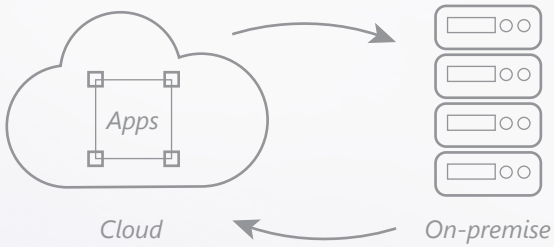
STEP 04

As you're building your ideal IT environment, the final step in moving to a flexible IT environment is to consider the current production systems running in your datacentre. Although it's not necessary to move every app away from a physical infrastructure, if you can provision running what each application needs, your company stands to save quite a bit of money.

While you decide which applications to move to the cloud, think about candidates that would be better off migrated. Production workloads don't live in isolation. There is a dependency on other systems.

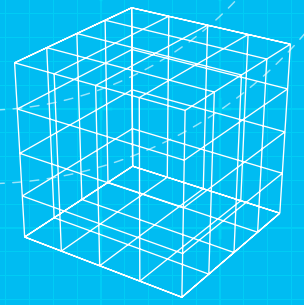
A modern IT environment provides a seamless connection between on-premises production systems and applications running in the cloud to give you the flexibility to collaborate and share workloads. This makes it possible to increase the value of your existing apps: Autoscale and manage complex load balancing, leverage blog storage and CDNs, incorporate entire tiers like Cache and Search.

The cloud operates as your own datacentre. But, because it's all self-service, things are much more simplified than on-premises. Being able to automate through pre-configured environments helps take workloads off of your core IT.



Run **Microsoft Azure** in your own datacentre with Azure Stack.

Azure hybrid cloud solutions give you the best of both worlds: more IT options, with less cost and complexity.



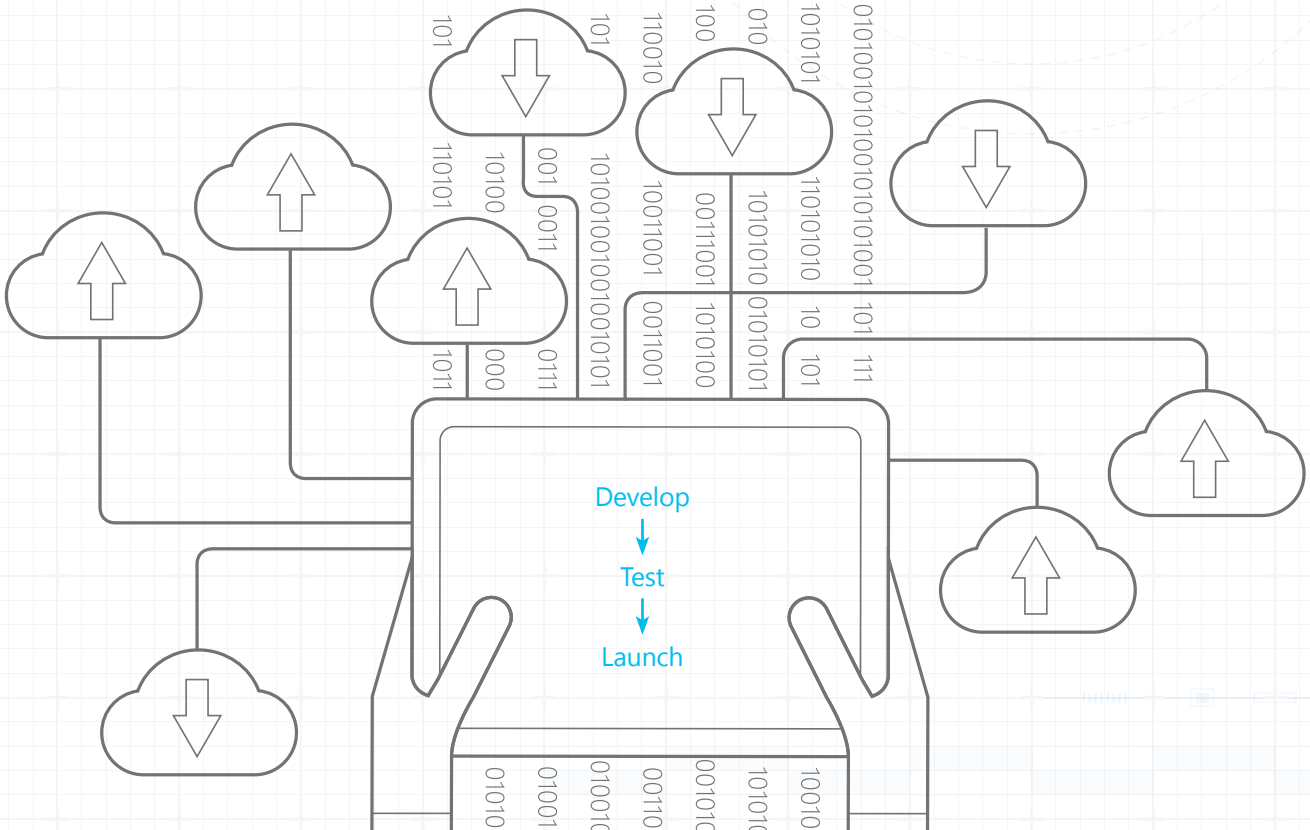
Consider current systems

STEP 04

Beyond what **Microsoft Azure** offers in IaaS are the applications available in the Platform as a Service (PaaS) model. Azure App Service lets you drive developer productivity, focus on being more strategic and accelerate innovation.

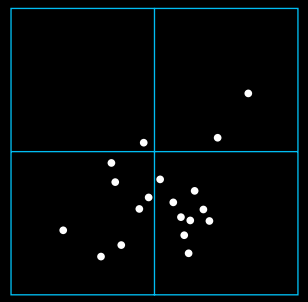
Develop and test apps without worrying about the underlying infrastructure. Focus on writing code, testing and launching applications and working to make upgrades to fix bugs.

PaaS works on top of IaaS, and will set up servers and configure infrastructures automatically.



Microsoft is in the Leaders Quadrant of Gartner's Magic Quadrant for Enterprise Application Platform as a Service for the second consecutive year.

Gartner defines application platform as a service (aPaaS) as "a form of PaaS that provides a platform to support application development, deployment and execution in the cloud. It is a suite of cloud services designed to meet current application design requirements, and in 2015, includes mobile, cloud, Internet of Things and big data analytics innovations."[3]



3. Source: https://www.gartner.com/doc/reprints?id=1-2C727LS&ct=150324&st=sb

Beyond DIY

You don't have to be a Fortune 500 company to run like one.

One of the greatest advantages of a cloud model is that organisations of all sizes can take advantage of the lessons learnt by highly successful companies. In addition to what they already have, users can also benefit from the knowledge others have gained from their own DIY experiences. This includes the ability to utilise the tools and shortcuts other users have created, tested and implemented. This type of ecosystem would be highly expensive and very complex to manage on-premises, but is ideal when time is short and budgets are tight. Cloud is also the ideal platform for running predictive analytics that allow you to develop solutions based on real-time data, like Towers Watson has done by using Azure as part of their hybrid UBI hosting solution.

Predictive analytics:
Towers Watson case study

TOWERS WATSON

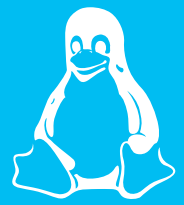
Towers Watson runs an on-premises data warehouse supporting an off-line R&D environment used to continuously evolve and improve the analytics running in their system. The company gathers analytics such as trip and sensor information, and third-party data feeds on weather and road characteristics to provide insurance companies with real-time reporting through cloud technology.

The Azure Marketplace

Running your servers on Microsoft Azure is simply an extension of what you're already running on-premises. Users can find solutions to IT problems from within the Azure portal. Partners here range from application platforms like Cloud Foundry to data solutions like Cassandra.

For many of these solutions, you can use either a pay-as-you-go model, or you can bring your own licence.

One-in-four VMs in Azure today run Linux and 60% of Azure Marketplace solutions are Linux.[4]



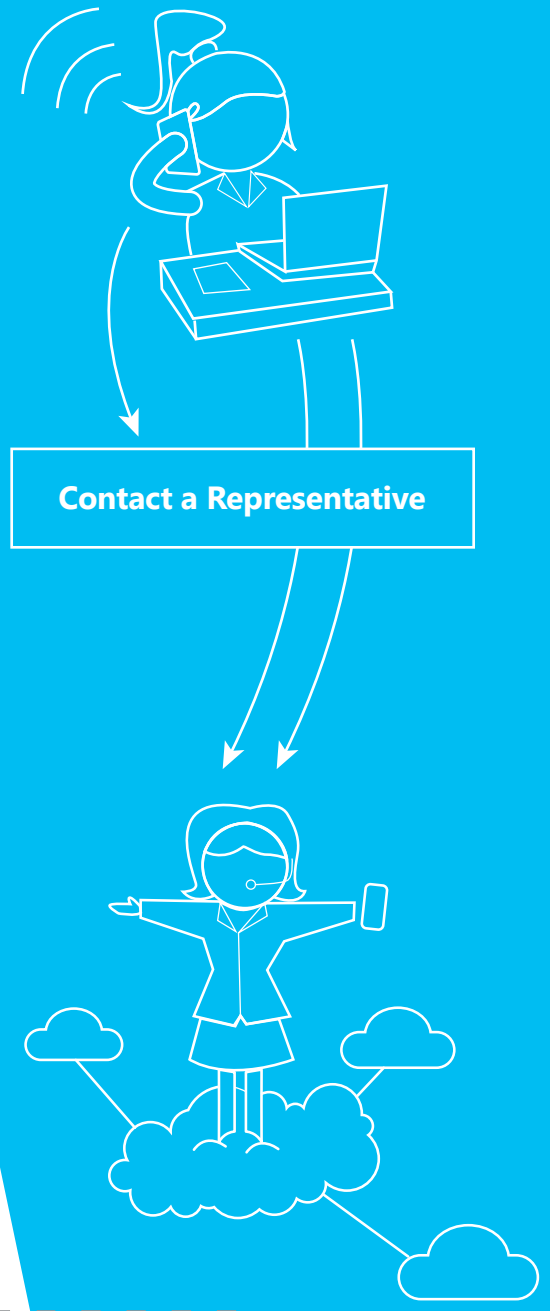
4. Source: https://michaelmckeownblog.wordpress.com/2015/11/06/microsoft-azure-now-even-more-open-with-red-hat/

Dream your DIY solution

CONCLUSION

The best way to learn and understand a new platform is to spend some time with it, take it apart and put it back together in new ways. There is a joy in the discovery process that also allows you to uncover the possibilities in your devices and technology.

There's a place that makes this possible—a virtual playground for spinning up ideas, testing out theories and potential scenarios and visualising real solutions to problems. The **Microsoft Azure** platform is the ideal way to create a custom cloud infrastructure that allows you to work in a way that best suits your needs. Its infinite resource capacity makes it the ideal platform for building your custom blueprint for flexibility.



Build a modern IT environment that meets your ideal requirements and reach your goals faster.

Ready to learn the next steps?
Contact a Microsoft Azure representative.

microsoft.com