GO AHEAD WITH CLOUD:

6 WAYS TO TRANSFORM YOUR BUSINESS WITH MICROSOFT AZURE

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INTRODUCTION:
HOW CLOUD CAN TRANSFORM YOUR BUSINESS

Most companies have deployed some form of cloud technology, but have yet to achieve true transformation. The technology is ready, but a mind shift is required.

The Five-Year Evolution of Cloud
In 2015, Cloud reached an inflection point. Its evolution from its emergence in 2010 illustrates why cloud-enabled transformation is now fully possible:

Small businesses were the first to embrace the cloud model to build custom cloud applications. Able to do more with less resources, they were willing to make the leap to cloud. At this point, corporate IT didn’t consider cloud viable for their needs.

As cloud platforms became more sophisticated, managing workloads and platforms seamlessly became a requirement. Automation and DevOps practices emerged as must-have elements for getting systems not only into the cloud, but also into the realm of agility and customer focus.

2010

Cloud platforms had matured, as had understanding of the cloud opportunity. Mid- and large-size companies were looking to migrate and operate their existing IT in the cloud, but still weren’t interested in building new systems in the cloud.

2013

Today

Organizations of all sizes are exploring a technology model that fully embraces the transformational promise of the cloud. Achievable goals include fully scalable infrastructure, quickly built applications featuring rapidly adjustable connections between systems and users and cloud-driven IOT and analytics.

The Transformation Mind Shift

Deploying cloud technology to improve your business is not just a hardware shift; it’s a mind shift.

Fully embracing the promise of cloud requires organizations to:

- Forget maintaining servers; think about innovating to solve business problems
- Forget versions and launch dates; think about user experience enhancement and business results
- Forget human error; think about human resource realignment to business needs
INTRODUCTION: WHY MICROSOFT AZURE?

Microsoft Azure is uniquely suited to deliver transformational benefits because it encompasses rich IaaS, PaaS and SaaS capabilities.

To understand cloud’s ability to impact your business, it’s important to review the three key components of the cloud computing stack:

**Infrastructure as a Service (IaaS)** – what people most commonly envision when they think of cloud: on-demand compute and storage.

**Platform as a Service (PaaS)** – adds modular turnkey capabilities on top of IaaS to create a cloud-based application development platform.

**Software as a Service (SaaS)** – a complete software application hosted in the cloud.

Microsoft is the only cloud provider that offers a complete and consistent platform that encompasses all three of these components across all cloud scenarios: public, hybrid and private.

As we’ll see in the following sections, this full set of capabilities is critical for organizations looking for a complete range of cloud transformation possibilities.

For a good analogy to understand IaaS, PaaS and Saas, see “**Pizza as a Service.**”
INTRODUCTION:
THE SIX WAYS TO TRANSFORM WITH AZURE

There are multiple paths that achieve value from the cloud. The six areas discussed in this eBook represent the best opportunities for immediate business transformation.

1. Extend Your Existing IT
   Gain the agility and speed your IT organization needs to meet business requirements

2. Create Innovative Applications
   Rapidly develop highly scalable applications to meet end user needs and capture business opportunities

3. Achieve DevOps Nirvana
   Break down barriers between your development and IT operations teams to deliver software faster, with higher quality and lower cost

4. Build Your Business On the Cloud
   Quickly and cost-effectively spin up a complete IT environment, or use the cloud to pivot your business model

5. Leverage Your Big Data
   Harness your data for new business insights in a cost-effective, scalable and user-friendly way that’s only possible with cloud

6. Connect to the Internet of Things
   Connect your devices and leverage real-time analytics to improve your business processes and your customer experience

Choosing a Path for Transformation

Business transformation with cloud is not “one size fits all.” You need to select the area that best fits your organization’s goals, challenges and needs.

Throughout this eBook, we provide checklists and case studies to help you select the transformation opportunities that are most relevant to your organization.

Cloud transformation is an ongoing process: you can start with one area today and build a foundation for future efforts. New cloud features and functionality are constantly emerging—that’s the exciting part about moving to the cloud!
TRANSFORMATION 1: EXTEND YOUR EXISTING IT

When you extend your existing IT environment with cloud, you gain flexibility, agility and speed.

IT organizations today are challenged to deliver more with less, while providing the flexibility and responsiveness demanded by the business. Cloud can play an integral role in meeting that challenge by serving as an extension and multiplier for in-house IT capabilities.

Extending your IT with cloud means more than just inexpensive data storage or raw compute power. Cloud can play a strategic role in making your company faster, more agile and more responsive to market changes.

This is an ideal starting point for companies that want to move to a hybrid cloud strategy. You can realize value quickly and set the stage to move into other areas of transformation.

What's the Business Value?

When you add cloud capabilities, you can:

- Realign your IT staff with line-of-business goals
- Scale on-demand and in real time with requirements
- Gain speed and agility to respond rapidly to new needs from the business
- Change your cost profile to allow investment in other initiatives

How Azure Makes it Possible

There are several ways you can extend your IT capabilities with Azure:

- **Migrate Workloads to the Cloud**
  Evaluate your existing IT workloads to determine which ones are good candidates for moving to the cloud. The migration of some applications might be as simple as lifting and shifting them to the cloud.

  Other applications will require remediation or modernization before migration. The good news is that migration can be executed gradually, according to a prioritized schedule.

- **Build a Dev/Test Environment in the Cloud**
  Many companies begin their move to Azure with a dev/test environment. The flexibility of cloud resource provisioning makes for a more responsive and cost-effective environment that’s easier to use and manage.

- **Leverage the Cloud for Disaster Recovery**
  Disaster recovery is a great option for obtaining immediate value from the cloud. Azure Site Recovery, combined with other Azure tools, can automate backup and recovery processes in the event of a data center outage. Disaster recovery is another ideal starting point for a hybrid cloud approach.
TRANSFORMATION 1: EXTEND YOUR EXISTING IT

Many organizations have already started the journey to the cloud by extending their IT environments with Azure.

How Walsh Used Azure to Extend Their Existing IT

Walsh, one of the largest construction firms in the U.S., wanted to extend its private cloud environment with public cloud capabilities to become more nimble and improve the scalability of its IT infrastructure. By leveraging Azure cloud services, the company was able to accelerate its server, storage and network provisioning so that its developers could create and deploy high-value software applications faster. With Azure, Walsh was also able to eliminate the costly problem of over-provisioning IT infrastructure at the start of each construction job. The company can now scale resources when needed at the click of a button.

Walsh’s initial foray into the public cloud delivered so many benefits that the company is now pursuing a “public cloud first” IT strategy. Walsh is moving 10 to 15 percent of its IT assets per year into Azure.

Read more about Walsh’s move to the public cloud here.

Learn more about Extending Your Existing IT with Azure:

- **10th Magnitude’s Cloud Readiness Assessment** provides a methodology for evaluating workload cloud readiness and creating a plan for step-by-step migration to the cloud

- Video: **What is Azure Site Recovery?**

- AzureCon 2015 Presentation: **Infrastructure for the Intelligent Cloud**

Your organization is a good candidate for Extending Your Existing IT with Azure if:

- You have a mandate to start moving to the cloud but you’re not sure where to start

- You want to get out of the data center business

- Your IT team is struggling to find the time and resources to devote to pressing LOB projects and requests

- Your IT environment experiences regular spikes in usage
TRANSFORMATION 2: CREATE INNOVATIVE APPLICATIONS

The cloud enables you to develop highly scalable applications and deliver them to end users with speed and agility.

A direct route to cloud transformation is developing cloud-native applications in Azure and/or modernizing existing applications to leverage the platform features of the cloud.

What’s the Business Value?

Custom cloud applications developed in Azure offer limitless opportunities to solve business problems with speed and agility:

- Accelerate sales processes
- Automate business operations
- Transact business securely online
- Convert data into revenue streams
- Deliver video content to customers
- Connect to supply chains via mobile devices

How Azure Makes it Possible

- Application development is where Azure’s Platform-as-a-Service (PaaS) features come into play. Azure PaaS provides a pre-existing framework that developers can use to build applications, reducing the need for custom code. PaaS also eliminates worry about the OS, middleware or runtime, allowing developers to be more productive.

- Cloud is a natural fit for Continuous Delivery, an approach that many successful tech companies have adopted to provide a seemingly constant stream of enhanced features and capabilities to their software. When the Continuous Delivery approach is combined with Azure Cloud Services, the result is software delivered more quickly, at a lower cost and with less risk.

### Continuous Delivery Methodology

- **Release**
- **Build**
- **Test**
- **Deploy**

Continuous Delivery is the philosophy of making constant small changes to technology instead of monolithic "versions."

### Azure Cloud Services

- ✓ Lower development risk
- ✓ Faster time to market
- ✓ Dramatically lower IT capital costs

A wide range of robust pre-packaged services are available on Microsoft’s Azure cloud development platform.
How kCura Uses Azure to Create Innovative Applications

kCura, a legal software provider, needed to create a scalable “lab” tool to provide individual demo environments for customers at their annual conference, Relativity Fest. In past years, kCura spent months purchasing, building and deploying a huge lab environment to demo new products. In 2014, they created an Azure-based, custom lab automation application that automatically provisioned demo environments in Azure for over 500 conference attendees simultaneously.

Read more about kCura’s innovative lab/demo application here.

Your organization is a good candidate for Creating Innovative Applications in Azure if:

- You’re under pressure to deliver new products and features to end users more quickly
- You want to increase your development team’s productivity
- You’ve adopted (or want to adopt) a Continuous Delivery approach

Learn more about Creating Innovative Applications in Azure:

- AzureCon 2015 Presentation: Building Apps with the Intelligent Cloud
- 10th Magnitude’s Application Modernization Quickstart offers a fast path for updating applications for migration to Azure
TRANSFORMATION 3: ACHIEVE DEVOPS NIRVANA

Cloud is the perfect DevOps platform: DevOps frees your applications to exist anywhere, while Azure provides flexibility and scalability.

DevOps, a philosophy of collaboration between your development team and your operations organization facilitated by continuous, automated technology, is a key component of cloud-era business innovation.

DevOps stretches the traditional iron triangle that impacts quality, cost and speed in equal measure. For example, in a non-DevOps world, higher quality usually means higher cost and lower implementation speed. With DevOps you realize higher quality more quickly for the same cost as a non-DevOps project.

Many organizations struggle to get started with DevOps adoption. A cloud platform provides tools and capabilities that make the transition easier.

What's the Business Value?

Adopting DevOps practices and automating infrastructure drastically improves your ability to innovate rapidly and deliver new features, applications and capabilities:

- Reduce cycle times to make software changes smaller, faster and safer
- Maximize your team’s capabilities by better leveraging their skills
- Create a framework for meaningful, measurable indicators
- Foster cultural changes that improve work environment, agility and efficiency

How Azure Makes it Possible

DevOps is all about breaking down barriers between your development and IT operations teams. The Azure capabilities that we covered in the first two Transformations help to remove these traditional silos.

Azure also has some additional tools that specifically support DevOps:

- Microsoft Application Insights combines standard application performance monitoring features with usage analytics and the ability to access application telemetry data and logs. It's designed to help development teams get detailed insights into an application's availability, performance and usage in near real time.

- Azure makes it easy to use Chef and other infrastructure automation tools, which are a major pillar of DevOps practices. Users can now access and instantly launch Chef servers from the Azure Marketplace and can also launch Azure virtual machines with Chef preconfigured.
TRANSFORMATION 3:
ACHIEVE DEVOPS NIRVANA

DevOps eliminates siloed development and IT operations so that organizations can deploy software faster and solve problems more quickly.

How Other Companies are Combining Azure and DevOps

- kCura has combined Azure and Chef to achieve business value from DevOps, including freeing up Ops staff for higher value activities and transforming their organizational culture. [Watch the interview to learn more.]

- ZS Associates reduced their server configuration time from two-and-a-half days to one hour using DevOps practices. [Watch this presentation from ChefConf 2015 to find out how they did it.]

Learn more about Achieving DevOps Nirvana with Azure:

- Blog post: [Microsoft Application Insights: Top Six Features to Get a 360° View of your App]

- 10th Magnitude’s DevOps Quickstart helps companies begin to implement infrastructure as code, a key element of DevOps

Your organization is a good candidate to Achieve DevOps Nirvana with Azure if:

- You’ve ever released an OS patch that broke your application

- You’ve ever made a change to your application that pushed its infrastructure beyond its limits

- You waste time figuring out why your apps aren’t performing the way they’re supposed to

- You lost features when your dev team pushed the last version of your software to production

- You’ve ever wasted time troubleshooting an intermittent fault on a server
TRANSFORMATION 4: BUILD YOUR BUSINESS ON THE CLOUD

If you’re a startup, small business or an ISV, Microsoft Azure can provide the foundation you need to quickly build your business or pivot your business model.

Startups, small businesses and ISVs were among the first companies to embrace the cloud model as it began to emerge. And cloud continues to be key to those businesses.

Cloud platforms have matured to the point where they are able to provide a completely integrated platform that encompasses infrastructure, development capabilities and packaged productivity software. An integrated platform provides a cost-effective way for startups to launch their businesses, small businesses to add lines of business or ISVs to rapidly get new products into market.

What’s the Business Value?

Building a business on the cloud delivers a number of important benefits for startups, small businesses and ISVs:

- **Ability to launch quickly** – get into the market fast to meet demand
- **Cost-effectiveness** – pay for only what you use instead of investing in costly hardware
- **Ability to take advantage of emerging software development practices** – cloud is the perfect platform for Continuous Delivery and DevOps
- **Scalability** – no matter how big your business gets, the cloud can scale with you

How Azure Makes it Possible

According to Microsoft, 40% of Azure revenue comes from startups and ISVs. These companies have adopted Azure because it offers the most complete cloud platform available from any provider, encompassing IaaS, PaaS and SaaS. (For an explanation of IaaS, PaaS and SaaS, see page 4).

Azure offers the cost-effective raw storage and compute power that is important for new or rapidly expanding companies. But Microsoft has also developed a wide variety of pre-built tools and components in Azure that make it easier to do everything from building mobile apps to managing identity and access to delivering content at scale to end users.

Finally, Microsoft’s commitment to open source for Azure means that startups, small businesses and ISVs don’t have to worry about being locked into a single platform.
Cloud technology provides an ideal environment for building an agile, scalable business without investing in costly on-prem infrastructure.

**TRANSFORMATION 4: BUILD YOUR BUSINESS ON THE CLOUD**

How Arrow Payments Pivoted with Azure

Arrow Payments is a payment processing provider for B2B and Internet companies. The company provides a secure gateway for online credit card payments.

Arrow started out in 2005, but as payment processing increasingly went online Arrow went in search of a way to reshape their business to respond.

Building Arrow's new online payment gateway in Azure was the most time- and cost-effective route, and it achieved data security levels high enough to pass certification with a third-party PCI compliance firm.

Building their new system in Azure let Arrow focus on their core business strengths so they could pivot their organization quickly to serve their new business line. They not only avoided purchasing expensive IT equipment and adding IT staff, but also spent the development time—a quick 13 weeks—hiring and training new sales staff.

Read more about Arrow Payments experience [here](#).

Learn more about Building Your Business On the Cloud:

- Article: [Jet.com gives consumers the power to save via Microsoft Azure-enabled pricing engine](#)
- Get free stuff for your startup through [Microsoft’s BizSpark program](#)

Your organization is a good candidate for Building Your Business On the Cloud if:

- You’re a startup that needs to quickly and cost-effectively spin up an IT infrastructure and/or development environment from scratch without a dedicated IT staff
- You’re a small business without extensive internal IT that needs to launch a new line of business or meet a market need
- You’re an ISV that needs to rapidly pivot your business model or introduce a completely new product
TRANFORMATION 5:
LEVERAGE YOUR BIG DATA

Cloud opens up a world of possibilities for storing and analyzing large volumes of data. Azure’s capabilities make big data accessible to a wide variety of users.

“Big data” has been a buzzword for years, but actually implementing big data solutions was too costly and time-consuming for most companies to do in an on-prem world.

With cloud resources, the scenario is radically different. Organizations no longer have to buy servers, install them and keep them running all the time to support analytic workloads. Now obtaining computing resources really is as simple as using a slider bar—move the slider up when you need peak resources, down to accommodate a lighter workload.

With this model, Azure creates endless possibilities for storing and analyzing data, and enables all sorts of innovative thinking.

What’s the Business Value?

Most organizations have already tapped into the value of business intelligence and analytics, whether that means using packaged software to perform basic data analysis or building a massive data warehouse to enable a staff of professional analysts.

Cloud supercharges the business value of analytics and BI by giving organizations cost-effective access to a broader range of capabilities than most could build in-house.

How Azure Makes it Possible

Azure can add speed, agility, scalability and cost-effectiveness to your organization’s business intelligence and analytics capabilities:

- Collect and store massive amounts of data at a lower cost than was possible before
- Create a data warehouse and begin querying it in minutes
- Build and prove predictive models in the cloud, then quickly deploy them
  - Azure Machine Learning features pre-built and pre-integrated resources that make sophisticated analytics accessible to regular end users
- Create user-friendly tools for visualizing and sharing data that make it easy to identify patterns and correlations
  - Power BI puts advanced capabilities in the hands of average users, including the ability for natural language querying

Microsoft continuously adds new analytic tools and capabilities to Azure
TRANSFORMATION 5: LEVERAGE YOUR BIG DATA

Your organization is probably already using BI tools. Azure extends those capabilities to make more of your data accessible to more of your end users.

How the Microsoft Digital Crimes Unit Leverages Big Data with Azure

Did you know that Microsoft has its own Digital Crimes Unit (DCU) charged with combating cybercrime worldwide? The DCU is equipped with Microsoft's latest analytics technology and is staffed with data scientists who leverage big data to help detect and disrupt the activities of cybercriminals. Among the technologies used at the unit are Azure HD Insight and the cloud-based Microsoft Analytics Platform System.

DCU investigators recently mined the unit's product-key-activation database—containing 650 million product keys and 7 billion rows of data—to identify tens of thousands of stolen product keys and stop the criminal ring behind the theft.

Learn more about the DCU's use of Azure big data technology here.

Learn more about Leveraging Your Big Data:

- Blog post: Azure Data Lake—Get Ready to Dive In
- AzureCon 2015 presentation: Transforming Data Into Intelligent Action

Your organization is a good candidate for Leveraging Your Big Data if:

- Your business generates large volumes of data that you haven't had the resources to store, integrate and/or analyze
- Your existing BI infrastructure isn't scaling or providing the answers your business users need
- You're already using some components of the Microsoft BI stack and want to use Azure to enhance those capabilities
TRANSFORMATION 6: CONNECT TO THE INTERNET OF THINGS

The Internet of Things is the convergence of devices, data, processes and people to gain insights and automate operations. Cloud makes this convergence possible.

Internet of Things (IoT) applications connect real-time data from devices with existing operational data to generate powerful business insights and automate critical business processes.

If you want to get started with (IoT) today, there are two key capabilities you need:

- The ability to ingest data from your devices and applications
- The ability to do something with that data as it’s being ingested—for example, running real-time queries that enable data visualization

Cloud technology enables both of these critical IoT capabilities.

What’s the Business Value?

IoT enables you to:

- Streamline your operations with connected devices that can provide failure warnings, location information or impending maintenance alerts
- Enhance the customer experience by reducing outages, providing service at optimal times and improving appointment scheduling
- Increase your revenue by differentiating your product with better service and offering vendors along your supply chain vital usage pattern information

IoT can add value for companies across almost every industry: manufacturing, oil and gas, retail, pharmaceutical, healthcare, transportation, construction—anywhere there are devices collecting and generating data.

How Azure Makes it Possible

Azure offers a full suite of integrated IoT capabilities that address all phases of an IoT implementation:

- **Connect and configure** – connect your devices to enable data collection
- **Gather and store** – ingest data from those devices in real time
- **Monitor and manage** – create ongoing management processes for devices and data collection
- **Analyze and visualize** – generate real-time insights and use them to identify and execute on cost-saving and revenue-generating opportunities
TRANSFORMATION 6:
CONNECT TO THE INTERNET OF THINGS

IoT can help you connect and manage a large number of devices and incorporate predictive analytics to improve your business processes and your customer experience.

Other Companies are Connecting to the IoT

- ThyssenKrupp is using Azure IoT capabilities to connect its elevators to the cloud and enable predictive maintenance. The benefits? Increased reliability and lower costs. Watch the video to learn more.

- Rockwell Automation is using Azure IoT technology to monitor capital assets used in mining, moving and refining petroleum. The benefits? Increased productivity and reduced downtime. Watch the video to learn more.

Learn more about Connecting to the Internet of Things with Azure:

- Blog post: The Killer IoT Combo—Azure Event Hubs & Stream Analytics

- Blog post: Add Predictive Power to IoT with Azure Machine Learning

- 10th Magnitude’s IoT Proof of Concept enables companies to quickly launch their first IoT project

Your organization is a good candidate for Connecting to the Internet of Things if:

- You need to connect and manage a large number of devices

- Your business processes could benefit from the incorporation of real-time analytics, for example: predictive maintenance or logistics management

- You’re interested in improving the customer experience through predictive analytics, for example: Azure can enhance social sentiment analysis or predictive healthcare for patients
CONCLUSION

HOW TO MOVE FORWARD WITH CLOUD

Microsoft Azure Resources

If Microsoft Azure sounds like it could be a good fit for your organization, you can check out the multitude of Azure resources that Microsoft has made available on its website.

To learn more about Azure capabilities and use cases:

Visit the Azure Cloud Resource Center for white papers, analyst reports and on-demand webinars. Of particular interest for decision makers are the cloud-related Gartner Magic Quadrant reports that Microsoft makes available for free download.

Read additional Azure customer case studies. You can search by industry, Azure service used and geography to find the stories that are most relevant to your organization.

To get hands-on with Azure:

Watch a series of three-minute Get Started videos to learn how to complete basic tasks in Azure, such as creating a virtual machine, a Node.js app or a SQL database.

And, when you’re ready to dive in, you can try Azure for free with full access to explore any cloud service offered.

Azure Magnitude Planner from 10th Magnitude

The Azure Magnitude Planner (AMP) is a tool that will help you pinpoint which cloud initiatives are most relevant to your company’s goals.

You can access an interactive version of the AMP at the following link:

http://www.10thmagnitude.com/amp

Enter your biggest goal, need or challenge in the question box and the tool will direct you to the relevant stage in the AMP. From there, you can click through to learn more about your recommended next steps with Azure.
ABOUT 10TH MAGNITUDE

10th Magnitude is a new-school technology company helping businesses achieve IT transformation through cloud. One of the top Microsoft Azure services firms in the US, they enable customers to innovate, automate and accelerate by leveraging the power of Microsoft Azure with a suite of cloud services that includes:

- Azure Migration
- Cloud Application Development
- DevOps and Azure Automation
- Azure Analytics and Internet of Things
- Managed Cloud Services

When 10th Magnitude opened its doors in 2010, most companies had little idea what cloud technology was, and certainly no idea that it would become a change agent as revolutionary as the telephone. In five short years, 10th Magnitude has used cloud to help transform businesses of all sizes in numerous industries and multiple countries. Today they are not only leading the market in Microsoft Azure development and implementation, but also spearheading the current enterprise DevOps revolution.

For more information, please visit:

www.10thmagnitude.com