Next Cloud Frontier – Moving on-premises apps to Azure Cloud!

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Despite many compelling arguments in favor of cloud computing—among them the unbeatable combination of greater flexibility at lower cost—many companies have still not committed to moving on-premises apps to the cloud.

The debate between operating expense (the cloud's approach) and capital expense (the on-premises approach) is waged daily across many organizations. ***Should they continue to offer their software as on-premises or move to a cloud-based model?***

There are trade-offs no matter what a firm chooses though, it's evident that opex is increasingly favored across the globe. For IT, 2000 to 2010 was more about virtualization, but that's done. It's no longer modern, simply the new legacy. The current decade is just about the cloud.

And to avoid irrelevance, a business must change and grow. They need not dig their heels in and cling to the past, as they would have done it in the past.

Accelerate your move to the cloud - There's no future in on-premises

The advent of the blockchain, data protection, digital agility, and cost reduction have eventually snowballed to make a cloud-based infrastructure a business mandate across all industries.

If “To cloud or not to cloud” is the question your businesses is currently facing.

Then, it is time to consider these recent stats, which cleary indicates that Cloud Adoption is soaring high and you need to migrate to the cloud, not simply to keep pace, but for continued survival.

Cloud Adoption is soaring

Over the last few years, cloud computing and infrastructure—the delivery of business services to users over a network—has taken the IT world by storm. There’s hardly an enterprise IT department that hasn’t already adopted (or isn’t currently considering) a move to cloud-based delivery models, and for good reason: the cloud offers a solution to IT management, resource, and cost challenges facing organizations today.

These days more number of organizations are investing in the cloud with a projected $107.2 Billion growth for worldwide cloud services spending by 2017 (Source: IDC). Developers are witnessing their largest gains by building upon PaaS vs. IaaS or SaaS.

In the recent Worldwide Semiannual Public Cloud Services Spending Guide, IDC estimated that spending on Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) will grow at much faster rates than SaaS with five-year CAGRs of 30.1% and 32.2%, respectively. IDC has reported that “PaaS is important because it's the focus at many companies for rapid application development and mobile app development, using the DevOps approach.”

The Cloud delivers that agility

Today's business environment demands agility: the ability to launch software applications and systems quickly, and the ability for those applications to scale dynamically in response to increased workload and demand from internal or external users. Migrating these applications to cloud can help customers in achieving this agility to help grow their business.

However, if a company’s application and systems mostly reside on-premises or in a hosted environments, where the full range of cloud infrastructure benefits cannot be unlocked, they should be be migrated to a scalable environment. Many companies planning migration of such systems and application to cloud encounter a series of challenges.

Challenges faced while migrating/developing applications to the cloud

When moving your applications to the cloud, you may come across a few challenges. Some of these challenges and security risks are:.

Data Security- As you are migrating application to the cloud, you must move sensitive data from your computers to cloud. In this transition, company should think about the security solutions of this sensitive information.

Interoperability- One of the big challenge in application migration is the current difference between the individual vendor approaches, and the implicit lack of interoperability.

Portability- If the company's infrastructure and applications are not transferable to the cloud, they should be rewritten in order to integrate them in the new cloud framework.

Bandwidth and Network latency issues- If the client's network is not upgraded and have such bottlenecks, the application migration to the cloud could become slow or impossible.

Cost and time- The cost and time it takes to move an existing workload to the Cloud, again this is one of the challenge from the financial point of view.

Are your legacy applications suitable for the cloud?

Organizations are promptly harnessing the advantages of the cloud by migrating the critical applications. But while it is easier than ever to deploy or create business applications in the cloud, most enterprises still have those critical legacy or in-house developed applications that complicate their migration
strategies. After all, not every legacy application is appropriate for the cloud.

Even if a legacy application is deemed technically possible to migrate, without understanding the cost to the business and the performance ramifications for end users, the impact could be disastrous. Therefore, the following factors should be considered for cloud migration decisions for legacy applications.

Architecture and design: Applications rely on legacy operating systems or have critical local dependencies that effectively rule them out of the running for migration.

Migration Cost: If the true costs of migrating the legacy app to the cloud compare favorably to maintaining it on-premises.

Security and compliance: Security measures and your cloud provider's risk mitigation capabilities

Performance expectations: Your ability to quickly detect and fix problems or minimize costly downtime once the app is in the cloud

Business criticality: Ensuring the cloud app performs favorably while still meeting the needs of the business and end users

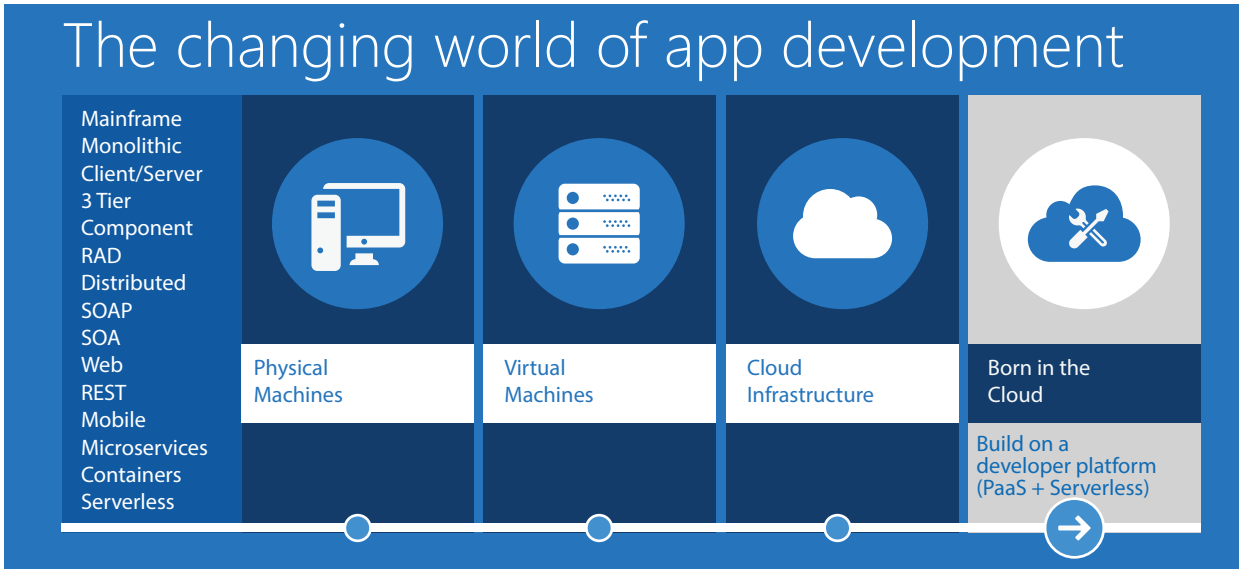
Dependencies: Dependency on other upstream and downstream systems and practical problem of moving them together.

The changing world of application Development

In the bygones, there used to physical machines, which were extremely expensive. Besides, these also caused conflicts and unexpected bugs and then came the virtual machines, which reduced the conflicts and improved utilization. However, the downside of this was the shared memory and fluctuating performance. And gradually we entered the cloud era when companies could rent the virtual machines they needed, when they needed them. They could scale applications up and down on demand. Nevertheless, you still needed to install and configure OS level patches and updates, and still had to cope with low-level networking.

Application development today

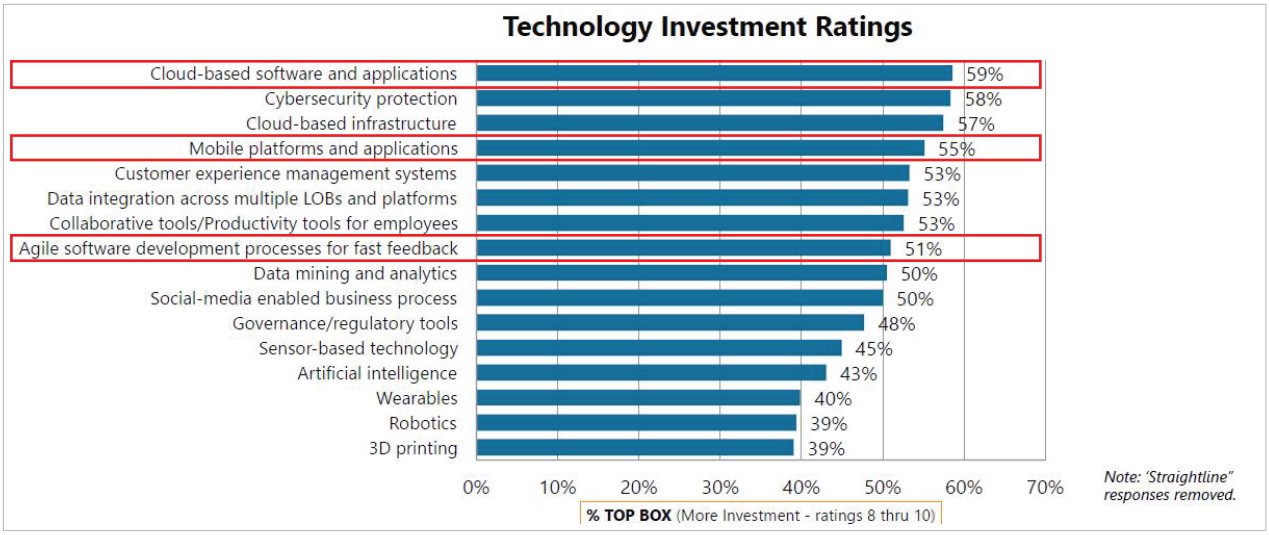
Today, more businesses are increasingly evaluating PaaS (Platform as a Service) and Serverless approaches to application development, moving beyond cloud-hosted VMs, removing the need to manage servers and scalability challenges, & increasing the speed of the iterative development process. The study commissioned by Microsoft & delivered by Forrester Consulting reveals that Azure PaaS offerings can enable significant IT savings. Azure PaaS delivers an application platform that ensures consistency and simplicity. Many IT tasks, like patching, updating, testing, networking, and others, are built in.



The Booming Cloud Opportunity

According to the IDC forecasts, worldwide public IT cloud services revenue (i.e. SaaS, PaaS, and IaaS) will reach $141.2B USD by 2019, a 19.4% compounded annual growth rate (CAGR): almost six times the rate of overall IT spending growth! SaaS still makes up the majority of spending, though PaaS and IaaS are expected to grow at almost twice the rate of SaaS over the next five years.

The largest (59%) percentage of large, midsize, and small business decision makers predict that cloud-based software and applications will be their most significant investment over the next 5 years to reach business goals.



Source: Hosting and Cloud Study 2016- The Digital Revolution, Powered by Cloud – Survey Results, 451 Research, 2016

Intrestingly, the Forrester Research report also indicated that "Eighty percent less IT administration time was required for applications on PaaS, allowing the organization to focus on application innovation, not administrative tasks. The organization used to spend significant time on server patching, networking setup, firewall configuration, and many other server-related tasks now included with Azure PaaS. This adds up to $132,240 saved in the first year."

Microsoft Azure Platform-as-a-Service (PaaS)

While adopting more agile DevOps methods, and moving your applications to the cloud will save you money and make your complex app deployments more efficient, you will make the biggest gains by focusing the majority of your developers back on coding.

IT organizations need to get back into the game by looking to new innovations that support applications and services that drive the business forward.

Azure PaaS enables several specific IT and business improvement, cost saving, and revenue opportunities on top of existing IaaS benefits. The below statistics affirms:

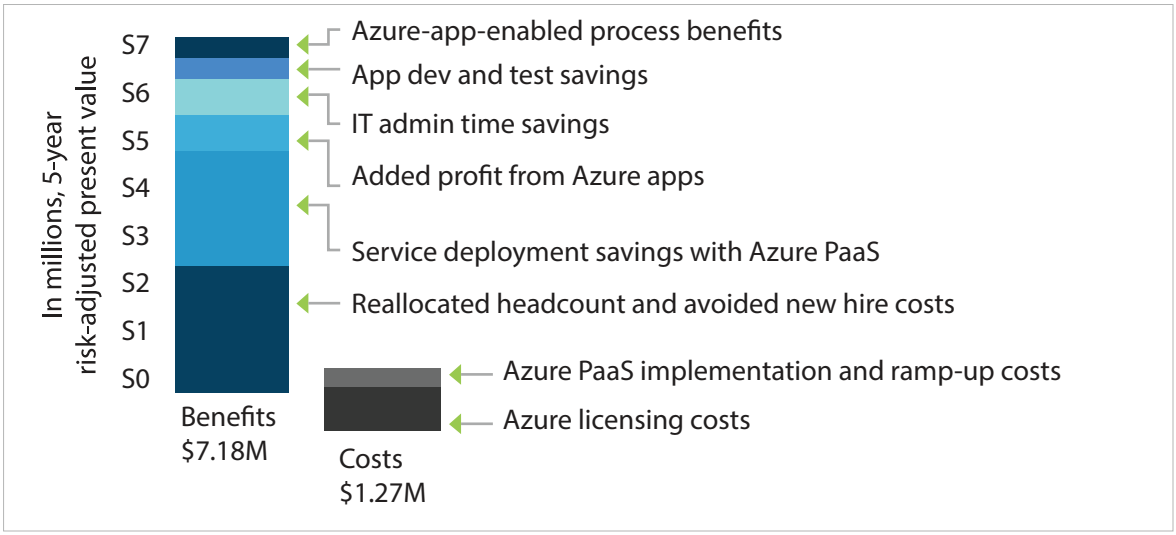


Image Courtesy: The Forrester Total Economic Impact™of Microsoft Azure PaaS

Furthermore, in its latest Total Economic Impact Study, Forrester Consulting interviewed a number of current customers of Azure's PaaS services and concluded that migrating to PaaS from IaaS resulted in a 466% return on investment. For customers migrating from on-premises environments to PaaS, the return on investment can be even greater. Time to market also improved by as much as fifty percent, because of the efficiency and speed of deploying applications with PaaS services.

The rewards, as Forrester has shown, are significant

466%
Return on Investment

5.91M
Net Present Value

80%
IT Time Saved

50%
Faster Service Deployment Time to Market

Source The Total Economic Impact TM Of Microsoft Azure Platform-As-A-Service, Forrester, June 2016

Building apps that work incredibly

Microsoft Azure services like Microservice, Service Fabric, Azure Functions, DevOps and Azure App Services provide customers with a comprehensive PaaS application platform for building, deploying, and managing apps from the simplest website to the most complex business solution. Microsoft Azure empowers application scaling up and scaling out to any size, with an automated self-service platform that allows for fast resource provisioning and a billing model that charges only for resources used.

Here are some Azure insights to help maximize Your profitability

Technologies	How does it help
Azure Microservices	**Microservices** are an application development and deployment approach perfectly suited to the agility, scale, and reliability requirements of modern cloud applications. In a microservices model, you individually build and deploy small, independently-executing services or "microservices," that collaborate using published API calls across the network to deliver the overall application's functionality. This results in a fine-grained, loosely coupled application that can easily be distributed across multiple host machines for scale and reliability.
Azure Service Fabric	**Azure Service Fabric** is a mature, feature-rich microservices application platform with built-in support for lifecycle management, stateful and stateless performance at scale, hybrid deployments, 24x7 availability, and cost efficiency. Another term that is used when discussing cloud-based solutions, and is rising in popularity, is "serverless" computing.
Azure Functions	It is server less, event-driven service offering that extends the existing Azure application platform with capabilities to implement code triggered by events occurring in other Azure services, SaaS products, and on-premises systems. **Azure Functions** extends our market leading PaaS platform, building on the existing WebJobs infrastructure to let developers easily implement code that reacts to events generated from across the breadth of Azure.
Azure Container Service	**Azure Container Service** provides a way to simplify the creation, configuration, and management of a cluster of virtual machines that are preconfigured to run containerized applications. Using an optimized configuration of popular open-source scheduling and orchestration tools, Container Service enables you to use your existing skills or draw upon a large & growing body of community expertise to deploy and manage container-based applications on Microsoft Azure.
DevOps	The Solution provides open, flexible and extensible cross-platform. DevOps tools and powerful cloud services that work with what you already use and give you more agility and flexibility for continuous value delivery. Streamline continuous deployment with **DevOps** tools that help you get innovative applications into user's hands faster. It helps you modernize your App Dev lifecycle and go from idea to deployment with continuous integration, testing, and deployment for any app targeting any platform.
Azure App Services	Develop powerful applications for any platform or device, faster than ever before. Meet rigorous performance, scalability, security and compliance requirements using a single back-end with **Azure App Services.**

Customer success stories highlighting these technologies

Global weather company AccuWeather is using a technology platform including Microsoft Azure and Microsoft Dynamics 365 to gain real-time intelligence into weather and business patterns. Handling 17 billion requests for data each day, AccuWeather is helping 1.5 billion people safeguard and improve their lives and businesses.

CarMax, the largest used car retailer in the United States, is transforming itself into a digital business to address the needs of today's connected consumers. With more car shopping happening online and on mobile phones, CarMax re-architected its website using Microsoft Azure platform services to deliver faster response to the 16 million people who visit its site each month and to speed the development of new digital services.

Tyco, a security systems company is taking advantage of Windows Server 2016, and in particular Windows Server Containers in conjunction with the Docker Engine, to first containerize legacy applications and later re-architect them into microservices.

OSI Soft, a Global leader in operational intelligence speeds innovation with the Microsoft cloud platform. To provide the scalability needed to meet the exponential growth in the volume of data collected and stored, OSIsoft is enhancing the PI System with cloud-scale capabilities using Microsoft Azure.

How WinWire can help?

WinWire Technologies, a managed partner and Gold Certifications in Azure Cloud, Application Development enables you to exploit the maximum value of Microsoft Azure by migrating legacy applications, modernizing existing architectures and creating new cloud-native solutions, allowing your information technology to transform into a force for true agility.

We help customers to have smooth digital transformation journey by building customer-facing cloud apps, modernizing legacy applications leveraging Azure Microservices, APIs, Azure Container Services, Azure Automation and DevOps that are robust, scalable, easier to iterate or change, and perform with low latency under high and variable degrees of load.

WinWire has over 40+ Certified Azure developers, architects, & advisory consultants who can help you in designing, migrating, & developing highly agile cloud applications which drive real business value and competitive advantage.

WinWire can assist you in multiple ways

- Custom App Dev
- Application Lifecycle Management
- Solution Analysis, Scope, & Design
- Proof of Concept
- User Experience Consulting
- Workflow Creation in SharePoint
- Performance & Application Troubleshooting

WinWire holds a distinctive position in the advisory and technology services market as a visionary with a scope that covers the entire spectrum of People, Process & Technology.

Advisory Services - Our cloud advisory consultants can help you select the appropriate services to meet your application's needs while staying compliant to regulations.

Development, Testing and Migration – Our developers and architects can help you ensure that your application is designed, built, migrated and integrated in a secure way.

Deploy and Managed IT Services - We can manage your cloud application's lifecycle like scaling infrastructure environments on Azure, SLA driven support and maintenance of cloud infrastructure, remote monitoring of application services and monitoring reports.

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