

The Business Value of AWS

Succeeding at Twenty-First Century Business Infrastructure

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Contents

| | |
|---|----|
| Abstract | 4 |
| Introduction | 4 |
| The New Business Infrastructure | 5 |
| The Standard for Service in a Digital World | 5 |
| How AWS Drives Business Value | 6 |
| Clear Obstacles to Innovation | 6 |
| Increase Flexibility | 7 |
| Enable the Enterprise | 8 |
| Using AWS as a Business Enablement Engine | 9 |
| Create Value | 9 |
| Evolve Strategically | 10 |
| Transform Business Operations | 11 |
| Maximize Your Investment | 13 |
| Conclusion | 14 |

Abstract

In this whitepaper, you'll see how you can use AWS to adapt to a changing interconnected market, and take advantage of global responsiveness and minimal barriers to innovation. AWS can help you create value for the business in addition to saving costs on infrastructure.

Introduction

Technology has changed the way business works, making computing power more available and cost-effective, and regularly surpassing previous performance benchmarks.

By delivering innovative new products and services that were unheard of only a decade ago, IT has become a business enablement machine. Businesses are connecting with customers via social networks, analyzing data trends, and creating new must-have products and services—all by harnessing the power of cloud computing.

Successful businesses are adapting to a dynamic new way of operating, approaching IT as a business driver, one that can have positive effects on a company's bottom line. Many of them are using Amazon Web Services (AWS) to help them remove obstacles to innovation like high costs and complexity. They're using AWS to increase flexibility and empower their employees to collaborate and share information seamlessly and securely.

The New Business Infrastructure

Over the last five years, technology has reshaped the way we do business. Cloud computing has not only driven IT costs down, it has helped companies across industries increase flexibility and productivity. They're interacting with their partners and suppliers in seamless, organized ways. In addition, they are driving greater employee satisfaction by making it easy to connect and collaborate. In this new digital world, access to information is real-time, personalized, and mobile.

The Standard for Service in a Digital World

To fill multiple heterogeneous needs, IT needs to be service-centric. Customers, both internal and external, demand solutions that meet their business and personal needs, device preferences, and mobility requirements. We are already seeing impacts in three key areas: cloud computing, mobility, and social.

The Cloud

Cloud computing has become the primary engine driving IT as a service. With cloud computing, you don't need to make large upfront investments in hardware and spend a lot of time managing that hardware. Instead, you can provision exactly the right type and size of computing resources you need to power your newest bright idea or operate your IT department. As the cloud has become mainstream and adoption has garnered momentum, you have access to state-of-the-art technology at a fraction of the cost and with greater speed than ever before.

Mobility

Mobility has fundamentally changed the way businesses operate. Information is available in multiple devices, in real time, and with greater accuracy than ever before. Mobility and the cloud together make it easier for workers to be productive from anywhere—not just the office. The mobile tools they use must be secured to meet tough industry standards.

Social

Social media has had a significant impact on the way people work. Employees can share information in real time, with multiple inputs and transparency. Today's

workforce expects to be able to exchange information in a more personal, dynamic way, without obstacles, and across a multitude of devices.

As IT has evolved and the world has become more digital, the discussion around cloud computing has changed, too. The conversation isn't just about where your data sits or how much you're paying for hardware—it's how you're using breakthroughs in technology to drive business value.

How AWS Drives Business Value

By using AWS, customers can harness IT in new ways—not just using smart IT to save costs, but to offer new services, better understand their customers, enhance productivity, and go to market faster. In other words, AWS helps businesses create solutions that have a direct impact on the bottom line. Using AWS empowers customers to access data, unleash mobility, and keep their data secure and accessible around the world. By using AWS, customers can free valuable resources used to manage complex and costly datacenters and repurpose them to focus on other highly strategic areas of the business.

In the 2014 Cloud Infrastructure as a Service Critical Capabilities report, Gartner evaluated cloud providers across four use cases: Application Development, Batch Computing, Cloud-Native Applications, and General Business Applications. AWS met more of the criteria than all other cloud providers assessed in the study.

Since 2006, AWS has been a leader in cloud services. We believe that cloud computing is transformational—helping customers achieve business results by providing innovative services, a vibrant ecosystem, and competitive prices. AWS continues to grow and scale, allowing us to provide new services that help more than 1 million customers around the world. As of 2014, AWS has 5 times more capacity than the other 12 leading cloud providers combined.

Clear Obstacles to Innovation

AWS is designed to help customers address a variety of challenging business problems through reliable and innovative services. Whether you need to launch an e-commerce website, run supply chain software, or model complex biotechnology products, AWS can help you gain new business insights, deliver

services rapidly, and create new offerings based on demands customers didn't know they had.

You don't need Fortune-100-level funding to drive insights from your CRM data, or a team of developers working around the clock on a new service—with cloud computing, innovation is fast and cheap. By using AWS, customers can leverage high-performance compute solutions and store, access, and analyze petabytes of data. AWS has over a million active users ranging from a vibrant developer community to global giants in the Fortune 500. The AWS customer base includes internationally recognizable names such as Unilever, Dow Jones and Siemens in addition to dynamic startups like Pinterest, Spotify, and Yelp. We'll explore some of these customer stories in the section below.

Increase Flexibility

With more than 50 unique services spanning multiple technology categories, a broad partner ecosystem, and continued innovation, AWS can help you drive business solutions to help your business grow. The AWS platform complies with most global industry standards. Using AWS gives customers the reliability and user experience necessary to drive new business.

Using AWS helps customers develop high performing and reliable solutions to address most business needs. Whether you are offering media services to customers around the world or managing medical devices for a highly decentralized workforce, AWS gives customers the tools to implement solutions quickly and with limited friction. For example, AWS [backup and recovery solutions](#) provide securable, scalable, and durable storage for data you want to access instantly with Amazon Simple Storage Service (Amazon S3) or data you want to keep in “cold storage” with Amazon Glacier. AWS networking solutions give you options that include private networking with AWS Direct Connect and isolating your own network with Amazon Virtual Private Cloud (Amazon VPC).

By using AWS, organizations can achieve greater flexibility and capacity, reducing the uncertainty of forecasting hardware needs. Additionally, the scale of AWS gives customers capacity and reliability that is difficult to match by on-premises solutions. For example, online content provider [Netflix](#) uses AWS to support [seamless global service](#) for services and delivery of content. AWS enables Netflix to quickly deploy thousands of servers and terabytes of storage within

minutes. Users can stream Netflix shows and movies from anywhere in the world, including on the web, on tablets, or on mobile devices such as iPhones.

Enable the Enterprise

AWS also delivers enterprise-quality services for businesses that want to leverage state-of-the-art infrastructure, giving customers the ability to better manage applications, quickly access data, and deploy quickly and cost effectively.

Global Solutions

AWS provides customers with the ability to collect and analyze data from hundreds of thousands of devices around the world in real time. AWS has a highly scalable, flexible, and global collection of services to work with connected device applications for the [Internet of Things \(IoT\)](#). This has implications for both industrial and consumer audiences. For example, [Siemens](#) Healthcare Diagnostics helps advance human health through innovation. Siemens has built a secure, HIPAA-compliant, and scalable platform on AWS by using services such as Amazon Simple Queue Service (Amazon SQS), Amazon Elastic Compute Cloud (Amazon EC2), Amazon Relational Database Service (Amazon RDS), Amazon ElastiCache, and AWS CloudTrail.

Big Data

AWS makes it easy to manage and master big data, turning it from a mountain of information you have to store and secure into a manageable flow that you can mine for trends and insights. Using AWS gives you the tools to provision the storage, computation, and database services you need to turn that data into information for your business. Take [Yelp](#), the company that collects in-depth reviews online and shares them in more than 120 markets over 29 countries. Yelp runs big data analytics using Amazon Elastic MapReduce (Amazon EMR) to process around 30 terabytes of data a day. Most important to Yelp is the opportunity cost. “With AWS, our developers can now do things they couldn’t before,” says Yelp search and data-mining engineer Dave Marin. “Our systems team can focus their energies on other challenges.”

High-Performance Computing

High Performance Computing (HPC) allows scientists and engineers to solve complex science, engineering, and business problems using applications that require high bandwidth, enhanced networking, and very high compute

capabilities. AWS allows you to increase the speed of research by running [high performance computing](#) (HPC) in the cloud; this also reduces costs. For instance, [Pfizer](#) turned to AWS for its HPC software and systems for worldwide research and development, which support large-scale data analysis, research projects, clinical analytics, and modeling.

Enterprise Applications

AWS offers a number of enterprise applications that users can adopt to improve messaging and collaboration and increase end-user productivity. With AWS, organizations can give their employees access to files, applications and experiences through the cloud. Users can also collaborate more effectively using AWS document management and enterprise email solutions, including [Amazon WorkSpaces](#) (a fully managed desktop computing service in the cloud that allows end users to access documents, applications, and resources) and [Amazon WorkDocs](#) (a fully managed, secure enterprise storage and sharing service with strong administrative controls and feedback capabilities that improve productivity).

Using AWS as a Business Enablement Engine

The AWS Cloud enables technology solutions, offering building blocks to stitch together a high-performing, low-cost infrastructure. In addition, customers are using the capabilities of AWS to create business solutions and move the dial on key performance indicators (KPIs).

Create Value

Organizations can use AWS to plan for [solutions and services](#) that meet their needs for years to come. AWS offers a broad set of global compute, storage, database, analytics, application, and deployment services designed to help you move faster, lower IT costs, and scale applications—all in the service of creating greater value for your customer.

Flexibility is a core tenet of AWS, giving customers the ability to adopt cloud technology quickly and with limited upfront investment. This allows customers to leapfrog to modern technology solutions without incurring large capital

investments. In addition, AWS offers infrastructure using cutting-edge technology, giving customers relief from having to acquire technology every cycle.

AWS customers have access to the latest technology, such as the storage and compute power to handle steep, rapid traffic spikes and huge data sets. Thanks to the efficiencies of scale that AWS enjoys, customers can consistently use innovative services and cutting-edge technology without having to go through multiple procurement cycles and expensive evaluations. AWS provides capabilities to support virtually any workload. This level of innovation gives customers continued access to the latest technology.

Evolve Strategically

One of the key benefits of AWS is the ability to use services [at your own pace](#). By using AWS, customers can grow, shrink, and adapt their consumption of services to meet seasonal requirements, launch new services or products, or simply accommodate new strategic directions. Retail customers, for example, can leverage AWS year-round, increasing capacity during peak season and decreasing it when they no longer need so much capacity. Similarly, pharmaceutical companies can vary their use of AWS depending on the stage of development of a specific pharmaceutical product. This flexibility helps organizations to not only drive the right scale, but also experiment, test, and conduct trials with much lower risk and at a much lower cost. For example, a pharmaceutical company could launch new products and bring them to market faster.

In the music industry, AWS helps the [Spotify](#) streaming music service continuously evaluate its infrastructure in order to meet evolving business goals. Emil Fredriksson, operations director for Spotify, says, “By removing the restrictions incurred by in-house solutions, we enabled much faster development and deployment cycles.” As part of this evaluation, the company frequently examines the possibility of integrating new services into its existing AWS feature stack. Based on this practice, Fredriksson reminds other technical decision makers that resource utilization can be unpredictable. He explains, “Consequently it is very important to design your systems so that they can react to variations in performance and compensate with scaling.”

AWS provides the tools and solutions to integrate your existing on-premises resources with the AWS Cloud. The breadth of AWS services, along with the

strength of our partner ecosystem, provides a wide array of options for developing the architecture that best meets your organization's needs. By using AWS to enhance and extend your capabilities without giving up the investments you've already made, you can greatly accelerate your adoption of cloud computing.

Transform Business Operations

By using AWS, customers can redirect their attention to core applications and reduce the resources required to manage the infrastructure that runs them. The AWS [global footprint](#) enables customers to reach other customers, vendors and suppliers wherever they are and with consistently rich experiences. With AWS, organizations can deploy applications in [secure environments](#) that require rigorous regulatory compliance. Infrastructure becomes a continually evolving asset.

Business Applications

[Resource planning](#) is critical for all businesses. Many organizations have made important investments in solutions like SAP and Oracle PeopleSoft. By migrating these packages to AWS, you can decouple significant resources from managing the infrastructure that supports them, and more capacity can be placed on optimizing their use. AWS offers a reliable and flexible cloud infrastructure platform that enables customers to run any type of application for business, from small departmental solutions to mission-critical applications in a secure and robust environment

Customers can use AWS to leverage and maximize existing investments. With License portability customers can migrate existing licenses to the cloud for some software packages. Popular software such as Microsoft SQL Server, Microsoft SharePoint, Microsoft Exchange, SAP HANA, SAP HANA One, Oracle 11g, PeopleSoft, IBM DB2, the IBM WebSphere family of products, and many more are available on AWS with more options and business applications coming all the time.

For example, [Johnson & Johnson](#) sells consumer health, pharmaceutical and bioinformatics products in more than 175 countries. Over 270 companies operate under the Johnson & Johnson brand in 60 countries worldwide. The IT division of the global enterprise turned to AWS when it decided to move to the cloud and

redefine its global IT strategy. The company now uses the AWS Cloud to run 120 applications; its big data architecture allows it to complete highly intensive and complex data modeling. The company plans to triple the number of applications it hosts on AWS and launch 25,000 Amazon Workspaces cloud-based desktops for its consultants and employees to use around the globe.

Data, Reporting, and Analytics

With more and more sensors and devices generating data, the opportunities to use data to optimize your products and services has never been greater—and AWS offers a range of [database management services](#) for developers. AWS provides services to set up your cloud storage, compute, and database tools and process all the data you have. From real-time data processing with Amazon Kinesis to forensic data analysis with Amazon Elastic MapReduce, from data warehousing with Amazon Redshift, to data workflow with Amazon Data Pipeline AWS provides easy configuration, powerful computing, and pay-as-you-go pricing to help organizations get started fast, and keep costs low.

Mobility

AWS provides a range of services designed specifically to help [mobile app developers](#) quickly and easily build applications. AWS Mobile Services are delivered as a set of building blocks, so customers can pick and choose the services they need for their mobile applications.

AWS Mobile Services are platform agnostic and designed to help organizations build applications across iOS, Android, and Fire OS platforms.

Customers using AWS can spend time and money on differentiating mobile applications, not on backend infrastructure. When a mobile application goes viral, AWS scales to meet the demands of new users around the world. [NTT DOCOMO](#), Inc. is a leading mobile phone operator in Japan. When the popularity of its voice recognition service caused performance and capacity issues, the mobile operator turned to AWS. Working with AWS Support, Enterprise-level, DOCOMO created a voice recognition architecture on AWS that helps the company scale for better performance during traffic spikes and accommodate its large and growing customer base.

Collaboration, Information Exchange, and Social

AWS also helps the enterprise foster collaboration and communication among its employees with fully managed services that enable customers to easily provision cloud-based desktops, access documents, applications, and resources, and share them with their peers.

Amazon WorkSpaces is a fully managed desktop computing service in the cloud that allows end users to access documents, applications, and resources. It's used by companies like [Johnson & Johnson](#) and [Exeter Family Friendly Insurance](#). Amazon WorkDocs is a fully managed, secure enterprise storage and sharing service with strong administrative controls and feedback capabilities that improve productivity.

Maximize Your Investment

AWS gives customers a [commercial-ready platform](#) to start developing applications from day one. Use AWS to build reliable, affordable, fault-tolerant systems that operate with a minimal amount of human interaction. AWS gives you access to the necessary tools, features, and geographic regions to support your efforts.

AWS also offers industry-leading capabilities across facilities, networks, software, and business processes to meet the [strictest security requirements](#). AWS's world-class, highly secure data centers use state-of-the-art electronic surveillance and multi-factor access control systems. Data centers are staffed 24x7 by trained security guards, and access is authorized strictly on a least privileged basis. Environmental systems are designed to minimize the impact of disruptions to operations. Multiple geographic regions and Availability Zones allow you to remain resilient in the face of most failure modes, including natural disasters or system failure.

[AWS Support](#) is a one-on-one, fast-response support channel that is staffed around the clock with technical support engineers and experienced customer service professionals who help customers get the most from the products and features provided by AWS. All AWS Support tiers offer an unlimited number of support cases with pay-by-the-month pricing and no long-term contracts. The four tiers provide developers and businesses the flexibility to choose the support tiers that meet their specific needs.

Conclusion

Moving to the cloud is not just about saving costs on IT anymore—it's about creating the environment that lets your business thrive. The digital revolution has made it easier than ever to connect with customers, develop ground-breaking new insights and scientific breakthroughs, and deliver innovative new products and services.

When you use the AWS Cloud, you clear away obstacles to innovation like high costs and long-term contracts—and you can take advantage of more than 50 unique services, a broad partner ecosystem, and continued innovation to drive business solutions and grow your business. With our global footprint and our expertise in creating technology that enables business innovation, you can trust AWS to deliver a solution that will help your business succeed.

For more information about how AWS can enable your business to move faster , see our website at <http://aws.amazon.com>, [create an account](#), and [contact our Sales department](#).