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Unlock the power and potential of data

How to scale, innovate, and make more informed business decisions with your data

Data is the differentiator

Businesses differentiate themselves from the competition by offering lower costs, creating better products, and providing great customer experiences.

Data can help you accomplish this—and more.

Data is increasingly at the center of every application, process, and business decision. It is the cornerstone of almost every organization's digital transformation.

But it's not just about how much data you have—it's about understanding how to use it to your advantage. Unlocking insights from data can help you anticipate and react to change.

Secure, affordable tools allow you to access and analyze data to its full potential. Making your data usable and insightful with data analytics and business intelligence helps you make better business decisions, drive innovation, reduce costs, and be more agile. Improve your ability to meet core security and compliance requirements with the comprehensive services and features that cloud can offer.

What's keeping businesses from effectively using data?

Driving value from data is more difficult for growing businesses, which are often dealing with:

- Lack of in-house tech skills and bandwidth
- Data silos between systems, departments, and people
- Teams working with different tools and languages
- Increased need for data governance

The benefits of a data strategy

A cloud-based data strategy can help your business:

- Uncover new business opportunities
- Free up teams and resources for innovation
- Unlock insights with Artificial Intelligence (AI)I and Machine Learning (ML)
- Make smarter decisions in real time
- Increase operational efficiency and optimize costs

The cloud also offers scalability for growing businesses. As companies grow and data compliance regulations tighten, the cloud allows you to scale quickly and continue to protect customer and business data—without having to stretch your resources further.

Uncover new business opportunities

Customer needs will continue to evolve. Better, faster insights can help businesses uncover new opportunities and innovate accordingly to identify new revenue streams. Data-driven decision making can help plan improvements to existing products or services, highlight customer service successes and opportunities for engagement, and be more responsive to customers and their needs—quickly and profitably.

With data from existing and new products and services, businesses get a 360-degree view of their customers and their services and products. Using this data, organizations can enhance customer experience and engagement on an ongoing basis. They can also deliver better customer service, making it more intelligent and efficient. Businesses can develop new products and services by merging customer usage data with sales numbers to monetize new opportunities, or adapt existing products and services.

When new opportunities in the market arise, a cloud-based data strategy allows you to capitalize on them quickly by accessing the data, confirming your hypothesis, and building a business case for it.

Customer-centric industries such as software as a service (SaaS) companies, hospitality, and healthcare providers can also package, anonymize, and productize their data, creating additional revenue streams.

Free up teams and resources for innovation

Manual processes take up valuable time and budgets, making it difficult for teams to focus on innovation and product development. By improving access to data and automating repetitive processes, a cloud-based data strategy helps businesses save time and invest more resources in innovation.

For example, Mikatasa, a family-run supplier of adhesives and paints, created opportunities for innovation by boosting productivity with improved data mobility and accessibility.

Before moving and managing data in the cloud, Mikatasa relied on numerous manual pen-and-paper processes, making it difficult for them to make decisions and respond to market changes. They turned to AWS to make their data more accessible via a tablet, helping salespeople improve the accuracy of order taking and delight customers. The tablets also allow Mikatasa to gather data about customers' purchasing patterns and the company's physical stores, supported with pictures and videos. As a result, visibility is better and the company can leverage data for future analytics activities.[1]

By moving data to the cloud, Mikatasa also reduced the number of people needed to maintain backend tasks. Their 30-person IT team can now work on developing frontend solutions, such as Mikatasa's new ecommerce ordering site. Their team can focus time on creating new features rather than fixing existing ones.

How Mikatasa realized value with a comprehensive, cloud-based data strategy

- Reduced total cost of ownership by 30%
- Focused time on new features rather than fixing existing ones
- Improved visibility into sales and customer data
- Lowered the number of IT tickets from 30 to zero
- Minimized data security risks
- Laid the foundation for data collection and analytics[1]

[1] https://aws.amazon.com/solutions/case-studies/mikatasa/

Unlock insights with analytics and business intelligence

AI is no longer a technology reserved for large enterprises with unlimited resources and talent. AI and ML are now within reach for organizations of all sizes, helping them improve customer experience, optimize business processes, maximize productivity, accelerate innovation, and resolve many common business problems.

With AI and ML, businesses get the speed, scale, and granularity they need at a level that on-premises data architecture cannot deliver.

"Analytics tools powered by artificial intelligence are a 'must have' when it comes to digital transformation."[2]

Forbes

[1] https://www.forbes.com/sites/forbestechcouncil/2021/12/27/why-ai-driven-analytics-is-essential-for-data-driven-decision-making/

AI and ML defined

AI

Artificial intelligence is the field of computer science dedicated to solving cognitive problems commonly associated with human intelligence, such as learning, problem solving, and pattern recognition.[3]

ML

Machine learning is a collection of algorithms that can learn from and make predictions based on recorded data, optimize a given utility function under uncertainty, extract hidden structures from data, and classify data into concise descriptions.[3]

Here are some tangible ways AI can drive value for your business:

- Enhance customer service experience by integrating intelligent chat and voice bots into your contact center
- Analyze interactions and transactions, making improvements that benefit your customers and your business
- Instantly extract text and data from virtually any document without manual effort
- Process millions of pages of documents in hours, uncover valuable insights, and implement human reviews
- Improve customer engagement and conversion by creating personalized web experiences—tailored to individual customer preferences and behaviors across channels
- Streamline and automate workflows with AI to create safe online environments and minimize moderation costs
- Accurately forecast sales, financial, and demand data to streamline decision making
- Locate Personally Identifiable Information (PII) from virtually any document and anonymize or secure the content
- Control costs by using AI and ML to identify anomalies, such as areas where you are overpaying and where you should invest your resources, in your operations
- Automate real-time decision making and turn opportunities into value faster, helping you increase revenue
- Track the performance of your products and see which factors impact trends

ML helps organizations identify patterns and automate decision making on large and complex datasets at an affordable cost compared to traditional analysis. For example, businesses can use ML to predict future outcomes based on historical data, predict how many products will be sold in future fiscal quarters based on a particular demographic, or estimate which customer profile has the highest probability of becoming dissatisfied or more loyal to the brand.

Predictions such as these allow for smarter business decisions, fuel more personalized user experiences, and have the potential to reduce customer retention costs—without adding more people to teams or spending time managing more data.[3]

Here's how to apply ML to your business:

01. Identify the right problem

02. Collect data based on business metrics, such as transactions, sales, attrition

03. Build an ML model based on your data

04. Run the ML model and apply prediction output

05. Make more informed decisions

BlueDot uses machine learning to detect and respond to risks

BlueDot processes a lot of data, collecting information on hundreds of diseases in dozens of languages every 15 minutes, 24 hours per day. With AWS, BlueDot can use natural language processing and machine learning to extract vital pieces of information, such as the name of the pathogen, the location and the time of the outbreak, and other contextual data. These insights help them detect and respond to risks in real time.[4]

[3] https://aws.amazon.com/machine-learning/what-is-ai/
[4] https://aws.amazon.com/solutions/case-studies/bluedot/

Make smarter decisions in real time

Speed matters. But when data is trapped in siloed, disparate systems, it can slow organizations down.

A business's data should be accessible, manageable, and unified in a secure and well-governed way to support better decision making. Moving from spreadsheets and separate platforms into a unified and easily accessible place, such as a data warehouse or data lake, can help you manage data more efficiently and make faster, better-informed business decisions.

Cloud-based data warehouses and data lakes are completely modular. Businesses can start with options that make sense for their specific business needs and their budget—and expand or adjust as the needs grow.

With an accessible, manageable, and unified data infrastructure in the cloud, businesses can make better decisions and respond to the unexpected faster. For example, when economic and supply chain issues arise, accessible data can help organizations move from a reactive, damage-control stance to more proactive decision making. Additionally, when opportunities arise, access to data helps organizations quickly confirm a hypothesis, build a business case, and act on it faster.

Data warehouses, data lakes, and lake houses

Data warehouse

A data warehouse is a central repository of information that can be analyzed to make more informed decisions. Data flows into a data warehouse from transactional systems, relational databases, and other sources, typically on a regular cadence. Business analysts, data engineers, data scientists, and decision makers access the data through business intelligence (BI) tools, structured query language (SQL) clients, and other analytics applications.[5]

Data lake

A data lake is a centralized repository that stores all your structured and unstructured data at any scale. You can store your data as is, without having to first structure the data, and run different types of analytics—from dashboards and visualizations to big data processing, real-time analytics, and machine learning—to guide better decisions.[6]

Lake house

A lake house architecture offers the best of both by connecting your data lake, your data warehouse, and other purpose-built services into a coherent whole. The lake house approach offers scalable data lakes, purpose-built data services, seamless data movement, unified governance, and performant and cost-effective management while providing a single place to run your analytics.[7]

[5] https://aws.amazon.com/data-warehouse/
[6] https://aws.amazon.com/big-data/datalakes-and-analytics/what-is-a-data-lake/
[7] https://aws.amazon.com/blogs/big-data/build-a-lake-house-architecture-on-aws/

Increase operational efficiency and optimize costs

With data siloed in multiple formats and locations, costs can add up quickly, expertise becomes a limiting factor, and businesses are unable to perform data analysis. As a result, organizations are forced to fall back on spreadsheets and disconnected databases, slowing down efficiencies and adding to operating costs.

A unified data infrastructure in the cloud can help overcome these inefficiencies. With data in one place, businesses can identify operational hotspots and automate repetitive or manual processes. With improved visibility into the company's processes, products, and services, SMBs can improve operations, increase efficiencies, and reduce costs. With the power of data insights, they can be proactive when supply chains arise.

The right tools and data strategy can automate processes such as:

- Order fulfillment
- Payment tracking
- User authentication
- Employee onboarding
- Inventory management

With time and cost savings on operations, resources can be reallocated to more high-value tasks that drive value and innovation for the business.

Shyam Steel modernizes while optimizing costs

For cross-division reports or reports spanning multiple years, managers at Shyam Steel had to start running reports in the evening before leaving the office. The data would only become available 12 hours later when they arrived to work the following day. Now, managers can run long and complex reports in under three hours. Plus, data from straightforward short reports is available instantaneously.[8]

[8] https://aws.amazon.com/solutions/case-studies/shyam-steel/

The path to a better data strategy

The cloud allows you to access data, gain insights, and create connections between multiple types of data. With the right cloud solutions in place, you can build your data strategy and begin gaining greater insights by following a few key steps:

01. Define your business goals and objectives

Before any data transformation can begin, you need to define what success looks like for your business. This will lay the groundwork for a clear, realistic path to building the data-driven company you want to see.

02. Collect your data and choose your tools

Moving to the cloud is the key to making your data more accessible, understandable, and useful for a wider variety of purposes. Rather than treating your database like a junk drawer where data just collects and sits, you can make it accessible, organized, and unified—which supports better decision making.

Analytics and business intelligence can help solve a range of business challenges, from immediate roadblocks such as cleaning up data or building a business intelligence visualization to uncovering opportunities for generating revenue from your data.

03. Analyze your data and put it to use in your business

Now that you've aligned on business objectives and migrated your data to the cloud, it's time to analyze and find the insights that can serve your organization. Data warehouses and data lakes provide the foundation to efficiently deliver reports and dashboards to monitor business performance and uncover insights that will drive smarter business decisions.

A cloud-based data architecture allows you to respond quickly to the unexpected. Automated data analytics sets the groundwork for AI and machine learning, and creates new ways to grow, increase efficiency, and serve customers better.

Why organizations are moving to the cloud

- Profit growth
- Cost-effectiveness
- Accessibility
- Scalability
- Security
- Simplicity

Why Amazon Web Services

Amazon Web Services (AWS) helps businesses build a better data strategy. It provides the tools and resources required to digitize data infrastructure, unify data, and ultimately innovate to create more products and experiences. Businesses that work with AWS benefit from:

The most comprehensive set of capabilities

AWS provides the most comprehensive set of data capabilities to support any data workload or use case. From databases for applications to storage for data lakes, to analytics, to ML and end-user tools and solutions, AWS provides the right capability in each area. That means you don't have to compromise on performance, cost, or results. AWS has been expanding its services to support virtually any cloud workload, and it now has more than 200 fully featured services.[9]

Easily connect all of your data

AWS is investing in a zero-ETL (extract, transform, and load) feature—one where you don't have to build and maintain complex data pipelines to perform ETL operations—so you can quickly and easily connect to and act on all your data, no matter where it lives.[10] With direct integrations between AWS services, we are eliminating ETL for common use cases so teams can move faster. To ensure you can act on all and not just some of your data, AWS services connect to an expanding list of hundreds of data sources, including third-party SaaS, on-premises, and other clouds, as well as seamless integration with third-party data.

End-to-end data governance

With end-to-end data governance on AWS, you have control over where your data sits, who has access to it, and what can be done with it at every step of the data workflow. AWS services give you the tools to help teams catalog, discover, share, and govern data across the organization.

[9] https://aws.amazon.com/what-is-aws/
[10] https://aws.amazon.com/about-aws/whats-new/2022/11/amazon-aurora-zero-etl-integration-redshift/

Why Amazon Web Services

Real savings you can see and measure

Moving to the cloud provides the ability to reduce costs while increasing efficiency. Migrating with AWS leads to an average cost savings of 31 percent.[11] AWS has reduced costs more than 100 times over the last decade, returning more than half a billion dollars to its customers.[12]

The highest level of cloud security

AWS security infrastructure is built to satisfy the highest requirements of the world's leading financial, educational, and governmental institutions that rely on it, ensuring small and medium-sized businesses have the same level of security as enterprises. AWS customers report on average 43.4 percent fewer monthly security incidents, and a 69 percent reduction in unplanned downtime.[13]

Built-in reliability and resiliency

Businesses cannot afford a breakdown in IT availability. That's why AWS has applied more effort than anyone else to ensure cloud resiliency. AWS's extensive investment in global availability zones and redundant networks, storage, and compute helps ensure that customers always have access to critical data and applications. In addition, AWS brings experience and frameworks to ensure business continuity, including dedicated teams and partners who can provide on-demand expertise and support.

Support through best-in-class partner programs and training

Growing businesses need to maximize IT performance with limited budgets and resources. AWS helps plan, scope, and size projects and offers a free, comprehensive library of digital, self-paced training courses and a range of skill certifications, workshops, and immersion days for customer teams. Additionally, thousands of AWS-certified partners and consultants are available to provide premier service—no matter the budget.

[11] https://aws.amazon.com/migration-acceleration-program/
[12] https://aws.amazon.com/blogs/aws-cost-management/amazon-ec2-15th-years-of-optimizing-and-saving-your-it-costs/
[13] https://aws.amazon.com/smart-business/faqs/

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Contact AWS

No matter the condition of the data, where it's stored, or how few people are administering it, AWS and its network of partners can help collect, consolidate, and organize data—quickly and affordably. Only AWS provides the capabilities businesses need for an end-to-end data strategy that will serve them now and in the future. AWS is making the complexities of data management easier, helping businesses to spend less time managing data, and more time getting value from it so that businesses like yours can start identifying patterns and predicting outcomes and get ahead of the competition.

Unlock the power and potential of your data today. Contact us to learn more about how the cloud can meet your specific needs.

To learn more and consider your buying options based on cost, time, and support, visit the AWS Smart Business Hub.

To get peer and expert insights on how to make the most of your data, join the AWS Connected Community for free.