THE POWER OF THE DATA-DRIVEN ENTERPRISE

Advanced innovation and business agility with cloud, AI and analytics

accenture

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In brief

The amount of data generated by people, organizations, and machines/devices grows by the day, but too few companies are making use of their own customer and operational data for competitive advantage.

Companies need to become “data-driven enterprises”—cloud-enabled organizations that can maximize the value of data, and treat it as an asset differentiated by its completeness, lineage, and quality. These businesses embed cloud-enabled data and predictive analytics at their core.

To become truly data-driven, companies should link a data-driven strategy to clear outcomes and also create a “data on cloud” strategy. They should identify high-ROI opportunities and enable data as a strategic asset. Finally, the business executives in an organization must be fully committed to developing and sustaining a strategic, data-driven culture.

As the world becomes increasingly digitized, staggering amounts of data are being generated by people, organizations, government agencies and, now, "things."

In fact, according to one report, 5 quintillion bytes of data are created every day around the world.[1]

But are companies making effective use of their own customer and operational data for competitive advantage? For the most part, the answer is, "No." Certainly organizations acknowledge the value of data, and are using more sophisticated technology to capture it. But, as Gartner® notes, nearly 97 percent of data sits unused by organizations.[2] Gartner also reports that more than 87 percent of organizations are classified as having low maturity levels in terms of business intelligence and analytics capabilities.[3]

This capability deficit comes at a time when it could severely restrict a company's growth or even weaken overall viability. That's because the demands for data are growing dramatically. In an Accenture study entitled, "From Bottom Line to Front Line," we found that high-performing organizations are seeing a significant increase in the demand for data and analytics, from sources well beyond just IT operations and finance. In fact, we are seeing an increased demand for data across entire lines of business.[4]

The goal: Operating an intelligent enterprise powered by cloud-enabled insights

An Accenture study[5] revealed a direct correlation between high performance and becoming what we call a "data-driven enterprise"—a company that can use the cloud as a catalyst for maximizing the value of data, and treating it as an asset differentiated by its completeness and quality.

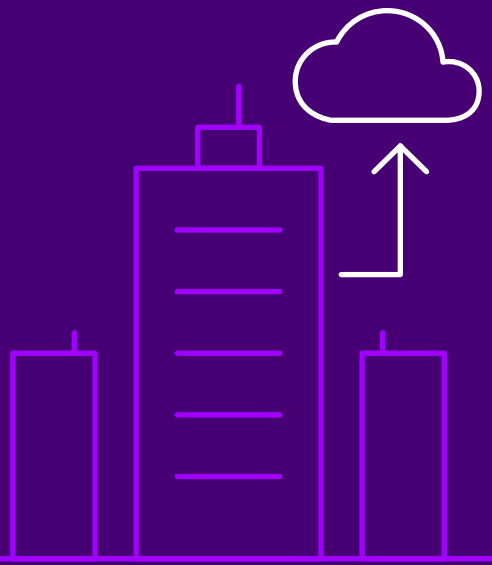
Such companies use data as the basis for innovation, business agility, and critical business decision-making through artificial intelligence and analytics to improve effectiveness, reduce risk and drive new sources of revenue. Data-driven businesses embed cloud-based data and predictive analytics at their core. They are characterized by optimization, prediction, continuous learning, and an insights-driven culture.

The benefits can be significant. In Accenture's experience, data-driven organizations are outperforming their competitors in terms of profitability as well as customer acquisition and retention.

One stumbling block: The ability to build the right cloud architecture to support data on cloud (see next section).

Where businesses are still relying on old, proprietary data sourcing systems, the documentation of business logic and rules are poor and data preparation from source to presentation is slow. As a result, the data transformation cycle for reporting can take days, resulting in reduced sales and poor business performance.

To overcome these limitations, companies need to transition from their legacy data sourcing and integration system to a more modernized, future-ready, flexible and scalable data architecture on the cloud. This can enable data capture in real time, reduce processing time (sometimes by more than 50 percent), and accelerate business outcomes.[6]



Creating a "data on cloud" strategy

Some data-driven companies embraced cloud computing from the very beginning. Most organizations, however, started their data transformation with on-premise computing, then gradually moved transactional data to the cloud only for specific requirements. This approach adequately served business needs until recently. In the digital economy, on-premise is showing its limitations.

Moving enterprise data to the cloud, if planned and implemented correctly, offers many advantages. A well-designed data fabric on the cloud can give businesses the much-needed scalability, enterprise flexibility and trustworthy, data-powered insights for smarter and faster outcomes.

Using the power of artificial intelligence, deep data science, and a host of agile and intelligent data services, businesses can discover dark data, identify data assets that can be monetized, and obtain intelligent and innovative business insights at speed.

What's hindering data-driven transformations?

What is preventing companies from becoming data-driven enterprises? One answer is that different kinds of companies are motivated by different things. Transformation for a technology company is often triggered by disruptive innovation or the inability to grow the business beyond the technical limitations and architecture patterns of the time. Such a threat can rally the business behind the transformation.

For other types of companies, their reason to transform may not be as dramatic. Often the reason has to do with a more general fear of losing competitive advantage. That's an important impetus for change but, without a dramatic threat to deal with, some parts of the business may not feel sufficient urgency. So, many non-tech companies are taking considerably longer to transform. Some are even stalling.

Discover Financial Services is successfully executing a data-on-cloud strategy. The bank leverages data from a variety of sources—structured and unstructured, streaming and batch—and rapidly analyzes the data for insights.

Getting to this point required a bold pivot from an on-premise, fragmented approach to a fully integrated cloud data platform on Amazon Web Services (AWS).

Innovation at speed and scale

Discover's cloud data platform makes enterprise data accessible to data scientists in real time. By leveraging the right combination of technology choices and automation techniques, the cloud data platform enables data scientists to spin up their exploration environment, source the needed data and explore advanced models. Instead of waiting weeks or months to start their data experiments, the data is prepped and made available on the cloud with a single click.

Flexible, future-ready design

The modular design of the platform on AWS means that components can be readily upgraded or swapped out so that the system can evolve. This gives data scientists continuous access to innovative, best-of-breed capabilities and future machine learning solutions.

Better risk mitigation

Analytics and machine learning increase the accuracy of lending decisions, mitigating risk.

As a data-driven bank, Discover Financial Services has successfully transformed how they store, access and analyze data. Their cloud-native strategy augments Discover's already-strong value proposition to customers and shareholders.

Organizations should use a "best fit" architecture approach for adopting data on cloud, based on their level of cloud maturity and their business demands, both present and future. Options include:

Extend the on-premise data supply chain

Offload the ingestion, processing or consumption of existing data to a cloud-based data service and build quick solutions to handle urgent business needs.

Modernize the data supply chain on the cloud

Build a parallel data lifecycle on the cloud by proactively aligning the data platform to the hybrid application ecosystem, thereby systematically shifting data's "center of gravity" to the cloud.

Create a new data ecosystem on the cloud

Redesign the data supply chain on the cloud—that is, build a cloud-native data solution. This approach is often needed when an organization's current data platform proves inadequate for analyzing data in real time and meeting compliance and customer service requirements.

Data-driven success stories

Highlighting success stories about data-driven transformations is one way to communicate a value proposition to the business and even help accelerate a new data mindset.

KDDI, Accenture and ARISE analytics

Consider KDDI, one of the largest mobile carriers in Japan, with more than 50 million subscribers. In the saturated Japanese mobile market, where the number of mobile phones exceeds the country's population,[7] competition among carriers is particularly stiff.

A communications company may have millions of customers, but there is only a small window of opportunity to engage those customers at various touchpoints. How does a company successfully deliver business campaigns during those small windows? The answer lies in the ability to formulate and deliver a unique, personalized customer experience. That, in turn, requires becoming a cloud-based, data-driven enterprise.

To deliver a better customer experience, which in turn can drive revenue growth, KDDI teamed with Accenture to form ARISE analytics,[8] which analyzes big data for meaningful customer activity information.

The companies built "Single Brain," an integrated customer care engine hosted on AWS.[9] Digging deep into the data and using artificial intelligence, ARISE unearths insights about customer preferences from petabytes of lifestyle data. With Single Brain, KDDI can optimize its customer channels, contact timing and content.

According to Takuya Kudo, KDDI's Chief Science Officer, "ARISE is transforming KDDI from a communications company to a broader touchpoint for customers' daily lives by using artificial intelligence to develop customer profiles that can help tailor a unique customer experience. In this way, we can continuously improve our competitiveness."

Results have been impressive. During the initial pilot, the company's conversion rate rose by 130 percent. Customer care improved, and the company also saw a substantial positive impact on churn rates. KDDI, Accenture and AWS have now extended the ARISE platform to other segments and sectors both within KDDI and externally.

Data-driven insights for West Midlands Police

Data-driven transformations are not only for large enterprises. In fact, smaller organizations and individual lines of business are frequently looking to generate value and serve customers and citizens more effectively. The cloud-based analytics program at the West Midlands Police in the UK is an example of improving a specific use case from data.

The West Midlands Police (WMP) serves the UK's second largest metropolitan area, which experiences a broad range of crimes ranging from terrorist threats to everyday petty incidents. With a need to improve performance using existing resources, and work within reduced budgets, WMP looked at how they could improve outcomes on crime, reduce harm, and identify vulnerabilities.

Working with Accenture and AWS, the organization created the Data-Driven Insight (DDI) program, which has put high-quality, actionable information into the hands of 6,000 police officers through enhanced search, reporting and analytics based on cloud technologies. These capabilities are built on a data set fed from multiple structured and unstructured sources of policing data. With a more complete data set, officers can build a more detailed and complete picture of individuals and patterns of crime. This is helping reduce the time and effort spent by police officials to find the information and actionable insights that they need to work effectively.

The program provides a highly sophisticated predictive analytics capability to support preventative interventions by better directing officers to individuals most at risk and assessing the impact of a range of interventions. This aspect of the platform is currently being extended with data from other large UK police forces to provide a national data analytics capability.

"We're able to be a much more agile organization, far more empowered with the information and tools to prevent crime, protect the public, and help those in need," according to Dave Thompson, Chief Constable, West Midlands Police.

AWS and the cloud-enabled, data-driven enterprise

According to an AWS white paper, "How to Overcome the Top Five Big Data Challenges,"[10] building and running big data applications in the cloud can provide the scale and performance to quickly discover business insights.

AWS offers a complete set of on-demand cloud services for big data, as well as managed services for big data analytics. AWS's comprehensive set of capabilities covers the entire range of approaches to big data analytics, including big data stores, data warehousing, distributed analytics and business intelligence. AWS provides a flexible, open and secure environment that gives organizations the ability to develop their own tools, install their own software, or use partner solutions.[11]

Big data will play an increasingly important role in enabling organizations to make smarter, faster and increasingly automated business decisions. Companies don't have to be held back by a skills shortage, high costs, the unpredictability of data, security issues, or the difficulty of creating a business case.

Advancing your data-driven transformation

Across industries, executives are charged with creating business-relevant insights from ever-expanding volumes of data. To thrive in such a challenging era, here are some actions to bear in mind:

1 Link a cloud-based, data-driven strategy to clear outcomes

What are you looking for? To improve customer acquisition and retention? Increase sales and profitability? Improve the performance of the supply chain? There are many worthy goals, but focus on what's right for you.

2 Start with high-ROI opportunities

Companies can be overwhelmed by the sheer amount of data they have, whether it is created, streamed or legacy. How to capture all of this data effectively is one challenge, but contemplating how best to drive insights from all the data can be even more overwhelming. Companies should start small with a high-value business opportunity to demonstrate the fast, positive impact of applying artificial intelligence and predictive analytics to corporate data.

3 Enable data as a strategic asset

Once the foundational cloud architecture has been established, an important step in becoming a data-driven enterprise is modeling the true value of data to the enterprise so that data can be treated appropriately as a strategic asset. Companies can then prioritize the backlog of data opportunities in their business. Predictive analytics can uncover untapped revenue and new business opportunities, but only if the data is easily accessible and available.

4 Empower the lines of business with insights

Empowering the lines of business in an organization to have insight into business and/or customer issues in real time is powerful. Empowering the business further to take action to address those issues is key to pivoting an organization towards becoming a data-driven enterprise.

5 Create a “data on cloud” strategy

Determine the best-fit architecture—from augmenting an on-premise data supply chain, to building a new, cloud-based data architecture.

6 Gain buy-in from the business

The business executives in an organization must be fully committed to developing and sustaining a strategic, data-driven culture. Only when business leaders align company goals, priorities and expectations with insights from data can organizations serve their customers faster and more effectively. Enterprises need to assess and address the level of business change required for their organization to truly understand the value of data to their business.

7 Manage organization and culture change effectively

Becoming data-driven requires a significant culture change, and there could be resistance from those entrenched in old processes. Manage change systematically and sensitively.

Conclusion: Cloud platforms for data-driven transformations

Increasingly, organizations will rely on cloud platforms to accelerate their transformation to a data-driven enterprise. Platforms such as AWS provide companies with a wide range of data analytics tools with the power to analyze vast volumes of customer, business and transactional data quickly, securely and at low cost.

Every company must move quickly to assess its data analytics capabilities and chart a course for transformation to a data-driven enterprise. It is a crucial part of becoming more responsive to customers and to market opportunities, and more agile given the rapidly changing nature of technology and the marketplace.

Key contacts

Accenture AWS Business Group (AABG)

Campbell Abbey

Campbell Abbey is the AABG Global lead for Artificial Intelligence and Machine Learning Solutions on AWS. He is an accomplished, data-driven cloud visionary who is highly regarded for his ability to influence change and communicate the benefits of adopting cloud data-driven strategies. Campbell has extensive experience in working with clients to develop cloud data and AI strategies that are focused on transformation and return on investment programs. He has a deep understanding of the cloud technology trends disrupting the industry and the business acumen required to communicate to executives about the ability for AI and ML cloud services to drive agility, productivity, and new sources of revenue.

https://www.linkedin.com/in/campbellabbey

Amazon Web Services

Nick Richmond

Nick Richmond is the Global Innovation Lead for Accenture AWS Business Group (AABG) at Amazon Web Services (AWS). In this role, Nick is responsible for leading global innovation strategies and solutions for customers, and aligning go-to-market messaging and activities around CMT. He helps enterprise customers to efficiently adopt and scale technologies that deliver meaningful business value.

Nick has over twenty years of experience across Europe and Asia-Pacific and in various technology leadership roles at global consulting firms such as KPMG and Accenture, and start-ups including Fonix Mobile. Nick graduated from Imperial college of London and now resides in Singapore with his wife and children.

https://www.linkedin.com/in/nickrichmond

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