

DataStax for Enterprises

Why Enterprises Need
an Operational Data Layer for
the Right-Now Economy

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Introduction Business at the Speed of Now

We live in the “right-now” economy.

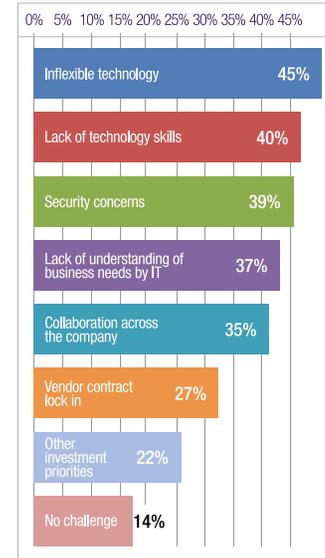
Business moves at ever increasing speeds, demanding real-time data to power actions. If you’re not using your data for in-the-moment insights and immediate responsiveness, and if you don’t know your customers with 360-degree precision, you risk losing market share and being outmanoeuvred by your competitors.

Choosing the right data platform has become fundamental to business success. According to a recent industry survey, 86% of CEOs encounter challenges in delivering the ideal infrastructure for their digital transformation programs, with inflexible technology being the main impediment.

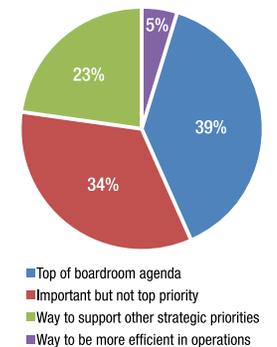
Here at DataStax we are committed to enabling enterprises to compete at the speed of now by providing the most solid foundation possible with our always-on data platform, built on the best distribution of Apache Cassandra.

Whatever your vertical, you need a contextual, always-on, responsive data platform that can empower your teams to innovate and bring game-changing applications to market faster than ever before. In this eBook, read how some of the world’s most iconic companies are staying ahead in their markets through the power of DataStax Enterprise.

BIGGEST BARRIERS TO PROVIDING THE IDEAL INFRASTRUCTURE FOR DIGITAL TRANSFORMATION



IMPORTANCE OF DIGITAL TRANSFORMATION



Source: BT-EIU Survey

Reinventing Itself for the Modern Era of Innovation Macy's

It's no secret that in recent years, Macy's, one of the world's most iconic brands, has faced fierce competition.

Understanding that the key to a healthy future was to leverage its in-store experience and technology, the retailer sought to revamp its catalog experience by integrating website, mobile, store, and partner application data for an omni-channel approach. However, Macy's soon realized that its legacy relational databases could not handle the growth in data and real-time demands of this new era of omni-channel shopping.

Macy's turned to DataStax Enterprise to power its omni-channel catalog, which allows the company to sell any product, online or in-store. With 20% of annual sales taking place on just two days, Black Friday and Cyber Monday DataStax Enterprise was able to scale to millions of requests per second with 100% uptime.

THE AWESOME ONLINE CATALOG EXPERIENCE



“At Macy's, our entire team and core value takes shape around customer-centricity. We are invested in providing a positive and engaging customer experience across all channels in an effort to attract and retain customers online and in-store. DataStax powers our omnichannel catalog service. Our catalog API's have to scale to millions of UPCs, million requests/sec with sub 100 milliseconds response times. The partnership and initiative helps us scale our technology to meet our growing business needs and ultimately digitize and personalize the customer journey across the omnichannel.”

ANAND RAJAGOPALAN, VICE PRESIDENT FOR E-COMMERCE ENGINEERING, MACY'S

Leveraging Data at Massive Scale for Tech Innovation

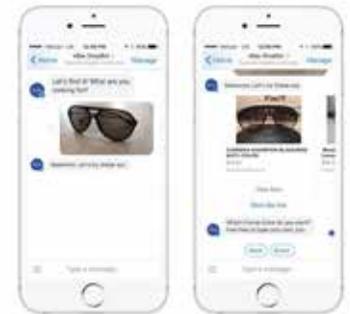
eBay

The world's largest online marketplace with over 112 million active users, eBay's unheralded success has been made possible in large part by its ability to transform enormous volumes of data into useful, real-time insights for customers.

eBay's exploding data volume and complexity, combined with demands for faster data processing, required the e-commerce pioneer to search for a data platform that didn't have the typical bottlenecks, scalability issues, and transactional constraints associated with most relational databases.

With integrated search and real-time analytics deployed across multiple data centers, DataStax Enterprise has allowed eBay to store 250+ terabytes of data, handle extreme data velocity with 6 billion writes and 5 billion reads a day, deliver highly accurate and personalized search results with low latency, and ensure 100% uptime, even during peak data loads.

NOW ACTIVATING AI AT SCALE



“Artificial Intelligence is powering the future of commerce and we’ve made significant progress over the past several years to position eBay as an AI-driven commerce platform. We’re now activating AI at scale through our personalization efforts, our image search technology, our customer support effort and, of course, through structured data among numerous other areas.”

DEVIN WENIG, CEO, EBAY

Seamless E-Commerce on a Global Scale Walmart

As the world's largest retailer, Walmart serves 260 million shoppers weekly via its eCommerce websites and apps and 11,000-plus stores in 28 countries.

Facing competition from all sides, Walmart knew that making its customer experience even better by seamlessly integrating its web, mobile, and in-store shopping platforms would pay off in enhanced loyalty and lead to higher revenue. However, its legacy systems could not provide the personalization, performance, or 100% availability needed to pull this off.

Walmart chose DataStax Enterprise for its search and streaming analytics capabilities, and also for its high fault tolerance and linear scalability.

The result?

A 30 to 40% year-over-year increase in mobile, web, and in-store traffic.

WALMART TOPS IN CUSTOMER EXPERIENCE PERSONALIZATION

The index awards scores on a scale of zero to 100. Here is how the top five scored:

1. Sephora, 79
2. JustFab, 72
- 3. Walmart, 69**
4. Net-a-Porter, 64
5. Ebay, 62; Nordstrom, 62 ; REI, 62



Source: <https://www.retailcustomerexperience.com/news/justfab-sephora-walmart-tops-incustomer-experience-personalization>



“For a brand to achieve the highest possible score, a customer would have to find its omnichannel experience seamless—meaning no matter how they interacted with a brand, be it on mobile, desktop, email, in store, the experience would need to be fluid and comprehensive.”

JASON GRUNBERG, VICE PRESIDENT OF MARKETING, SAILTHRU

Going All-In on Customer Experience

Comcast

The largest broadcasting and cable television company in the world by revenue, Comcast has received its fair share of criticism—some constructive, some not so constructive—regarding customer service and relations.

Seeking to change this and completely revamp its customers' experiences, Comcast, in late 2015, devised a five-year-plan to quantifiably improve its customer experience via a proprietary customer-360 platform called xNet.

To power xNet, Comcast chose the only platform capable of capturing and analyzing the millions of real-time customer-Comcast interactive moments that occur daily across the company's 25 systems and applications: DataStax Enterprise Graph.

Now, just two years into its customer experience initiative, Comcast's subscriber satisfaction numbers are at their highest level in 15 years.

CREATING A SMARTER NETWORK FOR THE SMART HOME



NETWORK RELIABILITY

Network-monitoring tools that can detect issues long before customers experience interruptions.



SMARTER RELIABILITY

Powerful enough to meet growing demand, but flexible enough to anticipate new trends.



INTERNET OF THINGS

A single home automation platform that helps consumers control Internet of Things (IoT) devices and home security.



Source: <https://17240-presscdn-0-36-pagely.netdna-ssl.com/wp-content/uploads/2016/06/cx-innovation-fact-sheet.pdf>

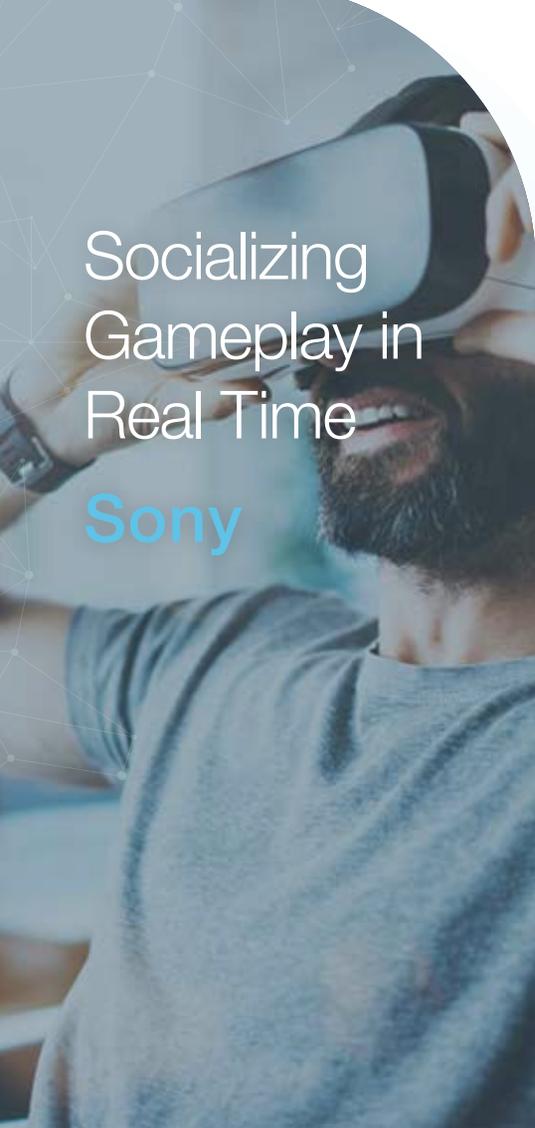


“We are committed to transforming Comcast into a customer experience company. Our technology choices are key to this journey, and we are excited to be partnering with DataStax.”

SREEJITH NAIR, DIRECTOR, PROJECT SPONSOR, COMCAST

Socializing Gameplay in Real Time

Sony



Sony is one of the leading manufacturers of electronic products for the consumer and professional markets, as well as one of the most comprehensive entertainment companies in the world.

Sony was looking to revolutionize the social gameplay experience by adding features like realtime gameplay streaming and personalized game libraries to the upcoming PS4, but its legacy infrastructure was neither scalable nor flexible enough to support this endeavor.

With the PS4 launch looming, the most important in the company's history, Sony decided to adopt the only data platform capable of scaling quickly in a short amount of time and of handling the realtime social gameplay demands of the new console: DataStax Enterprise.

PS4 became the fastest selling console of all time and has more than 60 million monthly active users.

IHS MARKIT SURVEY



Source: IHS Markit

SONY

“With DataStax Enterprise we’ve been able to implement a multi-cloud strategy with AWS and Google to avoid a single vendor lock-in. For customers we’ve been able to deliver new features very fast in PS4 to create revolutionary social gameplay experiences. Players are always connected through a common social experience, where they can chat, play, and share with one another. Behind the scenes DataStax Enterprise is the backbone of the entire experience.”

JEFF LUDWIG, VP, NETWORK PLATFORM DATA AND ENGINEERING, SONY INTERACTIVE ENTERTAINMENT

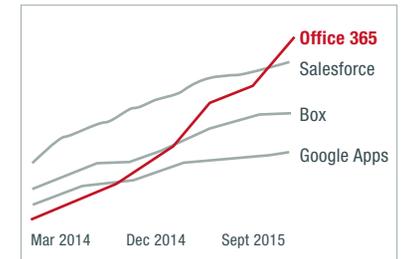
An Even Better Office 365 Experience Microsoft

A company that needs no introduction, Microsoft is always looking to improve on its technology leading products and services, with an eye on staying one step, if not three, ahead of its fierce competitors.

Seeking to optimize the Office 365 experience for its 85 million active users, Microsoft wanted to detect user problems proactively and also tap into the more than 300 terabytes of anonymized data from client and server logs to gain invaluable user behavior insights. To do this, it needed an always-on data platform that could scale quickly.

With DataStax Enterprise, Microsoft has been able to significantly reduce Office 365 support tickets, provide faster fixes, and proactively address problems before users become aware of them.

MICROSOFT'S OFFICE 365 IS THE NEW WINDOWS



Source: <https://seekingalpha.com/article/4089901-microsofts-office-365-new-windows>



“We introduced Microsoft 365, which brings together Office 365, Windows 10, and Enterprise Mobility & Security in a complete, secure solution to empower employees, safeguard businesses, and simplify IT management. Microsoft 365 is a fundamental shift in how we design, build, and go-to-market to address customer needs.”

SATYA NADELLA, CEO, MICROSOFT

Interconnecting the World's Data

Equinix



The world's leading colocation data center provider, Equinix specializes in providing interconnection between organizations, employees, customers, partners, data, and clouds on a global scale, controlling approximately 90% of U.S. internet traffic.

With more than 100 data centers around the world, it probably goes without saying that Equinix has a lot of data to deal with. The company eventually found its relational databases were incapable of accommodating the varying and growing data sets, or efficiently processing real-time streaming data without constraining storage or creating latency issues.

With DataStax Enterprise, Equinix has been able to unlock the value of its streaming data and do things it couldn't even dream of doing before, such as proactively monitoring and improving operational efficiency during peak hours by ingesting real-time data to a DataStax Enterprise cluster.

STRENGTHENING THE GLOBAL FOOTPRINT OF PLATFORM EQUINIX™



“Our game is to continue to build more scale and reach to enable the cloud providers, the networks and any enterprise that doesn't want to be in the data center business to move certain workloads, application workloads, to these co-location centers and run their business as cost-effectively and efficiently as they possibly can.”

STEVE SMITH, CEO, EQUINIX

The Need for Speed

Capital One

Everyone knows Capital One and their Samuel L. Jackson-hosted “What’s in your wallet?” commercials. But not everyone knows just how Capital One became a leading digital bank through DataStax.

Capital One needed a solid but extremely nimble data management platform to handle data from its wide array of financial products and services. Namely—it needed speed and scalability for advanced financial modeling in real time.

Via DataStax Enterprise, Capital One consolidated 450 million rows of data from its legacy database to a much faster and more efficient 11.8 million rows in DSE. Its new platform can do 21,000 transactions per second and has helped Capital One become globally recognized for its digital agility and transformation.

**THIS IS AUTO NAVIGATOR,
A TOOL BUILT USING
INSIGHTS FROM
DATASTAX ENTERPRISE:**



“It’s a direct-to-consumer experience that we have built. The product is called Auto Navigator. If you look at the current car buying process, the process is very complex, it’s confusing and it is opaque. We are re-imagining the car buying process with auto navigator. We are providing the best of resource capabilities to our customers.”

RAY BAJAJ, VICE PRESIDENT, HEAD OF ARCHITECTURE, SHARED SERVICES & GARAGE ENGINEERING,
CAPITAL ONE

Wrangling Big Data for a Single View Penn Mutual

A nearly 170-year-old life insurance and annuities company, Penn Mutual has been on a wild ride of technological innovation to break itself away from the brick and mortar pack.

In 2010, Penn Mutual's IT department embarked on a mission to consolidate its companywide data into a single system by merging the service-oriented architecture with master data management capabilities.

After trying a traditional RDBMS approach for the persistence layer, the company realized it needed something far more powerful to meet the performance and scalability demands of the new system.

With DataStax Enterprise, Penn Mutual has been able to attain a single source of information with authoritative access, enable sales with a holistic view of policy data and ad-hoc searches, and create additional applications and services for both internal and external use.

ATTAINING A SINGLE SOURCE OF TRUTH



“DataStax Enterprise also provides an intuitive management console called OpsCenter which made it easy to manage and scale our database environment to meet demands.”

MARK DASH, AVP INFORMATION TECHNOLOGY, PENN MUTUAL

In Search of 100% Uptime ING Group

A Leader in Digital Distribution

A full-service Dutch multinational bank that decided to put IT at its core a few years ago, ING Group deals with mountains of sensitive financial data on a 24-7-365 basis.

ING was having problems with the availability of its online mobile payment systems and other online features that needed more availability than its relational database could provide. But with DataStax Enterprise's multi-data center, advanced replication capabilities, ING found it could always deliver the right data in the right place at the right time.

ING now uses DSE for various uses, including online and real-time payment systems and "ING 360", a platform that provides a holistic, 360-degree view of the customers.

REAL-TIME MOBILE PAYMENT SYSTEM EXCELLENCE



ING UK CEO Gerald Walker (left) receives ING's award from Euromoney Western Europe regional editor Dominic O'Neill (right)



"You can actually now develop a relationship with a customer which is as broad as with any normal branch bank, but digitally only, he said. Because everything is digital, the data analysis enables you to understand the customer that much better."

RALPH HAMERS, CEO, ING GROUP

Building a Consolidated Finance Platform UBS Bank

UBS, a global financial services company with origins dating back to the mid-19th Century, is the biggest bank in Switzerland and has more than 59,000 employees worldwide.

In 2009, UBS began building a platform called Neo that consolidated all of its client-facing investment banking applications into a single user interface, but its departmental systems couldn't handle the storing and scaling of time-series data.

UBS chose to build Neo on DSE for its capability to offer global replication, its fast write speeds, and its time-speed-optimized query patterns. The finance magazine Profit & Loss named Neo "Best Platform" three years in a row.

**TUBS NEO PLATFORM
TRADING PLATFORM OF
THE YEAR AWARD.**



Source: <http://about-neo.ubs.com/download/risk-awards-2015-OTC-trading-platform.pdf>



“At UBS we believe in embracing change, rather than fighting it. Our technology lab in London, established in early 2015, is already exploring a range of innovations. These include blockchain, the shared ledger system that underpins Bitcoin and offers the potential to enhance transparency and trust, while reducing transaction costs.”

SERGIO ERMOTTI, CEO, UBS

Needing to Power the World's Traders

ICE

The Atlanta, Georgia-based Intercontinental Exchange Inc. (ICE), operates 23 regulated exchanges and marketplaces worldwide, including the New York Stock Exchange, which it bought in 2012.

ICE's main goal is to provide trusted and reliable up-to-the-second financial data to traders, investors, and academics. It deals with massive amounts of extremely volatile financial data, and it needs to keep this data safe, accurate, and usable.

ICE uses DataStax to scale its complex data environments and to gain real-time visibility into all of its "ticks", or stock price changes, allowing customers to query and search for those changes in real time.

**ICE DIGITAL PROVIDES
TRUSTED AND RELIABLE
UP-TO-THE-SECOND
FINANCIAL DATA**



Source: <https://www.tcfbank.com/personal/digital-banking>, <https://www.tcfbank.com/personal/debit-card/mobile-payments>



“DataStax—for us it really helps us scale our environments as we grow beyond the capabilities of single, or even a cluster of computers and we need to be able to scale infinitely.”

STEVE HIRSCH, CHIEF DATA OFFICER, INTERCONTINENTAL EXCHANGE AND NYSE

It's “Now” or Never

If there's one thing every enterprise needs today, it's the ability to adapt, move, and be nimble at the data layer.

From managing terabytes of transactional data to building a world-class customer 360 platform to powering stock trading worldwide, it's clear that there's never been a more important time to be able to adeptly handle the “now”, the moment. This moment is the all-important make-or-break interaction with your customers to provide instantaneous powerful, data-driven insight.

It's now or never.

Get started [here](#).