

Brochure



Data-driven enterprise infrastructure

Best Practices: How
the right infrastructure
empowers Big Data



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Welcome to the data boom

Big Data presents a massive opportunity. Your customers—who have come to expect a high level of responsiveness thanks to the consumerization of IT—demand that information and offers be custom-tailored to their needs. At the same time, IT must move from being a cost center to a value creator by enhancing sales, marketing, the supply chain, human resources, finance, and many other facets of the enterprise, including IT itself. But it’s impossible to support the level of analytics required to meet these expectations with a traditional IT infrastructure.

As IT becomes more of a value creator to the business by providing more on-demand delivery capabilities, the enablement will be through a software-defined infrastructure. This transformation allows IT to respond faster to business needs and new application demands through an optimized hybrid delivery model.

To maintain relevance and do what’s needed to eliminate the pockets of shadow IT that have grown up around Big Data, IT must also insert itself into the business’s conversation around how to gain analytics-driven insights, or risk losing the ability to manage those systems and how the company spends its IT budget—not to mention ensuring data and system security.

Successful organizations demonstrate a greater degree of partnership between the business and IT and have taken steps to ensure their infrastructure can support Big Data initiatives large and small.

For example, NASCAR monitors and analyzes social media activity around its races and drivers to reach new fan groups and better serve sponsors, track owners, and broadcast partners, and a large U.S. firm analyzes customers’ user data to create personalized marketing offers and invest more strategically in its infrastructure.

Companies such as these are contributing to the boom in global Big Data technology and services sales, which IDC forecasts will reach \$41.5 billion by the end of 2018.¹ According to HP research 75 percent of successful digital enterprises surveyed—those that adopt and exploit digital technology to generate real business outcomes—leverage Big Data throughout their organization and, as a result, know their customers very well. In addition, 56 percent of these firms make better-informed decisions using Big Data analytics.²

To empower a data-driven enterprise, you need to ensure your IT infrastructure can support your Big Data strategy and initiatives. You must also focus on the management of change, as well as the people and processes involved.

¹ IDC, “Worldwide Big Data Technology and Services 2014–2018 Forecast,” September 2014.

² HP Research, 2015 Report: Profiling infrastructure leaders, February 2015

What’s required to take advantage of Big Data in your enterprise?

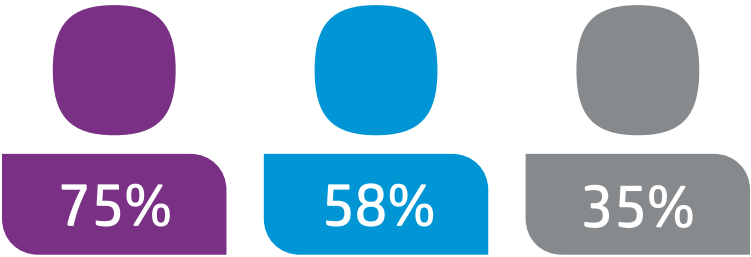
“There are three banner reasons enterprise customers are looking at Big Data: increase revenue, reduce costs, and reduce risk,” says Peter Moser, HP Enterprise Group Americas Presales. For example, SM Retail, Inc., a leading department store in the Philippines, leverages timely and accurate information to make more accurate decisions related to buying, product allocation, and forecasting. As the company’s senior vice president of IT services says, “Success means finding that additional one percent in the margins that really makes a difference to the bottom line. That’s our goal in using Big Data technology.”

To support your business’s analytics needs, IT infrastructure, policies, and data management tools must provide quick access to the data efficiently, effectively, and securely. Big Data workloads do provide a challenge to the traditional and legacy infrastructure that comprises most enterprise data centers.

“As the need has arisen to integrate social media data with the traditional transactional and warehouse data, information literally pours into the organization—often, ending up in a ‘Big Data lake’ built with Hadoop,” says Balaji Subramaniam Venkatesan, HP Technology Services. “Although this data provides valuable insights, organizations are realizing that the faster the processing can be done, the more powerful it can be. Thus, Big Data solutions often call for additional compute and storage capacity as well as increased bandwidth requirements.”

Enabling Big Data-driven customer profiles

Leaders Mainstreamers Laggards

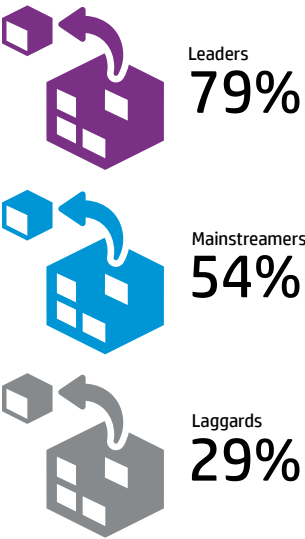


Digitally adept companies leverage Big Data to develop in-depth customer profiles and derive greater insight.

HP Research, 2015 Report: Profiling infrastructure leaders, February 2015



Digital technology adopters reap Big Data benefits



Companies with extensive digital technology exploit Big Data analytics solutions and techniques to drive optimal business outcomes.

Source: HP Research, 2015
Report: Profiling infrastructure leaders, February 2015

Where do you stand?

Here are five questions to help you gauge where your organization falls in the journey toward empowering data-driven enterprise:

1. Have the analytics projects you’ve initiated so far been one-off or point-in-time exercises, or is your goal to make analytics part of the company’s DNA?

It’s sensible to run pilots and proofs of concept to test how your technology, people, and processes work together to achieve a Big Data objective. But you’re more likely to think bigger picture and organize analytics projects holistically if you make them part of a sweeping Big Data strategy. “Being able to connect into the enterprise so the benefit of Big Data is not a one-off thing is important for many CIOs I speak to,” says Daniel Wu, HP Americas Presales.

2. Where is your company’s data, and who “owns” it?

Data needed to design a targeted marketing campaign, for example, may reside in different repositories within the company, managed by different groups, unbeknownst to the marketing folks running the campaign. To avoid this scenario, you need to eliminate silos between data, systems, and teams.

At the same time, it’s crucial to remember that Big Data is not simply a storage challenge. Storage is key, of course, but your infrastructure must also support the ability to analyze and understand the data to improve decision-making.

3. Are you aligning the needs of the business—and the outcomes various business units require—with what your infrastructure can support?

The more intimately you know what HR, the supply chain, marketing, finance, and other BUs need, the less likely those groups are to go around IT to access third-party solutions that you can’t monitor.

4. Once you are aligned with the business, how will you measure the impact of the Big Data services you provide?

You need a way to justify your investment in infrastructure architecture changes; one way to do that is to measure the business benefits gained from Big Data services. You can do this only if they come from IT.

5. What is required to secure your data and meet compliance or regulatory requirements?

Security that follows your data is a must. You have to be able to ensure that your data encryption solution goes where the data goes—from your data center to a private cloud environment, and even to public cloud storage.



How Big Data drives big value

When you want to get closer to customers to provide more custom offers or a richer experience with your brand, Big Data can help. You can also use it to improve IT operations and data security. And that’s just the beginning. A data-driven enterprise can:

- Enable data-driven customer intelligence and tailored marketing campaigns
- Use Big Data for security analysis
- Enhance existing data warehouses
- Establish the right infrastructure to enable an end-to-end data lifecycle

Enabling data-driven customer intelligence and tailored marketing campaigns

The key to tailored marketing campaigns, as with any business-driven IT project, is to balance the cost of using technology to solve a business challenge with positive results—increased sales, for example. An HP enterprise customer more accurately targeted offers by using HP’s Big Data analytics platform to transform customer use data into actionable insights. HP Vertica’s speed, combined with using Hadoop to move the data into the data warehouse, provided the firm with significant ROI and a quick payback.

In a data-driven move to stay ahead of all key forms of media and better serve fans, NASCAR teamed up with HP to design and build the NASCAR Fan and Media Engagement Center (FMEC) to help the organization track near real-time responses to fan engagement and more. The solution provides key metrics and analysis to better serve stakeholders such as sponsors, track owners, drivers, race teams, and broadcast partners. The FMEC “allows us to use analytics to make smart decisions in real time as well as over time,” says NASCAR Executive Vice President and CMO Steve Phelps.



Using Big Data for security analysis

Big Data tools not only help enterprise security teams collect the mountains of log and other data, but also correlate it—which helps detect anomalies to point to the possibility of a threat—analyze it, and provide the context needed for security pros to act on it.

A telecommunications firm uses various security products across multiple large data centers with thousands of servers and a heterogeneous collection of telecommunications infrastructure equipment. To integrate these products into a single global security operations center, the firm implemented enterprise security solutions that unify searching, reporting, alerting, and analysis across all the company’s enterprise log data. By using the intelligent aggregation and correlation capabilities of HP ArcSight ESM, the company realized a significant reduction in security events.

Big Data can also analyze your operations events, to quickly pinpoint the cause of problems and maintain the highest levels of availability and performance for IT services. HP Global IT deployed HP Operations Analytics on 15,000 nodes across its private cloud and gained a consolidated view of data from diverse tools. “OpsAnalytics gave us key metrics on application, database, and OS/platform performance that all came together in one place so we could triage and diagnose more effectively,” says Nagendra Solanky, strategic technologist for HP IT Global Data Services.

Enhance existing data warehouses

Before you can start to deliver Big Data analytics as a service to the business units that need it, you must ensure your enterprise data warehouse (EDW) environment is up to the task. This might require storage transformation initiatives and/or better systems for backup, recovery, and archiving.

SM Retail, Inc., the Philippines department store, replaced its legacy systems with a better performing platform for EDW, analytics, and reporting and reduced the time it takes to generate reports from up to eight hours to just 30 minutes, making it possible for critical retail reports to be ready at 7 a.m. for business-day decision making.



Establish the right infrastructure to enable an end-to-end data lifecycle

With the right approach to integration and architecture, your IT infrastructure can help enable Big Data as a service to keep you closely aligned with the business—and create new revenue streams by providing pay-per-use Big Data services to various parts of the business.

Danish supermarket group Dansk Supermarked deployed a pay-per-use, flexible capacity Big Data solution to uncover patterns within massive amounts of daily customer and operational data. In so doing, the company expects to be able to create more relevant and targeted product, pricing, and promotional offers for its 1.4 million daily customers.

Get started today

There's no doubt that Big Data presents enterprises with big challenges and opportunities. Why not join the 75 percent of leading enterprises surveyed that already use Big Data analytics to address a variety of business needs?³

Getting started empowering a data-driven enterprise—a checklist

Here are five areas to review to help you refine your Big Data strategy and start on the path toward creating a data-driven enterprise:

**Get a clear picture of your end goal.**

What do you want to be able to do with the rapidly multiplying data in your enterprise? Ideally, you want to be able to isolate and analyze the data that can provide the most valuable insights to those who need it, when they need it. This requires not just the storage capacity, but also the ability to analyze data securely and present it to decision-makers so they can act on it quickly.

**Locate IT or operational silos that create bottlenecks.**

Assess where analytics initiatives in your organization have succeeded and why. Profiting from the insight inherent in Big Data requires speed; you can move faster if you break down silos separating data, systems, and teams.

**Fine-tune your strategy for aggregating, storing, managing, analyzing, and securing corporate data.**

Not all data is created equal. Your infrastructure and storage architecture should reflect this. You must also consider speed and latency when evaluating analytics solutions.

**Identify the players.**

A number of groups within IT and the business will need seats at the table—including most of the C-suite, as analytics becomes core to more enterprise business strategies.

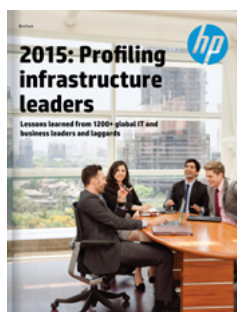
**Integrate security from end to end.**

As we've seen, this includes data security and encryption, as well as securing mobile applications throughout the lifecycle and deploying Big Data analytics to quickly and accurately identify cyber threats.

³HP Research, 2015 Report: Profiling infrastructure leaders, February 2015

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