



Information Management Imperatives in the Digital Age

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The Greek philosopher Heraclitus once wrote, "The only thing that is constant is change." While this remains true today, I doubt even he could have imagined how rapidly the world is changing. Businesses, especially, are finding it difficult to adapt to the fast-moving climate. Shifting business dynamics, the pervasiveness of digital technologies, advancements in technology, and regulatory and security pressures are driving change in the digital age and disrupting business like never before.

And while data is helping businesses meet the rising challenges of the modern world, managing data and taking advantage of the business opportunities that data offers has led to a whole new set of challenges. These challenges become even more complex with the emergence of new data types, large volumes of data, interoperability issues, security threats and stricter regulations around data. If businesses want to survive and thrive in this new climate, they need an innovative information management strategy and modern capabilities to generate true business value from data assets.



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About Dell Digital Business Services

Dell Digital Business Services enables digital transformation for customers by taking a business-first approach. Digital Business Services uses a robust consulting methodology to create digital strategy roadmaps for organizations, enabling new revenue models, exceptional customer engagement and superior operational excellence. Our services utilize digital technologies, including analytics, mobile, social media, cloud and Internet of Things, to deliver end-to-end customer solutions.

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Shifting business dynamics

New products and services, customer expectations and engagement models are changing the way we do business. In order to keep up, organizations are reinventing their business models — and need a comprehensive information management strategy to embrace new market opportunities.

Blurring industry boundaries, and increased mergers and acquisitions

Organizations are making a radical shift in the services they provide — many either crossing into new territory to provide services from adjacent industries or to create offers that didn't previously exist, such as:

- Communication companies providing entertainment services
- Internet companies like Paypal and Facebook challenging traditional banking services
- Over-the-top messaging and content companies like WhatsApp, Skype and Google making telecommunications companies rethink their business model

This trend will likely see an increase as companies continue to experiment, reinventing offerings or making innovative acquisitions to stay relevant and profitable.

But it's not easy. Organizations will need to acquire data that is not common to their business, and integrate and analyze this information with their regular data to identify new opportunities and execute them quickly.

Information management essentials:

To identify new opportunities, businesses will need a robust and forward-looking information management strategy that recognizes new internal and external information sources, advancements in information processing techniques, architectures and technologies, and business practices to use data as a differentiating asset. This will allow them to make innovative steps into new territory, proactively fulfill customer needs and stay ahead of the competition.

Personalized offerings, customer relationships and experiences

Organizations have long tried to understand their customers better in order to offer targeted products and campaigns. In the digital age, organizations are taking this a step further with customized products and marketing plans aimed at delivering an experience that guarantees customer satisfaction.

By enriching customer data with newer physiological and psychographic attributes, and also additional master data entities organizations gain access to customer insight like never before. However this often requires organizations to have multiple master data management (MDM) platforms. According to a Gartner study, the majority of Fortune 1000 companies utilize more than two MDM solutions to provide enterprise-wide MDM support. This can lead to significant cost inefficiencies and operational overheads.

Information management essentials:

Employing a single, comprehensive multi-domain MDM system can help businesses reduce costs and ensure superior operational efficiency. This reduces complexity while improving the overall customer experience and creating brand loyalty.

Getting to market quickly

Feeling the pressure from increased competition and real-time customer feedback, organizations are trying to launch products, respond to customer demands and incorporate business change quicker than ever. One way to accomplish this is to reduce the software development lifecycle (SDLC).

Information management essentials:

Businesses can utilize techniques, such as test data management, cloud-based integration platforms and data services, to reduce the SDLC and time to market. This can also help save money and significantly decrease risk.





Pervasiveness of digital technologies

To improve process effectiveness, customer experience and cost efficiencies, organizations are implementing cutting-edge digital technology. Mobile devices, sensors, social media and drones are just a few examples of the technology advancements that businesses are adopting today. These advancements can help enable superior, cost-effective customer engagements and offerings.

Redefining and improving business processes using technology

Using wearables, mobile devices, collaboration tools and other modern technologies, businesses can help streamline existing processes and reduce redundancy.

In some cases, digital transformation initiatives have resulted in the creation of entirely new processes — leading to new business requirements, data types, information flows, data transformation requirements, data privacy concerns and ways in which information is consumed.

A classic example of this is set-top boxes provided by cable TV companies. These boxes were generating and capturing vast amounts of data that, for many years, went unused. Recently, cable companies decided to monetize this data. This required a complex transformation to utilize new data types, manage large data volumes, deal with data privacy issues and increase customer insight into user behavior and advertising effectiveness.

Information management essentials:

Without a strong information management strategy, the cable companies wouldn't have been able to realize the value of their data using digital transformation. Organizations that couple their digital strategy with information management strategy can address new market opportunities — integrating disparate data, increasing customer insight and ensuring data security.

Popularity of social media platforms

Social media platforms are more popular than ever — with the majority of users active on more than one platform. While Facebook, Twitter and LinkedIn are examples of the more popular forums across a wide variety of geographies and customer demographics, these are only the beginning for organizations that want to understand how their brand is perceived and what their customers want.

In fact, 90 percent of enterprises use social media to respond to customer inquiries, and the platforms they use are varied. Consumers are also using blogs and other industry-specific platforms like Urbanspoon for restaurants and Amazon for product reviews to voice their opinions. As the data from these sources is unstructured, it makes the task of integrating and processing the information to extract meaningful insights all the more complex.

Information management essentials:

Organization will need to employ special techniques to extract and validate meaning, context and relevance from these unstructured sources. Information management solutions help cut through the complexity of this information to effectively use the data, along with other enterprise data, to improve strategic objectives.

Internet of Things is here to stay

The use of machine sensors and consumer-oriented devices, such as connected thermostats, light bulbs, refrigerators and wearable health monitors, is growing exponentially. IDC predicts the Internet of Things (IoT) market will soar in the coming years to almost 28.1 billion devices by 2020.

Organizations are increasingly experimenting with how they can use these devices in existing products to increase functionality and manage outcomes and customer experiences. The ability to integrate data from devices with other equipment or enterprise information also provides organizations with profound opportunities — as well as challenges.

Information management essentials:

Organizations will need to find new ways to process and store large volumes of data, ensure data security and solve interoperability issues to truly harness this revolutionary new technology.



Technology advancements

Technology has steadily made advancements in the digital age. Cloud, big data, data virtualization and in-memory processing have had a profound impact on business. Organizations need to recognize that success is not ensured just by deploying these technologies. They also need robust data management practices.

The adoption of cloud in the core business strategy

The adoption of cloud has been gradual yet widespread. Chief information officers have made cloud part of their strategy in a variety of ways — from sourcing virtual infrastructure and using hosted applications like software as a service to adopting cloud integration platforms.

Yet the popularity of cloud applications has introduced even more information management challenges. As organizations move their legacy applications to the cloud, they are left with large volumes of data that need to be converted or archived. Organizations are also struggling with integrating their on-premise and cloud applications, while ensuring data security.

Information management essentials:

Cloud-based integration and data management platforms enable organizations to reduce time to market and save costs.

The rise of big data

In 2013, it was estimated that 90 percent of the world's data was created in the preceding two years (2011–2012). And the volume of data continues to grow. Organizations need to address the challenges posed by large data volumes to harness the opportunities that big data presents.

The ability to integrate and govern data that is not similar in structure or source — and to do so quickly and at reasonable cost — is the main barrier to adopting big data initiatives. Organizations are also grappling with a shortage of skilled people to implement these solutions.

Information management essentials:

A framework to effectively integrate and govern big data and seamlessly manage it alongside other data repositories is critical to harnessing the true value of data.

Open data is gaining acceptance

Data is the raw material of the 21st century. And as the world goes digital, businesses and consumers are demanding access to more data than ever before. At the same time, the concept that certain data should be available for consumption and republication without restrictions is gaining popularity.

This concept of open data has obvious benefits, but it also presents some challenges in determining what information is up to date and accurate and managing the influx of free data.

Information management essentials:

To ensure that their employees are using data correctly, organizations need to define and implement strict policies for the use of data. Strong information management policies can help manage content and reduce the risk of legal ramifications.



Intense regulatory, security and cost pressures

Businesses have always been subject to regulations and financial pressures. However, organizations are now facing new regulations to ensure effective data management practices, especially concerning the protection and retention of customer data. Data security has emerged as a big concern for organizations as they deal with hostile competitors and, in rare cases, disgruntled employees.

Increased regulatory guidelines for data transmission, storage and disposal

Businesses are witnessing greater regulation of the collection, storage and use of information. Many governments have already created regulations that impose conditions on how to protect and use personally identifiable information and other sensitive data, with provisions to penalize organizations that fail to do so.

This means organizations need to treat privacy as both a compliance and business risk issue.

Information management essentials:

Information lifecycle management techniques, such as application retirement and data security, can

help organization increase regulatory compliance and reduce risk.

Increased application performance issues

For a while now, IT teams have addressed application performance issues by throwing more compute and storage hardware at the problem. While it might have worked in the past, it is definitely not sustainable or cost effective. This leads to organizations maintaining large application databases for a variety of reasons that often end up contributing to application performance deteriorating.

Information management essentials:

To combat the decline in applications performance, IT teams are actively exploring data compression and archiving techniques to optimize performance, increase sustainability and reduce costs.

Data masking is not just a regulatory mandate

With IT outsourcing, data theft, cloud adoption, and independent data verification and validation becoming more common, organizations are

looking for ways to prevent the misuse of data if it falls into the wrong hands. Data masking, or obfuscation, is the process of hiding data by replacing it with random characters that appear real and consistent — remaining usable for testing purposes.

Information management essentials:

While data masking is often included in regulatory mandates, organizations are now making it a priority regardless. An investment in data masking can help avoid potential financial penalties, damage to their company's image and business downtime.

As organizations evolve to meet the demands of the digital age, information management capabilities and practices also need to transform. While data integration, data quality, master data management and data warehousing are still vital to information management, organizations need to undergo a radical change to their approach for these disciplines. They will need to make significant investments in information management strategies and technologies if they plan to utilize data as a strategic asset to achieve new business goals.

For more information about any of our digital solutions or services, please visit Dell.com/DigitalBusinessServices or contact a Dell representative.

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