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Business Technology

Getting your data house in order

How to unlock the value of data

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Big data and advanced analytics represent a new frontier for competitive differentiation. Leaders from pharmaceuticals and retail to telecommunications and insurance are using advanced analytical methods and high-performing data processing capabilities to improve revenue and cost performance, and reduce risk. A well-defined data strategy enables them to harness and share data across the organization, improving basic functions such as budgeting, people-planning, and governance. Whatever one's business, the realities of today's marketplace mean that those with the best data systems and capabilities will win—and by an increasingly outsize margin.

A major U.S. bank, for example, is on track to gain \$2 billion in benefits as part of a multi-year data transformation that has seen the bank define a new data strategy, implement an enterprise-wide governance model and rationalize its underlying data management infrastructure. A large insurer channeled its commercial bid and pricing data to create a global risk platform that has transacted more than half a million trades. And an oil and gas company gained a 12-15 percent lift in profit margins by identifying high-value data sources and integrating internal and external data flows across the supply chain.

Research from McKinsey Global Institute suggests that over the next decade the Internet of Things and related data growth will have an economic impact of up to \$11 trillion per year—equivalent to about 11 percent of the world economy. This value is being driven by a number of recent advances in technology. Data lakes and flexible storage models, for example, are eliminating the cost of normalizing data for central storage. Machine learning models and parallel processing technology are dramatically speeding calculations. And real-time data streams are enabling “intelligent listening,” letting companies monitor and respond to events rapidly, often without human intervention.

In order to get a share of the pie and benefit from these new technologies, businesses will need to move swiftly and invest in high-performing data capabilities.

How to unlock the value of data

For most companies, using data for competitive advantage requires a significant data management overhaul. That includes identifying and assessing the value of existing data, designing a scalable data platform, and developing a long-term data strategy to help the organization achieve impact at scale. It also takes sustained commitment on the part of management, a willingness to make the up-front investment needed, as well as skilled advisers with the experience and technical resources to help organizations design and implement their programs.

The most successful data transformations tend to follow these three steps:

- **Define the data strategy:** The data strategy crystalizes the business case for transformation—identifying, valuing, and prioritizing the core set of initiatives and use cases that stand to deliver the strongest returns by examining where data, analytics and people can come together to improve quality, service, and value.

A robust strategy comprises several elements. These include creating an enterprise-level data architecture that defines data sources, capabilities and standards as well as prioritizing specific business or functional needs where data quality and integration are likely to generate the most impact. It must also establish a single point of accountability within each data domain, set predefined standards on data retention, and simplify the data environment by replacing legacy systems and removing duplicate repositories to reduce complexity and risk. In addition, the strategy must create flexible, reusable capabilities that support multiple use cases and value streams.

- **Design the target state and roadmap:** The next step is to assess the existing information and architecture—charting current data repositories and data flows, mapping them to unique data domains and assigning a single “golden source” of data to ensure consistency. Organizations must also look across their technology landscape to understand where they can simplify the data environment by rationalizing existing systems and where they can deploy next-generation technologies to better support the future state for data design, quality, security, and governance.
- **Mobilize the transformation:** With the strategy and roadmap set, teams then test the data model in a series of pilots to refine the use cases, address issues and inculcate new ways of working. A central team oversees the process, often using advanced data-management tools to assist in designing and refining the target state, enforce data security, and maintain data quality. A well-calibrated communications and performance management plan brings employees into the process, and regular performance monitoring keeps senior management informed and engaged.

Data governance is a key enabler

Before embarking on a transformation, data governance needs to be developed and embedded throughout the process. Leaders need to clarify the policies and standards required to ensure effective data management and they must define dedicated roles and responsibilities across the organization. Those roles and responsibilities work best when aligned with the company's operating structure, e.g., a decentralized operating structure would have a decentralized data model, a centralized structure a more centralized data model, and so on. Together, clear lines of accountability and a well-structured data governance model help motivate compliant behavior and foster the mindset change needed to sustain new ways of operating.

While organizations can achieve small, early wins with pockets of analytics, scaling those wins requires them to develop the right capabilities internally. This includes hiring a chief data officer (CDO) to define the multi-year roadmap, and collaborating with business and technology leaders to define the scope, priorities, and implementation plan. Companies must also create a center of excellence (COE) to drive consistency and impact across high value projects, identify enterprise-wide opportunities, and ensure reuse. Together, CDOs and COEs can support an innovation culture that makes good data practices an accepted way of doing business.

Data transformation can be self-funding

The benefits from enhancing data capabilities across the enterprise are deep and widespread. The cost-savings alone can make the data transformation exercise fully self-funding. For companies with an average IT budget of \$1 billion, for example, simplifying, streamlining, and optimizing data management can generate savings of between \$70-100 million annually. Many of the savings are achieved upfront and come from improved productivity among data resources, reduced storage and infrastructure costs, and rationalizing data sources, tools, and vendors. Better business decision making from faster, more accurate analytical models can create sizeable revenue uplift as well.

As with any organizational initiative, data transformations require a mix of business, technical and change management skills. Organizations often benefit from partnering with external advisers who specialize in helping companies design and oversee the different stages in the transformation process.

Here are some questions to consider when charting your company's approach to data management:

1. What data-enabled features and offerings have the potential to transform your business model and market position?
2. How might better information flows improve efficiency and lower business risk?
3. What parts of your business are most vulnerable to data-driven disruption by traditional and non-traditional competitors?
4. What is the opportunity cost of delaying a data transformation?
5. Do you have the capabilities in-house to manage such a transformation?

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