



Transforming data into value

The growing focus on data capital is a catalyst for key modernization technologies



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ONE OF THE biggest trends in digital transformation is the shift from simply storing data to converting it into intelligent and actionable insights. When raw data is interpreted into meaningful information, it becomes data capital.

Agencies such as the U.S. Census Bureau, Social Security Administration and the IRS are already mining their own data to gain important insights into the economy, population movement and the effectiveness of government programs.

Exploring new combinations of data

Unstructured data typically accounts for more than 80 percent of storage capacity, and that data continues to grow at an exponential rate.

Pooling unstructured data — such as digital images, video and sensor data — into a unified data lake makes it possible to analyze disparate types of information and derive new business intelligence through cross-correlations and regression analysis.

To make sense of all that data, agencies need the ability to scale out (rather than up) quickly. Unlike the appliance model, which involves adding another piece of hardware when the infrastructure hits a certain limit, scale-out solutions feature clusters of nodes, and each node can have compute, networking and storage resources. When an agency needs more capacity, it simply adds more nodes.

Such platforms scale quickly and easily, and they typically support both traditional and evolving protocols, such as cloud and mobile technology.

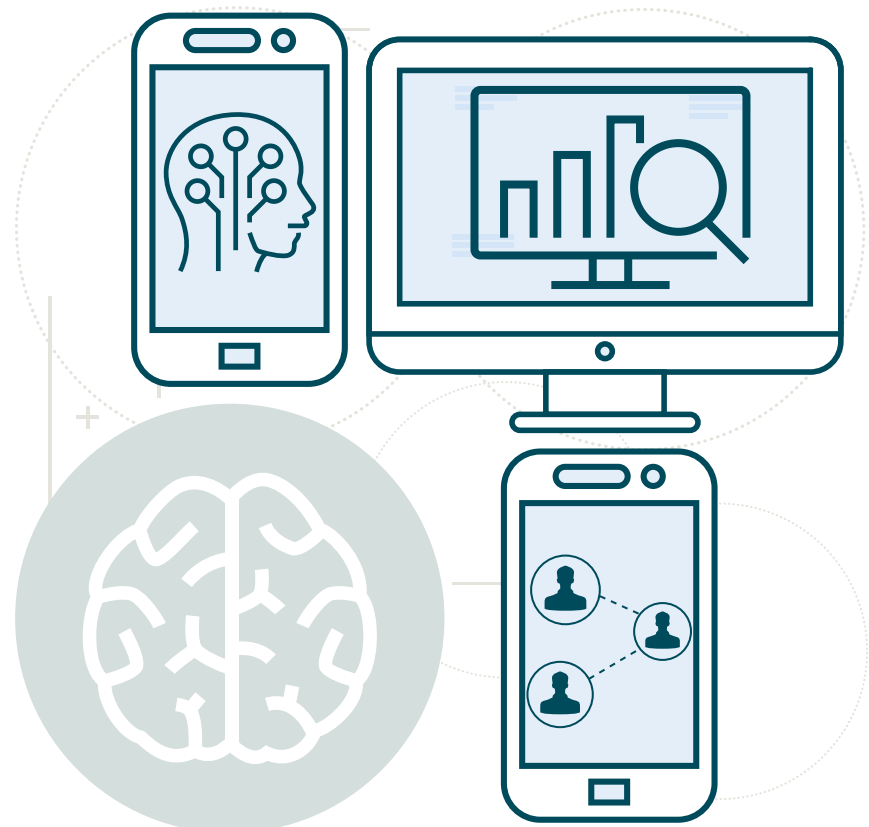
Beyond traditional analytics

At Dell EMC, we've identified four important areas where data capital is driving modernization:

1. The digital experience. Employees need up-to-date intelligence at a moment's notice, no matter how geographically dispersed they are. For instance, two employees might need access to the same data, but one sits at an agency workstation while another is using a mobile device in the field. Deployed warfighters in particular require fast, easy access to information and intelligence.

2. Big data. Being able to combine data from different areas of the government is transformational. In the case of IT, for instance, analyzing logs from a variety of machines can support intelligence-based security as new correlations reveal vulnerabilities that weren't visible before.

3. Internet of things. Agencies are generating so much data that it's difficult to keep up. As sensors are being added to just about everything from cars to refrigerators, the photo and video data streaming from those sensors is increasing in resolution





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and size. To be useful, all that data needs to be ingested at the rate it's being generated. Deriving valuable intelligence requires reactive solutions that can support the demand for faster performance.

4. Artificial intelligence. AI, machine learning and deep learning rely on high-performance, scalable solutions. For example, the Energy Department's national labs are analyzing massive

amounts of data more efficiently with the help of supercomputers, which also enable the National Institutes of Health to advance the insights gained from genome sequencing.

In addition, the Department of Veterans Affairs' Million Veteran Program will result in one of the largest databases of medical information. Researchers will use it to study diseases and ultimately

develop new treatments and medicine.

Taking raw data and transforming it into valuable intelligence goes beyond analytics to encourage creative new ways of looking at data. It is a paradigm shift that is fueling agencies' progress on modernization. ■

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