Building an Analytics-Based Organization

Joint analysis with Carnegie Mellon University reveals key attributes of analytically empowered companies.
Capturing the Promise of Big Data

Big data continues to grow. How big has it gotten? Consider a few facts:

- More than 2.5 quintillion bytes of data are created every day through a range of activities including social media posts, purchase transaction records, cell phone GPS signals, supply chain and logistics data, and digital videos, pictures, and audio recordings.
- Individuals generate more than 70 percent of all data; enterprises store and manage 80 percent of this data.¹
- The average business expects to spend $8 million on big data-related initiatives this year.²
- Hiring growth is part of this spending. It is estimated that for every IT job created in the United States to support big data efforts, three big data-related jobs outside of IT are being generated. This equals literally hundreds of thousands, potentially millions, of new jobs.³
- Global spending on big data is growing at an average annual rate of nearly 30 percent and is expected to reach $114 billion in 2018.⁴

A new breed of businessperson proficient in technology, core critical thinking, and analytics is needed to tap into the potential of big data.

While this massive wave of data promises to transform both top and bottom lines, few organizations have been able to operationalize and monetize this promise for their enterprise. Successfully managing big data and analytics is not about having the right technology, operating model, or people, but about tying these three vital aspects together to create a culture anchored by differentiated analytics.

The growth, range, and speed of data hold tremendous promise for transforming management models and the ways in which organizations make decisions. But reaching that potential will require mobilizing the organization to tap into the potential value that data offers. A new breed of businessperson proficient in technology, core critical thinking, and analytics is needed, as are people who can pull these skills together with the right domain expertise and knowledge of business strategy. Technology will underpin the transformation; it is a necessary element, but not the differentiator.⁵

A.T. Kearney and Carnegie Mellon University surveyed 430 companies around the world, representing a wide range of geographies and industries, for the 2014 Leadership Excellence in Analytic Practices (LEAP) study (see figure 1 on page 2). Based on the maturity of respondents’

⁵ For more information, see Big Data and the Creative Destruction of Today’s Business Models, at www.atkearney.com.
analytic competency and their ability to employ analytics to impact their business results, respondents are clustered into four populations: leaders (10 percent), explorers (32 percent), followers (38 percent), and laggards (20 percent). Only the leaders have attained the level of competency needed to impact business results significantly. While these leaders are found in every industry, those industries with many consumer touch points are generally more mature in their analytics approaches, as they tend to use information in innovative ways and take innovative approaches to product and service development.

Leading Themes and Practices in Analytics

In the course of the analysis, five themes and associated leadership practices emerged:

Enterprise value. Leaders use predictive analytics to fuel innovation and growth.

Sponsorship. Leaders enroll executive-level “champion-practitioners” to carve out analytics mindshare.

Mobilization. Leaders use pilots and rapid proof-of-concept deployment to create traction with businesses through faster value capture.

Technology enablement. Leaders take a balanced approach to building their advanced analytics technology footprint.
**Talent empowerment.** Leaders co-create and collaborate across data and decision-making silos to drive a culture of analytics-based decisions.

Leaders have developed the capabilities needed to succeed in their analytic efforts. While laggards remain focused on applying data for reporting, the leaders are springing forward with analytics to evaluate risks and tradeoffs, understand cost and revenue drivers, and predict trends to help drive business performance and innovation. Leaders are pushing the innovation agenda forward through analytics to create value (see figure 2). Executives have always required a forward view of their business; analytics provides them the vehicle for a more comprehensive and informed view of what could impact their business.

Executive sponsorship is vital to developing the enterprise’s enthusiasm for analytics. As seen in figure 3, the leaders are finding champions at the very top of their organizations—from the chief operating officer (COO), chief financial officer (CFO), or chief marketing officer (CMO)—while laggards more often find their analytics leaders in the IT leadership position or their business

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**Figure 2**

**How analytics impacts business strategy**

- **Fuel innovation (42%)**
- **Drive profitability (29%)**
- **Increase operational effectiveness (29%)**

Source: Leadership Excellence in Analytic Practices (LEAP) study, 2014

**Figure 3**

**Analytics champions by position**

- **Leaders (59%)**
- **Laggards (34%)**

CXO

- **Leaders (18%)**
- **Laggards (26%)**

IT head

- **Leaders (23%)**
- **Laggards (41%)**

Business-line heads

Source: Leadership Excellence in Analytic Practices (LEAP) study, 2014
Champions typically create demand for these services within their organizations in addition to promoting them elsewhere in the business. We are also seeing the emergence of a new C-level executive—chief data scientists or chief analytics officers (CAOs)—responsible for bringing analytic innovation to the broader enterprise. This role requires expertise from several domains to be woven together, including business strategy, data management, data science, and technology.

Although IT can enable success, it cannot drive it—this is as true in analytics work as it is in procurement, supply chain, or any other business function. Leaders are focused on piloting analytics efforts to secure buy-in and driving toward the development of repeatable solutions and processes, as shown in figure 4. Leading companies emphasize co-creation and collaboration among stakeholders to maximize results. For example, a single function cannot effectively reduce product complexity; rather, it needs to be addressed at the enterprise level and requires advanced data analytics to tackle in a systematic and holistic manner.

Figure 4
Leaders are piloting analytics efforts and developing repeatable solutions

Top investment areas by maturity

Source: Leadership Excellence in Analytic Practices (LEAP) study, 2014

Big data and advanced analytics comprise an increasingly large part of total technology spending at most companies. In building out their big data and analytics technology footprints, leaders are upgrading their existing stack through models that provide the flexibility to support rapid experimentation and innovation. At present, the complex and diffuse technology ecosystem around analytics provides a wide range of options that can pose a challenge when trying to make large capital IT investments (see figure 5 on page 5). In just a few short years, consolidation is likely to change this landscape significantly, leaving fewer, stronger service providers to partner with.

The big question almost every company faces is how to obtain the right talent to become an analytics leader and build a culture of sustained excellence. IT can be purchased, and data can be cleansed, expanded, and bought. Leaders emphasize the need to build an analytics-focused
culture to encourage adoption across the enterprise by fostering cross-functional collaboration and increasing confidence by building from pilots to demonstrate the value of analytics and enhancing capabilities. Figure 6 on page 6 shows leaders’ bias toward collaboration and laggards’ overemphasis on technology tools. Leaders are demonstrating shared value for the enterprise and creating analytics-driven communities.

Analytics brings change; executives accustomed to “going with their gut” are likely to resist this change, as they are unaccustomed to working with the probabilities generated from a predictive model. But this change is inevitable; only 4 percent of study participants dismiss analytics as a “passing fad.” Assembling the right team profile is a significant challenge even for the leaders in this space. Cultivating an analytics team requires piecing together a cross-functional skill set that includes expertise in business strategy, data science, and technology.

The CAO role will emerge at many companies in coming years; 6 percent of LEAP participants already have such an individual in place. Many questions remain about where these leaders will come from, to whom they will report, and how their role will differ from other functional leaders, but certainty is that analytics will increasingly be a permanent part of “business as usual.”
Big data and analytic practices represent a new Industrial Revolution, and these areas will continue to evolve in exciting new ways. This is a transformational moment for enterprises, as business analytics presents both opportunities and challenges. Traditional businesses such as AIG, Macy’s,

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Analytics: A New Industrial Revolution

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GE, and Major League Baseball are joining the likes of Amazon to reap the top- and bottom-line benefits of data. (For more information, see the summary for the January 2014 executive roundtable, Beyond Big: The Analytically Powered Organization, at www.atkearney.com.)

Doing this requires companies to accept that data and decision making can no longer reside in their own silos; data must inform decision making in order to unlock competitive advantage.

Successful enterprises will seize this opportunity by advancing their cultures to drive an enterprise-wide analytic operating model that puts data science at the center of their business strategy and management practices. Even as the CAO or chief data scientist role is just beginning to emerge, it is conceivable that this position will prove to be a waypoint in the journey toward a future in which the COO or CFO and their teams will be so analytics focused as to subsume these duties.

Transformation takes time; a long journey lies ahead for the business community. Those at the forefront will achieve the most significant results, while the followers and laggards will struggle and in some cases even collapse. The best thinking from operators, analytics practitioners, technology innovators, and the academic community will drive this change and the successes it will bring.

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The signature of our namesake and founder, Andrew Thomas Kearney, on the cover of this document represents our pledge to live the values he instilled in our firm and uphold his commitment to ensuring “essential rightness” in all that we do.

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