A big role for CFOs in big data

Others may lead in building data-analytics capabilities, but CFOs should cast a gimlet eye on how such efforts would ultimately create value.

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Harnessing the power of big data puts new demands on companies. Before an organization can capture the opportunities that data analytics offers to improve revenues, boost productivity, or even create entirely new businesses, it must first adapt its processes and culture to a series of new approaches. It requires not only new talent and investments in information infrastructure but also significant changes in mind-sets and front-line training.[1]

Because the horizons of big data typically span a wide range of functions, including marketing, risk, and operations, the C-suite can step up in a variety of ways. In some cases, the mandate of the chief information, marketing, strategy, or risk officers may need to expand. In others, companies may need new roles to lead data or analytics initiatives.

No matter who takes the lead, CFOs have an essential role to play. Just as they would ensure that the returns of any investment live up to expectations, CFOs should take the full measure of data-related opportunities, especially given their cross-functional nature. From defining an overall approach to deciding what to build to mobilizing talent and resources, CFOs should engage fully in planning and implementation with an eye to creating value. In our experience, the CFO's focus is most critical in six areas.

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Establishing new mind-sets

Senior teams embarking on this journey need both to acquire knowledge of data analytics so they can understand what's rapidly becoming feasible and to embrace the idea that data should be core to their business. Only when that top-level perspective is in place can durable behavioral changes radiate through the organization. An important question should be posed to all managers at the outset: "Where could data analytics deliver quantum leaps in performance?" This exercise should take place within each significant business unit and functional organization and can be led by any senior executive with the influence and authority to inspire action.

Leaders at one large transportation company asked the chief strategy officer to take charge of data analytics. To stretch the thinking and boost the knowledge of top managers, he arranged visits to big data–savvy companies. Then he asked each business unit to build data-analytics priorities into its strategic plan for the coming year. That process created a high-profile milestone related to setting real business goals and captured the attention of the business units' executives. Before long, they were openly sharing and exploring ideas, probing for new analytics opportunities—all of which helped energize their organizations.

CFOs can help shape the top-level perspective from the outset, just as they do in strategic planning, by asking how managers plan to deploy IT infrastructure, software, and people—and how it all will generate returns on the investment. Is the up-front cost the extent of it, or will the company eventually need to double down on its investment?

Defining an approach to data analytics

Like any new business opportunity, data analytics will underdeliver on its potential without a clear strategy and well-articulated initiatives and benchmarks for success. Many companies falter in this area, either because no one on the top team is explicitly charged with drafting a plan or because there isn't enough discussion or time devoted to aligning on priorities.

What the planning process typically lacks is a clear sense of the two to five applications of data that will help the company deliver better value. The more the process is tied to value, the more confidence managers can have in their investment—and, in our experience, the more likely they are to deliver. Think, for example, about 15 years ago, when systems for customer relationship management based on enterprise resource planning first emerged. The promise sounded the same. Yet with all that data, companies still had a high failure rate because they were not worried about the process, tools, and the changes at the front line.

At one telecommunications company, the CEO was keen to move ahead with data analytics, particularly to improve insights into customer

retention and pricing. Although the company moved with alacrity to hire a senior analytics leader, the effort stalled quickly. To be sure, the analytics team did its part, diving into modeling and analysis. However, business-unit colleagues were slow to train their midlevel managers in how to use the new models: they didn't see the potential, which frankly wasn't part of "their" strategic priorities.

As we have argued previously,[2] capturing the potential of data analytics requires a clear plan that establishes priorities and well-defined pathways to business results, much as the familiar strategic-planning process does. Developing that plan requires leadership. At a North American consumer company, the CEO asked the head of online and digital operations, an executive with deep data knowledge, to create the company's plan. The CEO also insisted that it be created in partnership with a business-unit leader who was not familiar with big data. This partnership—combining a data and analytics expert and an experienced frontline change operator—ensured that the analytics goals outlined in the plan were focused on high-impact business decisions. Such decisions included how to integrate the marketing function across channels, improve next-product-to-buy capabilities, and coordinate cross-channel product assortments (making sure the right products are carried in stores and are supported by the right complementary products online, for example, or up-selling when customers buy products online but pick them up in-store). Moreover, after these executives shared their progress with the top team, their collaborative model became a blueprint for the planning efforts of other business units.

Determining what to build, purchase, borrow, or rent

Another cluster of decisions that calls for the authority and experience of a senior leader involves the assembly of data and the construction of

advanced analytics models and tools designed to improve performance. The resource demands can be considerable. With multitudes of external vendors now able to provide core data, models, and tools, top-management experience is needed to work through "build versus buy" trade-offs. Do strategic imperatives and expected performance improvements justify the in-house development and ownership of fully customized intellectual property in analytics? Or is reaching scale quickly so important that the experience and talent of vendors should be brought to bear? The creation of powerful data assets also may require the participation of senior leadership. Locking in access to valuable external data, for instance, may depend on forging high-level partnerships with customers, suppliers, or other players along the value chain.

The radically diverging paths that retailers have chosen underscore the range of options leaders must weigh. Several retailers and analytics firms have established long-term contracts covering a broad sweep of analytics needs. Other large players, both brick-and-mortar and online, have invested in deep internal data and analytics expertise. Each of these choices reflects a dynamic set of strategic, financial, and organizational requirements that warrant the attention of senior executives.

Securing analytics expertise

Under almost any strategic scenario, organizations will need more analytics experts who can thrive amid rapid change. The data-analytics game today is played on an open and often cloud-based infrastructure that makes it possible to combine new external and internal data readily and in a user-friendly fashion. The new environment also requires management skills to engage growing numbers of deep statistical experts who create the predictive or optimization models that will underwrite growth.

The hunt for such talent is taking place in what has become the world's hottest market for advanced skills. Retaining these valued employees and getting them to connect with business leaders to make a real difference is a true top-management task—one that often demands creative solutions. The leader of a big data campaign at a major consumer company, for instance, decided to invest in an analytics unit distant from

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company headquarters. This other locale had abundant talent and a cultural environment preferred by data scientists and engineers. The leader then closed the loop, ensuring that each unit of the analytics team had a direct connection to a business-unit team at the company.

Mobilizing resources

Companies are often surprised by the arduous management effort involved in mobilizing human and capital resources across many functions and businesses to create new decision-support tools and help frontline managers exploit advanced analytics models. In many cases, the task of implementing big data decisions gets delegated to lower-level managers who lack the authority to secure budget funding or move the necessary employees. Take the example of another transportation company, where middle managers across product areas were tasked with identifying data-analytics opportunities and then pushing them forward. The analytics managers were routinely frustrated when data teams failed to deliver data on schedule or in usable formats. When it came time to embed the resulting analytics into customized tools, managers faced additional frustrations as urgent requests worked their way through routine budgeting and planning processes.

The CFO's contribution is especially important in this regard, as freeing up budgets or making purchase decisions can enable the executive team to move on the agreed-upon plan. The CFO or another empowered senior player is vital to breaking down the institutional barriers that frequently hamper efforts to supercharge decisions through data analytics. Success requires getting a diverse group of managers to coalesce around change—encouraging alignment among IT, business-line, analytics, and training experts. The possibility of failure is high when companies don't commit leadership.

The company above, for example, gave the task of stepping up the pace of its analytics agenda to a top marketing and sales executive, who assembled cross-functional teams including database managers, analysts, and software programmers. The teams rotated across analytics opportunities, steering them from launch to implementation in six- to eight-week bursts. Through this rapid mobilization, the company checked off several analytics priorities only months after the marketing leader took charge.

Building frontline capabilities

Many companies' big data initiatives underinvest in their efforts to ensure that the front line uses new insights to make better decisions. The sophisticated analytics solutions that statisticians and scientists devise must be embedded in frontline tools so simple and engaging that managers and frontline employees will be eager to use them daily. The scale and scope of this adoption effort—which must also involve formal training, on-the-job coaching, and metrics that clearly define progress—shouldn't be downplayed. In our experience, many companies spend 90 percent of their investment on building models and only 10 percent on frontline usage, when closer to half of the analytics investment should go to the front lines.

Here, again, we have seen plenty of cases where no one on the top team assumed responsibility for sustained ground-level change. Lacking senior accountability and engagement, one financial-services company weathered several waves of analytics investment and interest only to have efforts fizzle when training and adoption fell short. Dismayed, business-unit leaders then took

charge, investing in ongoing training sessions for managers and end users, pushing for the constant refinement of analytics tools, and tracking tool usage with new metrics. Over time, thanks to the consistent application of analytics, the transformation effort gained the hoped-for momentum.

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At all companies, top teams—and board members as well—must better understand the scale of what's needed to ensure data-analytics success. CFOs in particular should play an active role in ensuring that analytics are focused on high-value opportunities, that resources are allocated to these efforts, and that results are measured and assessed.

[1] See Dominic Barton and David Court, "Making advanced analytics work for you," *Harvard Business Review*, 2012, Volume 90, Issue 10, and David Court, "Putting big data and advanced analytics to work," September 2012, mckinsey.com.
[2] See Stefan Biesdorf, David Court, and Paul Willmott, "Big data: What's your plan?," mckinsey.com, March 2013.

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