For years, CIOs have worked to become true partners to their business lines and important strategic contributors to the C-suite, but a number of factors have kept the majority of them from making a true breakthrough at the highest level of their organizations. In fact, fewer than one in five of the 300+ CIOs surveyed for Ernst & Young’s recent report, “The DNA of the CIO: Opening the Door to the C-Suite,” say they have a seat at the top table.

Each organization is different, and management structures also tend to vary across industries, but there are some common themes that emerge from the study. One is that senior management tends to perceive the IT group as a support function or as a manager of outsourced services. CIOs also too often fail to discuss IT issues in terms of the value they add to the business. Finally, some simply lack the political or business acumen necessary to succeed in the C-suite. Nonetheless, most CIOs still say they aim to become innovative leaders of the business. But how they can achieve that transformation?

For CIOs who aspire to become true strategic partners to the enterprise and leaders in the C-suite, big data may offer them a way to significantly impact business performance and move up the ladder. The ability to obtain, sort, process, analyze and distribute data intelligently throughout the organization has never been more mission critical. At the same time, the proliferation of new sources of data – both internal and external, structured and unstructured – have given companies a unique opportunity to seize the reins and get answers to specific questions that once might have been inaccessible. Because CIOs are positioned at the nexus of the information flowing into and out of the company, the rise of big data provides them with a unique and perhaps unprecedented opportunity to demonstrate their strategic importance.

Nearly four in 10 CIOs cite overcoming a lack of support from their executive management teams as one of the biggest barriers they face to become more strategic. In a worrying number of businesses, management remains stuck in the old perception of IT as a back-office function or “help desk” that operates in the basement data center. In line with this perception, senior executives often aim to keep discussions with the IT organization centered on budgets or software implementation, with few seeking to engage them in wider discussions about the value of technology as a strategic driver of growth or as a source of operational insight.

The emergence of big data as an issue at the very top of CIOs’ agendas can change this. The CIO’s contribution in any business can be wide-ranging in its scope, involving execution of the IT basics and budget, enablement of business advancement by brokering highly targeted information and helping to develop the organization’s overall business model. The growing need for companies to effectively manage information flow gives CIOs the ability to spend more time on the second and third tasks, which are the most value-added and influential.

While the rise of big data on the corporate agenda might provide CIOs with an opportunity to reposition themselves in the company’s management hierarchy, there are a number of important traps to avoid as they work their way up the strategic ladder. These include:

- Confusing the availability of data with data value.
- The human bottleneck and underestimating the importance of data consumption and visualization.
- Attempting to apply old rules to the new, emerging data environment.

**Data Availability versus Data Value**

More data is available today than ever before. In 2011, the global spend on data was $25 billion, according to Burton Taylor Consulting, and it was predicted to top
$28 billion in 2012. A number of factors are driving this growth, including:

- Financial market data is becoming more granular and fragmented, even as demand from investors and regulators for information of all kinds keeps increasing.
- Consumer behavior data is being collected in vast quantities to feed retailers’ forecasts and inventory control models.
- Overall, models are becoming more complex and demanding more data from more sources.

Inefficiencies can arise quickly when different business lines purchase or collect data independently, which is often the case. These kinds of overlaps can also result from mergers and acquisitions or silos inside the enterprise. Too often, this results in the collection of data that is not strategically useful to the CIO or to senior management.

The CIO is the only executive with a view of all the data that the business needs and uses. By remaining well-versed in the imperatives of each business line and keeping a tight grasp on the various streams of information, he or she can decide what data is crucial, how and where it can be acquired, and how it can best be focused and disseminated throughout the organization. CIOs might also want to consider adding a “first line” of analytics to data as a way to make their contribution less of a mechanical exercise and more impactful for their C-suite colleagues.

The chief focus of data collection should always be addressing critical business issues, rather than gathering information simply because it’s there. “Build it and they will come” is not a substitute for a strategic enterprise intelligence plan. The CIO can play a value-added role here — helping the organization avoid wasting money and time on data collection and analysis exercises that go nowhere.

The Human Bottleneck

Most data is virtually free — storage has never been more plentiful — and processing power continues to grow year over year. This leads some executives to think that bringing in more data will, by itself, lead to better business outcomes. The problem is that data must be presented in a way useful to humans, thus creating a bottleneck.

This bottleneck is due to an underestimation of the importance of data consumption and visualization. To avoid swamping businesses with masses of data that they cannot manipulate, CIOs need to consider how to best present relevant data to users in the most efficient way.

There are many methods that CIOs can use to overcome these human bottlenecks. While there are hundreds of visualization techniques, the general challenge is simple: Business analysts and users of information within most companies are accustomed to rapid access to creatively presented data in their personal lives, whether on a mobile phone, their desktop or a tablet. CIOs’ efforts should focus on closing the visualization gap and giving their colleagues the same flexibility to interact with business data as exists with personal data. This includes mobile delivery, creative presentation, the development of custom reporting applications and BYOD considerations.

Old Dogs and New Tricks

Many CIOs came up through the ranks when the only thing they had to deal with was straightforward text or number-based data. Classical, relational data models handled this type of information efficiently. Today, a growing proportion of data entering the enterprise is unstructured, from social media content to video to customer input from mobile devices. All of this needs to be integrated, analyzed and made accessible in a useful manner — something that classical data models and classically trained IT professionals are not designed to do.

Managing the flood of unstructured data will require new skill sets and fresh ideas. IT specialists who have worked solely in the structured data environment might be unable to add much value. CIOs will need to recruit a new breed of data scientists or find ways to equip their current talent to meet these new demands.

Seizing the Day

The role of the CIO is at a critical turning point. IT executives who fail to come to grips with the changes that are sweeping their industries risk being relegated to a support function, or supplanted by their C-suite peers or those in newly created positions. Already, many organizations are contemplating the addition of chief data officers or chief digital officers to craft and deploy enterprise data strategies.

Big data presents CIOs with a golden opportunity to transform themselves and their enterprises while demonstrating their strategic value, but avoiding landmines and pitfalls along the way will be critical to this transformation. It’s a daunting task, but CIOs who can accomplish it will deliver tremendous value to their organizations, while helping themselves.

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