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Analytics:
Five skills that can help finance soar

In the five-plus years since analytics first entered the business mainstream, many finance departments have developed at least a baseline capability to leverage data for driving better decision-making. Some have even become sophisticated practitioners, tapping the power of analytics to inform a number of strategic opportunities, from price optimization to margin analysis to new product forecasting.

The gap separating the dabblers from the doers, however, remains wide, and the question has to be asked: Why?

One core differentiator is bench strength. In order to move beyond descriptive analytics (tasks such as historical transaction analysis, dashboards, scorecards, and key performance indicators), and into the realm of predictive and prescriptive analytics (i.e., risk-adjusted simulations, statistical-based forecasting, dynamic price optimization, and other strategic forms), CFOs need to understand the five distinct skill-sets that are required to make the leap. In this issue of *CFO Insights*, we'll outline those skills and help chart a course for identifying, acquiring, and developing that talent.

Scientists, storytellers, and more
Finance departments have plenty of motivation to address the analytics talent issue. Evidence suggests that those companies that go beyond the "table stakes" of descriptive analytics and become adept at prescriptive and predictive analytics reap substantial rewards. For example, a 2015 Deloitte survey found that companies that qualify as doers (a mere 16%) arrive at insights 53% faster than dabblers, and are 38% better at making course corrections.[1]

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More recently, a June 2016 Deloitte Dbriefs webcast attended by more than 3,000 finance professionals found that only 13.3% are pursuing the full complement of descriptive, prescriptive, and predictive analytics, while nearly three times as many (34.9%) indicated that they do not even know which forms of analytics their companies have adopted.[2]
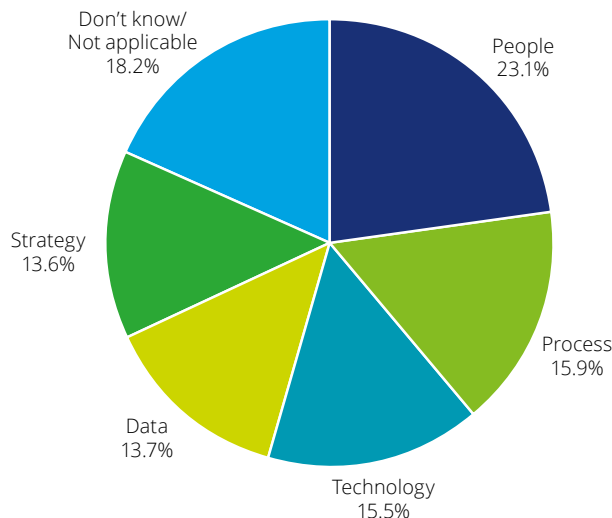
Asked what may be holding back their analytics efforts, respondents most often cited people, followed by process, technology, data, and strategy (see "Impediments to analytics efforts," Figure 1).

What will it take to solve the people part of the puzzle? For starters, CFOs need to understand that a robust analytics capability often requires five distinct skill-sets/roles:

- **Enterprise data scientists**, whose experience in statistics and quantitative techniques enables them to analyze data and develop the relationship models that underpin analytics initiatives;

- **Data management professionals**, who can support the extraction, cleaning, and transformation of structured and unstructured data, and who can develop strategies for assembling disparate sources of data and for storing that data to facilitate future analytics projects;

- **Domain/sector practitioners**, who can define the relevant business issues and drivers, as well as translate algorithm findings into business rationales;

- **Data storytellers**, who know how to analyze and present the output of analytics efforts, often in a highly visual way that facilitates data-driven actions;

- **Technology application experts**, who are adept at working with the production tools needed to support analytics efforts from conception to dissemination.

In the aggregate, this collection of skills may sound daunting, but there are two important points to consider: You don't need to immediately secure all of these capabilities to take analytics to the next level, and not all the skills need to reside within finance.

Figure 1. Impediments to analytics efforts

Source: Deloitte Dbriefs webinar, "Finance analytics demystified: Unlocking the value of data-driven decision making;" 3,244 votes total

Instead, think in terms of staging. The important skills needed in the early phase of finance analytics include having an understanding of the business (domain/sector practitioners), being able to get results in the form of analytical solutions (technology-oriented talent), and communicating effectively about analytics (data storytellers). Data-management and statistical skills can often be added to the mix as the company becomes more sophisticated in its analytics capabilities.

For simple analytics projects, though, the necessary statistical capabilities may already exist within finance. Take correlating the nonfinancial metrics on a balanced scorecard to financial metrics, for example. Even a newly hired business analyst may already have the skills to do the required work in a spreadsheet. Additionally, a number of companies are starting to train employees in statistics, with an eye toward enhancing their analytics capabilities.

Data scientists may be harder to identify, given that the ability to transform unstructured data into actionable insights is still relatively rare. But this capability may reside elsewhere in the organization, possibly within a central analytics group that can benefit from exposure to different business functions on a rotational basis, as some large companies are doing. Failing that, this skill can be acquired from third parties, and may come into play only for more sophisticated kinds of projects. In addition, technology vendors are beginning

to introduce automated statistical discovery capabilities into their software. This will likely enable more people to benefit from statistical insights without requiring the analytics team to include someone with a Ph.D. in the field, or an analyst who has spent years developing statistical skills.

What is essential to analytics effectiveness, though, is having good data storytellers. After all, the goal of analytics is to leverage the insights it provides into tangible actions that enhance the organization's success. That often requires putting results into the kind of context best communicated by a "story," be it a visual representation or some form of narrative (see sidebar, "What makes a good analytics story?"). While storytelling is a skill that is often missing both at business schools and in the marketplace, it is one CFOs need to develop, both in themselves and among their staff, to ensure that the results of analytics projects are communicated in a way that enables and motivates the intended audience to take constructive action (see "What's your story?" *CFO Insights*, July 2016).

Rolling out an analytics talent plan
With a better understanding of the five skill-sets needed to produce descriptive, prescriptive, and predictive insights, CFOs can then map those capabilities against current staff aptitudes and decide which ones can be met internally and which may have to be filled via hiring, partnering, or through third parties.

One way to begin is to simply poll finance staffers about their current analytics capabilities or relevant experience, and also gauge their interest in making analytics a larger part of their job responsibilities. Addressing the needed skills through training and development programs is also part of building out an analytics capability, and such efforts may benefit from the creation of rotational programs that give analysts exposure to the needs of tax, treasury, and other specialty areas, enabling them to develop their analytics capabilities to the fullest.

To elevate analytics to the next level, though, may require creating a dedicated analytics function within finance, led by a director of analytics or similar position, who serves as the orchestrator of the applicable skills, at least for the analytics projects that finance spearheads. This individual is typically a midlevel finance staffer who has accumulated some skills in data management and analysis. Some companies choose to embed their finance analytics group within the financial planning and analysis function, while others make it a separate group altogether. Regardless of the model chosen, companies tend to start small, with three to four people in the group, and then expand as an established record leads to increased demand, both from within finance and from other business units.

Effectively organizing the analytics function as it expands, however, can present its own challenges. Think of it as a continuum, with a dispersed model at one end in which many small analytics teams are dedicated to functional areas, including finance, and a centralized model at the other, in which a single analytics team addresses the needs of all areas of the business. In between, options include the creation of an analytics Center of Excellence and other hybrid models characterized by a mix of centralized and decentralized capabilities. Often, one of these hybrid models is a good place to start.

CFOs can also play an important role in propelling the use of analytics by taking a number of important steps, including:

- Setting a personal example by conspicuously using analytics to make important decisions;

- Dedicating a pool of funds to support analytics activities and projects;

- Talking frequently about the value of analytics and data-driven decision-making, both within finance and by advocating for the use of analytics across the organization;

- Working closely with analysts, regardless of where those analysts reside, by providing access to data, assessing problems and opportunities, and questioning the methods and assumptions behind the analysis;

- Developing a close working relationship with the chief information officer (CIO), because data governance and systems capabilities are critical to the effectiveness of analytics (see "Three ways to strengthen the CFO-CIO partnership," *CFO Insights,* May 2016).

Addressing the business imperative

While companies vary widely in their adoption of analytics, there is a broad awareness that finding people with the required skills is a challenge. In fact, the same Deloitte webcast that found that "people" topped the list of macro challenges also found that, when it comes to building an analytics team, the availability of talent tops the list of potential impediments.[3]
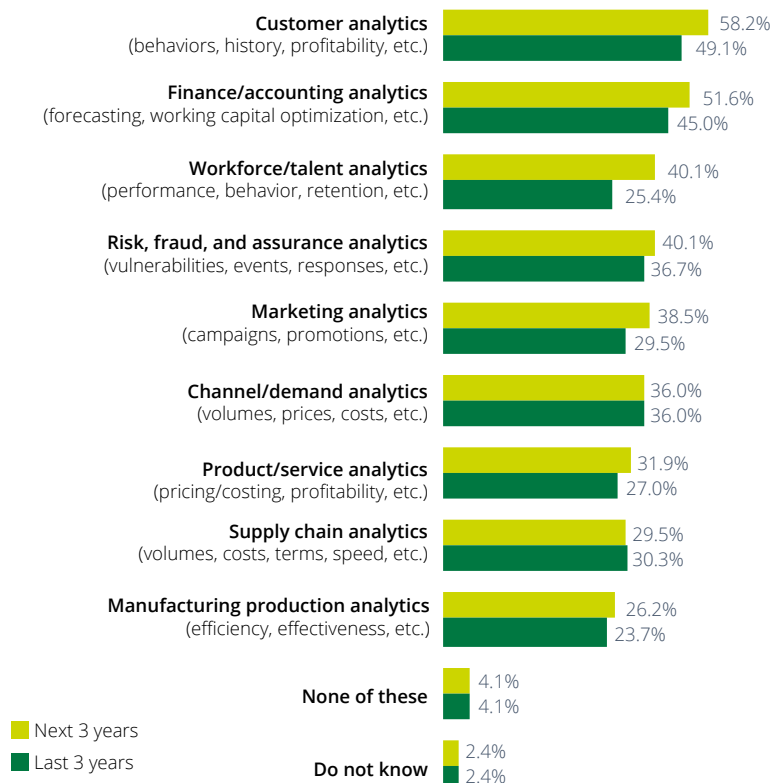
Given that a recent *CFO Signals*™ survey found that more than half of responding North America's CFOs are investing substantially (or plan to invest) in customer analytics, with finance/accounting analytics running a close second in terms of priority, the need for CFOs to ramp up the analytics talent pool within their finance departments is clearly a business imperative (see "Where analytics investments are being made," Figure 2).[4]

Making analytics a core competency for finance depends not only on people, of course, but also on strategy, process, data, and technology. That said, CFOs are ideally positioned to address the talent challenge, which can help move the needle on analytics accomplishments even if readiness in other areas is lagging. By understanding the skills needed, developing a plan to fill gaps, and creating a culture of continuous development, CFOs can not only take a big step forward in embedding analytics skills within finance, but can also help the whole organization leverage the many possibilities that analytics offer to transform operations. ◀

Figure 2. Where analytics investments are being made
Percent of CFOs selecting each type of analytics investment (n=122)

Source: *CFO Signals*, Q3 2016, US CFO Program, Deloitte LLP

What makes a good analytics story?

The ability to put financial and analytical information in a context useful to various constituencies is critical to analytics success. To help hone the delivery, CFOs might consider offering potential storytellers some useful advice, including:

- *Keep it simple, but engaging.* Don't assume that the numbers tell the story. Some companies have won attention for the outcomes of their analytics efforts by communicating them via 3-D models, music videos, interactive games, and apps.

- *Focus on the result and what it suggests.* Don't waste time explaining how you got to the result, and avoid using technical jargon that your audience doesn't understand.

- *Emphasize the problem or objective being tackled.* While a good story ends with recommended actions and predictions about their impacts, begin an analytics project by talking to your audience about what needs to be solved. That avoids having the team members feel as if they are being told what to do. It also helps provide the context for the story that will ultimately be told.[5]

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End notes:

1. "From Dabbling to Doing: The Age of the Intuitive Enterprise," Deloitte Development LLC, 2015.
2. "Finance analytics demystified: Unlocking the value of data-driven decision-making," Deloitte Dbriefs, June 22, 2016.
3. Ibid.
4. *CFO Signals*, Q3 2016, US CFO Program, Deloitte LLP.
5. Adapted from *Keeping Up With the Quants: Your Guide to Understanding and Using Analytics*, Thomas H. Davenport and Jinho Kim, Harvard Business Review Press, 2013.