

Building an effective analytics organization

October 2018 | Article

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To maximize the potential of advanced analytics, banks and payments providers need to design an organizational structure that supports the mission.

As companies recognize the predictive power of advanced analytics, many are hoping to use AA to drive their business decisions and strategies. While most companies understand the importance of analytics and have adopted common best practices, fewer than 20 percent, according to a recent McKinsey survey, have maximized the potential and achieved AA at scale.

In working with a wide range of organizations, McKinsey has seen many companies start their analytics journey eagerly, but without a clear strategy. As a result, their efforts often end up as small pilots that fail to scale or have significant impact. Some of these pilots have been mere exercises in “intellectual curiosity” rather than a serious effort to change the business. Consequently, they are not designed with an end-to-end approach that incorporates the necessary conditions for implementation. Instead, the pilots are carried out in small labs with limited connection to the business, and fail to provide the answers the business needs to move forward. Even if a pilot does answer the right questions, it may not address the cultural aspects that would, for example, make a sales representative trust a model more than her own experience.

These companies quickly become frustrated when they see their efforts falling short while more analytically driven companies are leveraging their data. Democratization of data is blurring sector boundaries; businesses will increasingly find themselves disrupted not by the company they have been monitoring for the last several years, but by a newcomer from another industry. Being the best in an industry is no longer enough; now companies must aspire to be at least at par across industries to compete effectively. Functional expertise, beyond specific sector expertise, will become more and more relevant.

With this in mind, McKinsey conducted an extensive, primary research survey of over 1,000 organizations across industries and geographies to understand how organizations convert AA insights into impact, and how companies have been able to scale analytics across their enterprise (see sidebar “McKinsey’s Insights to Outcome Survey”). In this article, we will discuss how to design, implement, and develop the right organization and talent for an AA transformation. An AA transformation usually requires new skills, new roles, and new organizational structures.

Building an AA-driven organization

Top-performing organizations in AA are enabled by deep functional expertise, strategic partnerships, and a clear center of gravity for organizing analytics talent. These companies’ organizations usually include an ecosystem of partners that enables access to data and technology and fosters the co-development of analytics capabilities, as well as the breadth and depth of talent required for a robust program of AA.

For a company aspiring to an AA transformation, these elements can be incorporated into any of several organizational models, each of which is effective as long as there is clear governance, and the company encourages an analytical culture across business units to learn and develop together. Answering a few key questions can help to identify the best model.

1. *Centralized, decentralized, or a hybrid:* First, the company should decide whether to create one centralized AA organization, in which AA stands alone in a center of excellence (COE) that supports the various business units; a decentralized organization,

in which analytics is embedded in individual businesses; or a hybrid, which combines a centralized analytics unit with embedded analytics areas in some units.

Our benchmark of several organizations indicates that any of these models can work effectively, as long as governance is established to prevent the various units from becoming islands. The proposed organization depends somewhat on how advanced the company and the business units are in their use of analytics.

It is important to note that any organization will change over time as the AA transformation evolves. Some companies start out decentralized and eventually move AA into a centralized function, while others that are centralized later move into a hybrid model of hubs and spokes. Top-performing companies prepare for these eventual changes.

The choice between centralization and decentralization is not an all-or-nothing decision but should be decided per sub-function. Data governance, however, should be centralized, even if data ownership is not. For data architecture, top-performing companies often have data centralized within business units. This data typically includes data from marketing, sales, operations, and so on. Most top-performing companies centralize partnership management; otherwise, competing or redundant partnerships could inadvertently be set up in various parts of the organization, and intellectual property could be at risk.

2. *To outsource or not to outsource:* Another decision is whether AA talent should be partially outsourced, and if so, how. Should outsourcing be limited to low-level data analytics activities? Or should the company establish several tactical partnerships for selected tasks? Or would a strategic partnership with an external vendor be the best approach? AA will effectively become the “brain” of the organization, so companies should be careful not to outsource too much. Top-performing companies often keep analytics that provide a competitive advantage—such as pricing analytics—within the organization. A central, internal unit can oversee all AA outsourcing, and partnerships can be established for specific AA solutions or to bring in particular assets, such as unique sources of data or advanced solutions.
3. *Locating the AA unit:* Yet another important decision is where to locate the AA unit. AA is most effective when it is cross-functional, accessible enterprise-wide, and integrated with the business. Various levels and functions can host it, but the final location should

have enough visibility and access to the C-suite to break through inertia and enable transformation. It is helpful if the unit has an enterprise-wide view, given its transformational potential for all functions.

The AA unit is often most effective when it is a sub-unit of business intelligence—as long as this area has an enterprise-wide perspective—or of strategy or digital. Some companies locate their AA units in IT, but this arrangement can be challenging. IT staff—who are used to managing longer-term projects that are often disconnected from the business—may not be prepared to manage short-term, agile AA projects. AA projects can end up last on their list of priorities. Including AA within marketing or operations, meanwhile, can limit its potential to transform the remaining parts of the organization.

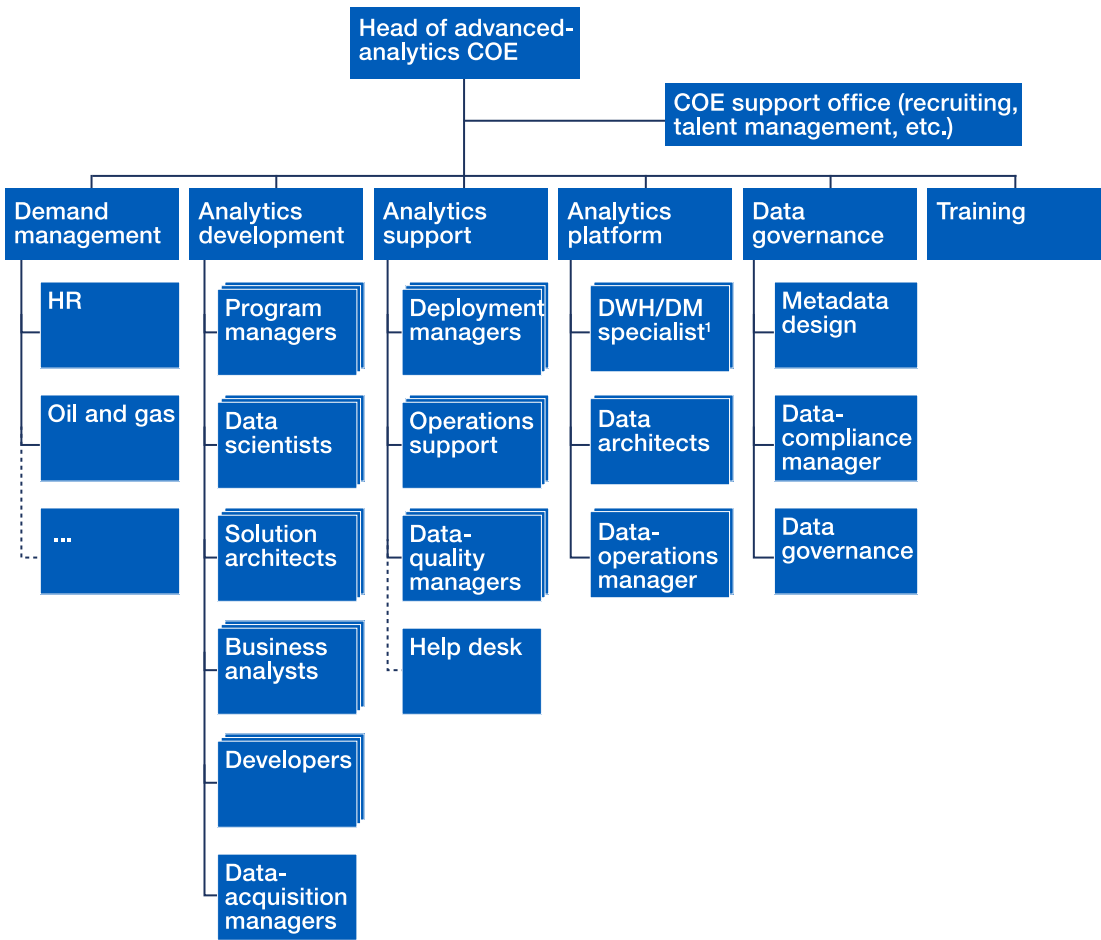
Staffing the AA center of excellence

Sixty percent of top-performing companies in AA have a “center of gravity” for their analytics efforts, according to our survey. They typically include a specific set of roles, skills, and capabilities within the COE (Exhibit 1), including data scientists (“quants”), data engineers, workflow integrators, data architects, delivery managers, visualization analysts, and, most critically, translators from the business who act as a bridge between the COE and business units. The translators usually have a combination of business, analytics, and technology skills and are found in the business partner role in data analytics leadership.

Exhibit 1

Top-performing companies usually have a 'center of gravity' for their analytics efforts.

Advanced-analytics center of excellence (COE)



¹Data-warehouse-management/data-management specialist.

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Many COE roles are filled with highly specialized analytical resources recruited from advanced degree programs in computer science or math. But these individuals must also be able to translate sophisticated models into simple, visual decision support tools for front-line employees.

They also need to have a collaborative mind-set, given the interdependencies among data, systems, and models. With translators bridging any communication gaps, team members from analytics and the business work together in two- to three-month agile “sprints” as they identify problems; find out whether relevant data exists and, if not, whether that data can be acquired; test their models; determine how those models will be put into production; and learn from the results.

The COE can be built in about 18 months, typically in incremental steps. It may start with five to ten data professionals, including data engineers, data scientists, and translators. In its end state, it likely will require significantly more. The number of translators needed will vary by business unit but is generally about 10 percent of business unit staff. Most companies source their translators from “client” business units and then train them, since these employees will have deep knowledge of the processes that AA is trying to optimize. These individuals are usually analytical, critical thinkers who are well respected in the company.

While the COE and some of its roles may emerge gradually, it is best to have the data, platform, and career paths needed for an AA transformation in place from the beginning. If the platform is still under development, adding more people may only make that development more complicated. And without a clear career path, attracting this scarce talent will be difficult. As much as possible, roles should be clearly delineated to prevent squandering valuable talent on functions for which they are overqualified, which can undermine retention.

Career development and strategic partnerships

Gaining an edge in analytics requires attracting, retaining, and sourcing the right talent. In McKinsey’s survey, 58 percent of respondents at top-performing companies say that their organization has deep functional expertise across data science, data engineering, data architecture, and analytics transformation. Top-performing organizations have four times as many analytics professionals and one and a half times more functional experts than other companies.

These companies also retain three times more talent—primarily by creating strong career development opportunities. People with superior analytics talent usually have many potential opportunities and thus need to see a clear career path and opportunities for growth within a company if they are to join or stay with it. Several career tracks should be available, as some analytics staff may wish to pursue a more technical profile, others may move into translator or integrator roles with the business, and some will likely move into managerial positions.

In all cases, these individuals tend to stay motivated if they are learning on the job and from one another. Achieving this goal requires a minimum scale for each analytics group. Having only one or two data scientists in each function will not help them learn, and they may have difficulty making themselves understood.

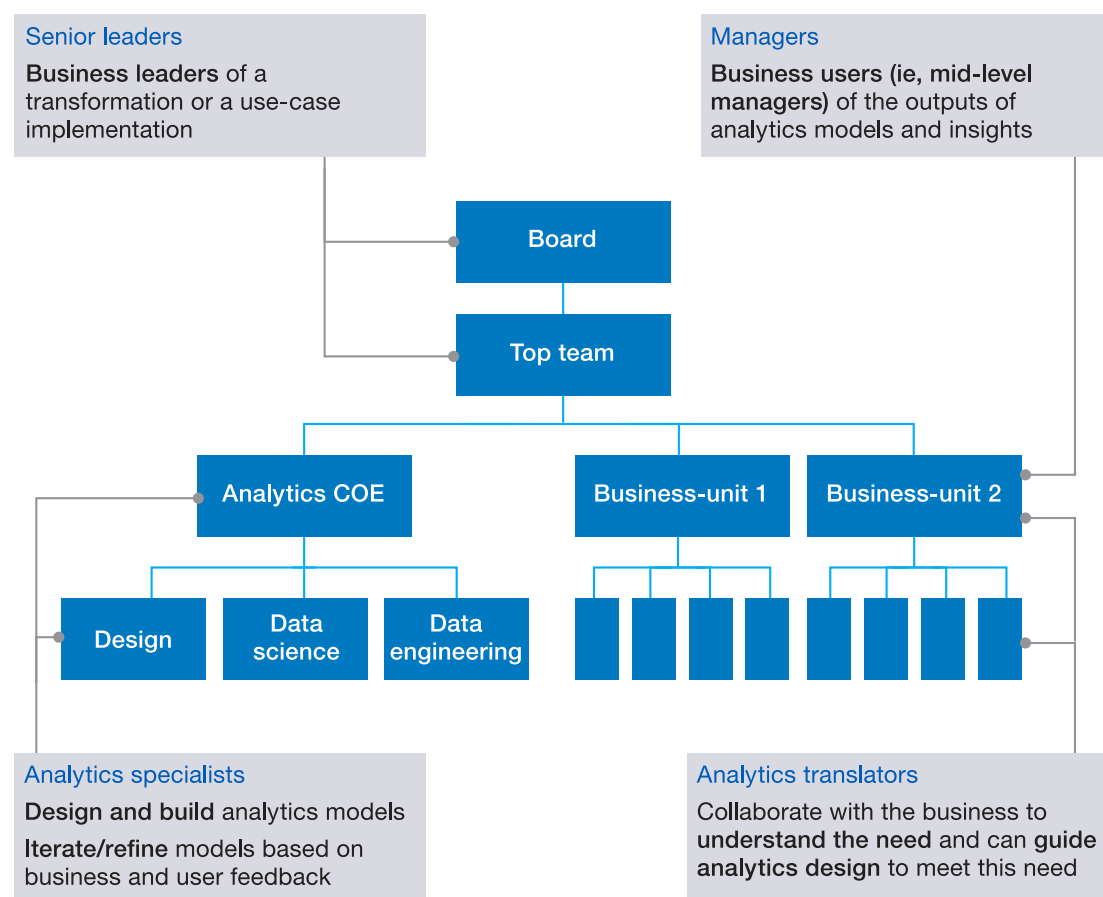
To fill any gaps in talent, 62 percent of survey respondents at top-performing companies say that they strategically partner with others to gain access to skill, capacity, and innovation. For example, a large, multinational retailer developed a strategic partnership with a start-up incubator that focuses on identifying cutting-edge technologies—such as drones—to transform the retail industry. The retailer found that employing a mix of in-house talent and smart, strategic partnerships with other organizations enabled it to get the best out of both, thus affording access to skills, capacity, and innovation on a much larger scale. Through the incubator, the retailer formed partnerships with start-ups and venture capital investors. The company also created a compelling value proposition for attracting top analytics talent.

Beyond the COE: training employees for cultural change

As detailed in [“Hidden figures: The quiet discipline of managing people using data,”](#) an AA transformation requires a profound cultural change, as the entire organization must change the way it operates. Employees need to learn to trust in AA, to understand what they can ask of it, and to know that AA can answer far more complex questions than traditional analytics ever could. Outside of the COE, then, employees at all levels—senior leaders, managers, analytics specialists, and analytics translators—need to be trained to be AA-proficient and to drive the transformation forward (Exhibit 2).

Exhibit 2

Beyond the center of excellence (COE), employees at all levels need to be trained.



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A sweeping—but feasible—transformation

Transforming a company to be AA-driven is a monumental task that should not be undertaken in one fell swoop, but instead incrementally, based on use cases. Since AA can and will transform a company, the effort to cultivate an AA-driven organization is most effective when it comes from the top, from senior executives. If a company focuses on the value of advanced analytics and builds AA capabilities as needed—while still having the data, platform, and talent strategy in place from the beginning—its AA transformation will succeed.

About the author(s)

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