Building an Analytical Organization

The Business Analytics Concours

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NEXT GENERATION ENTERPRISES ON DEMAND

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Executive Summary

Analytics is often viewed primarily as an exercise in technology and data, but success is just as often a matter of leadership, culture, and human capabilities. The best analytical competitors are invariably replete with leaders who are passionate about analytical decisions, analysts who understand their business areas as well as esoteric algorithms, and managers and front-line employees who know the analytical underpinnings of their business processes. The logical response for aspiring analytical firms would simply be, "Get me some of those people!" However, there are several challenges in doing so:

- Analytical people aren't easy to hire or to develop – and perhaps the most difficult role to fill is that of the analytically-driven senior executive.
- Highly analytical people aren't like other employees, and their "care and feeding" is difficult.
- There are a variety of ways to organize analytical functions within an organization, each with pluses and minuses.
- Anyone wanting to build an analytical culture – as with any other new cultural emphasis – will encounter a severe shortage of explicit directions for doing so.

Despite these challenges, organizations need to build analytical capability quickly. They need to get the right people in place, and the people need to be guided by a strong and persistent analytical orientation in the cultural fabric. They need to build a critical mass of analysts who can share ideas and learn from each other, but the analysts also need to be closely attached to business units and their analytical problems and issues. The analysts must include not only seasoned professionals, but also "analytical amateurs," who take analytical decisions and actions daily, are just as important in making business analytics pay off. The organization needs the discipline of an enterprise-wide approach to analytics, but also sufficient innovative and entrepreneurial spirit to create new initiatives at every level of the business. In this research project we explored best practices at meeting these difficult – and occasionally contradictory – objectives.

About this Research

This research was divided into two principal tracks. The first is **building analytical capability across an enterprise**. This discussion is built around two frameworks. The DELTA model describes five elements necessary to get started with analytics and succeed with analytical applications in any focused business domain:

- **D** for accessible, high-quality *data*
- **E** for an *enterprise* orientation
- **L** for analytical *leadership*
- **T** for a long-term strategic *target*
- **A** for a cadre of *analysts*

The FORCE model describes five additional elements necessary to institutionalize analytical orientation and processes across an enterprise over the long term:

- **F** for *fact*-based decision making
- **O** for *organizing* analysts and other resources
- **R** for continual *review* of business assumptions and analytical models
- **C** for a reinforcing *culture* of "test and learn"
- **E** for *embedding* analytics in major and differentiating business processes

The second track is **building and managing analyst groups**. It goes into depth on the "analysts" element of DELTA and the "organizing" element of FORCE. This discussion is centered on four key questions that arose repeatedly in out field research:

- What mix of analyst skills do we need?
- How should we consolidate our analyst resources?
- What should we do when demand exceeds supply?
- How can we best engage our analysts?

This research also contains a series of concise case studies exploring specific facets of building an analytical organization.

Major Findings

- There are two primary components to building a more analytical organization. One is to build the group of analytical professionals that will lead and facilitate the organization's analytical work, and the other, perhaps more challenging, is to move the entire organization in a more analytical direction. If companies are to become analytical competitors, analytics must be involved in a broad variety of strategic directions and initiatives, and involve a high percentage of employees.
- In terms of technology, many firms have siloed environments for analytics and business intelligence. In the past, many purchase decisions in this domain were made by user executives, rather than by IT, and the purchased hardware and software often supported a single application. While there is always a tradeoff between architectural simplicity and responsiveness to a particular business need, organizations wishing to become analytical competitors need to ensure that key technology resources are reliably accessible and well-managed.
- The specific way in which analytical resources and capabilities are organized is not terribly critical in the early stages of analytical competition. Over time, however, having the right organizational structure and processes can greatly influence the effectiveness of long-term initiatives. The key issues for an organization are ensuring that analytical resources are

applied to the firm's most strategic problems, and that strategic guidance over analytical capabilities is exercised.

- The most serious analytical competitors in the future will undertake systematic analysis of key decisions. They will assess who should make a decision, what information and analysis should inform the decision, what process is used to make the decision, whether the decision process should be automated, and so forth. Today such decision reviews are undertaken only rarely.

- The full specification of skills desirable in an analyst – quantitative, business, relationship – is seldom found in an individual. Thus, it is necessary to have the right mix of analytical "professionals," who use algorithmic tools and build models, and "semi-professionals," who focus on analytical business design and bridge between the professionals and their customers in the business.

- The trend is toward consolidation (but not necessarily total centralization) of analyst groups across the corporation, for two good reasons. One, if a company wants to differentiate itself in the marketplace through its analytical capabilities in major business processes, it doesn't make sense to manage analytics locally. Two, if analysts and analytical capabilities are scarce and expensive, it doesn't make sense to have them widely dispersed and managed locally.

- The business demand for analytical applications very often exceeds the available supply, for several reasons. Analysts, especially the Ph.D. statistician "professionals," may be in short supply – difficult to find, recruit, and retain. Pent-up demand can explode once a business gets a taste of analytics and notable applications succeed. Supply can be wasted on the wrong things, as when analysts spend too much time generating reports rather than building and maintaining models.

- Analysts seeks the same things in the employment deal as other valuable employees do – recognition, important work, capable colleagues, variety, and personal progress. But these preferences are more pronounced in highly educated employees such as analysts, and if their skills are in high demand, these employees can be more insistent that employers meet their needs – and quicker to jump ship if their needs aren't met.

Key Recommendations

- Moving the overall enterprise in a more analytical direction must be a multi-faceted initiative. Even if such a direction is supported by senior leaders throughout the organization, they will need to work across multiple fronts. The FORCE framework describes many of the components necessary to become more analytical over time.

- IT organizations wishing to gain or regain control over analytical technologies need to offer something in return – say, for example, service level guarantees and easier access to corporate data. Achieving more control for its own sake is usually not worth the trouble and the enmity of user-side executives.

- Leadership of an analytical transition should involve determining which areas of the business are most suited to analytical initiatives, putting middle-level analytical managers in place, and issuing frequent messages to the organization about the new analytical direction

that the organization is taking, and progress it is making along the journey. One way to send an authentic message is to set a personal example – use data, fact-based approaches, and analytics for key decisions whenever possible.

- Analytical competitors need to review their analytical activities both in the large and in the small. “In the large” means assessing how analytical capabilities fit the firm’s strategy and business model. When business or market conditions change, analytical activities need to change with them. “In the small” means that organizations need to continually review specific analytical models to ensure that they are still working as intended and are consistent with their business needs.

- If your enterprise at large is analytically oriented, focus on developing business knowledge in your professional analysts and having them work close to business operations. If your enterprise is not analytically oriented, then plan to rely more heavily on semi-professionals to work with business people, both conceiving applications and managing demand for analytics services.

- If you have “pockets of analytics” across the enterprise, employ the consolidation approach that fits your corporate structure and culture – direct reporting, dotted-line reporting, or consolidation mechanisms such as governance committees, centers of expertise, and program management offices. At a minimum, have dispersed analytics groups report dotted line to a central organization and form a community through a center of expertise.

- If demand for business analytics exceeds supply, explore all three primary means of aligning quality supply with quality demand:

  - *Increase supply* through hiring, outsourcing, improving infrastructure and work methods, and taming with like-minded groups such as Six-Sigma.

  - *Decrease demand* by enabling analytical “amateurs” to do more on their own, improving project evaluation and prioritization processes, and advising customers in the business on information sufficiency and other demand drivers.

  - Improve the quality of demand through executive education, strategic prioritization, and portfolio management.

- If you are committed to engaging and retaining your analyst talent, recognize them as a special segment of high-value employees, whose preferences and motivators may vary significantly from those of the average employee. Above all, make sure that the nature of the work itself meets their expectations and ambitions: Is it stimulating? Is it worthwhile? Does it enable them to learn and grow?

The Business Analytics Concours is an ongoing research and development program dedicated to enabling major corporations to improve business performance by expanding and focusing their analytic capabilities. The program brings together a select group of progressive corporations to work with Tom Davenport, a leader in business analytics, and nGenera, a leader in breakthrough business research.

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nGenera Corporation
Barton Oaks II
901 South Mopac
Suite 100
Austin, TX 78746
Tele: +1 512 904 3400

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www.ngenera.com