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Technology

Fresh Insights, Better Decisions, Great Outcomes:

Essentials for Excelling with Analytics

High performance. Delivered.

Can your organization react faster than its competitors to take advantage of today's turbulent business environment? If so, can it sustain its lead as conditions change in the future? If the answer to either question is "no," it's time to examine what's holding you back—and to make sure you have everything needed to make more of the right decisions at the right time, more of the time. Here are the fundamentals that build the solid data and technology foundations for highly effective analytics activities.

Every organization has to get better at how its leaders make decisions. It's not just that facts must replace hunches and hard data has to take over from instinct. It's also that senior executives today must manage and make sense of overwhelming amounts of data.

The data is not limited to what they and their value-chain partners continually generate, store, and retrieve—the data that resides in their collective data centers and that most business leaders now view as an asset. Today, it includes soaring volumes of external and largely unstructured data found in e-mails, tweets, blogs, video clips, and more—much of it generated by third parties. These days, those types of data must also be viewed as assets, and then incorporated into a holistic approach to data management.

Turning that wealth of data into usable benchmarks for sound business decisions is a real challenge. Managers must be able to turn information into insights, then convert insights into actions, and be sure those actions produce positive outcomes. Yet despite major investments in business intelligence (BI) tools over the last decade, many organizations still make decisions in ad hoc ways that may undermine peak performance. The truth is that for every timely, well-informed decision that leadership teams make today, too many other decisions are made late, made with few of the right inputs or with obsolete information—or not made at all. The information deluge complicates things further, creating a real risk of confusion.

A central part of the challenge is that most organizations struggle to master **analytics**—defined as the extensive use of data, statistical and quantitative analysis, explanatory and predictive models, and fact-based management to drive decisions and actions. Accenture's studies show that while a majority of executives concur that using analytics to derive actionable insights is important to future growth, a large proportion think that they are either not doing well enough or that they are not doing anything at all with analytics.

In a recent Accenture poll, two-thirds of senior managers at more than 500 blue-chip United States and United Kingdom organizations cited "getting their data in order" as an immediate priority. Longer term, the top objective for between two-thirds and three-quarters of executives is to develop the ability to model and predict behaviors and actions to the point where individual decisions can be made in real time, based on the analysis at hand. But the poll showed that if the executives are to realize that objective, their organizations must move fast. Almost 40 percent of respondents believe their current technological resources and systems significantly hinder the effective use of enterprise-wide analytics.

Clearly, business leaders need better ways to make decisions. Long-established corporations confront soaring competition from highly capable contenders from emerging nations. They face shrinking product lifecycles and far faster development cycles. They have to fight their way through thickets of regulation; they are exposed to greater volatility and higher risks in almost every aspect of business. And their talent, capital and ideas are far more mobile than they've ever been.

High performers build rock-solid analytical foundations

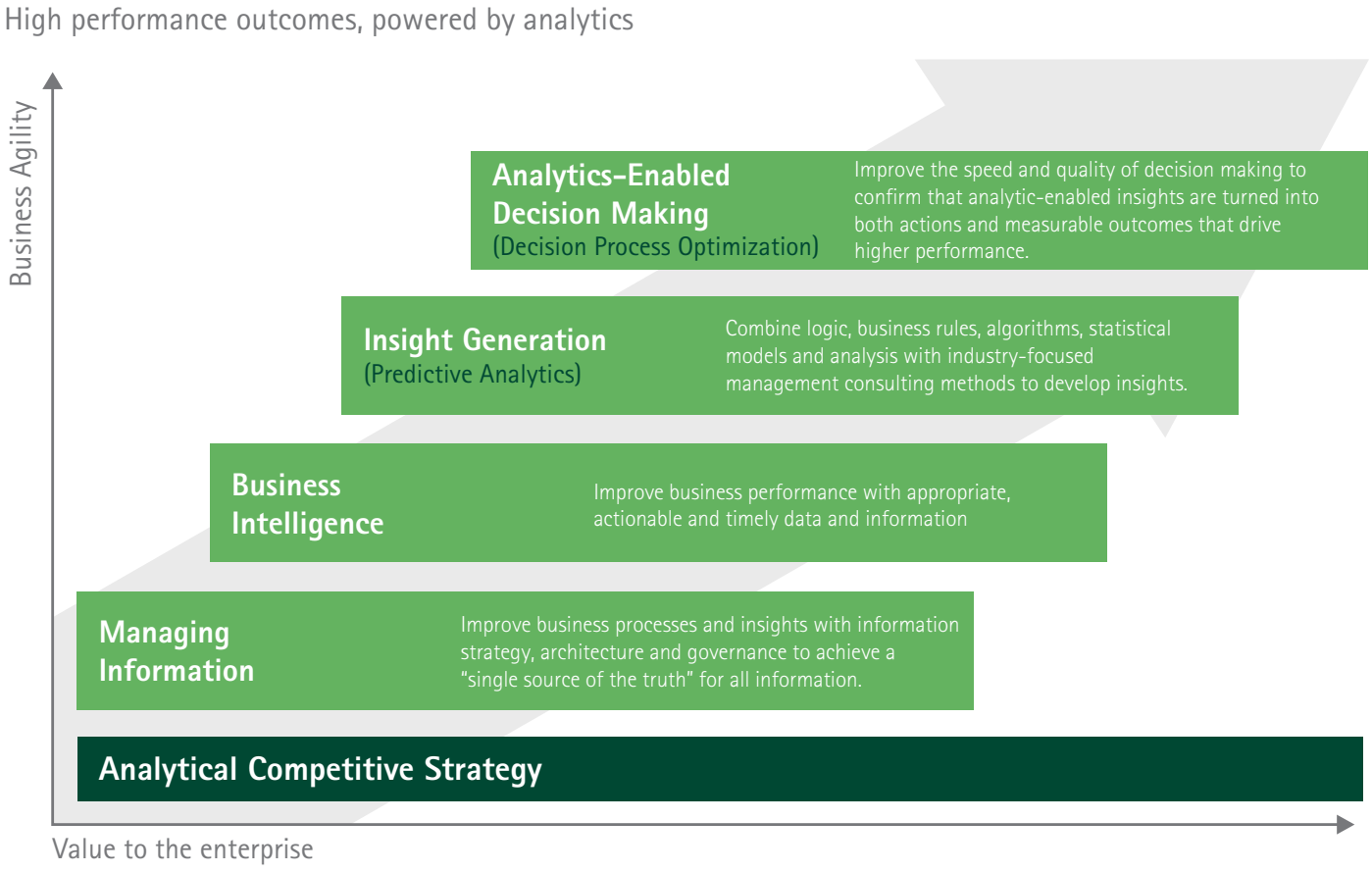
So what does it take to develop and support a cohesive, concrete approach to analytics? Analytics done right isn't only about using the most sophisticated software. It calls for creating, over time, an organizational culture infused with analytics expertise and ideas. It also means building very robust foundations in information management and business intelligence.

Accenture's empirical studies reveal that leading practitioners think in terms of a spectrum of analytics capabilities and make sure they have mastered the earlier stages before moving on to more sophisticated levels when such moves are deemed necessary. (See Figure 1.)

For some organizations, the ultimate goal is to have a true analytical enterprise—demonstrating the highest level of analytics capabilities. Accenture refers to this as the "analytics-enabled decision making" level—seen in high-performing organizations that have embraced an analytics mindset and can act on insights at scale, much as leading companies in the 1980s could demonstrate a complete Total Quality Management mindset as an imperative for driving continuous improvement in products and processes. Already, the most progressive enterprises are starting to piece together collaboration technology, social software and BI to create collaborative decision making environments.

For others, there are substantial benefits in moving another rung up the analytics ladder. They find they can make substantial gains in efficiency and cost-effectiveness by taking the steps necessary to become more analytical. There is no single starting point for an analytics journey; for instance, many organizations can do more to rework their data architectures to ensure that they can integrate all their different business processes to provide enterprise-wide views of their operations. Or a company that already has solid data-architecture underpinnings can often do more to shore up its analytics governance models in order to better manage data and content.

Figure.1: Leading organizations make sure they master the early levels of analytics maturity



A closer look at the analytics foundations

Regardless of where they are on their analytics journeys, leading organizations ensure that they have mastered the management of their information and established optimum BI practices. Each of those analytics levels merits a closer look:

Excelling at managing information

Leading organizations ensure that they excel along two vectors: consolidating and streamlining their information "infrastructure"—the physical layer—and refining their logical views of the data.

To begin with, they place a premium on sound data architecture in order to source, store and secure their data. They pay attention to their physical data storage facilities—for example, determining which data centers are under their own management, what can be outsourced, and what should be managed in the cloud from the standpoints of cost-effectiveness, security, regulatory compliance, and accessibility. They also are good at factoring in the aggregation of data through the services that buy and bundle data from all kinds of data providers.

The analytics leaders are now starting to think beyond conventional constructs in terms of how data is organized, accessed, and managed. To date, in most IT departments, data has largely been eclipsed by applications. But Accenture proposes that in the near future, platform architectures will be selected primarily to cope with soaring volumes of data and the complexity of data management—not for their ability to support this or that application.[1]

Whereas traditional databases are designed to keep track of where the data is stored and how it can and should be accessed, data platforms will provide a layer of abstraction that hides the data's location, and is not concerned with the form in which the data is stored or how its consistency is maintained. So in effect, the data representation architecture will be decoupled from the application. Data architecture, much like today's application architecture, will refer to abstraction layers and separation of concerns, and not just to data models.

The shift toward a data platform mindset is turning the spotlight on alternative databases. The trusty relational database is not about to be retired, of course. But it will soon start to make way for other types of databases—streaming databases, for instance. At the same time, it will underscore the fact that distributed data is the "new normal"—that is, we will see distributed ownership and control of data, not just its physical dispersion among different data centers and application silos. That will require different approaches to management of the data as well as its security, compliance and governance.

As companies recognize the fact that they can't possibly bring all of their enterprise data and external data together into a single place to derive insights from it, they are showing strong interest in applying distributed data management and analytics principles to enable users across the enterprise to access meaningful data whenever they want it. Technologies such as Hadoop and Hive are proving to be powerful enablers.

Furthermore, the data platform emphasis will highlight the need for superior skills and capabilities in master data management (MDM)—a vital component of sound governance practices. Specifically, MDM needs to keep track of the origin and location of data, access policies, regulatory framework, backup frequencies, degrees of redundancy, location of ownership of meta-data, etc. (We expect that this will create headaches for many organizations because MDM will become crucial as already scarce MDM skills become scarcer.)

A leading branded food company has taken control of its MDM with a comprehensive approach that addresses data management organization, governance structure, processes, standards, metrics, and supporting tools. Improvements achieved include reducing the cost of product transportation by 5 percent, increasing data sync capability with retailers, and data quality improvements of 18 percent by simple cleansing of product dimension data.

The analytics leaders also focus on getting the logical data layer right. They emphasize a "single source of the truth"—enabled by the move toward data platform concepts—as distinct from a "single version of the truth." Older "single version" thinking involved consideration of how to build integration routines that pulled information together from disparate sources—essentially dealing with siloed business capabilities that would use their own data sources. Today, the focus is shifting quickly toward how best to make data available to users, with a view to making it accurate and timely.

That shift is evident in the questions that surface increasingly in organizations large and small. The questions speak to the challenges of managing information well: How do we drive data consistency and accuracy across the enterprise? How do we drive ownership and control over critical information? We just merged with another company and need help integrating our data; where do we start? How can we make our IT architecture support our business needs?

Other pain points show up in questions about how data can stay clean and secure—especially pertinent in companies that have just undergone the herculean task of cleaning up all of their data. The pain points can also appear in organizations' pleas for one product catalogue that serves the entire business and that helps the organization surmount its version control issues, language issues, and its non-stop, time-consuming needs for systems updates.

With a single source of the truth in place, an organization is far better placed to improve its analytics capabilities—and thus to improve its decision making—by improving data quality with a holistic data management approach that includes information capture, data accuracy improvement, and optimization of data management areas—from migration and integration to transformation, cleansing, modeling, and conversion.

Proctor & Gamble is setting the information management bar high. The consumer goods conglomerate has been investing significantly in "decision cockpits"— community workspace portals that help streamline decision making. Today, with a new development platform to drive operational excellence around the clock, the company sees far fewer reports being generated and 70 percent fewer "touches"—in other words, information is handled far less frequently because the upgraded portals reduce the need for e-mail traffic, for instance.

The new development platform means that the company can now deliver decision cockpits five times faster than before, at lower cost and with 50 percent reusability. Says CIO Filippo Passerini: "We have eliminated thousands and thousands of legacy reports and we're moving everything to visual cockpits where you can drill down with alerts, color coding, etc. This makes the business flow much more fluid, much more dynamic, much more in touch."[2]

The antithesis of good information management showed up at one large industrial company where two business units in the same region, each using its own "version of the truth," arrived at diametrically opposite decisions about how to price stamped steel products. Unfortunately, such examples are not uncommon.

Establishing optimum BI practice

Business intelligence is defined as the information needed to run the business from day to day, providing intelligence to describe what happened. It concerns the retrieval and portrayal of data in ways that are useful for users.

But BI has come to be viewed differently by different constituencies. To technologists, BI means sophisticated software that has promised to help business managers better marshal and synthesize the corporate data at their disposal.

As a consequence, and as noted earlier, organizations worldwide have invested large sums in BI solutions. The rising tide of capable BI tools has lifted all organizational boats—meaning that core BI capabilities are rapidly becoming commoditized.

To business users, though, BI refers more to usable outputs. Although BI software has indeed helped improve the generation of data-rich reports, it is debatable whether those reports have done much to improve decision making. To some extent, such reports are themselves a form of "scope creep." They may be of use only to a handful of users for a specific project or a finite period of time.

The new frontier for productivity is found in mobile BI. Essentially, the differentiating value in BI today is in the "last mile" to the user (and also in the "first mile," at the points at which data is captured and analyzed.) Reflecting the reality of globally dispersed and more mobile management teams, mobile BI can significantly enhance the availability and usability of data: Executives who can easily access reports from anywhere through an iPad or similar smart portable device can devote more time to the actions recommended by the insights that they are obtaining. For instance, the intuitive, interactive interface on an iPad combines with BI software that features highly interactive dashboards to provide new ways to consume data and manage the business.

Several large enterprises intend to excel in using mobile BI. Essentially, they aim to get more from their investments in BI by rationalizing toolsets, consolidating teams, and coordinating the investigation of new capabilities. A global medical-sciences company—one of the world's largest—is working to reinvent how it addresses the reporting needs of its staff using mobile devices.

With a primary objective of improving productivity "on the go," the company set up a mobile computing core team to provide support across functions. The initial effort is to use Apple's iPad, but other devices are being evaluated as they are released. The team first conducted a pilot program to better understand the capability of mobile computing platforms and to assess their value. Then they established an enterprise app store from which employees can view and download applications, based on their roles and levels of authorization. To properly support the mobile platform, the team set up seamless help-desk service. And given legitimate fears about data security, the company has also defined the governance processes needed to confirm that such use meets its needs for legal and regulatory compliance.

Leading practitioners are quickly defining optimum practices in analytics business processes and in analytics governance and operating models. They take pains to nail down the two most fundamental analytics levels. In doing so, they significantly and consistently improve their decision making odds.

It's now time for all businesses to identify where they are on the analytics journey. As discussed, they do not have to strive to attain the highest level of analytics excellence in order to outperform in their sectors. But they do need to target the next higher level. When exactly they do so is a matter of setting priorities; in practice, it's never too late to embark on the next stage of the analytics journey. But shareholders have a right to ask why those efforts should wait much longer.

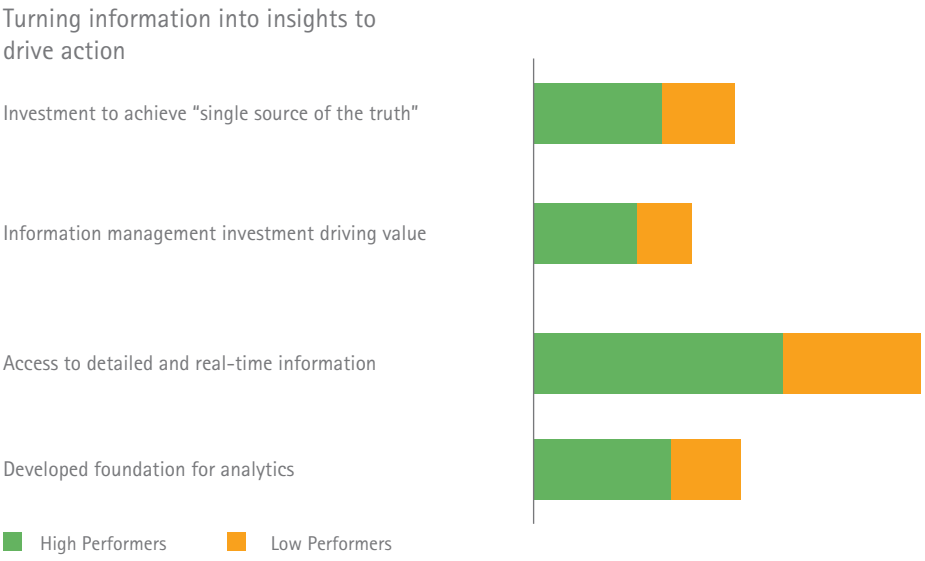
Proof that it's crucial to get the foundations right

Recent research by Accenture reveals that high-performance IT organizations are more evolved in their information management practices than their peers in other organizations. For example, they are more than twice as likely to have developed target data architectures and created effective BI and analytics capabilities as well as data governance. They provide their employees with more access to the most detailed and real-time information they need to do their jobs. The most accessible, granular and real-time customer data, for example, is 80 percent more accessible, more than twice as granular and twice as likely to be available in real time from high performers versus from other IT organizations.[3]

Investments in information management technology are delivering significantly more value for high performers. More than three-quarters of high performers said that business analytics investments are delivering 75 percent or more of the expected value—nearly twice the proportion of other IT organizations giving that response.

For example, high performers have invested more aggressively in data quality assurance and master data management technologies, giving them reliable, consistent information about customers, products, employees, and suppliers. Indeed, 92 percent and 77 percent of high performers have deployed or are piloting data quality assurance and master data management, respectively, versus just 53 percent and 57 percent of other organizations.

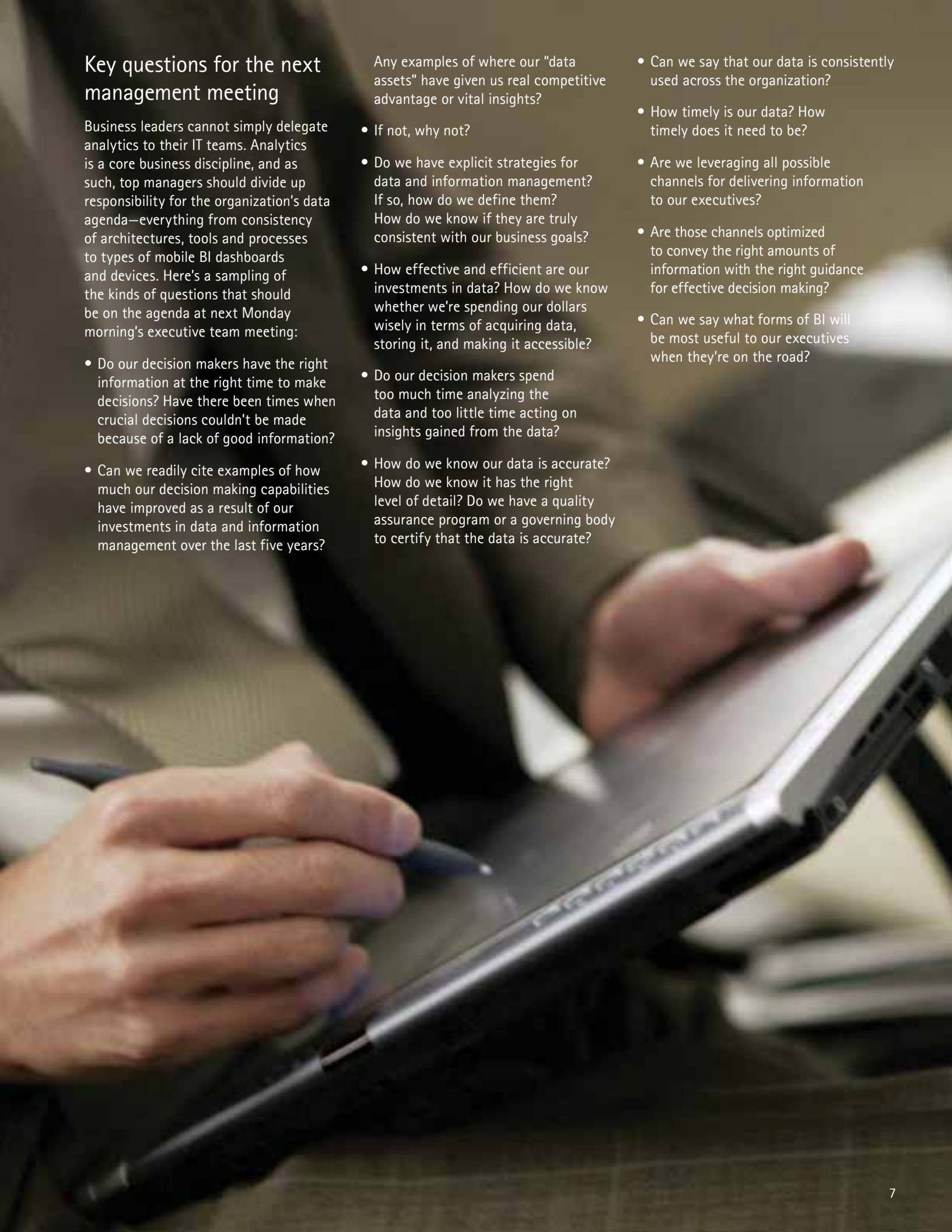
Figure 2: Crucial to Get the Foundation of Analytics Right



Key questions for the next management meeting

Business leaders cannot simply delegate analytics to their IT teams. Analytics is a core business discipline, and as such, top managers should divide up responsibility for the organization's data agenda—everything from consistency of architectures, tools and processes to types of mobile BI dashboards and devices. Here's a sampling of the kinds of questions that should be on the agenda at next Monday morning's executive team meeting:

- Do our decision makers have the right information at the right time to make decisions? Have there been times when crucial decisions couldn't be made because of a lack of good information?
- Can we readily cite examples of how much our decision making capabilities have improved as a result of our investments in data and information management over the last five years? Any examples of where our "data assets" have given us real competitive advantage or vital insights?
- If not, why not?
- Do we have explicit strategies for data and information management? If so, how do we define them? How do we know if they are truly consistent with our business goals?
- How effective and efficient are our investments in data? How do we know whether we're spending our dollars wisely in terms of acquiring data, storing it, and making it accessible?
- Do our decision makers spend too much time analyzing the data and too little time acting on insights gained from the data?
- How do we know our data is accurate? How do we know it has the right level of detail? Do we have a quality assurance program or a governing body to certify that the data is accurate?
- Can we say that our data is consistently used across the organization?
- How timely is our data? How timely does it need to be?
- Are we leveraging all possible channels for delivering information to our executives?
- Are those channels optimized to convey the right amounts of information with the right guidance for effective decision making?
- Can we say what forms of BI will be most useful to our executives when they're on the road?



Sources

[1] "Accenture Technology Vision 2011 - The Technology Waves That Are Reshaping the Business Landscape," Accenture Technology Labs, 2011, http://www.accenture.com/us-en/technology/technology-labs/Pages/insight-accenture-technology-vision-2011.aspx.

[2] "Accenture helps Procter & Gamble achieve high performance with innovative tools to enhance decision making with real-time information," Accenture, 2010;As quoted in "P&G's Quest for Growth," Manufacturing Executive, March 2010, p. 8.

[3] "Mind the Gap: Insights from Accenture's third global IT performance research study," Accenture, 2010 http://www.accenture.com/Global/Research_and_Insights/By_Role/HighPerformance_IT/CIOResearch/mind-the-gap.htm.

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