SUPPORTING TOP MANGEMENT WITH NEXT GENERATION

EXECUTIVE

INFORMATION

SYSTEM

MANAGING DATA AS AN ASSET

THE ABILITY TO **TRANSFORM** data into insights to help manage a company is the domain of corporate business intelligence, which consists of the processes, applications, and practices that support executive decision making. With such knowledge at a premium, chief information officers have moved to centre stage. By connecting the right parties across their companies, CIOs are making their role - helping organizations to mediate between business requirements and IT capabilities - more critical than ever.

It's a challenging mission because for all the data flowing through companies, executives often struggle to find the information they need to make sound decisions. Potentially valuable content is frequently trapped in organizational silos, lost in transit from one system to another, bypassed by inadequately tuned data collection systems, or presented in user-unfriendly formats. Although wired with layers of information-gathering technology, organizations still find it difficult to deliver the right data to the right people.

At the heart of these difficulties are inadequate executive information systems, supposedly designed to help top management easily access pertinent internal and external data for managing a company. Our research suggests that a set of common problems plagues these systems, which have existed for some time. Some forward looking companies have

therefore given CIOs a mandate to redesign them and to restore their importance in corporate decision making.

A FAILURE TO DELIVER

WHEN INFORMATION systems are dysfunctional, performance suffers. The executives of a large chemical company, for example, found that only about half of the data generated from its executive information system was relevant to corporate decision making. Executives needed precise numbers for each strategic business unit, product, and operating business, but non-uniform data made apples-to-apples revenue and cost comparisons difficult.

A rigid design architecture, based solely on financial-accounting rules, restricted the system's output to a limited number of reporting formats. Custom analyses, such as inventory turnover by product and region, were nearly impossible to generate. A cluttered front-end interface compounded the problem. Executive's intent on reviewing key performance indicators (KPIs) had to sort through a jumble of onscreen data, so the CIO needed to take several IT analysts offline every

month to comb through the figures and create the desired analyses. Frustrated, the company's board pressed the CIO to explain why group reporting costs were climbing upward and so much IT support was necessary.

As the chief *information* officer, the CIO should play a more central role in designing next-generation executive information systems that can help a company's top managers extract value from the data that surrounds them. Three major factors often hinder success.

INCONSISTENT AND UNRELIABLE CONTENT

Different semantics and inconsistencies in the way information is structured from one unit to another hobble many executive information systems. Data, gathered through a multitude of sources, often with different labels, tags, and uses, can be hard to aggregate accurately for

Chief Information Officers Have a Chance to Expand Their Influence As The Mediators Between Business Requirements And It Capabilities

decision-making purposes.

Group management accounting may roll up figures one way, operational management another—inconsistencies that can make executives question the reliability of the underlying data. At times, data sets lack contextual links that could provide perspective

needed for executive analysis. Even if the system's interface seems to be convenient, when executives doubt that the numbers are vetted, current, and accurate, they may be disinclined to use it.

POOR OVERSIGHT AND SYSTEM HANDLING

Too often, disjointed communication between businesses and IT can lead to flaws in an executive information system's design. Creating reports may be complex. Sometimes IT logic rather than business analysis drives the navigation system. Tensions may arise as divisions, accustomed to seeing their numbers presented a certain way, vie to retain control over preferred reporting formats.

Clear ownership is central to governance, but fiefdom issues are often a problem. As one executive told us, "Data ownership can get personal. The notion 'I want *my* data *my* way' can be pervasive."

INFLEXIBLE BUSINESS/IT ARCHITECTURE

Because business needs are dynamic, corporate business intelligence must be as well. Yet many executive information systems have static design architectures that limit the capture, organization, and accessibility of data. New demands—say, regulatory changes, the adoption of International Financial Reporting Standards, or requests from the field for performance data—often require time-

consuming adjustments. Older systems are largely ill-equipped to handle these updates, so the IT staff must create manual links to Excel spreadsheets and other data tables, and this can cause confusion. Since design limitations prevent the new data from being integrated into the system, parallel data structures crop up across the IT landscape. A well-functioning executive information system should deliver varying levels of detail, yet many dashboards offer only a top-line view of the business; navigation facilities to pierce through layers of reporting data overcharge current IT capabilities.

FROM INFORMATION TO INTELLIGENCE

ONE GLOBAL **CORPORATION** decided that the best way to tackle these problems was a wholly redesigned IT blueprint to support top management. The company, a multibillion-dollar global logistics organization prized for its ability to transport goods from one corner of the globe to another, was having a tough time getting its internal executive information system in order. While it could track cargo along any given point of its delivery network, it had little visibility into its own data streams. Years of rapid growth and decentralized, somewhat

laissez-faire information management had created an untidy patchwork of reporting processes across its divisions. Management lacked a single viewpoint into the company's core performance data and, as a result, couldn't know for sure which products made money.

Knowing that something had to be done, the CIO formed a task force, with members from both the business side and IT, which quickly found that relations between them were in some ways dysfunctional. Executives from headquarters, the business units, and the divisional and central IT functions all documented performance in their own way, tapping into different data sources to tally their results. These figures were rolled up into a series of group reports, but variances in the underlying data and the lack of a uniform taxonomy made it difficult for managers to know which set of numbers to trust. The management interface, designed to present key performance data, was jammed with so many different and, in some cases, conflicting KPIs as to be largely unusable. A non-user-friendly front end compounded the problem. Executives therefore asked for a new executive information system to gauge the company's performance at varying levels of detail (exhibit). This new corporate navigator would have to incorporate major improvements in design and functionality (see sidebar, "One company's blueprint for a next-generation executive information system").

STANDARDIZE DATA AND NEW INFORMATION STRUCTURES

To bring order, the CIO had to deal with a number of core issues. Standardizing the underlying data to tackle inconsistencies was the first of them. Under the CIO's leadership, the task force agreed to a set of group-wide KPI definitions, factoring in what the business side saw as the most important KPIs—such as inventory turns, cycle times, and margins—on a product-by-product basis. Then he created a company-wide taxonomy table to smooth the translation from one unit to another. The relationships between key pieces of information were redefined for the most important KPIs needed to manage the company. New IT bridges resolved the problem of manual data transitions from one system to another.

DESIGNING A BUSINESS INTELLIGENCE ARCHITECTURE

To improve the system's responsiveness, the CIO redefined the technical blueprint, creating centralized business intelligence data storage to house, tag, and order different data streams. A new architecture based on business domains or groupings rather than IT capabilities allowed data to flow more fluidly. The design included flexible tools for accessing and transforming data—tools that connected the group's system to various upstream databases, such as those for financial and management accounting.

Revised business applications created a common set of monthly and quarterly reporting formats, as well as analyses that executives without deep IT knowledge and experience could use to delve deeper into such things as shareholder value, budgeting, and capital

planning. Last, a redesigned and improved interface allowed managers to move easily between these views to get the information they desired in a format they could handle. Features such as colour coding, for example, created more intuitive groupings, guiding users through different types of reporting data.

STREAMLINING THE REPORTING HIERARCHY

As the CIO resolved these IT issues, he worked in parallel to help business leaders gain a greater degree of visibility into the company's core operations. In a series of meetings, he asked the leaders to identify their most important KPIs and reports in order to streamline and prioritize them. Stronger logic and better-informed, more disciplined reports and metrics help leaders set better targets, raise questions when performance diverges from them, and monitor progress more efficiently. The dynamic business-based architecture makes it easier to change reports - eliminating the costly ad-hoc analyses that had bogged down the process—so fewer IT resources are needed to maintain the system. Because the underlying data are now far more reliable, the CFO, for example, can use the redesigned interface as a presentation device during analyst calls and when he speaks before the board.

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Organizational flux, rising competitive pressures, and the expanding global reach of many organizations now place a premium on information that helps executives manage a company. New demands for transparency from

stakeholders and regulators magnify the need for better (and often more timely) information. Transforming data into useful insights is critical to creating value and, ultimately, to a company's competitive advantage. As the leading conduits between business requirements and IT capabilities, CIOs have an opportunity to expand their influence while supporting the goals of their companies.

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