: What is the impact of information management on the organization?

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Thirty years ago, at the start of my career, I addressed this question (cf., Power, 1983). My MIS Quarterly article explored 2 possible scenarios related to information management. At the time, there was widespread optimism that managing information could and would revolutionize organizations and have a profound effect on organizational decision making. The article developed two scenarios intended to help managers anticipate the effect of better managing information on organizational decision making. The scenarios described possible impacts of managing information, improved information technologies and decision support in a hypothetical multi-division conglomerate. Much has changed since 1983 and now seems an appropriate time to revisit those scenarios and this broad, general question of the impact of information management on the organization.

Each scenario presented a "snap-shot" in 1989-1990 of organizational decision making activities. In both scenarios, the different implementations of information management had a significant impact on organizational decision processes and structures. The scenarios examined four technological and administrative variables related to information management "power of the data administrator (high/low), sophistication and centralization of the database (high/low), sophistication of data entry and output (high/low), and systems control (high/low)". The scenarios represented extreme opposite, but plausible states for multi-divisional organizations in 1990.

In Scenario 1, "decision making responsibilities and organizational design are drastically altered as control is centralized and the organization begins to rely heavily on an integrated information system." This scenario is still developing in organizations. Scenario 2 described the continuation of a traditional decision making structure and activities with a very "heterogeneous information system, including traditional communication media like newspaper clippings and internal memos." Many organizations continue to follow this path.

The scenarios walk through the choices and changes managers made related to managing information from 1983-1989. In scenario 1, in 1984 automatic sensors and recording devices were used, especially for production and sales. Many decision tasks were routinized and programmed. Also in 1984, routine decision making programs were developed to interface with a relational DBMS. These changes did not occur in organizations in the 1980s. In the past 10 years, more of the changes envisioned in scenario 1 have been implemented in organizations. The costs have decreased and technologies have improved.

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Scenario 2 was the more conservative, incremental scenario. Scenario 2 is largely an accurate reflection of what did occur in many organizations. At issue today is whether the outcomes explored in scenario 1 are closer to realization or perhaps have been realized in many organizations. Alternatively, perhaps additional scenarios should be explored.

What happened in scenario 1? "In 1989, the three members of the Office of the President (OP) of the company met at a weekly assessment session. The Office of
the President includes the president, the vice president for information and financial analysis, and the vice president for products and marketing. The vice president for information and financial analysis controls all information
resources of the corporation."

"At this weekly meeting the president's usual procedure is to review all exceptions from the weekly status reports. For example, production exceptions are evaluated for divisions with production overruns or shortages greater than 10% of established targets. The procedure for evaluating weekly exceptions usually includes a quick
search of the management database to see if any relevant reports were filed. If an explanatory report is found for a discrepancy, the executive summary is usually flashed on the display screen in the front of the conference room and the three
officers quickly scan it for any important information." This description seems very contemporary.

The article explores the scenarios, but one last snippet from scenario 1: "Following a review of exception reports, the three executives usually do a search of external databases and information in the management database to identify any recent changes that might be relevant to the company. In preparation for these meetings, detailed searches of external databases have already been conducted by the planning staff and that information is in the management database." This type of activity is not widespread in organizations, but it still seems desirable. Today the management databases to support decision making focus on data warehouses with internal data. Building data-driven decision support with more external data should be a goal.

Information management (IM) remains an important topic. Managing information involves collecting, organizing and processing data from internal and external sources and distributing information to support decision making and business processes to targeted audiences. For those interested in this topic, I recommend the original article (Power, 1983). The two scenarios and possible impacts are discussed in more detail. Note especially the use of analytics, company databases and decision support.

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Managing information, providing analytics and decision support, automating processes and implementing innovative technologies remain important business IT issues. As noted at the conclusion of my 1983 article, "The future will always be unknown, but thinking about alternative futures and the issues that they raise may increase the likelihood that a desirable future will be realized."

References

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