Tutorial for Collaborative Decision Making

To support collaborative decisions, business intelligence (BI) leaders must do more than give knowledge workers more information. They must create a comprehensive decision environment that allows knowledge workers to define a problem, find all relevant information and expertise, follow best practice decision processes, analyze root causes, link the decision to its outcomes, and mine and record best practices for future use.

Key Findings

- Most BI deployments emphasize information delivery and analysis but fail to link BI content with the decision process or outcome, and don't capture best practices for use in future decisions.

- Collaborative decision making (CDM) platforms improve the quality and transparency of decisions by allowing knowledge workers to define a problem, find information and expertise, discuss an issue, brainstorm and evaluate options, and agree on a course of action.

- A CDM environment links the decision process to the actual decision outcome so that it can be mined for successful decision-making best practices and patterns for future decisions. With CDM, a decision can be monitored, evaluated, audited and reused.

- Organizational culture will pose a significant barrier to adoption in enterprises that do not support fact-based, transparent decision making.

Recommendations

- Find a senior executive willing to sponsor cultural change in support of fact-based, transparent decision making. This champion should excel at collaboration and the use of BI and analytics in decision making.

- Address cultural barriers to the adoption of CDM by demonstrating its value in pilot projects, and through decision audits and simulations.

- Implement training to show participants how to use the tools and follow decision making best practices and processes necessary for CDM.

Gartner

WHAT YOU NEED TO KNOW

Enterprises have invested billions of dollars in information and BI technologies to achieve better decision making, yet decisions still routinely fail. Bad decisions occur because enterprises often fail to optimize and capture the key elements in the decision process that are needed to make collaborative, high-value decisions about tactical and strategic issues. A CDM platform addresses this by combining BI technologies, decision tools, social networking, collaboration and workflow to enable knowledge workers to find the information and expertise they need, and to work together to define a problem, analyze it, explore options, assess decision outcomes, and record the decision process and best practices for future use.

ANALYSIS

Context

Each year, Gartner surveys over 1,000 CIOs about their business and IT priorities. Since 2005, they have chosen BI among the top priorities, often because they want to improve decision making. Despite unprecedented amounts of information and investment in BI technologies, decisions routinely fail — sometimes spectacularly. Risks are often underestimated. Acquisitions or mergers that seem to be good matches routinely fail to deliver expected synergies, or new, "bet-the-company" products often flop in the market. These failures happen in part because most BI deployments emphasize information delivery and analysis but fail to link BI content with the decision process or outcome, and don't capture best practices for use in future decisions.

Analysis

Today, analytic applications automate routine *operational* decisions through built-in business rules and workflows, so that when certain conditions arise the system points workers to the best response. But these systems do not offer much help to knowledge workers in making *tactical* and *strategic* decisions or decisions for exceptional situations. Tactical decisions address risks and opportunities as they arise. Strategic decisions, such as which company to buy or which market to enter, set a direction for the enterprise. Both tactical and strategic decisions require lots of different types of information, are iterative, and involve collaboration among several roles. Decision makers must decide how to structure the decision process for every instance. CDM combines BI with decision tools, social networking, collaboration and workflow to help knowledge workers make and capture decisions. BI leaders and IT managers that need to extend the value of BI to support better decision making should understand the process and benefits of CDM, what type of environment it requires, and the potential challenges to its adoption.

Collaboration Decision Making Supports the Whole Decision Cycle

Supporting tactical and strategic decisions means addressing all four steps of the typical decision, as defined in Figure 1 and the sections below.
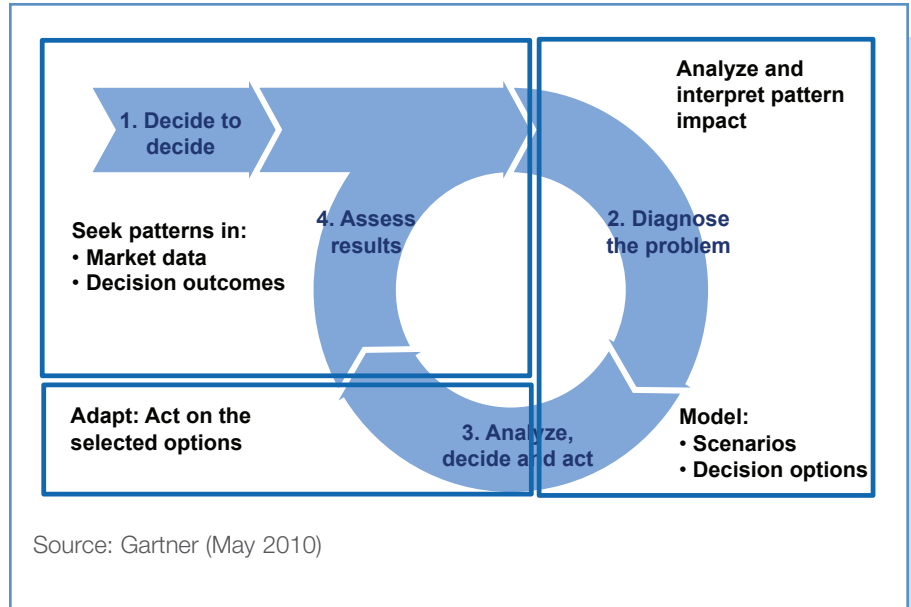
Step 1: Decide to decide. Knowledge workers must first determine what decision they need to make, usually based on events. Reports on business performance may indicate that some decision needs to be made, without specifying precisely what it is. For example, if traffic to the website drops off, does the enterprise need to redesign the site, improve search or change the content? External events often indicate a need to act — rising mortgage default rates should have alerted financial firms to the need to change their strategies before the recent financial crisis. To define the decision, knowledge workers must pick out which events or conditions relate to business performance from among the myriad events occurring in and around the enterprise. Knowledge workers must seek market cues and patterns through the use of tools such as alerts, dashboards, social analytics, economic reporting and social media analysis. Previous decisions and outcomes can help to identify leading indicators and weak signals pointing to a problem or an opportunity — as happened with a few individuals who accurately assessed the impact of subprime mortgage bonds and made a lot of money while the rest of the market crumbled.

Step 2: Diagnose problem. Next, knowledge workers must assess the situation and identify the root cause of the problem or the exact nature of the business opportunity. This is where many decisions fail because workers do not use the right expertise, do not have a diversity of opinion, succumb to decision bias or groupthink, or don't think through the effects of a decision — such as how a competitor will respond. This step requires the gathering of all relevant information sources, both structured and unstructured. Decision makers may use BI tools such as ad hoc analysis, visualization, descriptive analytics and predictive models. This step also typically involves collaboration via e-mail, instant messaging or Web conferencing, or face-to-face meetings. A CDM platform would capture and link to a decision collaboration that typically gets siloed in productivity tools. The analysis should include all relevant roles and expertise — knowledge workers must break out of routine relationships and organizational structures. Social software can help identify the right decision makers and expertise for a given decision. A CDM platform would prompt decision makers to consider contrary evidence in the decision process, include diverse decision makers, forecast the worst possible outcomes and why the decision could fail, address social and organizational bias, and stimulate debate.

Step 3: Assess options; decide and act. This step involves outlining assumptions, brainstorming options, simulating alternatives and conducting a "what-if" analysis, choosing an option and deciding how to implement it. Knowledge workers use decision models, such as mind mapping and strength, weakness, opportunity and threat (SWOT) matrices, and may run simulations to forecast what effect the decision will have. A CDM platform would integrate decision tools to optimize a decision and make the analysis part of the decision record.

Step 4: Assess results. Here, knowledge workers determine how effective their decision was. Most enterprise measurement systems — such as monitoring alerts on a dashboard, surveying customer satisfaction or monitoring messages from customers or blog postings about the enterprise — monitor enterprise metrics or programs unrelated to specific decisions or outcomes. A CDM platform would monitor and alert knowledge workers to specific decision outcomes and assumptions, particularly the need to adjust decisions as assumptions or outcomes change. The insight gained in this step should identify successful decision patterns, factors that had the greatest impact on the decision, and leading indicators and weak signals that might fuel another decision cycle so that enterprise performance continually improves. Unfortunately, this step remains the most neglected.

Collaborative Decision Making Yields Many Benefits

Most enterprises perform most parts of this process haphazardly, without regard to best practices and risk, and they have no way to link the different parts of the process. Therefore, their decision support suffers from:

- Siloed decision elements (for example, collaboration, decision and information).

- Manual connections.

- No formal feedback loop.

- A lack of records of the decision process and collaboration.

- The risk of biased decisions.

- No capture of best practices.

- A lack of auditability.

By contrast, CDM (see Figure 2):

- Helps define what decision needs to be made.

- Identifies the right people to participate in the decision.

Figure 1. Elements of a Typical Decision

Source: Gartner (May 2010)

Figure 2. How a CDM Solution Supports Each Point in the Decision Process

CDM = collaborative decision making, SWOT = strength, weakness, opportunity and threat

Source: Gartner (May 2010)