

# Decisions that drive success

*Using decision management as a competitive advantage*



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## Highlights:

Decision management is a highly effective method for optimizing and automating your business decisions. Supported by predictive analytics, it offers organizations the ability to move beyond reactive decisions to anticipate which actions are most likely to create successful outcomes in the future.

In this white paper, you'll learn how decision management works with existing technologies to create a closed-loop system that continually incorporates valuable feedback into your decision-making processes.

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Do you ever consider how many decisions you must make to get through a single day? Or, for that matter, how many decisions are required simply to complete your morning routine so you can start your day? From whether or not to hit the snooze on the alarm to what you will eat for breakfast, what you will wear today, which radio station to listen to, commuting options, which calls or emails to return first, which tasks and projects will take priority on this particular day. Decisions can be so common and continuous that often we barely notice we are making them.

From a business perspective, decision-making has never been more consequential than it is today. In this era of global parity, organizations have nearly equal access to IT resources, capital, inexpensive labor, online customer markets, manufacturing capacity and delivery services. Because these traditional sources of competition have become neutralized, the ability to manage, optimize and automate decisions is emerging as a primary competitive advantage. The enhanced execution of decisions is fundamental for carrying out business strategies faster and more effectively than the competition.

One of the bigger challenges for organizations competing in this paradigm is how to better utilize data in decision-making. The amount of data available to and generated by businesses is at an all-time high and growing at a staggering rate. According to the IT analyst firm IDC<sup>1</sup>, 15 petabytes of new information is generated every day (one petabyte equals one million gigabytes). That's eight times the amount of information that resides in all U.S. libraries. At the same time, the window of time



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## Optimized Decisions: Public Safety

A large metropolitan police department predicts and prevents criminal activity through analysis of incident reports, service calls and community tips, enabling the department to send resources where they are needed most.

Result: 20-30 percent decrease in violent crime and homicides in a one-year period

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to make decisions based on that data is short – and growing shorter. A business manager may have access to voluminous reports and dashboards to monitor business conditions, but the critical step of using that information to guide business processes and customer interactions is usually a manual process, sluggish in its response to changing conditions. Organizations that wish to gain a competitive advantage must find a better way.

### Organizational decision types

Before exploring how to optimize decisions, it's essential to understand what types of decisions take place in organizations, and which people or processes carry out those decisions. From a broad perspective, there are three primary organizational decision types: strategic, operational and tactical.

Although the people who typically make certain types of decisions are listed below, it's important to note that there is crossover between roles. It's not unusual for a person at any level of an organization to make a strategic, operational or tactical decision.

### Strategic decisions

Strategic decisions often set the long-term direction for an organization. A strategic decision could be an objective or an initiative which results in guidelines from which operational decisions are made. Strategic decisions, which are generally collaborative, require flexibility and are often made in response to changes to business or market conditions.

Examples:

- “We will lower our fraud rates by 10 percent in the next 6 months.”
- “We must increase cross sell to meet our sales targets.”
- “We will acquire Company A to complement our capabilities and expand market coverage.”

Strategic decision-makers:

- C-level executives
- VPs
- Line-of-business managers

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## Optimized Decisions: Retail

One of Japan's top computer retailers uses analytics to optimize cross-selling and help consumers through the buying process on the company website.

Result: Increased page views by 67 percent and tripled online profitability in one year

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## Optimized Decisions: Telecommunications

A major European cable provider surveyed customers at critical points in their contract, built models to predict satisfaction levels and executed campaigns targeting customers most likely to cancel subscriptions.

Result: Customer churn reduced from 19 percent to 2 percent in treated group

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### Operational decisions

Operational decisions generally include the formation of policies or processes. They are focused on a specific project or objective which is executed at a tactical level and serve to make tactical decisions more personal and anticipatory. They are driven by the need to establish efficient, repeatable, scalable processes using accurate and timely information. They require visibility into the business and an understanding of external conditions and influences.

Examples:

- “Insurance claims greater than \$5,000 will be sent to the special investigative unit for review.”
- “Seasonal items will be stocked at the front of the store.”
- “We will offer customers a discount when products A, B and C are purchased together.”

Operational decision-makers:

- Business managers
- System managers
- Business analysts

### Tactical decisions

Tactical decisions are commonly “front line” actions that apply a policy, process or rule set to a specific case. These types of decision lend themselves to automation and make outcomes more consistent and predictable. They require accurate and, often, real-time information for peak effectiveness.

Examples:

- “You’ll receive your claim check in seven days.”
- “While I have you on the phone, can I interest you in ...”
- “Would you like fries with that?”

Tactical decision-makers:

- Customer service representatives
- Financial services representatives
- Branch managers
- Salespeople
- Automated systems such as website recommendation engines

### Making better decisions

Consider the multitude of strategic, operational and tactical decisions that define your business. Some of these decisions, such as determining strategic initiatives, do not lend themselves to automation. But there are thousands of other daily decisions that can be automated and optimized for significant – and measurable – financial benefit.

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## Optimized Decisions: Insurance

A Dutch insurance company used analytics to predict which customers were most likely to respond to cross-selling and marketing campaigns.

Result: Increased conversion rates by 40 percent while reducing direct mail costs by 35 percent

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For example, what if an insurance firm were able to accurately predict which claims were likely to be fraudulent and automatically send those to its special investigative unit? This would allow the firm to accelerate the payment of valid claims for a positive impact on productivity, competitiveness and the bottom line.

In most organizations, however, decisions are not optimized or automated in ways that place data-driven business strategy as the foundation for action. For instance, a C-level executive may task a business manager with increasing the sales of value-added services. The business manager then calls upon a professional analyst to determine the best services to offer customers when they call. The analyst uses data mining and statistical analysis to determine relationships between products and services. The business manager and analyst then conduct a multi-step process for identifying the best offer for a “typical” caller. But because callers are individuals with unique needs and expectations, targeting a “typical” caller often misses the mark – resulting in a lost sales opportunity or even an adverse reaction from an otherwise satisfied customer.

The problem with such an approach is that insightful business input is not part of the process. There is no full circle feedback to help determine which scenarios lead to failure and which increase the possibility of success. The situation is compounded by the fact that business users and professional analysts typically don’t speak the same language regarding business issues requiring analysis. The business users focus on the business processes involved while the analysts typically focus on the techniques needed to perform analytical tasks.

In contrast, some organizations do have the ability to incorporate business insights into their decisions. For instance, when the business manager tasks the analyst with finding the best services to offer callers, decisioning technologies would be employed. The analyst now has the capability to create predictive models that score each customer in real time and build corresponding rules based upon business processes and regulations. More significantly, the business manager has the power to adjust priorities and processes in real time to optimize decisions. The analyst uses the insightful input from the business manager to fine tune the models for increased accuracy. Feedback from the results of the actual customer interactions are then included to create a virtuous cycle, a closed loop system in which decisions grow more effective with each iteration.

In this scenario, business strategy now drives the process. The business manager holds the cards for timely input while the analyst uses his technical skills to fine tune the results. It's an open environment in which customer interactions are precisely anticipated and effective responses are planned. True business-based analysis becomes the link between the “languages” of the analyst and business manager.

## Decision management optimizes, automates decisions

The concept that makes these advances possible is called decision management. It employs a decision process framework and analytics to optimize and automate decisions, enhance outcomes and solve specific business problems. It includes all aspects of managing automated decision design and deployment that an organization uses to manage its interactions with customers, employees and suppliers. In essence, decision management enables optimized decisions to become part of the DNA of your business processes.

Decision management is usually focused on high-volume decisions and implemented with the use of rule-based and analytic model-based applications. So, although decision management is relatively new, it is supported by proven technologies. Here are a few examples of how decision management touches existing enterprise technologies:

- Business rules – Decision management leverages rules designed by business users to represent operational policy
- Business process management – Decision management supports the processes defined and coordinated by BPM
- Data management – Decision management uses the data stored in data warehouses and managed with master data management technologies
- Predictive analytics – Decision management leverages predictive models to provide real-time insight to decision makers
- Business intelligence – Decision management monitors success with reporting and analysis tools
- Complex event processing – Decision management leverages event processing to influence the outcome of processes

According to a published report by James Taylor, an expert who has written and consulted extensively on this topic, “Decision management makes it possible, for the first time, to use predictive analytics as an integral part of a real-time decision process.”<sup>22</sup>

That’s a groundbreaking distinction for organizations that have traditionally used historical data and static information as the basis for business decisions. Predictive analytics provides the insight to anticipate what customers will do next, which are likely to leave for a competitor or respond favorably to up-sell or cross-sell campaigns. Predictive

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## Optimized Decisions: Banking

A global financial services firm used predictive analytics to manage relationships, retain clients and identify its most profitable customers.

Result: Reduced marketing costs by 50 percent while improving lead conversion and the effectiveness of marketing campaigns

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insights can identify areas of potential risk and fraud or spot new and emerging market opportunities. Organizations that can automate and optimize decisions informed by predictive analytics have a significant advantage over competitors that cannot.

## The path to decision management

Once you understand the types of decisions that take place in your organization and the kinds of decision management options available, you can begin building a decision management infrastructure. Business managers should first define their business challenges in the context of the decisions which impact them. Decision management can then optimize the targeted decisions with decision-centric applications developed for specific business problems. These applications present information in terms with which business people are familiar, and fold in predictive analytics in the context of the decisions which impact the problem.

The business manager can then prioritize the actions that should be taken when particular conditions are met. Decision management facilitates this with the balanced use of human defined rules, system created predictive models, and business objectives. Simulation of process outcomes, including the results of operational decisions over time, helps business people tweak how each decision will be handled.

Finally, organizations should make their optimal decision patterns part of the DNA of their business processes. Decision management accomplishes this with its interaction-centric deployment architecture. Deployment approaches, including real-time scoring and bulk scoring, ensure that best practices are embedded at the right time to impact each interaction. Interactive questions help gather important information at the point of decision to ensure proper outcomes.

Implementing decision management makes operational decisions deliberate, tactical business decisions more personalized and ensures the consistency of decision processes and flexibility within established guidelines. It provides the ability to predict (and therefore manage) outcomes to help generate better results with every decision. With its closed loop reporting of results and continued refinement of rules and predictive models, decision management recommendations grow more accurate and effective with every decision.

## Conclusion

In our personal lives, many people already use technology to automate some decisions, such as when to pay bills, or which podcasts or blogs to subscribe to. And “smart appliances” are on the horizon – such as refrigerators that “know” you need to buy more milk. It’s unlikely in the near future that we will have a device that automatically decides the wisest advice or course of action to take during challenging life situations. But in the realm of business, proven technologies already exist that make automated, optimized decision-making a reality.

Decision management is that highly effective, proven method for optimizing and automating your business decisions. Supported by predictive analytics, it offers organizations the ability to move beyond reactive decisions to anticipate which actions are most likely to create successful outcomes in the future. As a closed loop system that continually incorporates valuable feedback into the decision-making process, it’s an ideal approach for organizations that wish to react instantly to changing conditions and maximize the benefit of every decision. And in a global marketplace in which traditional sources of competition have been neutralized, it delivers a powerful capacity for outmaneuvering competitors and executing insightful business strategies.

Find out how proven IBM SPSS technologies can help your organization increase profitability, improve business processes and grow customers through decision management. Go to [www.ibm.com/spss](http://www.ibm.com/spss) or call 1.800.543.5815.

1 *Source:* IDC White Paper sponsored by EMC, “As the Economy Contracts, the Digital Universe Expands,” March 2008.

2 *Source:* Information Management Special Reports, “Decision Management Applications,” by James Taylor, May 2005.

## About IBM Business Analytics

IBM Business Analytics software delivers complete, consistent and accurate information that decision-makers trust to improve business performance. A comprehensive portfolio of business intelligence, predictive analytics, financial performance and strategy management, and analytic applications provides clear, immediate and actionable insights into current performance and the ability to predict future outcomes. Combined with rich industry solutions, proven practices and professional services, organizations of every size can drive the highest productivity, confidently automate decisions and deliver better results.

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