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Becoming a Decision-centric Organization

Ensuring excellence in decision making to drive efficiency and effectiveness

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Organizations face many challenges in today's business climate. Organizations whose success or failure is determined by the decisions they make are handicapped by systems that are centered on processes or functions. As a result, these organizations struggle to improve business productivity while managing costs and find it hard to make changes in their systems quickly, despite a pressing need to do so. To succeed, these organizations need to move their thinking from processes and functions to decisions—they need to become decision-centric.

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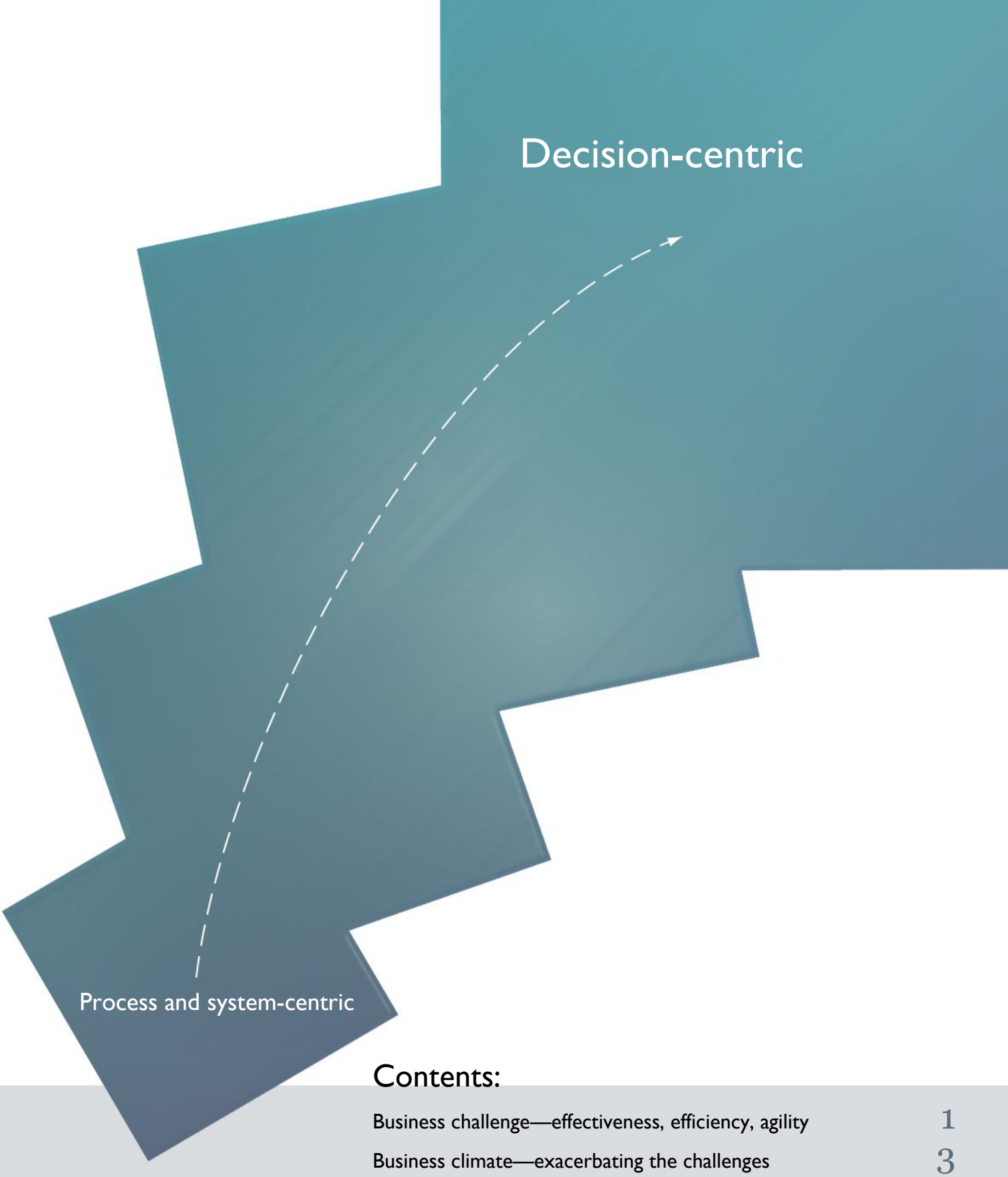

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The business challenge

Effectiveness, efficiency, agility and more

"As I talk to customers, partners, and employees, it becomes increasingly clear to me that the health of a company relies on the extent to which it creates meaningful and sustainable interactions."

Denise Shiffman, author of The Age of Engage

"Efficiency is doing things right; effectiveness is doing the right things."

Peter Drucker

Organizations today find themselves with a new set of challenges. They must deliver business effectiveness and efficiency, balancing running their business the right way with running it cost-effectively. Their organizations should be able to respond quickly and correctly to changing business conditions. Business executives want to exercise real control over business operations, even when those operations are distributed and complex. They also need to empower and support their people, ensuring that the staff they have can do their job and do it well. They must do all this while delivering more personalized, more customized products and services to meet the increasing demands of consumers.

Efficiency with effectiveness

Organizations must consider efficiency (typically in the form of cost reductions) and effectiveness (improved productivity) simultaneously. Businesses cannot trade-off efficiency for effectiveness—they must drive down operational costs while becoming more effective. Organizations that have focused solely on cutting costs have seen product quality and customer service suffer, costing them critical market share or customer confidence. Few, if any, organizations can be blind to costs, however, so simply focusing on what will be most effective is also not a strategy. Only an intelligent balance between the two offers the prospect of long term success.

Business challenges

Business agility

The business world continues to change rapidly. Organizations must be able to respond quickly to this changing environment. New risk models must be developed and deployed as soon as new risks are identified. New regulations, court cases or rulings by global organizations like the WTO must be implemented rapidly and accurately. Consumer behavior must be analyzed and understood so that new marketing programs, new customer service or product offerings can be offered to catch changing consumer trends. Without this agility, organizations will face fines and penalties, they will miss opportunities and will be overtaken by more responsive, more agile competitors.

Business control

Business executives want control over their businesses. They want to set strategy but they also want control over operations to ensure the effective implementation of this strategy. With organizations increasingly distributed across many locations and countries and top-down, centralized organizations being replaced with business networks or groups of collaborating organizations, this control is both more necessary and more challenging. To control operations, to manage risk and exploit opportunities in an organization of any size, requires control over the systems that reach out to the very edge of the organization.

Empowering people

It is often said that people are an organization's most important asset. Because people experience the growth and operations of the organization, learn from its mistakes and successes, see what works and what does not, they act as a critical repository of business knowledge capital and experience. Empowering and supporting people with specialized knowledge so that they are able to work effectively on the highest value tasks possible is essential. Ensuring that cases are managed and complex tasks critical to success are completed in a timely fashion while staffing levels are limited and experienced staff are scarce is a constant challenge.

Consumer demands

Consumers (or citizens, in the public sector) meanwhile are not content with the service they used to get either. They want and expect an increasingly personalized or tailored experience. They expect the organizations with which they interact to know them, to deliver customer-centric and personalized offers, solutions, proposals and more. They expect self-service applications that are likewise tailored, and they are willing to drop companies and go to competitors or to complain (increasingly using social media). Organizations must find a way to meet this demand also and do so at scale.

Delivering on all this would be hard in the best of circumstances. As the next section describes, today's business climate is challenging, with specific characteristics that make it hard to deliver on each of these needs individually and as a set.

The business climate

Making the challenge more difficult

"In our past three global CEO studies, CEOs consistently said that coping with change was their most pressing challenge. In 2010, our conversations identified a new primary challenge: complexity. CEOs told us they operate in a world that is substantially more volatile, uncertain and complex. Many shared the view that incremental changes are no longer sufficient in a world that is operating in fundamentally different ways.".

Capitalizing on Complexity, Insights from the Global Chief Executive Officer Study (IBM, May 2010)

Organizations are operating in a particularly challenging business climate; one that exacerbates the challenges noted in the first section and ensures that opportunities and advantages are particularly fleeting. Increased complexity and regulation, an ever increasing pace of change and the impending retirement of the baby boom generation all contribute to this difficult climate.

Increasing complexity

To survive and thrive in the modern business climate, organizations are taking more risks and making investments with increasingly marginal returns. This requires the systematic use of advanced risk models so that risks can be accurately, and rapidly, assessed. The ever more crowded competitive landscape, with national boundaries ceasing to be barriers to competitors, and the increasing sophistication of consumers means that acquiring, developing and retaining customers is more difficult. The widespread use of analytics and of finely targeted marketing is an effective response but it too increases the complexity of doing business. Add in the need to adopt new business models, often with broad and deep business webs replacing vertically integrated operations and it is easy to see why the modern business environment has become more complex and why such an environment requires a new class of system.

Business climate

Increasing regulation

Most organizations are no strangers to regulations or to the need to enforce those regulations. An increasingly international regulatory environment, however, means that even operations within a single country are governed by multiple layers of regulations. Those organizations operating in multiple countries often have many different combinations of regulations to enforce. Local political units, a national government, a multinational organization such as the EU, and multiple global organizations like the World Trade Organization may all have regulations that must be understood and correctly implemented if an organization is to avoid fines and regulatory issues. This proliferation of layers is accentuated by the simple fact that regulation is increasing. Each new crisis, each new international treaty, each new election results in more regulation. Organizations must find new ways to implement compliant systems, compliant processes, if they are to operate in this environment.

Rapid pace of change

While it can seem trite to say that the pace of change is increasing, it is also true. Executives consistently say that their companies are facing a more competitive environment than previously while the pace of innovation and the amount of information available are both growing rapidly—in the case of data perhaps growing exponentially. In the face of this high and increasing pace of change, organizations find themselves faced with a challenge: use information systems to handle the volume and response times a modern business requires, or use people to provide the flexibility to respond to the developing situation in which they operate. Today this choice is a false one—systems must be used to handle the business volume and velocity yet those systems must be flexible enough to survive the pace of change.

The "baby boomers"

As the baby boom generation reach retirement age, organizations risk losing critical experience if they have not managed to systematize and capture it. This generation, now among the most experienced and knowledgeable of an organization's people, is going to retire in ever greater numbers in the coming years, taking their knowledge with them. Add in the constant threat of turnover, with experienced staff leaving for competitors and the average tenure decreasing in most organizations, and the stage is set for a knowledge crisis. Organizations that suffer through such a crisis will not only lose their knowledge capital and potential competitive advantage, they will also find it difficult to ensure that the replacement staff will do their job correctly.

Increasing price pressure

The final challenge is one that is as old as organizations themselves—the ever present need to drive down operational costs. Organizations—whether commercial, not-for-profit or government run—have always needed to focus on managing their budgets and keeping their costs under control. As the world has become more interconnected, specialty outsourcers have grown up in every industry and in support of every function. Even when functions are not outsourced, the availability of worldwide communications means that organizations have more options for where to run almost all aspects of their business: where best to place manufacturing capacity, information technology, call centers and more have become regular conversation topics. The challenge is simple—how to drive down operational costs while continuing to support the organization's mission and values.

All organizations face these challenges to a greater or lesser degree. For a modern organization, addressing these challenges falls disproportionately on the CIO.

Chief Information Officers

Taking center stage to meet these challenges

"Our research suggests that this new alignment [between CEOs and CIOs] comes as CEOs better understand the importance of technology. They increasingly rely on CIOs to turn data into usable information, information into intelligence and intelligence into better decisions."

The Essential CIO, Insights from the Global Chief Information Officer Study (IBM, May 2011)

In today's fast paced world, organizations are their systems. If they wish to be customer-centric, their systems must be customer-centric. If they compete on their quality of service then their systems must help their staff deliver great service, or be able to deliver the appropriate response directly through automated channels. For people outside the organization, and for many inside it, the behavior of an organization's information systems determines the perception of that organization. Yet many organizations find their systems a barrier to meeting their business challenges, not an aid to doing so.

When an organization and its systems are disconnected, there is pressure on the CIO to find a solution. In the 2009 Trends Survey by the Society for Information Management, the top four concerns of CIOs were:

- Business productivity and cost reduction
- IT and business alignment
- Business agility and speed to market
- Business process re-engineering

If these concerns look familiar, it is because they match so closely to the business challenges discussed above. These four may seem like separate concerns, each requiring a different technology and approach. However CIOs who adopt a decision-centric approach can address all four in a coherent, integrated fashion. It is the lack of such an approach and systems that are

increasingly mismatched to an organization's priorities that create these pressures.

Business productivity and cost reduction

CIOs have been very focused on productivity and cost reduction as the recent recession has developed. While CIOs have always focused on **IT** productivity and costs, recently the focus has shifted decisively to the uses of the technology in reducing **business** costs and improving **business** productivity. Many technologies have been applied to generate improved business productivity. Personal productivity tools have targeted knowledge workers while enterprise applications like Customer Relationship Management (CRM), Sales Force Automation (SFA) and Enterprise Resource Planning (ERP) have targeted corporate functions. Recently business process management tools have been adopted to ease integration and manage workflow.

These approaches have delivered improved productivity, but it is increasingly difficult to make gains using them. Once systems no longer require data to be entered multiple times, paper forms are eliminated, and the data underlying a business are being managed effectively, the productivity gains come to an end. Business efficiency and business effectiveness require better systems, systems that focus on business productivity **and** cost reduction.

IT and business alignment

It sometimes seems that aligning IT departments with the business has been on the list of concerns that CIOs have as long as there have been CIOs. Technologies and approaches come and go and still the business and IT remain out of synch. Business people struggle to explain their changing needs to IT departments and to understand what it is they already have. IT departments are frustrated by users who don't know what they want and who constantly change their minds. Agile methods, new programming languages, model-driven architectures and before that Computer Aided Software Engineering or CASE tools, Joint Application Development and facilitated sessions have all been tried with mixed results. But a disconnect between the business and IT remains, and improved alignment is still an issue for CIOs.

Unless CIOs can align their departments, their staff, with the business units in their organizations, it will not be possible for those business units to exercise the control they need over an increasingly complex business environment. Furthermore, knowledge-intensive operations will be poorly or incompletely supported by information systems because the knowledge of how to run those processes exists entirely on the business side of the organization.

Business agility and speed to market

In a world where organizations **are** their information systems, CIOs understand that the key constraint on business agility is now how fast an organization can change its information systems. Most business executives regard IT as a hindrance to business agility, and that is something CIOs know they must change. Closing the gap between business people and their IT staff, improving alignment, is absolutely necessary for business agility but it is not sufficient.

Business users must also be able to make changes to their information systems directly and in collaboration with IT without the need to go through a full software lifecycle. A new pricing approach, new regulations, new customer segmentation—all must be applied quickly and accurately. These changes must be made without destabilizing the information systems that run the business but also without the need to apply a full software development lifecycle, even one based on Agile approaches.

Business process re-engineering

The fourth of the top CIO concerns is that of re-engineering their organizations, their business processes. Organizations have invested heavily in business process management technologies and approaches in recent years. Building on techniques like Lean and Six Sigma, organizations have been modeling and automating processes. Yet far too many of these processes are still expensive to operate with too many steps, too many manual reviews and low levels of straight-through processing. CIOs know that these processes must be made simpler, smarter and easier to change.

In addition, many business processes are rich in exceptions and modeling these can result in spaghetti processes that are just as hard to maintain as legacy applications. The core processes of an organization often seem simple to business users, but decision making and exception handling turn the once easy to understand process diagram into a nightmare of branching and complexity.

If the IT department and the CIO cannot re-engineer the customer-facing processes designed into legacy applications then the business will not be able to deliver on the promise of tailor-made products and services. If they cannot support radical re-design of business processes then agility will suffer and it is unlikely that a balance of effectiveness and efficiency can be delivered. Because unstructured processes, knowledge work, are some of the most complex processes, problems in this area and will have a disproportionate impact on knowledge workers and knowledge processes.

Tackling these disparate challenges does not require multiple projects or a wide range of technology. It requires, instead, a new focus for information systems. As we shall see in the next section, it requires a focus on decisions.

The decision-centric organization

A new approach to meet these challenges

"Taking control of operational decisions is increasingly a source of competitive advantage"

James Taylor and Neil Raden, Smart (Enough) Systems, Prentice Hall 2007

"Most discussions of decision making assume that only senior executives make decisions or that only senior executives' decisions matter. This is a dangerous mistake."

Peter Drucker

Meeting these challenges requires a new approach. It requires an organization to become decision-centric. It means a move away from a focus on processes and the functional applications that support them to decisions and to systems that automate them—Decision Management Systems.

Decisions have always been at the core of an organization's behavior but for too long they have been buried, considered only as part of an organizational function or a business process. Such buried decisions are rarely automated effectively, are hard to improve and the lack of explicit management of these decisions leaves organizations at a loss to know how to maximize their effectiveness.

Focus on decisions

The first critical characteristic of a decision-centric organization is a focus on decisions instead of processes or functions. The decisions an organization makes, the actions it selects from the possible alternatives are critical. Decisions are what make strategy real and drive results and performance against metrics. Implementing a strategy defined at the highest level of the organization comes down, in the end, to the decisions made about how to interact with partners, suppliers, customers, employees. It is these decisions that make a strategy real. Business metrics and Key Performance Indicators (KPIs) are affected by the decisions made throughout

the organization—the offers made to retain customers, the prices offered, the suppliers selected, the approvals given, the claims paid.

Organizations make many different decisions and these fall into three broad categories based on the value of each decision and the frequency with which those decisions are made. As shown below, decisions can be divided into strategic, tactical and operational decisions.

In the lower right of the chart are operational decisions, high volume but individually low value decisions. The primary focus of a decision-centric organization is on operational decision making—the day-to-day decisions taken by organizations as they run their business: the eligibility, pricing, risk and marketing decisions that drive transactions and customer interaction. Small improvements in these decisions often make a big difference, thanks to the multiplying effect, and these decisions are at the core of the business operations that must be improved.

Tactical decisions, shown in the middle of the chart, are taken less often but are less structured and repeatable. Typically the domain of knowledge-workers and managers, these often include escalations from and exceptions to operational decision-making. Unstructured decisions, such as those in complex cases, are a major class of tactical decisions in many organizations. Tactical decisions are important to a decision-centric organization. They are important because they represent the point where people must be engaged in otherwise automated processes. They also represent an opportunity for technology to act as a multiplier on the value of experience, knowledgeable staff.

Strategic decisions are taken rarely but are high value. These are one-off, ad hoc decisions taken at the highest level in an organization. While these decisions are important, all organizations make these decisions and a decision-centric organization is no different in how these are made, only in how they are implemented and made real.

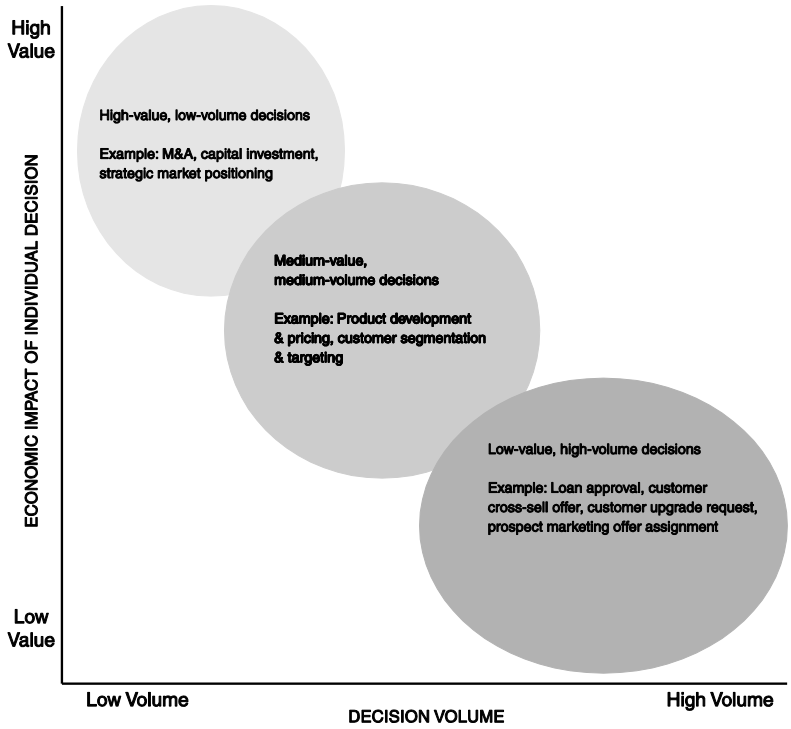

Figure 1 - Different kinds of decisions (Taylor & Raden, Smart (Enough) Systems: How to Deliver Competitive Advantage by Automating Hidden Decisions, 2007)

Decision Management Systems

With decisions at the forefront, organizations need to change their thinking about automation. Instead of regarding information systems as simple stores of information that people use, they need to regard them as action-oriented partners in running the business. This means automating decisions as much as possible so that decisions are executed quickly and accurately by information systems whenever they are needed. Encapsulating business knowledge, the regulations and policies that must be followed and more in their information systems, organizations can reduce costs, improve consistency and put people to work on higher value activities.

Few if any organizations are going to be able to automate 100% of their operational decisions. Most, in fact, will not want to do so. They want to provide some option for manual intervention and the flexibility that people can bring. However the system cannot simply hand-over to a person and return to a passive state. Instead the system should support those making the decision so that it can be made quickly and accurately. As soon as it is made, the system should respond to the decision being made and immediately see if the rest of the actions can be completed automatically. Can the system run to completion? If not, it should run as far as it can before asking, once again, for a person to participate.

This turns the decision support model on its head. Instead of the system passively supporting human decision-makers the Decision Management System is explicitly reaching out to people to help when it cannot decide automatically. People are supporting the system by making the decisions it cannot, participating as and when the system needs them.

Standard processes

Many organizations run multiple variations of their core processes. Dynamic processes can also be overly complex with multiple paths and complicated routing. A decision-centric organization, in contrast, runs standard processes. The separation of decisions from processes makes processes simpler and reduces the need for multiple, similar processes and for processes with many complex paths. Extracting the decision and putting it first creates a process driven by the specific customer, case or transaction without increasing process complexity.

Decision-centric organizations build these simpler, more standard processes from standard components, services and activities that perform the core functions of the organization. The variations that organizations need when dealing with different kinds of customers, different products or services are managed by deciding on the appropriate collection of activities in the context of this standard process rather than by having many process variations.

Event-driven

Organizations are beginning to recognize the value of responding in real-time to what is happening around them. Picking up on what consumers or the market are doing, responding to changes in the supply chain and more. Each such change can be thought of as an event and systems can increasingly generate electronic events to show that something has occurred. Listening to and responding to these events, typically in real-time, makes an organization more responsive.

Decision-centric organizations tend to be more event-focused than their more process- or function-centric competitors. A focus on decisions means that organizations have a way to take the appropriate action in response to external, or internal, events. When business events are detected, the next step for a

decision-centric organization is not to initiate a process but to make a business decision based on the available information and to act on that decision. This might mean invoking a standard process, assembling a set of generic activities to process information or gathering more information so that effective action can be taken. Because decision-centric organizations automate more decisions, most of these event responses can likewise be automated so that responsiveness to events is not compromised by a need to wait for manual intervention.

If a decision-centric organization focuses on automating operational and tactical decisions, on developing simple, standard processes and on responding to events, what benefits will it see? In the next section we will discuss the benefits of such an approach.

Benefits

How becoming decision-centric helps

"If you externalize and manage the decisions that impact your customers then you can drive those decisions with evidence. If you don't then you can't"

James Taylor, CEO Decision Management Solutions

"It's not enough to simply apply rules to data. You need to understand the context in which decisions are made and be able to manage the rules and those contexts in increasingly integrated ways, applying decisions consistently across multiple aspects of your business."

Phil Gilbert, VP of Business Process and Decision Management Products, IBM Software Group

Adopting a decision-centric approach has a number of benefits for organizations. These benefits, these outcomes, help organizations meet the challenges outlined earlier. A decision-centric organization maximizes straight through processing, delivers consumer- and information-driven processes that are infinitely customizable and that flow easily from straight through processing to human intervention and back again. The approach delivers increased agility by decoupling the IT and business lifecycles and it dramatically reduces the complexity and cost of IT.

Maximise straight through processing

With standard processes and explicit decision making, organizations increase the rate of straight through processing (STP) in their operations. The number of times a process must wait while items are put on work-lists or in work queues is reduced as Decision Management Systems are developed. This marriage of explicit decisions and simple processes keeps transactions moving with only exceptions requiring manual intervention. Manual intervention is streamlined too, with the decisions required to continue the process clearly identified for the staff who are involved in the process so that control can be returned to the system as soon as it is practicable. Minimizing the time spent on making these decisions with effective decision support further reduces the manual labor required overall. Staff can then focus on higher value activities.

The benefits of being decision-centric

Information-driven processes

A decision-centric approach makes organizations more responsive to events as they happen and eliminates the need for consumers to conform to an organization's processes. When events occur, a decision-centric set of applications takes the information available and decides what actions are required in response. The available information and the events that have occurred drive the organization's behavior—not a set of pre-defined, processes. This means that consumers do not need to understand the organization's internal processes: they can simply present the information they have and their desired outcome and the Decision Management Systems will take over, driving from the information available to the information required and the desired outcome.

Infinitely customisable processes

When decisions drive processes and it is easy to add new rules or options to the decisions involved, it becomes possible to create almost infinitely customizable processes. The decisions made can become more sophisticated, focusing on a particular customer segment or micro-segment. They can even allow consumer-specific logic, preferences, to be included. The behavior of the organization changes based on the current customer or transaction and the standard process is transformed into one customized to the specific transaction or customer. Components are assembled dynamically to create a unique process.

Improved case management

Dynamic processes are ideal for case management. Instead of trying to define a standard case management process, the possible actions are defined and dynamically assembled using decisions. Each activity increases the amount of information available and each knows what information it needs. As a case evolves, the next activities are identified by a decision-making component that uses the information available so far to see what should be done next. With a focus on automation, the next step is completed automatically if possible and, if not, the right person is brought into the picture. If additional information is required then the system can reach out and request it from the consumer directly or from an internal user. The case evolves as information is gathered and decisions are made at each step to ensure the right next step is taken.

Decoupled Business/IT lifecycle

It is no longer acceptable, if it ever was, for the IT lifecycle to constrain the business lifecycle. Organizations cannot defer making changes to the way they do business until the IT department can make a change. A decision-centric organization decouples the IT and business life cycles so that the business can evolve and adapt without requiring the IT department to make system changes at the same pace. Business changes require new behavior for decisions and these changes can be made without a full IT lifecycle because the decisions have been extracted from the rest of the software. A decision-centric organization empowers the business to make changes to its own systems without having to go through the full IT release cycle.

Simplified IT

Finally a decision-centric organization simplifies its information technology backbone and the management of this backbone. IT in a decision-centric organization focuses on managing standardized, simple processes and application or functional components. A business-focused environment for defining and managing decisions removes the major source of system complexity from the IT department. This complexity is not simply transferred to the business, either, as much of the complexity is business complexity that is already well understood by those on the business side.

Conclusion

The time to become decision-centric is now

"It is time to take decision making out of the realm of the purely individual and idiosyncratic"

Tom Davenport, "Make Better Decisions", Harvard Business Review November 2009

To meet their business challenges, especially in the current business climate, CIOs must lead their organizations to become decision-centric. Only a decision-centric organization is going to be able to deliver agility, control, compliance, personalization and decision management in a coherent, integrated way.

Decision-centric organizations deliver agility because they can make rapid changes to the way they conduct business. Decisions are the changeable elements of most operations and rapidly changing policy or regulation and competitive pressures affect these decisions, not the processes or functions within which they are made. Decision-centric organizations deliver the business control executives want over operations by giving them control over the decisions that drive day-to-day operations and implement business strategy. These decisions are compliant, and demonstrably so, because those who understand the regulations are driving the decision with no IT/business disconnect.

Decision Management Systems also benefit customers and internal staff directly. To personalize a product or service for a customer means to make a unique decision about how to interact with them. Decision-centric organizations also support their people by ensuring they work effectively on the highest value tasks they have.

Decision-centric organizations gain operational advantages and a competitive edge through a systematic focus on decision making throughout the organization.

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About Decision Management Solutions

Decision Management Solutions is the leading professional services firm specializing in decision management, a proven approach for rapid and cost effective deployment of predictive analytic models in operational systems. Decision Management Solutions is helping companies make the business case for analytics, enabling them to reduce fraud, continually manage and assess risk and maximize customer value with increased flexibility and speed.

James Taylor is the CEO and Principal Consultant of Decision Management Solutions. James is the leading expert in using Decision Management systems like business rules and predictive analytics to help companies improve decision making and develop smarter and more agile processes and systems. James has over 20 years developing software and solutions for clients and has led Decision Management efforts for leading companies in insurance, banking, health management and telecommunications.

In addition to consulting, James delivers webinars, workshops and training. He is a regular keynote speaker at conferences such as ComputerWorld BI & Analytics Perspectives, Business Rules Forum, Predictive Analytics World and IBM's Business Analytics Forum. James is the author of the upcoming book "Decision Management Systems: A Practical Guide to Business Rules and Predictive Analytics" (IBMPress) and was lead author of "Smart (Enough) Systems: How to Deliver Competitive Advantage by Automating Hidden Decisions" (Prentice Hall, 2007) with Neil Raden. He has contributed chapters to multiple books including "Applying Real-World BPM in an SAP Environment," "The Decision Model," "The Business Rules Revolution: Doing Business The Right Way" and "Business Intelligence Implementation: Issues and Perspectives." James is a faculty member of the International Institute for Analytics.

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