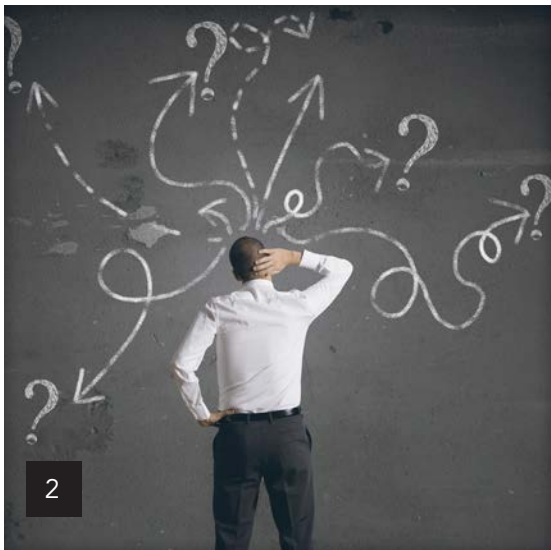


Decision Management:  
Enabling Faster, More Consistent  
Business Decisions in Enterprise  
Applications



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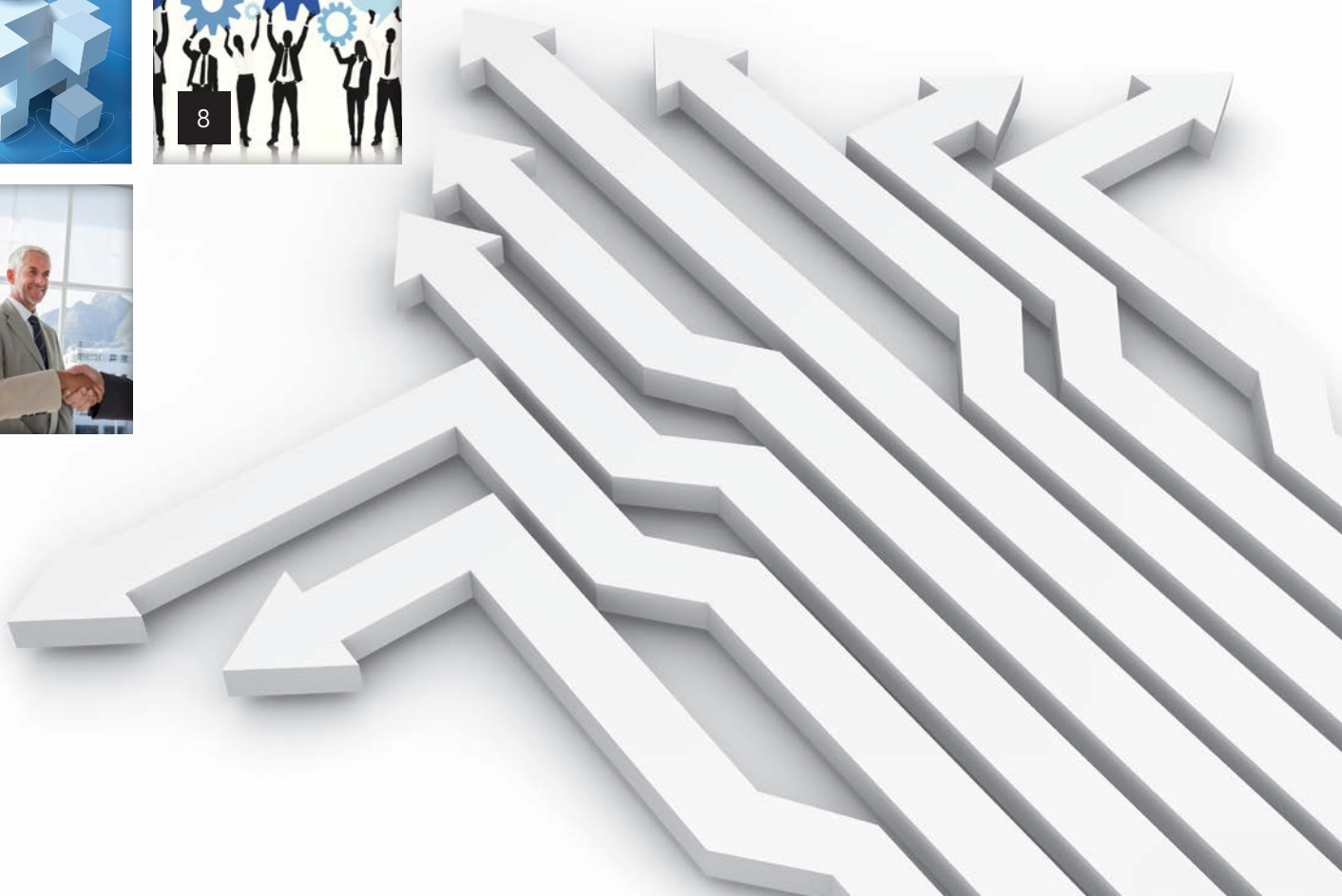
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## Why Your Business Needs Smarter Process

There's no under-estimating the importance of a satisfied customer to a business. Smart businesses know that it costs more to find new customers than it does to extend relationships with existing customers, and without satisfied customers there's no repeat business.

Satisfying customers goes beyond preventing negative experiences; it means delivering the level of personalization that customers now expect from their interactions. It means putting the right functionality or the right offer in front of the right customer at the right time.

Today's businesses can provide this experience and become customer-centric organizations by leveraging the wealth of information available about their customers and putting it to use, creating opportunities that grow the business by attracting new customers and expanding their relationships with existing customers.

Henry Ford perhaps explained the relationship between a business and its customers the best, using language that both employers and employees will easily understand: "It is the customer who pays the wages."

Today's customers expect instant, seamless, and insightful experiences. Instant in the sense that they expect businesses to make decisions and complete actions quickly; seamless so that the experience is the same regardless of the channel they're using to conduct business; and insightful in that the interaction should introduce the customer to new information or products that can benefit them.

A customer that needs to file an automobile insurance claim, for example, wants to begin the process on a mobile device without the need to place a phone call. He can do that by simply opening an app. After starting



the claim on the app, he finishes the process on a PC at home later that night without the need to start over. After completing his claim, the customer sees an offer for reduced premiums if he combines his homeowner's insurance with his automobile policy, potentially saving him money with lower premiums. This experience is instant, seamless, and insightful.

Technology is leading customers to hold businesses to a higher standard and, fortunately, businesses can harness technology to meet and surpass customer expectations. Developing relationships with customers around these instant, seamless, and insightful interactions helps attract new customers away from competitors that don't provide the same quality experience. Word travels fast in today's connected, social society. Customers that are satisfied with their experience can reach more people than ever before and actually help the business grow.

Two obstacles often prevent businesses from delivering quality customer experiences. First, many businesses fail to take advantage of the vast amount of data generated by their customers and interactions. This data is full of insight when it's properly mined and analyzed.

Second, many businesses fail to meet customer expectations because they lack the agility required to take what they learn from their customers and data and put it to use quickly and effectively. Market conditions change quickly — often much quicker than the decision-making process at many organizations. As a result, opportunities to optimize customer experiences, reduce risk, and grow the business can be easily missed.

### What is the Smarter Process Approach?

The Smarter Process approach helps enterprises reinvent their business operations so they can satisfy customers, adapt to changing market conditions, and grow their business. Businesses that employ the Smarter Process approach use their technology resources to deliver a better customer experience, while at the same time allowing the business to be in control of business decisions. This works to minimize risk and ensure the consistent application of business process and policy.

The Smarter Process approach simplifies business operations and helps businesses make the best use of the skills and resources they have available. A retail bank that processes loan applications, for example, likely has a number of processes already in place to ensure accuracy, regulatory compliance, and timely action. The processes, however, rely heavily on people

that are highly trained in the complexities of loan processing. These processes are also very difficult to change and can't easily be adapted to match customer expectations, such as the desire for a mobile access channel. Employing the Smarter Process approach allows the bank to automate more of the loan process, use its well-trained employees to work on more complex loans, and allow customers to check the status of their loan from any online device.

Taking a process that requires human intervention and automating it to make it faster and more consistent enables what is known as straight-through processing. To truly develop straight-through processing, however, requires more than automation — it requires logic. Businesses need the ability to program and change the decisions (formerly made by humans) into their enterprise applications. In addition, they need the decision logic to be visible to business stakeholders and they need the capability to change that logic at the speed of market demands.

Whether it's processing a loan application or putting a cross-sell offer in front of the right customer at the right time, decisions are constantly being made using business applications. On the surface, these decisions may not seem terribly complex: "If the customer meets certain criteria, take this action." But the challenge is in the volume of the decisions — businesses make thousands of these decisions every day — and the velocity of the change. Changing the criteria or the action is, for many organizations, too often a laborious process that comes at the cost of valuable opportunities.

*"The Smarter Process approach helps enterprises reinvent their business operations so they can satisfy customers, adapt to changing market conditions, and grow their business."*

## Questions to Ask Yourself

Think about your business, its operations, and its customers. Now ask yourself these questions:

Is it easy to do business with your organization? Can customers use multiple channels to do business any time of the day or night? Is the customer experience flawless, seamless, and instant?

How can your operations simplify the customer experience? Is it easy for customers to get the information they want quickly? Are there opportunities to reduce the number of steps or time involved across the customer experience? Do you deliver targeted information on new products and services to customers as they interact with your business?

What does your business technology look like? Existing applications can support the access channels and compliance regulations currently in use, but the need to

change is continual and rapid. Can they support what comes next, knowing that it could be here very soon?

Running a successful business means constantly striving for improvement. Just because your customers can do business across multiple channels doesn't mean there isn't room for the Smarter Process approach in your operations. Just because your business applications aren't brand new doesn't mean a costly rip-and-replace migration is necessary to build a customer-centric business. There are no black-and-white answers to the questions above. Perhaps the worst answer is "I don't know."

The remainder of this eBook will focus on how your business can develop the Smarter Process approach and leverage it to become a customer-centric organization that can compete in today's business climate. As you read it, think about what your customers want from your business today and what they will want in the future. Put what you learn to good use, and ensure your satisfied customers keep paying your wages for years to come. ■



## Building Smarter Process with Decision Management

**M**aking decisions has always been at the center of business. It begins with deciding what type of business to start, which types of products and services to offer, and which customers to target. Today's businesses make a startling number of decisions daily. The customers' demand for a flawless, seamless, instant experience means businesses are making more decisions, they have less time to make them, and they need to get those decisions right the first time. This requires decisions that are consistent with business policy and can be made at machine speed, without manual processes and human involvement.

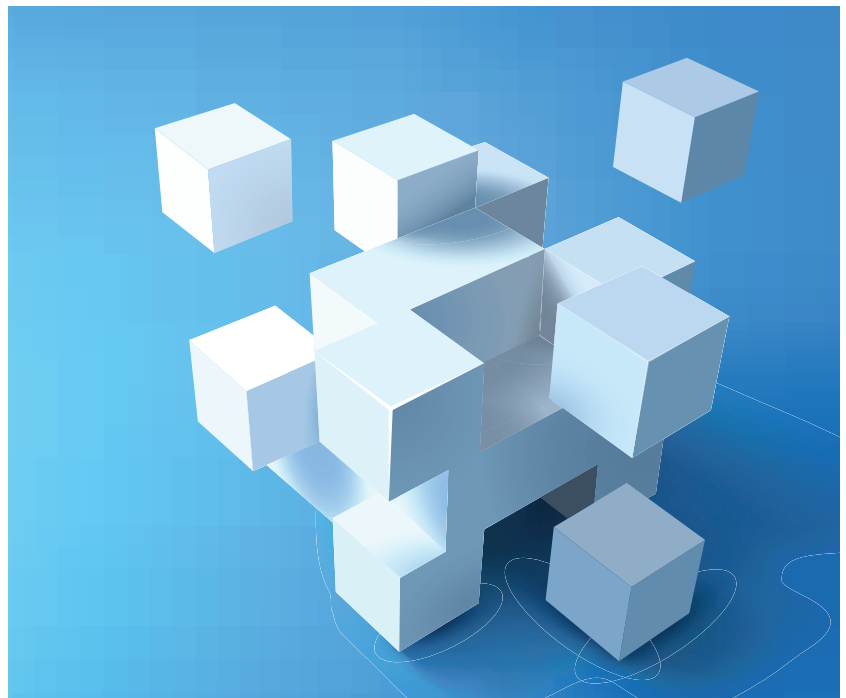
To enable the Smarter Process approach and build a customer-centric organization, businesses need to closely examine the decisions they make and how they make them. This process starts by understanding what a business decision is and what it isn't.

It's important to realize that business decisions are distinct from business processes. Business processes are more concerned with the tasks that enable products or services to be created and delivered to customers. Receiving orders, invoicing, and shipping orders, for example, are all driven by an organization's business processes. Business decisions, on the other hand, are the execution of business policy. That policy might be developed within the business itself, or it could be the result of industry or regulatory mandates. Every business has policies it needs to enforce and those policies manifest themselves in the decisions businesses make every single day. As the execution of policy, business decisions are built on business rules. Rules are the logic used to make decisions. The basic decisions businesses make have actually changed very

little over the years. It's the environment in which they're made that is changing.

In the past, many business decisions were made by people who either reviewed policies in place or simply created a policy that decided which customers could, for example, buy on credit at a local retailer or get a business loan. Promotions for new products or pricing were sent by mail, took a great deal of time to create and deliver, and had little if any capability to target certain customers. Decisions like these, made on a case-by-case basis, took time, often lacked consistency, and made the business vulnerable to risk.

Inconsistent decision making can negatively impact customers, but it also makes the business vulnerable to risk. Inconsistent or incorrect decision making could cause a business to fail an audit, fall out of compliance



with a regulation, or directly impact revenue when, for example, customers are receiving a discount incorrectly. There are, generally speaking, three types of decisions found in most businesses:

- 1. Decisions that help increase revenue:** Is a customer eligible for a certain promotion or a cross-sell or up-sell opportunity?
- 2. Decisions around consistency and compliance with regulations:** Are there prohibitions against a customer buying a certain quantity of a product? Is a customer eligible to make a certain purchase based on where she is located?
- 3. Decisions that reduce and mitigate risk:** Does the customer who just filled out a loan application online meet the criteria to be approved?

In order to keep pace with growing businesses, customer demands, and the number of access channels available, businesses long ago started encoding their business decisions into their business applications. These decisions were often based on a programmer's interpretation of business policy. Automating business decisions in this way had the potential for faster decision making, but it also created a number of new problems. It moved the implementation of policy and business decisions away from the business experts and put them in the hands of IT. Making a change in business policy and applying it to decisions now required the extra step of involving a programmer, and the process became difficult, slow, and prone to errors. It was fairly common for inaccuracies to creep into the business requirements as they were "translated" into programming.

When done correctly, business decision automation helps businesses and their customers avoid these situations because it leads to verifiable, consistent decision making. In addition to protecting against risk, this type of decision making pays off in increased customer loyalty and trust, promotes future business opportunities by encouraging repeat business, and makes it easier to acquire new customers.

## Changing the Way Business Decisions are Made

Business decisions, as mentioned earlier, are based on rules, and those rules can reside in any number of places. Many rules are found within the code of enterprise business applications, some of which have been around for years and are written in languages like COBOL or PL/I. In other cases the rules might reside in documents, live within business processes, or exist only in someone's brain and aren't written down at all.

It's often the case that the rules on which business decisions are based weren't established once and left alone. Many reside deep within software code where they are invisible to the business experts that need to see them most. There is a very good chance that duplicate or multiple versions of the rules exist. There is rarely a verifiable trail left that tracks the history of changes and why they were made. The rules in business applications are also likely based on how a programmer interpreted business policy at the time the code was written. They may not even apply to the business as it is run today.

This invisibility surrounding business rules, and the lack of resources and skills required to change them, leads to inertia, and it puts businesses in a bind. If making a change in the business rules takes too long, the business will begin to suffer from its lack of agility and will ultimately fail to remain competitive. Making the changes, on the other hand, increases the load on IT, which needs to make the change; taxes the organization's resources; and takes time.

What's really lacking in the way many businesses treat their business decisions is an understanding of how they support today's business environment. Customers are changing, and keeping pace with them requires businesses to change the rules. Regulators are constantly changing their rules. Businesses need the ability to change their decisions to keep pace.

Most organizations change their business decisions using their application development resources.

Developers make changes to business applications all the time, whether it's routine maintenance, adding new functionality, implementing a technology upgrade, or preparing the application for a new access channel like mobile. These projects are planned well in advance, taking into account that they may take weeks or months and setting aside time for QA and testing before they are available to users. These changes are sponsored by IT and not focused on rule changes.

Changing the rules organizations use to make business decisions is completely different. For starters, these changes are sponsored by the business, instead of IT. Business-sponsored changes include responses to shifts in the regulatory environment, a new pricing policy, and new product offers or loyalty programs. Unlike technology upgrades or maintenance, these changes need to take place quickly so they can support the seamless, flawless, and instant experience customers expect, or to comply with industry or government regulations and avoid penalties.

In the end, the traditional approach of calling on IT resources and application developers to change business decisions is too slow, too costly, and introduces too much risk. It also lacks the flexibility businesses need to respond to market and regulatory demands. Clearly a new approach is needed for businesses that need to change the way they make business decisions.

Decision Management is a new strategy businesses can use to change their business rules and make decisions in a way that suits today's business environment. The Decision Management approach calls for the logic (i.e., the rules that drive decisions) to be separated from the application. The rules become a specialized subset of the software development lifecycle where changes can be made more quickly and easily than before. This allows organizations to leverage the expertise of its employees who better understand how the policy and decisions affect the business, leading to faster, more consistent responses to changes in the business environment.

*"In the end, the traditional approach of calling on IT resources and application developers to change business decisions is too slow, too costly, and introduces too much risk."*

In Decision Management, the rules used to drive business decisions are expressed in a natural language common to the business and IT organizations, and the rules should be retained in a central location where the rules and their changes can be audited.

Initially, IT and business teams using Decision Management will collaborate and adapt their procedures to engage in the requirements dialog using natural language. Eventually the business experts will develop direct involvement in the assessment, implementation, testing, and the rapid deployment of changes under IT governance.

Decision Management is one of the building blocks of the Smarter Process approach. It helps businesses adapt quickly, create satisfied customers, and avoid the risk of falling short of compliance requirements. It's a new way of working with the decisions businesses have made every day for years.

The next article in this eBook will discuss how IBM is bringing next-generation Decision Management to enterprise applications and the benefits IBM customers can enjoy once they've changed the way they manage their decisions. ■



# Next-Generation Decision Management: IBM Operational Decision Manager for z/OS

Organizations running their enterprise applications on mainframes like the IBM System z platform are struggling to deal with many of the challenges discussed earlier in this eBook. Their decision making is locked inside application source code, making the business slow to adapt when marketplace or customer attitudes shift and the changes to business decisions costly to make in terms of time and resources. Many enterprises are, for example, trying to meet the needs of a new generation of mobile customers using the latest handheld devices to interact with applications developed in COBOL or PL/I.



Many organizations lack the IT resources to devote to the increasing pace, variety, and volume of change requests coming from the business. Decisions that are invisible to business experts and locked away in software code are more difficult to share, making it harder to develop a consistent application of policy. They also make it more difficult to find a “single version of the truth” or to deal with redundant code. The combination of these factors makes it difficult to ensure a seamless, consistent experience for customers that rely on these applications.

There aren’t many appealing options available to businesses that find themselves in this situation. Modernizing their business applications with a forklift upgrade is costly, time consuming, and full of risk if something goes wrong. Throwing people at the problem (i.e., hiring additional IT staff to deal with the flood of decision logic change requests) is inefficient, introduces risk because it can negatively impact software quality,

and unlikely amid stagnant IT budgets and other vital projects competing for resources.

IBM Operational Decision Manager (ODM) for z/OS represents a smarter way of dealing with business decisions. It is designed to help organizations gain more control over the business decisions that take place in their enterprise applications. Businesses that use ODM for z/OS will simplify their ability to make decision changes to enterprise applications, cut costs and cycle times, improve their agility and time to market, and enhance their visibility into business decisions as well as the governance of those decisions.

IBM ODM for z/OS can deliver these advantages to enterprise users because it enables separation of the decision logic from business applications and processes. This next-generation approach to Decision Management increases the visibility of business decisions and helps organizations leverage their talent, allowing

business experts to get involved, directly influence, and eventually be responsible for the business decisions while application developers focus on their core tasks. It also provides a central repository for business decisions and logic — the “single version of the truth” — that makes it easy for the business to find, access, and change business decisions without having to look through lines of software code.

Businesses can apply ODM to flexibly and reliably manage the repeatable, automated decisions found throughout their enterprise applications. Users get the most from ODM when they apply it to:

- Decisions that change frequently
- Opportunities for straight-through processing
- Decision services that should be reused across systems
- Manage and govern large numbers of decision services
- Real-time events requiring immediate action

Line-of-business subject matter experts using ODM for z/OS can collaborate on the creation and maintenance of decision logic, then test and eventually implement changes that help the business meet constantly evolving market, regulatory, or competitive conditions. ODM for z/OS helps improve the collaboration between business users and IT teams through its shared visibility and governance controls for the management of decision logic. It features an elegant development environment for application developers, which works in conjunction with a dedicated business user interface, allowing each role to quickly and easily execute its tasks related to business decisions. By enabling the business and IT to work together using a shared natural language — where the business requirements are expressed clearly — there is far less opportunity to introduce translation errors between the two sides. The natural language expression of the policy is the code.

It's standard practice for well-run application development teams making changes to an application to thoroughly test the application before putting it into

production. ODM for z/OS allows line-of-business users to do the same with business decisions by delivering end-to-end support of those decisions invoked from Java, COBOL, and PL/I. This support includes decision simulation and testing. Users can also trace the execution of how a business decision is made, providing a level of visibility not available when decisions and logic were trapped in software code.

### Deployment Options

The runtime components that ODM for z/OS uses to automate decision logic are provided by IBM Decision Server. Applications can access these servers in multiple ways, including native APIs for COBOL and PL/I applications, as well as RESTful and Web Service facilities. These access options are available to applications executing as batch work or in transactional environments, such as IBM Customer Information Control System (CICS) and IBM Information Management System (IMS), or in WebSphere Application Server.

IBM recommends the decision servers be placed as close as possible to the calling application, regardless of the execution platform. In the z/OS environment, this allows for cross-memory reach for all the application environments. Because there's no disruption to the application execution environment, having multiple decision servers does not pose an administrative challenge.

IBM ODM for z/OS can help businesses modernize enterprise applications. It allows them to take advantage of the logic in existing applications and put it to work solving business problems that didn't exist when the applications were written, without requiring expensive and time-consuming rip-and-replace upgrades.

IBM recommends that businesses take an incremental approach to business application modernization. Focus first on addressing the changes that take place often and/or very quickly to keep pace with the market. Businesses are often struggling to manage these

changes via the traditional software development lifecycle approaches. IBM ODM for z/OS provides the functionality businesses need to succeed in this step.

In time, more opportunities for application modernization will become clear, and enterprises can make decisions about how decision-based modernization can be used.

### Benefits of the ODM Approach

Implementing Decision Management with ODM helps enterprises put in place the Smarter Process approach they need to compete in today's business climate, maximize their resources, and create satisfied customers.

Exposing business decisions and the logic on which they're based to business expertise provides unprecedented visibility into the myriad of decisions enterprises make on a daily basis, including the ability to test and simulate different decision scenarios before

they enter a production environment. Never before have businesses been able to see and understand with such detail how their business policies are driving their decisions.

In addition to better visibility, Decision Management with IBM ODM for z/OS provides businesses with the ability to reuse their policies in a consistent fashion across their business application space. This "single version of the truth" helps organizations deliver the flawless, instant, seamless experience customers expect from their interactions with today's businesses.

The next article in this eBook will examine how a number of enterprises are leveraging IBM ODM for z/OS to improve the way they make business decisions. It will also explore the very real ways that Decision Management delivers tangible business benefits like increased revenue, lower costs, and customer retention. ■

*"Implementing Decision Management with ODM helps enterprises put in place the Smarter Process approach they need to compete in today's business climate, maximize their resources, and create satisfied customers."*

# IBM Operational Decision Manager for z/OS: Success Stories

IBM Operational Decision Manager for z/OS separates business decisions from software code and puts the ability to manage those decisions in the hands of business specialists.

These specialists can then work collaboratively with IT to make adjustments quickly and easily, making it possible for the business to react to changes in consumer attitudes, market conditions, or the regulatory environment.

Businesses that are using ODM for z/OS are introducing the Smarter Process approach to their organization. They now have the agility they need to respond to the demands of today's customers and reduce risk. It's easier for them to provide a seamless, flawless, instant customer experience. They can uncover new revenue opportunities and introduce efficiencies into their organizations. These businesses are also taking an incremental approach to modernizing their business applications, starting first with meeting their most immediate challenges.

A worldwide financial services organization was losing out on revenue because it didn't have the ability to deliver the right cross-sell and up-sell opportunities to its customers at the right time. The organization's decision logic was scattered and inconsistent across its channels. This led to a poor customer experience when, for example, the staff in an office would try to cross-sell to a client who wasn't eligible. This financial services firm wasn't able to provide the flawless, seamless, instant customer experience.

Adopting IBM ODM for z/OS allowed this firm to conduct its business in a smarter, more effective way. The result was the introduction of the Smarter Process approach to its existing enterprise applications. Now client relationships

have improved in terms of acquisition, retention, and wallet-share. The ability to instantly update decisions means changes are implemented with greater accuracy and speed, and the firm's ROI is accelerated.

The numbers don't lie:

- Revenue increased with \$14 million in approved bookings in less than three months
- Cross-sell offers increased from 13 percent to 40 percent
- Client offer acceptance rose from 3 percent to 20 to 30 percent.

A regional financial services company used IBM ODM for z/OS to optimize its change request cycle. It started out with a nine-month process for application changes, from initial request to production roll-out. The original rules methodology was built on a home-grown, table-driven solution. It was cumbersome and not auditable.



Such a lengthy process for changes put the organization at a competitive disadvantage, as the number and frequency of change requests were increasing due to regulation and competition. To make matters worse, the organization's mainframe programming skills were declining or at risk.

This organization implemented ODM for z/OS to replace its home-grown tool, and deployed it in support of online and batch systems. This reduced the development lifecycle, thanks to a new rule-testing methodology, from six months to two weeks. The overall implementation time was reduced from nine months to six weeks. This time savings adds up to a significant reduction in overall costs. The organization also benefits from increased top-line revenue, and it's more responsive to business changes and its customers.

A property and casualty insurance company improved the way it managed its business decisions and used the Smarter Process approach to improve client retention and increase revenue while reducing costs.

For this business, the IT inertia was so bad that changes to its enterprise applications could only be completed annually. Its governing policies and rules had grown brittle over time, and the business had a need to control or stem "premium leakage" (an insurance industry term for money left on the table by errors in rating customer premiums).

The Smarter Process approach and better management of its business decisions allowed this insurer to reduce its cycle times between submission and quote. It was also able to better control premium leakage and streamline its new business processes to help drive revenue, improve risk segmentation and risk selection, and take advantage of real-time process insight and metrics dashboards.

Introducing the Smarter Process approach for automating business decisions led to a number of improvements. The

cost, time, and effort to update and create new business decisions were decreased. Business analysts were able to complete rule authoring and validation, allowing IT to make better use of its resources.

A business value analysis put numbers to the advantages the business saw as a result of investing in Smarter Process:

- \$6 million in revenue growth over five years
- \$2 million in reduced operational costs
- \$1.7 million in reduced IT costs

### Conclusion

These businesses experienced very real benefits from better managing their business decisions and using the Smarter Process approach. They are now able to respond quickly to changes in their customer culture, their competitive landscape, and their regulatory environment.

At the same time, these businesses are addressing immediate business concerns using existing enterprise applications, without incurring the expense or risk of replacing these applications entirely. They are taking a prudent, measured approach to application modernization.

Businesses that lack visibility and governance surrounding their business rules and decisions should explore implementing next-generation Decision Management with IBM ODM. Creating an environment where IT expertise and business expertise can collaborate on business decisions helps build the customer experience required in today's business climate, reduces risk, and directly impacts revenue and ROI.

To learn more about Decision Management with IBM ODM for z/OS, please visit: <http://www.ibm.com/software/products/en/odm-zos/>. ■