



“The Business Rule Revolution” Book Excerpt

Running Business the Right Way

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Introduction: Welcome to the Business Rule Revolution

Barbara von Halle

Why This Book?

Business rules are everywhere. The right ones bring success, represent the smartest thinking, and make people such as customers feel good. The wrong rules bring trouble and uncertainty. You never know when the wrong rules may strike. You probably don't even know which ones they are.

Obviously, business rules are the very core of any business and determine whether it succeeds and how well, or fails and how badly. And yet, the current state of business rule best practices in the marketplace is unknown, until this book. This book is part of a series destined to be the Voice of the Business Rule Revolution, sharing and measuring its progress.

The Business Rule Revolution is the awakening of business leaders to the importance of business integrity and governance through management of individual rules. Some organizations are making great investments in it. Some have not begun. And most, are somewhere in the middle. But, there is no published book to serve as an anchor point—a book where real people share real experiences so that the Business Rule Revolution does its job.

Six important aspects of the book are:

1. It is for managers and decision-makers who make things happen in their organizations.
2. It addresses business rules to be leveraged for agility, compliance, and corporate intelligence as a key mechanism for engineering the business itself.
3. It is not meant to be read cover-to-cover.
4. Together, the sections provide a step-by-step management approach that crosses business and information technology barriers.
5. Real case studies are written by real people as practiced in well-respected corporations, government agencies, consultancies, and software vendors.
6. Leading technology is highlighted.

Who Is This Book For?

This book is for anyone interested in starting, planning, learning about, or participating in the Business Rule Revolution. These are the people who see the value and want to be part of it.

How Is This Book Unique?

There is no book like this one in the business rule space. Its uniqueness is that no one person wrote it. It is a true anthology of experiences, successes and of disappointments, but full of practical guidance, contributed by everyday people.

Goals of This Book

As the first book in the series, the goals of this book are to:

- Expose the practicality of the Business Rules Approach through successes in major organizations

- Bring business and information technology professionals together
- Present the achievements from a Business Rules Approach for both business and information technology

Who Wrote This Book?

Most of the people who wrote this book are not professional writers, teachers or speakers, although some of them present at Business Rules and related conferences. They are not theorists, although some have formal education in fields related to business rules, such as artificial intelligence, knowledge engineering, and software engineering. Most of them don't know each other. The one common characteristic they share is their generosity in disclosing their business rule lives to you.

While only a few chapters have been coordinated with other chapters, together they tell a true and complete story. The story has a business side and a technical side. These sides come together in these pages, to be shared by business and technical people. Our hope is that it brings these people together to realize the same business goals through business rules.

How to Read This Book

The book has three sections.

For both ***business and technical audiences***, Section 1 is an introduction to business rule topics. As such, it summarizes the current and desired state of practitioners of the Business Rules Approach. It explains the Rule Maturity Model (KPI RMM™), where the marketplace is on that model today, and where it wants to go. The Rule Maturity Model is a prevalent theme throughout many of the chapters.

Section 1 also contains a pivotal chapter from John Zachman, clarifying the concept of Enterprise Architecture which is the application of traditional architecture principles to an enterprise, not merely technology. From here, Larry Goldberg's chapter presents the role of business rules in an organization's Enterprise Architecture.

For the **business audience**, Section 2 focuses on understanding business processes and insights into the business policy maker as rule author. Specifically, Neal McWhorter explains business engineering with business rules, Art Moore and Michael Beck uncover the integration of business process modeling and business rules, and Larry Ward and Jordan Masanga explain how business process management (BPM) activities improve the business (with ties to business rules). A very special chapter from John Semmel describes home-grown software, by which non-technical rule authors conceive, author, analyze, and simulate rules.

For the more **technical audience**, Section 3 covers topics about rule architecture and technical rule support. Starting off, Gene Weng and May Abraham each contribute a chapter on the role and importance of the rule architect and rule architecture when building complex rule systems. Brian Stucky, representing a business rules service company called InScope Solutions, provides insights into positioning an enterprise for business rules in terms of people, processes, and organization. It is in Section 3 that software vendors present technology solutions to business rule opportunities. Two leading business rule management system (BRMS) vendors are highlighted in this section. James Taylor, representing Fair Isaac Corporation, describes the use of business rule technology in

delivering an enterprise policy hub. Linda Nieporent, representing ILOG, presents a case study with Equifax as it evolved in its use of ILOG's BRMS. Both vendors and their products have been around and evolved for several decades. They have much experience to share and interesting strategic visions for the Business Rule Revolution. Also in this section is a description of the KPI STEP™ Workbench as a source rule repository supporting organizations at Level 2 of the Rule Maturity Model.

The Open Door

Hopefully, this book is the first in a long series. We welcome new contributors and chapters. The journey begins today. Make this book, these authors, and this series your business rule almanac.

Sincerely,

Barbara von Halle
Larry Goldberg

1

The Essential Business Rule Roadmap

Barbara von Halle

What is the Business Rule Revolution?

The Business Rule Revolution is happening everywhere, even if it seems invisible. In fact, the business rules that are unseen or unknown are precisely the ones that can do the most damage. Invisible rules lurk behind a lack of proper business rule management—creating a precarious business climate for these times.

Consider the growing and painful awareness of questionable accounting practices by some corporate executives in some major organizations. What is at play here? Business rules are at play—good or bad, known or unknown. In these cases, rules were broken or secret. Some were improper rules applied to achieve improper objectives. Think of the Business Rule Revolution as appropriate parties knowing what the rules are, applying the rules in

all the right places, and the organization therefore taking full responsibility for its rules and its integrity.

In a nutshell, the Business Rule Revolution represents an emerging undeniable need for the right people to know what a business's rules are, to be able to change those rules on demand according to changing objectives, to be accountable for those rules, and to predict as closely as possible the impact of rule changes on the business, its customers, its partners, its competition, and its regulators.

This means that the Business Rule Revolution reflects a pent-up need for business people to play a more prominent role in safely stewarding the business's rules from their inception to execution, with probable automation. Otherwise, the business is driving in the dark, off-road without headlights—an environment where serious accidents can happen. An organization aiming to better manage its important business rules needs a goal, a roadmap, and a plan for action. This is where KPI's Rule Maturity Model (KPI RMM™ or RMM) fits.

This chapter explains the KPI Rule Maturity Model as the essential roadmap by which organizations chart their course in the Business Rule Revolution. This chapter covers:

- What exactly are business rules?
- What is the Business Rules Approach?
- Putting the business first
- What is the Rule Maturity Model?
- What the Rule Maturity Model is not?
- How the Rule Maturity Model is used today?

- Today's leaders: RMM levels 1, 2
- Tomorrow's leaders: RMM levels 3, 4, 5
- The Rule Maturity Model and the changing relationship between business and IT
- What happens next-technology predictions in the Rule Maturity Model?
- Summary and future vision

What Exactly Are Business Rules?

Business Rules are the ultimate levers with which business management is able to guide and control the business. In fact, the business's rules are the means by which an organization implements competitive strategy, promotes policy, and complies with legal obligations.

In reality, not every business rule is worth explicitly stating or even automating. Also, while business rule management systems (BRMS) are extremely valuable, not all business rules belong in one. A critical aspect of a successful Business Rules Approach, therefore, is assessing the value of specific business rules to the business, how often those rules need to change, how urgently the change is needed, and how much control the business people need or want over those changes, from start to finish.

The following are examples of business rules or business policies as a business person might initially express them:

- A premium customer is every customer whose credit rating is A or B.

- If a premium customer requests a loan for greater than \$500,000, allow a delay in the first payment date by 30 days.
- The formula for computing a student's cumulative grade-point average is found on page 6 of the student policy manual.
- A driver should proceed in a particular direction if the street is labeled "senso unico," but can proceed in the opposite direction without penalty unless the driver causes an accident.
- If a loan applicant's outside credit rating is marginal and the applicant also has a credit card balance greater than \$5,000, then it is highly likely that the applicant will default on a loan.
- An employee who has completed five years of full-time employment with the company is entitled to four weeks of paid vacation.
- Stock options vest at a rate of one-third each year over three years.
- A customer with outstanding payments due must pay in full prior to a new order being shipped.
- A preferred customer automatically receives free express shipping on all orders.

These examples illustrate that there are different kinds of business rules. Some rules impose constraints (constraint rules), some provide suggestions (guideline rules), some make calculations (computation rules), some infer interim conclusions (inferred knowledge rules), and some infer actions (action-enabler rules).

What is the Business Rules Approach?

There have been generations of advances in business and software engineering techniques and technology; yet, the rules of most businesses remain lost, unknown, inconsistent, inadequate, or simply resistant to change. Such rules, if crucial to business operations, are a hidden liability. Unmanaged rules result in lost time-to-market, regulation violations, and customer dissatisfaction: a sub-optimal running of the business at best.

Today, the Business Rules Approach is best defined as a formal way of managing and automating an organization's business rules so that the business behaves and evolves as its leaders intend. Organizations today apply the Business Rules Approach to rules carried out by humans during the course of manual processes as well as those automated in systems. Therefore, the Business Rules Approach enables business leaders to confirm that the right rules are guiding the business in all of the right places. This becomes possible by identifying rule-rich business processes and understanding the importance of the rules that are to guide specific aspects of those processes.

The Business Rules Approach includes tasks, roles, and a rule repository for business people, rules engines for automation, and formal ways of expressing rules so that the business's policies and supporting rules can be quantified, accessed, and changed as needed.

When the Business Rules Approach results in the automation of rules in systems, often a business rule management system (BRMS) is deployed. Applying the Business Rules

Approach with a BRMS “builds better, changeable systems faster than any previous approach.”¹ Real-world experience proves not only that business rule projects are completed faster, at less cost, and with less risk, but they continue to deliver substantial savings in time and money because rule maintenance is significantly accelerated.

Putting the Business First

While the Business Rules Approach has wide applicability, it always begins with the business itself, specifically its goals. After all, business rules existed long before there were computers. The Business Rules Approach recognizes that business rules are first about business directions, and later about databases and engines. With this perspective in mind, the Business Rules Approach makes possible the opportunity to manage the most important rules of the business, no matter what kind they are or what kind of technology they best belong in, if any.

This means that the adoption of the Business Rules Approach starts by understanding business objectives and letting those objectives drive the business rule management practices that are optimum for the organization or project.

To be business-centric, the Business Rules Approach requires a source rule repository. A source rule repository provides the following:

1. von Halle, Barbara, Business Rules Applied (2002: John Wiley & Sons, New York)

- Storage of rules for the business audience, in a central or coordinated location
- Access to rules by anyone who needs to know them
- Analysis of rule sets for redundancy, inconsistency, etc.
- Involvement of all stakeholders in the rule change process
- Traceability to where rules are executing in the business and its systems
- Traceability of business rules to relevant items, such as processes, use cases, decisions, business terms, data fields, stakeholders, motivations, data, and object models.

Critical to the Business Rules Approach is a newly defined business rule life cycle. It starts with a business opportunity or challenge, moves through the articulation of policies and rules with a business focus, and may culminate in automated rules in systems. The newly defined business rule life cycle typically enables shorter change cycles and may shift more of the responsibility for stewarding rule changes from technical to business people.

The optimum business rule management practices will enable management of underlying business rules by appropriate business stewards, regardless of what kinds of rules they turn out to be, what kind of rule authoring techniques will work best, and what kinds of technology options might be optimal. The optimum business rule management practices should therefore be designed to fit an organization's or project's goals and culture. This brings us to the role of the RMM.

What is the Rule Maturity Model?

Essentially, the RMM is a simple and practical model by which an organization aligns its business objectives with the optimum business rule management practices for achieving those objectives. It provides a straight-forward roadmap, customizable for each organization or project.

Like other maturity models, the RMM has six levels, starting from 0 and leading to 5. In a level 0 organization, people are unaware that business rules have a value worth contemplating; at level 5, organizations are utilizing business rules as proactive and predictive levers for change and compliance, as well as for gaining momentum over the competition, and predicting the future. Therefore, each RMM level represents an alignment between specific organizational objectives and corresponding business rule management practices, supported by refined roles, techniques, and software requirements. Each level also represents a major change in an organization's culture and its ability to reach for higher goals. Therefore, skipping levels is not recommended.

At a glance, each level of the RMM represents one major goal with respect to business rule management, as depicted in Figure 1 and listed below:

- RMM Level 1 → Knowledge of Rules
- RMM Level 2 → Agility of Rules
- RMM Level 3 → Consistency and Alignment of Rules
- RMM Level 4 → Prediction of Rules
- RMM Level 5 → Stewardship of Rules.

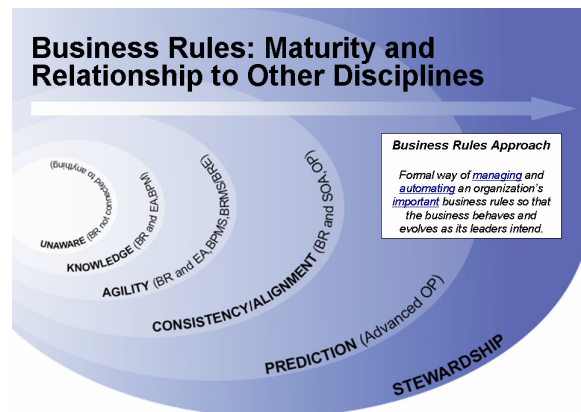


Figure 1: The RMM at a Glance

What the Rule Maturity Model is Not

The RMM is not a report card. In fact, higher RMM levels are not necessarily better than lower ones. It would be incorrect to judge organizations or projects seeking or achieving lower levels of the RMM as falling short in any way. To the contrary, applying the RMM successfully means achieving the RMM level that delivers desired business objectives through the managing of related business rules.

Figure 2 depicts more details of the RMM², along three vectors. The first vector is the business value which addresses the influence over rule changes materialized by each RMM level. The second vector is the technical state which describes where rules reside and how they are managed at each level. The third vector is the business control which alludes to the role of non-technical rule stewards and how that role evolves at each level of the RMM.

2. The original version of the RMM is at www.kpiusa.com/rmm.htm

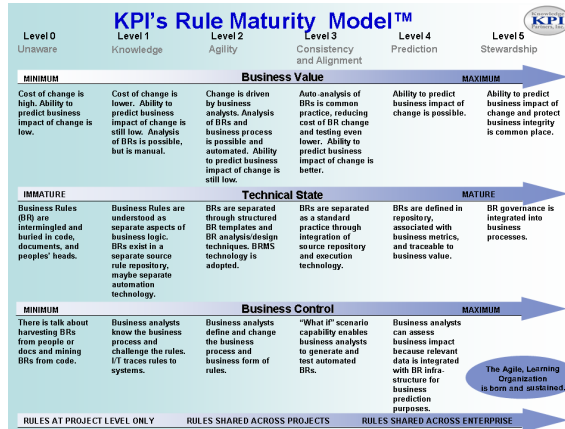


Figure 2: The RMM in More Detail

How the Rule Maturity Model is Used Today

To date, various organizations use the RMM for one or more of four main purposes:

- Assess their current state to understand where they are today with respect to managing business rules. Most are at RMM Level 0.
- Define their target state to determine how far they should go in managing business rules. Most are aiming for RMM Level 1 or 2, with a few aiming for RMM Level 3.
- Certify achievement to publicize to internal and external audiences their successes as they achieve targeted RMM levels.
- Determine the business value of incorporating the Business Rules Approach to drive the adoption of the Business Rules

Approach by targeted business objectives and to determine the means and metrics of measuring its outcome.

Organizations using the RMM to assess current and target states begin by identifying business objectives to be achieved by managing business rules. This leads to answers to the following questions before determining the desired target RMM Level:

- What objectives are achievable by better managing business rules?
- What are the short-term and long-term timeframes for achieving those objectives?
- Which business rules are worth managing?
- Who is to play which roles in managing business rules? Specifically, who drives policies to new and changed rules for different parts of the business?
- Is there a need for joint stewardship for some policies and rules?
- How will political conflicts concerning rules be settled?
- What technology is needed to support each of the roles?

Use of the RMM to certify achievement of specific RMM levels has uncovered a critical consideration. The RMM implies that all three vectors be managed at the same level of maturity. That is, there is danger in achieving an RMM Level 3 for the technical state (i.e., delivering enterprise-worthy rule authoring software, etc.) but an RMM Level 2 for the business control vector (i.e., putting that technology into the wrong hands). Inconsistent maturity causes unexpected, possibly devastating havoc. An organization exhibiting

disparate RMM levels in its business rule management may be dysfunctional, putting anticipated benefits in jeopardy. In fact, most shortcomings of the Business Rules Approach in practice can be attributed to inconsistent achievement of RMM levels across these vectors.

Today's Leaders: RMM Levels 1, 2

It is important to understand the culture and capabilities of organizations at each level of the RMM in more detail. Below, each level is introduced using Figure 1, adding the detailed explanations for Figure 2.

Level 0: Unaware

A Level 0 organization is **unaware** of business rules as being special. The rules remain hidden and unchartered. They are buried as details in process descriptions, policy and procedures manuals, or in system designs where they are vulnerable to becoming lost and unknown and resistant to change. As a result, no one knows where to start looking, where to stop, or how long it may take to find certain rules.

Even more importantly, business rules are not managed rigorously as strategic levers for achieving objectives. People in an organization at RMM Level 0 carry out business transactions often without knowing what the rules are or where they are executing in business processes or automated systems. The organization survives with rule changes that are difficult, time-consuming, and costly.

Level 1: Knowledge

A Level 1 organization wants to gain **knowledge** of some of its rules. Such an organization separates the business rules from other kinds of business artifacts or requirement types. To achieve this separation, a Level 1 organization captures the rules in a simple manner on a project-by-project basis, often involving only minimal investment in new software and organizational roles. Typically, rules are captured as free-form rule statements, stored in documents, spreadsheets, simple extensions to modeling or requirements tools, or a relational database that has room for rule-related metadata. Business people know where to find the documented rules and are, therefore, able to find out where those rules are executing in the business processes and systems. This minimal traceability can lead to a shorter change cycle than is likely at Level 0, where the rules remain buried.

At Level 1, because rules are separated simply but without a lot of rigor, they take on the characteristics of a new kind of non-rigorous business or system requirement. Therefore, as with other kinds of requirements, typically in Level 1 organizations, business analysts interview business experts about objectives, requirements, and source documents. The business analysts (with some technical skills) write the rules but technical people are still needed to produce automated rules. The business experts provide input and review the output, but do not play the direct role of creating the rule statements for the source rule repository.

As such, a Level 1 organization does not apply much rigor in its Business Rules Approach. True agility is in its infancy at Level 1, which is why most organizations aim for Level 2.

Level 2: Agility

A Level 2 organization aims for **agility** in its business rules; thus, it seeks more rigor in capturing and managing them. A Level 2 organization not only separates the rules from other business and technical assets; it does so with a well-defined rule authoring process. This process starts with authoring rules or changing rules, gaining business approval for them, analyzing them, testing them, and putting them into production (if automated). Structured methods, parsed rule syntax or intelligent parsers, and manual analysis of rule groups (for correctness, completeness, etc.) are possible. A Level 2 organization or project is well-positioned to take advantage of BRMS deployment because rules are expressed in a more rigorous form, closer to that needed for automation and for automated rule analysis (available through BRMS). To achieve maximum agility, a Level 2 organization requires traceability from changing rules to other business and system artifacts. Thus, Level 2 requires separation and traceability of business rules to support business and technical agility.

Organizations aiming for Level 2 store these rules in a more sophisticated source rule repository, used by business and technical people. The source rule repository also captures standard terms and related reusable rule clauses, enabling more robust rule reporting and analysis. Rule related roles are defined. Project-level rule stewardship exists. Typically, a BRMS is used for some automated rules.

The transition to Level 2 involves adding the authoring, validating, and analyzing of rules with an underlying semantic model. In some Level 2 organizations, business analysts who are not so technically oriented may author the business-friendly form of a rule, especially if the

source rule repository is one that is easy to use. Still, technically-oriented business analysts usually write the more formal form while technical people convert these into an automated form. The responsibility for creating business rules is shared by business analysts and technical people.

Tomorrow's Leaders: RMM Levels 3, 4, 5

Level 3: Consistency and Alignment

An organization aiming for RMM Level 3 seeks **consistency** among its rules and **alignment** of them to current and changing objectives. Therefore, an RMM Level 3 organization seeks business rule governance across projects, systems, and perhaps business unit boundaries.

Such an organization identifies business-driven benefits for standardizing or sharing business rule techniques and even automated business rule services across projects. These organizations typically establish a Business Rules Center of Excellence that endorses a standard business rules methodology. Sometimes multiple BRMSs are deployed, and common business rules techniques, standards, and roles are shared across BRMSs, when appropriate.

The transition to RMM Level 3 is extremely significant as it means cross-organizational rule governance as well as more sophisticated source rule repository support. It implies organizational change and collaboration, and brings with it some of the greatest business rule benefits.

Level 3 introduces automated rule analysis and simulation capabilities. This means that the translation from the business-friendly form to an executable version is either prompted by intelligent software or automatic in some manner. In this environment, business analysts or even business experts are able to author, change, and test rules without relying on technical people to bridge the gap. Usually, technical people put the resulting rules in production.

Level 4: Predictions

An organization at RMM Level 4 sees business rules as ***predictions*** for future success. Business people or analysts hypothesize about future events to which they wish to respond in a carefully pre-calculated manner. Business leaders or analysts craft different rule sets, test, simulate and compare predictions, and have these rule sets ready-and-waiting for deployment in anticipation of related threats and opportunities. These people craft business rules to react to such events and predict the business impact of rule changes on the client base, revenue, profit, and staff levels.

Level 4 opens up a whole new world. A Level 4 organization supports a variety of tools for capturing and analyzing rules and with metrics against which desired impact of rules on the business are managed. Business analysts or business experts define their destination via metrics and then interactively craft the rules by which they hope to arrive there. With tools and metrics at hand, business analysts or business experts can now proceed confidently from understanding future business objectives to simulating rules within a future context. Again, usually technical people put such rules into production, when needed.

**Level 5:
Stewardship**

An organization aiming at RMM Level 5 embraces the full **stewardship** of business rules for refining and re-inventing itself as necessary. The difference between Level 4 and 5 is that Level 4 aims at immediate or short-term futures, whereas Level 5 looks to a variety of longer-term futures. It represents a world of anticipation and planned reaction while hitting the ultimate goal of agility. A Level 5 organization is not satisfied in just being fast, but plans on being first. A Level 5 organization defines various futures as the organizations wishes them to play out before they happen!

The characteristics of each level of the RMM are summarized below.

Table 1: Culture and Capabilities for Each RMM Level

RMM Level	Use of Rules	Primary Goal of RMM Level	Comments
1	Re-orient or Re-discover (existing rules)	Knowledge of Rules	<ul style="list-style-type: none"> • Rules in business language • Rules tied to process models or use cases • Rules traced to systems implementation • Rules stored in spreadsheets
2	Re-act (to change)	Agility of Rules	<ul style="list-style-type: none"> • Rules in formal form possibly with rule authoring software • Glossary of terms tied to rules • Rules analyzable • Standard rule reports • Source rule repository with extensive traceability of rules to rule metadata, process models, object models, etc • Rules in agile technology (BRMS)
3	Re-align (with objectives)	Consistency and Alignment of Rules	<ul style="list-style-type: none"> • Rule sets assigned to business metrics • Rule sets shared as services across processes and systems • Business Rules Center of Excellence established • Possibly more than one BRMS • Standard methodology, templates, etc
4	Re-envision (short-term futures)	Future Predictions with Rules	<ul style="list-style-type: none"> • Potential events identified • Potential rules simulated • Revenue, profit, people differences estimated • Rules recast according to analysis
5	Re-invent (longer-term future)	Full Stewardship with Rules	<ul style="list-style-type: none"> • Rule stewards identified • Fast, first to define and respond • Ever-changing organization

The Rule Maturity Model and the Changing Relationship between Business and IT

Each higher level of the RMM, because there is more rigor in the methods and more sophistication in the software, offers the opportunity to re-shape the relationship between business and technical people. To understand how this relationship can evolve, let's first understand the basics of the business rule life cycle, which can provide a much shorter change cycle.

The concept of a business rule life cycle is new and it applies to all RMM Levels, except Level 0. In fact, for RMM Levels 1 through 5, the business rule life cycle is much the same. It usually consists of the following tasks or activities:

1. Document business objectives or requirements initially or requiring change.
2. Document business policies supporting the objective or requirement.
3. Identify source materials for underlying rules.
4. Discover and author rules in simple, business-friendly, natural language form (with glossary).
5. Author, validate, and analyze rules in rigorous, formal form with a semantic model of the underlying glossary.
6. Automate and test rules.
7. Simulate rules within a context.
8. Put rules into production.

A very significant difference among RMM Levels involves the role of business versus technical people in the business rule life cycle. At higher RMM Levels, businesspeople are able to carry

out more of the steps in the business rule life cycle because there are methods, standards, and software that enable them to do so with minimal technical support.

What Happens Next-Technology Predictions in the Rule Maturity Model?

The incremental methodology and technology requirements for each level of the RMM are becoming well-known and widely accepted. Practitioners use the RMM to prepare for future technology advancements. Software vendors use the RMM to deliver on the promise of the Business Rules Approach.

Most recent advances include the interest in and addition of some business rule management support for non-technical users to BRMS products. Another important trend is that of Enterprise Decision Management (EDM), which takes advantage of BRMS technology and sometimes analytical models to improve operational decisions. Per Cutter Consortium³, "EDM should be considered as a way to extend your organization's DW (data warehousing) and BI (business intelligence) capabilities by automating decisions through the use of rule-based systems and analytic modeling techniques."

For more insights into current technology trends and visions, see Chapter 15.

3. Hall, Curt, "Enterprise Decision Management: Business Intelligence Advisory Service," Executive Report volume 5, No. 6, Cutter Consortium

Summary and Future Vision

The RMM is a tested roadmap by which organizations set realistic business rule expectations and design a practical roadmap for getting there. The RMM keeps an organization grounded in a step-by-step Business Rules Approach that is customized to target business objectives. As such, the RMM is a guide for matching desired or required business benefits to the appropriate amount of investment in managing business rules. The RMM assists in defining the first steps in getting started while keeping a longer-term vision in sight.

Through the RMM, the vision of the Business Rules Approach will be realized:

To enable business leadership to take control of the guiding levers of the enterprise, and enable technology to match the rate of business change.

References

1. von Halle, Barbara, Business Rules Applied (2002: John Wiley & Sons, New York)
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Contributing Authors

Contributors of this edition of the Business Rule Revolution, in alphabetical order, are:

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Larry Goldberg is Managing Partner of Knowledge Partners, Inc., specializing in business strategy and architecture. Larry has over thirty years of experience in entrepreneurship on three continents—Africa, Europe and North America. In the last twenty three years his focus has been in creating rules-based technologies and applications. He has sponsored and played a primary architectural role in Business Rules Management Systems, and business rules-based commercial software applications in healthcare, supply chain, property and casualty insurance, and taxation regulation. Prior to joining Knowledge Partners, Inc. in 2005 as Managing Partner, he sold his company, PowerFlex Software, to Sapiens Americas, Inc., in 1999, becoming a Senior Vice President of Sapiens.

Barbara von Halle is the Founder and Managing Partner of Knowledge Partners Inc. As a recognized leader in today's Business Rules Approach, Barbara led the development of the best-selling Business Rules methodology book (*Business Rules Applied*, 2002: John Wiley & Sons), the KPI STEP™ licensed product of Business Rules Management methods and tools, the KPI RMM™, and a proven approach for excavating rules from code. As a Business Rules pioneer, Barbara received the Outstanding Individual Achievement Award from the International Data Management Association. She has earned a bachelor's degree in mathematics and an master's degree in computer science with an electrical engineering focus.

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Art Moore is a Managing Partner of Clear Systems LLC. Art has over twenty years of IT experience, from systems development to IT strategic planning and practice management. He has focused extensively on assisting large projects and organizations to establish and integrate business rule-related system specification and development methods, technology, and management tools and processes in their total business systems development and management context. Mr. Moore is a co-author of Barbara von Halle's last book, *Business Rules Applied* (2002: John Wiley & Sons).

Linda Nieporent is BRMS Product Manager at ILOG, Inc. Linda has over ten years of IT experience, the last six focused on business rules, both from a business user perspective and an IT implementation perspective. Ms. Nieporent is a co-author of Barbara von Halle's last book, *Business Rules Applied* (2002: John Wiley & Sons). As an active proponent of business rules practices, she has written articles and presented on business rules-related topics at user groups and industry conferences.

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James Taylor is Vice President of Enterprise Decision Management (EDM) at Fair Isaac Corporation. James is widely recognized as a leading proponent of the Enterprise Decision Management approach that uses business rules and predictive analytics to deliver excellence in

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Gene Weng is Business Rule Lead in a major American financial service company. Gene also worked as an IT architect for Perot Systems. He holds a master's degree in mathematics from the University of Science and Technology, Beijing, and a master's degree in computer science from the University of Oregon.

Larry Ward is Quality Assurance Project Manager at Oregon Public Employees Retirement Systems. Larry has over forty years' experience in systems analysis and design, industrial engineering, and QA, including over ten years' Business Rules Approach experience. He is working on a major systems conversion project that implements BPM at OPERS and uses the OPERS Business Rules Approach. Larry designed the process to apply a Business Rules Approach at OPERS and was the project coordinator for five years; he managed IBM® Rational® RequisitePro® and ClearCase® database repositories, requirements, and content for over five years, and assisted in developing tools and processes to update the rule databases. He has earned a bachelor's degree in business and management, a master's degree in management, and a Juris Doctor degree.

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