Business Rule Concepts

Getting to the Point of Knowledge

Fourth Edition

by Ronald G. Ross

Co-Founder, Business Rule Solutions, LLC
Executive Editor, BRCommunity.com
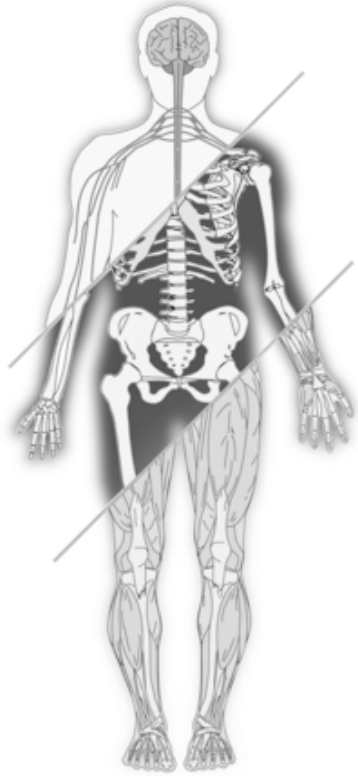**Chair, Business Rules & Decisions Forum Conference**

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THE WORLD'S MOST TRUSTED RESOURCE FOR BUSINESS RULE AND ENTERPRISE DECISIONING PROFESSIONALS

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Chapter 1

What You Need to Know About Structured Business Vocabularies

In the human body, structure is provided by the skeleton. The skeleton has two basic components: the bones and the ligaments that connect the bones. Even though the bones are larger and in a sense more basic, both components are essential.

   In everyday business operations, structure is given by **business vocabulary**, or more precisely by the **concepts** represented in the vocabulary. There is a whole lot more to a vocabulary than you might imagine. Without any exaggeration, a good business vocabulary is no less important to effective business operation than a strong and complete skeleton is to the human body.

   Like the skeleton for the human body, a vocabulary likewise has two components: **noun concepts** as represented by **terms***,* and verb connections between those noun concepts as represented by **wordings**. These noun concepts and verb connections are equivalent to bones and ligaments, respectively. They give structure to basic business knowledge — that is, they represent fundamental things in the operational business you need to know about. The terms and wordings given to them, in turn, let you talk about those things in a standard way.

   We like to visualize this structure by means of a graphical **concept model**, representing the skeleton, or blueprint, for the basic knowledge needed in business operations. I will illustrate later using **ConceptSpeak**.

> Noun concepts and verb connections between them
> give structure to basic business knowledge. Terms and
> wordings let you talk about that knowledge in a standard way.

About Noun Concepts and Terms that Represent Them

A **term** is a noun or noun phrase that workers recognize and use in business communications of all kinds — for example, in agreements, deals, licenses, certifications, warranties, procedure manuals, schedules, directives, training, instructions, and so on. Business requirements for IT systems, and the documentation and help or guidance messages in operational IT systems, are additional forms of business communication.

A term carries a particular meaning for the business, which should be unambiguous given a particular context of usage. Some examples:

customer	employee name	date
prospect	delivery date due	high-risk customer
shipment	manager	employee
order	gender	line item
invoice	status	quantity back-ordered

Our meaning of *term* comes straight from *Webster's*. Note the key words *precisely limited meaning* in this definition.
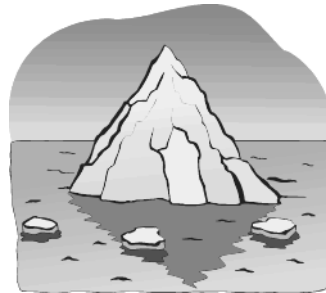
> **Term**: *a word or expression that has a precisely limited meaning in some uses or is peculiar to a science, art, profession, trade, or special subject*
>
> *Merriam-Webster's Unabridged Dictionary [MWUD]*

The particular noun or noun phrase selected as a term represents merely the tip of the iceberg with respect to meaning. More fundamental is the business *concept* for which the noun or noun phrase stands. This concept *must* be defined. That is, the concept a term represents should never be taken for granted. As one practitioner put it, "The more self-evident the meaning of a term is, the more trouble you can expect." As an example, another practitioner from a medium-sized company rattled off six different (and conflicting!) definitions of "customer" from different parts of her organization.

To communicate business rules effectively, a precise **definition** for each term should be given explicitly in business-oriented fashion, free of any IT jargon. All wordings (and statements of **business rules**) that use the term will depend on this meaning. Here is an example of a definition, again from Webster's.

Customer: *one that purchases some commodity or service; especially, one that purchases systematically or frequently*

> Every term requires a careful definition.

The core terms in the business vocabulary — those typically depicted in a graphical concept model — should satisfy these three tests:

Basic: A term should represent something fundamental to business — that is, the term should be one that cannot be derived or computed from any other terms. Any term that can be derived or computed should be specified as the subject of a business rule.

Countable: A term should represent a thing whose instances are discrete — that is, whose instances can be *counted*. A term that has an aggregate or *mass* sense (e.g., *merchandise, personnel, inventory,* and so on) should be broken down into its countable constituents (e.g., *product, employee, item,* etc.). Those are the core concepts of the vocabulary.

Non-Procedural: A term should always represent a thing we can know something about, rather than how something happens. In other words, a business vocabulary is about *knowledge*, not about the actions, processes, transforms, or procedures that produce or use that knowledge. A vocabulary, for example, might include the terms *customer* and *order*, but it would not include any action for *taking* customer orders.

The collection of all terms and definitions that satisfy the tests above are the core part of a **business vocabulary**. Such terms are crucial for expressing business rules effectively.

Basing all business rule statements on a shared vocabulary is the way to avoid a "Tower of Business Babel" when organizing business operations or developing IT requirements for systems to support them. Actually, the same is true for just about any day-to-day work product you could write. Here then is a fundamental (and obvious) principle: We will inevitably work more effectively if we all speak the same language!

> Effective business communication
> requires a shared business vocabulary.

Developing the Business Vocabulary

Core terms in a business vocabulary represent types or *classes* of things in the business, rather than **instances** of those classes. For example, a business might have 10,000 customers, but they are represented by the single term *customer*. Incidentally, since the term refers to the class rather than to all the instances, the term's singular form is preferred in the vocabulary (that is, *customer* rather than *customers*).

   Business rules generally address classes rather than instances. But business rules can address instances too — for example, a business rule might apply to one country, say The Netherlands, that does not apply to another country, say Belgium.

   Creating a shared business vocabulary covering both classes and pre-established instances (e.g., The Netherlands, Belgium, etc.) is an important up-front cost of doing business effectively in today's ever more knowledge-intensive world. This activity requires a measure of vision and patience.

   The business benefits, however, are substantial. Managing, operating, and interacting based on agreed vocabulary is basic not only to improving business communication, but to retaining core business **know-how** as well. These are hardly luxuries in a world where staffs are ever more volatile, self-service is rapidly becoming the norm, and delivery platforms are forever evolving.

About Connections Between Noun Concepts and Wordings that Represent Them

Noun concepts can be connected to each other much as ligaments connect bones in the human skeleton. Connections between noun concepts are generally expressed using verbs and verb phrases relating appropriate terms. These noun-and-verb constructions are called **wordings** — phrases of predictable types that permit sentences, especially expressing business rules, to be made for business operations.

   Examples of wordings are given in the table. Note that each wording involves a verb or verb phrase (italicized in the table) to connect relevant terms. Selection of the best verbs and verb phrases to succinctly represent connections between noun concepts is fundamental to building a robust business vocabulary.

Wording for a Connection Between Noun Concepts	Sample Business Rule Statement Using the Wording
customer *places* order	A customer has always *placed* at least one order.
shipment *is approved by* employee	A shipment must *be approved by* at least two employees.
shipment *includes* order	A shipment must not *include* more than 10 orders.

Here are some important observations:

1. Wordings extend business vocabulary in important ways. Most obvious is that wordings add standard verbs and verb phrases. Less obvious but equally important is that by connecting terms they bring structure to the vocabulary (think ligaments). For this reason, we like to say *structured* business vocabulary.

2. The sample wordings in the table actually represent types of connections, called **verb concepts**, rather than individual connections expressed as **facts**. For example, for *customer places order* a stated fact might be *Global Supply, Inc. has placed the order A601288*. Structured business vocabularies are generally more concerned with identifying verb concepts rather than expressing facts.

> A structured business vocabulary includes
> wordings for verb concepts.

3. In English and many other languages, every wording follows a strict subject-verb-object structure — for example, *customer places order*. The wording thus provides a building block for constructing sentences of arbitrary complexity that unambiguously express business rules or other kinds of knowledge.

> A wording provides a building block
> for writing unambiguous sentences.

4. A verb concept does not imply or establish any business rule on its own, nor does any associated wording. For example, the wording *customer places order* creates no business rule. It would be inappropriate to express a wording as: *A customer has always placed at least one order*. This latter statement is more than a verb concept — it expresses a business rule pertaining to the verb concept.

> **A verb concept recognizes something that can be known, but implies no business rules on its own.**

5. Verbs (e.g., *places*) used in wordings do not represent or label any action, task, or procedure per se (e.g., *place order*). Any such operation represents a different aspect of business operations — the power or "muscle" aspect. Think of a structured business vocabulary as providing the most appropriate way to organize knowledge about the *results* (or potential results) of such operations. By *most appropriate*, I mean **anomaly**-free and **semantically**-clear. In other words, a business vocabulary organizes what we can know (and communicate) as the results of operational processes or transforms taking place in the business.

> **A structured business vocabulary organizes knowledge about the results of processes or transforms, not about how they actually take place.**

6. A majority of connections of core interest for structured business vocabularies involve exactly two terms — e.g., *customer places order*. Connections involving more than two terms, however, are sometimes appropriate (e.g., person *visits* city *on* date). It's also possible for a wording to concern only a single term (e.g., person *smokes*). Refer to Part 2 for discussion.

7   In formal logic, each wording represents a *predicate*. More precisely, in **SBVR** a wording represents the *meaning* of a predicate. Although not directly important for practitioners, this point is a crucial one for engineers and others concerned with tooling and formalisms.

Certain important kinds of connections between noun concepts come in handy, *pre-defined* 'shapes'. Chapter 6 discusses four of these, two of which are illustrated briefly below. These special-purpose elements of structure extend the reach and precision of the structured business vocabulary significantly.

Special-Purpose Element of Structure	Example	Use in a Sample Business Rule Statement
Categorization	'Corporate customer' *is a* **category** *of* 'customer'.	A customer is always considered corporate if the customer is not an individual person.
Property	order *has* date taken order *has* date promised	An order's date promised must be at least 24 hours after the order's date taken.

A structured business vocabulary establishes the full scope of potential discourse (in business operations and any supporting systems) in a very fundamental way. If a worker or some automated process produces or expresses knowledge about some other concept or connection not in the vocabulary, we literally have no way to communicate or share such knowledge in a standard and consistent fashion.

> A structured business vocabulary establishes the basis for communicating and sharing operational business knowledge.

Using Graphical Concept Models

You might have noticed that even though structured business vocabularies are often rendered graphically, no diagrammatic examples have yet been presented. This is not because diagrams are not useful. Just the opposite is true; they are *very* useful.

Rather, I wanted to emphasize that a vocabulary is first and foremost about what we can *know*, and about how we can *communicate* about what we can know.

The bottom line is business communication. Knowledgeable workers on the business side must originate and understand the vocabulary.

> "What we can know" about the operational business can always be expressed on the basis of a structured business vocabulary.

Getting all the terms and wordings in a vocabulary to fit together as if in some large jigsaw puzzle can be hard. This is where a graphical **concept model** plays an important role.

When creating a blueprint for remodeling your house, you can quickly see when the pieces are not fitting together. The eye often spots the problems quite easily. A graphical concept model serves a similar purpose in developing a vocabulary. Just remember, sponsors and business people should sign off on vocabulary — the terms, definitions, and wordings — *not* on any diagram per se.
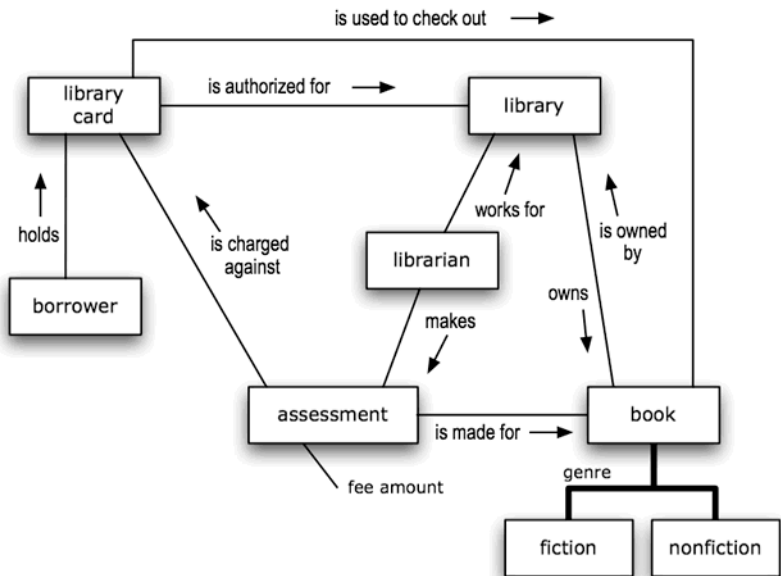
> The principal deliverable of concept modeling is a business vocabulary, not a diagram.

Figure 1–1 presents a simple concept model in graphical form. The various connections in this concept model are listed below it. This list includes several that are unlabeled in the diagram — these connections are based on the special-purpose elements of structure mentioned earlier.

> A concept model is a blueprint for basic business knowledge.

Figure 1–1. Sample Concept Model for a Library Using ConceptSpeak.

Connections in Figure 1–1

Explicitly-labeled:
- library card is used to check out book
- library card *is authorized for* library
- library *owns* book (book *is owned by* library)
- librarian *works for* library
- librarian *makes* assessment
- assessment *is made for* book
- assessment *is charged against* library card
- borrower *holds* library card

Unlabeled, based on connector type:
- fiction *is category of* book
- nonfiction *is category of* book
- assessment *has* fee amount

Closing the Communications Gap

Ask managers and workers in the business what they mean by *requirements* for developing software systems, and typically you get answers centered on functions to be performed, or on the look-and-feel of user interfaces. The answer ''vocabulary'' (or ''shared business vocabulary'') is almost never among the responses.

Nonetheless, a shared, well-structured business vocabulary is fundamental for requirements. Without such a vocabulary you cannot provide real meaning or coherency (sense) to the requirements (much less business rules).

> A shared, well-structured business vocabulary
> is fundamental for requirements.

A shared, well-structured business vocabulary literally provides *meaning* (**semantics**). This meaning, of course, is abstract. It might not be as obvious as what a system does or how the system looks on the outside. Just because something is less obvious, however, does not mean it is any less important. Break a bone, and see what happens to the body's behavior. (I have, so I can speak with some authority!)

> A shared, well-structured business vocabulary provides meaning
> and coherency to business rules and requirements.

The problem is by no means limited to communication of requirements between business workers and IT. Indeed, in many organizations today, business workers from different parts of the organization often have trouble even talking to *each other*. Or to say this more accurately, they talk to each other, but they are not really *communicating*. They live in different *semantic silos*.

A well-managed, well-structured business vocabulary should be a central fixture of business operations. We believe it should be as accessible and as interactive as, say, spellcheck in Microsoft Word.

> A well-managed, well-structured business vocabulary
> should be as accessible and as interactive
> as spellcheck in Microsoft Word.

Special care should be taken for synonyms, as well as for multiple languages. (It's a *global* world these days after all!) See the sidebar.

Note about Synonyms and Multiple Languages

In an ideal world, every operational business concept would have a single name. In real-life, of course, that's not always the case:

- The same **noun concept** can be given multiple **terms**. These terms can be in the same language producing *synonyms* (e.g., *customer, client*), in different languages (e.g., French, Mandarin, and so on), or both.
- The same **verb concept** can be given multiple **wordings**. These wordings can be in the same language (e.g., customer *places* order, order *is placed by* customer), in different languages (e.g., French, Mandarin, and so on), or both.

A robust environment for managing vocabularies must support this reality. Such support recognizes distinct contexts of usage, as well as communities with different speech preferences.

Developing and managing a shared, well-structured vocabulary means capturing business knowledge from the business-side workers and managers who possess it (or adopting it from some outside source or community of practice). The skills involved with distilling that business knowledge are essential for business analysts.
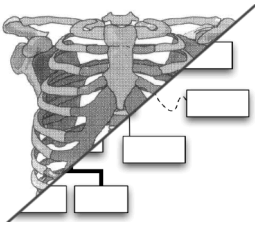
You also need appropriate business-level platforms to manage your vocabulary. Such automated support is crucial to effective business communication, as well as to organizing large sets of business rules. As discussed in Chapter 3, you will need special tooling for this purpose, which we call a **general rulebook system**.

> Your company needs an automated
> business-level work environment for managing
> its operational business vocabulary.

Summary

A good business analyst seeks to ensure that each **noun concept** and **verb concept** of the operational business is represented in the **business vocabulary**, one and only one time. The goal is to ensure that all structural components are *unified* and *unique*. This approach helps ensure that all **business rules** and other forms of business communication, including IT requirements, are expressed consistently.

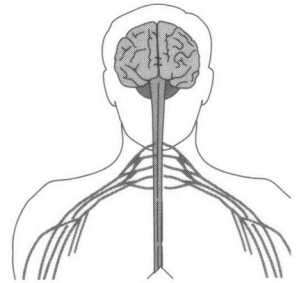> A structured business vocabulary promotes consistency.

Some IT professionals believe that if they can get behavior right, the structure will simply fall into place. That is not our experience at all. It's the body as a whole that matters. You can design a lot of very elegant appendages and a lot of fancy behaviors, but there had better be a well-considered skeleton to hold them all together!

Chapter 2

What You Need to Know About Business Rules

In the human body, control is provided by the nervous system, an organized collection of nerves that connect to the muscles. Business operations must have similar coordination of behavior. This coordination or *guidance* is supported by **business rules**.

In the human body, power is provided by the muscles; in business operations, it is supported by processes. Nerves and muscles are separate; business rules and processes should be separate too.

This principle of separation is called **Rule Independence**. Not embedding business rules in processes has huge benefits — not the least of which are for the processes themselves, as discussed in Chapters 11 and 12. The ideas underlying Rule Independence are enumerated in the *Business Rules Manifesto*, a copy of which can be found at the end of this book.
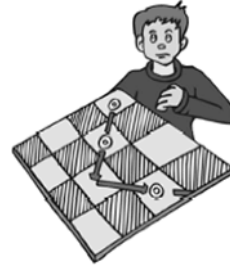
> Rule Independence means separating business rules from processes.

Rules are familiar to us all in real life. We play games by rules, we live under a legal system based on rules, we set rules for our children, and so on.

Yet the idea of rules in business systems is ironically foreign to many people. Say "rules" and many IT professionals, for example, think vaguely of expert systems or artificial intelligence — approaches deemed appropriate for only very specialized or very advanced kinds of problems. Recognition has come only slowly about how central business rules actually are to basic, day-to-day business operations.

Not coincidentally, many business-side workers and managers have become so well indoctrinated in **procedural** views for developing requirements that thinking in terms of business rules might initially seem foreign and perhaps abstract. Virtually every methodology has been deficient in this regard, whether for **business process** analysis, system development, or software design.

That omission is *highly detrimental and very costly*. Thinking about the control aspect of any organized activity in terms of rules is actually very natural. For example, imagine trying to explain almost any game you can think of — chess, checkers, baseball, football, tennis, and so on — without explaining the rules on which the moves in the game are based. Even if it were possible (that's doubtful!), explaining things that way would certainly not be very *effective*.

> Absence of business rules in IT methodologies is highly detrimental and very costly for the business.

In short, you need business rules. Without any exaggeration, good business rules are no less important to business operations than a robust, finely-tuned nervous system is to the human body.

You naturally want each business rule to be specified *once and only once*. One-place specification (**single-sourcing**) means the business rule will be easier to find — and to change quickly. If you want true agility, business rules are the ticket.

Collectively, the set of business rules represents a separate **rulebook** for the business game. This rulebook should, of course, be automated, to provide scalable support for the origination and management of the business rules. As discussed in Chapter 3, you need special tooling for the rulebook, which we call a **general rulebook system**.

> The rulebook encompasses the rules of the business game.

Do business rules complicate matters for the business? *No!* Doing business is no more complicated by having independent business rules than are the games of chess, baseball, and football by having their own independent rulebooks.

Are business rules all that matter? *Of course not!* You still need artifacts for other needs, including process models, use cases, etc. These latter deliverables are needed to produce the raw power to do work — muscles for the business to flex. Business rules represent a well-developed nervous system, a way to ensure your business works *smart*.

> Business rules ensure your business works smart.

The Basics of Business Rules

A first step in understanding **business rules** is simply to relate them to the issue of guidance. The sidebar below presents a light sampling of typical business rules, each categorized informally according to the kind of guidance it provides. Note how far-ranging these categories really are. *Every* aspect of guidance for business operations can be addressed by business rules.

Restriction
 A customer must not place more than three rush orders charged to its credit account.

Guideline
 A customer with preferred status should have its orders filled immediately.

Computation
 A customer's annual order volume is always computed as total sales closed during the company's fiscal year.

Inference
 A customer is always considered preferred if the customer has placed more than five orders over $1,000.

Timing
 An order must be assigned to an expeditor if shipped but not invoiced within 72 hours.

Trigger
 'Send-advance-notice' must be performed for an order when the order is shipped.
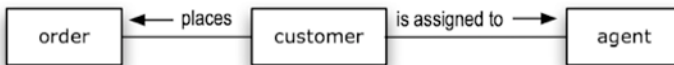
A second step in understanding business rules is to understand how they relate to a **structured business vocabulary**. Rules build *directly* on **verb concepts**. Basically, expression of a business rule simply adds a sense of obligation or necessity to **terms** and **wordings** *already* set up in the **concept model**.

Terms, Facts, and Rules

The focus of **business rules** has often been described as *terms, facts, and rules.* Under the rigorous formal prescriptions of **SBVR** this mantra, which dates to the early 1990s work of the Business Rules Group (www.BusinessRulesGroup.org), is not 100% technically accurate. Nonetheless it's memorable and certainly adequate for an initial understanding.

Here is a sample business rule: *A customer must be assigned to an agent if the customer has placed an order.* Figure 2–1 shows the relevant terms and wordings for this statement. Note how the verb concepts worded *customer places order* and *customer is assigned to agent* are used directly in the statement, with only minor adjustments in tense as appropriate for English grammar.

Figure 2–1. Terms and Wordings for the Agent-Assignment Business Rule.

In business problems involving hundreds or thousands of business rules — not at all uncommon — there is no way to achieve consistency across such large numbers of statements without a common base of terms and wordings. This vocabulary scaffolding is indispensable for *scaling up*.

> Scaling up requires that business rules be expressed directly on a structured business vocabulary.

Basing verbalizations directly on wordings for verb concepts is a key feature of business-oriented notations for business rules such as **RuleSpeak**.

A third step in understanding business rules is appreciating the importance and power of expressing business rules **declaratively**. When statements are based directly on wordings for verb concepts, the result is always declarative. The Agent-Assignment Business Rule presented above illustrates. Expressing business rules declaratively is a key means of

liberating the business from the perils of IT-speak. The sidebar below
explains how you can determine whether specifications are declarative.

When Are Specifications Declarative?

In graduate school in the early 1970s, I learned this highly pragmatic test
for determining whether specifications are **declarative**:

*   Take each statement of the specification and type it on an individual
    punch card. (It's really hard to find punch cards these days, but for the
    sake of discussion, let's ignore that.)

*   Assemble the deck.

*   Test it to make sure it works.

*   Throw the whole deck up in the air.

*   Pick up all the cards in random order.

*   Re-test it.

If the logic still works, the statements are declarative. If not, they are
procedural. The point is that in declarative specifications no logic is lost
'between the lines' — i.e., none is intrinsic to the sequence of presentation.
In other words, there is no hidden **semantics** (meaning).

Fully appreciating these ideas requires careful examination of the
relationship between business rules and **events**. In general, business rules
specified declaratively are free of any direct reference to events. More
about that important topic in Chapter 8.

Violation of Business Rules

Let's examine more closely what should happen when a business rule is
breached. Consider the Agent-Assignment Business Rule. What happens
when an event occurs that might violate this business rule?

1. The business rule needs to be
    evaluated with respect to the event.
    We call that a **flash point**.

2. If a **violation** is detected, appropriate
    intervention should ensue.

3. Assuming the user is authorized and
    knowledgeable, some explanation
    should be provided about what
    triggered the intervention. You
    might call that explanation an **error message**, but we prefer **guidance
    message**. The intent should be to inform and to shape appropriate
    business behavior, rather than simply reprimand or inhibit it.

What should that guidance message say? *The default guidance message can contain exactly the same text as given for the business rule.* For the Agent-Assignment Business Rule it could literally read: *A customer must be assigned to an agent if the customer has placed an order*. To put this more strongly, a business rule statement *is* a guidance message.

> A business rule statement *is* a guidance message.

Now I overstated the case a bit to make the point. Obviously, additional or customized text can be provided to explain the relevance of the business rule to the specific event, to suggest corrective measures, to give examples, and so on. Also, in a truly-friendly business rule system, you often wouldn't want simply to present the message, then shut down the work. Instead, as discussed in Part 4, you might offer a **procedure** or **script** to the user to assist in taking immediate corrective action. But for now, let's stick to the main point.

And that main point is this: The guidance messages that business workers see once an operational business system is deployed can be the very same business rules that knowledgeable workers on the business side expressed during the capture of business requirements. Guidance messages, business rule statements, error messages from a business perspective — these are all *literally* one and the same. Well-expressed business rules during the requirements process provide the basis for well-expressed guidance messages; poorly-expressed business rules during the requirements process generally result in poorly-expressed guidance messages.

This approach has *proven* potential for closing the requirements gap between business people and IT that still plagues many companies today. In traditional approaches, much is usually lost in the translation of up-front requirements into the actual running systems. Using business rules, the business side participates directly in developing what it ultimately gets back as guidance messages — a truly business-oriented approach.

Direct assistance in expressing the business rules up-front will prove very valuable to the managers and workers involved in business rule capture. It will enable them to be far more articulate about their requirements. We see

the ability to assist in expressing business rules as a key skill for business analysts. Every business analyst should speak **RuleSpeak**!

> Business rules help close the requirements gap.

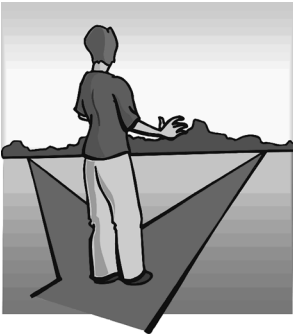## Decision Management and Decision Tables

Business rules directly support business operations in at least three ways:

- Guide day-to-day business activity.
- Shape operational business judgments.
- Make operational business decisions.

The former two roles coordinate **business processes**; the third role leads to decision management and **decision tables** (refer to Chapter 9).

An **operational business decision** is where some minute-to-minute, day-to-day determination must be made in performing business activity. Examples of operational decisions include whether or not to:

- Approve an application for automobile insurance.
- Pay a claim.
- Buy a stock.
- Declare an emergency.
- Accept a reservation.
- Indicate possible fraud.
- Give an on-the-spot discount to a customer.
- Assign a particular resource to a given request.
- Select a health care service for a patient.
- Certify a ship for safety.

As these examples illustrate, operational business decisions might have to do with configuration, allocation, assignment, classification, assessment, compliance, diagnosis, and so on.

Business Activity vs. Specialized Know-How

You can expect business rules to generally align according to the kind of operational support they provide — to coordinate business activity or to apply specialized **know-how**.

Examples for three different organizations are given below.

Internal Revenue Service (IRS)

Business Rule to Coordinate Business Activity

- *A processed tax return must indicate the IRS Center that reviewed it.*

Business Rule to Apply Specialized Know-How

- *The calculated total income must be computed as tax return wages (line 1) plus tax return taxable-interest (line 2) plus tax return unemployment compensation (line 3).*

Ministry of Health

Business Rule to Coordinate Business Activity

- *A claim must be assigned to an examiner if fraud is suspected.*
- *An on-site audit must be conducted for a service provider at least once every five years.*

Business Rule to Apply Specialized Know-How

- *A claim involving comprehensive visits or consultations by the same physician for the same patient must not be paid more than once within 180 days.*
- *A claim that requests payment for a service event that is a provision of health service type 'consultation' may be paid only if the service event results from a referral received from another service provider.*

Ship Inspection Agency

Business Rule to Coordinate Business Activity

- *A ship inspection work order must include at least one attendance date.*
- *A ship must indicate a client who is financially responsible for inspections.*
- *An inspection due for a ship must be considered suspended if the ship is laid-up.*

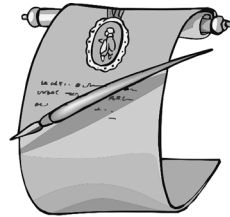**Business Rule to Apply Specialized Know-How**

- *A ship area subject to corrosion must be inspected annually.*
- *A salt water ballast tank must be inspected empty if the ship is more than five years old.*
- *A barge must have an approved bilge system to pump from and drain all below-deck machinery spaces.*

Business rules concerning the company's product/service invariably involve the company's special area(s) of expertise. They often use more arcane (knowledge-rich) vocabulary. For that reason, such business rules are typically more difficult to capture and express. And there tends to be significantly more of them. Your approach needs to be prepared for that.

Summary

Business rules should be externalized from processes and established as a separate resource. **Rule Independence** permits direct management of the business rules, so they can evolve at their own natural pace rather than that of the software release cycle.

Other benefits include better process models, and much closer tie-in to the business side (a.k.a. business alignment). Business rules put your company on the road to *true* agility.

> Business rules put your company on the road to *true* agility.

When introduced to business rules, the first reaction some people have is that their business has far more **exceptions** to business rules than rules per se. They question how all these exceptions can be handled in any organized fashion. This is a valid concern.
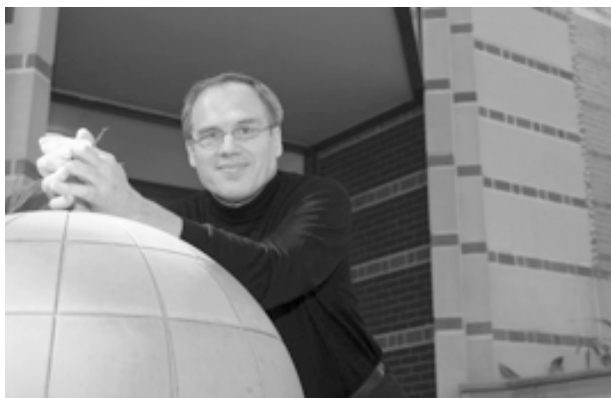

Exceptions to business rules, however, merely represent more business rules. Looking at it that way is crucial — *every business rule costs you something*.

> Every business rule costs something.

The most significant cost of rules is not the direct cost of their implementation and maintenance in software systems (especially if you're using a rule engine). The real cost often lies hidden in the associated documentation, training, administration, and time — the *people* time it takes to communicate the business rules and to change them. Time, of course, is among the most precious of all commodities. Your business does not need *more* rules — it probably needs fewer (*good*) rules!

About the Author
Ronald G. Ross

Ronald G. Ross is recognized internationally as the "father of business rules." He serves as Executive Editor of Business Rules Community (www.BRCommunity.com) and its flagship publication, *Business Rules Journal*. He is a sought-after speaker at conferences world-wide. More than 50,000 people have heard him speak; many more than that have read his books. His popular seminars are given on-line through AttainingEdge and in Europe though IRM-UK.

Mr. Ross has served as Chair of the annual International Business Rules & Decisions Forum Conference since 1997. He was a charter member of the Business Rules Group (BRG) in the 1980s, and an editor of the two landmark BRG papers, *"The Business Motivation Model: Business Governance in a Volatile World"* and the *"Business Rules Manifesto."* He is active in OMG standards development, with core involvement in SBVR.

Mr. Ross is Principal and Co-Founder of Business Rule Solutions, LLC. At BRS, Mr. Ross co-develops *IPSpeak*™, its groundbreaking methodology for business rules, decision logic, and business vocabulary (concept models), including the popular *RuleSpeak*® (www.RuleSpeak.com). Mr. Ross is the author of nine professional books, including the ground-breaking, first book on business rules *The Business Rule Book* (1994) and *Principles of the Business Rule Approach*, Addison-Wesley (2003). His newest is *Building Business Solutions: Business Analysis with Business Rules* with Gladys S.W. Lam (2011, An IIBA® Sponsored Handbook). He holds a BA from Rice University and an MS in information science from Illinois Institute of Technology. For more information about Mr. Ross, visit www.RonRoss.info, which hosts his blog. Follow his tweets on Ronald_G_Ross.

About...

Business Rule Solutions, LLC — Business Rule Solutions, LLC is the recognized world leader in the advancement of business rules and decision management. Co-founders Ronald G. Ross and Gladys S.W. Lam are internationally acclaimed as the foremost experts and practitioners of related techniques and methodology.

   Since its inception in 1996, BRS has helped pilot the worldwide growth of business rules. BRS offers IPSpeak™, its groundbreaking methodology for business rules, decision logic, and business vocabulary (concept models), including the popular *RuleSpeak*®. Services include consulting, training, publications, and presentations. For more information about BRS, visit www.BRSolutions.com.

BRCommunity — Business Rules Community is a vertical, non-commercial community for business rule and decision management professionals, providing articles, expert commentary, panels, and a variety of other hands-on resources. BRCommunity.com and its flagship publication, *Business Rules Journal*, were established in 2000. Visit www.BRCommunity.com.

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