



Business Rule Solutions

Ronald G. Ross

Principal, Business Rule Solutions, LLC
Executive Editor, Business Rules Journal

www.BRCommunity.com

Author: *Business Rule Concepts: Getting to the Point of Knowledge*

Ross@brsolutions.com

Many companies today are looking to manage business activity on more of a beginning-to-end, value-add basis. That requires thinking cross-organizationally, always keeping to the business perspective. Can business rules help? Yes, greatly. This Column explains.

Business Rules and Business Processes

Just in case I need to say this, yes, you still need business process models when you do business rules. Business rules do not substitute for business processes, they just make them a lot better.

The best definition of *business process* I have found to date is Janey Conkey Frazier's: *the tasks required for an enterprise to satisfy a planned response to a business event from beginning to end with a focus on the roles of actors, rather than the actors' day-to-day job.*

What do business rules do for business processes? Roger Burlton says it this way: "If you separate the business rules, you can develop remarkably stable business processes." If you're looking to manage business activities on a business-process basis, stability is key. Burlton goes on to say: "The really rapid change is in the business rules ... *not* in the business processes." *Right!*

How do business rules and business processes relate? Burlton observes that business processes "... transform inputs into outputs *according to guidance* – policies, standards, rules, etc..." The key phrase in that is *according to guidance*. Guidance is exactly what business rules provide.

From a real-world perspective, day-to-day business operations involve two fundamental kinds of business rules, as follows. Each kind of business rule has its own relationship to business processes.

Definitional Rule: *a rule that is intended as a definitional criterion giving a necessity about the meaning of some concept.* Definitional rules are about what you can know.

Behavioral Rule: *a rule that there is an obligation concerning conduct, action, practice, or procedure.* Behavioral rules are about what people must or must not do.

Definitional Rules and Business Processes

The relationship of definitional rules and business processes is a direct one. Definitional rules simply off-load work pertaining to knowledge. They do so in two basic ways:

Computation: Computation rules provide decision logic needed to perform calculations.

Classification: Classification rules provide decision logic needed to determine whether or not something is true.

For either computation or classification, decision logic can become quite complex involving many business rules. Trying to capture all those business rules within the 'flow' of a business process model is frankly hopeless. Instead, you should reference or invoke decision logic indirectly. That can occur in at least two basic ways:

Via the name of a task. For example, in insurance you might see a task called 'Adjudicate Claim'. This task requires a decision to be made, which in turn requires definitional rules.

Via the expression of a conditional flow. For example, in insurance you might see conditional flows such as 'if claim is complete' or 'if fraud is suspected'. These conditions also indicate decisions to be made; again definitional rules are required.

Perhaps the most serious mistake people make in modeling business processes is including series of binary decision points ('diamonds') where flows branch based on *yes-or-no* (Boolean) logic. What's wrong with that? For one thing, many business decisions (most?) aren't binary(!). For another, the business process model quickly becomes so detailed and cluttered, you'll lose sight of the business value-add. Good communication and business buy-in will fade fast.

Quite often what people are actually trying to do when they embed a series of diamonds in their business process models is to capture and represent decision logic (read *business rules*). Burlton characterizes that practice this way: "Anytime you stick diamonds in your business process model you're dead." Call it a *worst practice*.

Behavioral Rules and Business Processes

Behavioral rules are ones that people could violate. In a game of football, behavioral rules are why you need referees on the field during each game — someone to watch and intervene if any violations occur. Behavioral rules, which arise any time people could be involved (not just knowledge), are a distinctive feature of the business rules paradigm.

Ways in which behavioral rules relate to business process models are sometimes focused and direct, and sometimes not. Here are some sample concerns that behavioral rules address:

Iteration. Business processes often include loops that permit iteration. Timing and repetition criteria for these loops can be expressed as business rules, for example:

Maximum time allowed between iterations.

Behavioral Rule: *Additional information needed for a claim must be requested at least every 5 days if not received.*

Minimum time allowed between iterations.

Behavioral Rule: *Additional information needed for a claim must not be requested more often than every 24 hours.*

Maximum iterations permitted.

Behavioral Rule: *The total number of requests made for additional information needed for a claim must not exceed 10.*

Maximum time permitted for completion.

Behavioral Rule: *A request for additional information needed for a claim must not be made after 10 days.*

Service Level Agreements. A service level agreement generally involves four things: (1) an action item, (2) a party, (3) escalation criteria, and (4) timing criteria.

Behavioral Rule: *A customer service request must be brought to the attention of a supervisor if the request is not resolved within 4 hours.*

In this example we find: (1) the action item *customer service request*, (2) the party *supervisor*, (3) the escalation criteria *if not resolved*, and (4) the timing criteria *within 4 hours*.

Compliance. A business process can involve hundreds of business rules (or more!) addressing specific things *people* need to do to comply with business policies, contractual

agreements, or external regulations. For example: *A customer that has placed an order must have an assigned agent.* A business process cannot possibly address that many business rules directly. What to do? Do what comes naturally — maintain a separate *rulebook*, as in football. The business process can focus on a *planned response to a business event from beginning to end*; the rulebook can provide the necessary guidance.

Best Practices

Definitional rules address knowledge; what *people* do is another matter. Having flesh-and-blood people involved 'in the loop' makes a big difference. Best practices in designing business processes with business rules *and people* include:

1. **Avoid mixing definitional and behavioral criteria in the same business rule.** Do people 'in the loop' need to abide by specific results from evaluating definitional rules? If so, specify some behavioral rule(s). For example, classification rules may indicate whether or not an applicant for insurance satisfies all prerequisites. Behavioral rules can indicate whether the decision-maker(s) in the loop *must* accept a qualified applicant — or must *not* accept an *unqualified* applicant.
2. **Separate tasks for creating operational knowledge and for people to take business action.** Knowledge-rich tasks (e.g., determining the suitability of an applicant) can be based on definitional rules; the take-action tasks (e.g., hiring the applicant) can be guided by behavioral rules.
3. **Consider the cost of business rules in developing the business process.** In business terms, it would be *very costly* (if even possible) to gather *all* the data that *any* definitional rule potentially applied in a business process might need. For example, a car insurance company might have the business rule: *An applicant for car insurance is never considered qualified if the applicant is less than the minimum driving age.* Other business rules might involve creditworthiness (which could involve an extensive credit check), previous driving history (which could require requesting records from the state), and so on. If it can be determined right from the start the applicant isn't old enough, that's obviously something you want to do. So a basic goal in designing business processes with business rules and people is *work avoidance* (no pun intended). Always test the cheapest rules first wherever possible.

Summary

A business process model is an end-to-end, results-oriented view of the business tasks appropriate for a planned, optimal response to a significant business event. Business rules capture the decision logic needed for such activity, but do not substitute for the business process itself.

Business process models can be greatly simplified by taking the business rules out and addressing them separately. Benefits include:

- Stable business processes that serve as a framework for managing cross-organizational business activity.
- A new resource, the *rulebook*, you can use to manage rapid change in business practices.

Excerpted from Chapter 11, Business Rule Concepts: Getting to the Point of Knowledge (Third Edition), by Ronald G. Ross, August 2009. ISBN 0-941049-07-8

<http://www.brsolutions.com/publications.php> - Reprinted with permission.

For more about the author, see www.RonRoss.info.