

Escaping the Swamp: Business Rule Management in a Complex World



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Summary

Many companies are moving to document and automate their business rules through Business Rules Management (BRM) techniques. The advantages seem obvious: business rule rationalization and automation provide high return-on-investment opportunities throughout an organization. Yet BRM projects can become a significant resource drain with no demonstrable improvement in productivity. Worse, BRM can actually decrease productivity. Why is this happening? How can companies document their business processes without getting caught in the business rules swamp?

This white paper argues that systematic, formal documentation of business rules exposes a level of complexity in business organizations that was hitherto implicitly managed by the skill sets and experience of its workforce. Deciding what rules of the organization to document and manage is just as important as the rules themselves. We outline five principles for successful business rule management:

- *Develop a framework first*
- *Be creatively focused*
- *Triage your business discovery process*
- *Combine business rules management with traditional organizational management*
- *Rely on best practices*

Application of these principles increases the likelihood of success for business rule management projects.

Introduction

The ability to define processes through formalized business rules¹ adds significant value to an organization. Clear modeling and management of business rules provides *agility, portability, and inheritance*. Modern companies must be more agile and responsive to regulatory, market, and technological changes than ever before. Multinational organizations can make gains through the portability of their units' business models as they are realized through well-managed software or documented business rules. Finally, business rules allow a business process to be understood and executed, regardless of who is responsible for executing them. If a person responsible for some business process leaves the company, a new person can inherit their capability through well documented business rules, cutting training costs and mitigating turnover risk.

A business rule is a simple, specific, testable sentence that defines or constrains some aspect of the organization.

Modern Rules Management Software (RMS) makes all of the above truly feasible. RMS allows for business rule management (BRM) of many and complex processes. Better yet, the new generation of RMS delivers additional, functionality: it turns very complicated process and business algorithms into business logic that requires very little intermediate developer assistance, saving significant cost in analysis and development.

Yet the reality of business rules projects is that they can be tar babies that cost organizations millions with no return on investment.

What is missing from current business rule initiatives is a good strategy for BRM. Deciding *what is important* and letting go of *what is not* is the most important part of any business rules capture activity. This white paper describes five principles for capturing business rules that will increase the likelihood of success for any BRM project.

First Principle: Develop a Business Framework First

In our experience, the more a project emphasizes precise, structured rules in early stages, the more it is likely to fail. Leaders of business rule projects must always manage expectations by helping the champions understand that *short-term*

¹ Some analysts take pains to distinguish between business rules, which define or constrain an aspect of a business, and workflow rules, which handle the steps in the realization of that definition or constraint. In principle, business rules reflect *analysis*, whereas workflow Rules reflect *design*. Ultimately, however, the two are tightly integrated and interdependent. Moreover, we have found that it is very difficult for domain experts and analysts to identify business rules in isolation of the processes that realize them. For both these reasons, this paper's principles can be applied equally to business and workflow rules, and we will use the phrase "business rule" to describe both.

uncertainty is necessary for *long-term success*. The two primary goals early in a project should be:

- Gaining consensus about business operations among department managers, and
- Capturing departmental process flows.

These early goals may seem far removed from the actual documentation of business rules, but we have found that they can only be understood once the basic framework of the business is established. Only in creating this framework can

A handoff describes a transition point between two roles through some substantive result or artifact. The relevant handoff tools are defined while developing the business framework.

reasonable discussions about solutions exist. It is also common that the nature of the problem, as it was initially understood, evolves once viewed in the context of a well-established framework. This allows initial project concepts to change before large amounts of time, money, and resources are invested in a solution that does not actually match actual organizational needs.

Generally, the level of detail described in this initial framework should not go below a simple description of handoffs generated by any specific role. The results generally include the departmental business flows, a short list of informally defined business rules — almost all of which are related to departmental workflow — and a long list of handoffs used to drive later business rules capture.²

Second Principle: Be Creatively Focused

A team that is ready to discuss business rules in depth will require discipline to stay at the appropriate level of discussion. Yet creative thinking is critical to both defining and categorizing business rules and concepts. Thus, projects are most

Business rules can be considered at many different levels, from the global strategy level to the individual formatting of documents by paralegals. Different people will be interested in the level that best matches their experience and priorities.

likely to succeed when the discussion is both *creative* and *focused*—i.e., the project team is given free reign to be as creative and thoughtful as possible within the scope of the current level of discovery.

A balanced team will include two distinct roles: *Drivers*, who identify and manage the scope of the discussion, and *Creators*, who thoughtfully explore all the issues and possibilities relevant to that particular discussion. Any analysis by the team should be fed by the creators and

managed by the drivers. In fact, a team at the beginning of a business rules project

² Almost any employee can describe her job through the documents, artifacts, assembly parts, etc., that move into and out of her task queue. This is true of a line worker completing a housing assembly, or of an executive collating materials for a quarterly financial report. As such, the handoff level of detail is ideal for initial business rule analysis.

might create a “focus contract”, in which the project champions and the project team agree to the following:

- The team will identify a Driver at each meeting who is responsible for defining the level of the current requirements discovery.
- The team will work to be creative at each level, but let the Driver define the scope of the discussion. The Driver will have the final say about the relevance of a particular discussion.
- The creative thinkers will work to document their “off-level” thoughts. The Driver will work with the Creators to identify when topics are likely to become relevant and put those items on the agenda when the appropriate level of discussion is reached³.

Domain experts generally fall into the Creator category, although they can be extremely useful in identifying the true scope of any specific problem.

Third Principle: Triage Your Business Discovery Process

If the principle of creative focus is concerned with the depth of a discussion, the principle of triage is concerned with the breadth. Many organizations assume that a business rule project should identify *all* of the rules that manage their business. We argue that this is a paralyzing objective. The goal of a business rules project should be to generate a list of business rules that are *most effective* in producing value for a company. Exactly what rules should be addressed are identified during the creation of the business framework, because there may well be parts of the business that do not require in-depth, detailed BRM.

Complex business processes are often low-tech. By “complex” we do not mean the level of technological sophistication, but rather the total number of steps, activities, and dependencies involved the successful completion of an assignment.

Our primary triage strategy is to *control as little as possible*. Whenever possible, we try to leave existing, stable, complex processes alone. Careful effort should be made, however, to document the inputs and outputs of your businesses’

³ Any issues raised during a discussion that are at a higher organizational level should be addressed immediately. They should have already been considered and resolved, and can represent considerable risk. However, issues that are at a lower organizational level should be recorded and addressed at a later time. Issues raised that are “off-level” will almost certainly be relevant in later iterations as the project gains depth.

components. A *business component* is a discrete collection of inputs, activities, and outputs whose internal processes are not well understood or documented⁴.

Identifying the inputs and outputs of an activity allows measurable results and cost analysis without having to identify exactly how such activities are executed. Later business rule efforts can then drill into the components and identify business rules and operational processes.

Fourth Principle: Combine Business Rules Management with Traditional Organizational Management

One of the major reasons organizations engage with us in BRM projects is their concern over the operational risk of necessary knowledge not being documented. We agree. The point of the first three principles is to identify what should be managed by a business rules project that is attempting formal codification of an organization's processes for RMS. Software, however, is only one solution. Once an organization has decided which business rules are the best candidates for codification in RMS, it should continue to rely on non-RMS tools and processes to manage the rest.

There is tremendous value in this approach. After all, the most sophisticated business rule repositories on earth are still human beings. This is particularly the case for certain kinds of processes that require either:

- high levels of expertise (i.e., a master carpenter or a statistician)
- recursive pattern-matching operations (i.e., people searching for stock patterns or citation lists), or
- hard to define “fuzzy” processes in which very sophisticated decision making occurs through repetition and pattern matching. A lot of assembly line work falls into this category.

Such processes are very difficult to quantify, and are best managed within the organization through componentization and human management. Employee development, cross-training programs, documentation processes written by employees themselves, and improved employee retention strategies can be implemented to minimize that risk and buttress the RMS approach.

⁴ The “component” is a well-known metaphor in software development. Recent innovations in communication protocols – particularly XML — have extended the metaphor upwards into the business thinking of organizations. For example, the Mortgage Bankers Association's new MISMO standard allows organizations in the highly componentized mortgage industry to use a single XML API to communicate between different service providers to accomplish specific goals in the loan origination process. Large companies that have adopted the componentized approach to organizational structure continue to gain flexibility and production efficiency.

Fifth Principle: Rely on Best Practices

Having spent our time discussing how to evade the pitfalls, we return to discipline and execution. A successful project is made up of many components, and we cannot emphasize enough the importance of best practices as a way to improve any project's likely success. These include:

- Good software development practices and tools
- Good requirements management practices and tools⁵
- Good business rules and project scope practices. We often use the Zachman framework, particularly when augmented by the UML business rule standards.
- Above all, iterative development in a structured framework.⁶

Conclusion

At West Pole, we are not, as a rule, enamored of software; we are enamored of solutions. Technology alone won't optimize a process. The newest crop of RMS offers enormous opportunities for productivity and value for organizations, but if not deployed in a disciplined framework of business elicitation tools and best practices, the effort to implement them can be expensive and paralyzing. The goal of any BRM project should never be to model *all* business processes through codified rules. The goal should be to codify only those rules that are amenable to RMS and provide the greatest mitigation of risk and return on investment.

⁵ See our white paper, *Use Case and Interview Techniques for Focused Requirements Capture*

⁶ See our white paper, *Selling RUP: Increase People's Comfort Level and Plan Your RUP Rollout*