

An Investment in BRMS Delivers Rapid ROI

The benefits of the Business Rules Management System (BRMS) are many, and deployment of this bridge between business professionals and software developers usually pays for itself after just a year. **BY THOMAS COTIC¹**

Programmers understand a lot about code and know how to write elegant software. They are rarely expert, however, in the matter of business rules. An understanding of the business rules requires the business experts of the company. They in turn have difficulty imagining how those business rules flow into software. The BRMS serves as a bridge between these two perspectives.

This role continues to grow in importance. As an IDC study of BRMS revealed, the demand within companies is growing steadily to implement strategic changes by adapting business rules in IT systems to respond at any time to changes in the market and to customers' individual needs.

Of the companies polled in the IDC study, 43% said that they would change business rules at least once a month if the architecture of their IT systems and their development processes could support that efficiently. Timely changes to business rules generally fail, however, due to lengthy release cycles in application development.

Business rules represent complex business requirements that can be specified and tested only by business people. Their cooperation, however, usually ends with the specification of the business rules. IT takes charge of implementation and testing. The result is that business errors are usually discovered only much later and at great expense.

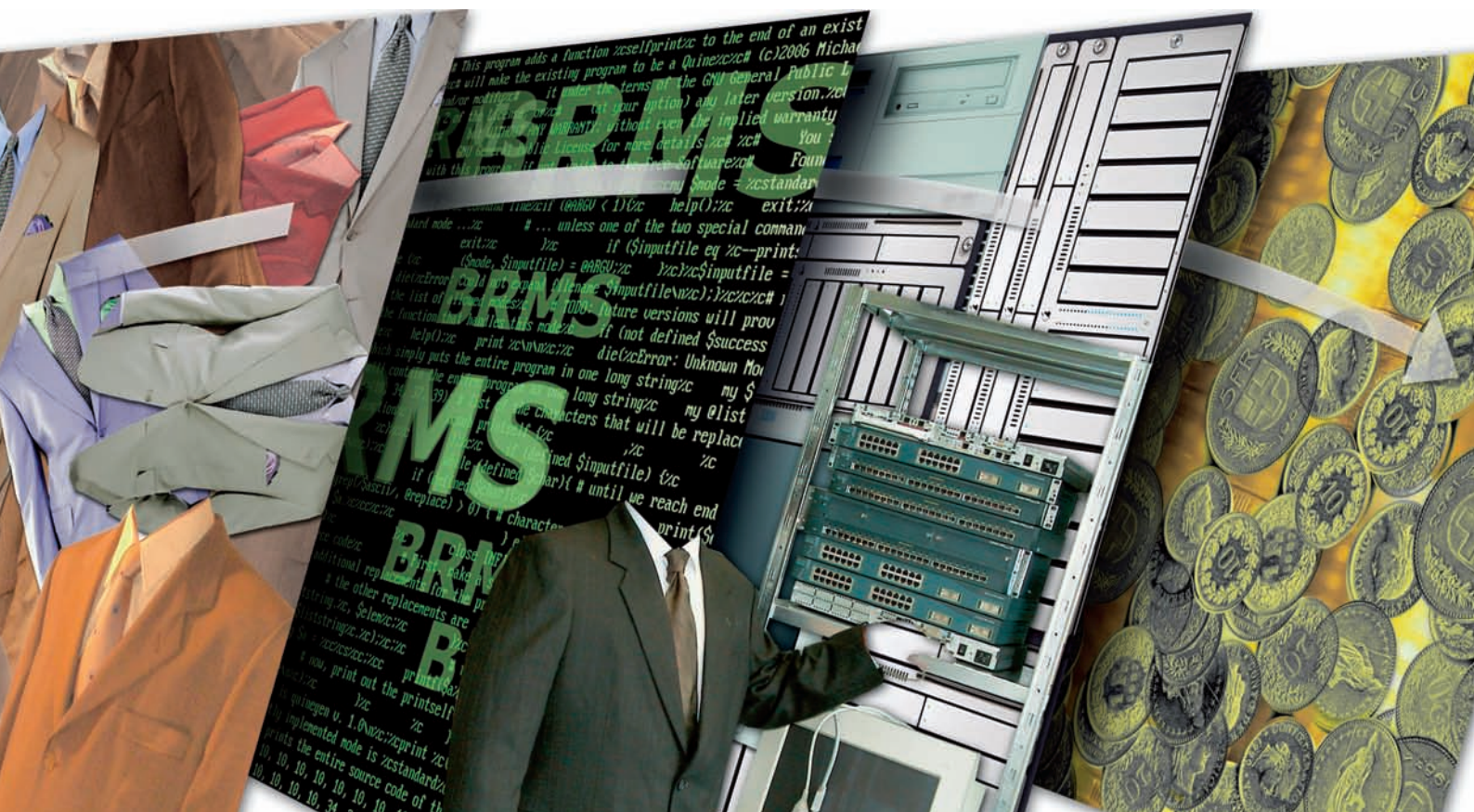
In this article, you will learn...

- How, thanks to BRMS, IT can respond more flexibly to changing business rules
- How quickly BRMS pays for itself
- The qualitative benefits offered by BRMS

If we look at not only the high initial expenditure of implementing business rules in IT systems but consider as well the requisite adjustments during the entire operational period, we find enormous potential to increase efficiency.

The Foundation for Business and IT Collaboration

A BRMS embodies the approach of extracting business rules from the technical



application logic and administering the rules separately. This means that the rules can be maintained independently of the IT system's release cycles. Graphic modeling in particular enables business users to play a decisive role in creating, testing and simulating business rules, or even handle the process entirely independently. Instead of specifications in text format, business users provide IT with rule models that have been validated from a business perspective – enormously reducing the expenditure on consultation.

The model-driven BRMS approach results in coding-free implementation of business rules with responsibility in the hands of the business users. Thus IT can focus on the technical aspects: integrating the rules system in the IT architecture, specifying the data connections for executing business rules, and deployment of modified rules in production.

Summarily, the BRMS becomes an advanced collaborative platform for business and IT, and as a result, the enterprise actually gets more business and software agility, at a lower cost, and with much higher quality.

Total Quality Management for Rules

A total quality management (TQM) process with clear delineation of responsibilities is required if business is going to be able to make rapid changes to business rules outside normal release cycles. This process must meet business needs with respect to implementation of business rules and technical requirements of IT for automated test, release and deployment processes. Only the consistent support provided by a BRMS allows for quick and especially secure rule changes that are possible even during live operations.

Accelerated Cycles, Greater Efficiency

The introduction of a BRMS changes the classic development cycle of design, development, and testing with simultaneous quality assurance and documentation. The design phase is significantly reduced since the tool-supported modeling of business rules significantly facilitates the rule definition and design. Even during modeling, test data and expected reference results are defined. Moreover, this approach allows for iterative procedures when defining business rules-which is indispensable with complex business rules. It also forms the foundation for automated test procedures in TQM. Coding of business rules is no longer required at all, and with that goes the lengthy consultation loop between the

AN EXAMPLE FROM PRACTICE

ROI Calculation: BRMS Pays for Itself in One Year

An investment bank's experience illustrates how the introduction of the Business Rules Management System (BRMS) pays off. This scenario concerns the implementation of a "rules-based rating." The project directors calculated an expenditure of \$800,000 for two rating services, with a total of 6,000 rules, to cover consultation with the business division and conventional realization by IT. Frequency of business rule changes of 20% was assumed after initial implementation. Over a period of 5 years, this resulted in a nominal benefit of \$830,000. Savings of 30% for realization and 50% for changes were set at a conservative level. Costs of

\$404,800 are incurred for licenses, maintenance and training for the BRMS. That results in an absolute ROI of \$427,200, or 206% ROI. The investment thus pays for itself within the first year.

Adapting this example, discrete ROI calculations can be made for various BRMS and application scenarios. The only estimates required are the amount of the expense for implementation without use of a BRMS and the frequency of rule changes. The values for savings in realization and maintenance based on experience form a sufficiently strong foundation to calculate the ROI based on various BRMS scenarios.

business department and IT that was needed until the business rules could be implemented free of errors.

Figures based on practical experience with a BRMS show that there is a savings potential of 25% to 50% in the development of new business rules and up to 50% to 75% in the maintenance phase. These results are greatly influenced by the complexity and frequency of changes made to the business rules involved.

Return on Investment with BRMS

The decision to introduce BRMS is always an investment decision as well that must be founded on a positive return on investment (ROI). Analysts' studies of the ROI for BRMS, such as that done by IDC, indicate an average ROI of 210%. This examination of ROI determined in retrospect the benefits and the costs expended for product introduction in the sense of total costs of ownership (TOC).

While producer's information on licenses, maintenance, training and any additional hardware required make it easy to determine the TCO for BRMS, it is incomparably more difficult to quantify the specific benefits.

One possible approach is to determine the expense that would have been incurred if business rules were implemented without using BRMS. Starting with that value, the relative benefits could be determined, taking into account the above values based on experience for the savings during the realization and maintenance phases. The time period under consideration and the frequency of rule changes are values that also have significant influence on the outcome. (See box below as well.)

Qualitative Benefits of BRMS

Implementation of a BRMS offers a series of qualitative benefits, in addition to the

quantitative ones mentioned above. For instance, the execution of business rules in BRMS is documented thoroughly. This documentation makes it possible to trace all decisions made, at any time, and to provide that as support to employees in charge, for example, as part of the clarification of the applications.

The use of BRMS also resolves classic problem areas such as maintaining the consistency of documentation with the business rules that are in production. Since the latter were generated from rule models, exact correspondence is always ensured. No additional expenses are incurred for documentation either. Finally, administration of business rules using a BRMS offers revision security since each version and author is documented, archived, and easily traceable.

The separation of business rules from the technical program code and their central administration in a rule repository also increases the extent to which they can be reused, thus reducing redundant rule implementations. Business rules can be deployed ideally across platforms within the context of a Service-oriented Architecture (SOA) as rules services. If an estimate of the degree that rules can be reused is available, that estimate can be included in an examination of ROI.

An examination of ROI and the additional qualitative benefits of a BRMS often cost-justifies the implementation of a BRMS from the perspective of application development. The actual benefit of these systems is not based on IT, however, but rather on business drivers. The opportunity for directly implementing strategic changes using business rules (time-to-market) results in significant advantages over the competition. ■

¹ Thomas Cotis is co-founder and managing shareholder of Innovations Softwaretechnologie.