

Business Logic Management Systems



Technology to automate
decision making and
critical business functions.



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A logical view of Business Logic Management Systems (BLMS)

In order for any business application to be effective it must model and produce the same results that would be produced if a knowledgeable human being were performing the task. This *knowledge* that the human possesses would include the *business rules* and *business logic* that are part of the underlying business process.

As software continues to take over tasks that were once performed by humans, and even pushes the boundaries by performing tasks that humans are not be capable of performing with the same degree of speed or accuracy, the need for a standardized methodology of business logic storage and retrieval becomes paramount.

A BLMS (Business Logic Management System) is a structured data base in which a business can store, retrieve, change and use the business rules that effect its operations. Heterogeneous business applications that require knowledge of the organization's business logic access the BLMS in order to perform their tasks.

A well-designed BLMS eliminates the need for the IT staff to recreate logic modules for every application that it develops. These applications can simply query the central BLMS and make the appropriate logic decisions based upon the data that is returned.

This approach requires the software developers only to separate the applications business logic modules from the presentation modules and application flow control.

The BLMS *engine* executes decisions based upon the business rules. It is capable of simulating the human knowledge and collective enterprise experience that normally is behind the myriad business decisions that are made every day.

Financial institutions, for example, can establish a BLMS that holds the rules for establishing credit limits, approving new accounts, making C.O.D. vs. Net 30 decisions, and other financial decisions which are based upon quantifiable parameters.

Network monitoring and management systems can respond to attacks, requests for services, outages, etc., using the business logic provided by the BLMS.

As business logic requirements change, business analysts or administrative personnel can update the business logic without enlisting the aid of the IT staff. The new logic is immediately available to all client applications. And the business avoids the time and expense of involving programmers.

The Case for Separating Logic from Development

The tools, designs and thought processes that goes into developing various portions of a complex application can differ greatly from each other. Designing a User Interface (UI) requires an entirely different approach than incorporating the business logic. UI developers concern themselves with the placement of screen elements, screen widths, fonts, colors and general usability issues. They rarely concern themselves with underlying business logic processes. Very often the design of the business and presentation logic occurs at entirely different times in the project lifecycle than the presentation areas. Also, large organizations may practice workforce separation where teams of highly specialize developers work solely within their areas of expertise. A BLMS enables easier separation of the business logic modules from the remainder of the application.

Most enterprise applications are developed as the result of a request being generated by the business analyst or an operational manager. The project usually involves a formal or informal process where IT system analysts collect user requirements, identify user roles and construct models of the relevant business process. This information is then sent to the IT software development department where the coding begins. Often, the business logic design and implementation are left until the end while the staff wrestles with basic design issues such as the user interface, database connectivity and network access. The application design and prototypes go back and forth between developers and the business side of the organization until everyone agrees that the application delivers what the users expected.

The most common reason that a new application is rejected by the users is failure of the software to produce the correct results because it is based upon faulty business logic. Standardizing the approach to accessing and interpreting business logic removes these issues and greatly reduces the development time while improve product quality.

A BLMS allows the business analysts to define and create business logic using everyday language and simple If/Then/Else statements that are typically accessed through a point and click interface. Although rules may be related to other rules, the application need not have any knowledge of the relationship. It simply needs to know how to produce a query, accept the results and then act upon them. The BLMS itself manages the relationships and complexities of the business logic.

Compare this to the current standard methodology required to develop an application without the benefit of having a BLMS available. Business logic rules and constructs are piled on top of each other in a never-ending string of complex CASE and IF statements. The application plows its way through the logic sieve until the answer falls out the bottom. Should the rules change, the application is sent back to the developers for updating. The cost to the organization in down time and IT payroll can be enormous. The costs of having the application make the wrong decision due to faulty logic can be devastating.

In the final analysis, it is simply easier to read and maintain business logic that is not an integral part of the underlying code. A BLMS delivers this capability.

Although there is a learning curve involved in implementing and managing a BLMS, the cost savings in change management alone can be enough to fully justify the acquisition. The biggest investment of time involves training the business analyst in the rules writing process and training the IT department in how to use the BLMS. Once these hurdles are overcome, the savings begin in earnest.

Is a BLMS Right For Your Organization?

Whether or not a BLMS is right for your organization depends upon the type and size of the applications that exist within your enterprise. A BLMS may not be warranted if an organization runs mostly standard, "out-of-the-box" single-purpose applications. Also, many ERP and CRM systems come with their own specialized versions of a BLMS. Organizations with minor business logic decision needs can get by with these minimal BLMS capabilities.

However, larger enterprises that make ongoing investments in custom-designed software intended to manage infrastructure tasks, especially unattended decision-based applications such as credit approval and real-time transactional systems, may very well benefit from the cost and timesaving features of a BLMS.

The hardest decision involves retrofitting a BLMS into an existing system that is operating as expected. The case might be made that the decision can be shelved until such time as the application needs to be updated. While that may seem like a viable approach, the process of updating the application will be further delayed by the time that it takes for the organization to acquire, install and learn how to use the BLMS. This makes the idea of developing a BLMS-enabled version of the business application, while leaving the legacy version running, a more attractive alternative.

Summary

A BLMS makes sense for an organization that develops enterprise-wide applications that are transactional or event-driven and must produce results that are based upon quantifiable business logic, i.e. clear business rules. The organization will experience a higher degree of software reliability, lower development costs, and the ability to respond instantly to changing business logic. These are competitive advantages that lead to increased profitability.