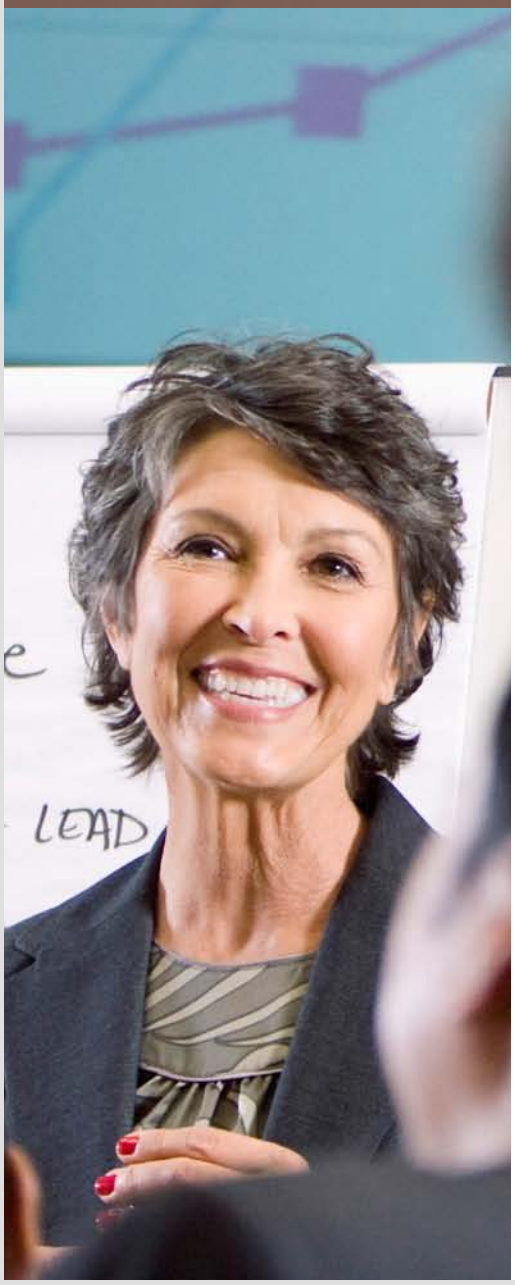
SAP Solution Brief
SAP NetWeaver

SAP NetWeaver Business Rules Management

CENTRALLY COMPOSE, EXECUTE, AND MAINTAIN BUSINESS RULES

GREATER AGILITY, BETTER DECISIONS

With the SAP NetWeaver® Business Rules Management component, you can externalize business rules and manage them centrally across multiple software installations. The results: greatly enhanced speed and flexibility, plus more consistent and transparent enforcement of corporate policies.



From straightforward allocation of tasks to the right employees to performing complex calculations of prices and discounts, decisions are part and parcel of day-to-day business (see Figure 1). And no matter what form they take, they all have to be made quickly, efficiently, and in line with the corresponding business rules.

But managing and deploying these all-important rules poses major challenges. Many companies still depend on individuals to make decisions based on their knowledge and experience, opening the door to inconsistency and inaccuracy. Documenting procedures in spreadsheets is a step in the right direction but fails to bridge the gap between rules and the associated business processes. Coding rules into software enables enterprises to automate their decisions. But programming at the level of individual applications often entails duplicate effort, lacks the flexibility needed to rapidly adapt rules to ever-changing business imperatives, and can cause governance and compliance issues.

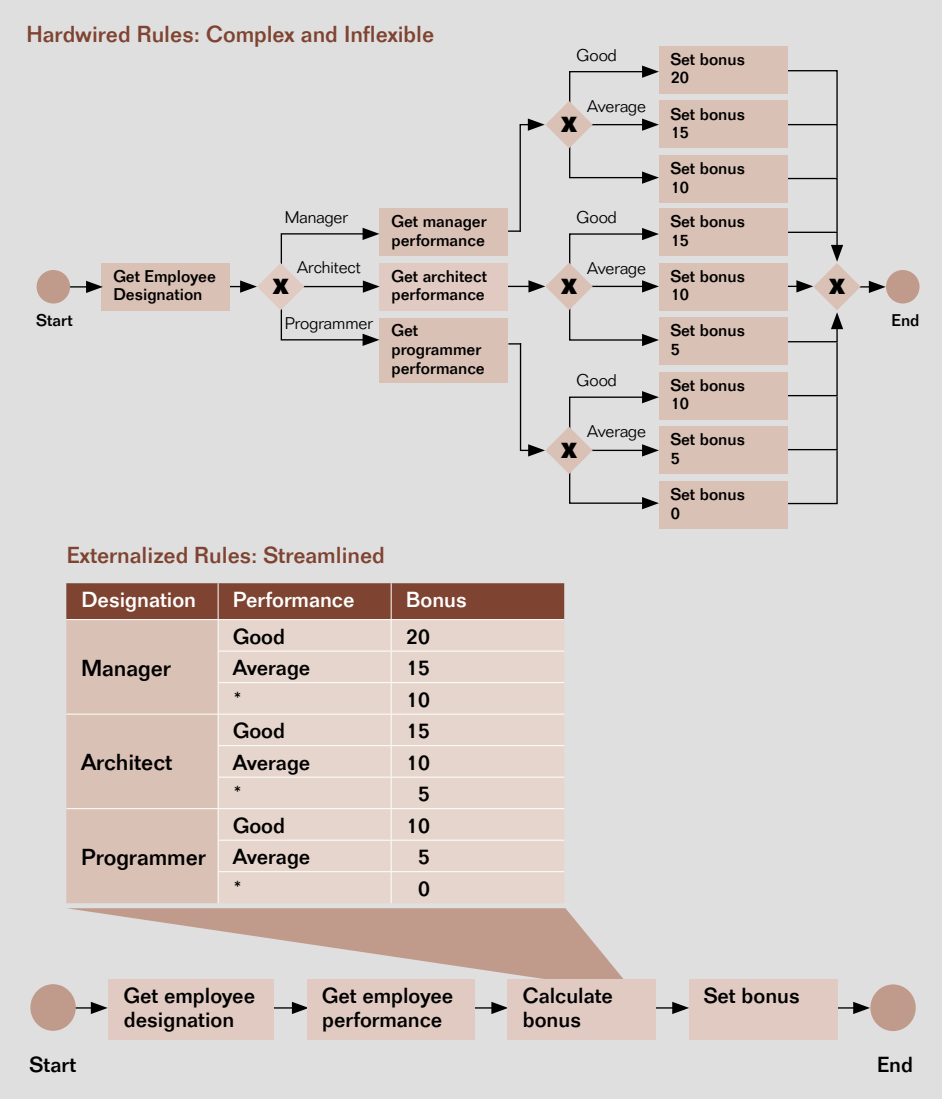
Coding is problematic for another reason: The domain experts who define the rules generally lack the programming skills necessary to implement them in applications. And the IT specialists who program the rules often lack the relevant business knowledge. As a result, vital details can be lost when rules are hardwired in software.

Greater Reliability, Efficiency, and Agility

There's a solution that helps you master these challenges: the SAP NetWeaver® Business Rules Management (SAP NetWeaver BRM) component. An integral part of the SAP NetWeaver Composition Environment offering, SAP NetWeaver BRM supports central management of rules across their entire lifecycle. It enables rules to be externalized and made available across heterogeneous application landscapes via reusable Web services (see Figure 2). What's more, it allows rules to be directly embedded into business processes – increasing agility, boosting

Type of Business Rule	Example
Decision rules	Automate complex decisions – for example, distribute workload using rule-based task assignment
Validation rules	Check eligibility of claims settlement or of applicants for certain product offerings
Recommendation rules	Guide buying behavior by personalizing Web sites and product recommendations
Calculation rules	Calculate sales commissions prices, discounts and rebates
Alert rules	Trigger alerts for critical business events (for example, to detect fraud)

Figure 1: Types of Business Rules



Designation	Performance	Bonus
Manager	Good	20
	Average	15
	*	10
Architect	Good	15
	Average	10
	*	5
Programmer	Good	10
	Average	5
	*	0

Figure 2: Decision Making: Hardwired Versus Externalized Business Rules

efficiency, and eliminating duplicate effort. The result: more reliable enforcement of corporate policies; consistent implementation of rules across multiple software solutions; and faster, more flexible adaptation of business rules in line with real-world requirements.

Rapidly Model and Deploy Rules

SAP NetWeaver BRM delivers a powerful set of rule-composition tools based on the open Eclipse* development platform, plus a Java-based runtime engine. The component gives you a choice of two approaches to rule modeling. First, you can centrally create rules in the form of reusable Web services for consumption by multiple applications. This eliminates the need for time-consuming coding at the level of individual applications and databases, enabling rapid deployment of new and modified rules. Second, SAP NetWeaver BRM allows you to embed rules directly into processes – through tight integration with the SAP NetWeaver Business Process Management component. In addition, you can also use the rules engine of SAP NetWeaver BRM by embedding it as a separate component in Java-based SAP® and non-SAP applications – for example, to execute customer loyalty rules on point-of-sale (POS) terminals.

Select the Format That Is Right for You

Different types of rules call for different rule formats. SAP NetWeaver BRM lets you choose between relatively straightforward if/then rules, more sophisticated decision tables, and flow rules. If/then rules use simple English statements joined by "and" and "or";

* Written primarily in Java, Eclipse is an open-source software platform. It comprises extensible application frameworks, tools, and a runtime library, providing software developers and administrators with an integrated development environment.

decision tables allow you to model rules in familiar spreadsheet-like structures; and flow rules let you logically combine different rule formats by dragging and dropping graphical elements into an intuitive flow chart that visualizes the sequence of rules.

Test Rules and Validate Their Correctness

Once you have defined or modified business rules, you want to check that they are formally correct. And you need to understand their practical impact in day-to-day business. SAP NetWeaver BRM enables you to validate the syntax of if/then rules, decision tables, and other rule artifacts and detect any errors, such as overlapping conditions or missing ranges in decision tables. SAP NetWeaver BRM provides features to perform automatic bulk testing, allowing you to perform more comprehensive tests at lower cost.

Define Priorities

When two rules conflict, which one should apply? SAP NetWeaver BRM lets you resolve issues of this kind by prioritizing rules. In the event of a problem, the rule with the higher priority applies. SAP also provides support for rule activation periods and dates. This feature allows you to specify when limited-term promotions apply or help ensure new policies come into effect at the right time, for example.

Keep Track of Rule Versions and Variants

SAP NetWeaver BRM provides comprehensive version and variant histories, giving you 360-degree insight into rules projects for specific periods or activities. This functionality enables you to compare different versions of individual rules – and see who changed what, and when. You can also set any existing version or variant as the active one. The solution supports design-time and run-time versioning, thereby allowing you to also change rule versions on the fly.

Empower Business Users

With conventional approaches, rules usually must be coded into software applications by IT specialists. As a result, key information can be lost in translation between your user departments and the IT unit. To empower domain experts to play a more active role in defining, managing, and deploying rules, SAP NetWeaver BRM provides a range of functionalities:

- Support for decision tables – a format familiar to many business users
- An intuitive Web-based graphical interface for rules management, such as to enable experts to change if/then rules and decision tables
- Integration with Microsoft Excel to enable experts to export decision tables, maintain rules offline using familiar tools, and then import the results back to SAP NetWeaver BRM

Benefits Across the Board

With SAP NetWeaver BRM, your organization can automate a wide range of decisions by centrally composing, managing, and maintaining business rules. And that means a host of benefits for your company as a whole, as well as for managers, IT professionals, and business users.

The component allows business managers to:

- Enforce corporate policies transparently and consistently – through externalization and central management of business rules
- Increase the quality of business decisions throughout the enterprise

What's more, SAP NetWeaver BRM enables IT specialists to:

- Save time, resources, and money through central rules management
- Make sure rules are applied consistently across business processes – and eliminate duplicated effort

Business users are able to change rules faster and more flexibly – thanks to an intuitive Web-based graphical interface and familiar rules representation formats such as decision tables.

SAP NetWeaver BRM can be deployed on its own to make rules available across multiple software installations via reusable Web services. In conjunction with SAP NetWeaver Business Process Management, it enables you to embed rules in business processes from the very outset.

Find Out More

To learn more about SAP NetWeaver BRM, call your SAP representative today or visit us on the Web at www.sap.com/platform/netweaver/components/brm.

QUICK FACTS

www.sap.com/contactsap

Summary

The SAP NetWeaver® Business Rules Management (SAP NetWeaver BRM) component lets you centrally compose, execute, and maintain all-important business rules for consistent, enterprise-wide enforcement of policies and procedures, better decision making, and greater responsiveness to changing business imperatives.

Business Challenges

- Implement business rules efficiently, transparently, and consistently throughout the organization
- Avoid costly, time-consuming, and error-prone duplication of rules in different applications and databases
- Accelerate adaptation of rules in line with changing business needs
- Enable business users to quickly and flexibly define and maintain rules

Key Features

- **Composition of business rules** – Create and maintain business rules in an Eclipse-based development environment
- **Execution of business rules** – Validate and deploy business rules reliably and rapidly
- **Externalization of business rules** – Make rules available to multiple applications in the form of reusable Web services
- **Business user empowerment** – Allow business users to play a greater role in defining and deploying business rules

Business Benefits

- **Consistent and transparent enforcement of corporate policies** through externalization and central management of business rules
- **Enhanced agility and responsiveness** through a single solution for managing business rules across applications
- **Straightforward incorporation of rules into business processes** via Web services and through integration with the SAP NetWeaver Business Process Management component
- **Increased speed and flexibility** by including business users in definition and adaptation of rules

For More Information

To learn more about SAP NetWeaver BRM, call your SAP representative today or visit us on the Web at www.sap.com/platform/netweaver/components/brm.

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