

## Business Problem Overview

### Reducing Transaction Costs

The cost of a business transaction is calculated considering the number of people involved in the transaction, the material resources used, and the time taken for a transaction to be completely processed. These factors have a direct bearing on the costs, since resources tied up in processing one transaction cannot be involved in processing another transaction at the same time.

“Implementing a new information technology is generally seen as a means for reducing the transaction costs of an organization. However, in practice, implementing a new IT often results in higher transaction costs. This is because the amount of information that needs to be processed by the organization increases. This can result in information overload.

The cost of processing this information is known as coordination cost. If these costs exceed the benefits of IT, then the implementation becomes something negative and expensive. To reduce coordination costs, organizations can do one of two things:

1. Improve information processing capabilities.
2. Use IT to reduce the need for coordination - less information to process means lower coordination costs and lower transaction costs”

[http://en.wikipedia.org/wiki/Transaction\\_cost](http://en.wikipedia.org/wiki/Transaction_cost)

Wikipedia.org

QuickRules allows enterprises to improve their information processing capabilities, reduces the need for coordination between different groups in the enterprise, and lowers the opportunity costs by speeding up the processing. This enables enterprises to reduce the transaction costs, improving top-line sales capabilities and increasing margins.

### Reducing Integration Costs

The cost of integrating BRMS technology into an existing IT ecosystem can be calculated considering the resources required to:

1. Elicit/capture business rules from existing systems
2. Integrate the BRMS runtime into the IT Systems
3. Merging the BRMS product toolset with the existing GUI.

Eliciting/Capturing business rules from the existing systems is a manual-labor intensive task, and falls outside the scope of BRMS products. Commercial BRMS products, therefore, need to reduce the resources required for the other activities – integrating the Runtime / Toolset into the existing IT System / Software Product.

QuickRules allows enterprises / OEMs to easily integrate BRMS technology into their existing IT Systems / Software Products by providing the Rule Capture / Development environments on the Eclipse Platform. This enables quick and easy integration of the QuickRules RuleBuilder tool into other Eclipse-based front-ends, reducing the time/effort/cost of developing or upgrading existing systems.

## QuickRules Advantages

### How can QuickRules improve my information processing capabilities?

QuickRules allows enterprises to capture business policies, contracts signed with suppliers, partners and customers, governmental regulations, and associated numerical data into its toolset; these are dynamic in nature and change on a periodic basis.

The QuickRules toolset allows the enterprise to capture changes to these entities and deploy them into production quickly. This allows enterprises to maintain a high level of automation in processing transactions, thereby increasing the daily information throughput in its IT systems.

Features	Rule Developer	Business User
▪ Define Business Terms with type information (“Definitions” feature)	✓	✓
▪ Author Inference (IF... THEN...) Rules using Definitions	✓	✓
▪ Author Decision Tables (Spreadsheet Format) using Definitions	✓	✓
▪ Create and manage complex rule execution sequences diagrammatically using FlowRulesets	✓	✓
▪ Author collections of related terms in a single unit (“Data Types” feature)	✓	✓
▪ Share captured business rules across the enterprise	✓	✓

For real-life case studies that discuss this, refer to the following documents on our website:

1. International Truck accelerates Warranty Claims Processing
2. Pulincio implements TarMed (Switzerland’s new Healthcare-funding Regulation) at Wincare
3. Lufthansa Technik Logistik automates applying Customs Regulations on Aircraft Maintenance Parts

### How does QuickRules reduce my costs of coordination?

QuickRules recognizes three different areas where coordination is required and provides feature support to reduce the costs involved in each of them:

#### 1. Coordination between Business Users

Business Users designing policies need to communicate with each other. The usual communication channels are meetings, email, office documents, phone, or printed material. In reality a combination of some or all of these are used. This leads to a profusion of documents (written, printed, or online), each one codifying only a part of one policy. This implies that consolidation of these documents to completely describe the entire policy at a single location is often a laborious and time-consuming process.

QuickRules allows business users to directly capture the policy into its toolset, in a single location, incrementally. As the knowledge base grows, this same location can be updated from anywhere in the enterprise via the web, eliminating the need for other forms of communication.

Features	Rule Developer	Business User
▪ Group business rules into related units (“FlowRulesets” feature)	✓	✓
▪ Copy/Paste business rules across flows	✓	✓
▪ Share FlowRulesets across the enterprise	✓	✓

### 2. Coordination between Business and IT System Development Team

Once a policy has been formalized, Business is responsible for transferring it to the IT department for implementation and enforcement, leading to another set of meetings, usage of email, etc. After this phase, the IT department creates more documents describing the same policy in technical terms, designs the IT system (more documents), and translates it into code (yet another representation of the same policy). This requires significant effort from both the Business and IT teams; most of it spent verifying the accuracy of the policy representation after each stage of translation.

QuickRules allows the already captured [“1. Coordination between Business Users”] business policy to be implemented and enforced in the same format as it was captured in. While this does not completely eliminate coordination [meetings for knowledge transfer may still be required], it does eliminate the need and effort in creating multiple representations of the policy.

Features	Rule Developer	Business User
▪ Map natural language phrases to data objects (“Alias” feature)	✓	
▪ Create executable units for business rules (“Add Ruleset” feature)	✓	✓
▪ Author business rules (“Add Rule” feature)	✓	✓
▪ Re-use business rules into Rulesets (“BaseRules” feature)	✓	✓
▪ Define preconditions to business rules (“Precondition” feature)	✓	✓
▪ Define constraints on business rule activation (“Mutex” feature)	✓	✓
▪ Set time period validity for business rules (“Effectivity” feature)	✓	✓
▪ Add context-specific metadata to business rules (“Custom Properties” feature)	✓	✓
▪ Check for self-consistency in the business rules using the WebEditor (“Check Consistency” feature)	✓	✓
▪ Customize the consistency checks based on the needs of the enterprise	✓	✓
▪ Share rulesets across the enterprise	✓	✓

### 3. Coordination between Business and Quality Assurance Team

Quality Assurance personnel verifying policy implementation in IT systems need to coordinate with Business. Most of this effort is spent in gaining business knowledge, and verifying the results of test runs, requiring significant investment in resources from both parties. A second problem is that neither the Business nor the Quality Assurance teams can be confident that the test cases suite is comprehensive and meets the needs of the business scenario – Quality Assurance teams may design test suites with the implementation in mind, while Business is thinking in terms of real-life use-cases.

QuickRules allows Business to view and test the implemented business policy directly by authoring and executing test cases with minimal [one-time] support from the IT department. Business can access policy over the web, further reducing the effort spent in coordination.

Features	Rule Developer	Business User
▪ Use Java classes/XML Documents for testing	✓	
▪ Define breakpoints to stop execution at pre-defined points	✓	
▪ Introspect into data objects at breakpoints	✓	
▪ Introspect into business rules at breakpoints	✓	
▪ Generate reports of the debug run	✓	

Summarizing, policies (business policies, contracts, and regulations), once captured into the QuickRules toolset, no longer need to be encoded in multiple formats as they flow through the design, implementation, enforcement and governance stages. This eliminates the need to author multiple documents (business/technical requirements, high level/low level design specifications, and code) and reduces the effort involved in coordinating different people/groups, thereby drastically bringing down the overall costs of coordination.

For real-life case studies that discuss this, refer to the following documents on our website:

1. VoluBill uses QuickRules to manage Mobile Content Billing Packages
2. FAS Improves Training and Recruitment Services in Ireland’s Labor Market using QuickRules.NET

**How does QuickRules reduce my opportunity costs?**

QuickRules BRMS allows enterprises to achieve and maintain a consistently high level of automation in IT systems that implement business processes. The architecture of the platform also reduces the co-ordination effort between disparate groups in the organization by a significant amount. Both factors combine to help enterprises to:

1. React to market changes rapidly; and
2. Use fewer resources to implement changes.

This decreases the time-to-market and consequently the associated opportunity costs.

Features	Rule Developer	Business User
<ul style="list-style-type: none"> <li>▪ Add/edit/delete business rules at runtime</li> <li>▪ Add/edit/delete rulesets at runtime</li> <li>▪ Re-use flows defined in FlowRulesets at runtime</li> <li>▪ Add/delete business objects at runtime</li> <li>▪ Test business rules at runtime</li> </ul>	✓	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✓</li> </ul>

For real-life case studies that discuss this, refer to the following documents on our website:

1. Combined Insurance Automates Claims Processing System with a QuickRules driven Approach
2. US Central Optimizes Financial Product Development and Delivery using QuickRules

**How does QuickRules reduce my integration costs?**

QuickRules BRMS gives enterprises / OEMs a head-start in integrating BRMS technology into their IT Systems / Software Products by providing the Rule Capture and Development tools on the Eclipse platform. This allows developers to plug the QuickRules BRMS toolset directly into their Eclipse-based GUIs without any modification, reducing the time/effort/costs of adding business rules functionality into the existing front-end code.

Features	Rule Developer	Business User
<ul style="list-style-type: none"> <li>▪ Add Rule Capture/Development Controls into 3<sup>rd</sup>-party front-ends</li> <li>▪ Merge the QuickRules BRMS Data Model with 3<sup>rd</sup>-party Data Models</li> <li>▪ Develop custom controls for Rule Capture/Development</li> </ul>	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> </ul>	

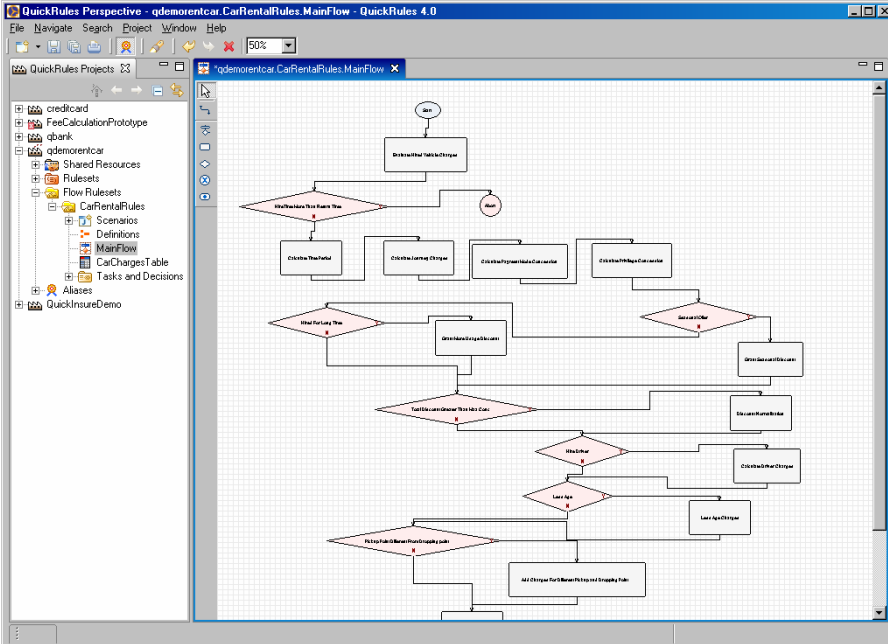
### **What other benefits does QuickRules provide?**

By enabling a significant reduction in coordination costs, and a higher rate of automation, QuickRules reduces the requirement for qualified personnel to implement business processes, and maintain the IT systems.

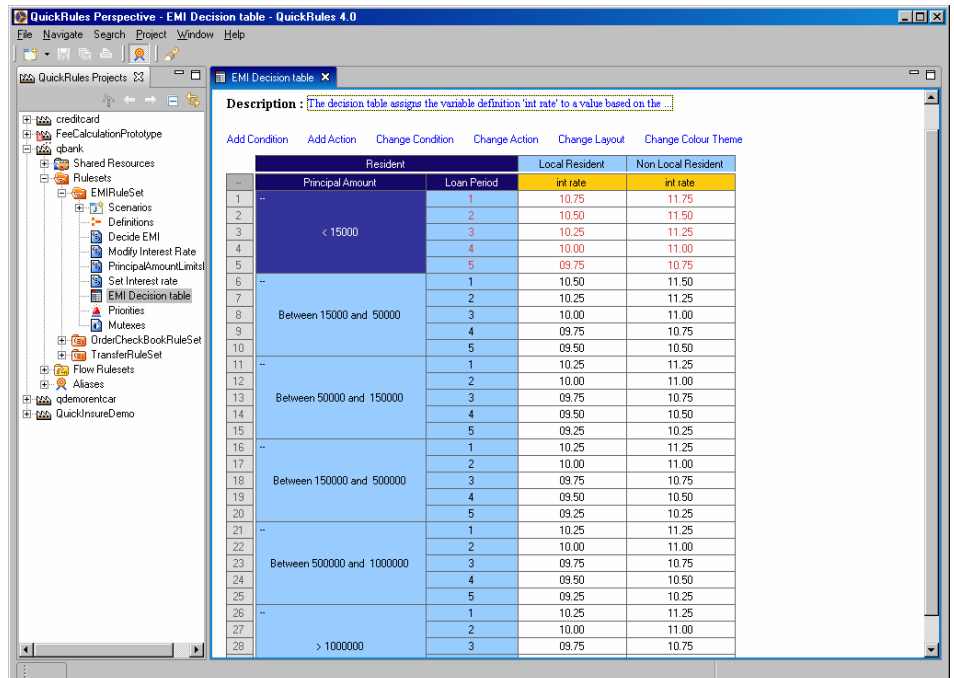
By capturing knowledge about contracts, policies, and regulations completely, QuickRules enables enterprises to institutionalize knowledge, reducing manual intervention in normal day-to-day operations, and thus the dependency on “experts”.

Both these benefits enable enterprises to hire, train, and retain fewer people – reducing personnel costs.

### Product Screenshots



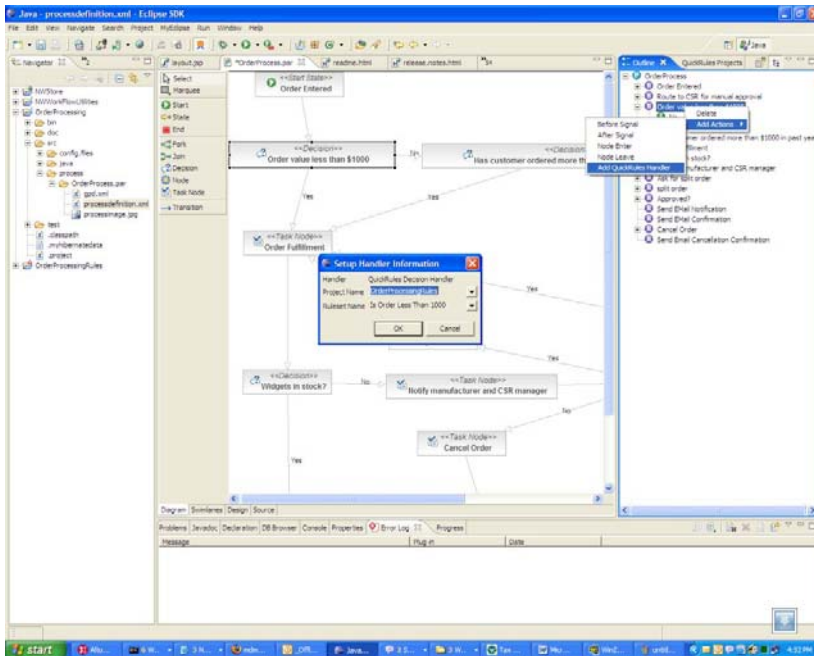
Eclipse-based Rule Development IDE showing “Flow” rules



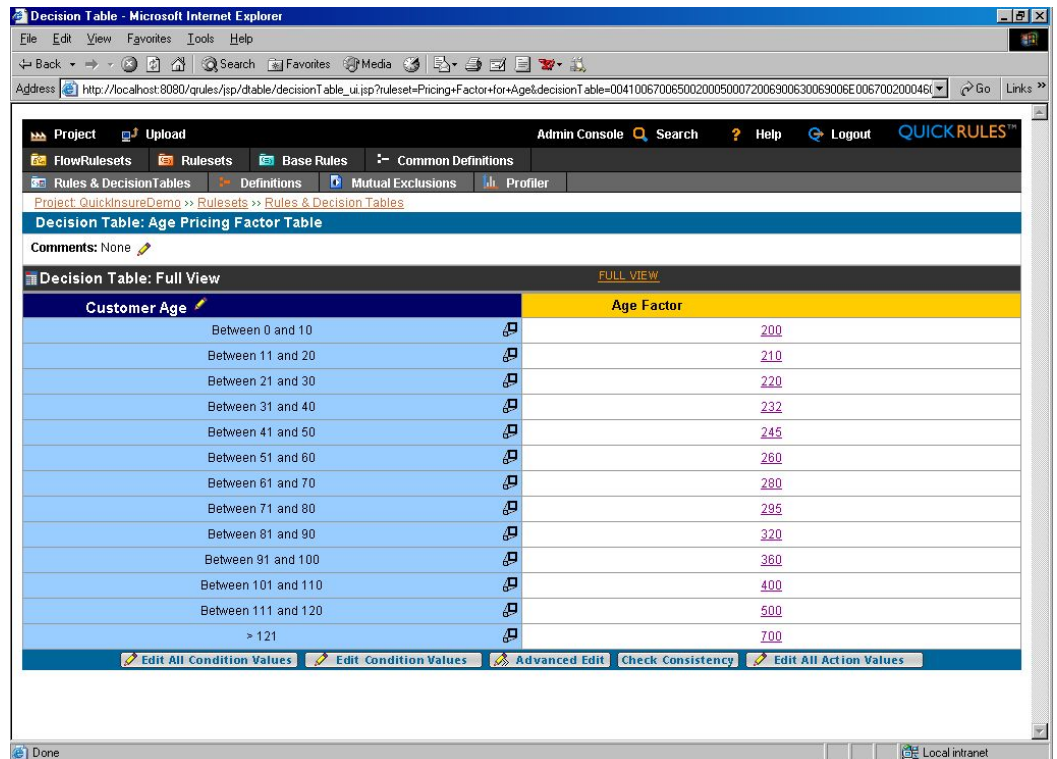
**Description:** The decision table assigns the variable definition 'int rate' to a value based on the

Principal Amount	Loan Period	Resident	Local Resident	Non Local Resident
		int rate	int rate	int rate
< 15000	1	10.75	11.75	
	2	10.50	11.50	
	3	10.25	11.25	
	4	10.00	11.00	
	5	09.75	10.75	
Between 15000 and 50000	1	10.50	11.50	
	2	10.25	11.25	
	3	10.00	11.00	
	4	09.75	10.75	
	5	09.50	10.50	
Between 50000 and 150000	1	10.25	11.25	
	2	10.00	11.00	
	3	09.75	10.75	
	4	09.50	10.50	
	5	09.25	10.25	
Between 150000 and 500000	1	10.25	11.25	
	2	10.00	11.00	
	3	09.75	10.75	
	4	09.50	10.50	
	5	09.25	10.25	
Between 500000 and 1000000	1	10.25	11.25	
	2	10.00	11.00	
	3	09.75	10.75	
	4	09.50	10.50	
	5	09.25	10.25	
> 1000000	1	10.25	11.25	
	2	10.00	11.00	
	3	09.75	10.75	

Eclipse-based Rule Development IDE showing Decision Tables



Integration with jBPM Business Process Management Tool



The screenshot shows a web browser displaying a 'Decision Table' for 'Age Pricing Factor Table'. The table lists age ranges and corresponding age factors. The interface includes navigation tabs like 'Project', 'Upload', 'Admin Console', 'Search', 'Help', and 'Logout'. The table has columns for 'Customer Age' and 'Age Factor'.

Customer Age	Age Factor
Between 0 and 10	200
Between 11 and 20	210
Between 21 and 30	220
Between 31 and 40	232
Between 41 and 50	245
Between 51 and 60	260
Between 61 and 70	280
Between 71 and 80	295
Between 81 and 90	320
Between 91 and 100	360
Between 101 and 110	400
Between 111 and 120	500
> 121	700

WebEditor showing Decision Tables

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