An Introduction to Business Rules

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Business Decisions are Everywhere...

Improve agility and time to market
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Let’s create a special promotion for our best customers.

And Changing Frequently

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And Changing Frequently

- Commissions / Royalties
- Underwriting
- Tax calculation
- Billing
- Fraud assessment
- Eligibility
- Configuration
- Pricing
- Benefit calculation
- Compliance Screening
- Documentation Requirements
- Accounting Disposition
- Product Selection
- Up-sell/Cross-sell offer
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- Underwriting
- Tax calculation
- Billing
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Improve agility and time to market
The traditional (ad hoc) approach of dealing with rule changes leads to:

- Reduced organizational agility
- Reduced employee productivity
- Increased load on IT

Issues:

- Rules are hidden in code or isolated within the organization
- Changes are hard to track and maintain over time
- Rules used by systems have to be programmed and require IT resources
- Duplication and multiple versions of the same rules
- Lack of auditability, traceability
- Decision changes cannot be easily tested or simulated

Where Business Rules Typically Exist:

- Applications
- Documents
- People
- Processes
More Agile Approach with Business Rule Management System (BRMS)

Business Rules are locked inside System z application code

- Adapt faster to ongoing change requirements
  - Respond to customer and industry demands by deploying rule changes independently from lengthy application maintenance cycles
- Reduce load on IT development
  - Express decision logic in business language terms to enable your business experts to participate in rule changes
  - Validate rules execution without the need to retest the whole CICS application

99.999% availability means code update windows are small
What is a BRMS (Business Rules Mgmt System)?

- A software system used to **define, deploy, execute, monitor and maintain** decision logic within an organization.
- Business Rules are known as the decision logic
  - May include policies, requirements and conditional statements that are used to determine the tactical actions that take place in applications and systems
- Held in a repository, can be maintained by IT and business experts, which allows decision logic to be external from application code
Business Rules Management System (BRMS)

Provides complete functionality and tooling to fully maintain and manage an organization’s business rules through the complete business rule life cycle by multiple roles.
WebSphere ILOG JRules BRMS

Design

Maintain

Share

Deploy

IT Development

Rule Studio

Rule Solutions for Office

Rule Team Server

Decision Validation Services

Rule Repository

Transparent Decision Services

Rule Execution Server

Rules for COBOL

Custom Web Applications

Line Of Business

IT Operations
Intuitive Rule Authoring Environments

**Decision Tables**

- If the one way driving distance of the vehicle coverage request is more than 500 and the type of the vehicle is **Sport Utility Vehicle**, then add a 25% surcharge.

**Point & Click**

**Scorecards**

**Decision Trees**
ILOG Business Rule Management Solutions for COBOL Applications on System z

ILOG BRMS Management and Development

Rule Studio (Eclipse)

RTS Rule Repository

Rule Team Server (RTS Web)

Decision Validation Services

Application Developer, Architect

Rule Management

Business Analyst, Business Manager

ILOG Business Rules for z/OS

Rules for COBOL

CICS, IMS, Batch Applications

Rule Execution Server zOS and Linux on z
Dynamic Rules Management
Managed Execution Environment with BRMS

- High performance and scalable rule execution

- **Add new behaviors** to key COBOL business applications and minimize risk and disruption

- **Improve Agility** – author and reuse business decisions and rules across applications

- Automate business decisions – quick response to market and regulatory changes

- Rule services management & monitoring
**ILOG BRMS Case Study**

**Challenge**
- The company was missing revenue by not being able to present the right offer at the right time when a customer was on-line.
- Decision logics were scattered and inconsistent across channels.
- Poor customer experience: branch staff would sometimes try to cross-sell to clients who did not qualify for the additional credit, resulting in negative client experience.

**Solution**
- Create an ILOG BRMS based cross-sell/up-sell solution
- Decision support throughout generation of personalized & qualified offers
- Cross-channel (branches, call centers, etc.), cross-product & customer centric
- Agile solution from both business & IT standpoints!

**Business Benefits**
- Improved client relationship – acquisition, retention & wallet-share
- Accelerated ROI
  - Increased revenues - $14M in approved bookings in 2.5 months
  - Significantly increased cross-sell offers: from 13% to 40%
  - Significantly increased acceptance from 3% to 20%-30%
- Instant updates of rules fully managed by business users.
Phase 1 - Start with identifying the corporate rules. These will be authored in Rules for COBOL and the generated Corporate rule program will be included in each of the 6 applications.

Phase 2 – Start with Country 1 App – migrate rules to Rules for COBOL and generate required rules program to call with app.

Phase 3 to xx – Continue with each country application but by business decision review each country rules with those already in the repository to determine where more common rules should be.

Concurrent with Phase 3 – Begin the new architecture design and new development for the claims application on distributed.

Challenge

- There are 6 different COBOL Applications mix of CICS and Batch. Each application contains similar functionality – the applications were included in the company portfolio as part of smaller company purchases.

Solution

Business Benefits

- Enhanced use of IT resource time allocated to Application System Maintenance.
- Ability to have an efficient way to phase out duplicate application functionality with no impact to business activities
- Reduction in CPU utilization on System z due to eliminating multiple application systems

Large Multi Product European Insurance Company based
**Challenge**

- Numerous mainframe COBOL applications with little or no documentation
- Integration/feeds between the mainframe COBOL applications were done as “patch work” and not consistent
- Updates to applications systems require long lead times by lead time

**Solution**

- Global processes will be the first phases and a BRMS is used in these process to ensure consistency and ease of adding in specific region business rules with new project phases.
  - Distributed solution using JRules BRMS
  - Rules for COBOL used to develop and maintain business object model.
- Involve business users early and through the development process
- Focus on time to market and agility.

**Business Benefits**

- Decreased Time to Market for new services and new pricings structures
- New technology in phased approach rather than complete rip and replace
  - New and existing applications will need to run in parallel
  - Corporate data will remain on the mainframe
- Employees trained and mentored during the first phases so they can continue with the ongoing development.

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**One of the Largest US Distribution Companies**
Modernization Projects Examples for BRMS

Modernization Issues to resolve

1. Consolidation of COBOL application portfolio
   • Combine similar processes into one or two applications – cost savings on maintenance

2. Maintenance Projects
   • “Open up the application” to add new functionality; new product; etc.

3. Sharing Rules across Platform/ Running Parallel
   • Modernization or simplification of large applications across multiple platforms.
   • Keeping the rules in sync across multiple phases of projects.

Benefits of a BRMS

- Rule management
  - Version Control
  - Impact of rule change
  - Central repository for multiple rule deployments

- Rule testing and simulation to ensure accuracy of changes prior to deployment.

- Reuse of rules across platforms and applications – COBOL and Java
- Incremental modernization with rule management and execution – faster ROI.
BRMS Benefits to COBOL Development and Maintenance

- **Rule Analysis**
  - Get automatic notification of potential rule conflicts, redundancies prior to deployment

- **Impact Analysis**
  - See where rules are used across projects/applications using queries

- **Change Management**
  - Version Control,
  - Compare history of changes

- **Smart Views**
  - Take control of very large rule bases with Smart Views, easy search and reporting

- **Fast deployment of rule changes**
  - Hot-deploy rule changes

- **Rule Repository Security**
  - Secure: integrated with enterprise security facility including single sign-on
Delivering…
The essentials for business rule mining of existing software assets enhancing the ability to capture, maintain and take advantage of application knowledge that can provide insight into an application's structure and its interactions with business data.
ILOG BRMS for System z to capitalize on modernization and innovation

1. **Improve**
   
   **Improve Agility**: author and reuse business decisions and rules across applications with BRMS Rule Studio.

2. **Adapt**
   
   **Automate business decisions**: Quick response to market and regulatory changes with BRMS Rule Team Server.

3. **Innovate**
   
   **Add new behaviors** to key COBOL business applications and minimize risk and disruption with Rules for COBOL.
Thank you in various languages:

- धन्यवाद (Hindi)
- 多謝 (Traditional Chinese)
- ขอบคุณ (Thai)
- Спасибо (Russian)
- Merci (French)
- Gracias (Spanish)
- Obrigado (Brazilian Portuguese)
- Danke (German)
- شكراً (Arabic)
- Grazie (Italian)
- 多谢 (Simplified Chinese)
- ありがとう (Japanese)
- Teşekkürler (Turkish)
- 감사합니다 (Korean)
- நன்றி (Tamil)