Corticon and Business Processes working with OpenEdge

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Agenda

- What are Business Rules
- How do Corticon Business Rules enhance your application
- Introductory Corticon demo – order pricing
- Modes of use
- Parameterized Rules Demo – rebate management
- Deployment for ‘multi-tenancy’
- Q & A
Business Rules are application logic that pertain to the business domain.
Software specifically designed to manage and execute business rules, for use by those who understand the rules best.
Corticon enables you to make the **Right Decision** at the **Right Time** with **Business Agility**
IT App Develop. from the Business Point of View

- Business/market/industry requirements change
- Time to deployment
- Visibility/involvement/trust gap

Problems

- SMEs
- Policies
- Regulations

Mysterious Technical Stuff Happens
The Purpose of Corticon

Cost to Fix Errors vs. Time

Cost to Fix Errors

Requirements  Design  Coding  Unit Testing  Acceptance Testing  Production

Most Costly Errors

Development Cycle Phases

business  IT  business
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Rule Models Become Services

Rulesheets, built in Studio and assembled into Ruleflows...

...become Decision Services once deployed to Corticon Server
User Interface Layer

Applications With Externalized Business Logic

Rules Layer

Data Layer
Where Corticon is Used

Business Processes & Workflows

1. BPM
2. RPM
3. CRM
4. Telerik
5. Sitefinity
6. OpenEdge
7. Legacy

Corticon Server

Decision Services

question

answer

question

answer

question

answer

question

answer

User Interfaces

Portals

Web Apps

Mobile Apps

Cloud

Applications & Platforms
Progress Delivers on These Requirements

- **Immersive Experience**
  - Frontend Tools

- **Cognitive Cloud**
  - Backend Services

- **Connected Data**
  - Data Connectivity
    - Systems of Record
    - Big Data
    - Internet of Things
Progress Cognitive Apps Offering

Immersive Experience
- Progress® Kendo UI®

Cognitive Cloud
- Progress® OpenEdge®
- Progress® Data RPM®
- Progress® Kinvey
- Progress® Corticon®
- Progress® Sitefinity®

Connected Data
- Progress® DataDirect®
Choosing Between ABL and Corticon

- Is the business logic changed frequently?
- Is the business logic customized for different end users?
- Is the business logic relatively complex?
- Is greater transparency into the operation of the business logic required?
- Is correctness of the business logic critical?

The more “yes” answers, the better the fit for Corticon!
Model-Driven Rules Development

Traditional Approach
Often contains errors and performance issues

Specify → Design → Templates → Code → Test → Integrate → Deploy

Reduce development and change cycles by 90%

Corticon Approach

Specify → Design → Templates → Code → Test → Integrate → Deploy

Requires Technical Resource

Higher quality, higher performance, agility
When Does It Make Sense To Use Corticon?

- **Volatility**: Business rules governing a decision constantly change. Modularize, isolate.
- **Complexity**: Business rules governing a decision are complex. Validate integrity and functionality.
- **Volume**: Business rules governing a decision are high in volume. Organize, visualize.
- **Cost of Quality**: Consequences of bad decisions are high. Transparency, auditability.
- **Ownership**: Business rules owned by the people who understand them best. Ease of use.
Why Model-Driven Rules Development

Out-of-the-box ready for use by
- Business Analysts
- IT Professionals

Patented Excel-like modeling tool
- No programming
- Business friendly

Simple deployment

PROVEN WITH THE MOST SOPHISTICATED BUSINESS PROBLEMS

Vocabulary consists of your business objects/terms

Rules are constructed with drag-and-drop ease

Comprehensive, extensible library of operators (akin to Excel functions)

Rule Statements provide rule documentation and traceability
Guaranteed Rule Integrity

Built-in integrity checks ensure creation of accurate, complete & robust rules
Corticon Terminology and Rule Modeling Workflow

Corticon Studio

- Vocabulary
  - Domains
  - Entities
  - Attributes

- RuleTest

- RuleSheet
  - Conditions
  - Filters
  - Actions
  - Messages

- RuleFlow
  - Rulesheet 1
  - Rulesheet N

Corticon Server

- Decision Service
  - v1.0
- Decision Service
  - v2.0

Schema

Dashed line: optional step
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Ways Corticon can be used in an ISV application

“Internal Use”
Maintaining volatile common logic (using Corticon Studio)
• Lowers costs and speeds time-to-market
• Developers, business analysts (BAs)
• Complete flexibility for metadata, rule complexity, design patterns and deployment

Customizing end-user specific logic (using Corticon Studio)
• Faster, cheaper customizations
• May enable greater degree of customization
• Developers, BAs, implementation consultants
• Complete flexibility for metadata, rule complexity, design patterns
• May influence deployment (more on this later!)

End-user use
Self-service custom rule management (using Corticon Studio)
• Reduces burden on ISV resources
• Requires trained end-user developers / BAs
• Typically constrained to certain rules and ISV-defined meta-data
• Lifecycle and deployment governance can be challenging, constrains viable use cases

Self-service mgt of constrained custom rules (using custom web/mobile/desktop UI)
• Enables end-user independence
• ‘Rules’ managed via web interface
• Non-technical users make the changes
• Only applies to well-constrained scenarios
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Deployment options for ‘multi-tenant’ Customization Rules

**Corticon Server**
- Shared Corticon Server & server configuration
- Single Decision Service (DS)
- Simplest app integration
- RuleFlow conditionally branches by tenantID
- Tenant-specific RuleSheets
- TenantID in request
- Low tenant independence

**Corticon Server**
- Shared Corticon Server & server configuration
- Decision service per tenant
- App invokes tenant’s DS
- Still reuse common RuleSheets
- No TenantID in request
- Medium tenant independence

**Corticon Servers**
- Corticon Server & server configuration per tenant
- Decision service per tenant but with common name
- App invokes tenant’s Server OR
- Proxy routes to tenant’s Server
- No TenantID in request (unless for Proxy routing)
- Tenants are fully independent
The Value of Business Processes and Business Rules

Operational Efficiency

• Faster business processes - reduced communication & co-ordination overhead
• Better resource utilization – allocate/escalate tasks & route processes optimally
• Improved reliability, faster response times and reduced costs

Enhanced Visibility

• Real-time visibility into the current state of business operations
• Greater transparency into automated processes and business decisions

Agility & Flexibility

• Greater adaptability to evolving business strategies and tactics
• Faster and simpler customization of the processes & rules that drive the business
BPM and BRMS in OpenEdge Reference Architecture

ANY PLATFORM, ANY DEVICE, ANY CLOUD

Tools
- Developer Studio
- Community Frameworks

Security

Service Interfaces

Process and Policy
- Business Processes
- Business Rules

Application
- Adv. Business Language
- Integration
- Application Server

Data
- RDBMS
- Replication
- DataServers

User Interface
- Mobile
- Desktop
- Web

Open Client Access

Management
What is Business Process Management?
Business Process Management Phases

**Business Process Analysis**
- Understand all processes of the business
- Identify duplications, inconsistencies and gaps
- Simulate the potential of Process Improvement and Automation

**Business Process Documentation**
- Gain a common definition of your business's processes
- Get consistency and insight
- Help train new employees
- Provide procedural guidance in complex or uncommon scenarios

**Business Process Execution**
- Elevate employee productivity
- Improve process quality
- Automate tasks
- Better operational visibility
- Capture data for process analysis and optimization

**Business Process Optimization**
- Simulate process changes
- Adjust process parameters
- Adjust and extend the process definition
- Validate changes yield expected improvements
Process Designer
Process Simulation with Recommendations

<table>
<thead>
<tr>
<th>Source</th>
<th>Problem</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BrenntagSimpleProcess -&gt; validateUpdateOrder</td>
<td>318 instances of this workshop have to wait for its performer (Total Waiting: 04:20:48; SM = 1260)</td>
<td>Increase resources used by workshop.</td>
</tr>
<tr>
<td>BrenntagSimpleProcess -&gt; manualApprove -&gt; FinanceApproval</td>
<td>198 instances of this workshop have to wait for its performer (Total Waiting: 04:05:08; SM = 2580)</td>
<td>Increase resources used by workshop.</td>
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<td>Increase resources used by workshop.</td>
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<td>198 instances of this workshop have to wait for its performer (Total Waiting: 04:05:08; SM = 2580)</td>
<td>Increase resources used by workshop.</td>
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<tr>
<td>BrenntagSimpleProcess -&gt; manualApprove -&gt; ExportApproval</td>
<td>198 instances of this workshop have to wait for its performer (Total Waiting: 04:05:08; SM = 2580)</td>
<td>Increase resources used by workshop.</td>
</tr>
<tr>
<td>BrenntagSimpleProcess -&gt; submitToLogistics</td>
<td>0 instances of this workshop have to wait for its performer (Total Waiting: 00:00:00; SM = 0)</td>
<td>Increase resources used by workshop.</td>
</tr>
<tr>
<td>BrenntagSimpleProcess -&gt; validateUpdateOrder</td>
<td>1 instances of this workshop are critical to their process instances (Average Critical Instance Time: 00:00:00; SM = 150)</td>
<td>Increase resources used by workshop.</td>
</tr>
</tbody>
</table>

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Real-time Visibility
Process Dashboards
Progress Corticon: Key Use Cases

**Commerce (Sales & Marketing)**
- Apply
- Price/Quote
- Recommend
- Police

**Customer Servicing**
- Intake
- Validate
- Adjudicate
- Recover
- Fraud

**Manufacturing & Supply Chain**
- Production Planning
- Resource Allocation
- Logistics

**Enterprise Rules Management**
- Decision Analytics as a Business & IT Discipline
Progress Corticon BRMS Recognized Market “Leader”

Corticon has **breakthrough** tools for business analysts.

Corticon positioned as **Leading Innovator** in Gartner Magic Quadrant

Corticon has developed **breakthrough** technology in the BRMS market.
Demo: Agile Approvals