



**New Wisdom**  
SOFTWARE, LLC

RULEGUIDE™  
Business Rules Management

## ***RuleGuide Decision and Rule Management***

OMG DMN Information Day  
March 23, 2011

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*New Wisdom Software*

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# Agenda



- Typical complexity with BPM-BRM
- RuleGuide Decision and Rule Management
  - Practicing BPM, BDM, and BRM
  - *Our Results! From 711 rules to 5 rules*

# Typical Complexity with BPM-BRM



BPM and BRM working together!



# Typical complexity with BPM-BRM

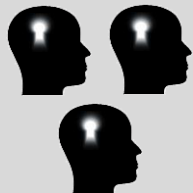
## Rule Sources

Legacy System Code



Policy Manuals,  
Internal Documents,

Legislation &  
Regulations



Subject Matter Experts

## Rule Capture, Management & Analysis

Rule or Decision Methodology



Rule  
Repository

Gateway to Production

## Business Rule Execution

Business Rule  
Engine (BRE)

Automated System  
(non-BRE)

Manual Business  
Process

Results / Statistics / Metrics



# Typical complexity with BPM-BRM

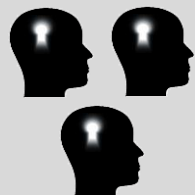
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Term  
Repository



Rule  
Groupings



Relationship  
Mappings

Complicated

Gateway to Production

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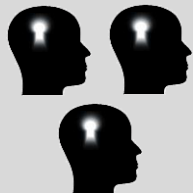
# Typical complexity with BPM-BRM

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## Rule Capture, Management & Analysis

Rule or Decision Methodology



Complicated

Gateway to Production

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# Along came a Decision



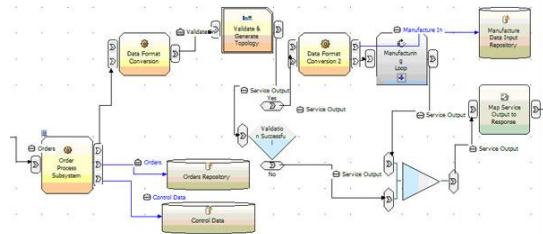
BPM

Decision

BRM

We're going to get it right this time!

# RuleGuide Decision and Rule Management

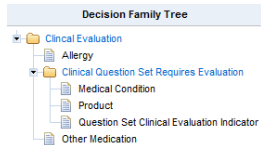


Process Models

## Decisions



Tables



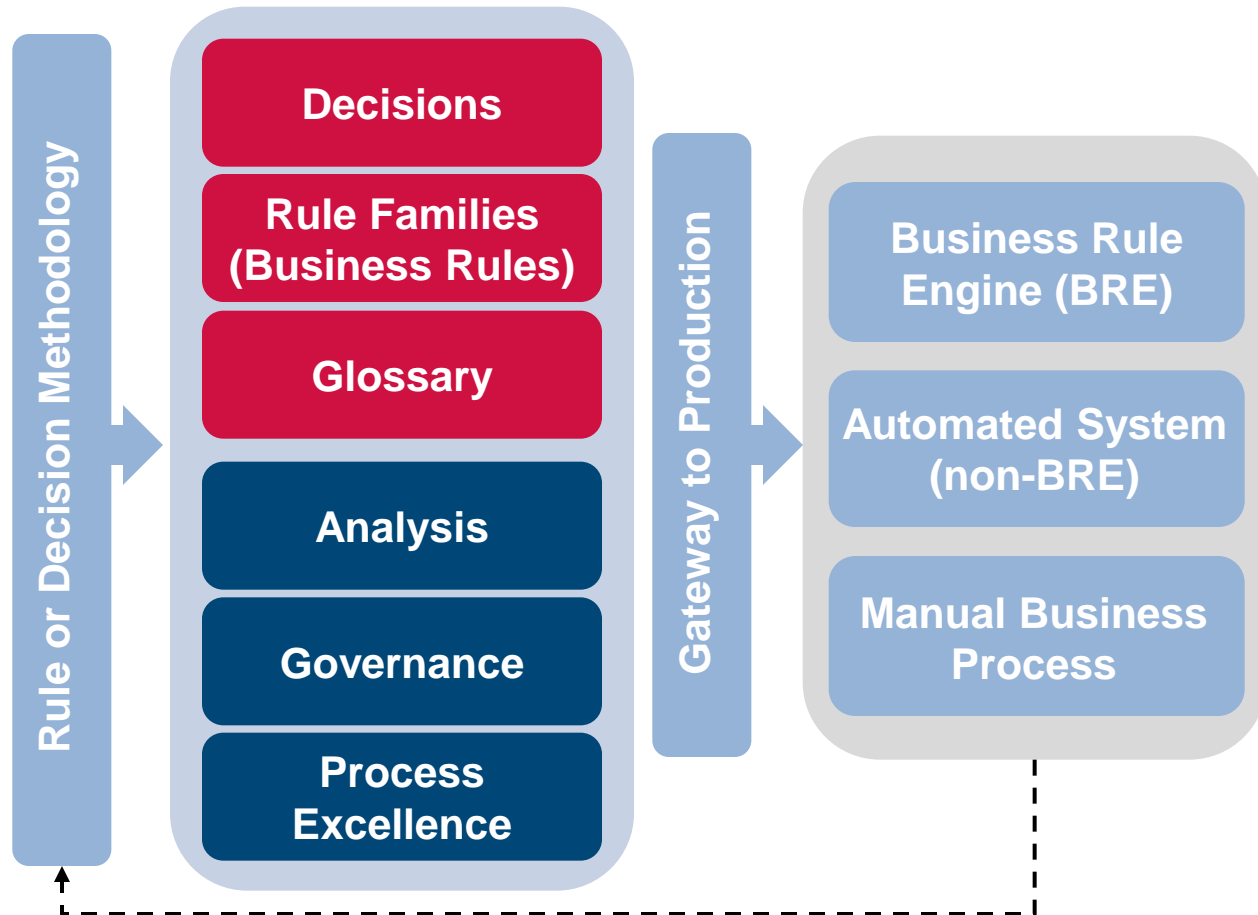
Models

## Family Tree



Rule Sources

## RULEGUIDE™ Business Rules Management



Results / Statistics / Metrics

**Separate business logic from business process.  
Structure logic as decisions and rule families.**



## **The BP-D-RM Harmony**



# RuleGuide Decision Approach

- ▣ Business Logic: Three Levels of Separation
  - ▣ Decisions – business context defines a framework for business logic
  - ▣ Rule Families – business logic presented in reusable rule sets
  - ▣ Values – variables maintained as an extension of the Glossary

# Tee up a Decision Focused Approach



A progressive approach using decisions, rules, and value tables



## Is a Clinical Evaluation Required for this Rx?

When a patient refills a Rx, it is the responsibility of the Pharmacy to ask certain questions prior dispensing the Rx.

Under certain conditions, a clinical evaluation is required by a pharmacist or qualified clinical staff.



## Description

This decision determines if a clinical evaluation is required when a new allergy is recorded, or another medication is recorded, or one of the questions in the question set are answered yes for a product or a clinical diagnosis.



# Is a Clinical Evaluation Required?

The Business Analyst has external inputs of data to determine if a clinical evaluation is required for this Rx refill.

These inputs are;

1. New allergy is recorded
2. New medical condition is recorded
3. A table which has three relevant columns, including 236 questions broken into questions sets for a clinical diagnosis and a product. There are about 40 products

Typically these questions are asked on the phone by a Rx Tech to clarify an Rx refill.



# Is a Clinical Evaluation Required?

At first glance, the rule set could have many rules to satisfy the conditions. Input items 1 and 2 could be satisfied by 3 rules in the decision rule family.

Item 3 would require rules for the 236 questions times 3 column combinations for 708 rules (for each one of the questions, we would have one per diagnosis, one per product, and one rule for the combination of diagnosis and product).

That's 711 potential rules.

# Is a Clinical Evaluation Required?



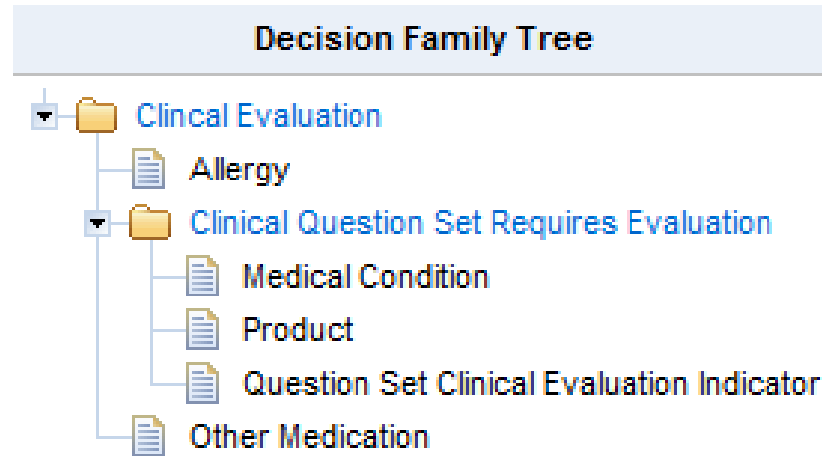
After some discussion we realized there were 472 combinations of conditions in the question set table (we eliminated the combination of diagnosis and product as an unneeded condition set).

“What is the best way to plug in 472 rules into RuleGuide?”  
She said she would do it on the weekend.

In under 3 hours, we walk through the questions, reviewed the variables, sketched out the decision as a model, and captured the decision, rule families, glossary and rule statements using RuleGuide.

Following is the final result captured in rule families.

# Determine Clinical Evaluation



Prefix	Decision Rule Family	Version	Decision Family Tree	Description	Supporting Documents	Decision Steward	Organization
Determine	Clinical Evaluation	WIP	<ul style="list-style-type: none"> <li>Clinical Evaluation               <ul style="list-style-type: none"> <li>Allergy</li> <li>Clinical Question Set Requires Evaluation                   <ul style="list-style-type: none"> <li>Medical Condition</li> <li>Product</li> <li>Question Set Clinical Evaluation Indicator</li> </ul> </li> <li>Other Medication</li> </ul> </li> </ul>	Determine based on certain criteria if an evaluation by the clinician is required			ENTERPRISE

Version+  Decision Family Tree  Description  Supporting Documents  Decision Steward  Rule Analyst  Stakeholders  Key Initiative  Effective Date  Termination Date  Release Date  
 Saved By  Modified Date  Organization

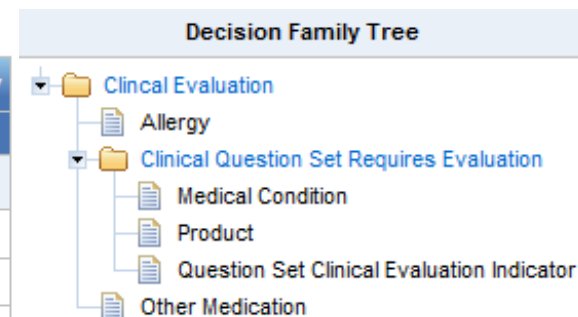
Search Criteria: Decision Rule Family[Clinical Evaluation]

# Determine Clinical Evaluation



Add Search Refresh Condition Order Clinical Evaluation Rule Family									
Condition(s)								Conclusion	
Pattern	Other Medication	Allergy	Clinical Question Set Requires Evaluation				Clinical Evaluation		
2		is Entered					is	Required	
3			is		yes		is	Required	
4	is Entered						is	Required	

Version+  Wrap Text  Rule Name  Row ID  Version  Message



Search Criteria:Rule Family[Clinical Evaluation]

Add Search Refresh Condition Order Clinical Question Set Requires Evaluation Rule Family									
Condition(s)								Conclusion	
Pattern	Medical Condition	Question Set Clinical Evaluation Indicator	Product	Clinical Question Set Requires Evaluation				Clinical Question Set Requires Evaluation	
3		is	yes	is	product exist in table			is	yes
4	is	Exist in table	is	yes				is	yes

Version+  Wrap Text  Rule Name  Row ID  Version  Message

Search Criteria:Rule Family[Clinical Question Set Requires Evaluation]

# RuleGuide Approach in Practice



## Sample Clinical Question Set

Medical Condition	Product	Questions	Clinical Evaluation Indicator
mc1		Q set1	Yes
mc2	p1	Q set2	No
	p2	Q set3	No

# Is a Clinical Evaluation Required?



## Summary

- 711 down to 5 rules
- The end result was realized by making the rules generic and yet descriptive enough for the analyst to deliver a clear and detailed requirement to the implementation team.
- The variables are maintained in a Value Table. If a value changes, the rules do not have to be changed.

# RuleGuide Approach



**19<sup>th</sup> Hole - Optimized Business Logic  
Easily managed with three levels of separation**



**Thank you for listening!**



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