Integrating DMN FEEL to BPMN and CMMN

Trisotech brings Strategies, Design and Technology together to provide business guidance and insight in the digital enterprise age.

Where strategies come to life!

Digital Enterprise Suite
Seeking more granular control
Extract elements that have different lifecycles

“Giving back control to business”
The Holy Grail of operations

Your operations need to be malleable to become anything you want or more importantly anything your customers want.

Simpler
Agile
Smarter
Operations

Where strategies come to life!
Desired Characteristics of your Operational Model

❖ Agile
  • Adaptive
  • Leveraging Knowledge Workers

❖ Smart/Intelligent
  • Knowledge focused
  • Leveraging Business Goals, Business Rules

❖ Contextual
  • Information focused
  • Leveraging Business Events
Specifying an Operational Model

Where strategies come to life!

Processes
Taking steps to achieve a desired outcome

Cases
Managing a context to achieve a desired outcome

Decision
Deciding while achieving a desired outcome

Deciding is an activity present in both Processes and Cases
The Triple Crown of Process Improvement

Mature business standards such as BPMN, CMMN and DMN exist that can help make your operations more efficient and effective.

BPMN, CMMN and DMN are true enablers of Digital Transformation.
Value Proposition of the Triple Crown

❖ Reach faster agreement on the “as is” and “to be” operations through unambiguous models
❖ Encourage stakeholder participation through graphically expressive notations
❖ Facilitate the analysis and improvement of operations
❖ Create a library of processes, case definitions and business decisions to specify operations or onboard new employees, partners, or clients
Why use BPMN, CMMN or DMN

❖ Unambiguous format for modeling processes, cases and decisions
❖ Can be interchanged between different vendors’ products
❖ Provide common and readily-transferable skills that are learned by business and IT professionals
What are BPMN, CMMN or DMN

❖ Languages for describing operations
❖ Means to Ends
❖ Tools not Solutions
<table>
<thead>
<tr>
<th>When to use BPMN, CMMN or DMN</th>
<th>Variable</th>
<th>Unpredictable</th>
<th>Emergent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Every work effort instance looks slightly different</td>
<td>The exact course of action is unknown and highly situation specific</td>
<td>The exact course of action only emerges during process execution when more information becomes available</td>
</tr>
</tbody>
</table>
Business Decision Management

Whether your operations are variable, unpredictable or emergent, central to its success is good decision making.

“Making good decisions is a crucial skill at every level.”
– Dr. Peter F. Drucker

• Strategic Decisions
• Tactical Decisions
• Operational Decisions
Informed decision-making comes from a long tradition of guessing and then blaming others for inadequate results.
Scott Adams
DMN provides a modeling notation to capture business decision requirements and decision logic. It increases an organization’s agility and adaptability by capturing the business decisions independently from where they are used.

**Decision Model and Notation**

DMN increases an organization’s agility and adaptability by defining both the requirements of the business decision and the structured decision logic.

DMN 1.1 is the current version.

Trisotech is a global leader in digital enterprise solutions, offering innovative and easy-to-use software tools that allow customers to discover, model, analyze and find insights into their digital enterprise.
Trisotech Road Map to the Harmonization of the Triple Crown

- DMN Models for specifying BPMN and CMMN decisions
- FEEL as a formal expression language in BPMN and CMMN
- Item Definition and Typing ala DMN in CMMN and BPMN
- Context Scoping

Where strategies come to life!
Trisotech Road Map to the Harmonization and Integration of the Triple Crown

DMN Models for specifying BPMN and CMMN decisions

Where strategies come to life!
DMN is by design a complement to BPMN and CMMN

Trisotech is a global leader in digital enterprise solutions, offering innovative and easy-to-use software tools that allow customers to discover, model, analyze and find insights into their digital enterprise.
Implemented as a BusinessRuleTask
No support or mention of DMN
BusinessRuleTask concretization is outside the BPMN spec
Input/Outputs can be specified by the normal Task mechanism
DMN Models for specifying BPMN and CMMN decisions

- DecisionTask references a Decision through an decisionRef attribute (QName) or decisionRefExpression
- The Decision element is a reusable element that defines the name, input/output and implementationType
- The attribute implementationType can be set to refer a DMN decision (http://www.omg.org/spec/CMMN/DecisionType/DMN1)
- The attribute externalRef points to the decision being reused (The decision import mechanism for externalRef is not clearly defined in the CMMN spec)

Trisotech recommends using the CMMN structure moving forward.
Trisotech Road Map to the Harmonization of the Triple Crown

FEEL as a formal expression language in BPMN and CMMN

Where strategies come to life!
Expression Language

BPMN and CMMN punted the definition of an expression language.
DMN introduces Friendly Enough Expression Language

Where strategies come to life!
FEEL for BPMN Expressions

Where strategies come to life!
FEEL for BPMN Expressions

- AdHocSubProcess – completionCondition
- Assignment – from (Used in Data Associations)
- Assignment – to (Used in Data Associations)
- ComplexBehaviorDefinition – condition (Used inside MultiInstanceLoopCharacteristics)
- ComplexGateway – activationCondition
- ConditionalEventDefinition – condition
- CorrelationPropertyBinding – dataPath (Used inside correlationSubscription of Process)
- CorrelationPropertyRetrievalExpression — messagePath (Used in CorrelationProperty)
- DataAssociation – transformation
- MultiInstanceLoopCharacteristics – loopCardinality
- MultiInstanceLoopCharacteristics – completionCondition
- SequenceFlow – conditionExpression
- StandardLoopCharacteristics – loopCondition
- TimerEventDefinition – timeDate
- TimerEventDefinition – timeDuration
- TimerEventDefinition – timeCycle
FEEL for CMMN Expressions

Where strategies come to life!
FEEL for CMMN Expressions

- RepetitionRule – condition
- RequiredRule – condition
- ManualActivationRule – condition
- CaseParameter – bindingRefinement
- ProcessTask – processRefExpression
- CaseTask – caseRefExpression
- DecisionTask – decisionRefExpression
- ParameterMapping – transformation
- TimerEventListener – timerExpression
- IfPart – condition
- ApplicabilityRule – condition

Where strategies come to life!
Trisotech FEEL Editor

- Code Completion

Where strategies come to life!
Trisotech FEEL Editor

❖ Code Coloring
Trisotech FEEL Editor

❖ Content Assist
(Strings, Dates, etc)
Item Definition and Typing ala DMN in CMMN and BPMN
Item Definition and Typing ala DMN in CMMN and BPMN
Trisotech
Road Map to the Harmonization of the Triple Crown

Where strategies come to life!
Context Scoping

Elements defined at one level are in scope for all child levels

<table>
<thead>
<tr>
<th>Model (Definition)</th>
<th>Process</th>
<th>Sub-process</th>
<th>Task, Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Resource</td>
<td>• Data Object</td>
<td>• Data Object</td>
<td>• Property</td>
</tr>
<tr>
<td>• Data Store</td>
<td>• Data Input</td>
<td>• Property</td>
<td></td>
</tr>
<tr>
<td>• Data Output</td>
<td>• Property</td>
<td></td>
<td>• Property</td>
</tr>
<tr>
<td>• Property</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model (Definition)</th>
<th>Case</th>
<th>Stage</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Role</td>
<td>• Case File Item</td>
<td>• Input</td>
<td>• Output</td>
</tr>
<tr>
<td>• Input</td>
<td>• Output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Output</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Exploring BPMN, CMMN and DMN Unification

Separation of concerns
• Each notation captures the diversity of each points of views

Alignment vs integration
• These views do need to align into a coherent whole (operating model)

Expressiveness vs simplicity
• A unique notation would potentially lead to notational overload

Semantic opacity
• Concepts from certain view(s) cannot be expressed in other view(s)

Execution Semantic
• Contrary to popular beliefs CMMN would absorb BPMN

Enabling a best of breed market
• Practitioners and tool vendors can specialize

Trisotech recommends harmonization of BPMN, CMMN and DMN rather than unification or integration
Integrating DMN FEEL to BPMN and CMMN

Denis Gagné
dgagne@Trisotech.com

Questions?
Come do a trial of the future

www.Trisotech.com

Where strategies come to life!