

Welcome to Parsing Regulations into DMN

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Business Decision: The resolution of a question of interest to the business through the application of business rules logic to input data.

Source: The Microguide to Process and Decision Modeling in BPMN/DMN



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The essence of decision modeling is:

- 1) Breaking down complex situations into manageable elements.
- 2) Matching the elements with data, operators and functions.
- 3) Structuring data where appropriate.
- 4) Developing strategies for optimal choices

Regulatory Compliance



- Goals

- Risk Management

- Disclosure (Reporting)

- Consumer Protection

- Special Event (Fraud) Detection

- It's a Big Issue for Major Financial Institutions

- Annual Spend \$800m-4bn (FT)

- 20,000-30,000 Employees; about 10% Staff

- Consumes 13% of Revenue (US Securities)

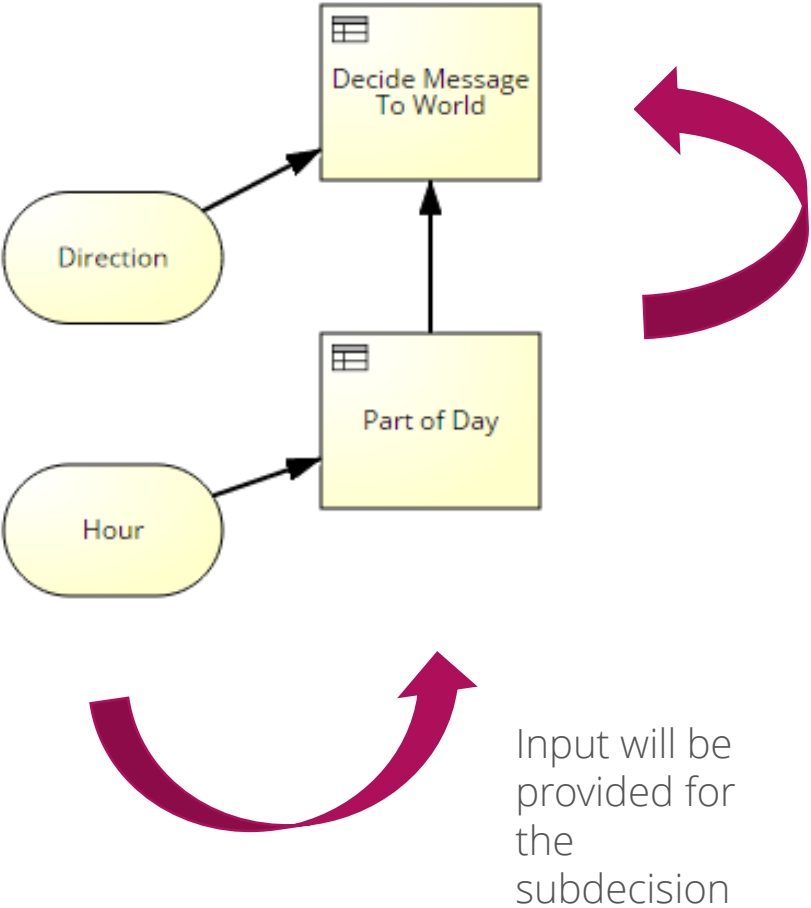
The Big Hurdles of Regulatory Compliance



- Time Pressure
- Size and Internal Consistency
- Safe Agility – Avoiding The ‘IT Trap’
- Accountability and Auditability
- Risk: Financial Organisations Must Get It Right



The Flow/Structure of the Decision



U	Inputs		Outputs	
	Direction	Part of Day ⓘ	Message to World	
	{Coming,Going}	{Morning,Day,Night}	Text	
1	= Coming	= Morning	"Good Morning and Hello ...	
2	= Coming	= Day	"Good Day and Hello Worl...	
3	= Coming	= Night	"Good Night and Hello W...	
4	= Going	= Morning	"Good Morning and Good...	
5	= Going	= Day	"Good Day and Goodbye ...	
6	= Going	= Night	"Good Night and Goodby...	



How do we parse this into a Decision Table?

Dodd-Frank Part 43, Real Time Reporting, Decide if a swap is reportable

Part 1 Entity Rules

- **Part 1.a:** All swaps are reportable with the exception of internal swaps between affiliates that are wholly-owned subsidiaries of the same parent entity with the exception of any "covered transaction".
- **Part 1.b:** A covered transaction includes a loan to an affiliate, a guarantee for the benefit of an affiliate or similar bona fide commercial transactions with an affiliate.



Continued

Part 43, Decide if a swap is reportable

Part 2:

- **Part 2.a:** All single names are out of scope except securities issued by the US Treasury, FANNIE MAE, FEDDIE MAC, Tennessee Valley Authority or other US Agencies.
- **Part 2.b:** All index and broad-based baskets are in scope (including High Delta Options and Quanto Option) except narrow based index or basket.
- **Part 2.c:** Instruments: Credit Default Swap, Total Return Swap, Option
- **Part 2.d:** Exceptions:
 - Note Issuance
 - Bank Loan participation

When to split up Decisions into Sub Decisions?

- Criteria-



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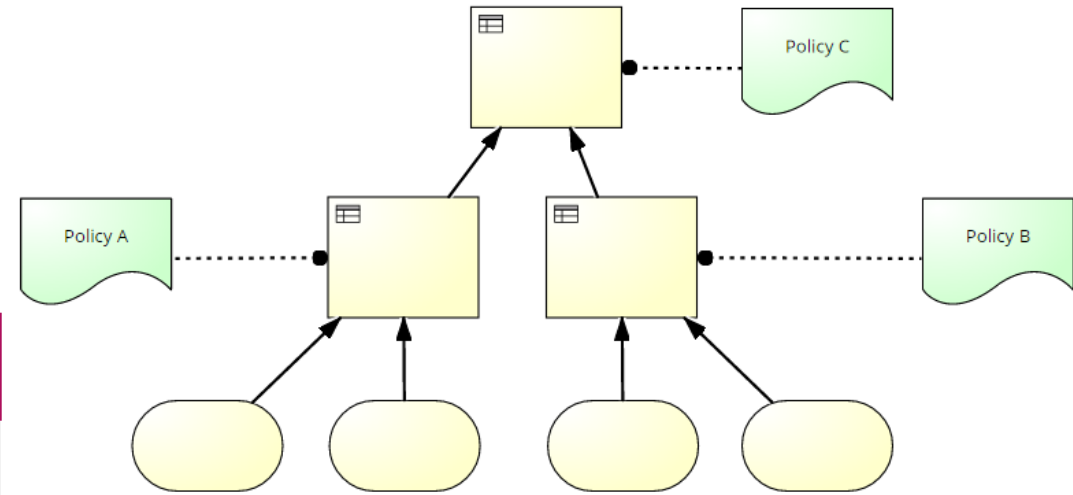
Authority

- Separate depiction of influenced decision parts
- Influenced by different Knowledge sources

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Entity, Topic, Evnt

- Categorizations that focus and reduce rules
- Instances that are narrowed by a domain of rules (events, types of groups)





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A business rule is a statement of the action to be taken when a specific set of conditions are true.

Source: The Microguide to Process and Decision Modeling in BPMN/DMN



Business Rules Compare, Categorize, Compute and Control



Business Processes comply
with the control



Business Rules

In General Business Rules group together compliance areas sections

- **Part 1.a:** All swaps are reportable with the exception of internal swaps between affiliates that are wholly-owned subsidiaries of the same parent entity with the exception of any "covered transaction".
- **Part 1.b:** A covered transaction includes a loan to an affiliate, a guarantee for the benefit of an affiliate or similar bona fide commercial transactions with an affiliate



F	Inputs			Outputs	Annotations
	Client Facing?	Wholly Owned Entity/Bank	Covered Transaction	Reportable-Entity	Compliance Section
	Boolean	Boolean	{Loan To Affiliate, Guarantee , Comm...	Boolean	Regulation
1	= true	-	-	true	Part 1.a
2	= false	= false	-	true	Part 1.a
3	-	-	= Other	false	Part 1.b
4	-	-	≠ Other	true	Part 1.b
5	-	-	-	true	Part 1.b
+	Add new row				



Parsing Requirements for Business Rules

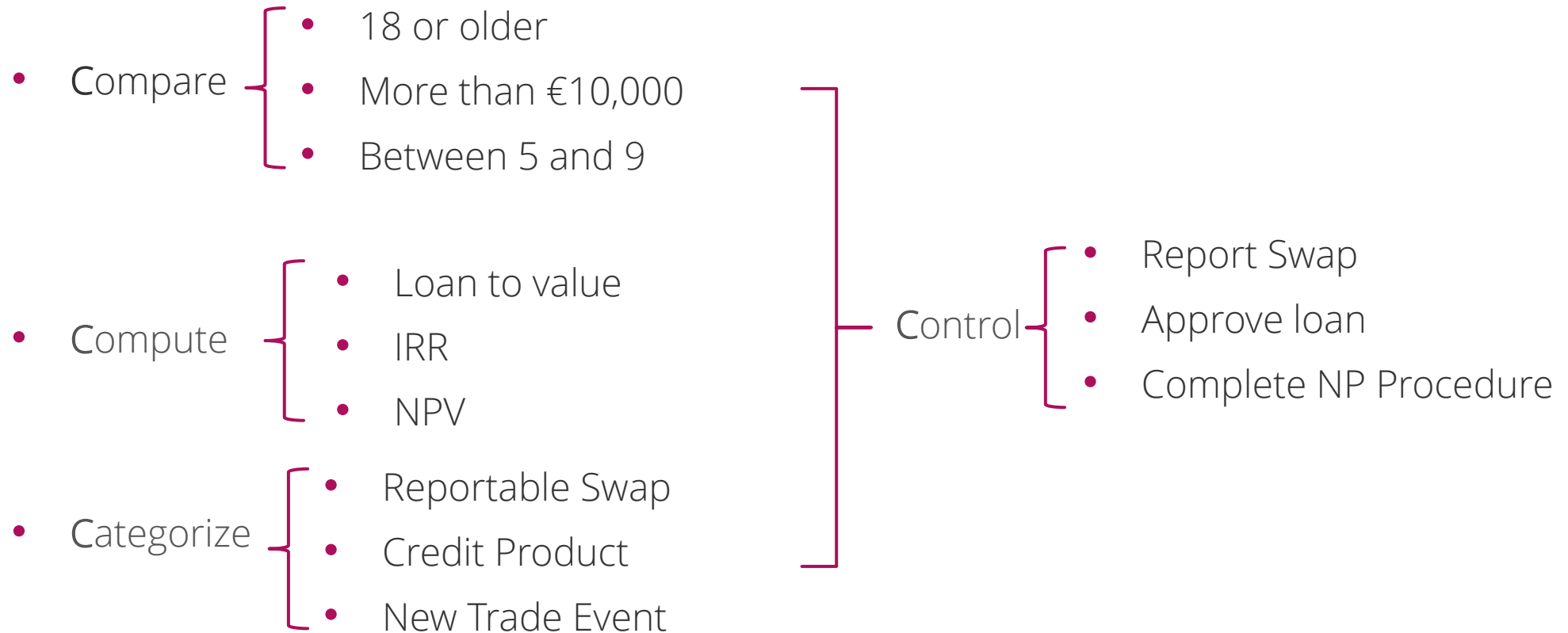
It is possible to look at a written requirement and derive the business rules.

- One way is the to look for the 4 C's, a business rule Compares, Computes, and Categorizes in order to Control something
- The first 3 C's are characteristics of the Inputs
- The last, Control is the result of the rule evaluation



From Sentences to Business Rules

Example: Customers must be 18 or older to qualify for a policy.





- What type of constraint is expressed
Is computed, categorized or compared?
- Identify the data
Do you need additional data not explicitly expressed?
- Select the input data types.
Number, Date, Enumeration, Text
- Establish the enumerations.
Does the sentence list a set of types?
- Decide the output, yes/no, categories, selections

Parsing Requirements for Business Rules



Locate the rules and determine what the decisions are

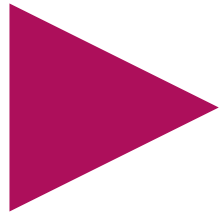
- **categorizations**
look for the adjective and study what input attributes define the category. A *late* invoice, a *delayed* payment, etc.
- **comparison**
look for prepositions or adjectives that connote comparisons, less than, greater than,
- **computations**
look for obvious formulas or technical jargon, NPV, Loan to Value, Greater than X, Dates. etc.
- **Control**
happens at the end of the business rule the 'right hand side', what is the objective

Parsing Requirements for Business Rules

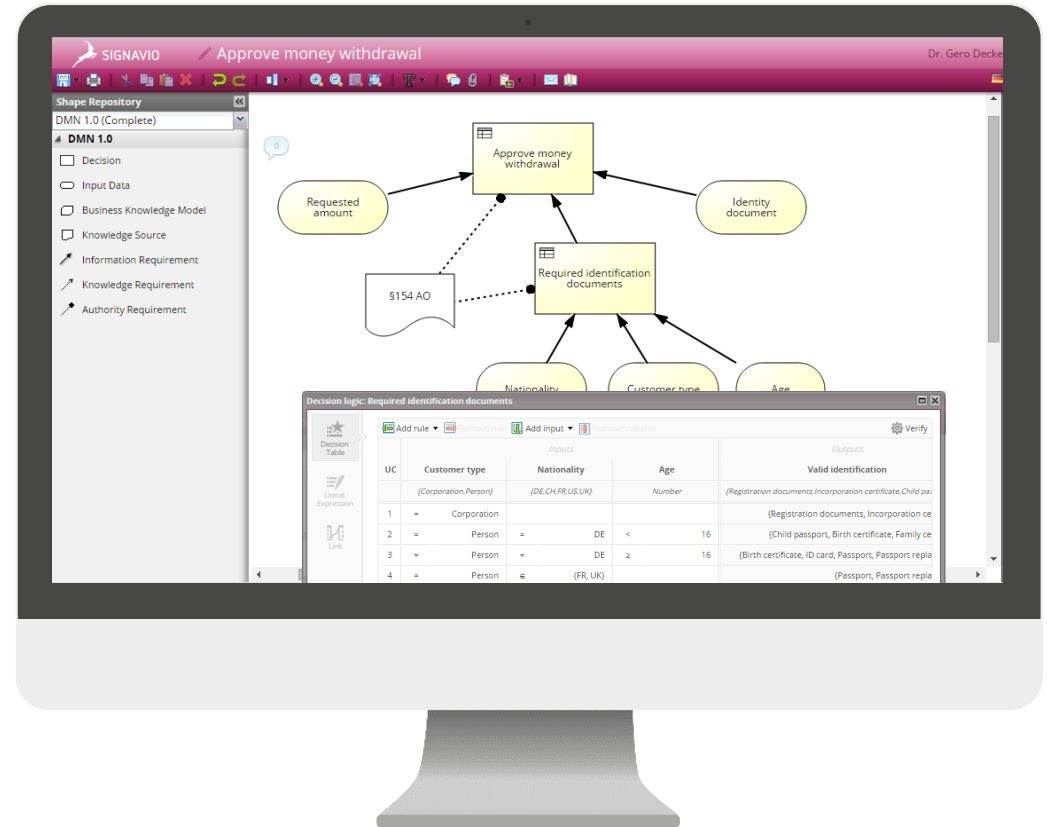


- Solve the problem
 - Identify the data
 - Select the data types.
 - Establish the enumerations.
 - Decide the output

Signavio Decision Manager – Demonstration



Demo



Thank you!



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