



Balancing Automated and Human Decisioning

One of the most prominent challenges of DMN

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- TRIPOD FOR OPERATIONAL EXCELLENCE -

Decision Modeling (DMN)

The main purpose is not AUTOMATION.

- Shared Understanding & Transparency
- Consensus on Decision-Making Policies
- Boundaries of Automated and Human Decisioning
- Boundaries of Deterministic and Stochastic Decisioning

- A Decision Model should be the translation of an organisation's policies for end-to-end operational decision-making,
- ... and should integrate all forms of human and automated decision-taking into one consistently orchestrated structure.

Decision Modeling (DMN)

DMN facilitates automation.

- The combined power of:
 - Decision Requirements Diagram (DRD)
 - Decision Tables
 - Contexts
 - FEEL
 - Decision Services
 - Business Knowledge Models (BKM)
 - ... empowers automation.
 - **The Decision Model = ITs automation.**

Decision Modeling (DMN) – Use Case

Car Claim Handling



VEHICLE A		VEHICLE B	
8. Insured/policyholder (see insurance certificate) NAME: LAMBERT First name: LOUIS Address: KINGSSTREET 15 Postal code: 7431 Country: BELGIUM Tel. or E-mail: 0711/112233		8. Insured/policyholder (see insurance certificate) NAME: BEULIN First name: RENÉ Address: QUEVOI STRAAT 69 Postal code: 9111 Country: BELGIUM Tel. or E-mail: 0612/245678	
7. Vehicle Make, type: TOYOTA RAV4 Registration N°: X12 332 Country of registration: BELGIUM		7. Vehicle Make, type: BMW 5 Registration N°: ABC 211 Country of registration: BELGIUM	
9. Insurance company (see insurance certificate) NAME: BELEN'S VERZEKERING Policy N°: X1212345 Green Card N°: Insurance Certificate or Green Card valid from: to: Agency (or bureau, or broker): NAME: Address: Country: Tel. or E-mail:		9. Insurance company (see insurance certificate) NAME: AG INSURANCE Policy N°: AG 191457 Green Card N°: Insurance Certificate or Green Card valid from: to: Agency (or bureau, or broker): NAME: Address: Country: Tel. or E-mail:	
10. Driver (see driving license) NAME: LAMBERT LOUIS First name: LOUIS Date of birth: 31/12/1976 Address: 365 ABOLUE Country: Tel. or E-mail: Driving license n°: KN 3125 Category (A, B, ...): A Driving license valid until:		10. Driver (see driving license) NAME: BEULIN RENÉ First name: RENÉ Date of birth: SEE ABOVE Address: Country: Tel. or E-mail: Driving license n°: X12 12345 Category (A, B, ...): A Driving license valid until:	
11. Indicate the point of initial impact to vehicle A by an arrow →		11. Indicate the point of initial impact to vehicle B by an arrow →	
12. My remarks:		12. My remarks:	
13. Signatures of the drivers		13. Signatures of the drivers	

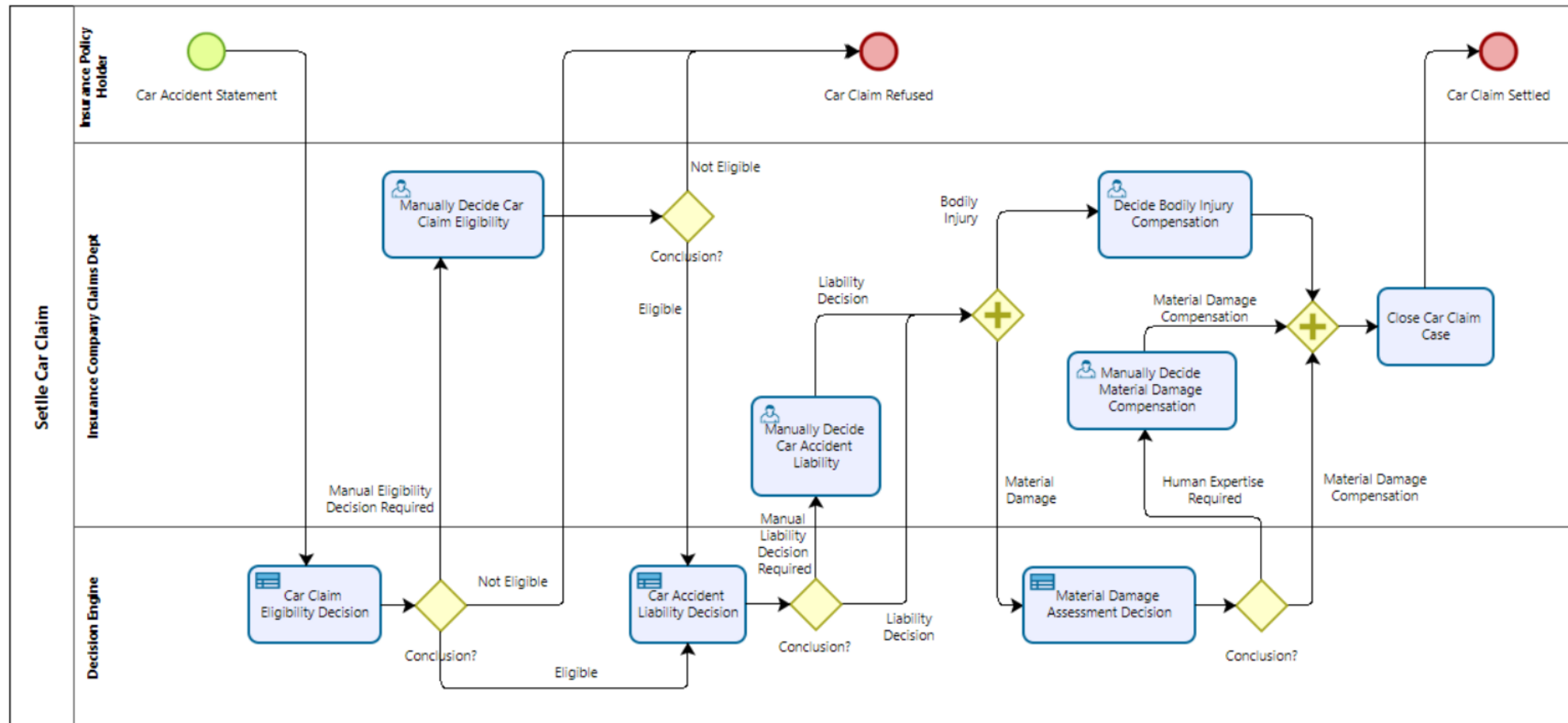
Decision Modeling (DMN) – Use Case

Car Claim Handling – What's at stake?

- Eligibility
 - Insurance Contract? Contract Status? Insured Car? Insured Driver?
- Liability
 - Customer Liability / Third Party Liability / Shared Liability.
- Material Damage Compensation
- Bodily Injury Damage Compensation
- Third Party Damage Recovery

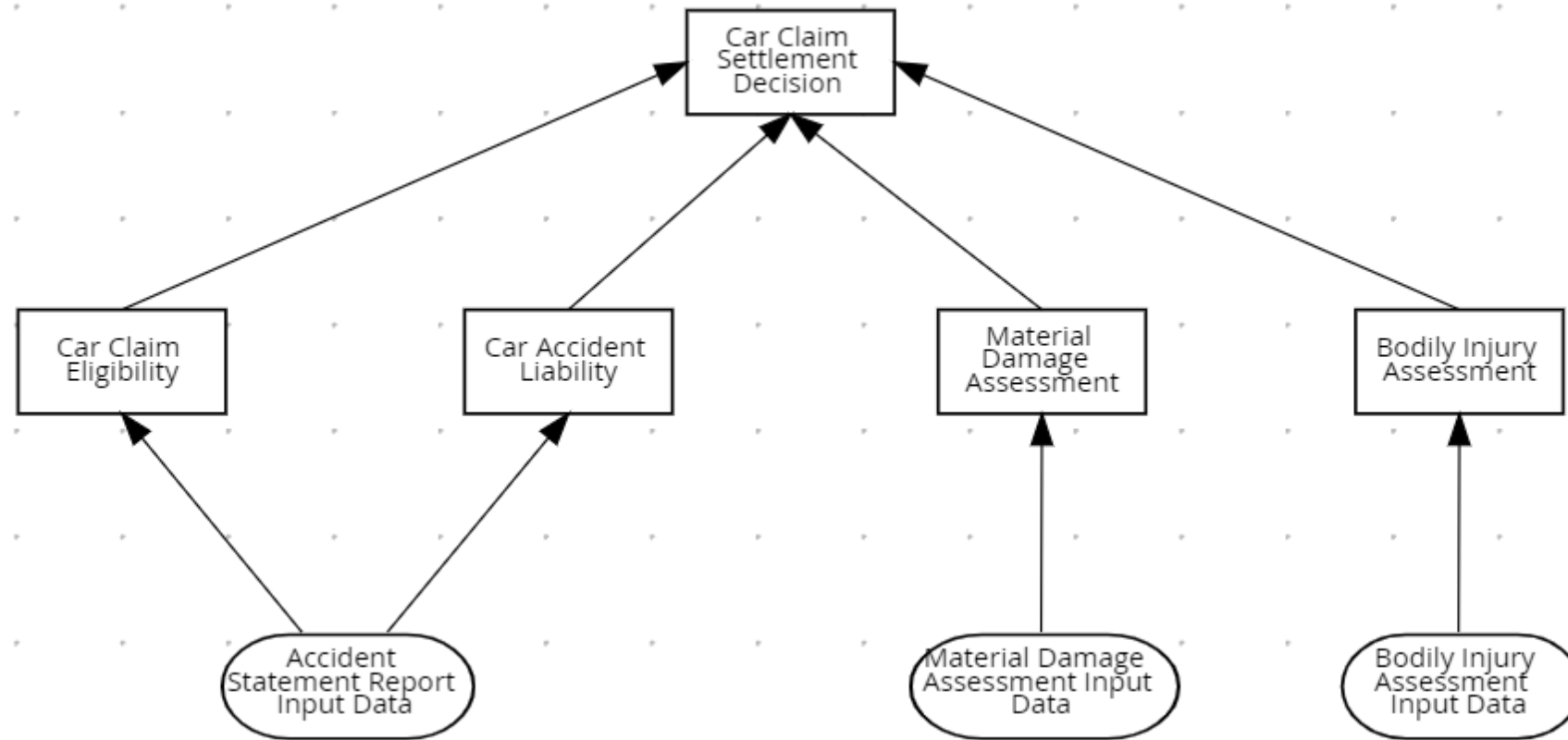
Decision Modeling (DMN) – Use Case

Car Claim Settlement – Traditional Sequential Handling



Decision Modeling (DMN) – Use Case

Car Claim Settlement – Decision Requirements



Decision Modeling (DMN) – Use Case

Car Claim Handling – Sources for Settlement Decision

- Eligibility
 - Accident Statement / Insurance Details
- Liability
 - Accident Statement / Circumstances
- Material Damage Compensation
 - Survey Reports or Damage Photos
- Bodily Injury Damage Compensation
 - Always Human Expertise Required

12. CIRCUMSTANCES

Put a cross in each of the relevant boxes to help explain the drawing
** delete where appropriate*

A		B
<input type="checkbox"/>	1	<input type="checkbox"/>
<input type="checkbox"/>	2	<input type="checkbox"/>
<input type="checkbox"/>	3	<input type="checkbox"/>
<input type="checkbox"/>	4	<input type="checkbox"/>
<input type="checkbox"/>	5	<input type="checkbox"/>
<input checked="" type="checkbox"/>	6	<input type="checkbox"/>
<input type="checkbox"/>	7	<input type="checkbox"/>
<input type="checkbox"/>	8	<input type="checkbox"/>
<input type="checkbox"/>	9	<input type="checkbox"/>
<input type="checkbox"/>	10	<input type="checkbox"/>
<input type="checkbox"/>	11	<input type="checkbox"/>
<input type="checkbox"/>	12	<input type="checkbox"/>
<input type="checkbox"/>	13	<input type="checkbox"/>
<input type="checkbox"/>	14	<input type="checkbox"/>
<input type="checkbox"/>	15	<input type="checkbox"/>
<input type="checkbox"/>	16	<input type="checkbox"/>
<input type="checkbox"/>	17	<input checked="" type="checkbox"/>

state number of boxes marked with a cross

Must be signed by BOTH drivers
Does not constitute an admission of liability, but a summary of identities and of the facts which will speed up the settlement of claims

13. Sketch of accident when impact occurred 13.

Happy Flow:

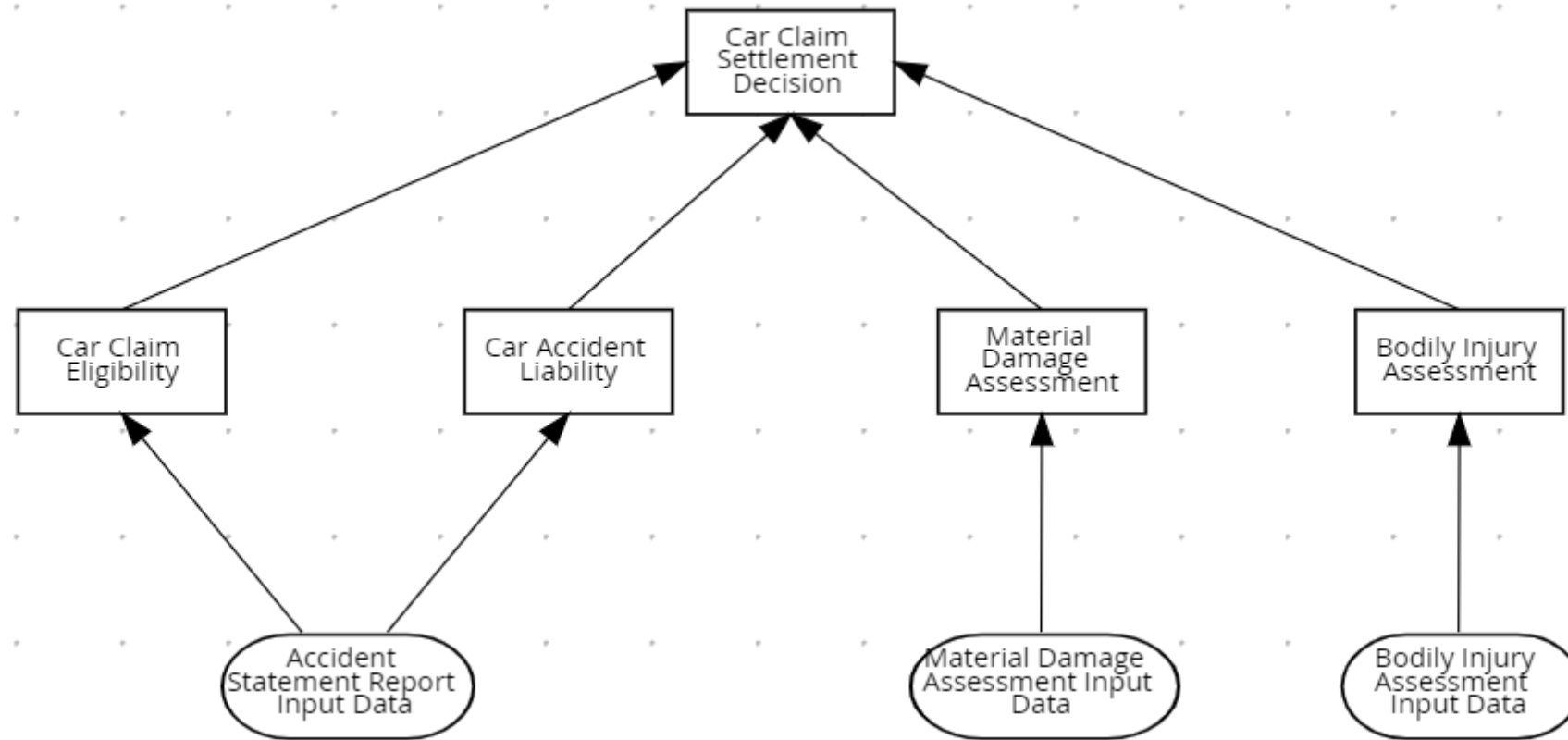
- No Bodily Injury
- Conclusive Input Data on Eligibility, Liability & Material Damage
- Fully Automated

Less Happy Flow:

- Human Expertise Needed on 1 or More Topics
- Not Sequential, Just Information Dependencies

Decision Modeling (DMN) – Use Case

Car Claim Settlement – End-to-End Decisioning



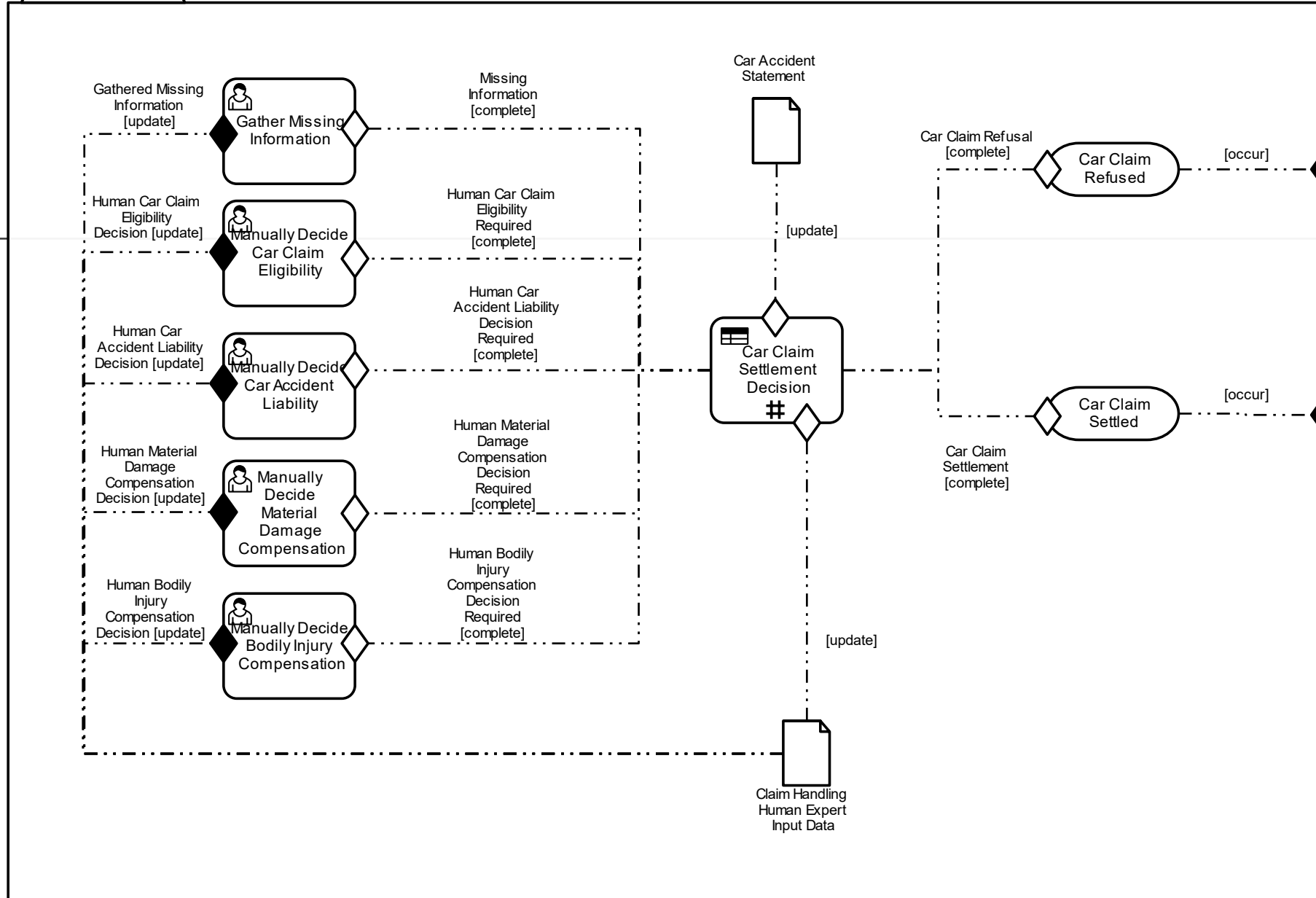
Decision Modeling (DMN) – Use Case

Car Claim Settlement – End-to-End Decisioning

Car Claim Settlement Decision (Decision Table)

C	Car Claim Eligibility (tEnumEligibilities)	Car Accident Liability (tEnumLiabilities)	Material Damage Assessment (tEnumMaterialDamageAssessments)	Bodily Injury Assessment (tEnumBodilyInjuryAssessments)	Car Claim Settlement Decision (ListoftEnumSettlements)
1	"Not Eligible"	-	-	-	"Refusal"
2	"Missing Information"	-	-	-	"Missing Information"
3	-	"Missing Information"	-	-	"Missing Information"
4	-	-	"Missing Information"	-	"Missing Information"
5	-	-	-	"Missing Information"	"Missing Information"
6	"Human Decision Required"	-	-	-	"Human Car Claim Eligibility Decision Required"
7	-	"Human Decision Required"	-	-	"Human Car Accident Liability Decision Required"
8	-	-	"Human Decision Required"	-	"Human Material Damage Compensation Decision Required"
9	-	-	-	"Human Decision Required"	"Human Bodily Injury Compensation Decision Required"
10	"Eligible"	not("Missing Information", "Human Decision Required")	not("Missing Information", "Human Decision Required")	not("Missing Information", "Human Decision Required")	"Settlement"

Car Claim Case



Decision Modeling (DMN) – Use Case

Car Claim Handling – Decisioning Centricity

- End-to-end decision model as the **Spider in the Web** for car claim settlement.
- The decision model is the **central and unique implementation** of the insurance company's policies and regulations on car claim settling.
- The decision model **orchestrates** deterministic (DMN), stochastic (AI) and human decisioning to reach a **balanced end-to-end decision**.





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