VOLVO

PDM/PLM

NEM conferance

Volvo Trucks

CAST| PDM/PLM/ Patrik Jigmyr| Internal

2025

Agenda

Overview PDM(KOLA) Logic

What is our logic – details

Our Logic put to use

BOM or Variant difference

Agenda

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What is our logic – details

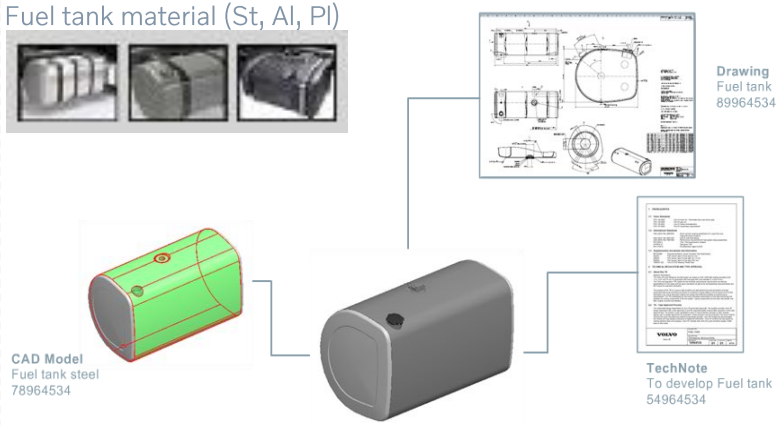
Our Logic put to use

Volvo Group PDM/PLM (KOLA) Logic*

*Volvo logic

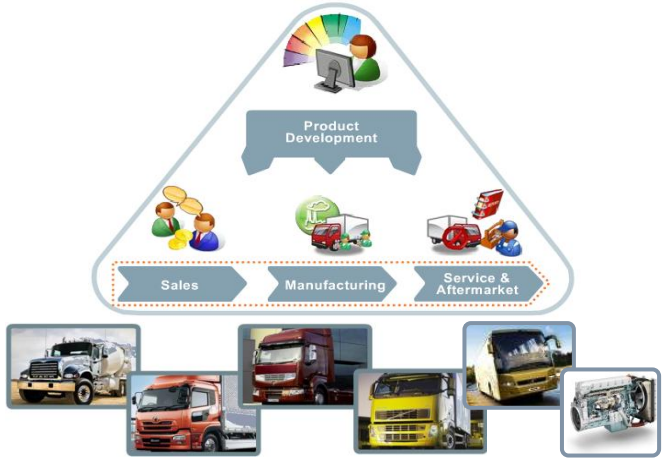
Volvo Group PDM/PLM (KOLA) Logic is Volvo Group's **product data[1] backbone** driving the main **business processes[2]** and it is embedded in an eco-system of in-house developed **IT applications[3].**

Product Data[1]



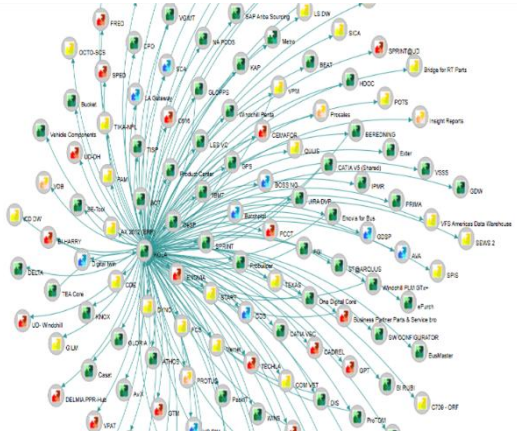
[1] Variants, Parts, Digital Models, Documents etc.

Business Processes[2]



[2] Product Development, Sales & Marketing, Manufacturing, Aftermarket

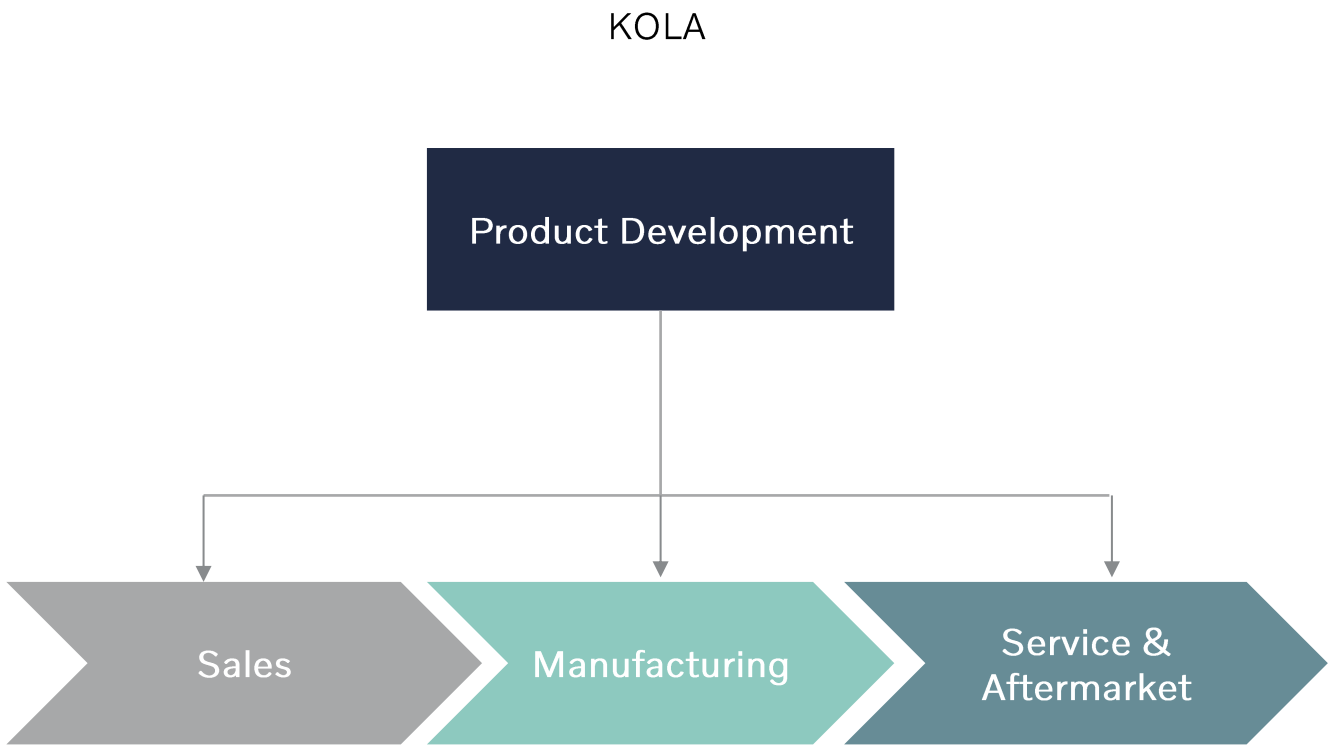
IT Systems[3]



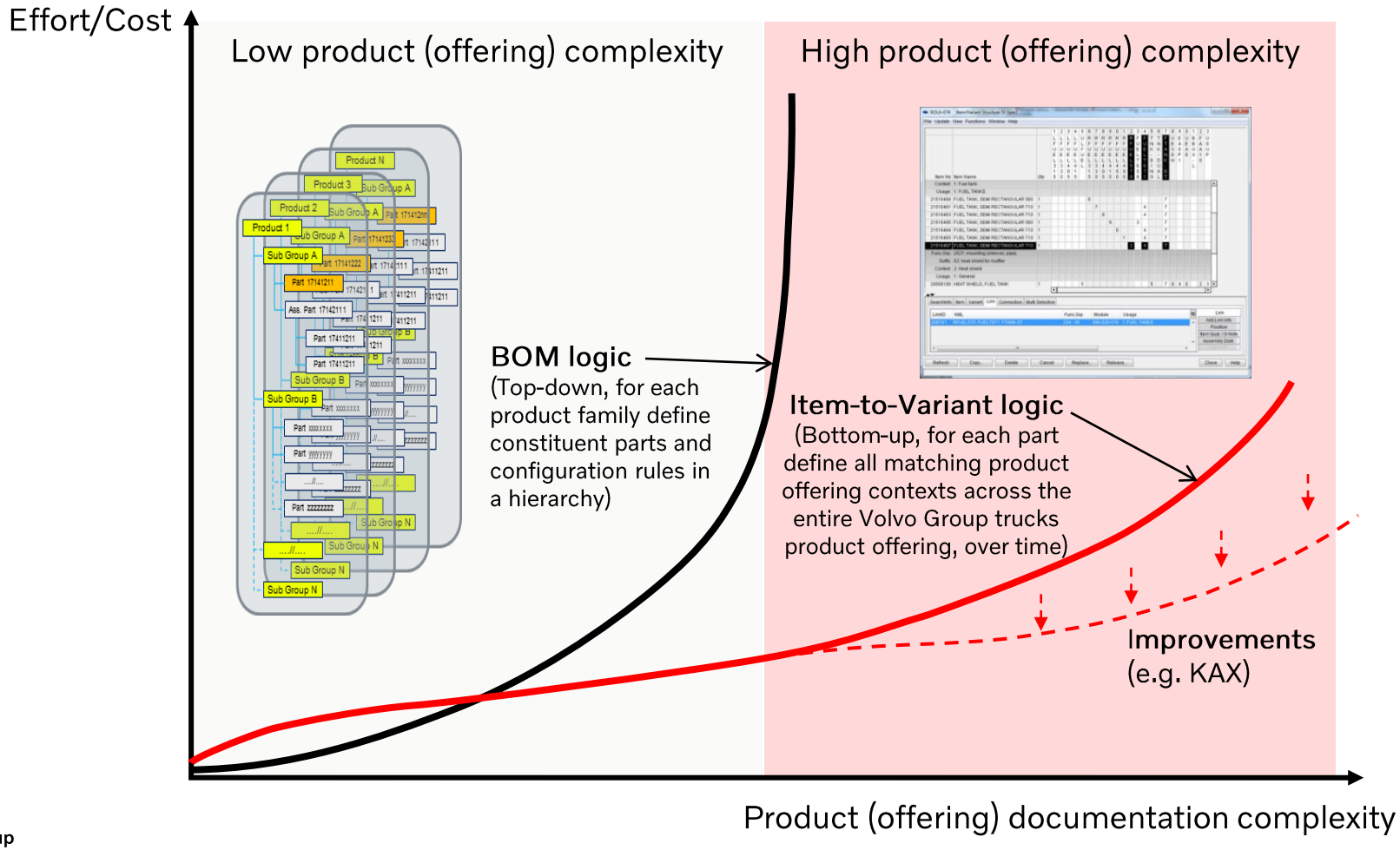
[3] KOLA, EDB, AVP, ProBuilder, BEREDNING, SPRINT, DELTA, PRISM, IMPACT, SW CONFIG ...

KOLA
System and Flow

- **KO**nstruktionsdata **LA**stvagnar or “Design data Trucks”
- Tool designed to document product development
- Kola information communicated to other systems



Volvo experience of COTS (eBOM*) logic vs. (KOLA) Item-to-Variant logic



STRENGTHS

- Enabling **widest multi-brand product offering** in the truck industry based on **CAST principles**
- Powerful in managing trucks **offering complexity.**
- Engineering and all downstream processes based on the same logic.
- Enabling global synergies and industrial flexibility

*eBOM – Engineering Bill of Material

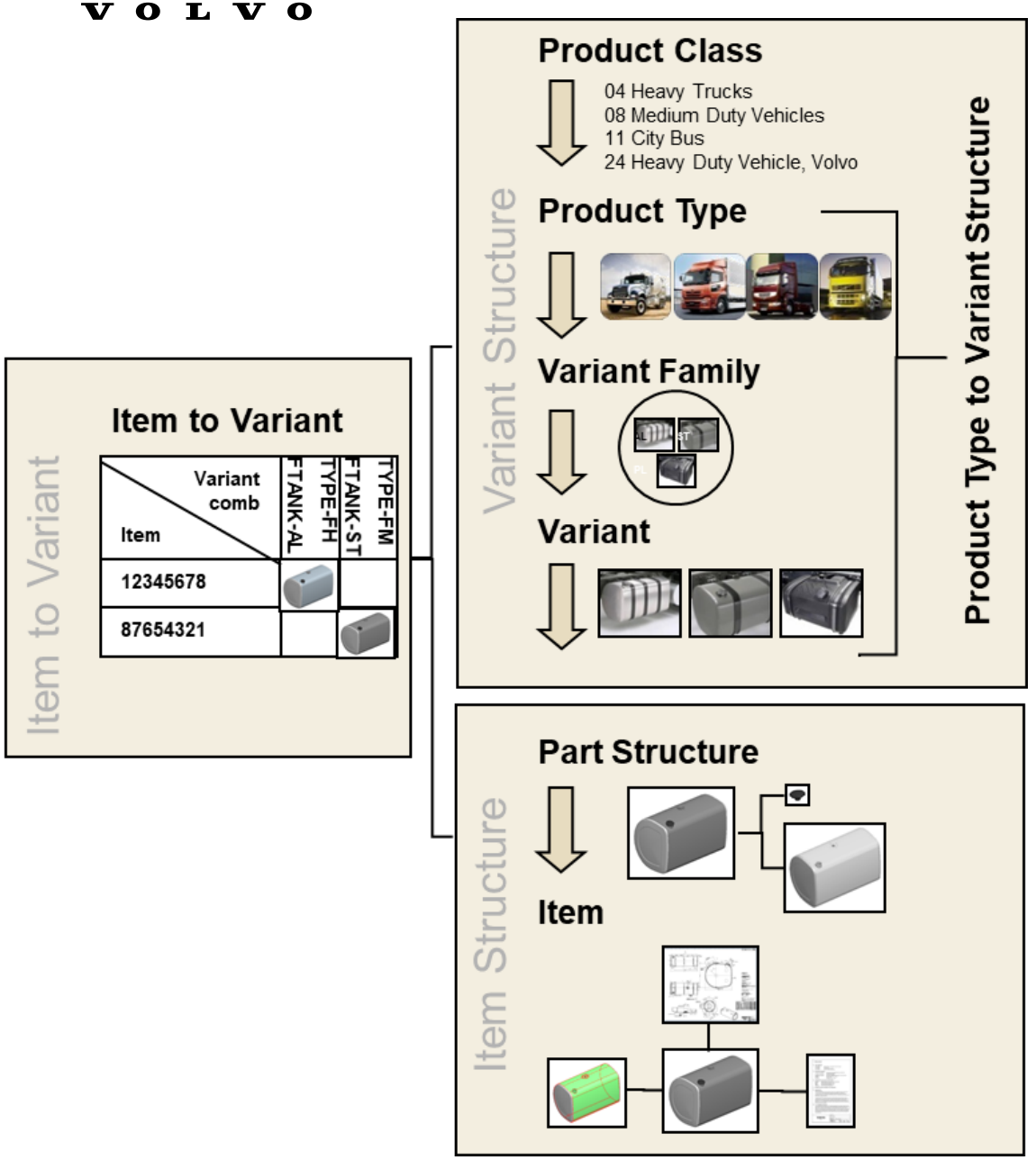
Agenda

Overview PDM(KOLA) Logic

What is our logic – details

Our Logic put to use

Product Structure
Hierarchy Overview



Product Class

Component / Product

PC61

Engine

PC75

Rear Axle

PC71

Gear Box

PC24

HDV

PC06

MDV

PC15

Bus

PC13

Coach Bus

Product Type

FH62PT

F-SERIES HIGH 6*2 PUSHER TRACTOR

MDR62R

MEDIUM DISTRIBUTION ROUGH

Variant Family

Represents a product option that can be offered to the customer.

Has a number of variants, representing the actual choices for the option.

DPX Family

ENGINE TYPE

Variant

Variants describe the variation within a function or a property.

Each of the different variations of the function represents a Variant.

DPX Family

ENGINE TYPE

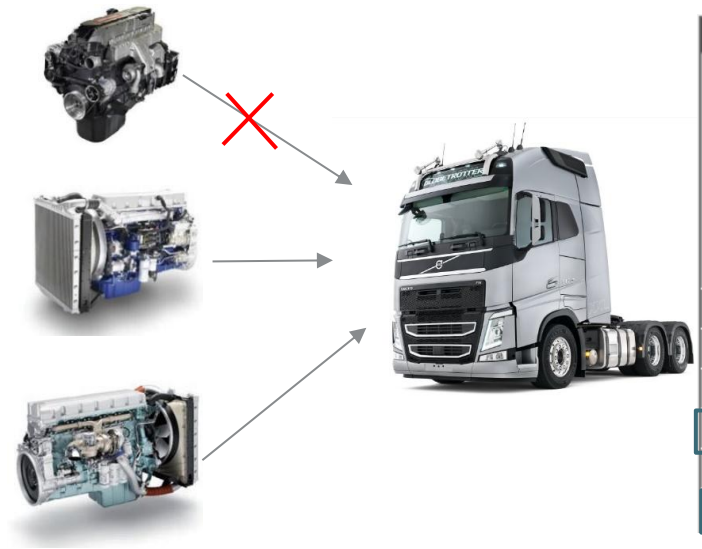
7 Litre Engine

13 Litre Engine

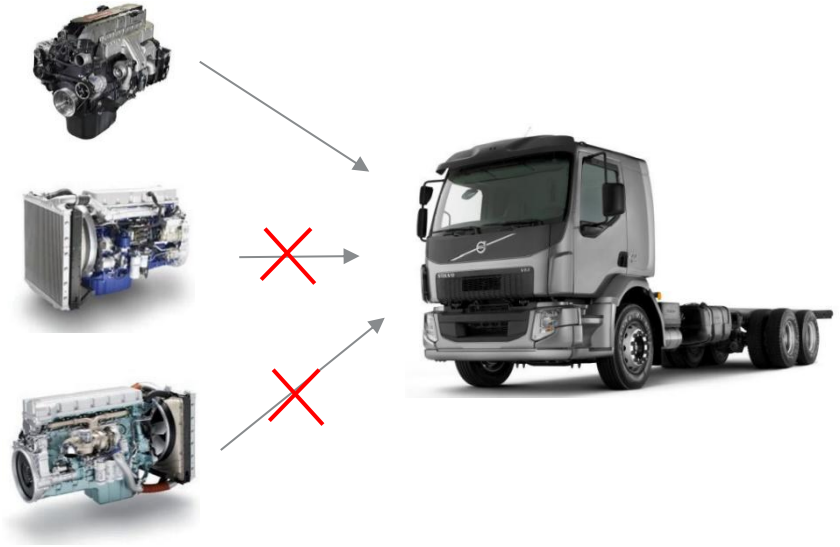
16 Litre Engine

Product Type to Variant

Overview of the Types and Variants that are authorized in a certain Product Class.



		1	2	3
Variant	Description	FH 42 T	FH 62 PT	FH 62 TT
Prod.Class:	24: HEAVY			
FamilyID:	DPX: ENGI			
ENG-VE11	11 L. ENGI			
ENG-VE13	13 L. ENGI	1	2	3
DPX-BKX	13,2 L ENG			
ENG-VE16	16 L. ENG	1	2	3

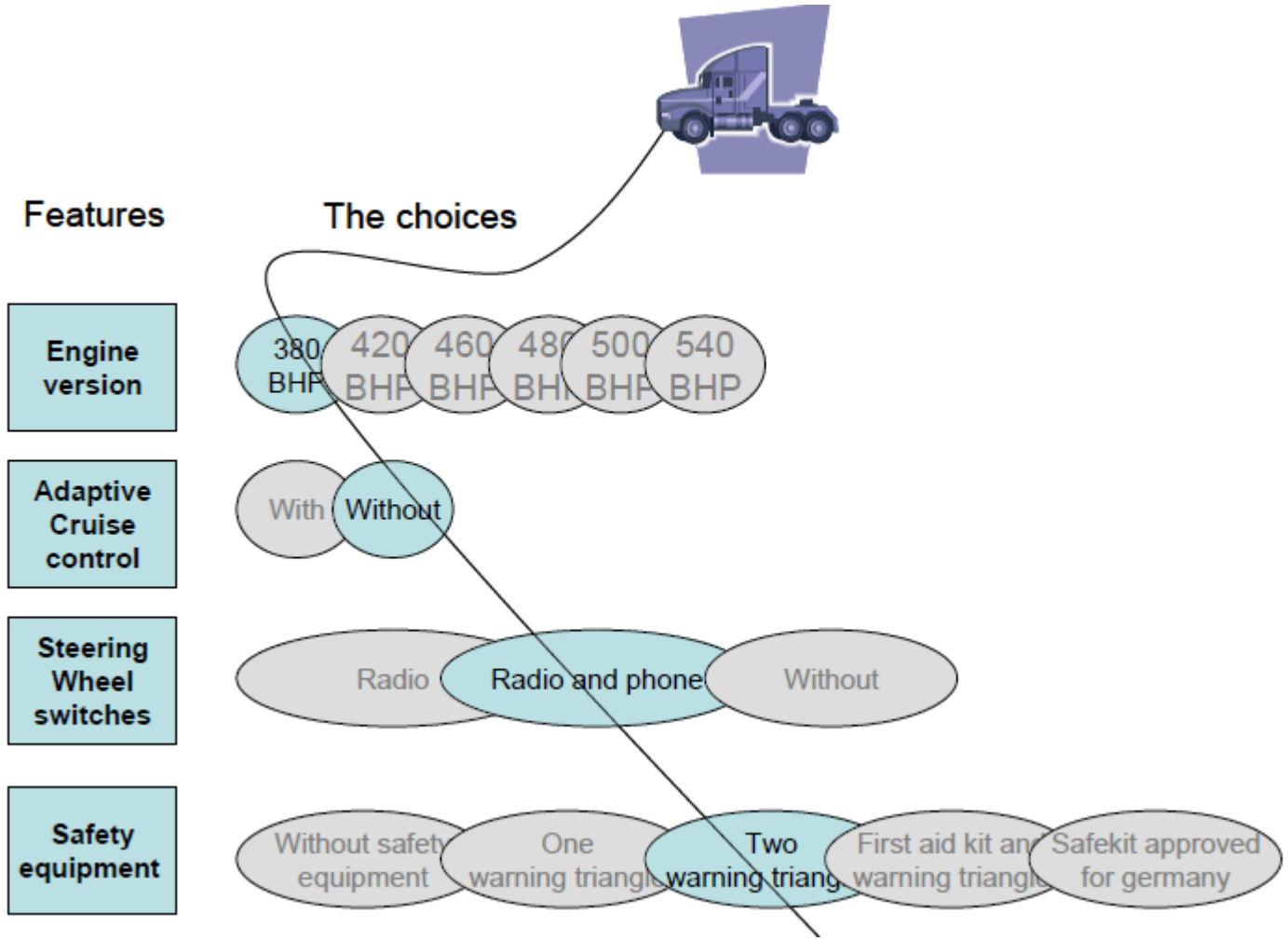


		1	2	3
Variant	Description	MDR 42R	MDR 62R	MDR 82FR
Prod.Class:	06: MEDIU			
FamilyID:	DPX: ENGI			
ENG-MWM5	5 LITRE MV			
ENG-MWM6	6 LITRE MV			
ENG-MWM7	7 LITRE MV	1	2	3
ENG-D8	8L. DIESEL			

Variant Structure

Describes the product offering from a technical point of view.

The product offering means all allowed truck configurations.



Variant Rules

Basically, the Variant Structure consists of building blocks, called Variants, and rules for how these building blocks can be combined.

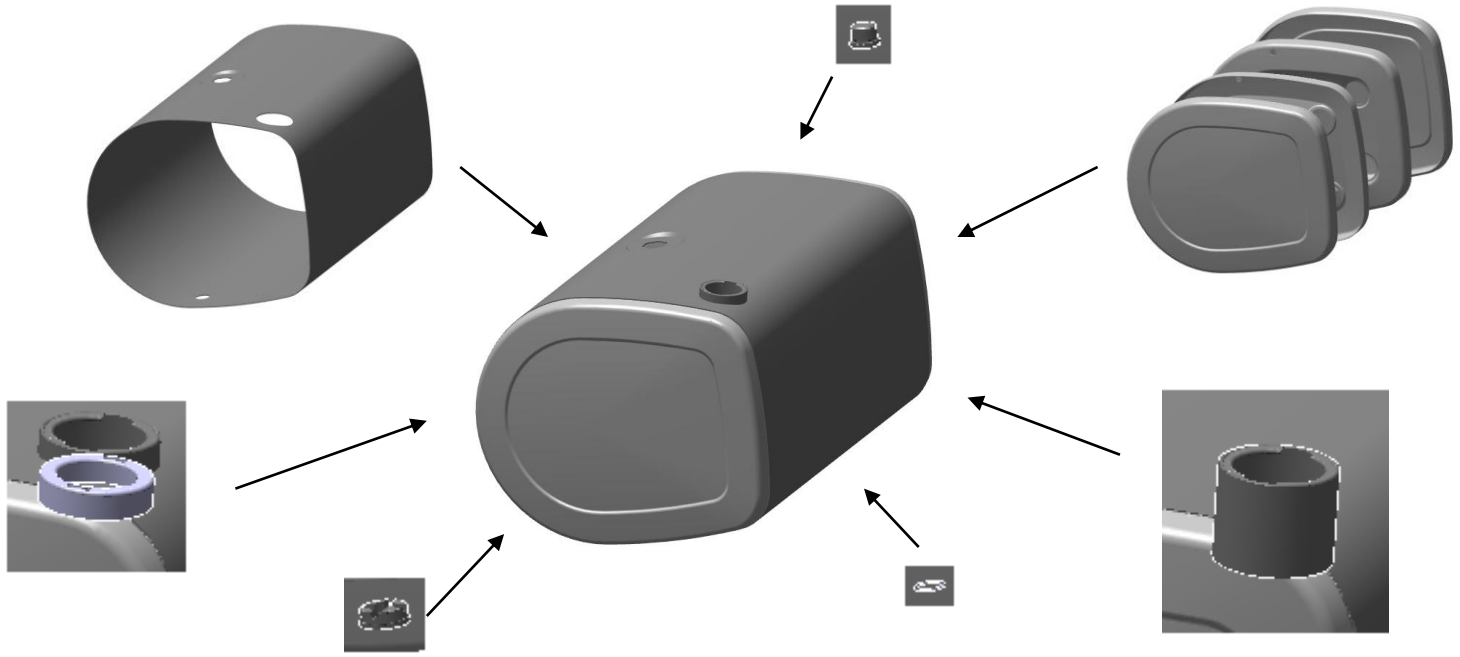
These rules consist of **Authorizations** and **Exclusions**

The **Authorizations** are the **general** rules for how to deal with the Variants. The **Exclusions** are **adjustments** of these general rules.

Part Number	Part Name
22038777	FUEL TANK
957185	GASKET
20503566	BLEEDER SCREW
20503569	FLANGE
20538744	END PLATE
20374926	FILLER PIPE
21493784	FLANGE
21516660	CASING
20538745	BAFFLE

Part Structure

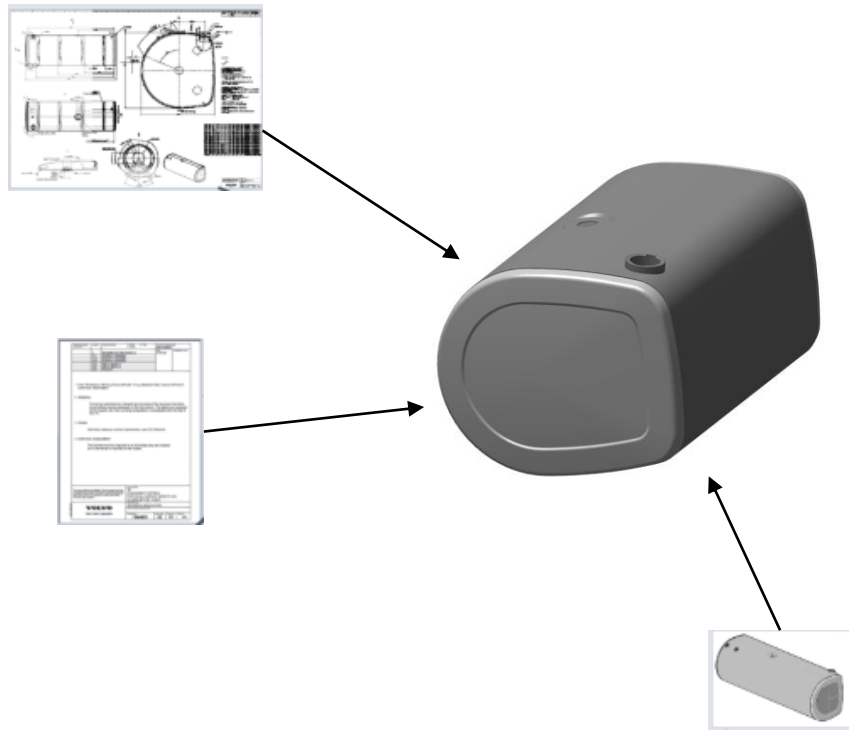
Assembly Parts are built up of Constituent Parts.

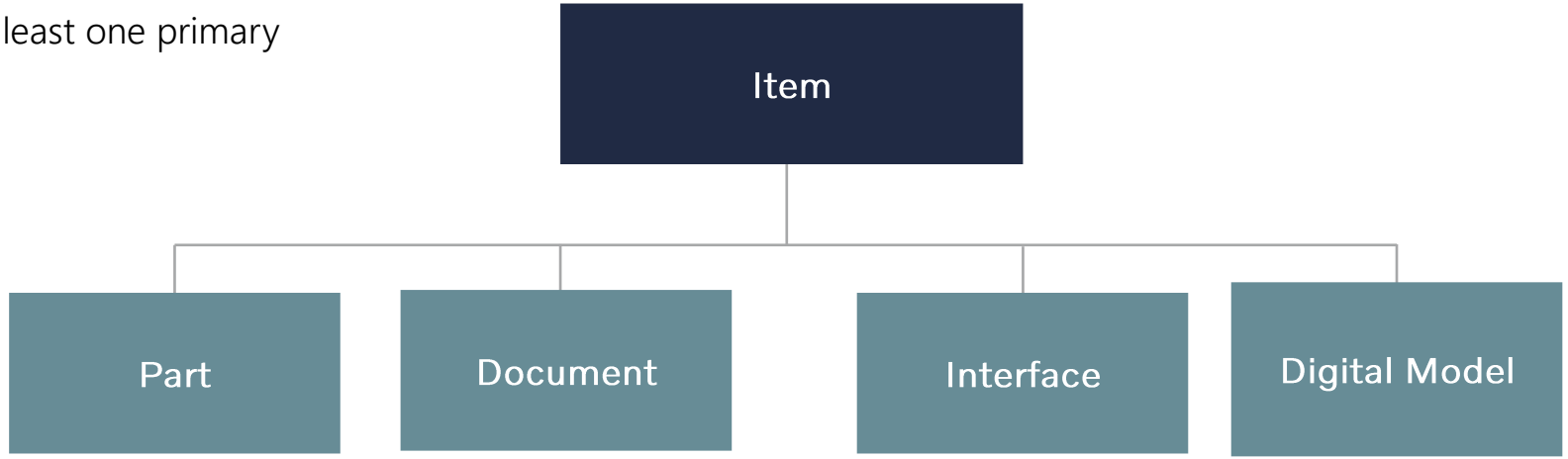


Item

Items are connected to a part.

Parts need at least one primary reference.

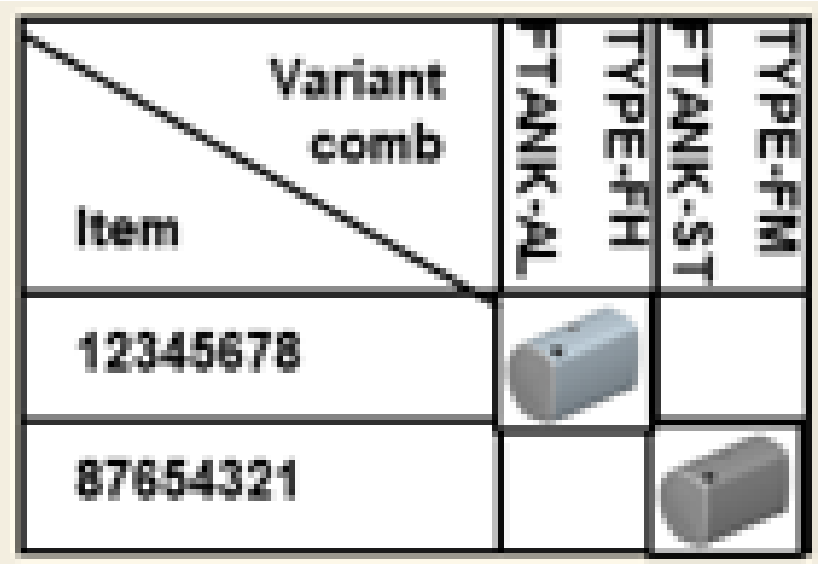




Item

Item / Variant Structure

Combining our Items with our Variant using a functional grouping to describe our set of products



Virtual builds

Depending on the type of Item used in the Item/Variant structure we can build up not just physical vehicles