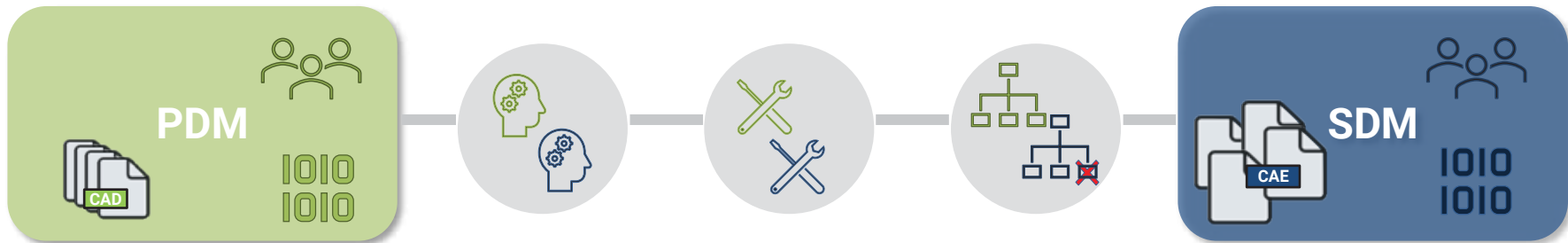


Streamlining data extraction from Teamcenter

Latest approaches to CAE Structure creation and maintenance

Giannis Haralampidis

Problem description

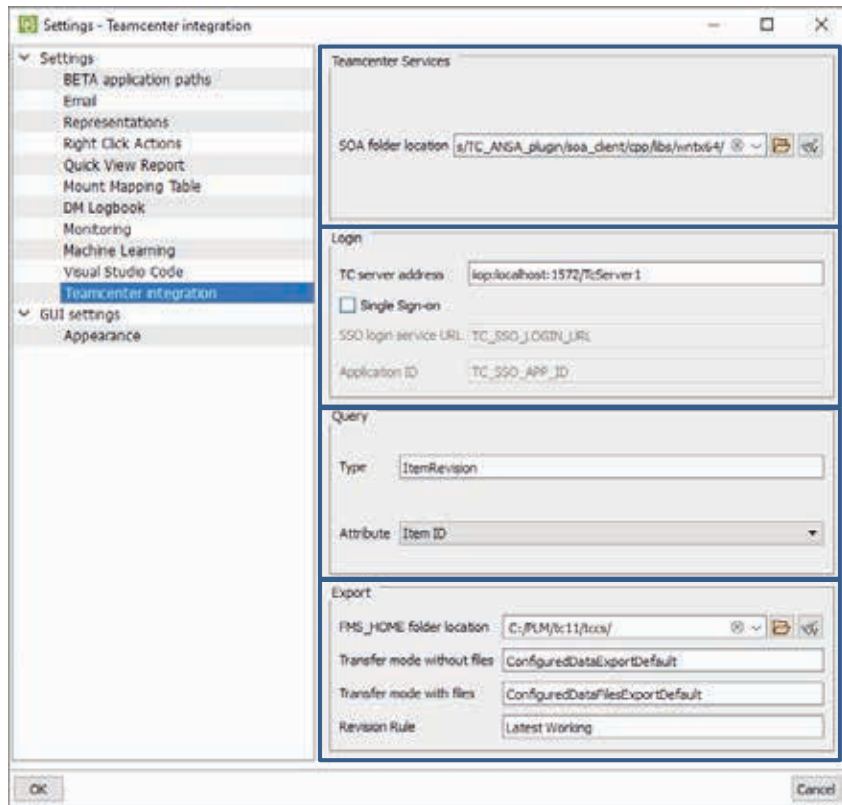


- Experts from both sides
- Extensive configuration
- Different modularization

Integration with Teamcenter

- No configuration is needed from Teamcenter side
- No restriction for specific Teamcenter architecture
- All BETA software can communicate with Teamcenter with the minimum configuration
- Communication is based on Service Oriented architecture (SOA)
- Login with SSO is possible
- Various queries can be sent to Teamcenter
- Export of BOMs, CAD data, Metadata, Variants

Teamcenter Utilities - Configuration



SOA

Login

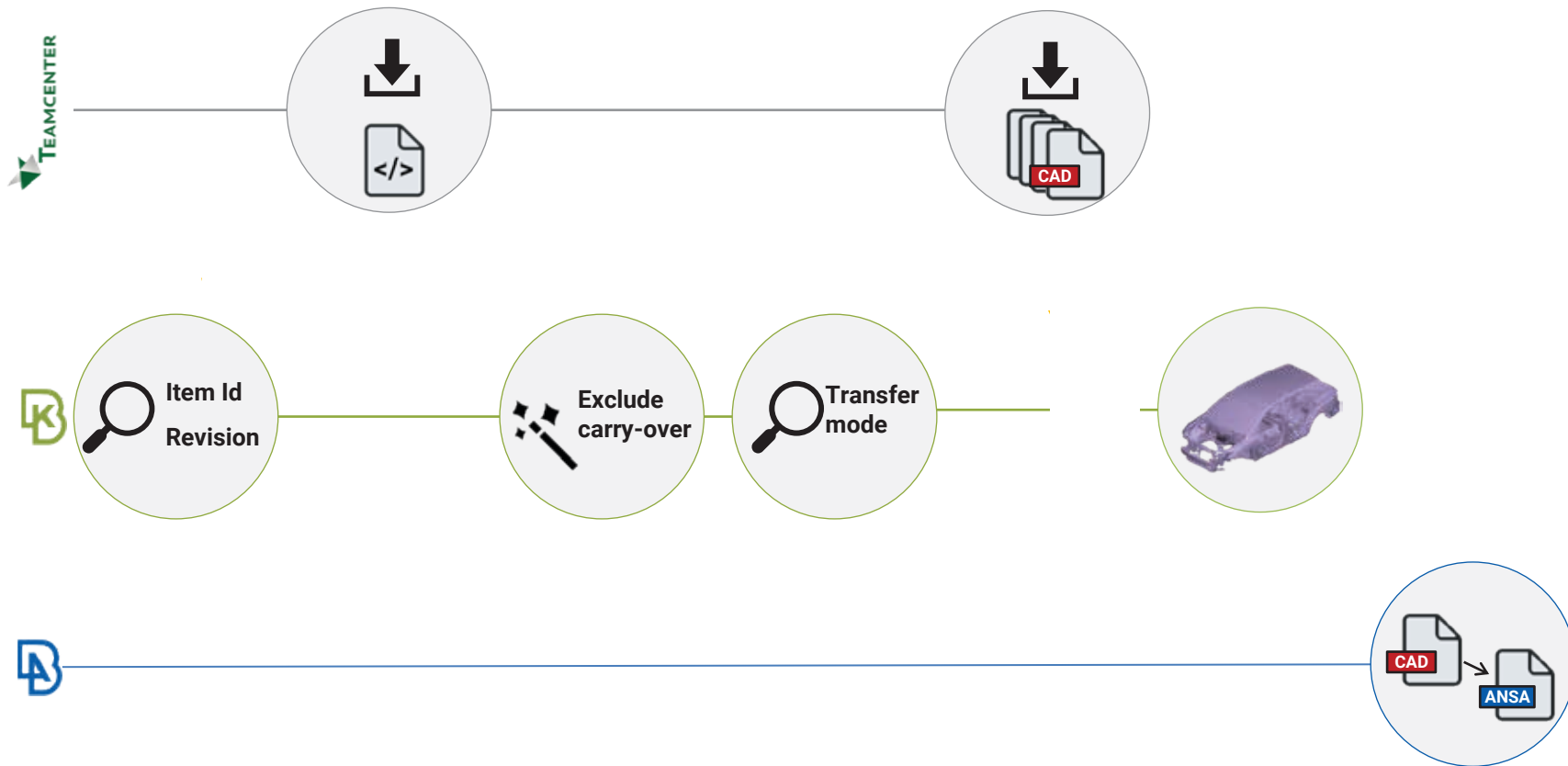
Queries

Export

Use cases

- 1 Create CAE subsystem from a CAD structure
- 2 Create CAE subsystems from a CAD structure using templates
- 3 Update subsystem from TC
- 4 Import variant rules and create 100% subsystems

Use case 1: Create CAE subsystem from a CAD structure



Use case 1: Create CAE subsystem from a CAD structure

The screenshot shows a software interface with a top menu bar and a main workspace. A 'Teamcenter' menu is open, showing options: 'Login', 'Query for structure', and 'Query for variants'. A yellow callout box with the text 'Query for item id' points to the 'Query for structure' option. Below this, a 'Query TC' dialog box is open, showing 'Export' options (Revision rule: Latest Working) and 'Query Product' options (Item ID: 100000, Revision:). A yellow callout box with the text 'Select revision' points to the 'Item Revision Id' column in the 'Query Results: ItemRevision' table. The table contains one row: Item Id: 100000, Item Revision Id: A, Object Name: FRONT_DOORS, User Name: infodba (infodba), Date Last Modified: 01-Jun-2023 11:08.

Teamcenter

- Login
- Query for structure
- Query for variants

Query TC

Export

Revision rule: Latest Working

Query Product

Item ID: 100000 Search

Revision:

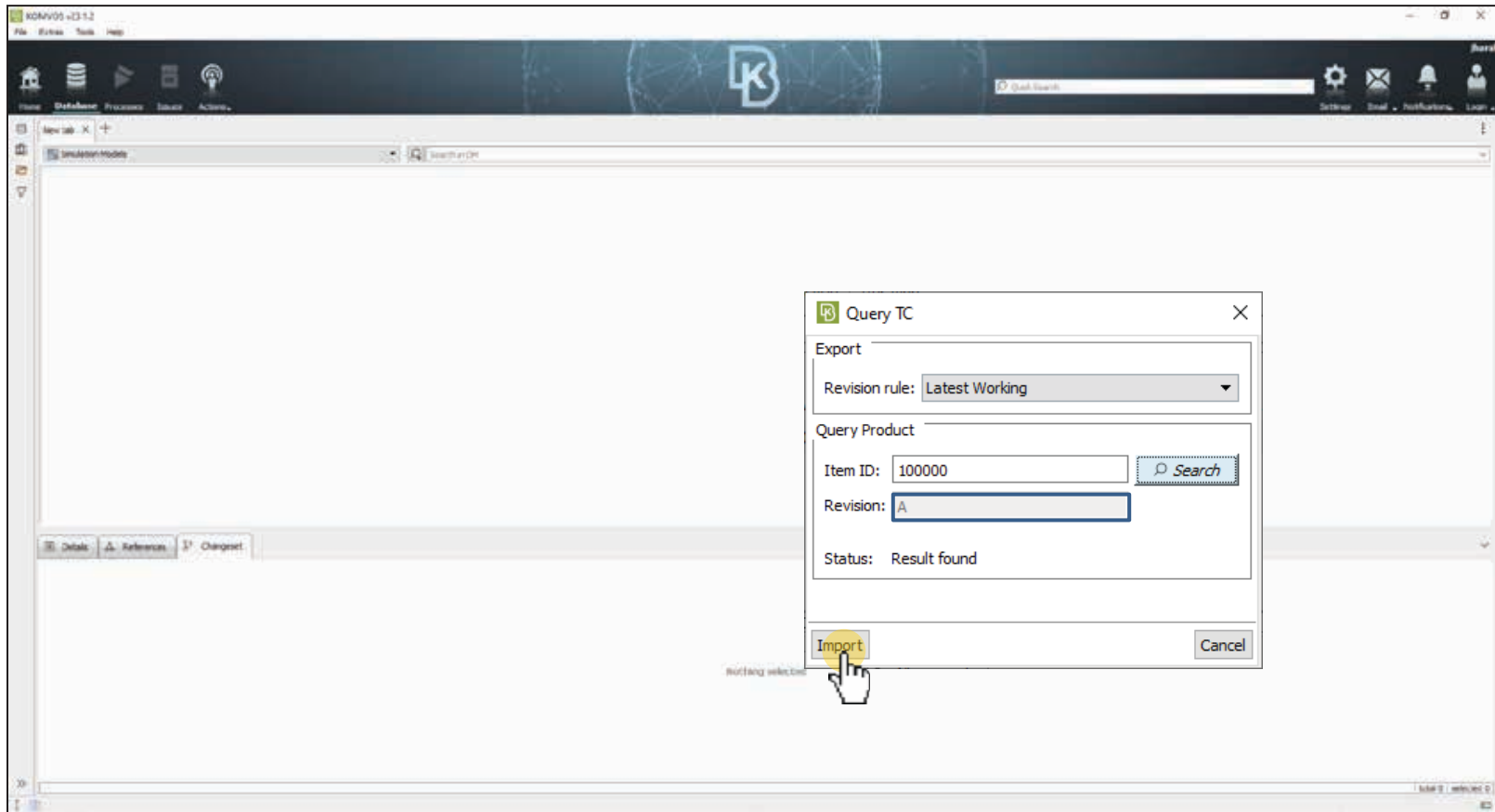
Query Results: ItemRevision

Item Id	Item Revision Id	Object Name	User Name	Date Last Modified
100000	A	FRONT_DOORS	infodba (infodba)	01-Jun-2023 11:08

total 1 | visible 1

OK Cancel

Use case 1: Create CAE subsystem from a CAD structure



Use case 1: Create CAE subsystem from a CAD structure

The screenshot displays the Beta CAE software interface. The main window shows a CAD structure tree on the right side, listing various parts and their properties. A summary table at the bottom right provides a quick overview of the parts and files found in the CAD structure.

Part	16	Part files	16
Found in DM	0	Has exports	9
Found in DM	16	File does not exist	16

A yellow box highlights the 'Check in DM' button at the bottom of the interface, with a hand cursor pointing to it.

Use case 1: Create CAE subsystem from a CAD structure

The screenshot displays the Beta-CAE software interface. The main window shows a CAD structure tree with a list of parts. A yellow vertical bar highlights the text 'Download missing parts' in the center of the screen. The 'Actions' menu is open, showing 'Download missing parts' and 'Generate subsystems from templates'. The 'Download missing parts' option is highlighted with a yellow circle and a mouse cursor. The CAD structure tree shows a hierarchy of parts, including '100000_A_FRONT_DOORS', '200391_A_FRONT_DOOR_LT', '300002_A_HINGES_LT', '400002_A_CASE_LT', '400010_A_SIDE_IMPACT_BAR', '400020_A_LOCK_REINFORCEMENT', '400030_A_UPPER_FRAME', '400041_A_EXTERIOR_PANEL_LT', '400050_A_REINFORCEMENT_BAR', '400060_A_BACK_FRAME', '400060_A_MIRROR_REINFORCEMENT', '400070_A_REINFORCEMENT_BELT_LT', '200391_A_FRONT_DOOR_RT', '300002_A_HINGES_RT', '400010_A_SIDE_IMPACT_BAR', '400020_A_LOCK_REINFORCEMENT', '400030_A_UPPER_FRAME', '400050_A_REINFORCEMENT_BAR', '400060_A_BACK_FRAME', '400060_A_MIRROR_REINFORCEMENT', '400041_A_EXTERIOR_PANEL_RT', and '400070_A_REINFORCEMENT_BELT_RT'. The 'Parts' and 'Part files' summary at the bottom indicates 16 parts and 16 part files, with 9 files existing and 7 files not existing.

Download missing parts

Actions

- Download missing parts
- Generate subsystems from templates

ID	Name	Type	Material	Color	State
100000	A_FRONT_DOORS	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
200391	A_FRONT_DOOR_LT	A	1.0,0.0,0.0,1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
300002	A_HINGES_LT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400002	A_CASE_LT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400010	A_SIDE_IMPACT_BAR	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400020	A_LOCK_REINFORCEMENT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400030	A_UPPER_FRAME	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400041	A_EXTERIOR_PANEL_LT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400050	A_REINFORCEMENT_BAR	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400060	A_BACK_FRAME	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400060	A_MIRROR_REINFORCEMENT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400070	A_REINFORCEMENT_BELT_LT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
200391	A_FRONT_DOOR_RT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
300002	A_HINGES_RT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400010	A_SIDE_IMPACT_BAR	A	0.990264061-0.0402566030000000...		
400020	A_LOCK_REINFORCEMENT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400030	A_UPPER_FRAME	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400050	A_REINFORCEMENT_BAR	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400060	A_BACK_FRAME	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400060	A_MIRROR_REINFORCEMENT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400041	A_CASE_RT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400041	A_EXTERIOR_PANEL_RT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		
400070	A_REINFORCEMENT_BELT_RT	A	1.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0,0.0,0.0,0.0,1.0		

Parts: 16
Part files: 16
Found in DB: 0
Not found in DB: 16
File exists: 9
File does not exist: 7
Check HDB

Use case 1: Create CAE subsystem from a CAD structure

Save new subsystem

ID	Name	Module ID	Variant	Transformation Matrix
100000	A_FRONT_DOORS	100000	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
200001	A_FRONT_DOOR_LT	200001	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
300001	A_HINGES_LT	300001	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
400002	A_CASE_LT	400002	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600010	A_SIDE_IMPACT_BAR	600010	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600020	A_LOCK_REINFORCEMENT	600020	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600030	A_UPPER_FRAME	600030	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600041	A_EXTERIOR_PANEL_LT	600041	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600050		600050	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600060		600060	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600070		600070	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600080		600080	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600090		600090	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600100		600100	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600110		600110	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600120		600120	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600130		600130	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600140		600140	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600150		600150	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600160		600160	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600170		600170	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600180		600180	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600190		600190	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600200		600200	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600210		600210	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600220		600220	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600230		600230	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600240		600240	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600250		600250	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600260		600260	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600270		600270	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600280		600280	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600290		600290	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600300		600300	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600310		600310	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600320		600320	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600330		600330	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600340		600340	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600350		600350	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600360		600360	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600370		600370	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600380		600380	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600390		600390	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600400		600400	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600410		600410	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600420		600420	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600430		600430	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600440		600440	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600450		600450	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600460		600460	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600470		600470	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600480		600480	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600490		600490	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600500		600500	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600510		600510	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600520		600520	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600530		600530	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600540		600540	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600550		600550	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600560		600560	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600570		600570	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600580		600580	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600590		600590	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600600		600600	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600610		600610	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600620		600620	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600630		600630	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600640		600640	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600650		600650	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600660		600660	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600670		600670	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600680		600680	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600690		600690	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600700		600700	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600710		600710	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600720		600720	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600730		600730	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600740		600740	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600750		600750	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600760		600760	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600770		600770	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600780		600780	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600790		600790	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600800		600800	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600810		600810	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600820		600820	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600830		600830	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600840		600840	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600850		600850	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600860		600860	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600870		600870	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600880		600880	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600890		600890	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600900		600900	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600910		600910	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600920		600920	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600930		600930	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600940		600940	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600950		600950	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600960		600960	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600970		600970	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600980		600980	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
600990		600990	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1
601000		601000	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,0,0,1

Parts: 16 Part files: 16
Found in DIR: 0 File exists: 9
Not found in DIR: 16 File does not exist: 16
Check in DIR

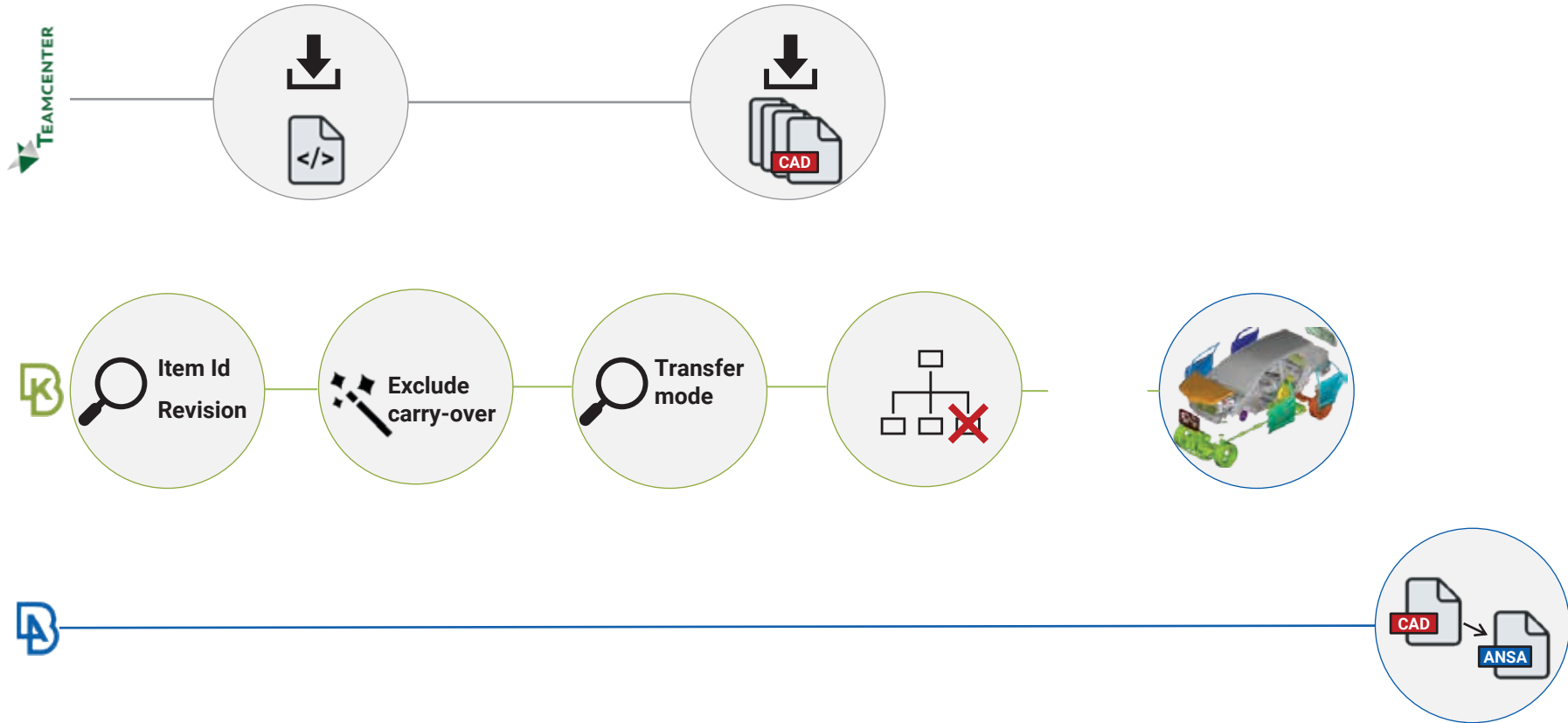
Use case 1: Create CAE subsystem from a CAD structure

The screenshot displays the Beta CAE software interface. On the left, a tree view shows a CAD structure with various components. The 'Contents' pane lists items such as '100000_FRONT_DOORS', '100000_A_FRONT_DOORS', and '202001_A_FRONT_DOOR_LT'. A yellow highlight is placed over the '202001_A_FRONT_DOOR_LT' entry, with the text 'Show in viewer' overlaid. Below the tree, a 'Details' pane shows properties for the selected item, including 'Module ID: 100000', 'Project: caef', and 'Release: A'. On the right, a 3D viewer shows a red wireframe model of a car door and a green solid model of the same door. The interface includes a top menu bar, a toolbar, and a search bar.

Contents	DM Modification Date	DM Creation Date
100000_FRONT_DOORS (A; caef;)	06-Jun-2023 18:23:30	06-Jun-2023 18:20:39
100000_A_FRONT_DOORS (Module ID: 100000)	06-Jun-2023 18:23:30	06-Jun-2023 18:20:39
202001_A_FRONT_DOOR_LT (Module ID: 202001)	06-Jun-2023 18:23:29	06-Jun-2023 18:20:39
302301_A_HINGES_LT (Module ID: 302001)	06-Jun-2023 18:23:29	06-Jun-2023 18:20:39
BACK_FRAME (Module ID: 607000)	06-Jun-2023 18:23:25	06-Jun-2023 18:20:26
CASE_LT (Module ID: 607002)	06-Jun-2023 18:23:27	06-Jun-2023 18:20:27
EXTERIOR_PANEL_LT (Module ID: 607041)	06-Jun-2023 18:23:26	06-Jun-2023 18:20:26
LOCK_REINFORCEMENT (Module ID: 607020)	06-Jun-2023 18:23:25	06-Jun-2023 18:20:25
WINDOW_REINFORCEMENT (Module ID: 607000)	06-Jun-2023 18:23:26	06-Jun-2023 18:20:26
REINFORCEMENT_BAR (Module ID: 607050)	06-Jun-2023 18:23:25	06-Jun-2023 18:20:25
REINFORCEMENT_BELT_LT (Module ID: 607031)	06-Jun-2023 18:23:27	06-Jun-2023 18:20:27
SIDE_IMPACT_BAR (Module ID: 607010)	06-Jun-2023 18:23:25	06-Jun-2023 18:20:24
UPPER_FRAME (Module ID: 607030)	06-Jun-2023 18:23:25	06-Jun-2023 18:20:25
202001_A_FRONT_DOOR_RT (Module ID: 202001)	06-Jun-2023	06-Jun-2023 18:20:39
302302_A_HINGES_RT (Module ID: 302002)	06-Jun-2023	06-Jun-2023 18:20:39
BACK_FRAME (Module ID: 607000)	06-Jun-2023	06-Jun-2023 18:20:26
CASE_RT (Module ID: 608001)	06-Jun-2023	06-Jun-2023 18:20:27
EXTERIOR_PANEL_RT (Module ID: 608041)	06-Jun-2023	06-Jun-2023 18:20:26
LOCK_REINFORCEMENT (Module ID: 607020)	06-Jun-2023	06-Jun-2023 18:20:25

Name	Value
DM Modification Date	06-Jun-2023 18:20:39
Template Name	
DM Properties	
Module ID	100000
Project	caef
Release	A
Variant	
Revision	001
Loadcase Variant	
Representation	classic
FE Type	ANSI

Use case 2: Create CAE subsystem from CAD structure using templates



Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1

BIW

FRONT

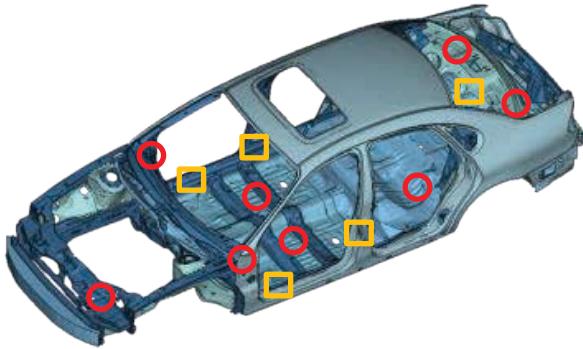
REAR

SIDE

ROOF

BOLTS ○

TRIMS □



Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1

● BIW

📁 FRONT

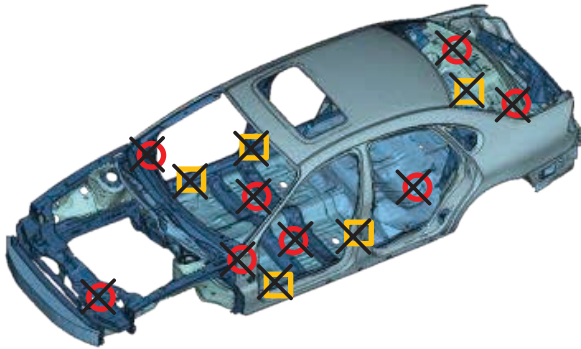
📁 REAR

📁 SIDE

📁 ROOF

📁 BOLTS ○

📁 TRIMS □



Use case 2: Create CAE subsystem from CAD structure using templates – Mode 2

- 📁 FULL_VEHICLE
 - 📁 FRONT_DOORS
 - 📁 REAR_DOORS
 - 📁 REAR
 - 📁 FRONT
 - 📁 SIDE
 - 📁 FLOOR
 - 📁 FRONT_SUSPENSION
 - 📁 SEATS
 - 📁 TRIMS
 - 📄 DOORS_TRIMS
 - 📄 BIW_TRIMS
 - 📁 REAR_SUSPENSION
 -



Use case 2: Create CAE subsystem from CAD structure using templates – Mode 2

- 📁 FULL_VEHICLE
 - 📁 FRONT_DOORS
 - 📁 REAR_DOORS
 - 📁 REAR
 - 📁 FRONT
 - 📁 SIDE
 - 📁 FLOOR
 - 📁 FRONT_SUSPENSION
 - 📁 SEATS
 - 📁 TRIMS
 - 📁 DOORS_TRIMS
 - 📁 BIW_TRIMS
 - 📁 REAR_SUSPENSION
 -



● DOORS

● BIW

●
●
●



Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1

The screenshot shows the software interface with the following components:

- Teamcenter Menu:** A dropdown menu is open, showing options: Login, Query for structure, and Query for revisions. A hand cursor points to "Query for structure".
- Query TC Dialog:** A dialog box titled "Query TC" is open. It has an "Export" section with a "Revision rule" dropdown set to "Latest Working". The "Query Product" section has an "Item ID" field containing "001542" and a "Search" button. A hand cursor points to the "Search" button.
- Query Results Dialog:** A dialog box titled "Query Results: ItemRevision" is open, displaying a table with the following data:

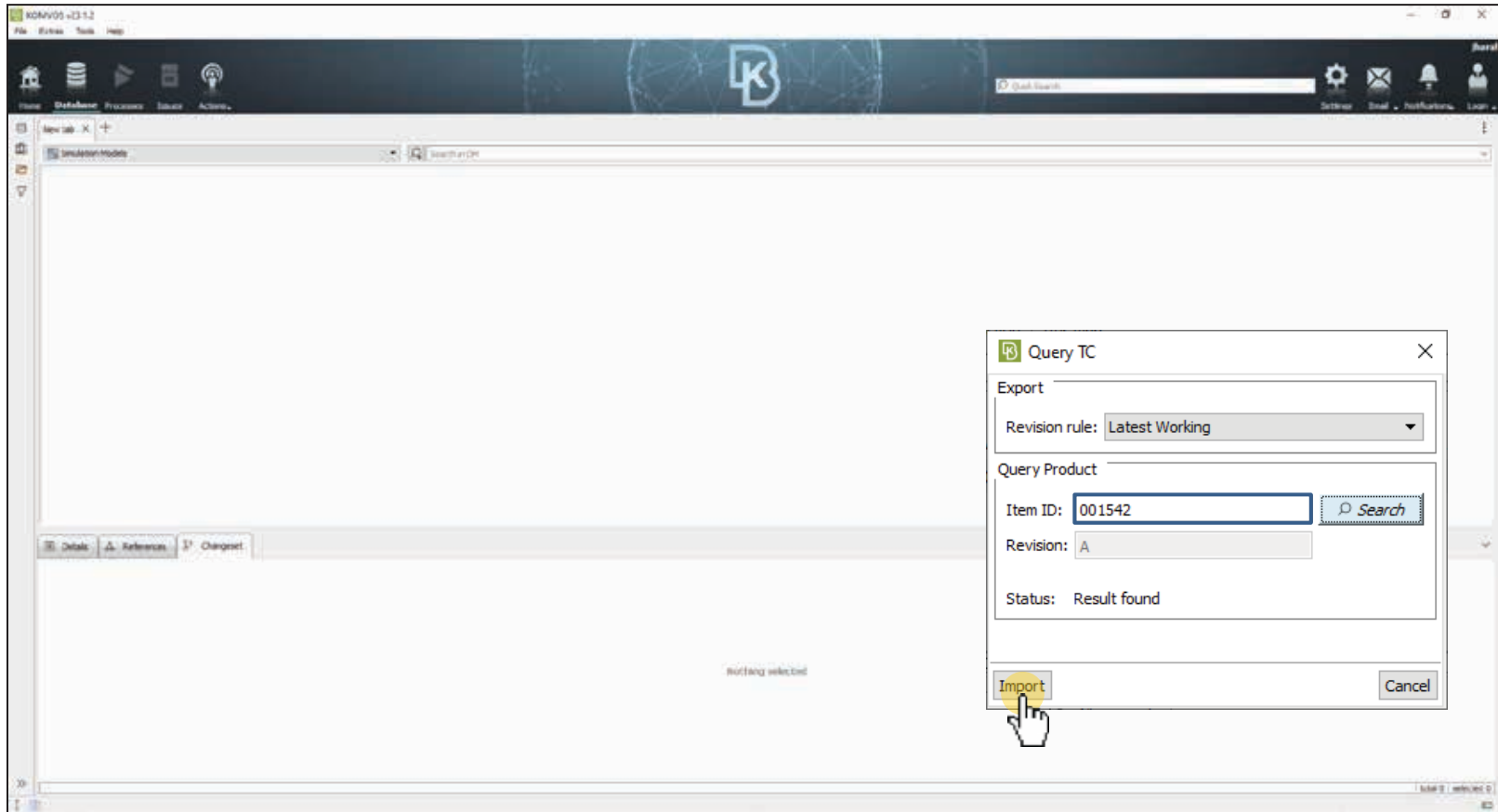
Item Id	Item Revision Id	Object Name	User Name	Release Status	Date Released	Date
001542	A	BTW	infodba (infodba)			01-Jun-2023 16

A hand cursor points to the "Item Revision Id" cell containing "A".

Two yellow callout boxes with white text are overlaid on the image:

- One box is positioned next to the "Query for structure" menu item, containing the text "Query for item id".
- Another box is positioned next to the "A" in the "Item Revision Id" column of the table, containing the text "Select revision".

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1



Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1

The screenshot displays the KDMVOS v23.1.2 software interface. The main window is titled "Part Manager" and shows a "Structure" view of a CAD assembly. The assembly tree on the right lists various parts and sub-assemblies, including:

- 001542_A_BIW
- 001539_A_BOLTS
- 001541_A_TRIMS
- 001543_B PILLAR LEFT
- 001550_A ROOF
- 001561_A_FRONT BUMPER
- 001565_A_SHOCK HOUSING REAR RIGHT
- 001568_A_SHOCK HOUSING REAR LEFT
- 001571_A_SHOCK HOUSING FRONT LEFT
- 001576_A_FLOOR
- 001597_A_RAIL REAR RIGHT
- 001603_A_C PILLAR LEFT
- 001607_A_A PILLAR LEFT
- 001619_A_MOUNTS & BRACKETS
- 001624_A_REAR BUMPER FRAME
- 001634_A ROOKER PANEL RIGHT
- 001637_A_UNBODY FRAME RIGHT
- 001642_A_C PILLAR RIGHT
- 001646_A_LIGHT MOUNTS
- 001650_A_REAR SEAT SUPPORT MOUNT
- 001662_A_A PILLAR RIGHT
- 001674_A_SHOCK HOUSING FRONT RIGHT
- 001679_A_UPPER RAIL FRONT RIGHT
- 001682_A_RAIL FRONT LEFT
- 001692_A_B PILLAR RIGHT
- 001699_A_UPPER RAIL FRONT LEFT

At the bottom of the interface, a summary table provides the following data:

Parts	172	Part Files	172
Found in DM	?	File exists	172
not found in DM	?	File does not exist	0

A yellow vertical bar highlights the "Check in DM" button in the bottom left corner of the interface. A mouse cursor is pointing at this button. The text "Check in DM" is overlaid on the image in a large, bold font.

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1

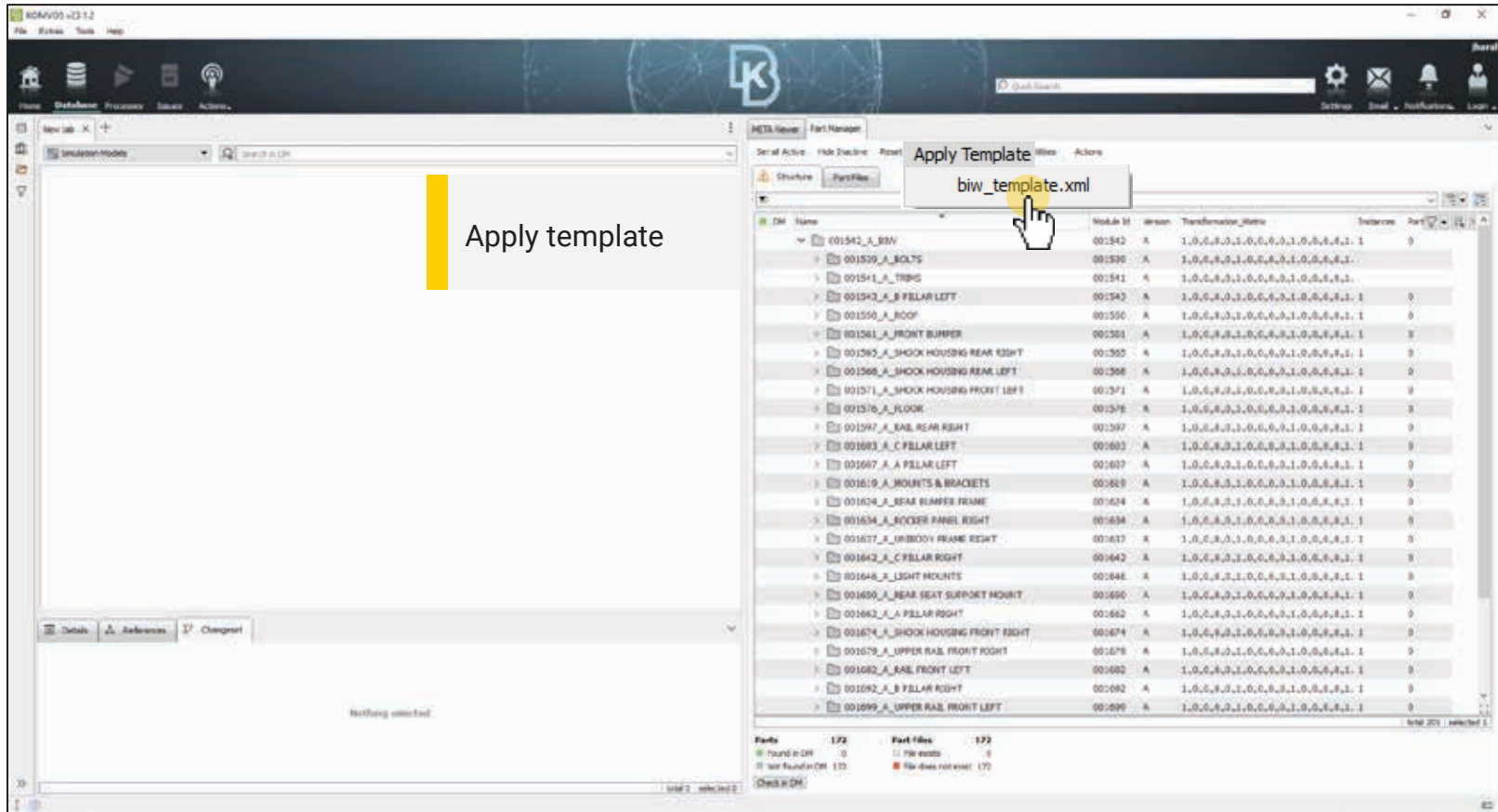
The screenshot displays the Beta CAE software interface. The main window shows a CAD structure tree on the right and a parts list table below it. The parts list table has the following columns: DM, Name, Module ID, Version, Transformation Points, and Part. The table contains 27 rows of data, including parts like 001542_A_BODY, 001536_A_BOLTS, 001541_A_TYRES, 001543_A_PELLAR LEFT, 001550_A_ROOF, 001551_A_FRONT BUMPER, 001565_A_SHOCK HOUSING REAR RIGHT, 001566_A_SHOCK HOUSING REAR LEFT, 001571_A_SHOCK HOUSING FRONT LEFT, 001576_A_FLOOR, 001597_A_RAB REAR RIGHT, 001603_A_C PELLAR LEFT, 001607_A_A PELLAR LEFT, 001610_A_MOUNTS & BRACKETS, 001624_A_REAR BUMPER FRAM, 001634_A_HOOKER PANEL RIGHT, 001637_A_UNIBODY FRAME RIGHT, 001642_A_C PELLAR RIGHT, 001646_A_RIGHT MOUNTS, 001650_A_REAR SEAT SUPPORT MOUNT, 001662_A_PELLAR RIGHT, 001674_A_SHOCK HOUSING FRONT RIGHT, 001678_A_UPPER RAIL FRONT RIGHT, 001682_A_RAB FRONT LEFT, 001692_A_S PELLAR RIGHT, and 001696_A_UPPER RAIL FRONT LEFT.

At the bottom of the interface, there is a summary table:

Parts	172	Part Files	172
Found in DM	0	File Exists	0
Not Found in DM	172	File does not exist	172

A yellow vertical bar is positioned over the text "Working on..." in the bottom left corner, and the text "Check in DM" is overlaid on the bar.

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1



Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1

The screenshot displays the Beta CAE software interface. The main window shows a CAD structure tree on the right, with a yellow box highlighting the text "Items become inactive". The tree lists various components such as 001542_A_BODY, 001550_A_TOSH, 001551_A_MOUNTS, 001543_A_B_PILLAR LEFT, 001550_A_FLOOR, 001551_A_FRONT BUMPER, 001555_A_SHOCK HOUSING REAR RIGHT, 001556_A_SHOCK HOUSING REAR LEFT, 001571_A_SHOCK HOUSING FRONT LEFT, 001576_A_FLOOR, 001597_A_SEAT REAR RIGHT, 001603_A_C_PILLAR LEFT, 001607_A_A_PILLAR LEFT, 001619_A_MOUNTS & BRACKETS, 001624_A_REAR BUMPER FRAME, 001634_A_ROCKER PANEL RIGHT, 001637_A_INBODY FRAME RIGHT, 001642_A_C_PILLAR RIGHT, 001646_A_LIGHT MOUNTS, 001650_A_REAR SEAT SUPPORT MOUNT, 001662_A_A_PILLAR RIGHT, 001674_A_SHOCK HOUSING FRONT RIGHT, 001679_A_UPPER RAIL FRONT RIGHT, 001682_A_RAIL FRONT LEFT, and 001692_A_B_PILLAR RIGHT. The bottom status bar indicates 174 Parts, 172 Part Files, 0 File events, and 0 File items not used.

Items become inactive

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1

The screenshot displays the Beta CAE software interface. The main window shows a CAD structure tree with various components like '001542_A_BOV', '001543_A_B PILLAR LEFT', etc. A 'Save Subsystem' dialog box is open, showing the 'Save Subsystem properties' section. The 'Name' field is set to '001542', and the 'Template Name' field is set to 'Template Name for template'. The 'Save as New Subsystem' checkbox is checked. A yellow vertical bar is on the left side of the dialog box.

Save new 150% subsystem

Template name is saved

DM	Name	Module Id	Version	Transformer_Status
	001542_A_BOV	001542	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001543_A_B PILLAR LEFT	001543	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001544_A_B PILLAR RIGHT	001544	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001545_A_B PILLAR FRONT LEFT	001545	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001546_A_B PILLAR FRONT RIGHT	001546	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001547_A_B PILLAR REAR LEFT	001547	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001548_A_B PILLAR REAR RIGHT	001548	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001549_A_B PILLAR FRONT LEFT	001549	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001550_A_B PILLAR FRONT RIGHT	001550	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001551_A_B PILLAR REAR LEFT	001551	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001552_A_B PILLAR REAR RIGHT	001552	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001553_A_B PILLAR FRONT LEFT	001553	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001554_A_B PILLAR FRONT RIGHT	001554	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001555_A_B PILLAR REAR LEFT	001555	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001556_A_B PILLAR REAR RIGHT	001556	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001557_A_B PILLAR FRONT LEFT	001557	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001558_A_B PILLAR FRONT RIGHT	001558	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001559_A_B PILLAR REAR LEFT	001559	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001560_A_B PILLAR REAR RIGHT	001560	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001561_A_B PILLAR FRONT LEFT	001561	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001562_A_B PILLAR FRONT RIGHT	001562	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001563_A_B PILLAR REAR LEFT	001563	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001564_A_B PILLAR REAR RIGHT	001564	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001565_A_B PILLAR FRONT LEFT	001565	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001566_A_B PILLAR FRONT RIGHT	001566	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001567_A_B PILLAR REAR LEFT	001567	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001568_A_B PILLAR REAR RIGHT	001568	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001569_A_B PILLAR FRONT LEFT	001569	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001570_A_B PILLAR FRONT RIGHT	001570	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001571_A_B PILLAR REAR LEFT	001571	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001572_A_B PILLAR REAR RIGHT	001572	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001573_A_B PILLAR FRONT LEFT	001573	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001574_A_B PILLAR FRONT RIGHT	001574	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001575_A_B PILLAR REAR LEFT	001575	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001576_A_B PILLAR REAR RIGHT	001576	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001577_A_B PILLAR FRONT LEFT	001577	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001578_A_B PILLAR FRONT RIGHT	001578	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001579_A_B PILLAR REAR LEFT	001579	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001580_A_B PILLAR REAR RIGHT	001580	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001581_A_B PILLAR FRONT LEFT	001581	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001582_A_B PILLAR FRONT RIGHT	001582	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001583_A_B PILLAR REAR LEFT	001583	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001584_A_B PILLAR REAR RIGHT	001584	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001585_A_B PILLAR FRONT LEFT	001585	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001586_A_B PILLAR FRONT RIGHT	001586	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001587_A_B PILLAR REAR LEFT	001587	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001588_A_B PILLAR REAR RIGHT	001588	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001589_A_B PILLAR FRONT LEFT	001589	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001590_A_B PILLAR FRONT RIGHT	001590	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001591_A_B PILLAR REAR LEFT	001591	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
	001592_A_B PILLAR REAR RIGHT	001592	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1

Parts: 174 Part Files: 172
Found in DM: 0 No events: 0
Not found in DM: 172 No items retrieved: 172
CAD in DM

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 1

The screenshot displays a software interface for creating a CAE subsystem from a CAD structure. The left pane shows a hierarchical tree of components, and the right pane shows a 3D model of a car chassis. A yellow highlight is placed on the tree, and a text box labeled "Show in viewer" points to it.

Component Name	Creation Date	Import Name	Variant
001542 (REV. A, CSAP, Multivariant)	08-Jun-2023 22:47:53	tes_femobile	Multivariant
001542_A_BODY (Module ID: 001542)	08-Jun-2023 22:47:53		
001542_A_B PILLAR LEFT (Module ID: 001543)	08-Jun-2023 22:47:53		
001550_A_ROOF (Module ID: 001550)	08-Jun-2023 22:47:53		
001561_A_FRONT BUMPER (Module ID: 001561)	08-Jun-2023 22:47:53		
001565_A_SHOCK HOUSING REAR RIGHT (Module ID: 001565)	08-Jun-2023 22:47:53		
001568_A_SHOCK HOUSING REAR LEFT (Module ID: 001568)	08-Jun-2023 22:47:53		
001571_A_SHOCK HOUSING FRONT LEFT (Module ID: 001571)	08-Jun-2023 22:47:53		
001576_A_FLOOR (Module ID: 001576)	08-Jun-2023 22:47:53		
001597_A_RAIL REAR RIGHT (Module ID: 001597)	08-Jun-2023 22:47:53		
001603_A_C PILLAR LEFT (Module ID: 001603)	08-Jun-2023 22:47:53		
001607_A_X PILLAR LEFT (Module ID: 001607)	08-Jun-2023 22:47:53		
001610_A_MOUNTS & BRACKETS (Module ID: 001610)	08-Jun-2023 22:47:53		
001624_A_REAR BUMPER FRAME (Module ID: 001624)	08-Jun-2023 22:47:53		
001634_A_ROCKER PANEL RIGHT (Module ID: 001634)	08-Jun-2023 22:47:53		
001637_A_UNIBODY FRAME RIGHT (Module ID: 001637)	08-Jun-2023 22:47:53		
001642_A_C PILLAR RIGHT (Module ID: 001642)	08-Jun-2023 22:47:53		
001646_A_LIGHT MOUNTS (Module ID: 001646)	08-Jun-2023 22:47:53		
001650_A_REAR SEAT SUPPORT MOUNT (Module ID: 001650)	08-Jun-2023 22:47:53		
001662_A_A PILLAR RIGHT (Module ID: 001662)	08-Jun-2023 22:47:53		
001674_A_SHOCK HOUSING FRONT RIGHT (Module ID: 001674)	08-Jun-2023 22:47:53		
001679_A_UPPER RAIL FRONT RIGHT (Module ID: 001679)	08-Jun-2023 22:47:53		
001682_A_RAIL FRONT LEFT (Module ID: 001682)	08-Jun-2023 22:47:53		
001690_A_B PILLAR RIGHT (Module ID: 001690)	08-Jun-2023 22:47:53		
001699_A_UPPER RAIL FRONT LEFT (Module ID: 001699)	08-Jun-2023 22:47:53		
001702_A_UNIBODY FRAME LEFT (Module ID: 001702)	08-Jun-2023 22:47:53		
001707_A_RAIL FRONT RIGHT (Module ID: 001707)	08-Jun-2023 22:47:53		
001717_A_ROCKER PANEL LEFT (Module ID: 001717)	08-Jun-2023 22:47:53		
001720_A_RAIL REAR LEFT (Module ID: 001720)	08-Jun-2023 22:47:53		
001726_A_FLOOR (Module ID: 001726)	08-Jun-2023 22:47:53		

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 2

The screenshot illustrates the workflow for creating a CAE subsystem from a CAD structure using templates in Mode 2. The main interface shows a 'Teamcenter' menu with options: 'Login', 'Query for structure', and 'Query for variants'. A hand cursor points to 'Query for structure'. A 'Query TC' dialog box is open, showing the 'Export' section with 'Revision rule' set to 'Latest Working'. The 'Query Product' section has 'Item ID' set to '000898' and 'Revision' set to 'A'. A hand cursor points to the 'Search' button. Below the dialog, a 'Query R' dialog box is open, showing a table of results. A hand cursor points to the 'Import' button. The table contains the following data:

Item Id	Item Rev	Id	Object Name	User Name	Release Status	Date Released	Date Last Modifed
000898	A		TAURUS	infodba (infodba)			01-Jun-2023 16:49

Yellow callout boxes highlight the 'Query for structure' menu item and the 'Query for item id' text. Another yellow callout box highlights the 'Select revision' text. A blue box highlights the 'Import' button in the 'Query R' dialog box.

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 2

The screenshot displays the Beta CAE software interface. The main window shows a CAD structure tree in the Part Manager, listing various components such as 00008_A_TAURUS, 001542_A_BDV, 001500_A_REAR RIGHT DOOR, 001492_A_ELECTRICAL SYSTEMS, 001450_A_REAR LEFT DOOR, 001438_A_HVAC, 001424_A BRAKE SYSTEM, 001419_A_FUEL SYSTEMS, 001376_A_FRONT RIGHT DOOR, 001310_A_DASHBOARD, 001294_A_TRENS, 001284_A_PEDALS, 001189_A_SUSPENSION AND STEERING SYSTEM, 001149_A_COOLING SYSTEM & AIR CONDITION, 001146_A WINDSHIELD WASHER, 001129_A_ARMREST, 001086_A_FRONT LEFT DOOR, 001066_A_WHEELS, 001021_A_EXTERIOR, 001005_A_EXHAUST SYSTEMS, 000998_A_WINDOWS, 000991_A_STEERING WHEEL, 000944_A_ENGINE AND TRANSMISSION, and 000899_A_SEATS. A yellow box highlights the 'Check in DM' button at the bottom left of the Part Manager window.

Check in DM

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 2

The screenshot displays the Beta-CAE software interface. The main window shows a CAD structure tree with a list of parts and their properties. A blue box highlights the 'DM1: common' entries for several parts. A yellow box highlights the 'Check in DM' button at the bottom left of the interface.

ID#	Name	Module ID	Version	Transformation Utility
000906_A_TURBULE		000906	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
001542_A_BBW		001542	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
001726_A_FIREWALL		001726	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001743_A_FIREWALL_MED_BRKT_1_UP-L	001743	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001742_A_ENGINE_TOP_SHIELD-L	001742	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001741_A_FIREWALL_LOWER_PLATE-R	001741	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001740_A_FIREWALL_UPPER_3-L	001740	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001739_A_FIREWALL_LOWER_PLATE_BRKT_4-L	001739	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001738_A_FIREWALL_MED_BRKT_1_UP-L	001738	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001737_A_FIREWALL_PLATE-C	001737	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001736_A_FIREWALL_PLATE-L	001736	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001735_A_FIREWALL_BRKT_UP-L	001735	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001734_A_FIREWALL_LOWER_PLATE-L	001734	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001733_A_FIREWALL_PANEL	001733	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001732_A_FIREWALL_UPPER_2-L	001732	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001731_A_ENGINE_TOP_SHIELD-R	001731	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001730_A_FIREWALL_BRKT_UP-R	001730	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001729_A_FIREWALL_LOWER_PLATE_BRKT_4-R	001729	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001728_A_UPPER_PANEL-L	001728	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
DM1: common	001727_A_CONSOLE_MECHAS_BRKT	001727	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
	001726_A_RAIL REAR LEFT	001726	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
	001717_A_ROCKER PANEL LEFT	001717	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
	001717_A_RAIL FRONT RIGHT	001717	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
	001712_A_MIDBODY FRAME LEFT	001712	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1
	001699_A_UPPER RAIL FRONT LEFT	001699	A	1.0.0.0.0.1.1.0.0.0.1.1.0.0.0.1.1

Parts: 243 Part Files: 243
Found in DM: 132 File exists: 0
Not found in DM: 111 File does not exist: 143

Check in DM

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 2

The screenshot displays the KDMVOS v23.1.2 software interface. The main window shows a CAD structure tree for a part named '000898_A_TAURUS'. The tree is expanded to show a sub-assembly '001542_A_BW' containing various firewall components. A yellow highlight is placed over the '001726_A_FIREWALL' part in the tree. The 'Actions' menu is open, showing options like 'Download missing parts' and 'Generate subelements from templates'. A hand cursor is pointing at the 'Download missing parts' option. A text overlay 'Download parts from Teamcenter' is positioned over the menu. At the bottom of the interface, a summary table shows the status of parts and files.

Parts	743	Part Files	743
Found in DM	132	File exists	0
Not found in DM	571	File does not exist	743

Check in DM

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 2

The screenshot displays the KDMVOS v23.1.2 software interface. The main window shows a CAD structure tree with a hierarchy starting from 'DM' and '000898_A_TAURUS'. A 'Part Manager' window is open on the right, showing a list of parts with columns for Name, ID, and a binary code. A yellow box highlights the 'Generate subsystems from templates' action in the 'Actions' menu. A text overlay 'Generate subsystems automatically' is positioned over the highlighted action. The bottom status bar shows 'Parts: 743' and 'Part Files: 743', with a breakdown of found and not found items.

Name	ID	Code
DM		
000898_A_TAURUS		
001542_A_BW	001542	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001726_A_FIREWALL	001726	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001743_A_FIREWALL_MID_BRKT_I_UP-I	001743	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001742_A_ENGINE_TOP_SHIELD-L	001742	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001741_A_FIREWALL_LOWER_PLATE-R	001741	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001740_A_FIREWALL_UPPER_3-I	001740	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001738_A_FIREWALL_MID_BRKT_I_UP-I	001738	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001737_A_FIREWALL_PLATE-O	001737	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001735_A_FIREWALL_BRKT_UP-I	001735	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001734_A_FIREWALL_LOWER_PLATE-L	001734	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001733_A_FIREWALL_PANEL	001733	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001732_A_FIREWALL_UPPER_2-I	001732	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001731_A_ENGINE_TOP_SHIELD-R	001731	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001730_A_FIREWALL_BRKT_UP-R-I	001730	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001729_A_FIREWALL_LOW_PLATE_BRKT_R-I	001729	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001728_A_UPPER_FIREWALL-I	001728	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001727_A_CONTROL_MODULE_BRKT	001727	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001720_A_RAIL REAR LEFT	001720	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001717_A_ROCKER PANEL LEFT	001717	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001707_A_RAIL FRONT RIGHT	001707	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001702_A_UNIBODY FRAME LEFT	001702	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001699_A_UPPER RAIL FRONT LEFT	001699	A 1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1

Parts: 743
Found in DM: 132
Not found in DM: 571
Part Files: 743
File exists: 0
File does not exist: 743

Use case 2: Create CAE subsystem from CAD structure using templates – Mode 2

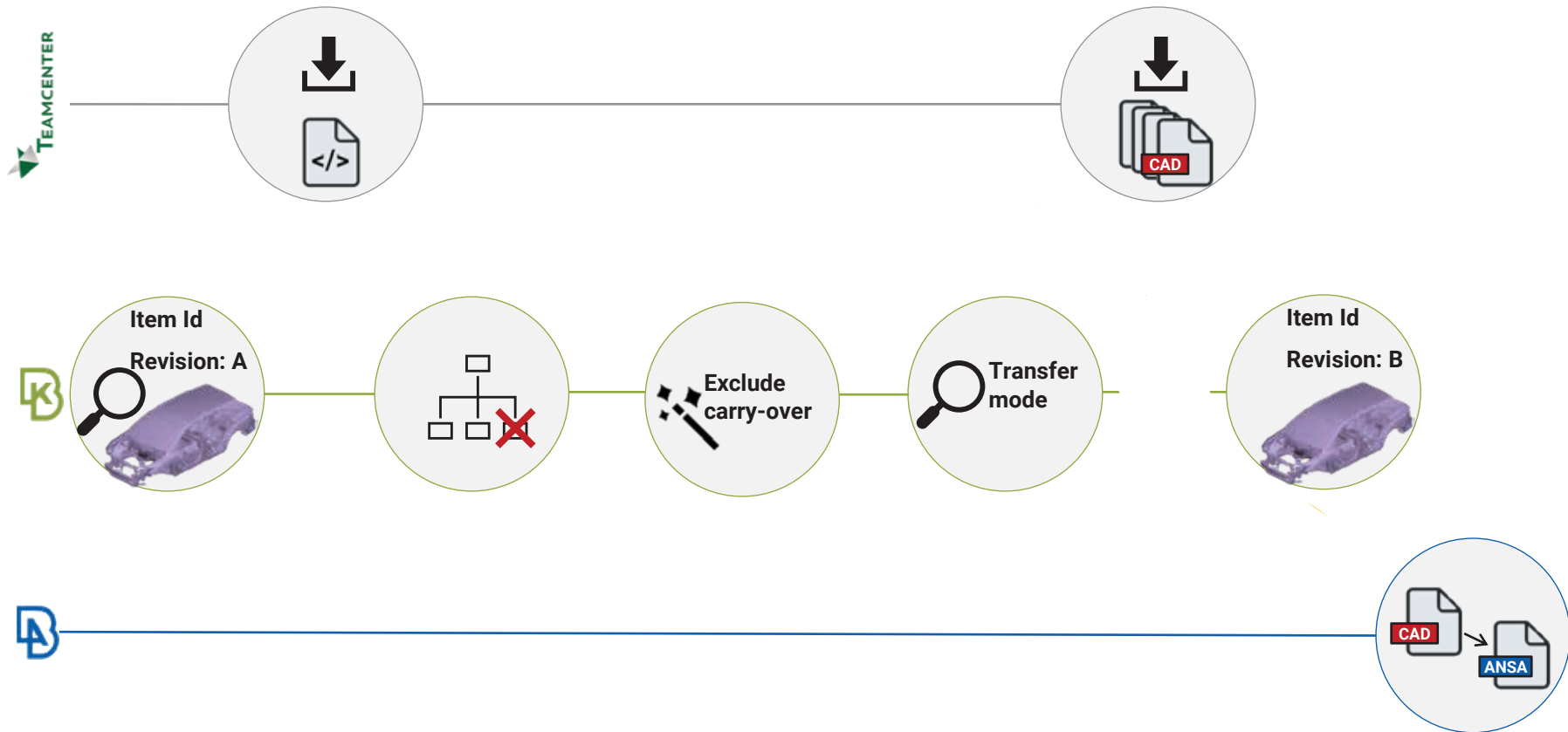
The screenshot displays the Beta CAE software interface. The main window is titled 'BETA CAE' and shows a 'Part Manager' window. The 'Contents' panel on the left lists various subsystems with their IDs and modification dates. The 'Part Manager' panel on the right shows a hierarchical tree of parts, including '000902_A_TURBS', '000903_A_SCATS', and '000904_A_ENGINE AND TRANSMISSION'. The 'Parts' panel at the bottom right shows a summary of parts and files.

ID	Name	Modifi- Date	Template Name	Variant
000900	(SEATS , A , conf , -)	10-Jun-2023 22:04:01		
000901	(ENGINE AND TRANSMISSION , A , conf , -)	10-Jun-2023 22:07:14		
000902	(STEERING WHEEL , A , conf , -)	10-Jun-2023 22:09:12		
000903	(EXHAUST SYSTEMS , A , conf , -)	10-Jun-2023 22:09:00		
001023	(EXTERIOR , A , conf , -)	10-Jun-2023 22:09:30		
001129	(ARMREST , A , conf , -)	10-Jun-2023 22:13:17		
001149	(WIPERHEAD , A , conf , -)	10-Jun-2023 22:13:51		
001149	(COOLING SYSTEM , A , conf , -)	10-Jun-2023 22:13:28		
001180	(SUSPENSION STEERING , A , conf , -)	10-Jun-2023 22:17:05		
001204	(PEDALS , A , conf , -)	10-Jun-2023 22:12:08		
001310	(DASHBOARD , A , conf , -)	10-Jun-2023 22:17:03		
001410	(FUEL SYSTEM , A , conf , -)	10-Jun-2023 22:13:08		
001424	(BRAKE SYSTEM , A , conf , -)	10-Jun-2023 22:14:03		
001430	(HVAC , A , conf , -)	10-Jun-2023 22:14:31		
001542	(BRV , A , conf , -)	10-Jun-2023 22:13:30		
001000	(DOORS , A , conf , -)	10-Jun-2023 22:04:20		

Part Name	Modifi- Date	Template Name	Variant
000902_A_TURBS	000902	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
000903_A_SCATS	000903	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
000904_A_ENGINE AND TRANSMISSION	000904	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
000902_A_STEERING WHEEL	000902	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
000903_A_WINDOWS	000903	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001003_A_EXHAUST SYSTEMS	001003	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001023_A_EXTERIOR	001023	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001086_A_WHEELS	001086	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001086_A_FRONT LEFT DOOR	001086	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001129_A_ARMREST	001129	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001149_A_WIPERHEAD WASHER	001149	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001149_A_COOLING SYSTEM & AIR CONDITION	001149	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001180_A_SUSPENSION AND STEERING SYSTEM	001180	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001204_A_PEDALS	001204	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001294_A_TIRMS	001294	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001310_A_DASHBOARD	001310	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001370_A_FRONT RIGHT DOOR	001370	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001410_A_FUEL SYSTEMS	001410	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001424_A_BRAKE SYSTEM	001424	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001430_A_HVAC	001430	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001430_A_REAR LEFT DOOR	001430	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001492_A_ELECTRICAL SYSTEMS	001492	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001500_A_REAR RIGHT DOOR	001500	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1
001542_A_BRV	001542	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1

Parts: 243 Part Files: 243
Found in DB: 1 File exists: 0
Not found in DB: 1 File does not exist: 143

Use case 3: Update subsystem from TC



Use case 3: Update subsystem from TC

The screenshot displays the Beta-CAE software interface. The main window shows a tree view of a subsystem structure. A context menu is open over the 'Teamcenter' node, with the 'Check for updates' option highlighted by a yellow circle and a mouse cursor. Below the context menu, a yellow bar highlights the 'Check for updates' text.

Component Name	Creation Date	Template Name	Variant
101542 (REV , A , csaF_MultVariant)	08-Jun-2023 12:14:53	beta_Template	MultVariant
100000 (FRONT_DOORS , A , conf , 1)	08-Jun-2023 18:23:30		
120000_A_FRONT_DOORS (Module ID: 100000)	08-Jun-2023 18:23:30		
201001_A_FRONT_DOOR_LT (Module ID: 201001)	08-Jun-2023 18:23:30		
302001_A_HINGES_LT (Module ID: 302001)	08-Jun-2023 18:23:30		
BACK_FRAME (Module ID: 607000)	08-Jun-2023 18:23:26		
CASE_LT (Module ID: 607002)	08-Jun-2023 18:23:27		
EXTERIOR_PANEL_LT (Module ID: 607041)	08-Jun-2023 18:23:28		
LOCK_REINFORCEMENT (Module ID: 607020)	08-Jun-2023 18:23:25		
INNER_REINFORCEMENT (Module ID: 607090)	08-Jun-2023 18:23:26		
REINFORCEMENT_BAR (Module ID: 607050)	08-Jun-2023 18:23:25		
REINFORCEMENT_BILT_LT (Module ID: 607101)	08-Jun-2023 18:23:27		
SIDE_IMPACT_BAR (Module ID: 607110)	08-Jun-2023 18:23:25		
UPPER_FRAME (Module ID: 607030)	08-Jun-2023 18:23:25		
202001_A_FRONT_DOOR_RT (Module ID: 202001)	08-Jun-2023 18:23:30		
302001_A_HINGES_RT (Module ID: 302002)	08-Jun-2023 18:23:30		
BACK_FRAME (Module ID: 607000)	08-Jun-2023 18:23:26		
CASE_RT (Module ID: 608041)	08-Jun-2023 18:23:28		
EXTERIOR_PANEL_RT (Module ID: 608041)	08-Jun-2023 18:23:28		
LOCK_REINFORCEMENT (Module ID: 607020)	08-Jun-2023 18:23:25		

DM Modification Data

Name	Value
Template Name	
DM Properties	
Module ID	
Project	
Release	
Variant	
Iteration	
Loadcase Variant	

N/A info

Use case 3: Update subsystem from TC

The screenshot displays the KORDOS v23.2 software interface. A 'Query TC' dialog box is open, showing the following details:

- Export:** Revision rule: Latest Working
- Query Product:** Item ID: 100000, Revision: B, Status: Result found
- Buttons:** Search, Import, Cancel

Yellow callouts and arrows indicate the following actions:

- Query for item id:** Points to the 'Item ID' field containing '100000'.
- Select revision to import:** Points to the 'Revision' field containing 'B' and the 'Import' button.

In the background, a table lists various components and their release dates. A yellow vertical bar highlights the '100000' item ID in the list.

Item ID	Release Date	Release Name	Version
101542 (REV , A , csaF , Multivariant)	08-Jun-2023 22:47:53	ba_Fairlane	Multivariant
100000 (FRONT_DOORS , A , conf , 3)	08-Jun-2023 18:23:09		
120990_A_RIGHT_DOORS (Module ID: 100000)	08-Jun-2023 18:23:09		
201001_A_FRONT_DOOR_LT (Module ID: 201001)	08-Jun-2023 18:23:09		
302331_A_HINGES_LT (Module ID: 302331)	08-Jun-2023 18:23:09		
BACK_FRAME (Module ID: 400001)	08-Jun-2023 18:23:09		
CASE_LT (Module ID: 600001)	08-Jun-2023 18:23:09		
EXTERIOR_PANEL_LT (Module ID: 600002)	08-Jun-2023 18:23:09		
LOCK_REINFORCEMENT (Module ID: 607001)	08-Jun-2023 18:23:09		
MINOR_REINFORCEMENT (Module ID: 607002)	08-Jun-2023 18:23:09		
REINFORCEMENT_BAR (Module ID: 607003)	08-Jun-2023 18:23:09		
REINFORCEMENT_BILT_LT (Module ID: 607004)	08-Jun-2023 18:23:09		
SIDE_IMPACT_BAR (Module ID: 607005)	08-Jun-2023 18:23:09		
UPPER_FRAME (Module ID: 607006)	08-Jun-2023 18:23:09		
202001_A_FRONT_DOOR_RT (Module ID: 202001)	08-Jun-2023 18:23:09		
302331_A_HINGES_RT (Module ID: 302002)	08-Jun-2023 18:23:09		
BACK_FRAME (Module ID: 400001)	08-Jun-2023 18:23:09		
RT (Module ID: 600003)	08-Jun-2023 18:23:09		
ROOF_PANEL_RT (Module ID: 600004)	08-Jun-2023 18:23:09		

Below the dialog box, a table shows release data:

Release Status	Date Released	Date Last Modified
a)		08-Jun-2023 23:15

Use case 3: Update subsystem from TC

The screenshot shows the Beta-CAD interface with a CAD model structure on the left and a parts list on the right. The parts list is titled 'PARTS' and contains the following data:

DM	Name	Module ID	Version	Transformation_Matrix	Distances	Part File
100000	100000_B_FRONT_DOORS	100000	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	0
201001	201001_B_FRONT_DOOR_LT	302001	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	0
302001	302001_A_HINGES_LT	302001	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	0
607002	607002_A_CASE_LT	607002	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	1
607010	607010_A_SIDE_IMPACT_BAR	607010	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607020	607020_A_LOCK_REINFORCEMENT	607020	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607030	607030_A_UPPER_FRAME	607030	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607041	607041_A_EXTERIOR_PANEL_LT	607041	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	1
607050	607050_B_REINFORCEMENT_BAR	607050	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607060	607060_B_BACK_FRAME	607060	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607090	607090_B_HINGOR_REINFORCEMENT	607090	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607101	607101_B_REINFORCEMENT_BELT_LT	607101	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	1
607120	607120_B_GLASS_CHANNEL	607120	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607130	607130_B_GLASS_CHANNEL HOLDER LT	607130	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	1
202001	202001_B_FRONT_DOOR_RT	202001	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	0
302002	302002_A_HINGES_RT	302002	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	0
607010	607010_A_SIDE_IMPACT_BAR	607010	A	0.996364861_0.3043266053400008	2	1
607020	607020_A_LOCK_REINFORCEMENT	607020	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607030	607030_A_UPPER_FRAME	607030	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607050	607050_B_REINFORCEMENT_BAR	607050	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607060	607060_B_BACK_FRAME	607060	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607090	607090_B_HINGOR_REINFORCEMENT	607090	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
607120	607120_B_GLASS_CHANNEL	607120	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.2	1	1
600001	600001_A_CASE_RT	600001	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	1
600041	600041_A_EXTERIOR_PANEL_RT	600041	A	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	1
608011	608011_B_REINFORCEMENT_BELT_RT	608011	B	1.0.0.0.1.1.0.0.0.0.1.0.0.0.1.1	1	1

At the bottom of the parts list, there is a 'Check in DM' button. A yellow bar highlights this button, and a hand cursor is pointing at it. Below the button, there is a status bar with the following information:

Parts	19	Part Files	19
File found in DM	7	File exists	0
File found in DM	7	File does not exist	19

Check in DM

Use case 3: Update subsystem from TC

The screenshot displays the Beta-CAD interface. On the left, a tree view shows the CAD model structure under 'Contents', with '100000_FRONT_DOORS_A_(conf...)' selected. The main area shows a table of parts with columns for Name, Module ID, Version, Transformation Matrix, and Instance. A blue box highlights the 'DM' column, which contains the following entries:

DM	Name	Module ID	Version	Transformation Matrix	Instance
	100000_B_FRONT_DOORS	100000	B	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
	201001_B_FRONT_DOOR_LT	201001	B	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
	202001_A_HINGES_LT	202001	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
DM1: common	607902_A_CASE_LT	607902	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	2
DM1: common	607813_A_SIDC_IMPACT_BAR	607813	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
DM1: common	607923_A_LDOOR_REINFORCEMENT	607923	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,2	1
DM1: common	607933_A_UPPER_FRAME	607933	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
DM1: common	607941_A_EXTENSION_PANEL_LT	607941	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
	607933_B_REINFORCEMENT_BAR	607933	B	1,0,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
	607980_B_BACK_FRAME	607980	B	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,1,2	1
	607990_B_MIRROR_REINFORCEMENT	607990	B	1,0,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
	607101_B_REINFORCEMENT_BELT_LT	607101	B	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
	607123_B_GLASS_CHANNEL	607123	B	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
	607133_B_GLASS_CHANNEL HOLDER LT	607133	B	1,0,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
	232001_B_FRONT_DOOR_RT	202001	B	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
	302002_A_HINGES_RT	302002	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
DM1: common	607813_A_SIDC_IMPACT_BAR	607813	A	8,996364861,4,604326605340000	1
DM1: common	607923_A_LDOOR_REINFORCEMENT	607923	A	1,0,0,0,0,0,1,0,0,0,0,0,1,0,0,0,2	1
DM1: common	607933_A_UPPER_FRAME	607933	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
DM1: common	607953_B_REINFORCEMENT_BAR	607953	B	1,0,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
	607980_B_BACK_FRAME	607980	B	1,0,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
	607990_B_MIRROR_REINFORCEMENT	607990	B	1,0,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
DM1: common	607123_B_GLASS_CHANNEL	607123	B	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,2	1
DM1: common	608002_A_CASE_RT	608002	A	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
DM1: common	608041_A_EXTENSION_PANEL_RT	608041	A	1,0,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1
	608101_B_REINFORCEMENT_BELT_RT	608101	B	1,0,0,0,0,1,0,0,0,0,1,0,0,0,0,1,1	1

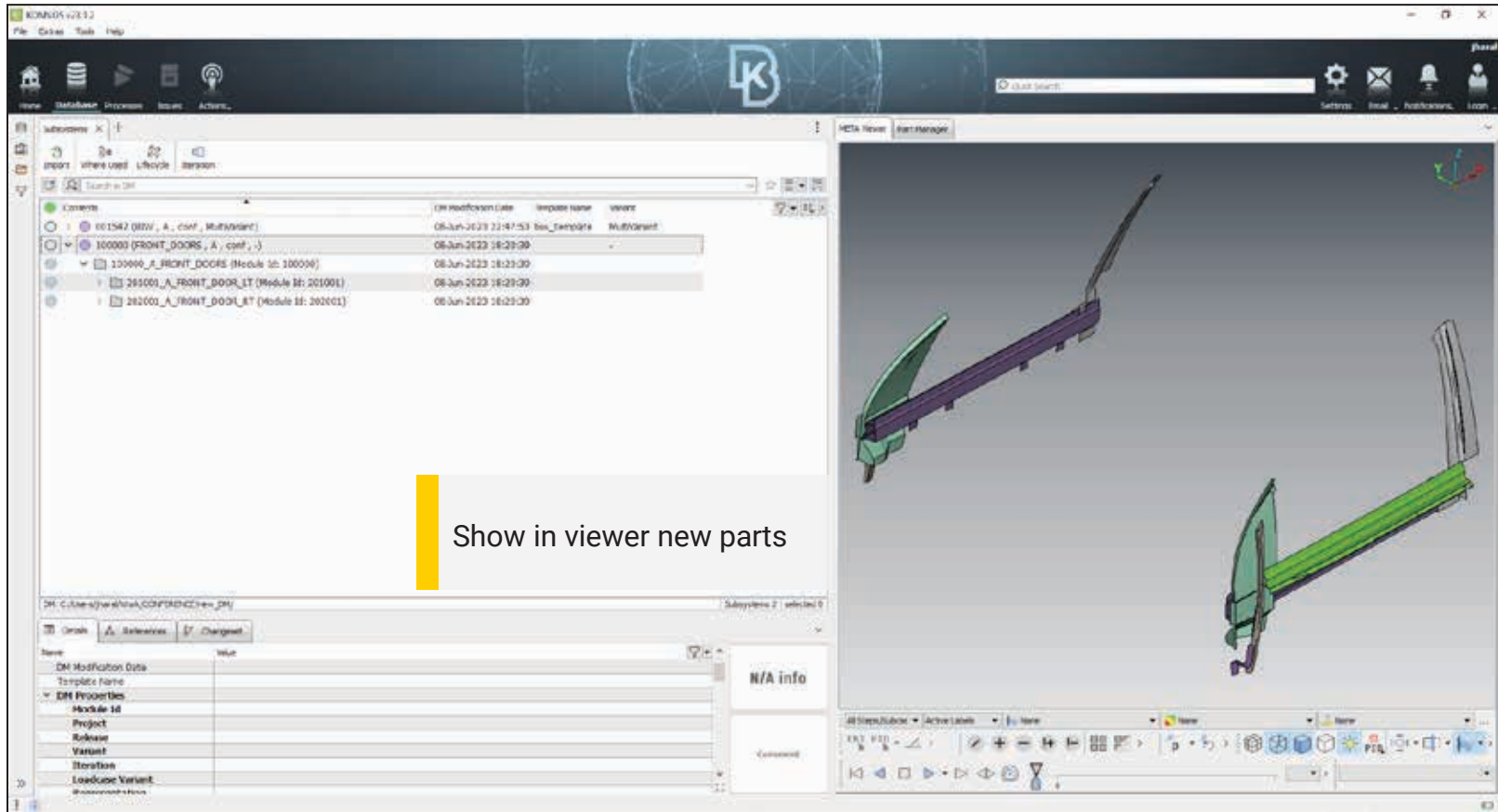
A yellow box with the text 'Check in DM' is positioned below the table. At the bottom of the table, a summary row shows: Parts: 19, Part Files: 19, DM Found in DM: 11, File does not exist: 0, DM Not Found in DM: 8, File does not exist: 0.

Use case 3: Update subsystem from TC

The screenshot shows the Beta-CAE software interface. The main window displays a tree view of parts, with a blue box highlighting a selection. A yellow circle highlights the 'Download missing parts' button in the 'Actions' menu. A yellow vertical bar highlights the 'Download missing parts' button in the context menu. A summary table at the bottom shows the status of parts and files.

Parts	10	Part Files	10
Found in DB	11	File exists	6
Not found in DB	9	File does not exist	10

Use case 3: Update subsystem from TC



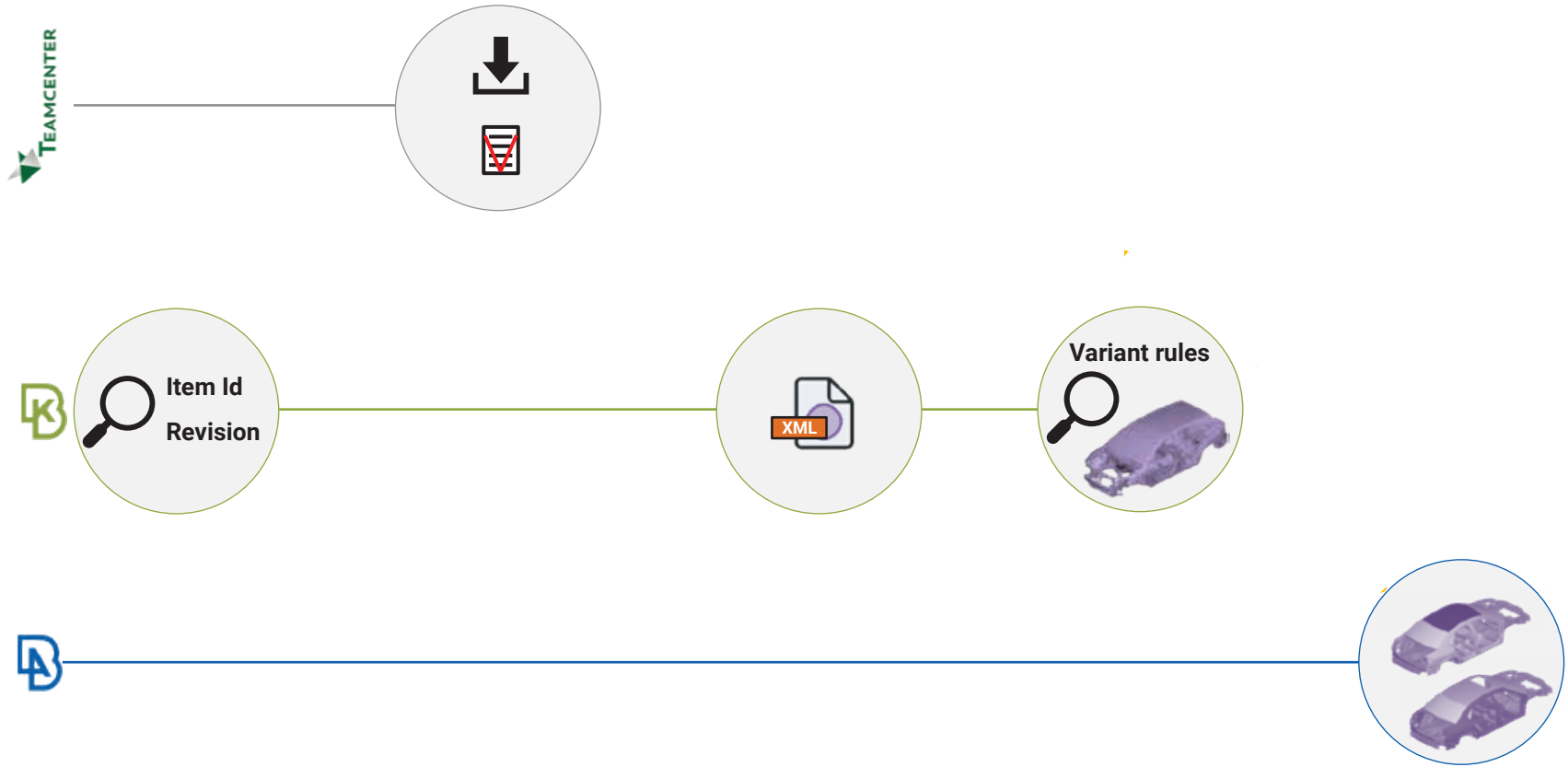
Show in viewer new parts

Use case 3: Update subsystem from TC

Save new version of subsystem

Component	Module ID	Variant	Project	Release	Iteration	LoadCase Variant	File Type	Representation
FRONT_DOORS	100000	conf		R	001		AMSA	
FRONT_DOORS_LT	201001							
A_FRONT_DOORS_LT	302001							
A_CASE_LT	607002							
A_SIDE_IMPACT_BAR	607010							
A_DOCK_REINFORCEMENT	607020							

Use case 4: Import variant rules and create 100% subsystems



Use case 4: Import variant rules and create 100% subsystems

Teamcenter

- Login
- Query for structure
- Query for variants

Query TC

Export

Revision rule: Latest Working

Query Variant Rules

Item ID: 001542 Search

CAD Revision: A

Version:

Status: Item found in TC.

OK Cancel

Item ID	Date Released	Date Last Modified
001542	01-Jun-2023 16:55	01-Jun-2023 16:55

total 1 | visible 1

Query for item id

Select revision

Use case 4: Import variant rules and create 100% subsystems

The screenshot displays the KORDOS v23.2 application window. On the left, a sidebar shows a tree view with 'Subsystems' expanded. The main area features a table of variant rules. A yellow callout box with the text 'Variant rules saved in library' points to the 'Library Items' section in the sidebar. Below the table, a detailed view of a variant rule is shown, including its name and various attributes. To the right, an XML editor displays the structure of the variant rule, showing columns and rows for object names and descriptions.

Part	Product ID	Version	CAD Revision	Software Version	User	DN Creation Date	DN Modification Date
001542	001542	001					
001	001542	001					
001	001542	001	A	23.1.2	Paul	08-Jun-2023 13:11	08-Jun-2023 23:57:44

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<DisplayDefinitionTable>
  <columns>
    <column_entry relation_to_base="object name">Object Name</column_entry>
    <column_entry relation_to_base="object desc">Description</column_entry>
    <column_entry relation_to_base="last mod date">Date Last Modified</column_entry>
    <column_entry relation_to_base="contexts">Contexts</column_entry>
  </columns>
  <rows>
    <row>
      <row_element property_name="object name">roof_sun</row_element>
      <row_element property_name="object desc"></row_element>
      <row_element property_name="last mod date">01-Jun-2023 16:55</row_element>
      <row_element property_name="contexts">{001542}roof = sun</row_element>
    </row>
    <row>
      <row_element property_name="object name">roof_normal</row_element>
      <row_element property_name="object desc"></row_element>
      <row_element property_name="last mod date">01-Jun-2023 16:54</row_element>
      <row_element property_name="contexts">{001542}roof = normal</row_element>
    </row>
  </rows>
</DisplayDefinitionTable>
```

Use case 4: Import variant rules and create 100% subsystems

The screenshot displays a CAD application window with a 3D model of a car chassis on the right. On the left, a tree view shows a hierarchy of components under 'Teamcenter'. A context menu is open over the tree, with 'Create variants' selected. A dialog box titled 'Variants Management: 150% Product' is overlaid on the screen. The dialog contains a table with the following data:

Create	Variant	Variant Description
<input checked="" type="checkbox"/>	roof_normal	
<input checked="" type="checkbox"/>	roof_sun	

At the bottom of the dialog, it shows 'total 2 | selected 0'. The 'OK' button is highlighted with a hand cursor.

Use case 4: Import variant rules and create 100% subsystems

The screenshot displays the KORDOS v23.2 software interface. The top menu bar includes 'File', 'Extras', 'Tools', and 'Help'. The main window is divided into several panes:

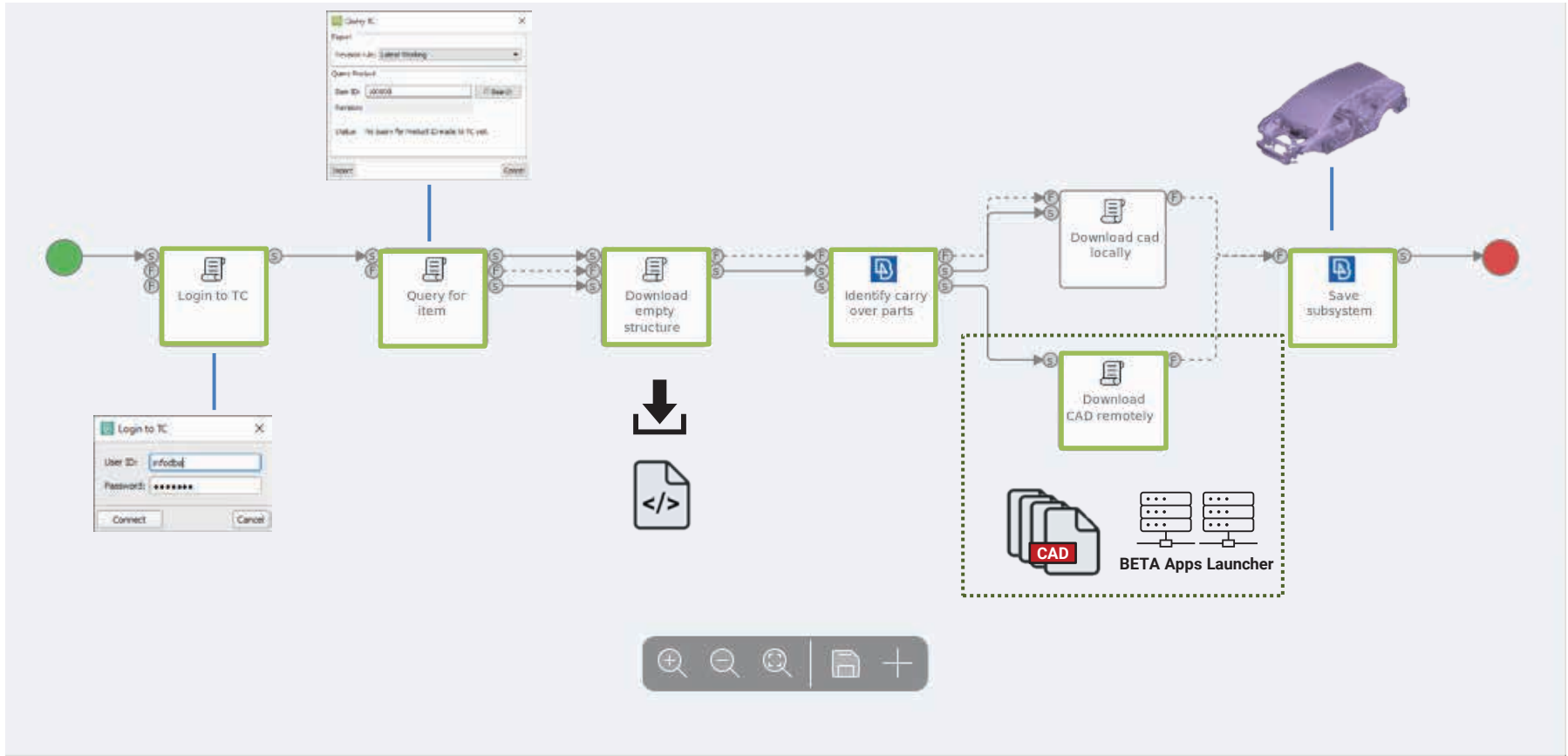
- Variant Rules Table:** A table listing variant rules with columns for 'DH Modification Date', 'Template Name', and 'Variant'. The table contains the following data:

	DH Modification Date	Template Name	Variant
001542 (BHV , A , conf , MultiVariant)	08-Jun-2023 22:17:53	bin_template	MultiVariant
001542 (BHV , A , conf , normal_roof)	09-Jun-2023 06:23:00	bin_template	normal_roof
001542 (BHV , A , conf , sun_roof)	09-Jun-2023 06:13:41	bin_template	sun_roof
100000 (PROHIT_DOORS , A , conf , -)	08-Jun-2023 16:23:39		
100000 (PROHIT_DOORS , B , conf , -)	08-Jun-2023 23:37:39		
- 3D Model View:** A 3D rendering of a car chassis with various components highlighted in different colors (green, purple, red, yellow). The model is shown from two perspectives: a top-down view and a side view.
- Details Panel:** Located at the bottom left, it shows fields for 'Name', 'Status', 'User', 'DH Modification Date', 'Template Name', and 'DH Properties'. The 'DH Properties' section includes 'Module ID', 'Project', 'Release', and 'Variant'. The current view shows 'N/A info'.

Adding value to the process with SPDRM

- All use cases can be executed as SPDRM processes
 - A process will ensure that all steps will be followed
 - A process can be paused and continued from the point you left it
 - A process can be executed from any user with less software experience
- All use cases can run automatically through scheduled jobs
- Time consuming jobs or resource consuming jobs can be executed through BETA Apps Launcher

Adding value to the process with SPDRM



Adding value to the process with SPDRM

The screenshot shows the 'Scheduled Jobs' application window. At the top, there is a 'Create job' button and a toolbar with icons for search, refresh, and other functions. Below this is a table with the following data:

Job Id	Active	Job Name	Executing User	Executing Role	Last Execution	Last Execution State	Next Execution	Creator	Start
51	<input checked="" type="checkbox"/>	Import from TC nightly	admin	Administrators			10/06/2023 22:00	admin	10/06/2023

Below the table, there is a large clock icon. At the bottom of the window, there is a 'Past Executions' section and a 'Job Properties' dialog box. The 'Job Properties' dialog box has the following fields:

- Name: Import from TC nightly
- Starts: 10/06/2023 22:00
- Repeats: Every 1 Days
- Ends: 15/06/2023 18:00
- Creator: admin
- Executing User: admin
- Executing Role: Administrators
- BETA Apps Launcher: spdrm-sszera-gr
- Generic Script Action: TC to SPDRM (remote)
- Definition Workflow:
- Active:

An 'Update' button is located at the bottom right of the dialog box.

Scheduled job

Adding value to the process with SPDRM

```
#The Teamcenter Services libraries location.
#They are necessary for connecting to the Teamcenter server and using the Teamcenter functionality.
SOA

#File client cache
FMS_HOME

#Address of the host
TC_HOST

#Single Sign-on
#Enter 0 for allow
TC_SSO

#SSO application ID
TC_SSO_APP_ID

#SSO login service
TC_SSO_LOGIN_URL

#This transfer mode
TransferModeWithout

#This transfer mode
TransferModeWithFile

#Use this Revision
RevisionRule

ItemType

#Enter attribute to
QueryAttribute

SkipSubTypes
SkipPartNames
```

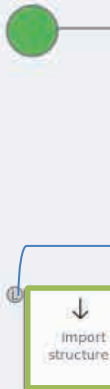
```
jharal_20230620_223415.log - Notepad
File Edit Format View Help
Date: June 06 2023, 10:18:16
Process: TC to SPDRM
User: jharal
-----
Product Id: 001542
Revision: 001
Revision rule: latest Working
-----
Downloading parts hierarchy from Teamcenter...
PLMXML with parts hierarchy successfully exported
Downloading variants from TC...
Variants rules successfully exported from TC
Successfully uploaded variant rules as a Library Item of type "Variant Rules" with handle id 21501
-----
Processing 150% model in ANSA
Creating subsystems...
Subsystems 1
Checking if subsystem exists in SPDRM
Subsystem with Product id: 001542 CAD Revision: 001 Name: BIW Variant: MultiVariant does not exist
Saving 150% subsystem
Activating configuration sun_roof
Checking if subsystem with Variant: sun_roof exists in SPDRM
Subsystem with Product id: 001542 CAD Revision: 001 Name: BIW Variant: sun_roof does not exist
Saving 100% subsystem
Activating configuration normal_roof
Checking if subsystem with Variant: normal_roof exists in SPDRM
Subsystem with Product id: 001542 CAD Revision: 001 Name: BIW Variant: normal_roof does not exist
Saving 100% subsystem
Carry over parts: 95
New parts: 32
Exporting JT files from Teamcenter...
PLMXML exported successfully
Parts successfully attached a JT representation file: 32
```

parts locations

gs

download settings

tings



Summary

- Direct communication with Teamcenter with minimum configuration
- Generate subsystems out from CAD structures of Teamcenter
- Easy creation and maintenance of subsystems using templates
- Import of variant conditions
- Upgrade the solution through SPDRM processes
- Schedule repetitive jobs in SPDRM
- Execute demanding jobs in remote resources through Beta Apps Launcher