

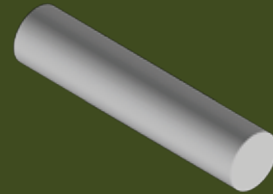
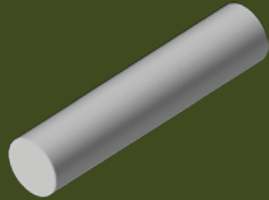


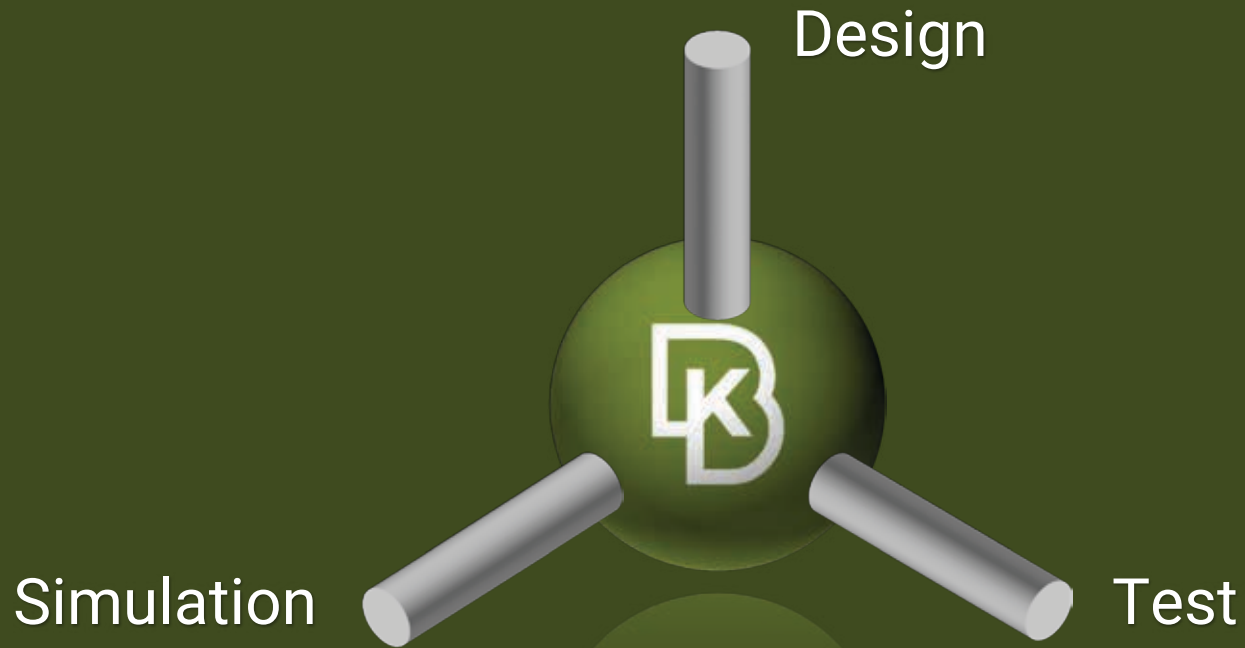
**Groundbreaking
Simulation Solutions**

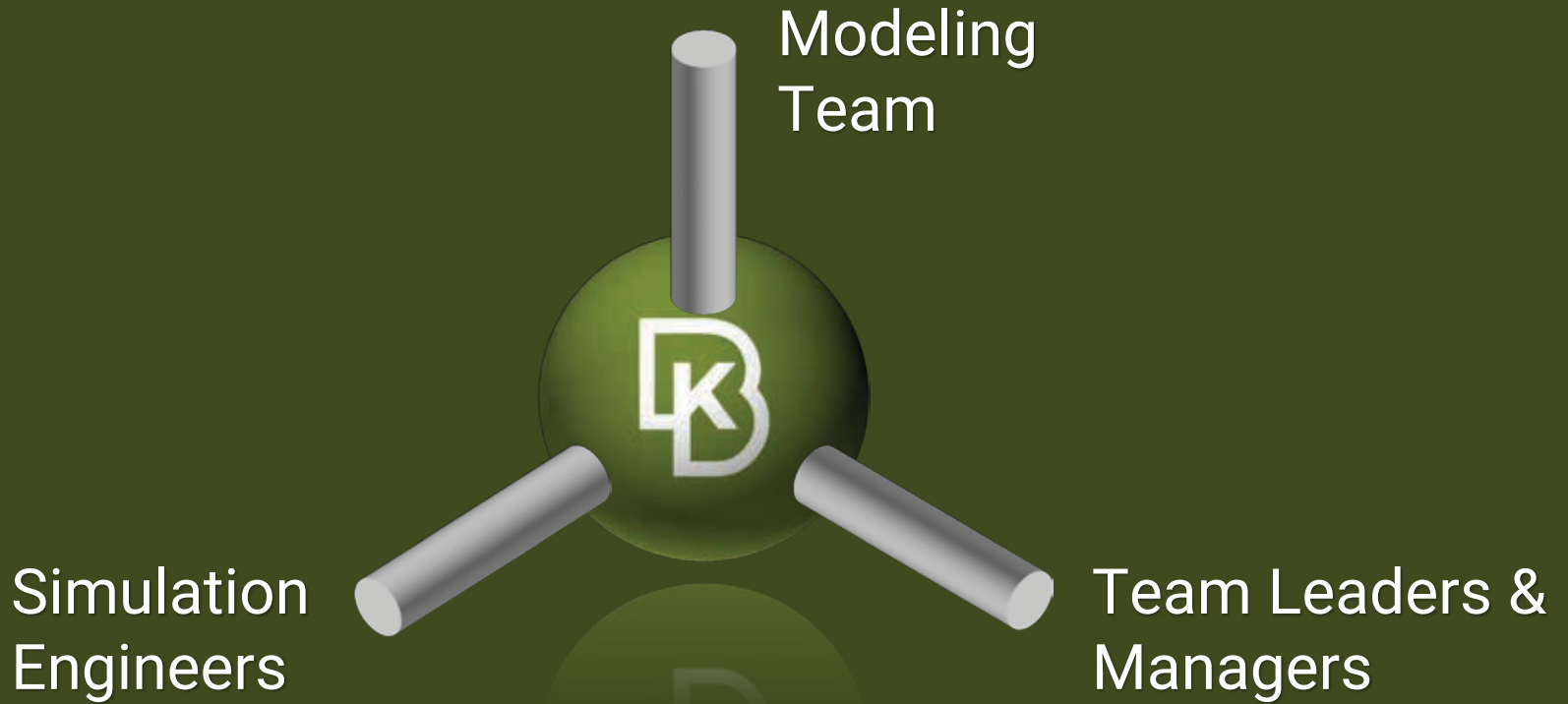
physics on screen

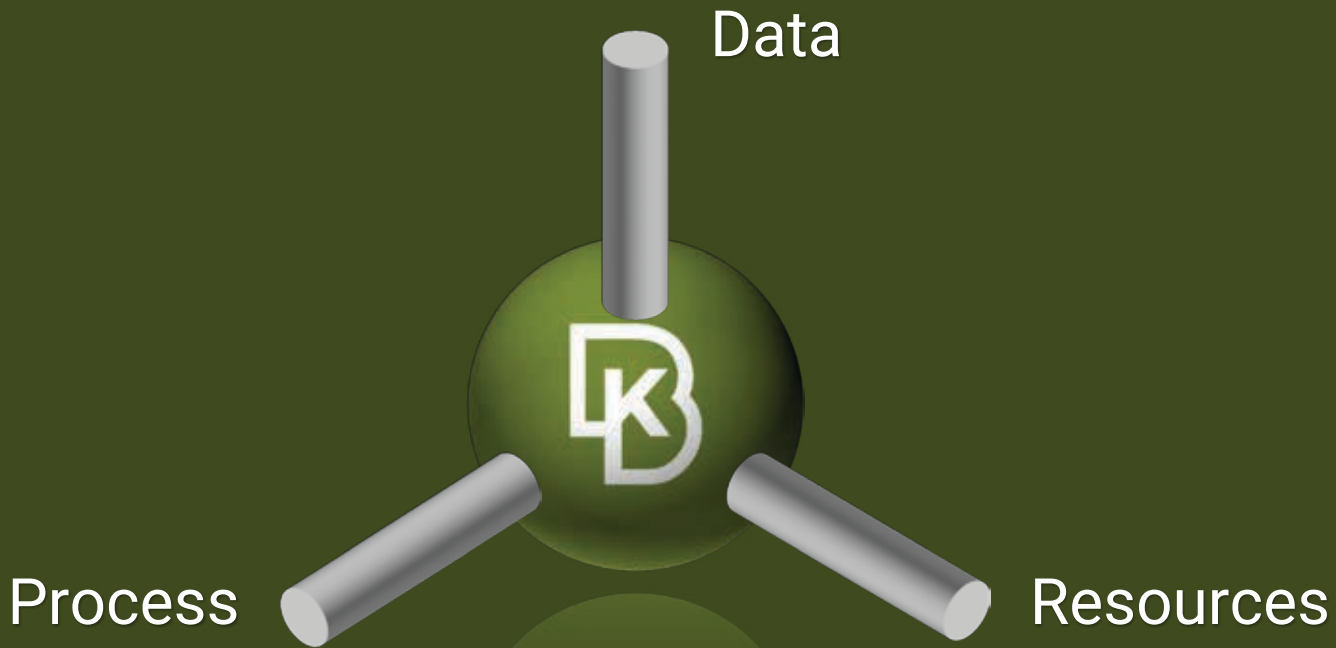
Reintroducing KOMVOS as a Simulation Data and Process Management Desktop client

Irene Makropoulou

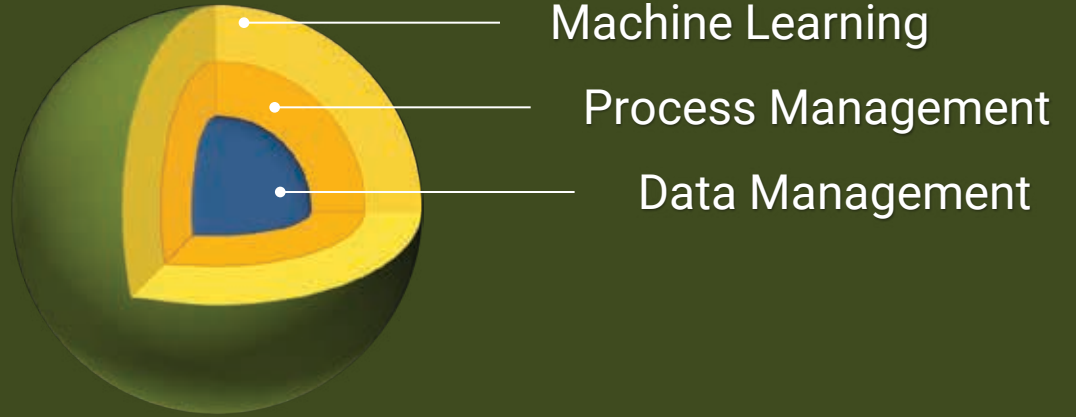


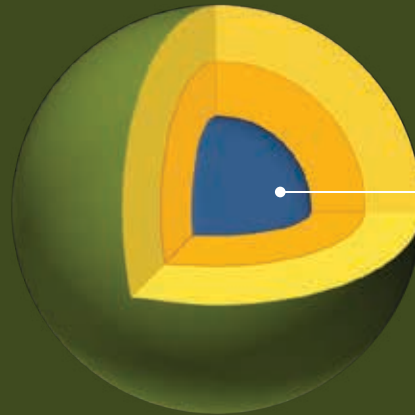










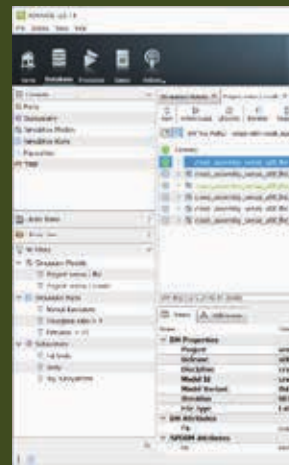
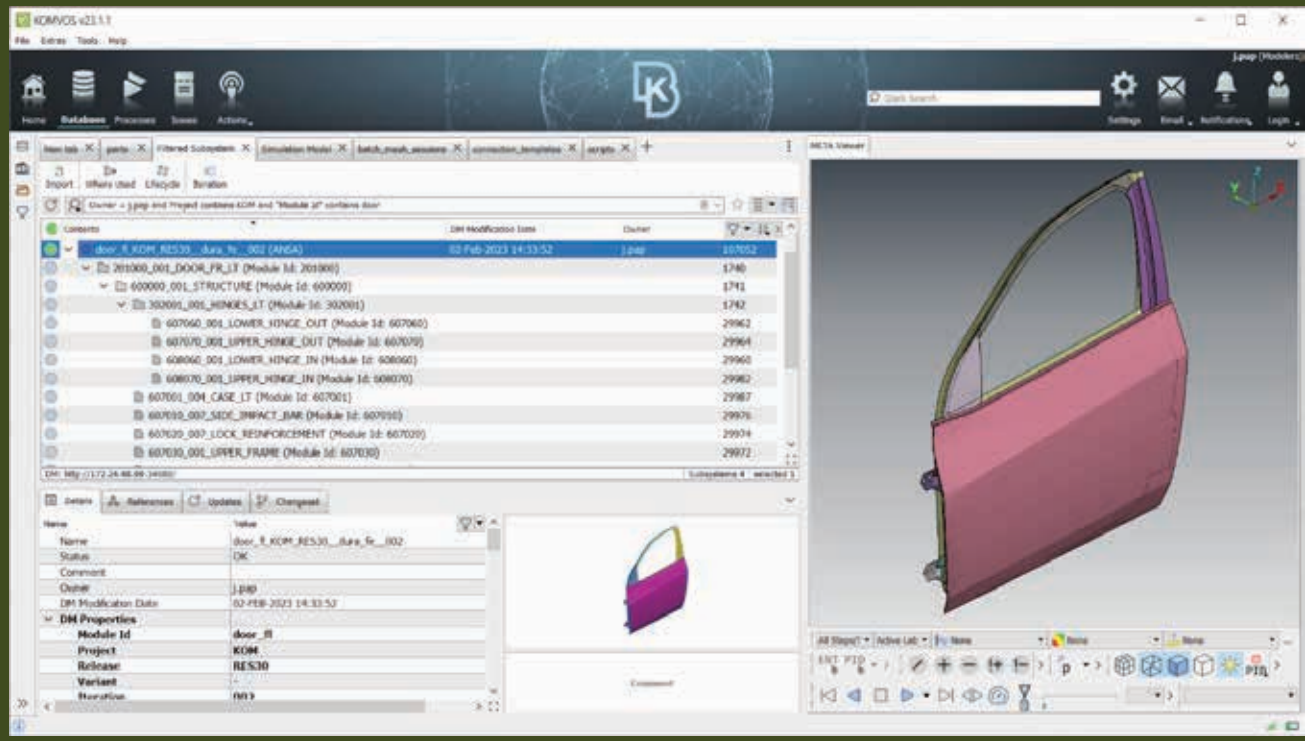


Machine Learning

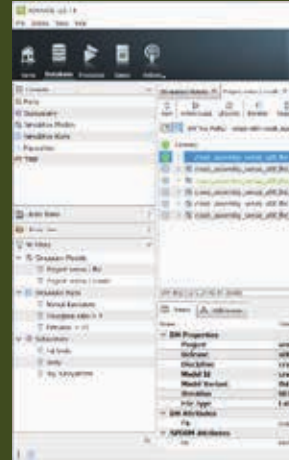
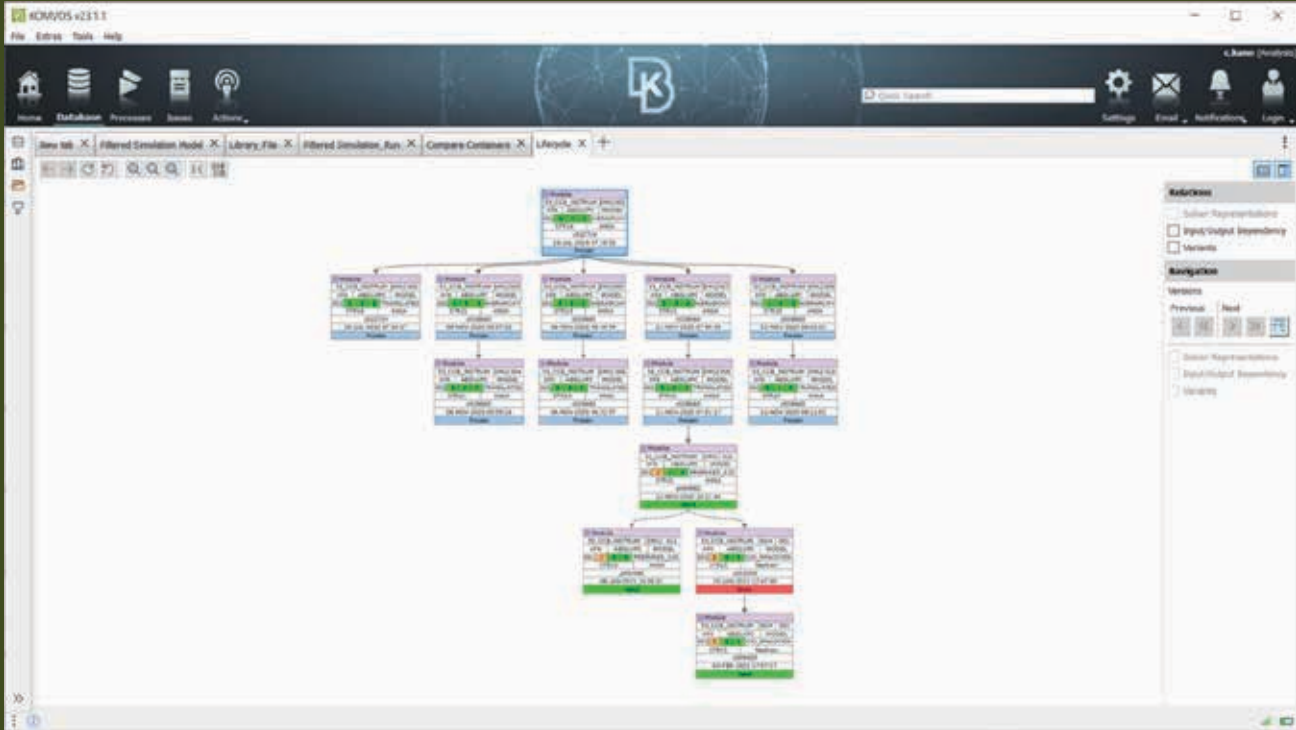
Process Management

Data Management

Data Browsing



Data Browsing



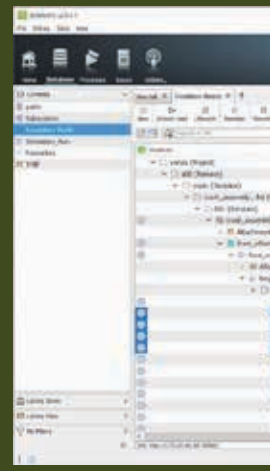
Data Search



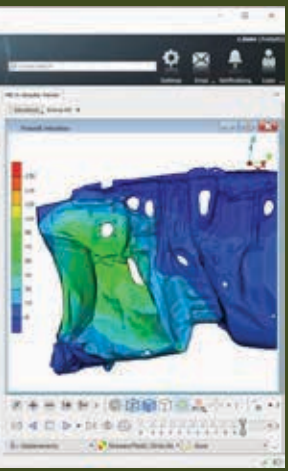
The screenshot displays the software's data management interface. At the top, there is a navigation bar with icons for Home, Dashboard, Processes, Status, and Actions. Below this is a sidebar with a tree view of simulation models and rules. The main area shows a table of simulation models with columns for Name, Creation Date, Owner, ID, and Test Tag. A table below the main list shows detailed properties for a selected model.

Name	ID
crash_assembly_venza_a00_hd_crash_001	66703
crash_assembly_venza_a00_hd_crash_002	67418
crash_assembly_venza_a00_hd_crash_003	107761
crash_assembly_venza_a00_hd_crash_004	108286
crash_assembly_venza_a00_hd_crash_005	109400
crash_assembly_venza_a00_hd_crash_006	109264

Property	Value
Project	venza
Release	a00
Discipline	crash
Model Id	crash_assembly
Model Variant	hd
Iteration	001
File Type	LoDyna
File	crash_assembly_venza_a00_hd_crash_001.kay
ID	66703



Results Comparison



EDWARDS v23.11

File Edit Tools Help

Home Dashboard Processes Status Activity

NEW TAB: Filtered simulation models Library File Filtered simulation runs Reports Table 1: Simulation Run

U/Recycle Services Reports Logbook

Contents

Contents	CM Modification Date	ID	Owner
SA_Frontal_velocity_000_Bd_900_01_01	26-Jan-2022 14:50:29	66799	s.tzantzas
SA_Frontal_velocity_000_Bd_900_01_01	26-Jan-2022 14:53:20	68866	s.tzantzas

IP# 172.14.43.38:20195 Simulation Run 2: selected 0

Details References Updates Reports Table 1: Simulation Run

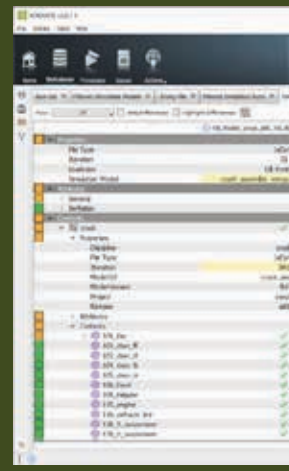
Chart Image Keyword MetaProject Table Table

Report	Full_Frontal_velocity_000	Bd
	01_01_01	001_01_01
Pulse_Velocity	✓	✓
SectionForce_Frontal_LONG1_X-566_SH	✓	✓
SectionForce_Frontal_LONG1_X-566_BH	✓	✓
SectionForce_Frontal_LONG1_X-746_SH	✓	✓
SectionForce_Frontal_LONG1_X-746_BH	✓	✓
SectionForce_LONG1_3-130	✓	✓
SectionForce_LONG1_3-130_SH	✓	✓
SectionForce_LONG1_3-300	✓	✓
SectionForce_LONG1_3-300_BH	✓	✓
SectionForce_LONG1_3359	✓	✓
SectionForce_LONG1_3359_BH	✓	✓
SectionForce_Pulse_Frontal_LONG1_X-566_SH	✓	✓

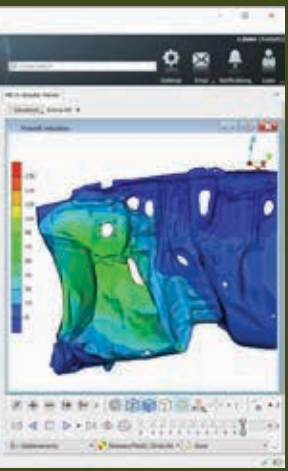
Reports 143 selected 1

WETA Results Viewer

Chart page



Results Comparison

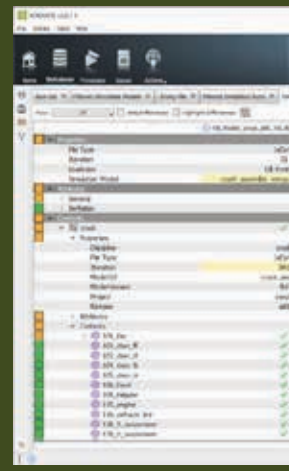


The screenshot shows the EDWARDS v23.11 software interface. The top menu bar includes File, Global, Results, Help, and a search bar. Below the menu is a toolbar with icons for Home, Definitions, Processes, Results, and Activity. The main workspace is divided into several panes:

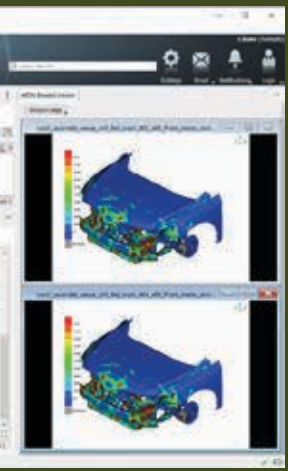
- Contents:** A table listing simulation runs with columns for Name, QM Modification Date, ID, and Owner.
- Simulation Runs:** A table showing simulation runs for 'Full_Frontal_versus_000'.
- Results:** A table showing simulation results for 'Full_Frontal_versus_000'.
- 3D Models:** Two 3D model views showing the car body with color-coded stress or strain distributions.

Name	QM Modification Date	ID	Owner
SA_Frontal_versus_000_Bid_900_01_01	26-Jan-2022 14:50:29	66799	s.kozanitz
SA_Frontal_versus_000_Bid_900_01_01	26-Jan-2022 14:53:20	68866	s.kozanitz

Report	01_01_01	000_01_01
Deformation_80ms_Section_Left	✓	✓
Energy_balance	✓	✓
Frontal_intrusions_Final	✓	✓
Frontal_intrusions_Max	✓	✓
Front_plastic_strain_Bottom	✓	✓
Front_plastic_strain_Front	✓	✓
Front_plastic_strain_Top	✓	✓
Front_plastic_strain_Left	✓	✓
Intrusions	✓	✓
Original_Fix	✓	✓
Original_Left	✓	✓
Time_step_Added_max	✓	✓

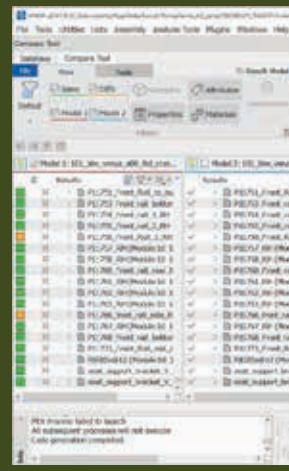


Simulation Contents Comparison

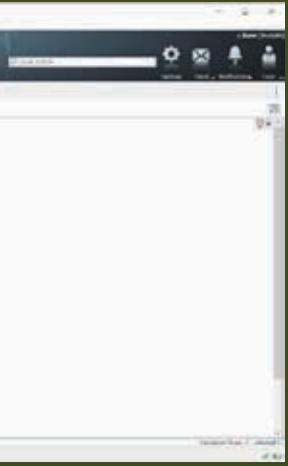


The screenshot shows the eSimsys v2211 software interface. The main window displays a comparison of simulation contents between two models. The interface includes a menu bar, a toolbar, and a main workspace with a tree view on the left and a comparison table in the center.

Attributes	Model 1: fd_frontal_versz_a00_fm_041_01	Model 2: fd_frontal_versz_a00_fm_042_01
File Type	LiDyna	LiDyna
Iteration	01	01
Loadcase	fd_frontal_01	fd_frontal_01
Simulation_Model	crash_assembly_versz_a00_fm_crash_001	crash_assembly_versz_a00_fm_crash_002
Attributes		
General		
Definition		
Contents		
crash		
Properties	crash	crash
File Type	LiDyna	LiDyna
Iteration	001	001
Model ID	crash_assembly	crash_assembly
Model/Variant	fd	fd
Project	versz	versz
Release	a00	a00
Attributes		
Contents		
101_bst	✓	✓
102_door_l	✓	✓
103_door_rl	✓	✓
104_door_r	✓	✓
105_door_rr	✓	✓
106_hood	✓	✓
109_seatbelt	✓	✓
115_engine	✓	✓
116_exhaust_line	✓	✓
120_s_suspension	✓	✓
130_r_suspension	✓	✓



Model Comparison



ANSYS v21.1.0 C:\Users\beta\AppData\Local\Temp\beta_MF_psta\0210321_165617\Hstf\beta.mca

File Tools Utilities Lists Assembly Analysis Tools Plugins Windows Help

Compare Tool

Database: Compare Tool

File View Tools Result Model Navigation

Default Model 1 Model 2 Properties Materials Connections Layout General

Model 1: 101_biv_verza_a00_bhd_cras... Model 2: 101_biv_verza_a00_bhd_cras...

Model 1	Model 2
P11751_Front_Rail_to_bu	P11751_Front_Rail_to_bumper_F
P11753_Front_rail_bottom	P11753_Front_rail_bottom_1k11
P11754_Front_rail_1_RH	P11754_Front_rail_1_RH (Module Id: 1)
P11755_Front_rail_2_RH	P11755_Front_rail_2_RH (Module Id: 1)
P11756_Front_Rail_3_RH	P11756_Front_Rail_3_RH (Module Id: 1)
P11757_RH (Module Id: 1)	P11757_RH (Module Id: 11757)
P11758_RH (Module Id: 1)	P11758_RH (Module Id: 11758)
P11760_Front_rail_rear_F	P11760_Front_rail_rear_RH (Module Id: 1)
P11761_RH (Module Id: 1)	P11761_RH (Module Id: 11761)
P11762_RH (Module Id: 1)	P11762_RH (Module Id: 11762)
P11763_RH (Module Id: 1)	P11763_RH (Module Id: 11763)
P11766_Front_rail_side_R	P11766_Front_rail_side_RH (Module Id: 1)
P11767_RH (Module Id: 1)	P11767_RH (Module Id: 11767)
P11768_Front_rail_bottom	P11768_Front_rail_bottom_1k12
P11773_Front_rail_mid_1	P11773_Front_Rail_mid_rear_10
RIGID@12 (Module Id: 1)	RIGID@12 (Module Id: 1)
seat_support_bracket_F	seat_support_bracket_F_R1 (Module Id: 1)
seat_support_bracket_F_1	seat_support_bracket_F_R2 (Module Id: 1)

101_biv_verza_a00_bhd_cras_001.kap

selected 0

REX Process failed to launch. All subsequent processes will not execute. Code generation completed.

ANSYS v21.1.0

File Tools Utilities Lists Assembly Analysis Tools Plugins Windows Help

Compare Tool

Database: Compare Tool

File View Tools Result Model Navigation

Default Model 1 Model 2 Properties Materials Connections Layout General

Model 1: 101_biv_verza_a00_bhd_cras... Model 2: 101_biv_verza_a00_bhd_cras...

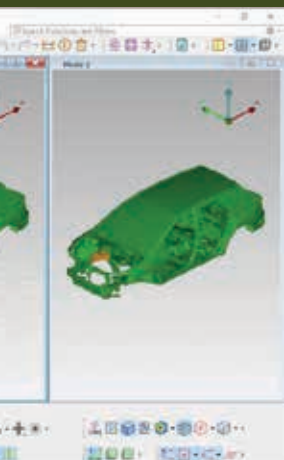
Model 1	Model 2
P11751_Front_Rail_to_bu	P11751_Front_Rail_to_bumper_F
P11753_Front_rail_bottom	P11753_Front_rail_bottom_1k11
P11754_Front_rail_1_RH	P11754_Front_rail_1_RH (Module Id: 1)
P11755_Front_rail_2_RH	P11755_Front_rail_2_RH (Module Id: 1)
P11756_Front_Rail_3_RH	P11756_Front_Rail_3_RH (Module Id: 1)
P11757_RH (Module Id: 1)	P11757_RH (Module Id: 11757)
P11758_RH (Module Id: 1)	P11758_RH (Module Id: 11758)
P11760_Front_rail_rear_F	P11760_Front_rail_rear_RH (Module Id: 1)
P11761_RH (Module Id: 1)	P11761_RH (Module Id: 11761)
P11762_RH (Module Id: 1)	P11762_RH (Module Id: 11762)
P11763_RH (Module Id: 1)	P11763_RH (Module Id: 11763)
P11766_Front_rail_side_R	P11766_Front_rail_side_RH (Module Id: 1)
P11767_RH (Module Id: 1)	P11767_RH (Module Id: 11767)
P11768_Front_rail_bottom	P11768_Front_rail_bottom_1k12
P11773_Front_rail_mid_1	P11773_Front_Rail_mid_rear_10
RIGID@12 (Module Id: 1)	RIGID@12 (Module Id: 1)
seat_support_bracket_F	seat_support_bracket_F_R1 (Module Id: 1)
seat_support_bracket_F_1	seat_support_bracket_F_R2 (Module Id: 1)

101_biv_verza_a00_bhd_cras_001.kap

selected 0

REX Process failed to launch. All subsequent processes will not execute. Code generation completed.

Results Logbook



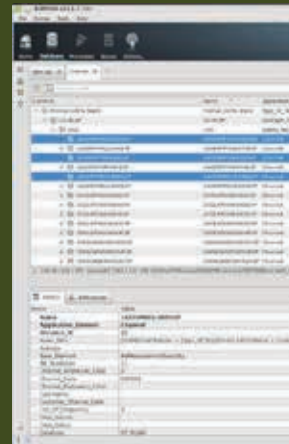
Results Logbook - X

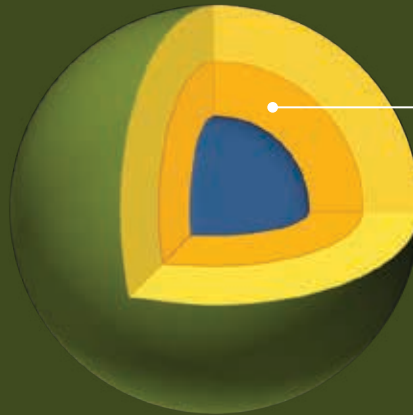
Job	Status	Model	Location	Door_Rd_In_Reducer_Hel	Door_Rd_In_Reducer_Hel	Door_Rd_In_Reducer_Hel	Total Energy Diff	Max Transient RMS CAKPR_LIN	Max Transient RMS CAKPR_ROT	Max Transient RMS CAKPR_MID	Value
front_offset_versa_000_001_01_01	OK	001	E1	2.304	1.201	8.272	189433.290	176.322	94.094	4.253	
front_offset_versa_000_002_01_01	OK	002	E1	2.304	1.201	8.272	189433.290	176.322	94.094	4.253	
front_offset_versa_000_003_01_01	WP	001	E1	2.324	1.428	6.180	189280.290	176.445	92.106	4.251	
front_offset_versa_000_004_01_01	WP	002	E1	3.038	1.518	18.432	189443.360	180.756	88.364	4.038	
full_frontal_versa_000_001_01_01	WP	001	E1	1.679	1.767	13.228	209564.200	35.827	85.400	0.411	
full_frontal_versa_000_002_01_01	WP	002	E1	1.666	1.764	3.290	209448.300	61.716	117.847	0.758	
full_frontal_versa_000_003_01_01	WP	001	E1	1.696	1.728	11.854	3018794.000	62.181	181.180	0.682	
full_frontal_versa_000_004_01_01	WP	002	E1	1.736	1.723	5.891	2916723.000	73.724	133.809	0.762	

Details

Name	Value
Iteration	01
Simulation_Hybrid	crack_assembly_versa_000_001_crack_001
Location	front_offset_01
File Type	LDyna
Name	front_offset_versa_000_001_01_01
Status	OK
Target Point	
ANSYS Creation Date	06.04.2025 09:45:54
ANSYS Modification Date	06.04.2025 09:58:07
Build Status	OK
Color By	11.41375
DM Creation Date	26.09.2022 13:11:02
DM Modification Date	13.06.2023 14:42:18
DM Path	DM:\Structure\versas\01\crack\crack_assembly\01\LDyna\crack_assembly_versa_000_001_crack_001\front_offset_01\LDyna\front_offset_versa_000_001_01_01\
DM Root	hpc://172.24.40.99:35098/
Deck	LDyna

N/A info





Machine Learning

Process Management

Data Management

Process Design & Execution

The screenshot displays the KOMPUS v21.11 Process Designer interface. The main workspace shows a workflow diagram with the following steps: 'Review job status', 'Distribute information', 'CADT answer', 'Prepare geometry and text', 'Assemble subsystem', and 'Finish'. A red circle at the end of the flow indicates the process completion. The right-hand side features a 'Details' panel for the selected 'Assemble subsystem' activity, containing the following information:

Name	Value
Attributes	
State	
Path	Build Subsystem
Definition	
Inhibitor DM Items	
Description	
Description	
Properties	
Name	Build Subsystem
Package	Build Subsystem
Version	1.3
Settings	
Auto Delete	False
Statistics	
Start Date	
End Date	
Duration	
System Attributes	
Id	24079
Type	Workflow
Creation Date	20-Apr-2023 12:28:43
Owner	LDMP
Variables	
Subsystem_Board_Id	

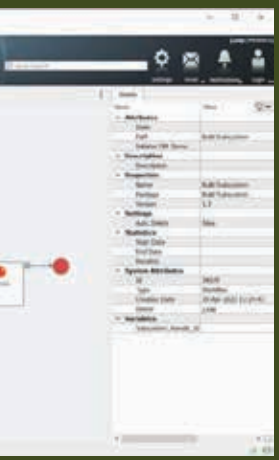
This partial screenshot shows a task list or execution log on the right side of the interface. It includes a tree view with various tasks and their statuses, such as 'Build Subsystem' and 'Prepare geometry and text'. The tasks are listed with their respective icons and completion indicators.

Core functionality

Process Management

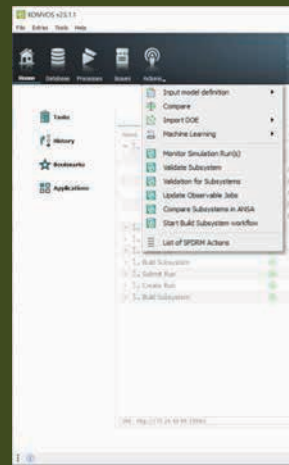
Execution

Process Monitoring



A screenshot of the KOMPAS v21.11 Process Management interface. The main window displays a list of processes with columns for Name, State, Application, Path, and Creation Date. The interface includes a top navigation bar with icons for Home, Database, Processes, Issues, and Actions. A left sidebar contains sections for Tasks, History, Bookmarks, and Applications.

Name	State	Application	Path	Creation Date
Build Subsystem	▶		Build Subsystem	20-Apr-2023 06:24:30
Distribute information	●		Build Subsystem > Distribute information	20-Apr-2023 06:24:30
Prepare geometry and mesh	●	ANGA	Build Subsystem > Prepare geometry and mesh	20-Apr-2023 06:24:30
CAD Translate	●	ANGA	Build Subsystem > CAD Translate	20-Apr-2023 06:24:30
Assemble subsystems	●	ANGA	Build Subsystem > Assemble subsystems	20-Apr-2023 06:24:30
Review	●	Power2DTE	Build Subsystem > Review	20-Apr-2023 06:24:30
Review job request	●	Excel	Build Subsystem > Review job request	20-Apr-2023 06:24:30
Submit to HPC	●		Submit to HPC	19-Apr-2023 16:15:36
Submit Run	●		Submit Run	19-Apr-2023 11:17:15
Create Run	●		Create Run	02-Feb-2023 14:04:38
Build Subsystem	●		Build Subsystem	02-Feb-2023 14:19:25
Submit Run	●		Submit Run	20-Jan-2023 10:52:49
Create Run	●		Create Run	23-Jan-2023 12:38:32
Build Subsystem	●		Build Subsystem	23-Jan-2023 10:57:26



ing

Script Actions



The screenshot shows the KOMPAS v21.11 software interface. A 'Script Actions' menu is open, listing various actions such as 'Input model definition', 'Compare', 'Import DOE', and 'Machine Learning'. Below the menu, a table displays a list of script actions with columns for 'Application', 'Type', and 'Created Date'.

Application	Type	Created Date
Build Subsystem	Build Subsystem	20-Apr-2023 09:14:30
Build Subsystem > Distribute information	Build Subsystem > Distribute information	20-Apr-2023 09:24:30
ANSA	Build Subsystem > Prepare geometry and mesh	20-Apr-2023 09:24:30
ANSA	Build Subsystem > CAD Transfer	20-Apr-2023 09:24:30
ANSA	Build Subsystem > Assemble subsystem	20-Apr-2023 09:24:30
Powertrain	Build Subsystem > Perform	20-Apr-2023 09:24:30
Excel	Build Subsystem > Review Job Result	20-Apr-2023 09:24:30
	Subnet to HPC	16-Apr-2021 11:15:36
	Subnet Run	16-Apr-2021 11:17:15
	Create Run	20-Feb-2023 14:14:38
	Build Subsystem	02-Feb-2023 14:19:25
	Subnet Run	25-Jan-2023 15:28:48
	Create Run	23-Jan-2023 12:28:32
	Build Subsystem	22-Jan-2023 10:17:25



Machine Learning

Process Management

Data Management

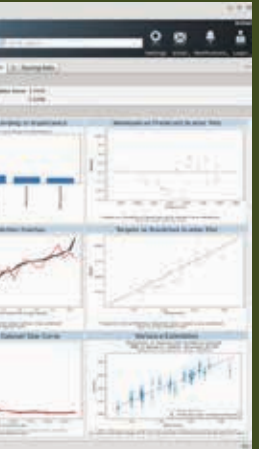
Train ML Algorithms

The screenshot displays the Kognos v211.1 interface. The main window shows a list of tasks under the 'Processes' tab. The tasks are organized into several groups, each with a 'Data collector', 'Training', 'KPI estimation', and 'Predictor storage' step. The 'Data collector' steps are marked with a green checkmark, indicating they are completed. The 'Training' and 'KPI estimation' steps are marked with a grey circle and a right-pointing arrow, indicating they are in progress. The 'Predictor storage' steps are marked with a grey circle and a right-pointing arrow, indicating they are pending or not yet started. The tasks are as follows:

Names	Status	Creation Date	Progress
↳ DV based predictor training: Sim_Results_Predictor			
stout_max_acceleration : 1 - Data collector	✓	16/12/2022	●
stout_max_acceleration : 2 - Training	○	16/12/2022	→
stout_max_acceleration : 3 - KPI estimation	○	16/12/2022	→
stout_max_acceleration : 4 - Predictor storage	○	16/12/2022	→
mass : 1 - Data collector	✓	16/12/2022	●
mass : 2 - Training	○	16/12/2022	→
mass : 3 - KPI estimation	○	16/12/2022	→
mass : 4 - Predictor storage	○	16/12/2022	→
stout_max_displacement : 1 - Data collector	✓	16/12/2022	●
stout_max_displacement : 2 - Training	○	16/12/2022	→
stout_max_displacement : 3 - KPI estimation	○	16/12/2022	→
stout_max_displacement : 4 - Predictor storage	○	16/12/2022	→
nodout_Neov/Follow node magnitude acceleration (fms)	✓	16/12/2022	●
nodout_Neov/Follow node magnitude acceleration (fms)	○	16/12/2022	→
nodout_Neov/Follow node magnitude acceleration (fms)	○	16/12/2022	→
nodout_Neov/Follow node magnitude acceleration (fms)	○	16/12/2022	→
Deformation/Displacements : 1 - Data collector	✓	16/12/2022	●
Deformation/Displacements : 2 - Training	○	16/12/2022	→
Deformation/Displacements : 3 - KPI estimation	○	16/12/2022	→
Deformation/Displacements : 4 - Predictor storage	○	16/12/2022	→

The screenshot shows a code editor window with a workflow configuration. The workflow is a sequence of steps: 'Initial Data Collection', 'Data Collector', 'KPI Estimation', and 'Predictor Storage'. Each step is represented by a small icon and a text label. The workflow is shown in a tree view, with the 'Data Collector' step selected. The code editor also shows a 'Script Actions' panel on the right, which contains a list of actions for each step, including 'Data Collector', 'KPI Estimation', and 'Predictor Storage'. The actions are listed in a table format, with columns for the action name and the step it belongs to.

Make Predictions



KOMVOS v23.1.0

File Edit Tools Help

Home Database Processes Issues Actions

Quick Search

Settings Email Notifications Login

Predictors x New Tab x Predictors x Predict Session x +

Predictor info
 Type: DV based predictor
 Group: 231_3_Dec

Outputs:
 • 11138 : Curve / Path Report Curves / CFC1000_THOR-50TH_HEAD.CG_ACCELEROMETER_x_head_acceleration_x
 • 11139 : Field / Deformation / Displacements

My Experiments

Iteration	Status	seatbelt_dummy_friction (0.2-0.8)	slipping_position (-20.0-20.0)	path_went_time (0-12.0)	seatbelt_sensor_time (10.0-30.0)	From Report Curves/CFC1000_THOR-50TH_HEAD.CG_ACCELEROMETER_x
0001	OK	0.2	-20	7	10	OK

Design Space Exploration

The Design Space Exploration plot shows four data series: seatbelt_dummy_friction (left y-axis, 0.2-0.8), slipping_position (middle y-axis, -20.0-20.0), path_went_time (right y-axis, 0-12.0), and seatbelt_sensor_time (far right y-axis, 10-30). The x-axis represents iterations from 0 to 29. Multiple green lines represent the evolution of these variables over time.

ID	seatbelt_dum	slipping_posit	path_went_time	seatbelt_sens
Exp001	0.275	8	1.099	29
Exp002	0.219887	-8.20222	8.38232	14.1857
Exp003	0.380222	18	0.20233	25.8238
Exp004	0.520222	-11.9887	7.82232	18
Exp005	0.3	20	4.91617	21.8887
Exp006	0.2	18	0.88232	20
Exp007	0.45	-19.6887	10.2023	20.8232

META Viewer Details References M KPh 2D Results from Reports 2D/3D Results

MetaPost

A 3D CAD model of a human figure seated on a yellow base, representing a simulation setup. The figure is shown in a dynamic pose, with various colored components (purple, green, red, yellow) representing different parts of the model or simulation environment.

Displacements: None





One platform,
a wide variety of applications

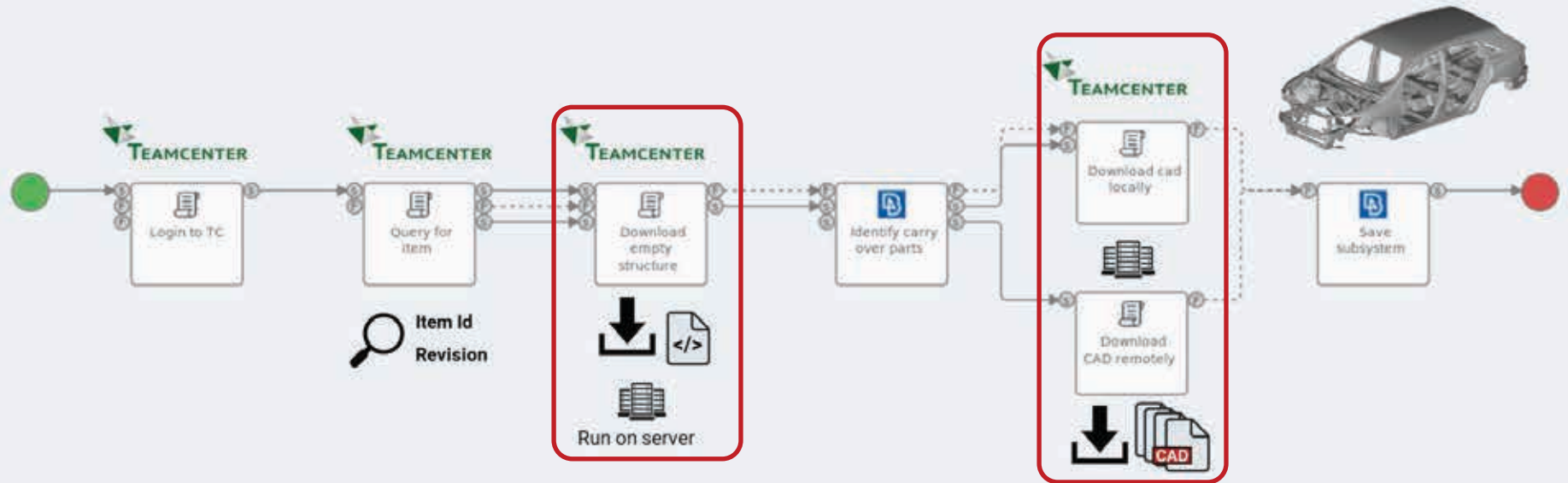


Download TC Product

Update Subsystem



Streamlining data extraction from Teamcenter: Latest approaches to CAE Structure creation and Maintenance
Day 1 Wednesday June 14, 2023
17:30 - 18:00 (Session 3C | Jupiter)

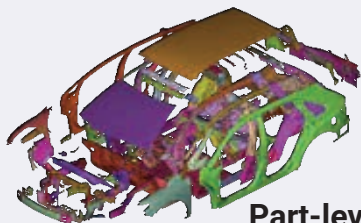




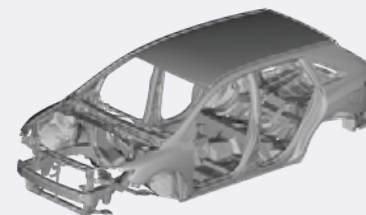
CAD 2 ANSA

Create Meshes

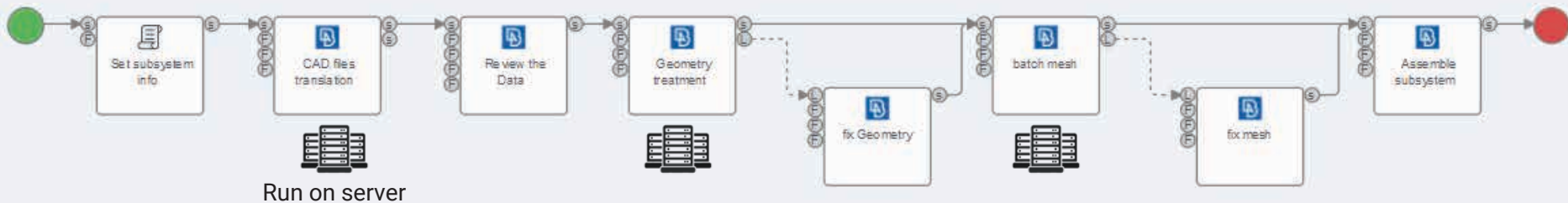
Build Subsystem



Part-level

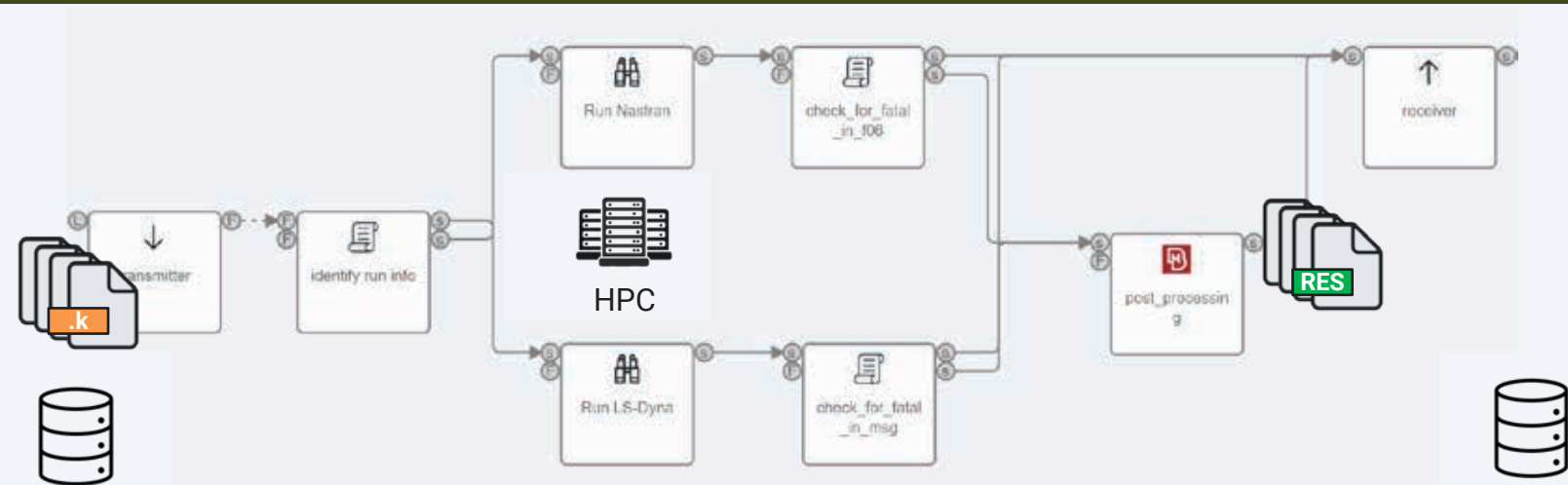


Subsystem-level





Submit Run to HPC



Processes		HPC Jobs		Script Actions	
Status	Job	Correlation Id	name	Node Id	Node Name
✓	1605176504	1605176504	front_offset_venza_a00_lhd_003_01_01.key	5654	Run LS-Dyna
✓	1605126234	1605126234	front_offset_venza_a00_lhd_003_01_01.key	5094	Run LS-Dyna

In queue

Finished

Running

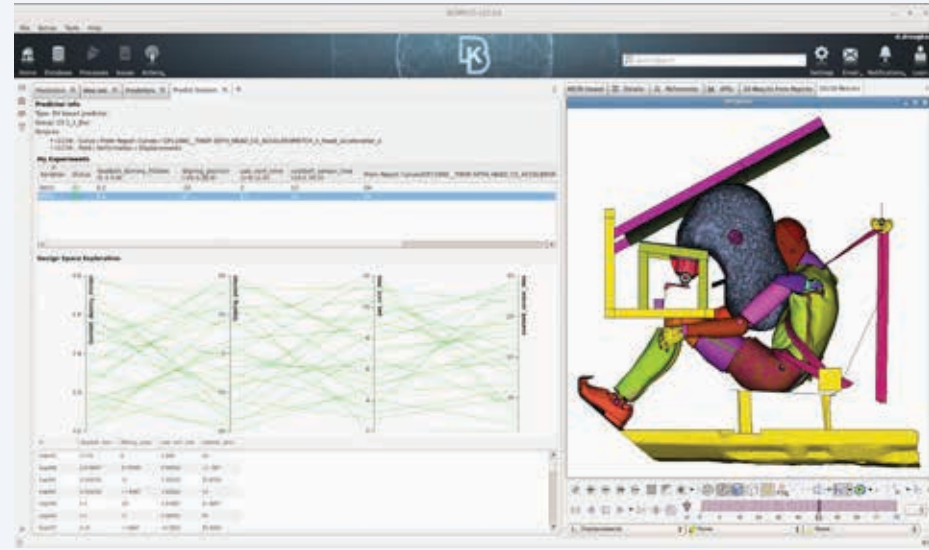
Error



▶ DOE Setup

🌱 Create Predictors

🔮 Predict





Create Issue

Impact analysis

Details

Edit Request Feedback Evaluate

tutorial-3: Old material used in inner panel

Details

Status	New	Assignee	Chris Kane (c.kane)
Issue DM Item	30017	Reporter	Irene Makropoulou (irene)
Project	tutorial	Due date	10-Jun-2023 23:59:59
Release	release1	Created	10-Jun-2023 12:47:21
		Resolved	

Optional

Type Bug

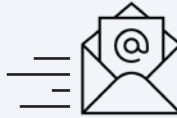
Priority High

Description

MD 104200 used by inner panel is wrong. Must be synced from new db.

References

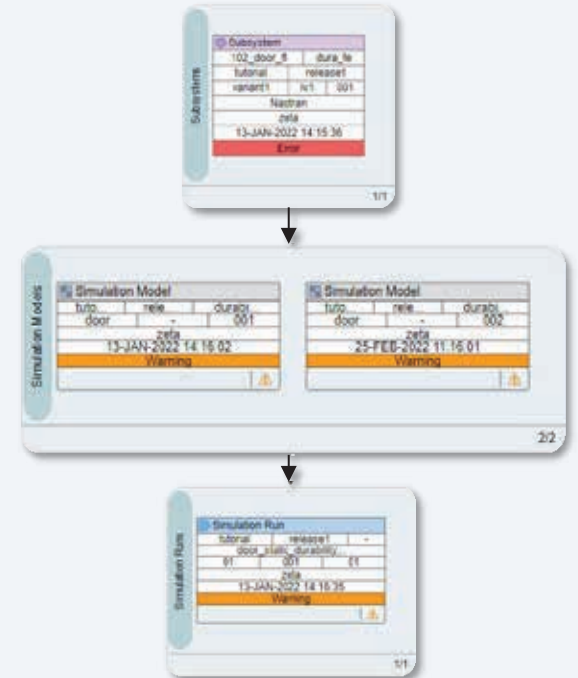
Id	Name	Status
30017	102_door_fl_tutorial_release1_variant1_dura_fe_lv1_001	Error



Owner

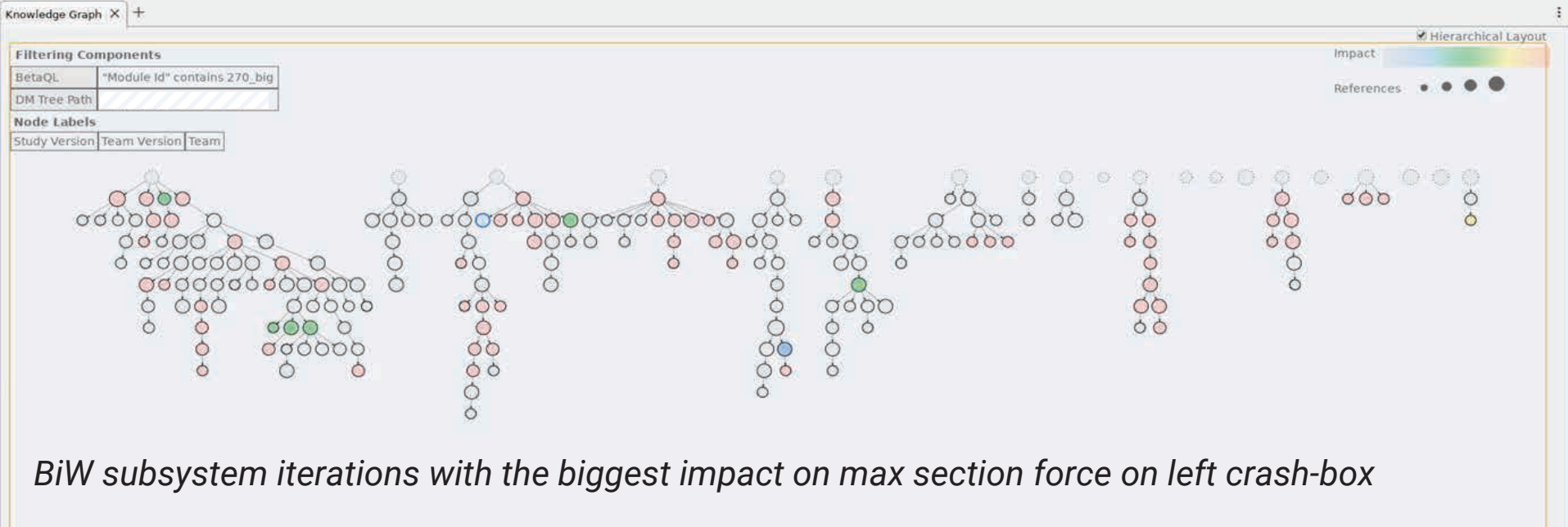


Affected users





Subsystems Centrality



Integration of SPDRM elevated Data and Process Management in KOMVOS

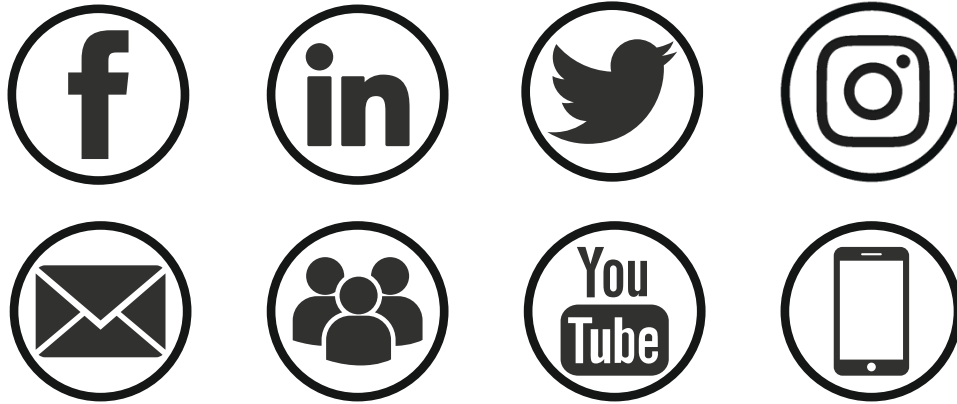


Simulation Data and Process Management enables ML

ML enables Knowledge Management



Exciting things are coming!



Stay connected