



**Groundbreaking  
Simulation Solutions**

*physics on screen*

# KOMVOS

A digital hub for CAE Simulation Process and Data Management



KOM  
ktion

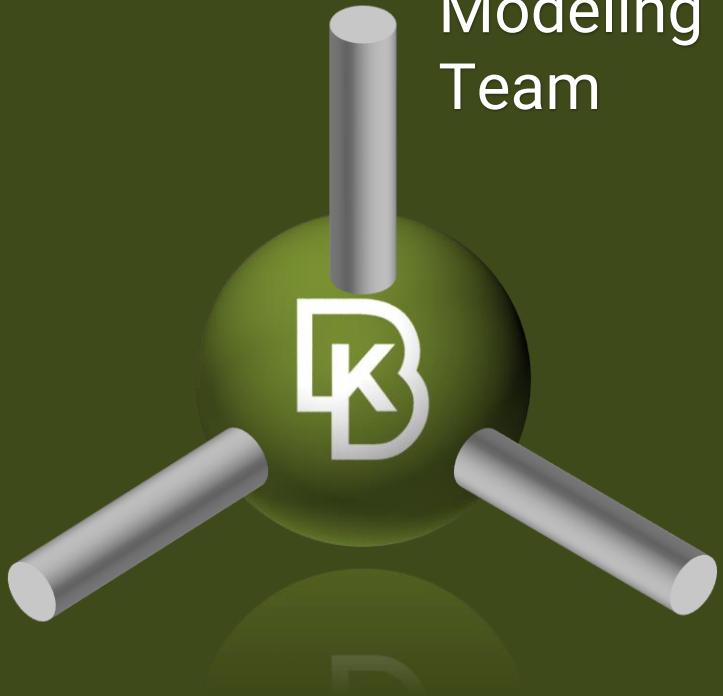


Simulation

Design

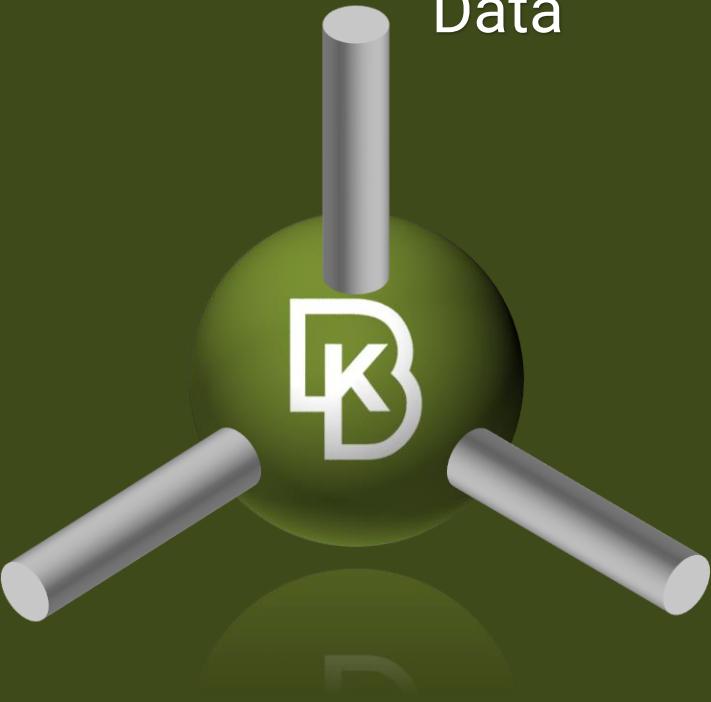
Test

Simulation  
Engineers



Modeling  
Team

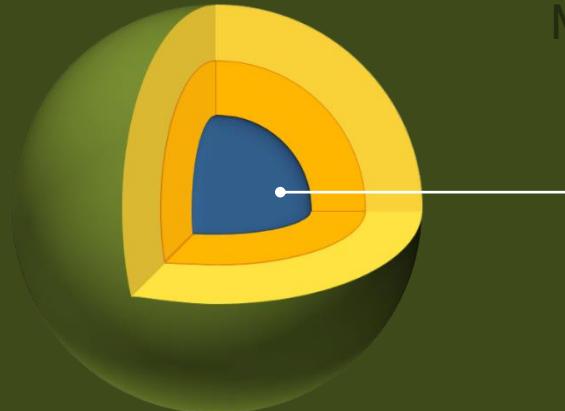
Team Leaders &  
Managers



Process Data Resources







Machine Learning

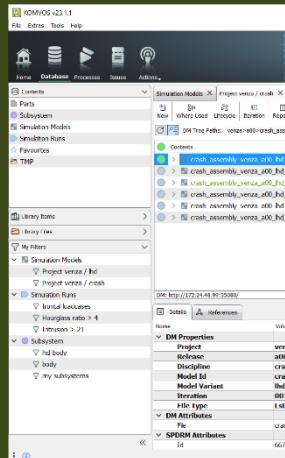
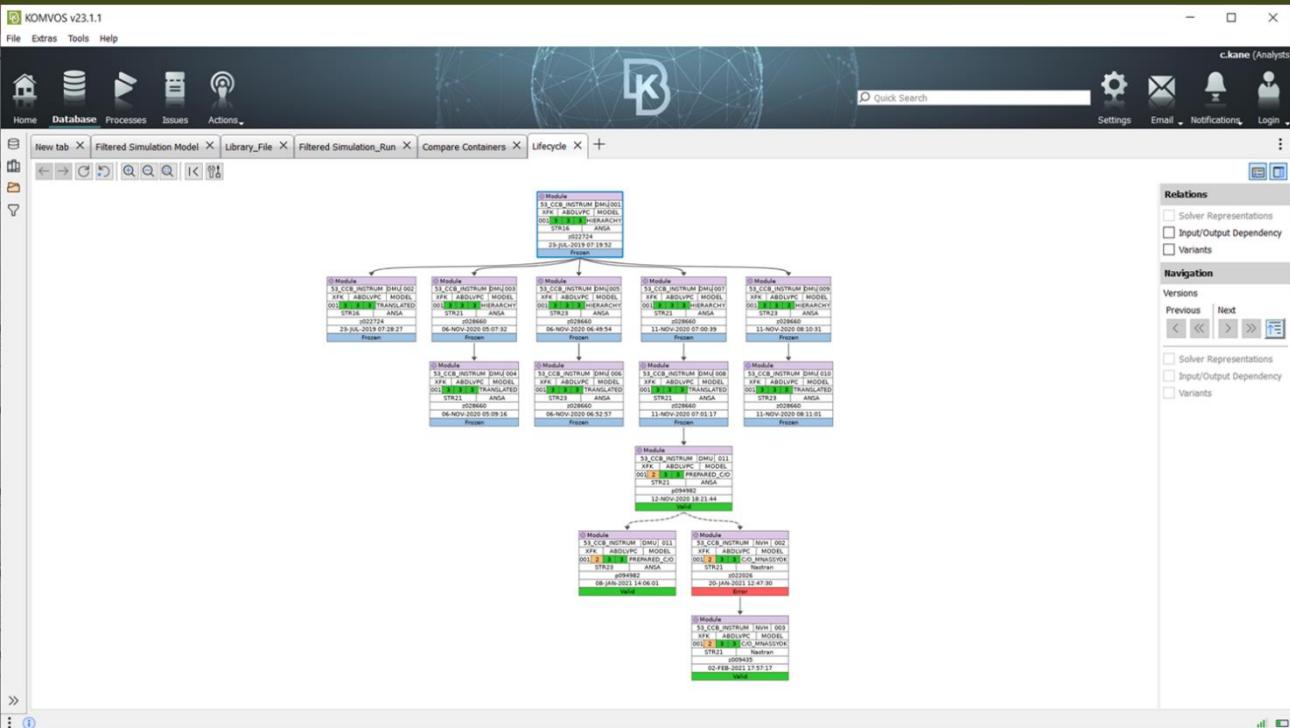
Process Management

Data Management

# Data Browsing

The screenshot displays the KOMVOS v23.1 Data Management software interface. The main window is titled "KOMVOS v23.1.1" and shows a "Database" tab selected. On the left, a tree view of the database structure is shown under the "Contents" node, listing various components like "door\_fl\_KOM\_RES30\_dura\_fe\_002 (ANSY)" and their sub-components such as "201000\_001\_DOOR\_FR\_LT" and "302001\_001\_HINGES\_LT". The right side of the interface features a "META Viewer" window displaying a 3D model of a car door assembly, colored in pink and purple. Below the viewer, there are tabs for "All Steps/!" and "Active Lab", along with various tool icons. The top right corner shows a separate "j.pop (Modelers)" interface window.

# Data Browsing



## Data Search

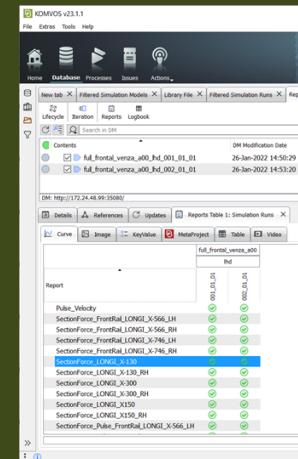
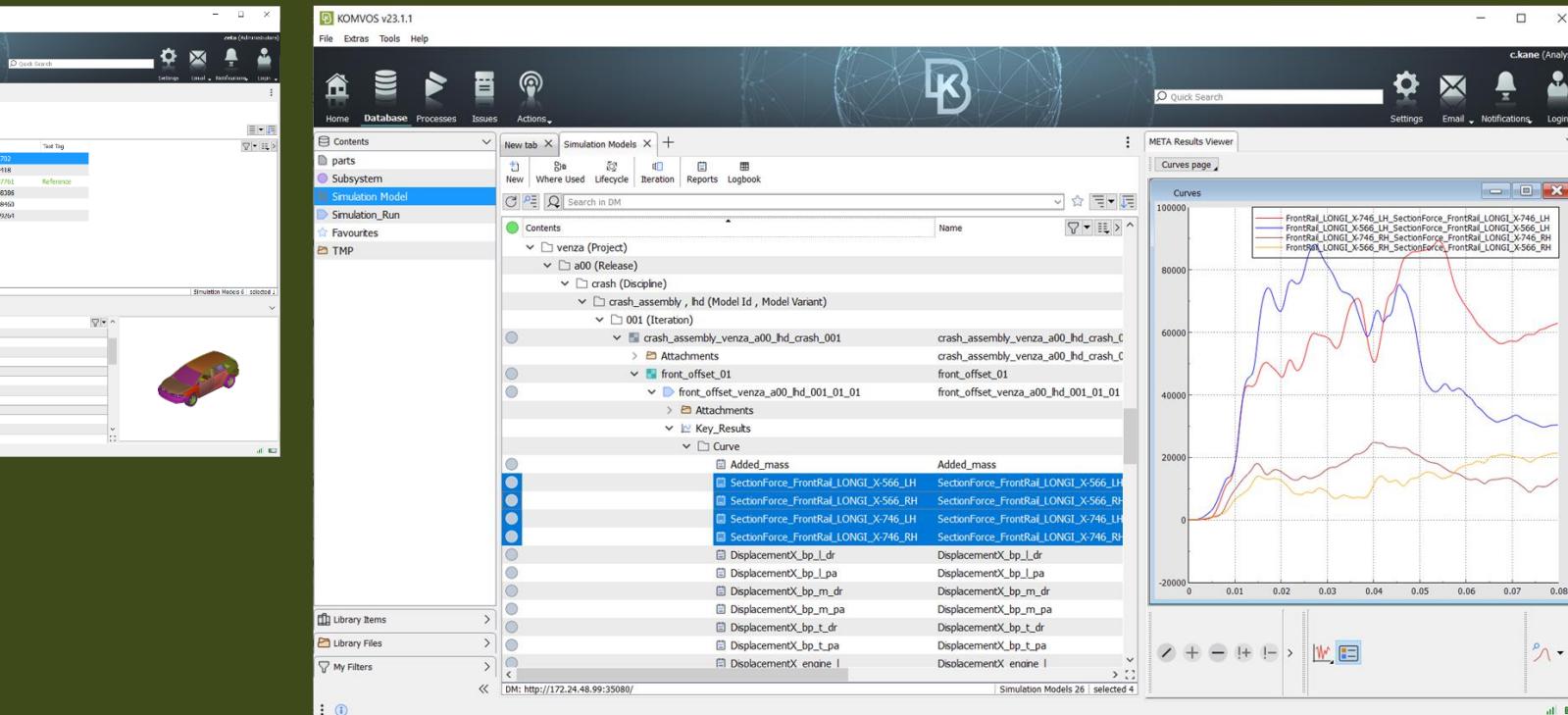
g

The screenshot displays the KOMVOS v23.1.1 Data Management interface. The main window shows a search results table for 'crash' under 'Project venza / crash'. The table includes columns for DM Creation Date, Owner, Id, and Text Tag. One row is highlighted with a blue background.

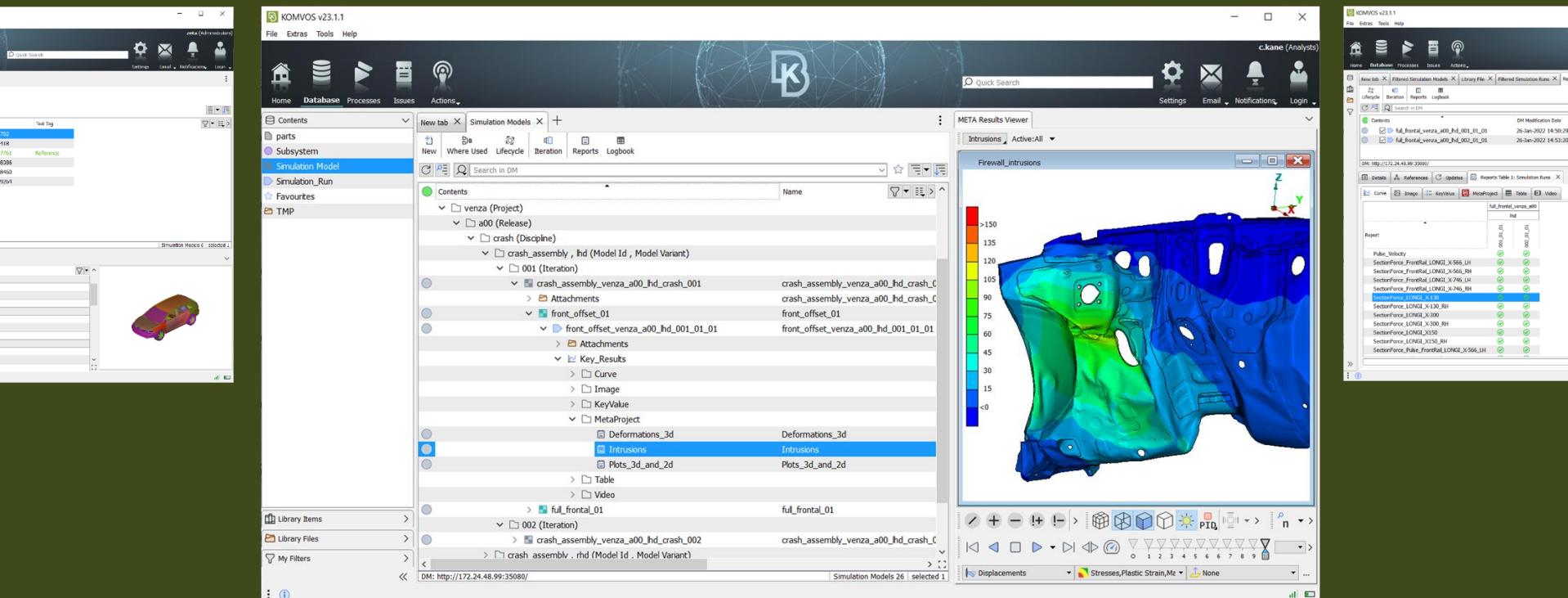
	DM Creation Date	Owner	Id	Text Tag
crash_assembly_venza_a00_lhd_crash_001	26-Jan-2022 13:09:10	s.tzamtzis	66702	
crash_assembly_venza_a00_lhd_crash_002	26-Jan-2022 13:31:46	s.tzamtzis	67418	
crash_assembly_venza_a00_lhd_crash_003	22-Feb-2023 11:28:28	c.kane	107761	Reference
crash_assembly_venza_a00_lhd_crash_004	22-Feb-2023 11:39:17	c.kane	108386	
crash_assembly_venza_a00_lhd_crash_005	22-Feb-2023 12:01:49	c.kane	108460	
crash_assembly_venza_a00_lhd_crash_006	23-Feb-2023 14:09:43	c.kane	109264	

The bottom panel shows a detailed view of the selected simulation model, 'crash\_assembly\_venza\_a00\_lhd\_crash\_001'. It lists 'DM Properties' such as Project (venza), Release (a00), Discipline (crash), Model Id (crash\_assembly), Model Variant (lhd), Iteration (001), File Type (LsDyna), and 'SPDRM Attributes' (Id: 66702). To the right is a 3D visualization of a car model.

## Results Review



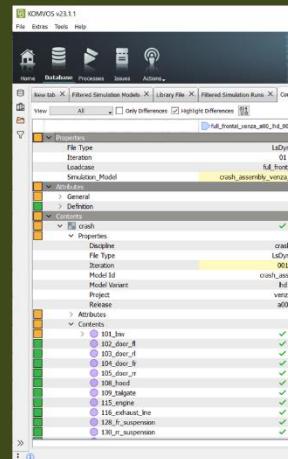
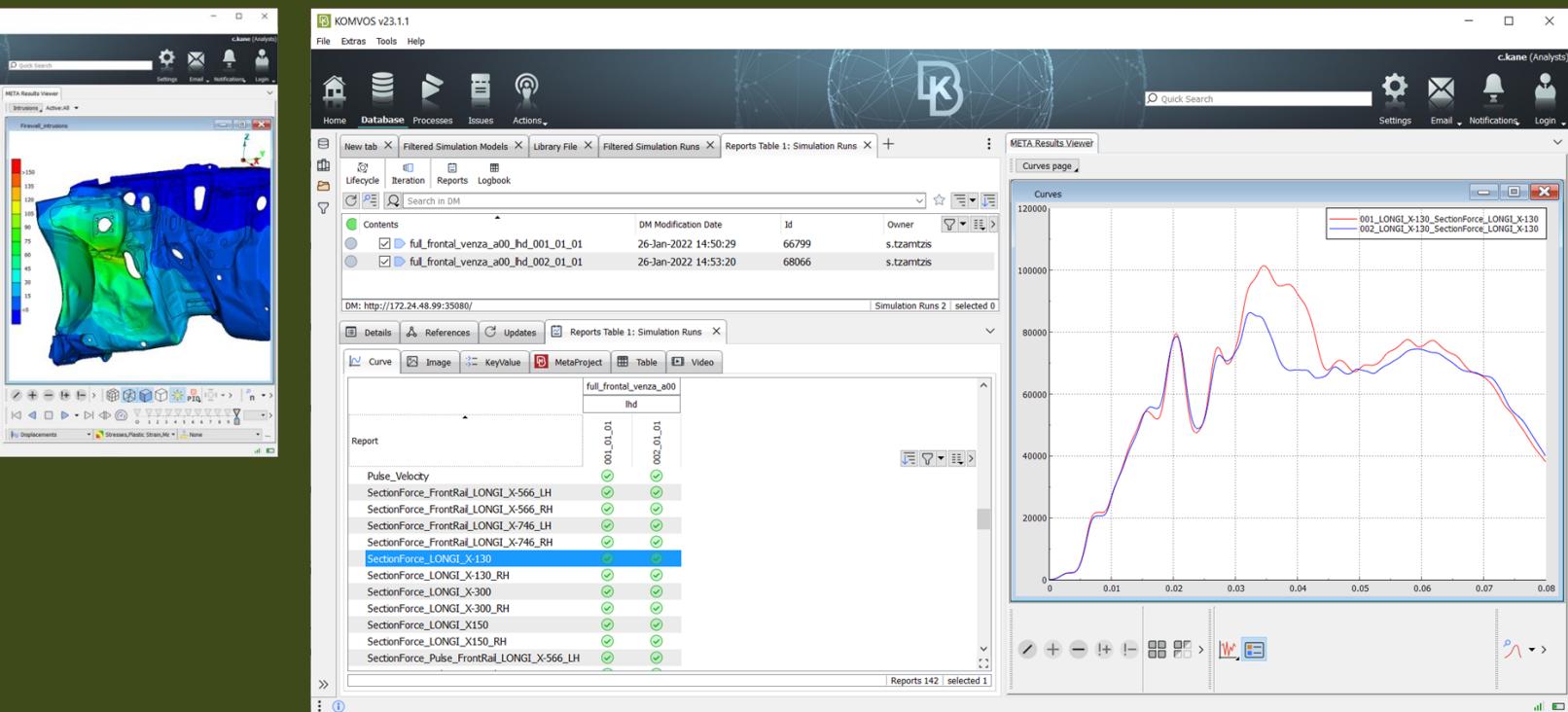
# Results Review



# Results Comparison

v

Simulation



# Results Comparison

v

KOMVOS v23.1.1

File Extras Tools Help

c.kane (Analysts)

Home Database Processes Issues Actions

New tab Filtered Simulation Models Library File Filtered Simulation Runs Reports Table 1: Simulation Runs +

Quick Search Settings Email Notifications Login

Contents DM Modification Date Id Owner

full\_frontal\_venza\_a00\_lhd\_001\_01 26-Jan-2022 14:50:29 66799 s.tzamtzis

full\_frontal\_venza\_a00\_lhd\_002\_01\_01 26-Jan-2022 14:53:20 68066 s.tzamtzis

DM: http://172.24.48.99:35080/ Simulation Runs 2 selected 0

Details References Updates Reports Table 1: Simulation Runs

Curve Image KeyValue MetaProject Table Video

Report full\_frontal\_verza\_a00\_lhd

	001_01	002_01_01
Deformation_80ms_Section_Left	✓	✓
Energy_balance	✓	✓
Firewall_intrusions_Final	✓	✓
Firewall_intrusions_Max	✓	✓
Front_plastic_strain_Bottom	✓	✓
Front_plastic_strain_Front	✓	✓
Front_plastic_strain_Iso	✓	✓
Front_plastic_strain_Left	✓	✓
Intrusions	✓	✓
Original_Iso	✓	✓
Original_Left	✓	✓
Time_step_Added_mass	✓	✓

Reports 23 selected 1

crash\_assembly\_verza\_a00\_lhd\_crash\_001\_a00\_Front\_plastic\_strain\_Iso

Properties

- File Type: lhd001
- Iteration: 01
- LeadUser: s.tzamtzis
- Logbook:
- Model Version: crash\_res
- Model Id: crash\_res
- Project: crash\_res
- Release: ver2021
- Comments:
  - 101\_low
  - 102\_door\_f
  - 103\_door\_b
  - 104\_door\_h
  - 105\_door\_r
  - 106\_head
  - 107\_cabin
  - 115\_engine
  - 116\_exhaust\_le
  - 126\_R\_suspension
  - 130\_R\_suspension
- Attributes:

crash\_assembly\_verza\_a00\_lhd\_crash\_002\_a00\_Front\_plastic\_strain\_Iso

Properties

- File Type: lhd001
- Iteration: 01
- LeadUser: s.tzamtzis
- Logbook:
- Model Version: crash\_res
- Model Id: crash\_res
- Project: crash\_res
- Release: ver2021
- Comments:
  - 101\_low
  - 102\_door\_f
  - 103\_door\_b
  - 104\_door\_h
  - 105\_door\_r
  - 106\_head
  - 107\_cabin
  - 115\_engine
  - 116\_exhaust\_le
  - 126\_R\_suspension
  - 130\_R\_suspension
- Attributes:

Simulation

son

# Simulation Contents Comparison

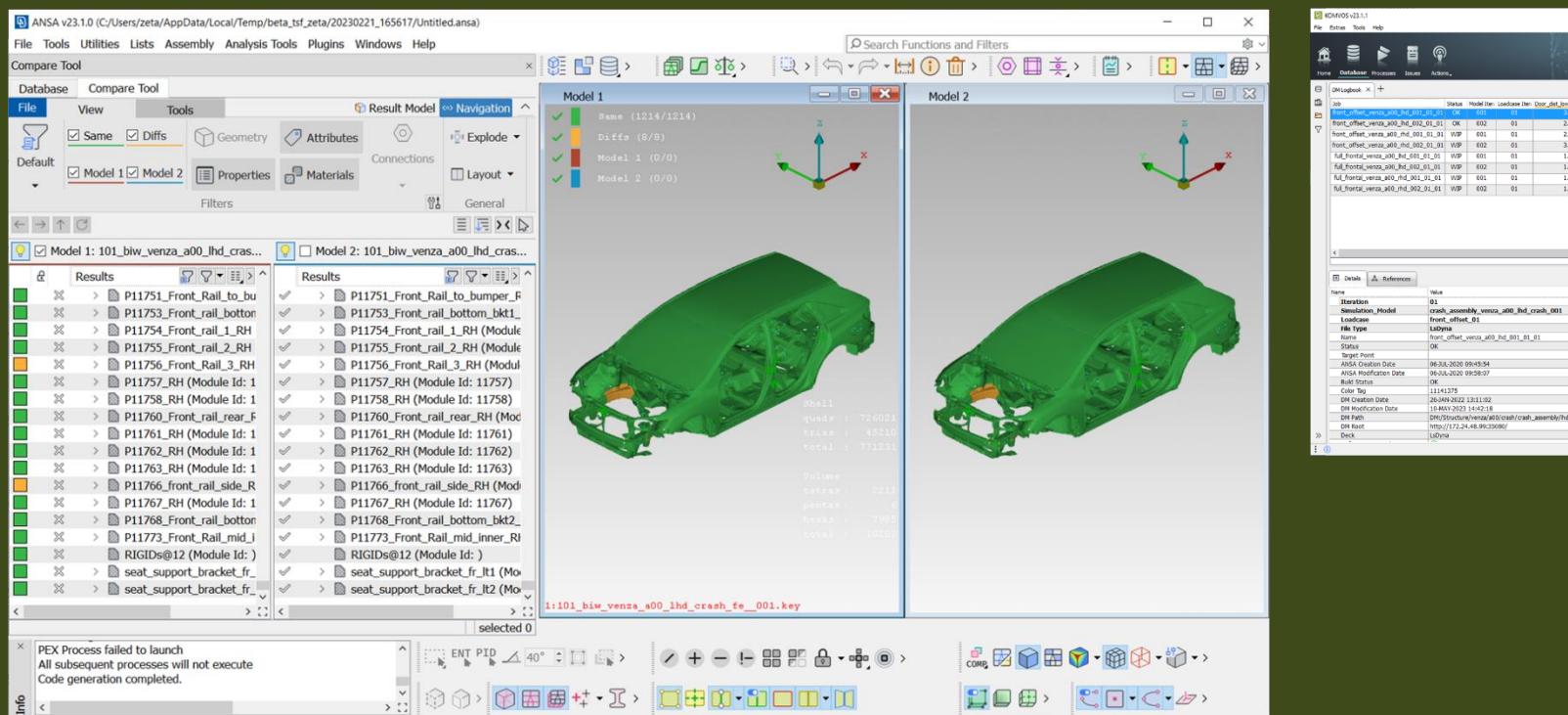
The screenshot displays the KOMVOS v23.1.1 software interface, specifically the 'Compare Tool' feature. The main window shows a comparison between 'Model 1: 101\_bmw\_venza\_a00\_lhd\_crash\_001' and 'Model 2: 101\_bmw\_venza\_a00\_lhd\_crash\_002'. The interface includes a navigation bar with Home, Database, Processes, Issues, Actions, and tabs for New tab, Filtered Simulation Models, Library File, Filtered Simulation Runs, and Compare Containers.

The central area is a grid-based comparison table. The columns represent the two models being compared. The rows are categorized by type: Properties, Attributes, and Contents. Under 'Properties', both models show 'File Type: LsDyna', 'Iteration: 01', 'Loadcase: ful\_frontal\_01', and 'Simulation Model: crash\_assembly\_venza\_a00\_lhd\_crash\_001' for Model 1 and 'crash\_assembly\_venza\_a00\_lhd\_crash\_002' for Model 2. Under 'Attributes', the 'crash' category is checked for both models. Under 'Contents', a list of components is shown, each with a checkmark indicating they are present in both models. The components include: 101\_bmw, 102\_door\_fl, 103\_door\_rl, 104\_door\_fr, 105\_door\_rr, 108\_hood, 109\_talgate, 115\_engine, 116\_exhaust\_line, 128\_fr\_suspension, and 130\_rr\_suspension.

On the right side of the interface, there is a detailed list of specific components and their attributes, showing a breakdown of the differences between the two models. A status message at the bottom right indicates: 'PEX Process failed to launch. All subsequent processes will not execute. Code generation completed.'

comparison

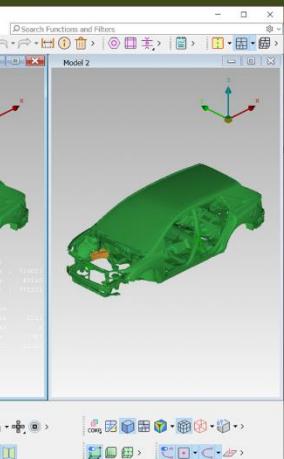
## Model Comparison



son

Tes

# Results Logbook



KOMVOS v23.1.1

File Extras Tools Help

zeta (Administrators)

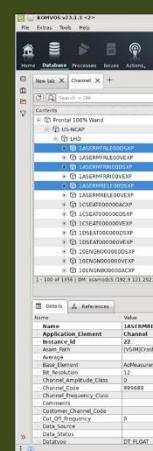
DM Logbook

Job	Status	Model	Iter.	Loadcase	Iter.	Door_dist_low_reduction_max	Door_dist_mid_reduction_max	Door_dist_top_reduction_max	Total Energy Diff	Max Intrusion BRAKE_CALIPER_LH	Max Intrusion Engine	Hourglass_total_energy_ratio	Plastic
front_offset_venza_a00_lhd_001_01_01	OK	001	01	3.066		1.584	8.312	1876720.000	179.155	89.394	4.469		
front_offset_venza_a00_lhd_002_01_01	OK	002	01	2.500		1.261	8.272	1894032.000	179.532	94.644	4.553		
front_offset_venza_a00_lhd_001_01_01	WIP	001	01	2.834		1.426	9.180	1933200.000	178.445	92.996	4.253		
front_offset_venza_a00_lhd_002_01_01	WIP	002	01	3.038		1.518	10.432	1869440.000	192.356	104.544	4.039		
full_frontal_venza_a00_lhd_001_01_01	WIP	001	01	1.679		1.763	13.239	3095648.000	50.837	89.490	0.611		
full_frontal_venza_a00_lhd_002_01_01	WIP	002	01	1.686		1.764	7.793	3254440.000	64.778	117.847	0.758		
full_frontal_venza_a00_lhd_001_01_01	WIP	001	01	1.690		1.728	11.654	3018704.000	62.191	100.190	0.682		
full_frontal_venza_a00_lhd_002_01_01	WIP	002	01	1.700		1.725	5.891	2916720.000	75.724	130.908	0.762		

Details References

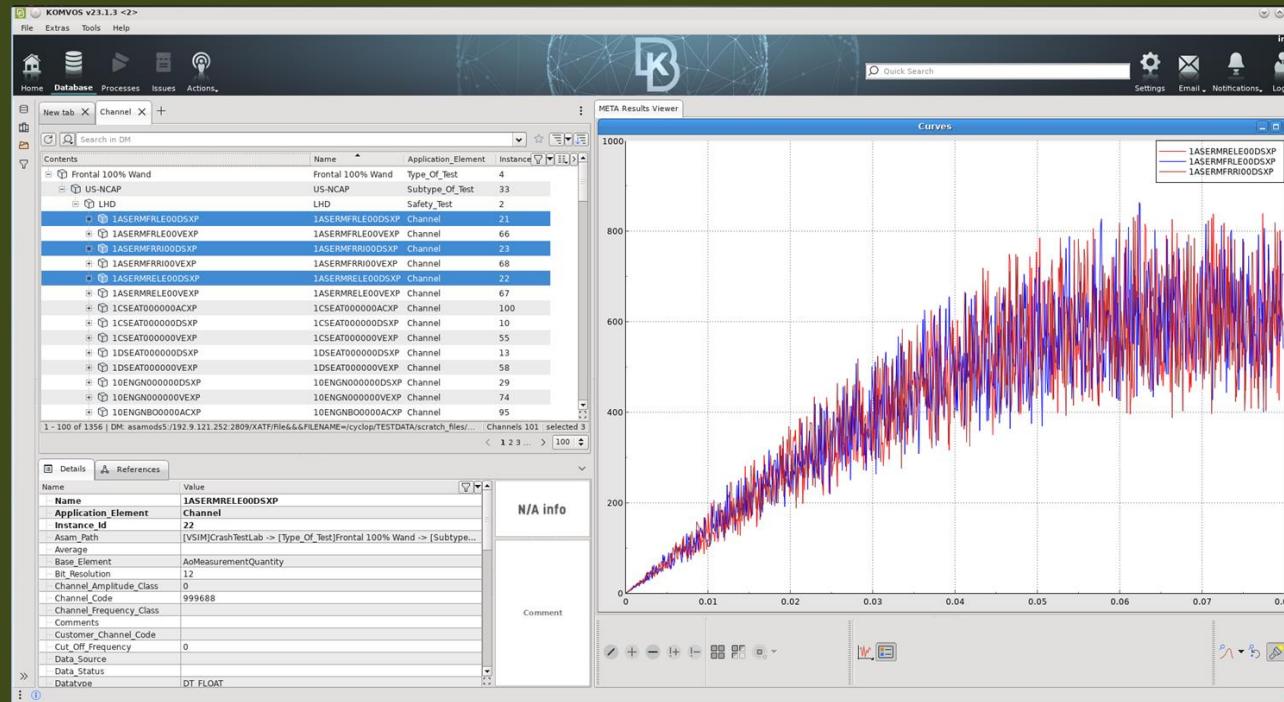
Name	Value
Iteration	01
Simulation_Model	crash_assembly_venza_a00_lhd_crash_001
Loadcase	front_offset_01
File Type	LsDyna
Name	front_offset_venza_a00_lhd_001_01_01
Status	OK
Target Point	
ANSA Creation Date	06-JUL-2020 09:45:54
ANSA Modification Date	06-JUL-2020 09:58:07
Build Status	OK
Color Tag	11141375
DM Creation Date	26-JAN-2022 13:11:02
DM Modification Date	10-MAY-2023 14:42:18
DM Path	DM:/Structure/venza/a00/crash/crash_assembly/lhd/001/LsDyna/crash_assembly_venza_a00_lhd_crash_001/front_offset/01/LsDyna/front_offset_01/01/LsDyna/front_offset_venza_a00_lhd_001_01_01/
DM Root	http://172.24.48.99:35080/
Deck	LsDyna

N/A info



ok

# Test Results Review





# Process Design & Execution

The screenshot displays the KOMVOS v23.1.1 software interface, specifically the Process Management module. The main window shows a process flow diagram and a detailed view of a selected process instance.

**Process Flow Diagram:**

```
graph LR; Start(( )) --> ReviewJobRequest[Review job request]; ReviewJobRequest --> DistributeInformation[Distribute information]; DistributeInformation --> CADTranslate[CAD Translate]; CADTranslate --> PrepareGeometry[Prepare geometry and mesh]; PrepareGeometry --> AssembleSubsystem[Assemble subsystem]; AssembleSubsystem --> Review[Review]; Review --> End((( )))
```

**Selected Process Instance Details:**

Name	Value
<b>Attributes</b>	
State	
Path	Build Subsystem
Iniator DM Items	
<b>Description</b>	
Description	
<b>Properties</b>	
Name	Build Subsystem
Package	Build Subsystem
Version	1.3
<b>Settings</b>	
Auto Delete	false
<b>Statistics</b>	
Start Date	
End Date	
Duration	
<b>System Attributes</b>	
Id	34079
Type	Workflow
Creation Date	20-Apr-2023 12:24:43
Owner	j.pap
<b>Variables</b>	
Subsystem_Handle_Id	

**Right Panel:**

- Processes: A tree view showing the process structure, including "Build Subsystem", "Distribute information", "CAD Translate", "Prepare geometry and mesh", "Assemble subsystem", "Review", and "Submit job request".
- History: A list of recent actions: "Build Subsystem", "Distribute information", "CAD Translate", "Prepare geometry and mesh", "Assemble subsystem", "Review", "Submit job request", "Submit to HPC", "Create Run", "Build Subsystem", "Submit Run", "Create Run", and "Build Subsystem".
- Bookmarks: A list of saved items.
- Applications: A list of available applications.

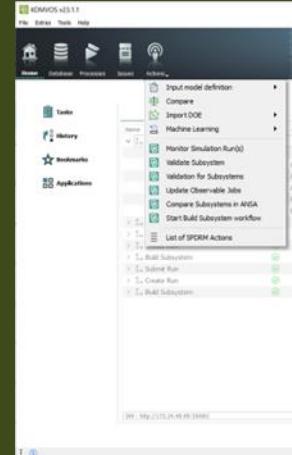
ecution

# Process Monitoring

The screenshot displays the KOMVOS v23.1.1 software interface, specifically the Process Monitoring and Management module. The main window is titled "Processes" and lists various tasks and HPC jobs. The table includes columns for Name, State, Application, Path, and Creation Date.

Name	State	Application	Path	Creation Date
Build Subsystem	Running	Build Subsystem		20-Apr-2023 09:24:30
Distribute information	Completed	Build Subsystem > Distribute information		20-Apr-2023 09:24:30
Prepare geometry and mesh	Completed	ANSA	Build Subsystem > Prepare geometry and mesh	20-Apr-2023 09:24:30
CAD Translate	Completed	ANSA	Build Subsystem > CAD Translate	20-Apr-2023 09:24:30
Assemble subsystem	Completed	ANSA	Build Subsystem > Assemble subsystem	20-Apr-2023 09:24:30
Review	Completed	Powerpoint	Build Subsystem > Review	20-Apr-2023 09:24:30
Review job request	Completed	Excel	Build Subsystem > Review job request	20-Apr-2023 09:24:30
Submit to HPC	Pending		Submit to HPC	19-Apr-2023 16:15:36
Submit Run	Pending		Submit Run	19-Apr-2023 15:57:15
Create Run	Completed		Create Run	02-Feb-2023 14:34:38
Build Subsystem	Completed		Build Subsystem	02-Feb-2023 14:19:25
Submit Run	Completed		Submit Run	23-Jan-2023 15:52:48
Create Run	Completed		Create Run	23-Jan-2023 12:28:32
Build Subsystem	Completed		Build Subsystem	23-Jan-2023 10:57:26

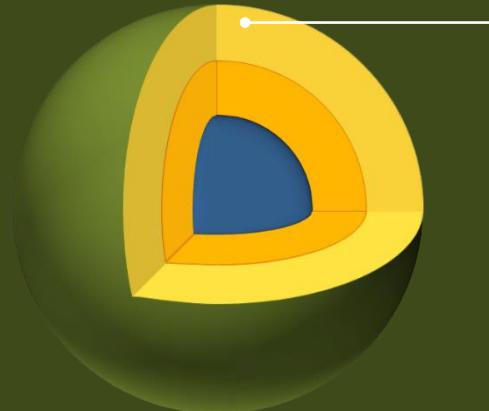
Below the main window, there is a status bar with the URL "DM : http://172.24.48.99:35080/" and a message "Workflows 8 | Nodes 29 | Selected 0".



# Script Actions

The screenshot shows the KOMVOS v23.1.1 software interface. On the left, there is a sidebar with icons for Home, Database, Processes, Issues, Actions, Tasks, History, Bookmarks, and Applications. The Actions menu is open, showing options like Input model definition, Compare, Import DOE, Machine Learning, Monitor Simulation Run(s), Validate Subsystem, Validation for Subsystems, Update Observable Jobs, Compare Subsystems in ANSA, and Start Build Subsystem workflow. Below this is a "List of SPDRM Actions". The main central area is titled "Script Actions" and displays a table with columns for Application, Path, and Creation Date. The table lists various actions such as Build Subsystem, Submit to HPC, Create Run, and Build Subsystem, categorized by application like ANSA, Powerpoint, and Excel, with their respective creation dates.

Application	Path	Creation Date
ANSWER	Build Subsystem	20-Apr-2023 09:24:30
ANSWER	Build Subsystem > Distribute information	20-Apr-2023 09:24:30
ANSWER	Build Subsystem > Prepare geometry and mesh	20-Apr-2023 09:24:30
ANSWER	Build Subsystem > CAD Translate	20-Apr-2023 09:24:30
ANSWER	Build Subsystem > Assemble subsystem	20-Apr-2023 09:24:30
Powerpoint	Build Subsystem > Review	20-Apr-2023 09:24:30
Excel	Build Subsystem > Review job request	20-Apr-2023 09:24:30
	Submit to HPC	19-Apr-2023 16:15:36
	Submit Run	19-Apr-2023 15:57:15
	Create Run	02-Feb-2023 14:34:38
	Build Subsystem	02-Feb-2023 14:19:25
	Submit Run	23-Jan-2023 15:52:48
	Create Run	23-Jan-2023 12:28:32
	Build Subsystem	23-Jan-2023 10:57:26



Machine Learning

Process Management

Data Management

# Train ML Algorithms

The screenshot displays the KOMVOS v2.3.1 software interface, specifically the 'Processes' tab. The main window shows a list of tasks categorized under 'Processes' and 'HPC Jobs'. The 'Processes' section contains numerous entries, many of which are expanded to show sub-tasks. For example, 'DV based predictor training : Sim\_Results\_Predictor' is expanded, showing sub-tasks like 'strut\_max\_acceleration : 1 - Data collection', 'strut\_max\_acceleration : 2 - Training', and so on. Most of these sub-tasks have a green checkmark next to them. The 'HPC Jobs' section shows a single entry: 'DV based predictor training : Sim\_Results\_Predictor,001\_HPC\_13'. The status of this job is 'Running' with a progress bar at 100%. The sidebar on the right provides detailed information about this specific HPC job, including its name, state, creation date (16/12/2022), and progress (100%). It also lists other related items such as 'DV based predictor training : Head\_acceleration', 'DV based predictor training : Head\_acceleration', and 'DV based predictor training : Head\_acceleration'. The bottom of the interface shows the URL 'DM : http://172.24.48.99:35080/' and the status 'Workflows 8 | Nodes 29 | Selected 0'.

# Predictors

KOMVOS v24.0.0

File Extras Tools Help

Home Database Processes Issues Actions

New tab X Simulation Models X Predictors X +

Train Improve

Search in DM

Contents Iteration Id

- nodout-Node/X acceleration (xa)
- Magnitude of acceleration (ma)
- left\_clavicle\_inboard\_load\_cell\_res
- Kinetic energy (ke)
- HIC\_36
- HIC\_15
- 001
  - DV based predictor\_Occupant\_safety\_measurements\_001\_HIC\_15 001 8412
  - DV based predictor\_injury\_criteria\_v24\_001\_HIC\_15 001 11184
  - DV based predictor\_Injury\_Criteria\_001\_HIC\_15 001 5092
  - DV based predictor\_InjuryCriteria\_001\_HIC\_15 001 11149
  - DV based predictor\_HIC15\_001\_HIC\_15 001 11227
  - DV based predictor\_1d\_2d\_3d\_Results\_Prediction\_001\_HIC\_15 001 8392
  - head\_acceleration\_res
  - From Report Curves/MagnitudeHeadAcceleration
  - From Report Curve/CFC100\_\_THOR-50TH\_HEAD\_CO\_ACCELEROMETER\_X\_head\_acceleration\_x
  - From Report Curve/CFC600\_\_THOR-50TH\_THORACIC\_SPINE\_LOADCELL\_thoracic\_spine\_load\_cell\_fx
  - From Report Curves/CFC60\_\_THOR-50TH\_HEAD\_ANGULAR\_RATE\_SENSOR\_X\_head\_angular\_velocity\_x
  - Displacements
  - Deformation/Displacements
  - BRIC
- head\_acceleration\_res
- From Report Curves/MagnitudeHeadAcceleration
- From Report Curve/CFC100\_\_THOR-50TH\_HEAD\_CO\_ACCELEROMETER\_X\_head\_acceleration\_x
- From Report Curve/CFC600\_\_THOR-50TH\_THORACIC\_SPINE\_LOADCELL\_thoracic\_spine\_load\_cell\_fx
- From Report Curves/CFC60\_\_THOR-50TH\_HEAD\_ANGULAR\_RATE\_SENSOR\_X\_head\_angular\_velocity\_x
- Displacements
- Deformation/Displacements
- BRIC

DM:/komvositfiles/komvodata/SampleFiles/Occupant\_Safety/occupant\_safety\_DM/ Predictors 48 selected 1

Details References

Name	Value
Group Name	1d 2d 3d_Results_Prediction
Output Measure	HIC_15
Iteration	001
Sub-type	DV based predictor
File	DM-PredictorHIC_15/1d_2d_3d_Results_Prediction/001/DVx20basedx20predictor/file/bp.dat
Name	DV based predictor_1d_2d_3d_Results_Prediction_001_HIC_15
Status	Pending Verification
Output Measure Type	Keyvalue
Output Measure Sub-type	-
Model Type	-
Propagation Ratio	100
DM Creation Date	05-JUL-2022 10:36:18
DM Modification Date	05-JUL-2022 11:11:24
Irene	d.scholten

N/A info

1d hic\_15\_ 2d ac

META Results Viewer KPIs Training Data

Accuracy Metrics

Estimated Test Mean Absolute Error 3.6500  
Train Mean Absolute Error 2.6206

Performance Plots

Ranking of DVs according to importance

Residuals vs Predicted Scatter Plot

Target - Prediction Overlay

Targets vs Predicted Scatter Plot

Test Accuracy vs Dataset Size Curve

Variance Estimation

Properties: Predictions with confidence bounds  
MAE of Variance: 3.6424, Accuracy: 92.0% (Maximum Confidence level: 95.0%)

\* MAE of Variance is the minimum error of the confidence bounds for each prediction  
Accuracy is the percentage of the point bounds that correctly enclose the ground truth value

Design Space Exploration

Iteration Status Summary Predictors X New tab X Predictors X Predict Session X +

Type: DV based Predictor

Group: 23\_1\_Z\_Head

Curve: CPC100\_\_THOR-50TH\_HEAD\_CO\_ACCELEROMETER\_X\_head\_acceleration\_x

Iteration: 0001

Start time: 2022-07-05 10:36:18

Last update: 2022-07-05 11:11:24

Job user time: 130.023 s

Wall clock time: 130.023 s

Nodes: 10

Design Space Exploration

Iteration: 0001

Start time: 2022-07-05 10:36:18

Last update: 2022-07-05 11:11:24

Job user time: 130.023 s

Wall clock time: 130.023 s

Nodes: 10

# Make Predictions

KOMVOS v23.3.0

d.drougas

Predictors X New tab X Predictors X Predict Session X

Predictor info  
Type: DV based predictor  
Group: 23.1\_2\_Dec  
Outputs:

- 1138: Curve / From Report Curves / CFC1000\_\_THOR-50TH\_HEAD\_CG\_ACCELEROMETER\_X\_head\_acceleration\_x
- 1139: Field / Deformation / Displacements

My Experiments

Iteration	Status	Seatbelt_dum...	Starting_posit...	Pad_vend_time	Seatbelt_sens...
0001	Ok	0.2	-20	2	10
0002	Ok	0.6	30	13	30

Residuals vs Predicted Scatter Plot

Targets vs Predicted Scatter Plot

Variance Estimation

Design Space Exploration

3D Model View:

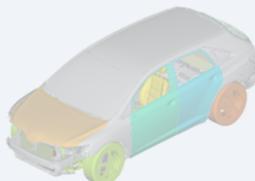




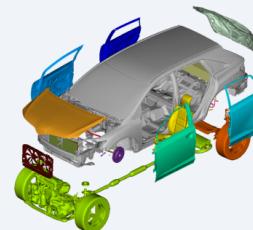
One platform,  
a wide variety of applications

[Download TC Product](#)[Update Subsystem](#)**CAD Structure**

- 📁 FULL\_VEHICLE
  - 📁 FRONT\_DOORS
  - 📁 REAR\_DOORS
  - 📁 REAR
  - 📁 FRONT
  - 📁 SIDE
  - 📁 FLOOR
  - 📁 FRONT\_SUSPENSION
  - 📁 SEATS
  - 📁 TRIMS
    - ixel DOORS\_TRIMS
    - ixel BIW\_TRIMS
  - 📁 REAR\_SUSPENSION
  - ....

**CAE Structure**

- DOORS
  - 📁 REAR\_DOORS
  - 📁 FRONT\_DOORS
  - ixel DOORS\_TRIMS
- BIW
  - 📁 REAR
  - 📁 FRONT
  - 📁 SIDE
  - 📁 FLOOR
  - ixel BIW\_TRIMS
- SEATS
- FRONT\_SUSPENSION
- REAR\_SUSPENSION
- ....

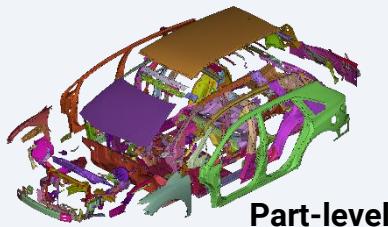
**SDM database**



Create Subsystems

Translate CAD files

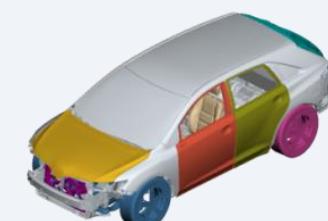
Create Meshes



Part-level



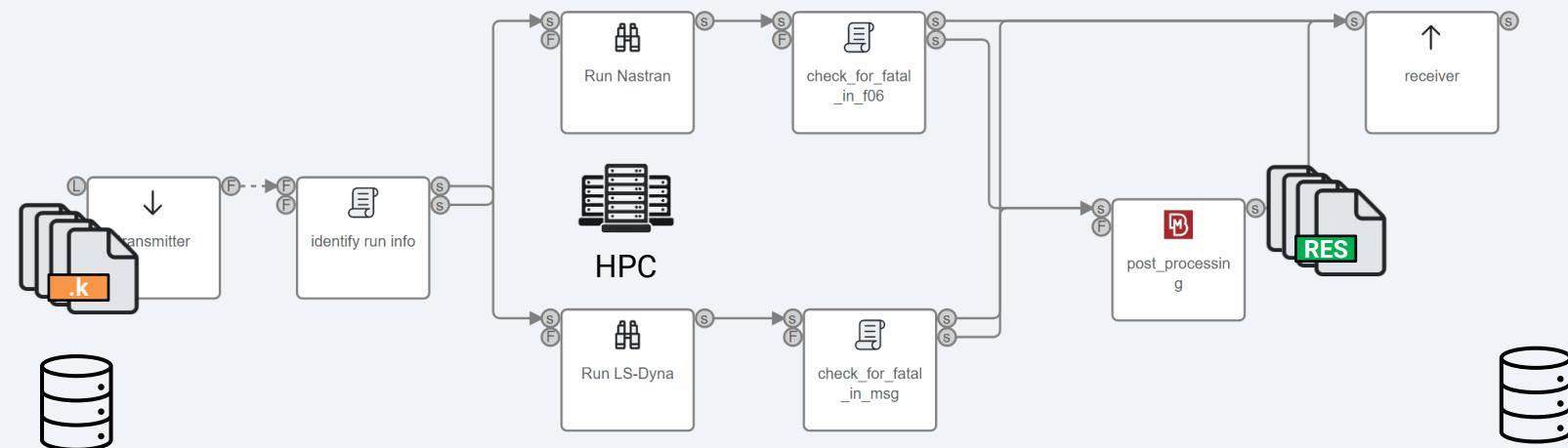
Subsystem-level



Simulation Model-level



Submit Run to HPC



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



In queue



Finished



Running



Error



## DOE Setup



The screenshot displays the KOMVOS v23.1.0 software interface, which includes several windows and panels:

- Top Bar:** File, Extras, Tools, Help.
- Left Panel:** Home, Database, Processes, Issues, Actions, Predictors (with tabs for Predictor info, Type: DV based predictor, Group: 23.1\_Z\_Bec, and a preview of a report curve).
- Middle Left Panel:** My Experiments table showing a single entry for a seatbelt dummy friction test.
- Middle Right Panel:** Design Space Exploration showing three scatter plots of different variables.
- Bottom Left Panel:** A table of experimental results for various trials (Exp001 to Exp017).
- Right Side:** A large 3D visualization of a crash test dummy in a car seat, with various colored segments representing different sensor locations (e.g., head, torso, legs) and a pink beam representing a constraint or load path. Below the 3D view is a detailed view of the "Displacements" tab.



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**

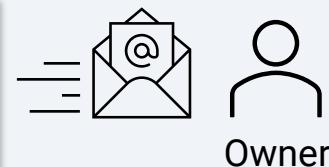
Type	Bug
Priority	High

**Description**

MID 104200 used by inner panel is wrong. Must be sync'd from new db

**References**

ID	Name	Status
30017	102_door_fl_tutorial_release1_variant1_dura_fe_lv1_001	Error



Subsystem
102_door_fl_dura_fe
tutorial release1
variant1 lv1 001
Nastran
zeta
13-JAN-2022 14:15:36
Error

1/1

Simulation Models

tuto...	rele...	durabi...
door	-	001
zeta		
13-JAN-2022 14:16:02		
Warning		

2/2

tuto...	rele...	durabi...
door	-	002
zeta		
25-FEB-2022 11:16:01		
Warning		

2/2

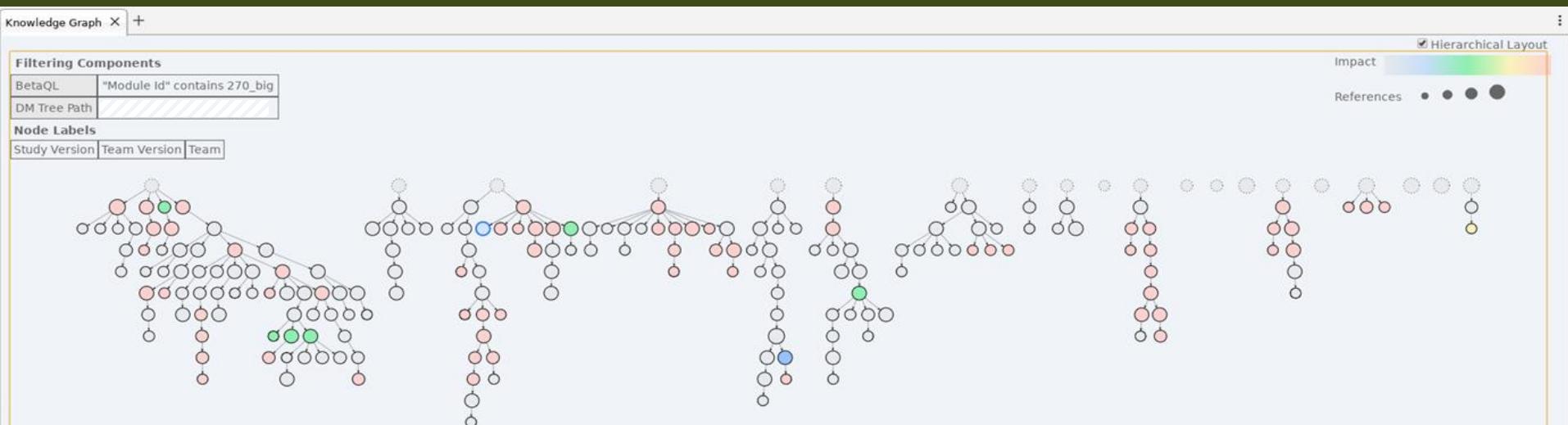
Simulation Runs

tutorial	release1	-	door_static_durability
01	001	01	01
zeta			
13-JAN-2022 14:16:35			
Warning			

1/1



## Subsystems Centrality



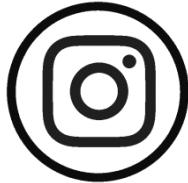
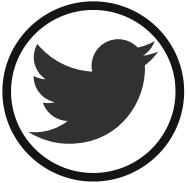
*BiW subsystem iterations with the biggest impact on max section force on left crash-box*

# Integration of SPDRM elevated Data and Process Management in KOMVOS



Simulation Data and Process Management enables ML

ML enables Knowledge Management



Stay connected