BETA

SIMULATION SOLUTIONS

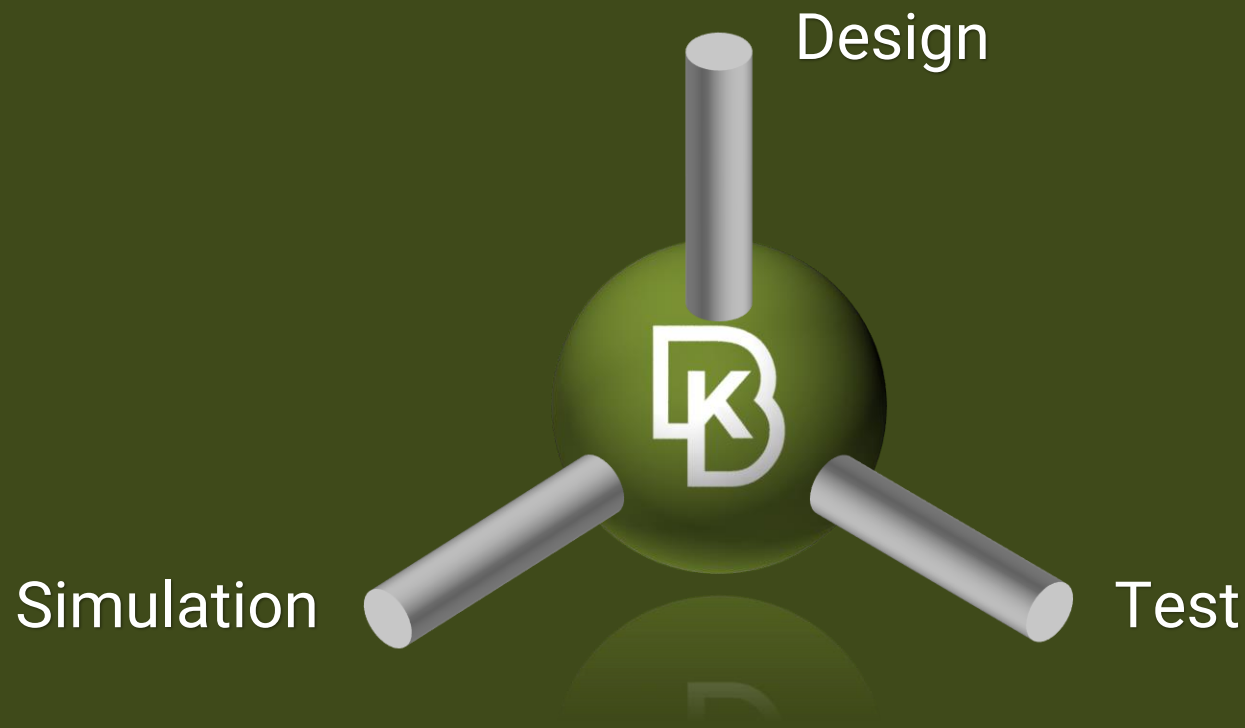
# Groundbreaking Simulation Solutions

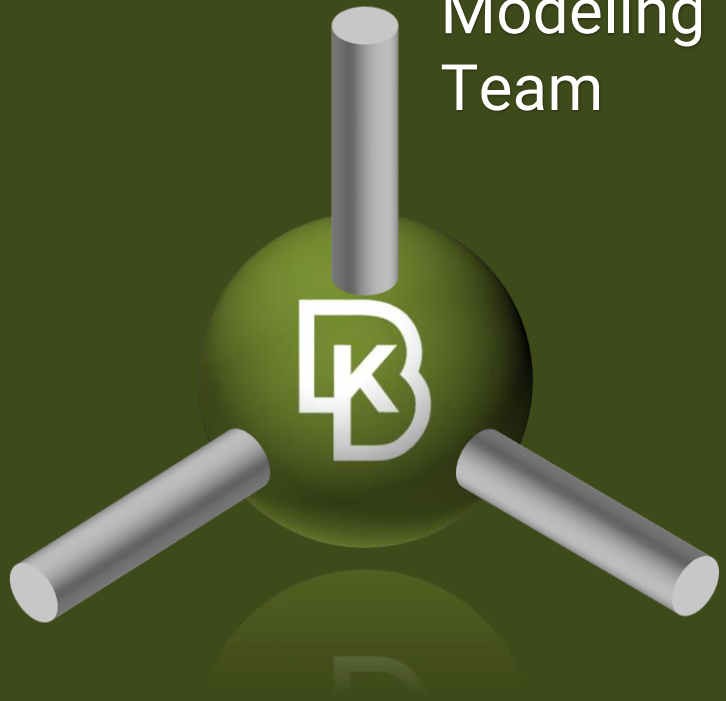
*physics on screen*

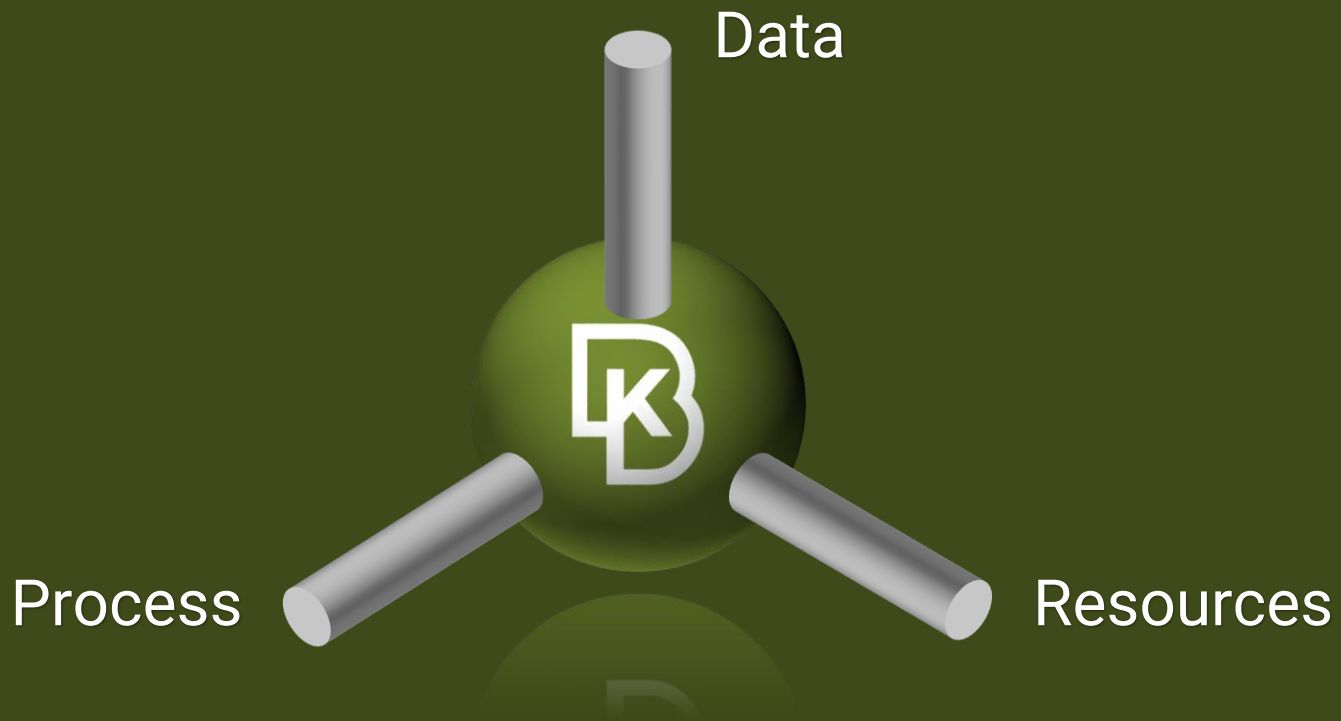
# KOMVOS

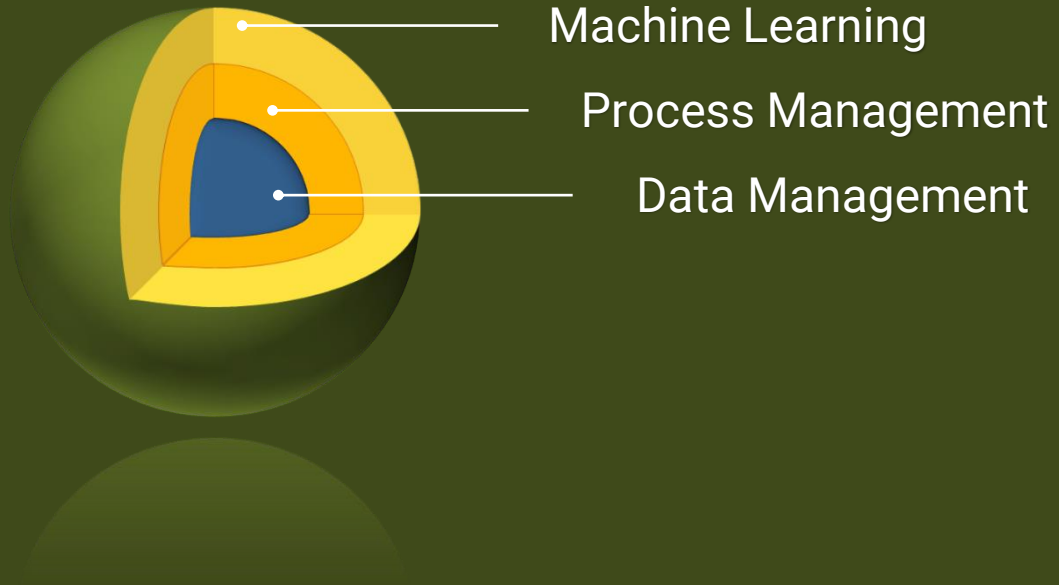
A digital hub for CAE Simulation Process and Data Management

KOM ction

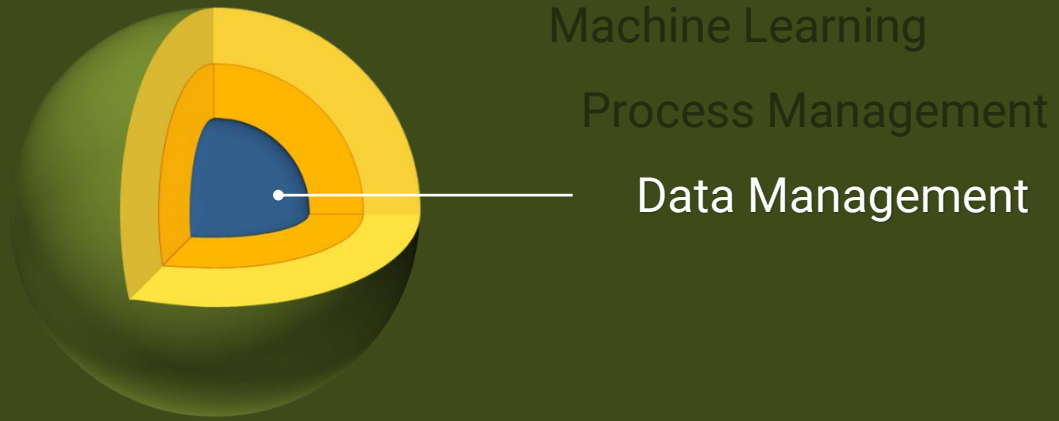

Design
Simulation
Test


Modeling
Team
Simulation
Engineers
Team Leaders &
Managers


Data
Process
Resources

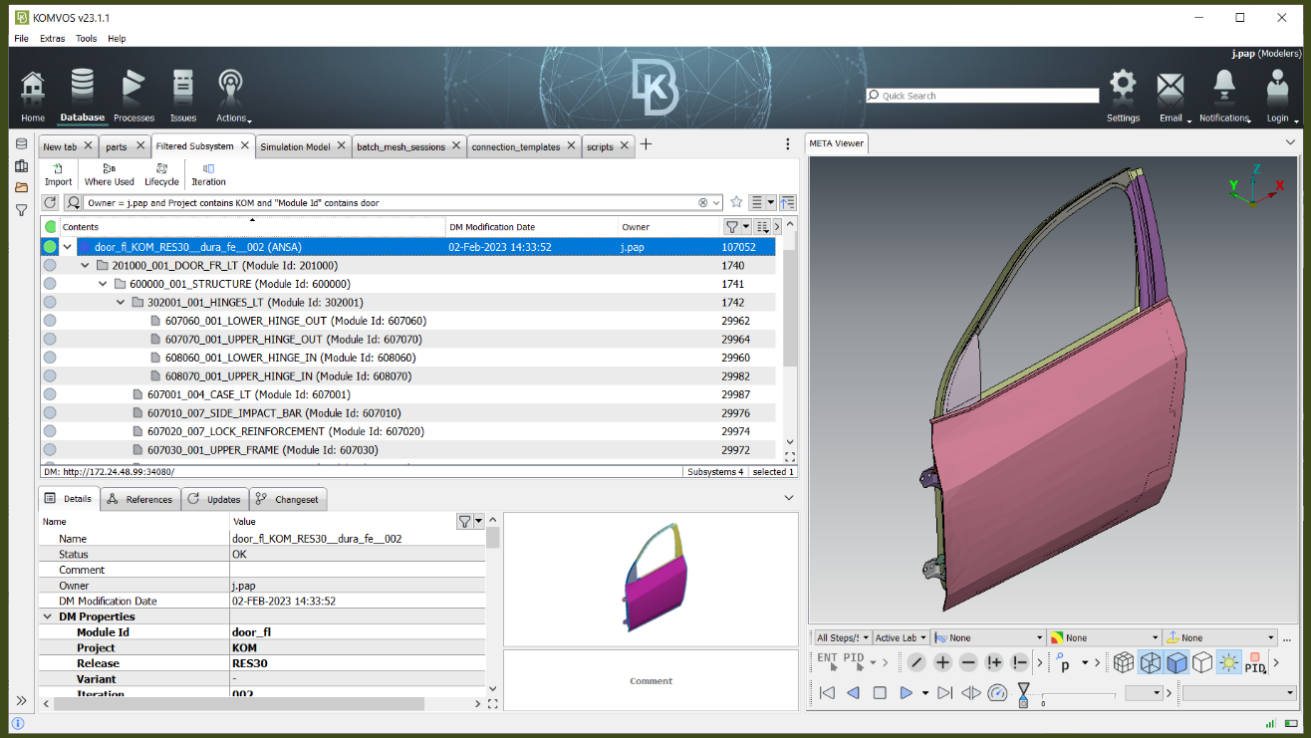

Machine Learning
Process Management
Data Management

# Data Management



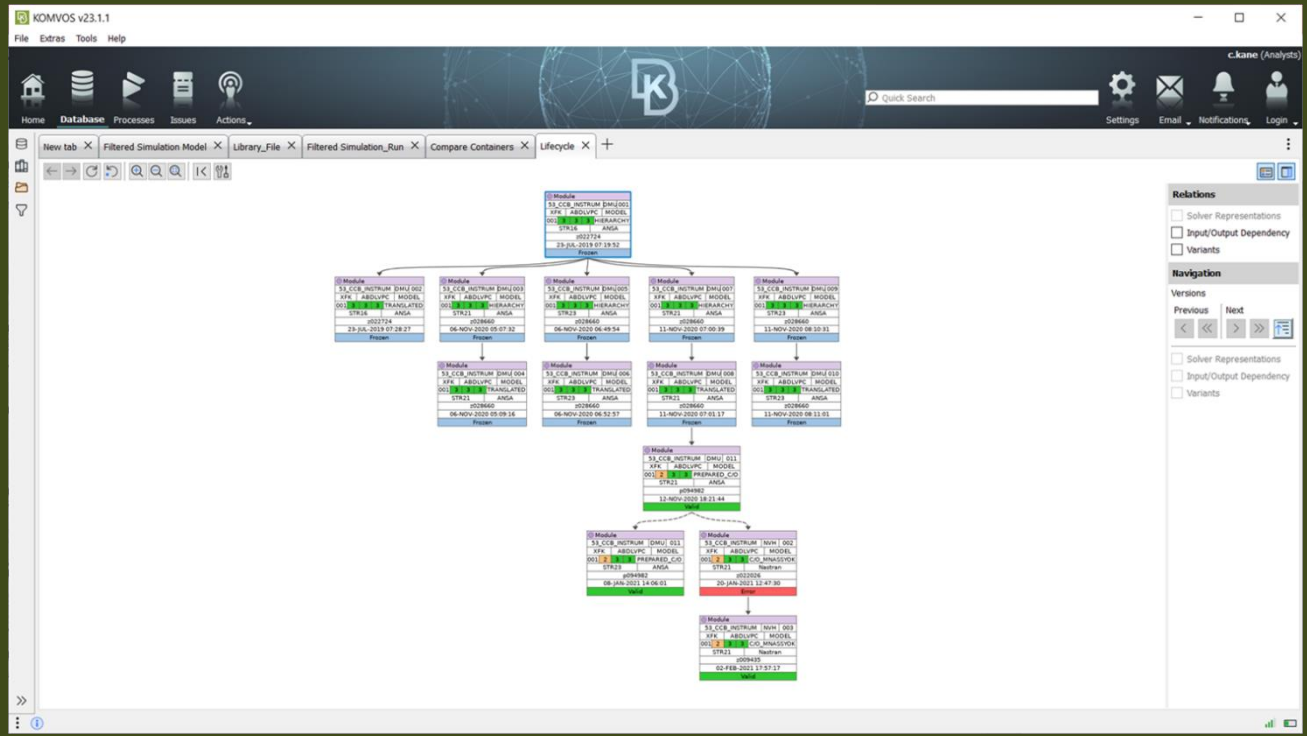
# Data Management

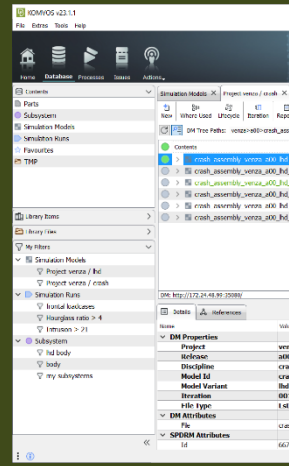
## Data Browsing



# Data Management

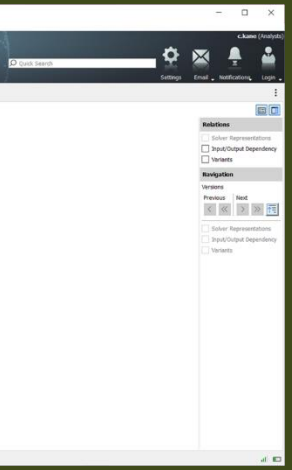
## Data Browsing

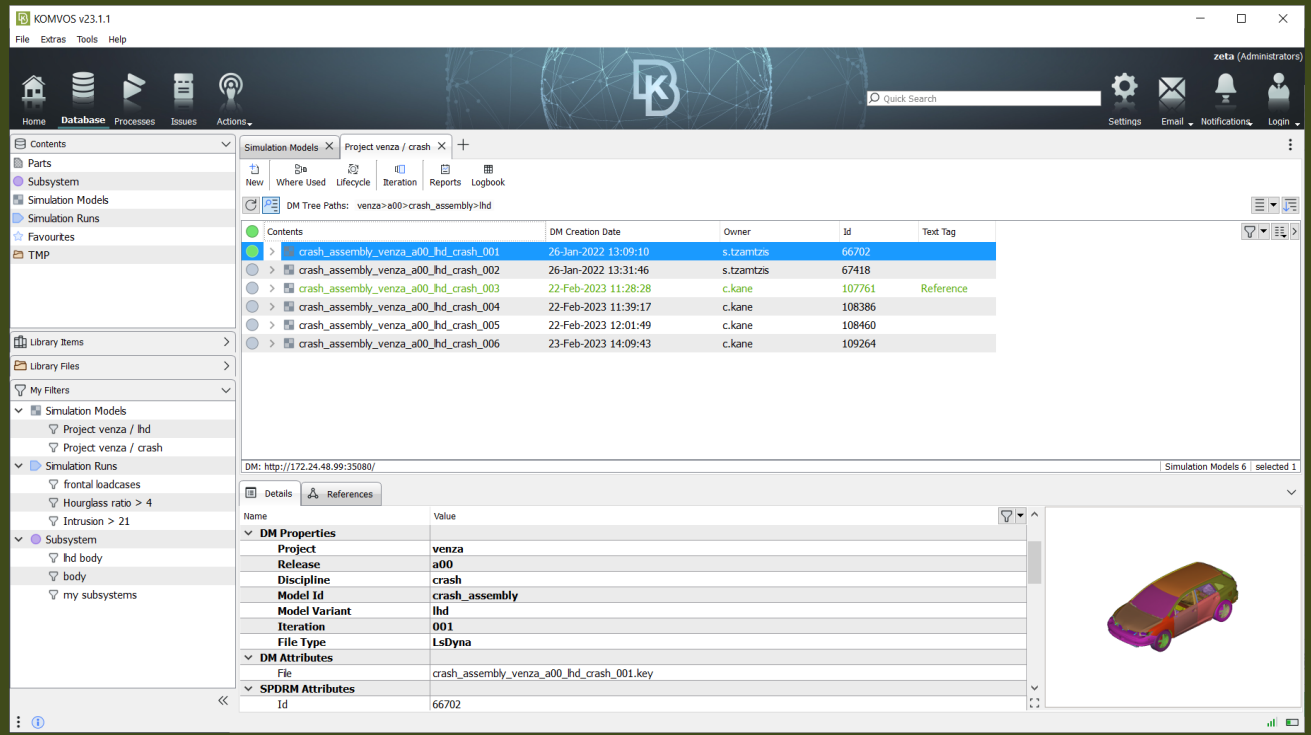


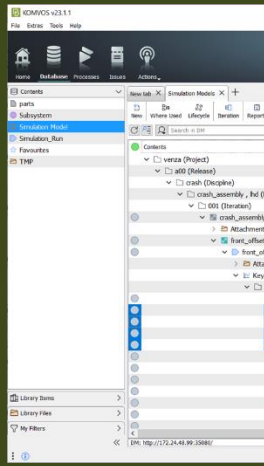



# Data Management

## Data Search

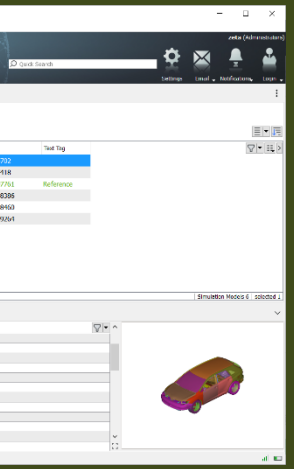


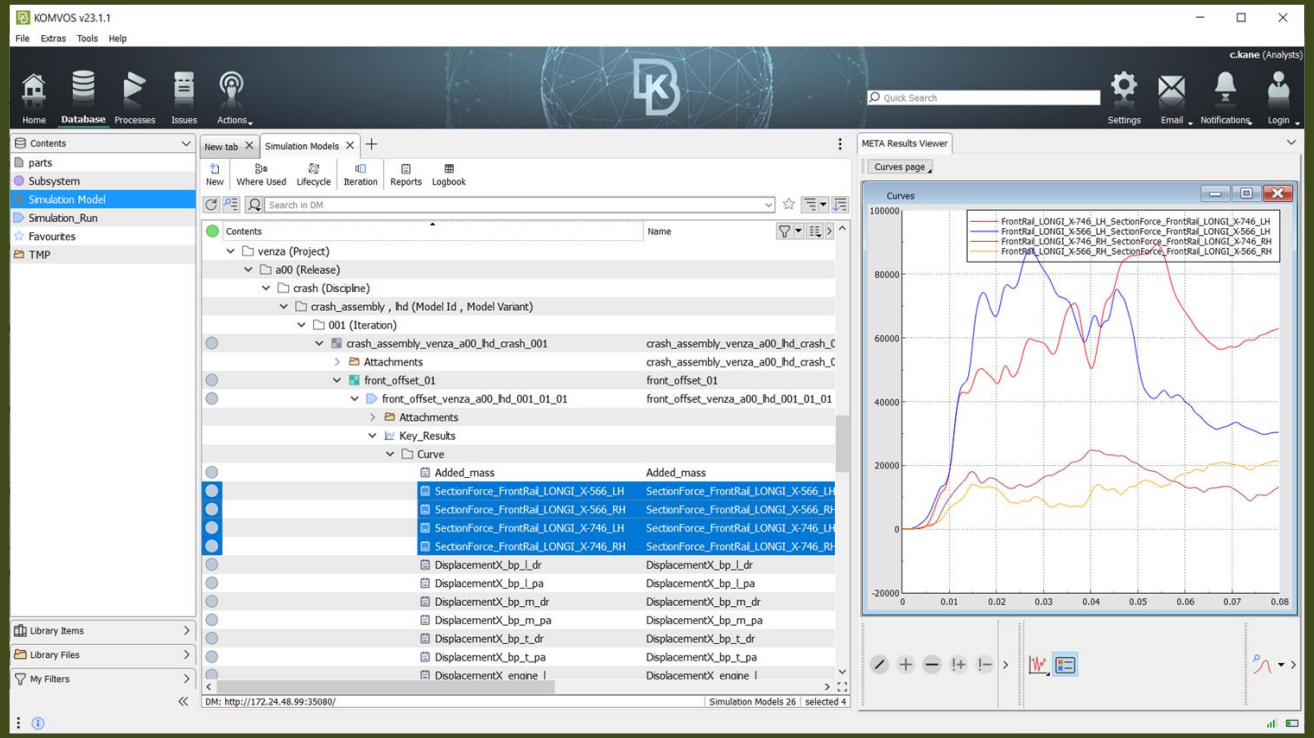


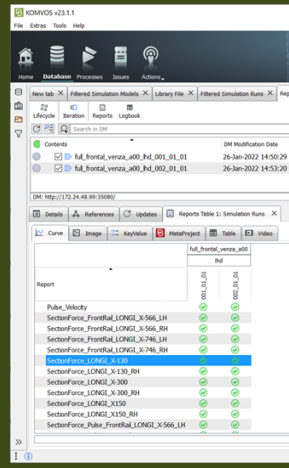



# Data Management

## Results Review

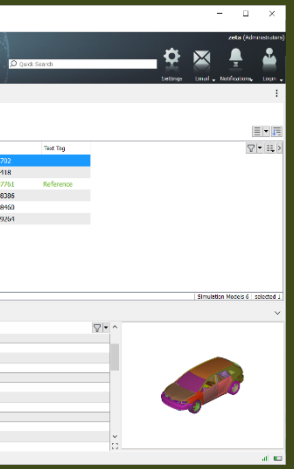


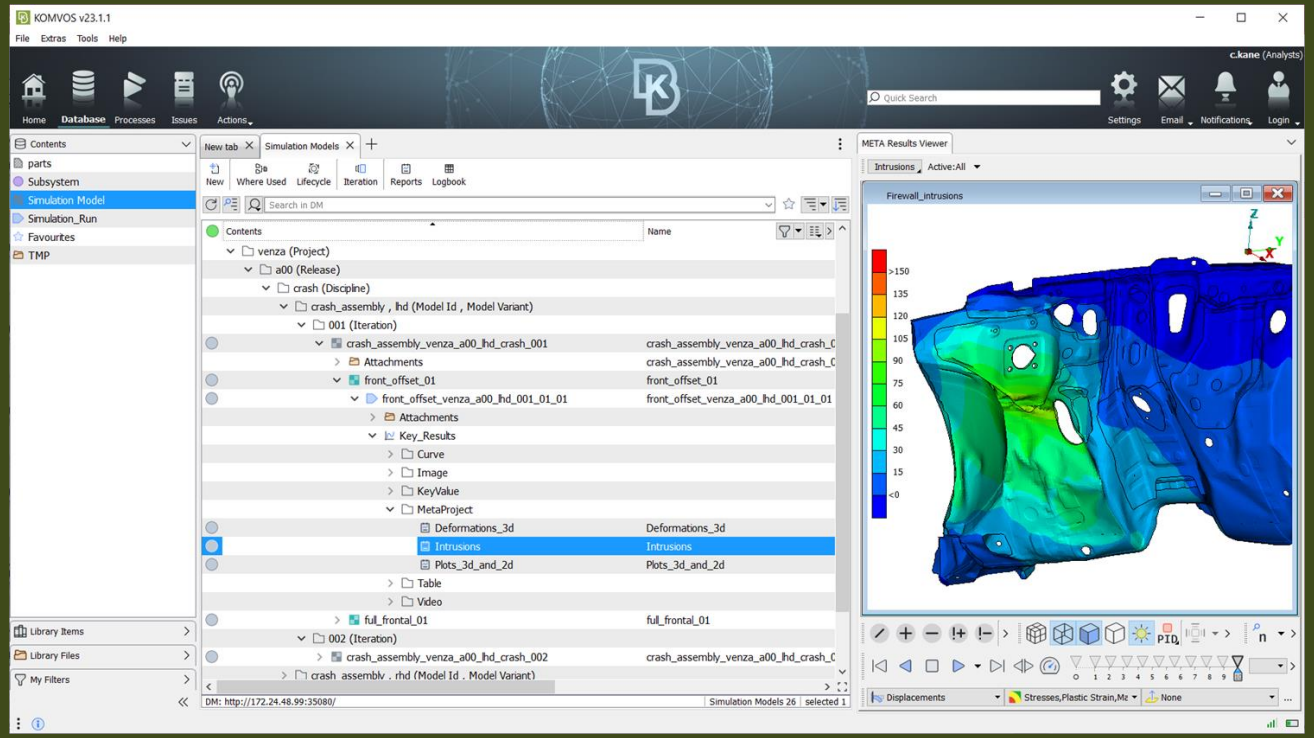


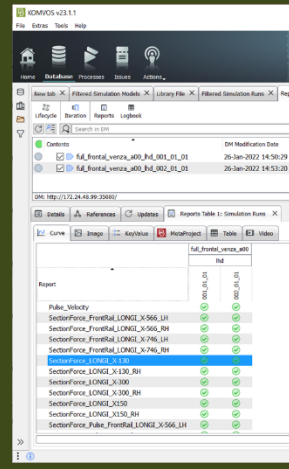



# Data Management

## Results Review

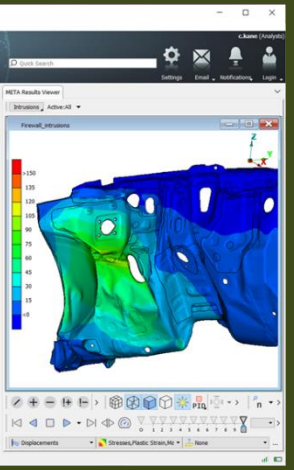


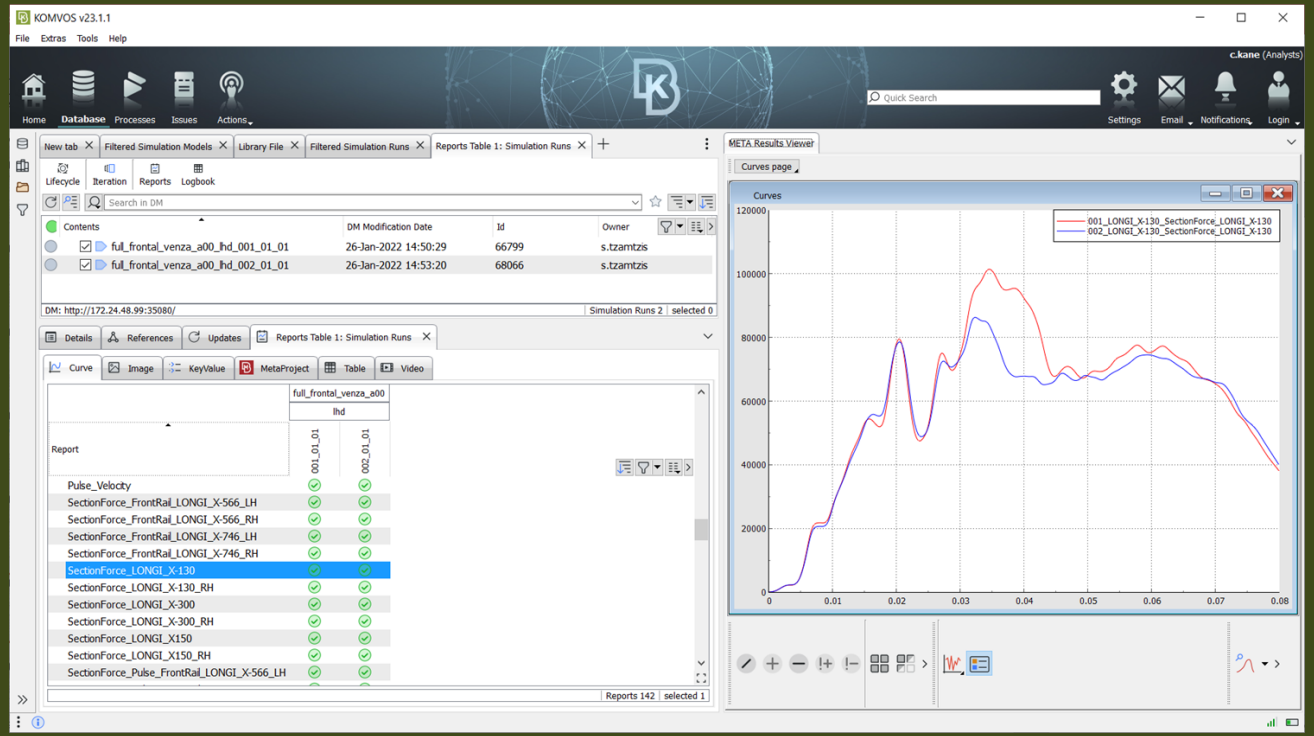


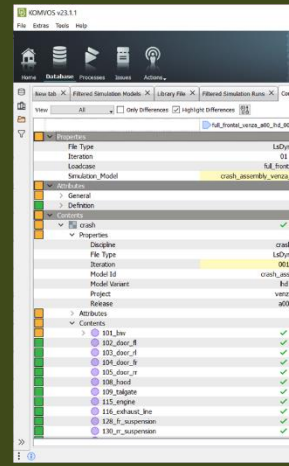



# Data Management

## Results Comparison

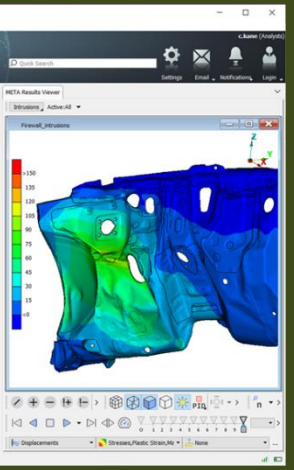


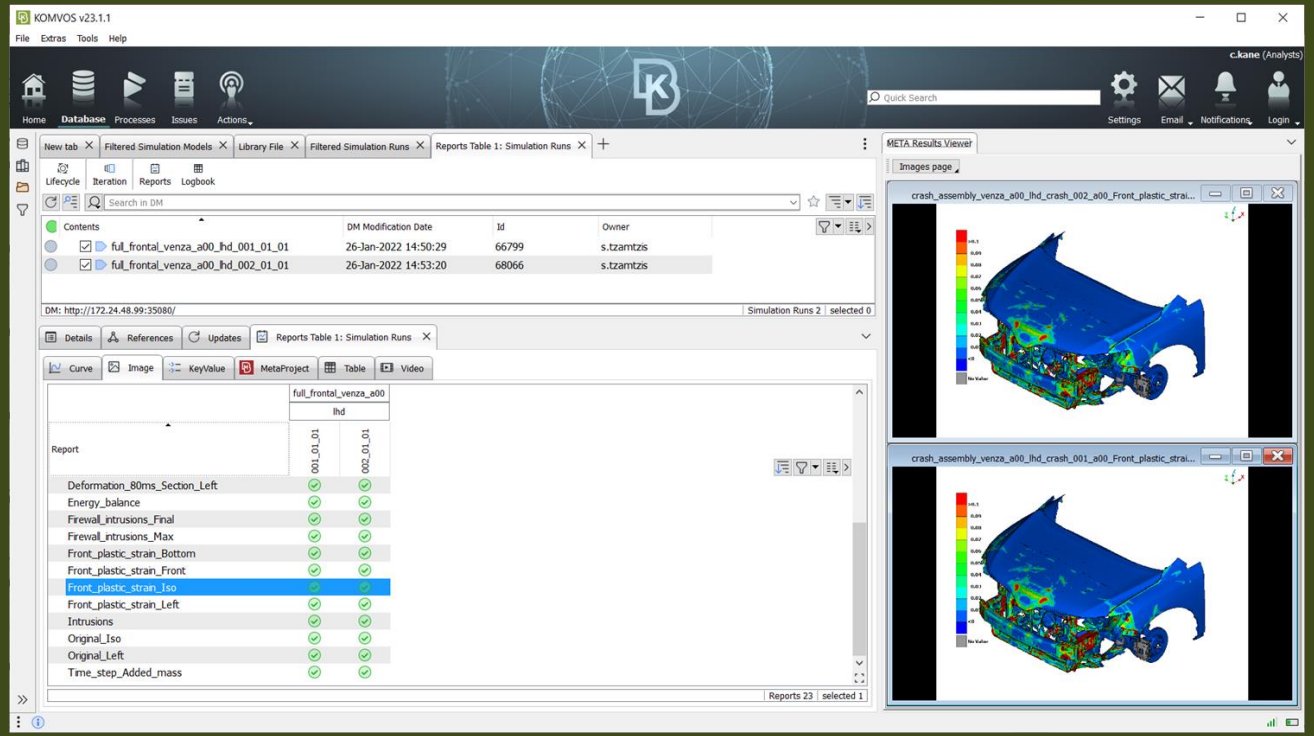


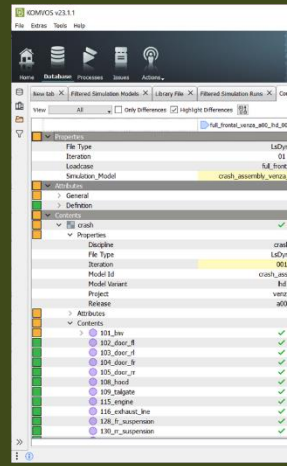



# Data Management

## Results Comparison





# Data Management

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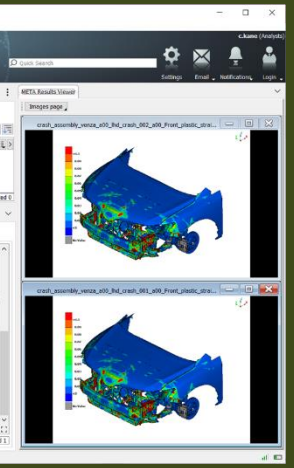
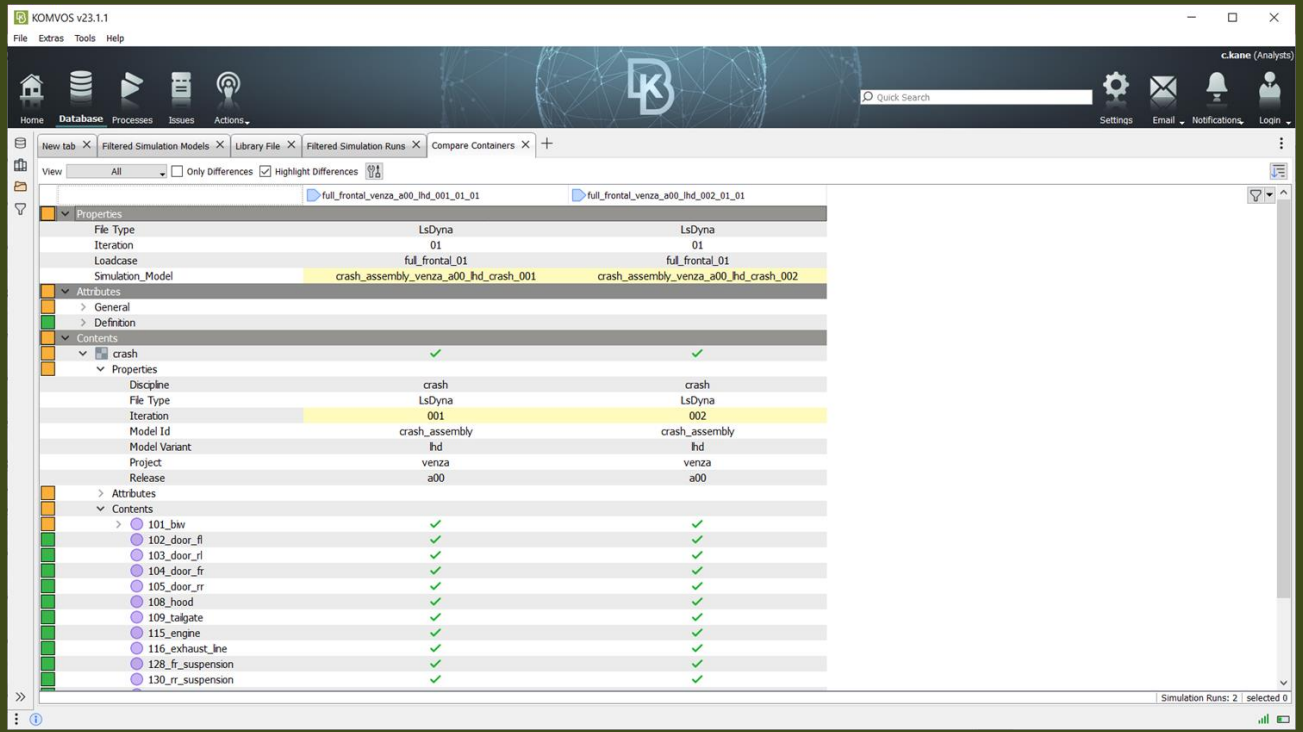
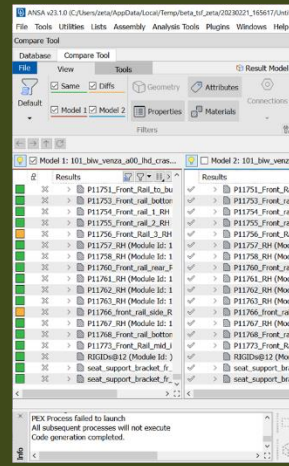
## Simulation Contents Comparison

Mo





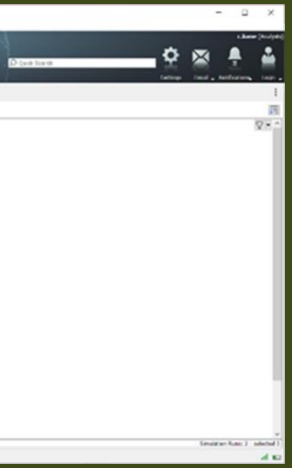



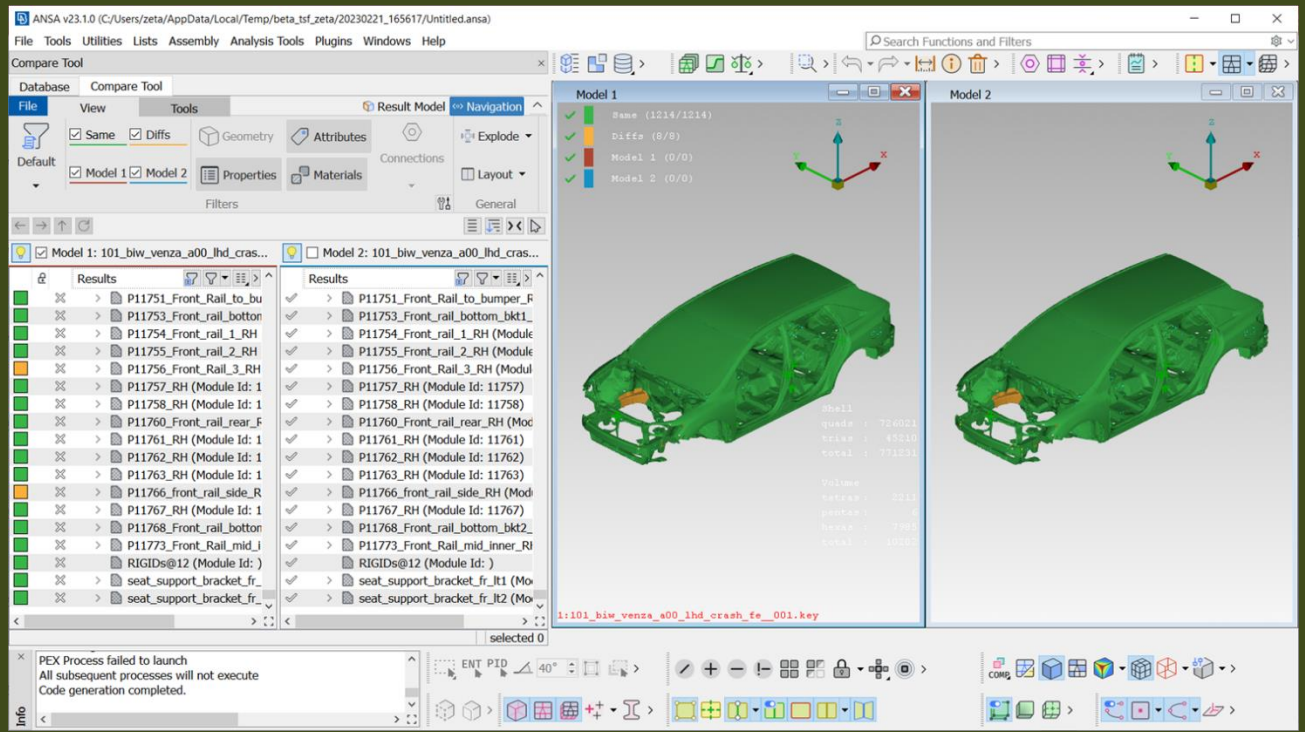
# Data Management

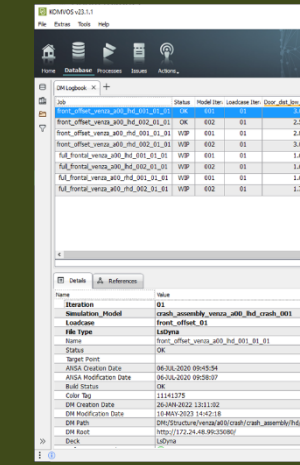
omparison

## Model Comparison

R





# Data Management

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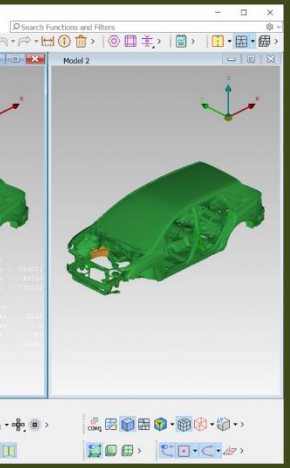
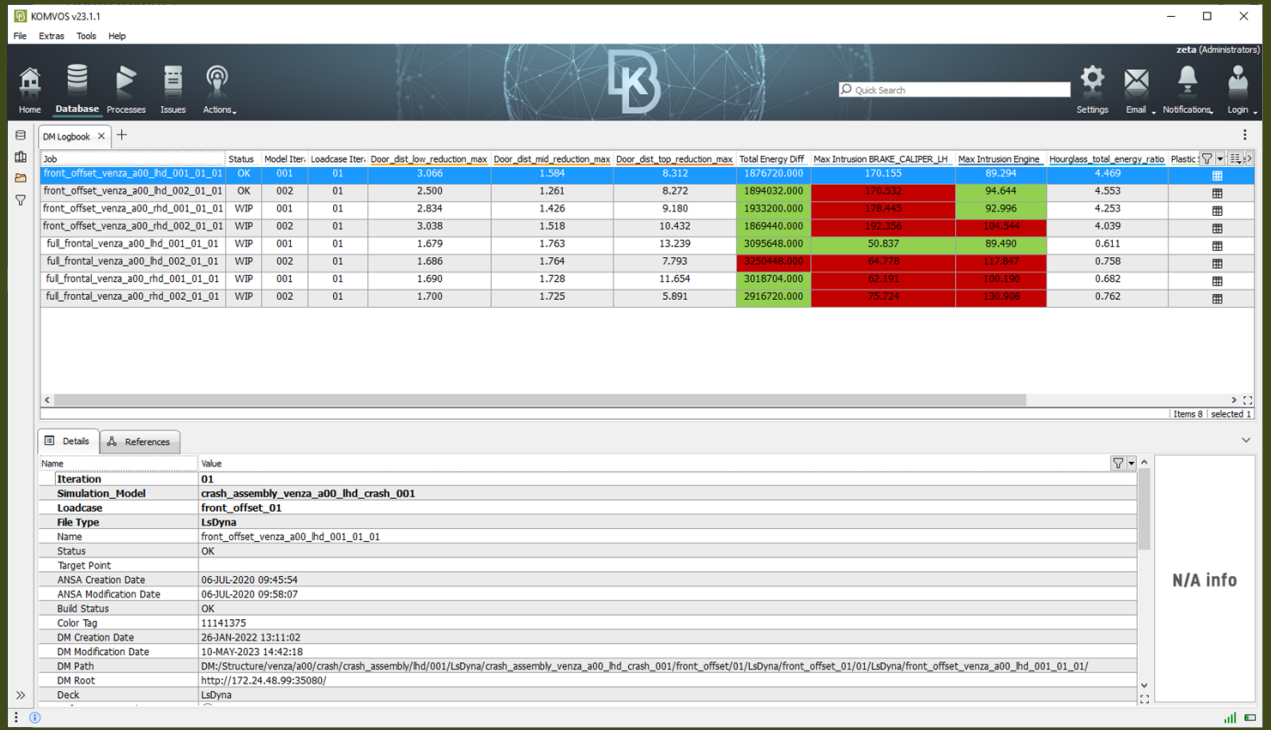
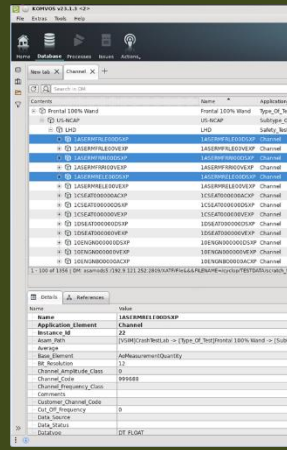
## Results Logbook

Tes



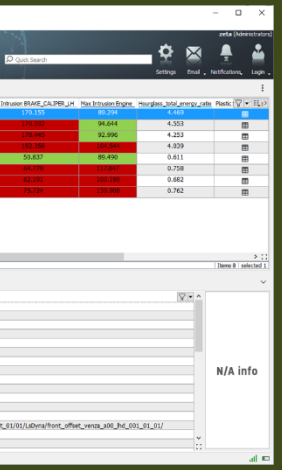


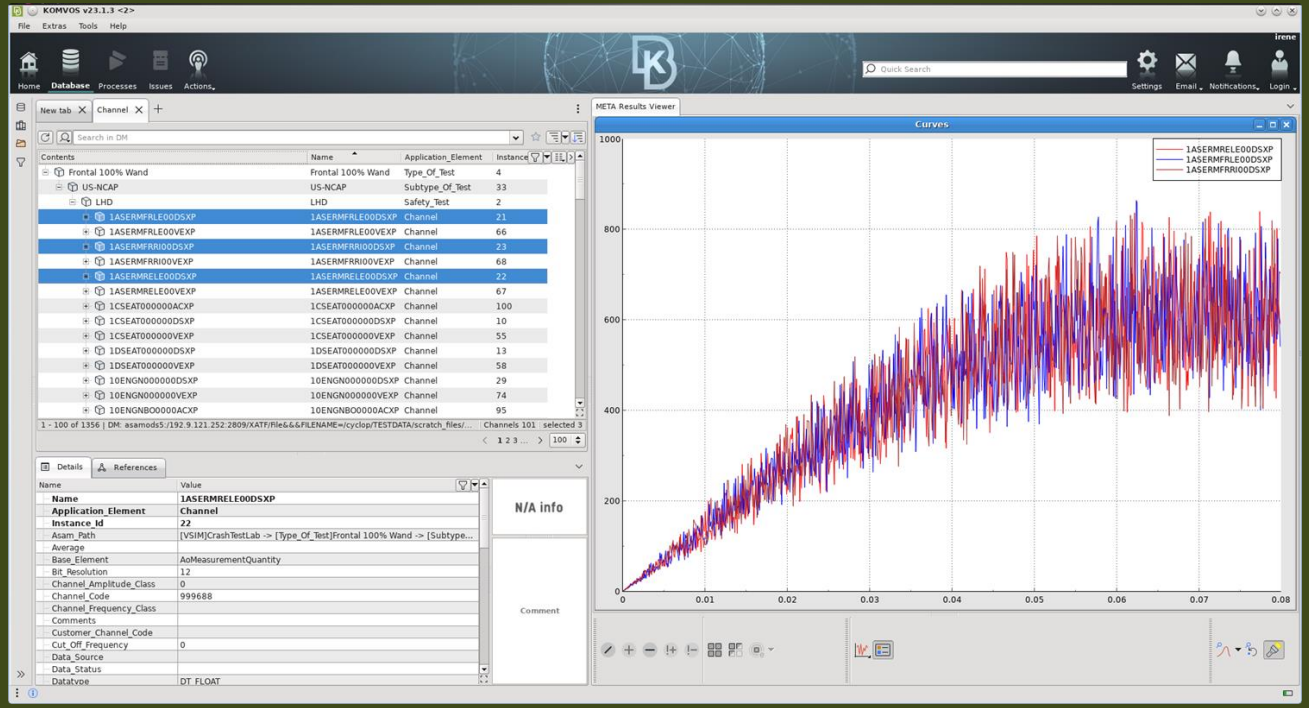



# Data Management

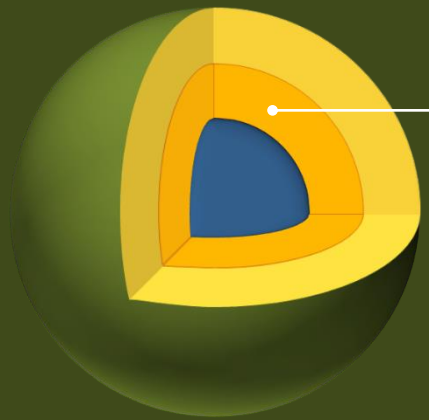
ok

## Test Results Review



# Process Management



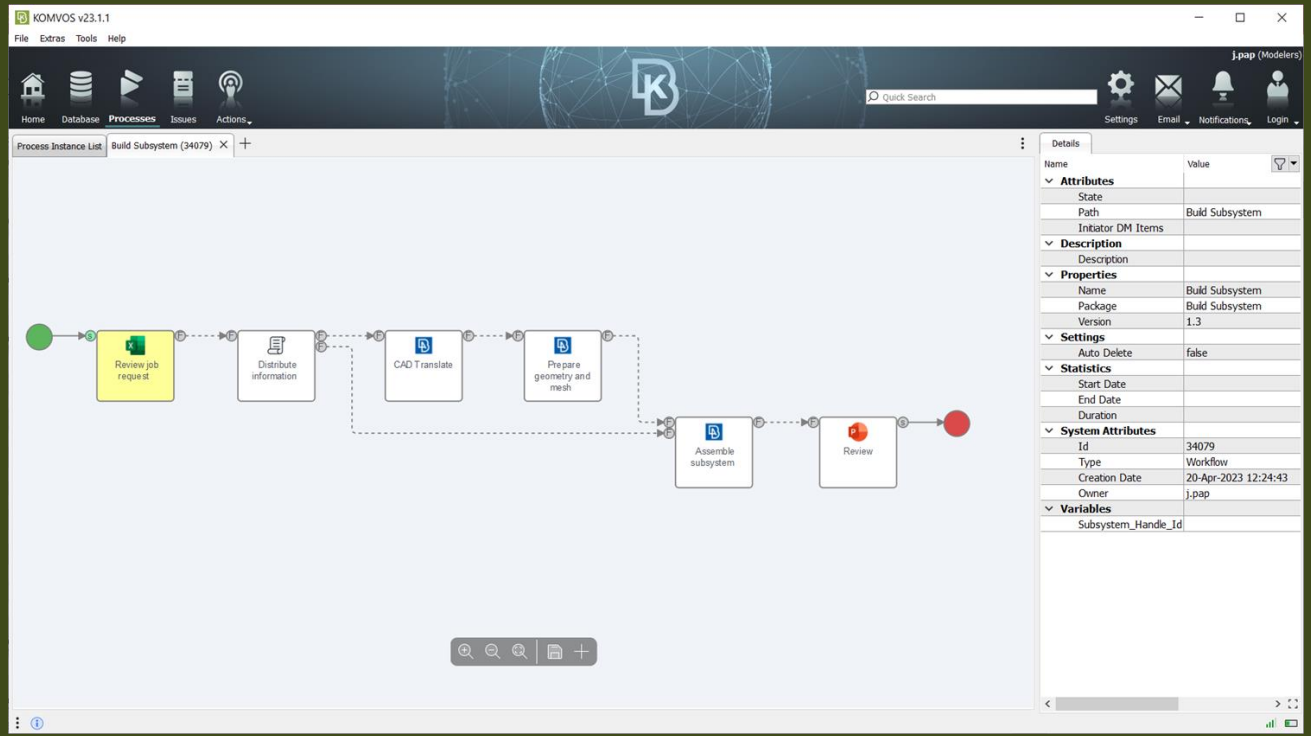
Machine Learning

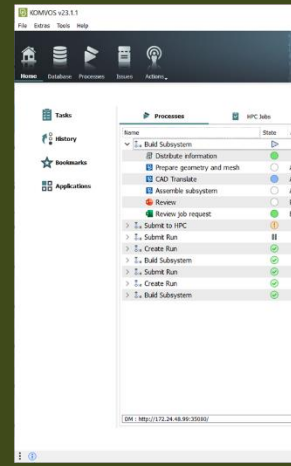
Process Management

Data Management

# Process Management

## Process Design & Execution

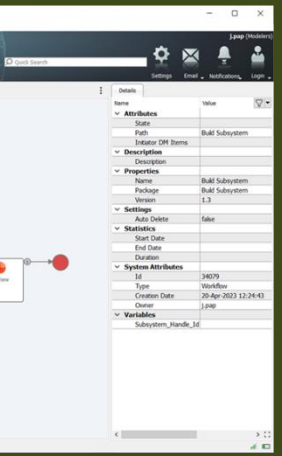


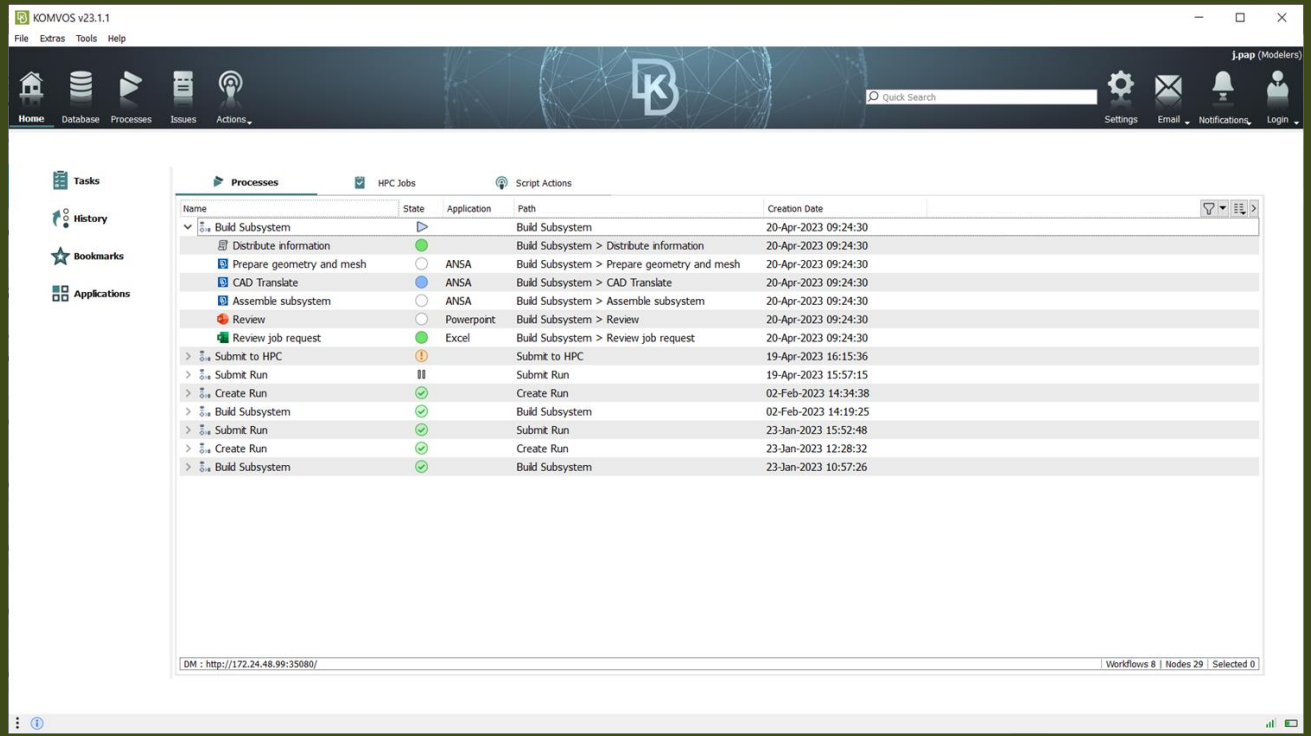



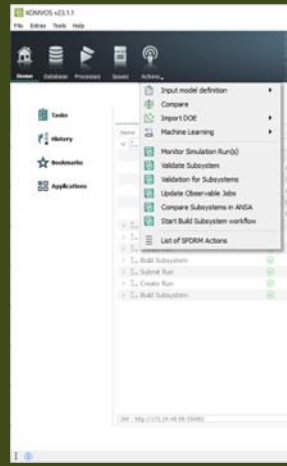
# Process Management

ecution

## Process Monitoring



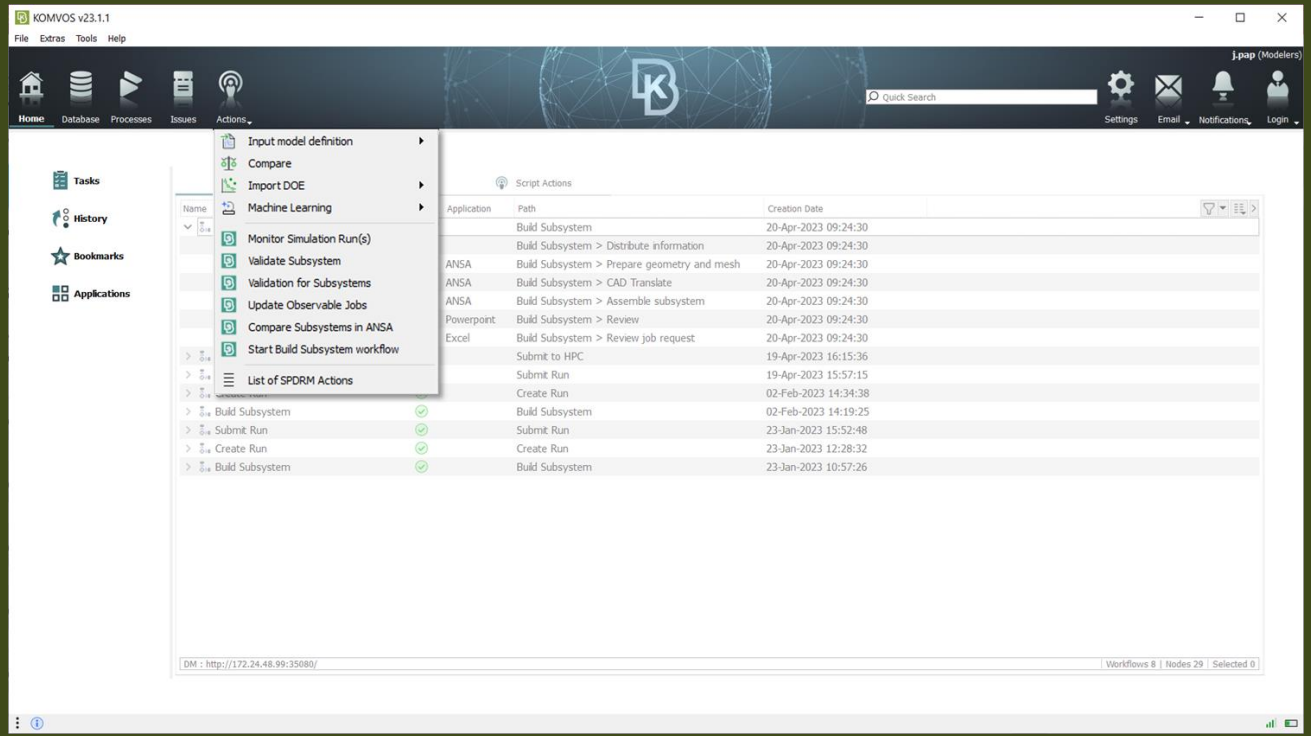


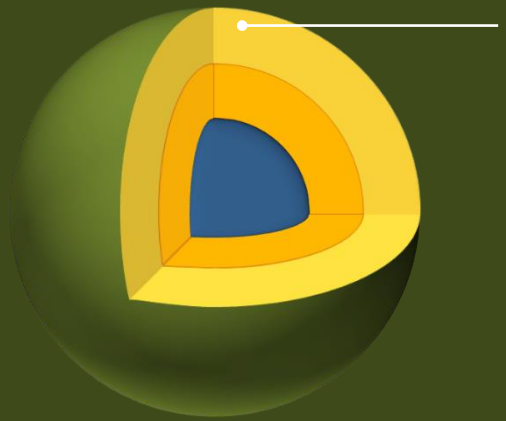
# Process Management

ring

## Script Actions



# Machine Learning



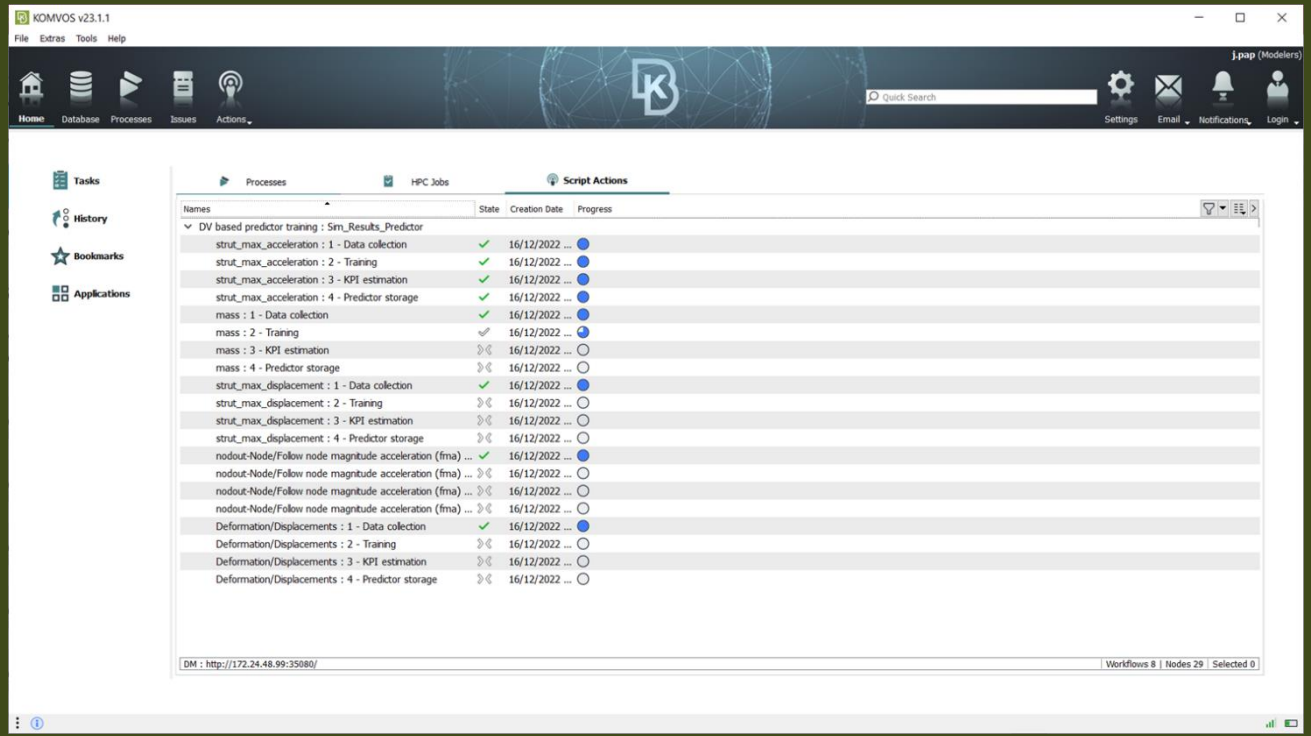
Machine Learning

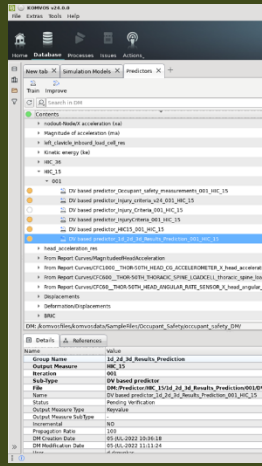
Process Management

Data Management

# Machine Learning

## Train ML Algorithms



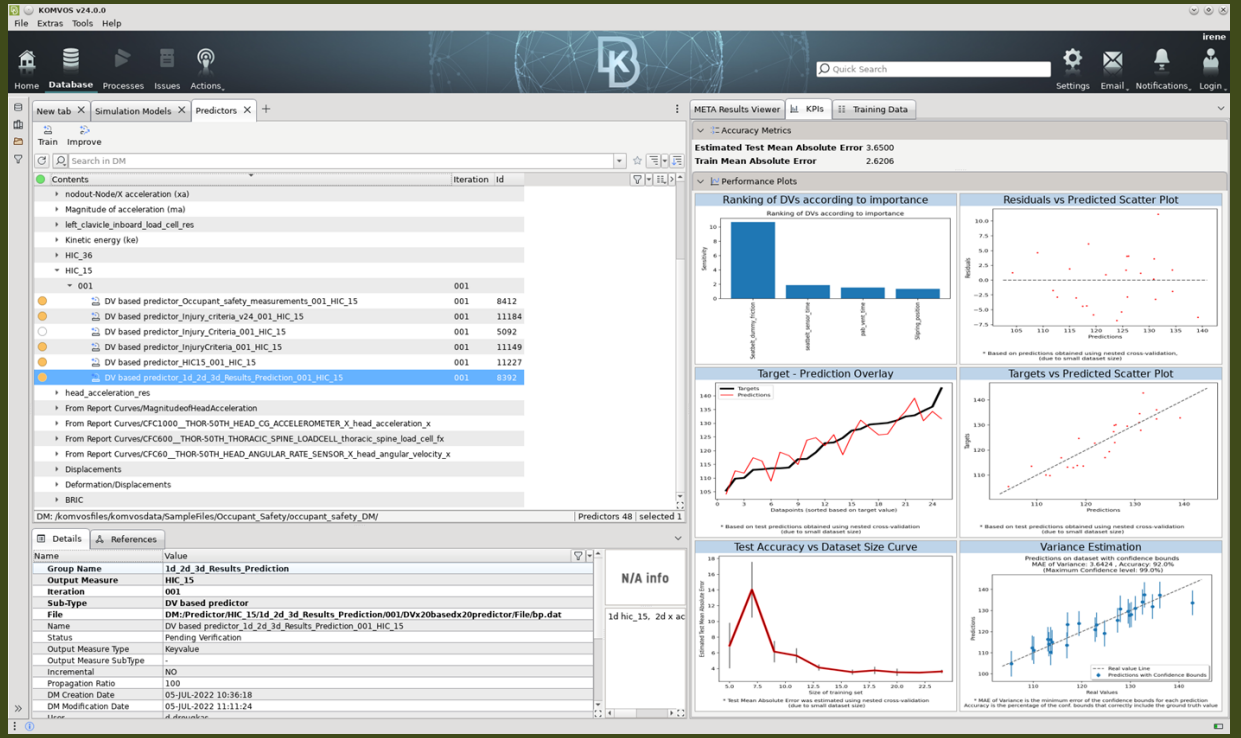



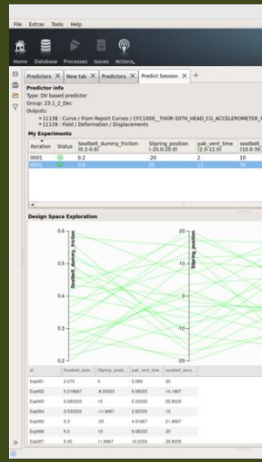
# Machine Learning

nms

## Predictors

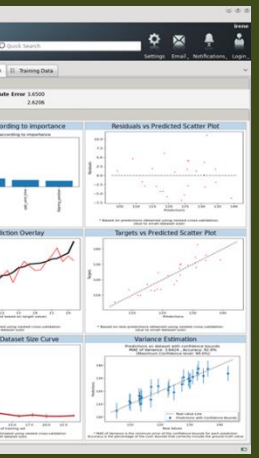
M

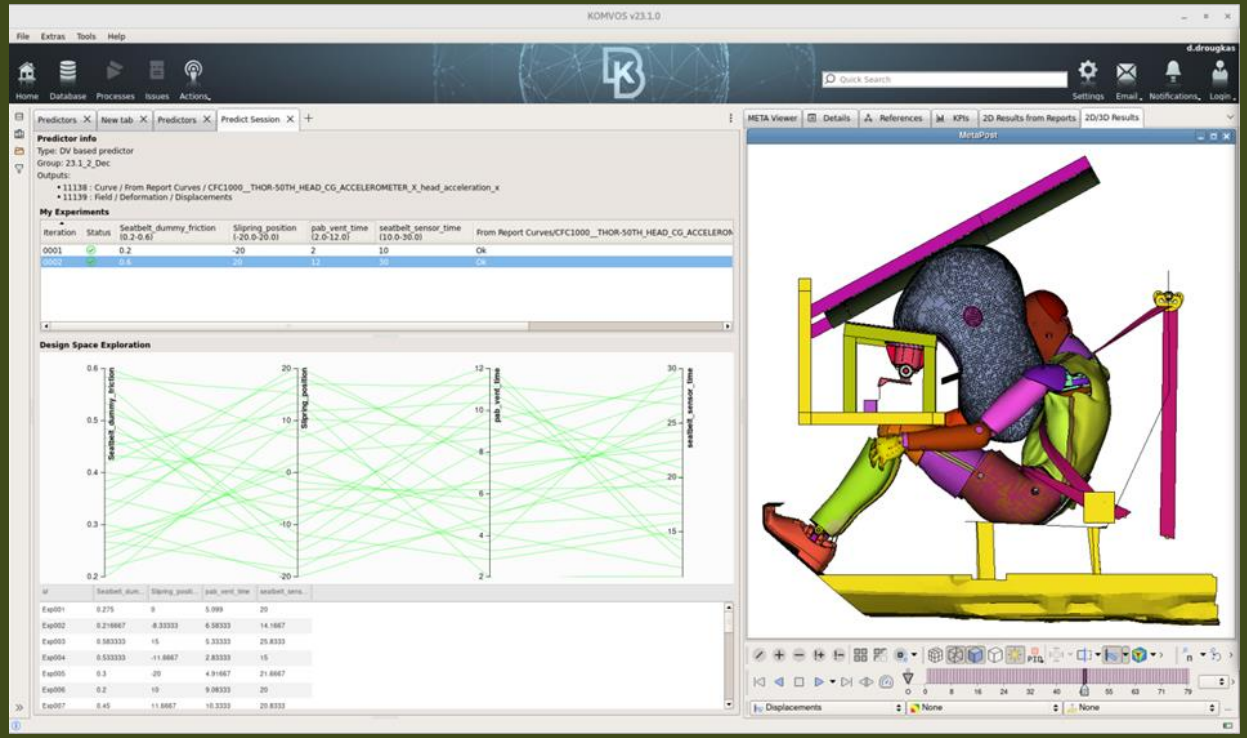


# Machine Learning

## Make Predictions





One platform,
a wide variety of applications

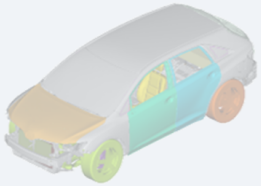
# Integration with PDM systems

Download TC Product

Update Subsystem

**CAD Structure**

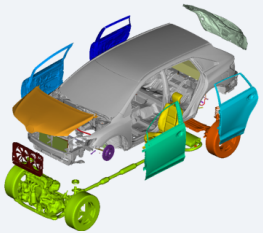
- FULL_VEHICLE
  - FRONT_DOORS
  - REAR_DOORS
  - REAR
  - FRONT
  - SIDE
  - FLOOR
  - FRONT_SUSPENSION
  - SEATS
  - TRIMS
    - DOORS_TRIMS
    - BIW_TRIMS
  - REAR_SUSPENSION
  - .....



TEAMCENTER

**CAE Structure**

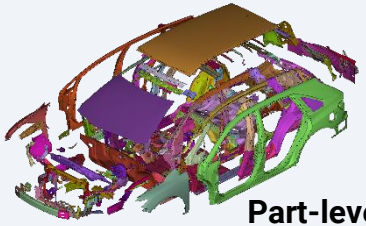
- DOORS
  - REAR_DOORS
  - FRONT_DOORS
  - DOORS_TRIMS
- BIW
  - REAR
  - FRONT
  - SIDE
  - FLOOR
  - BIW_TRIMS
- SEATS
- FRONT_SUSPENSION
- REAR_SUSPENSION
- .....



**SDM database**

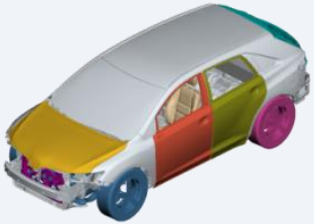
# Model Build Orchestrator

- Create Subsystems
  - Translate CAD files
  - Create Meshes



Part-level

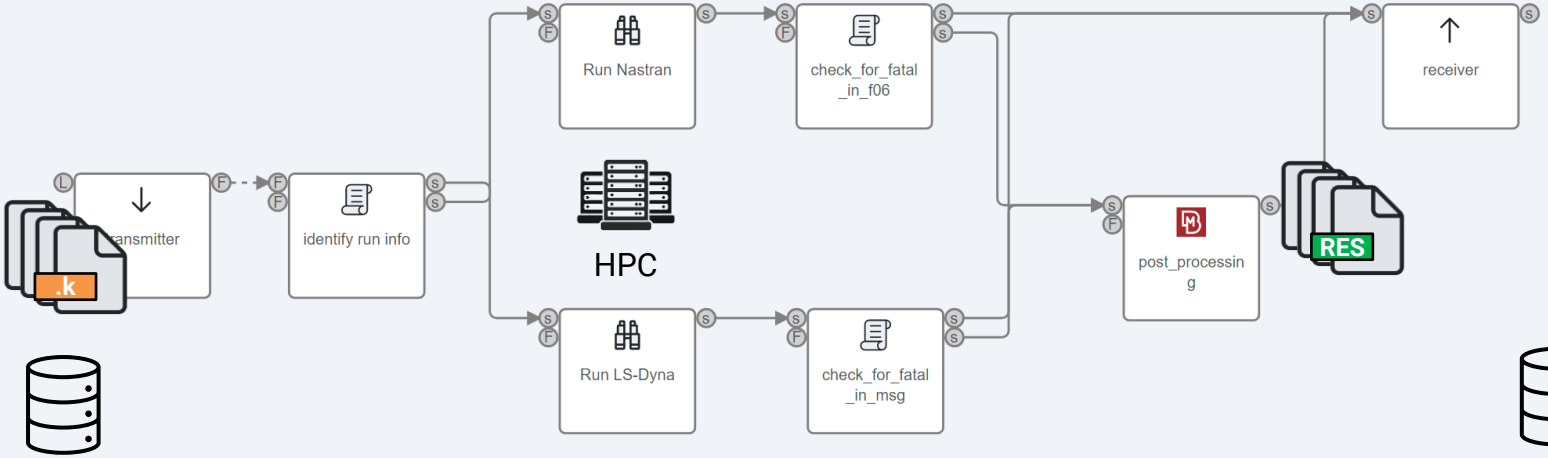
Subsystem-level



Simulation Model-level

# Job Submission and Monitoring

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

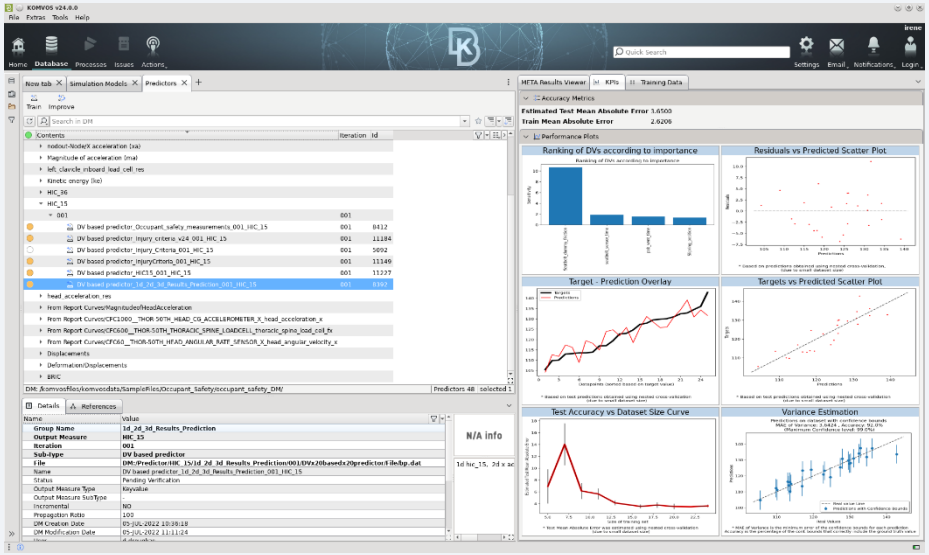
Finished

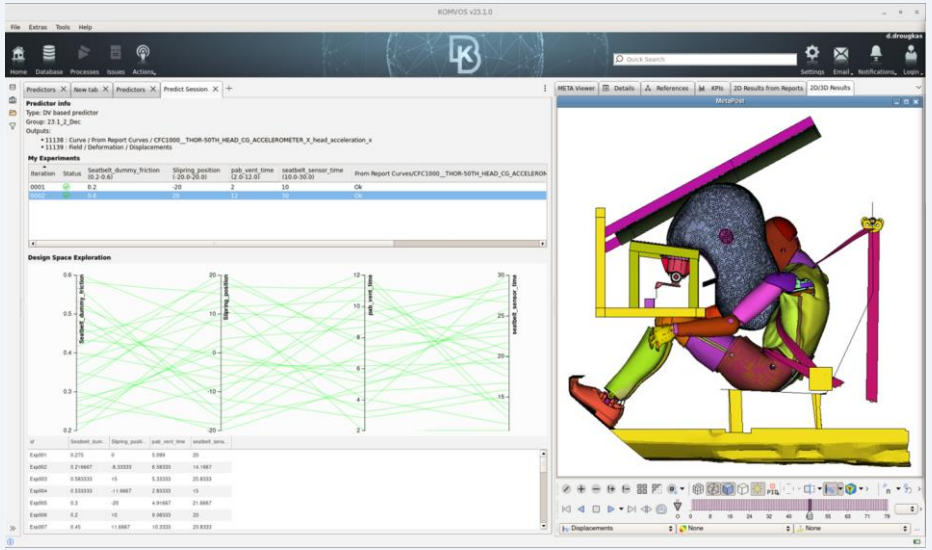
Running

Error

# DOE Studies and Optimization

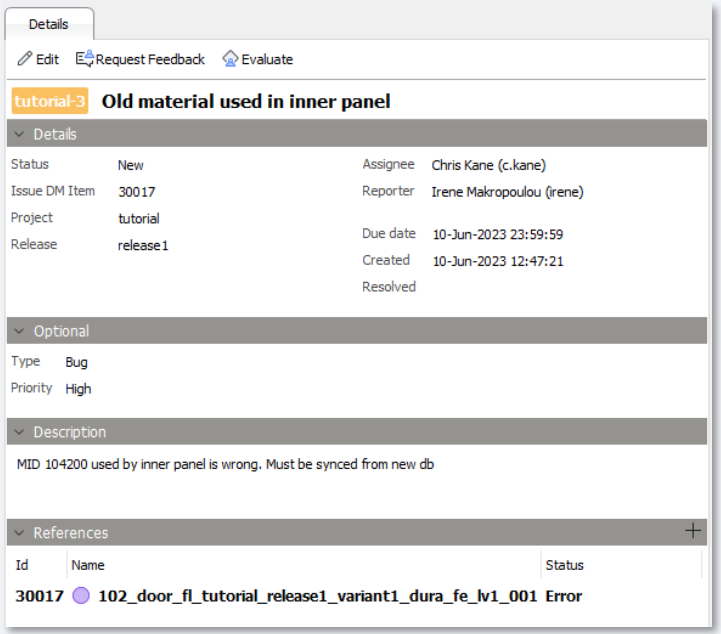
- DOE Setup
- Create Predictors
- Predict



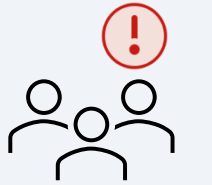



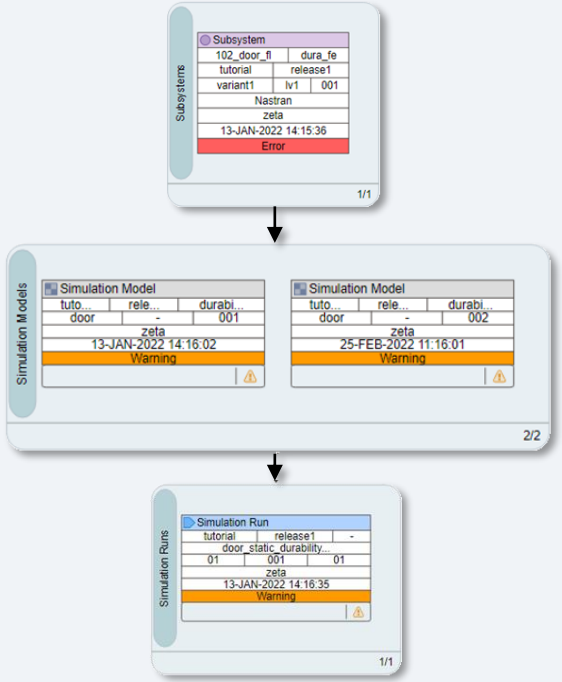
# Quality Management

- Create Issue
- Impact analysis



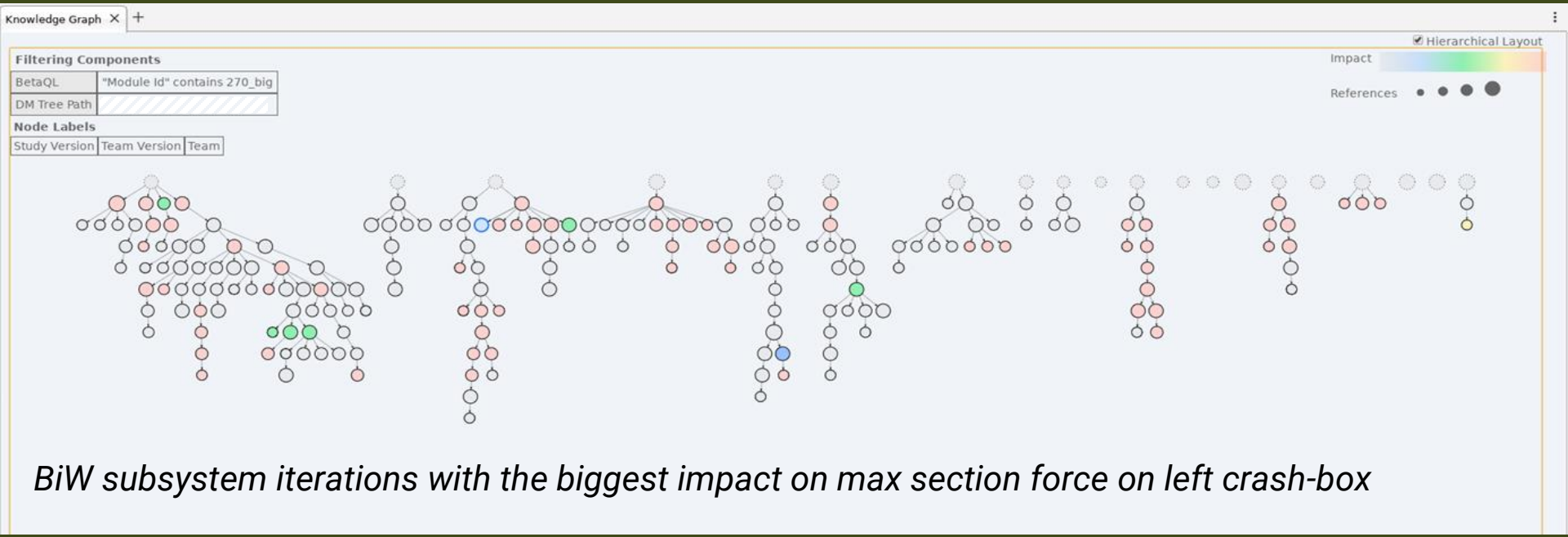




# Data Analysis

Subsystems Centrality



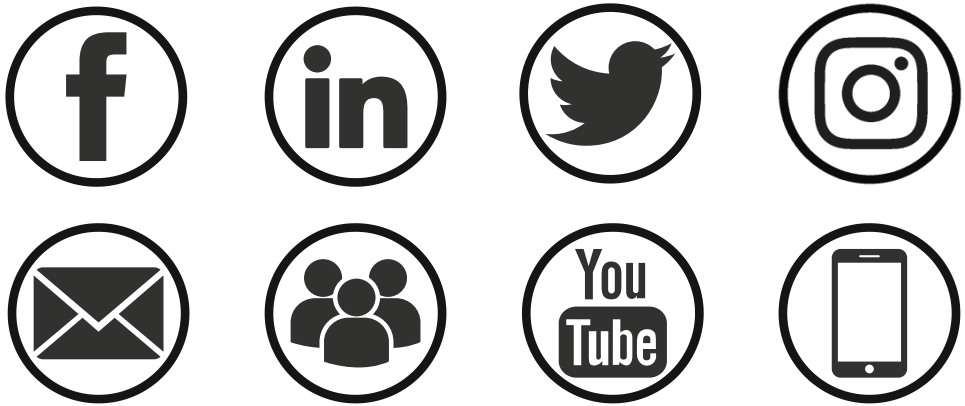

*BiW subsystem iterations with the biggest impact on max section force on left crash-box*

# Integration of SPDRM elevated Data and Process Management in KOMVOS

Simulation Data and Process Management enables ML

ML enables Knowledge Management

BETA
SIMULATION SOLUTIONS




## Stay connected