




ANSERS

FULL PERSPECTIVE



The single point-of-truth
for your data

physics on screen

The background of the slide is a blurred screenshot of a web application dashboard. It features several data visualization components: a line graph at the top left with a green line, a line graph at the bottom left with a blue line, and a line graph at the bottom right with a blue line. The text "ANSERS is a web application, offering a front-end dashboard interface for CAE / test data" is overlaid in the center of the dashboard. The word "web" is highlighted in orange, and "CAE / test data" is also highlighted in orange.

ANSERS is a **web** application, offering a front-end dashboard interface for **CAE / test data**



Visualize data from various sources

- Simulation & Test
- Filesystems & DBs

Offer more than reports

- Flexible & interactive
- Updated live
- Link to actual data

Share the knowledge

- Access to non-experts
- Effortless reports/data sharing
- Meaningful overview and valuable insights





● CAE modeling engineers

- Check available versions
- Compare metadata
- View in 3d



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Compare metadata
View in 3d

● CAE analysis engineers

Check Simulation Runs, Simulation Models
View results (images, curves, etc.) in
analysis specific dashlets



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View data from test measurements
Correlation studies



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Check CAE data and results



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View data from test measurements
Correlation studies

● Designers

Check CAE data and results

● CAE team leaders

Monitor progress for
design milestone

Use cases



ANSERS





Home

+ Panel

Type Of Test

- Name
- Frontal Pfahl
- Seite 90°
- Frontal Schrag
- Frontal 100% Wand
- Frontal 90°
- Heck Offset
- Heck 100%
- Heck 90°
- Rollover

Subtype Of Test

- | Name | Description |
|---|---------------------------------|
| <input type="checkbox"/> ADR 69 | Frontal 100% Wand ADR 69 |
| <input type="checkbox"/> FMVSS208 | Frontal 100% Wand FMVSS208 |
| <input type="checkbox"/> IHS-Bumper | Frontal 100% Wand IHS-Bumper |
| <input type="checkbox"/> Lenkradvers... | Frontal 100% Wand Lenkradver... |
| <input type="checkbox"/> Sensor | Frontal 100% Wand Sensor |
| <input type="checkbox"/> TRIAS 33 | Frontal 100% Wand TRIAS 33 |
| <input type="checkbox"/> TRIAS 47 | Frontal 100% Wand TRIAS 47 |
| <input checked="" type="checkbox"/> US-NCAP | Frontal 100% Wand US-NCAP |

Safety Test

Name	Description	Order Number	Project Number	Test Number
<input checked="" type="checkbox"/> LHD	Structural crash,US-NCAPLHD	19911996	VEI342	34814
<input type="checkbox"/> RHD	Structural crash,US-NCAPRHD	19911997	VEI342	34815

Channels

Name	Result	Max
<input type="checkbox"/> Filter	Filter	Filter
<input type="checkbox"/> 1CSEAT00000DSXP	Translational Displacement	850.84
<input type="checkbox"/> 1CSEAT00000DACXP	Translational Acceleration	3294679.34
<input type="checkbox"/> 1BSEATRE00FOZP	Force	709.33
<input type="checkbox"/> 1BSEATRE00FOZP	Force	1279.52
<input type="checkbox"/> 1SROOFMILE00FOZP	Force	188.51
<input type="checkbox"/> 1SROOFFRE00FOZP	Force	300.35

Channels viewer

No data

Photo

Photo viewer

Movie

Movie viewer



Home



Dashboard



Connectors



Status Data

Home

+ Panel

Variants

<input type="checkbox"/>	Name
<input type="checkbox"/>	External_Aero_DrivAer_A01_Notchback_001_01_01

Cd

Cl

No data

No data

Pressure

Pressure

Home

Panel

Sim runs logbook

Id	additionalAttributes	properties			attributes	Energies			Intrusions	
	Created	Iteration	Loadcase	Simulation_Model	Comment	Total Start	Total End	Total Diff	Hourglass ratio	BRAKE_
6715	24/09/2020 20:13:43	01	FrontODB_01	crash_assembly_VENZA_A00_lhd_crash_001		2.12e+8	2.14e+8	1.88e+6	4.468913298127944	0.467476876...
13350	30/09/2020 16:52:41	01	FrontODB_01	crash_assembly_VENZA_A00_lhd_crash_002	Changed thick...	2.12e+8	2.14e+8	1.89e+6	4.553230354646502	0.402246448...
49477		01	FrontFull_D2	crash_assembly_VENZA_A01_RHD_crash_001		1.65e+8	1.68e+8	3.02e+6	0.68186609345810...	58.24469714...
49893		01	FrontODB_02	crash_assembly_VENZA_A01_RHD_crash_001		2.12e+8	2.14e+8	1.93e+6	4.252883919846225	0.512937478...
51125		01	FrontFull_D1	crash_assembly_VENZA_A01_LHD_crash_002		1.65e+8	1.68e+8	3.25e+6	0.75768146020291...	73.81544218...
51548		01	FrontFull_D1	crash_assembly_VENZA_A01_LHD_crash_001		1.65e+8	1.68e+8	3.10e+6	0.61085877454912...	42.32063795...
51970		01	FrontFull_D2	crash_assembly_VENZA_A01_RHD_crash_002		1.65e+8	1.68e+8	2.92e+6	0.76210807801575...	86.44814071...
52386		01	FrontODB_02	crash_assembly_VENZA_A01_RHD_crash_002		2.12e+8	2.14e+8	1.87e+6	4.03941072113415	1.347957884...
69690	03/02/2022 13:17:23	01	SledTest_D1	seat_dummy_DUMMIES_A01_4rowsSeatbel...	Seatbelt pos. 0...	undefined	undefined	undefined	undefined	undefined

Details

No data

Home

Dashboards

Connections

Static Data

VENZA: NVH - Subframe FRFs CAE and ASAM

Home

+ Panel

Simulation runs

<input type="checkbox"/>	Name	Comment
<input type="checkbox"/>	FRF_LG_CM_VENZA_A01_LHD_001_01_01	
<input type="checkbox"/>	FRF_LG_CM_VENZA_A01_LHD_002_01_01	
<input type="checkbox"/>	FRF_LG_CM_VENZA_A01_LHD_004_01_01	
<input type="checkbox"/>	FRF_LG_CM_VENZA_A01_LHD_005_01_01	
<input type="checkbox"/>	FRF_LG_CM_VENZA_A01_LHD_006_01_01	
<input type="checkbox"/>	FRF_LG_CM_VENZA_A01_LHD_007_01_01	
<input type="checkbox"/>	FRF_LG_CM_VENZA_A01_LHD_008_01_01	

ASAM Testseries

<input type="checkbox"/>	Name	Project
<input type="checkbox"/>	SubframeFrfs	VENZA_tests

Ref_RkPinion_LH_X_Res_CrMmbr_FrSide_LH

X

Y

Z

No data

No data

No data

No data

Use cases

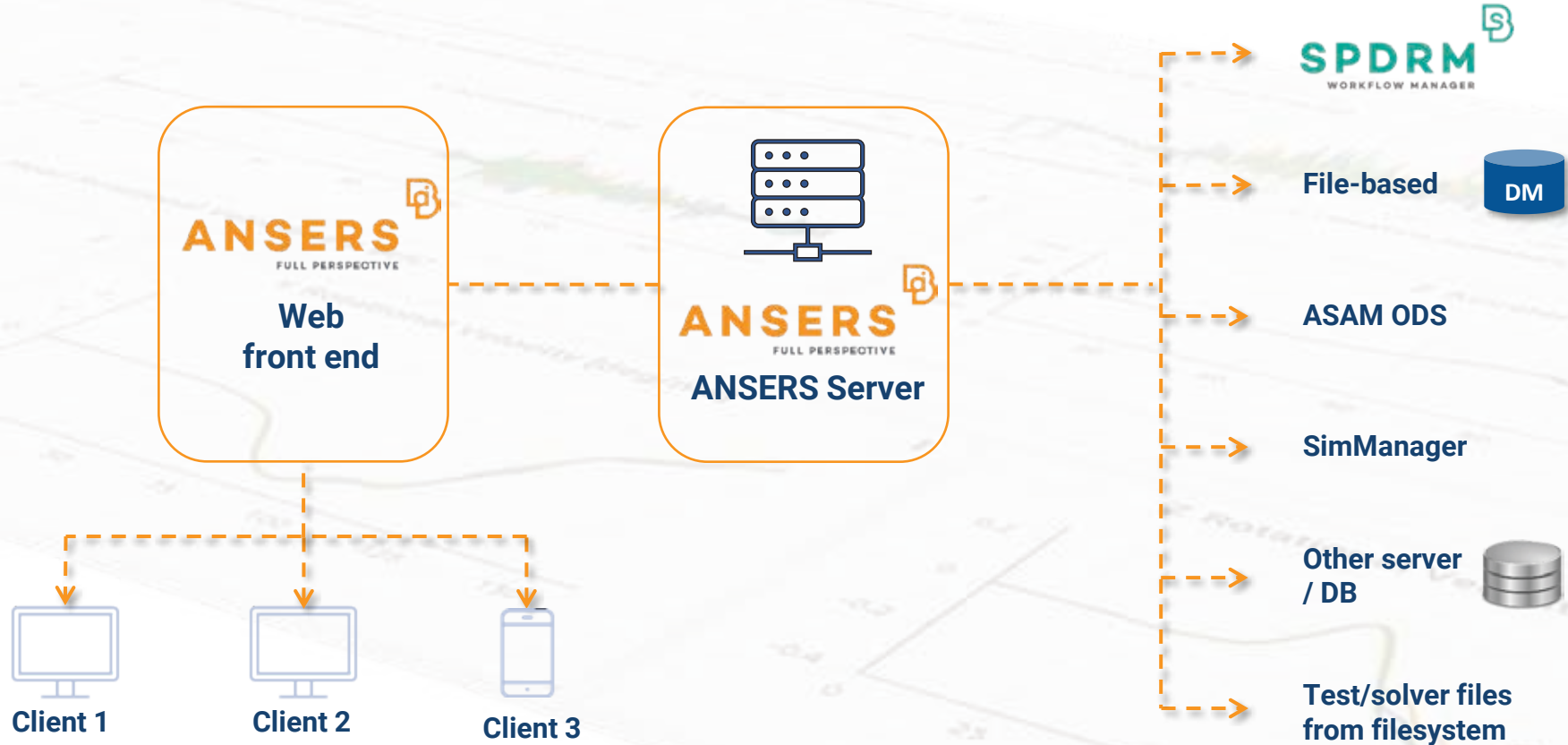
ANSERS 

Generic viewing of
model, results or test
data




Loadcase templates
(crash/nvh/ stiffness/
cfd)

Overview of a version /
specific runs
performance

Compare simulation /
test data





- **SPDRM** WORKFLOW MANAGER 
- **File-based** 
- **ASAM ODS**
- **SimManager**
- **Other server / DB** 
- **Test/solver files from filesystem**



Test & Simulation



Data security



Performance & Scalability

List

Table with values

Simulation runs

properties			attributes		
Id	Iteration	Simulation_Model	Loadcase	Comment	
6715	01	crash_assembly_VENZA_...	Front008_01		
13350	01	crash_assembly_VENZA_...	Front008_01	Changed thickness of parts 152,1...	
49893	01	crash_assembly_VENZA_...	Front008_02		
52386	01	crash_assembly_VENZA_...	Front008_02		

KeyValues table

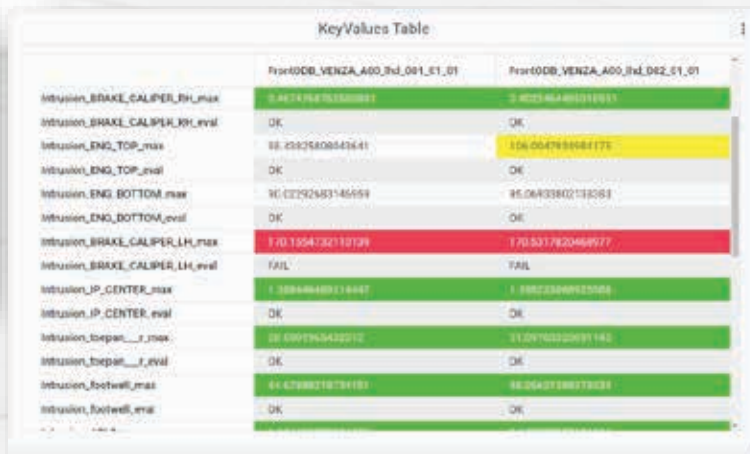
PROPERTY_NAME	PROPERTY_VALUE	PROPERTY_UNIT
crash_simulation_status	0	
crash_simulation_time	18.12345678	[seconds]
crash_simulation_force	10	[kN]
crash_simulation_moment	100	[kNm]
crash_simulation_displacement	10	[mm]
crash_simulation_velocity	10	[m/s]
crash_simulation_acceleration	10	[m/s²]
crash_simulation_temperature	10	[C]
crash_simulation_humidity	10	[%]
crash_simulation_pressure	10	[Pa]
crash_simulation_wind_speed	10	[m/s]
crash_simulation_wind_direction	10	[deg]

List



ID	Status	Simulation Name	Location	Comment
6711	OK	exam_assembly_VENCA...	Forc00B_01	
13130	OK	exam_assembly_VENCA...	Forc00B_02	Checked thickness of parts 1121
9883	OK	exam_assembly_VENCA...	Forc00B_03	
9734	OK	exam_assembly_VENCA...	Forc00B_04	

Table with values



	Forc00B_VENCA_A00_Ind_001_01_01	Forc00B_VENCA_A00_Ind_002_01_01
Intrusion_BRAKE_CALIPER_RH_max	3.9K7476K70330081	3.9K23464400191051
Intrusion_BRAKE_CALIPER_RH_eval	OK	OK
Intrusion_ENG_TOP_max	38.4582580845641	136.0047959881173
Intrusion_ENG_TOP_eval	OK	OK
Intrusion_ENG_BOTTOM_max	30.02292483146159	85.0693380213308
Intrusion_ENG_BOTTOM_eval	OK	OK
Intrusion_BRAKE_CALIPER_LH_max	1.70.1354732110739	1.70.5317820466977
Intrusion_BRAKE_CALIPER_LH_eval	FAIL	FAIL
Intrusion_IP_CENTER_max	1.38844640318447	1.38822306925706
Intrusion_IP_CENTER_eval	OK	OK
Intrusion_botpan__f_max	38.6997965422712	31.05763220991182
Intrusion_botpan__f_eval	OK	OK
Intrusion_botwell_max	44.6788278791193	48.0540738877938
Intrusion_botwell_eval	OK	OK

Table with curves



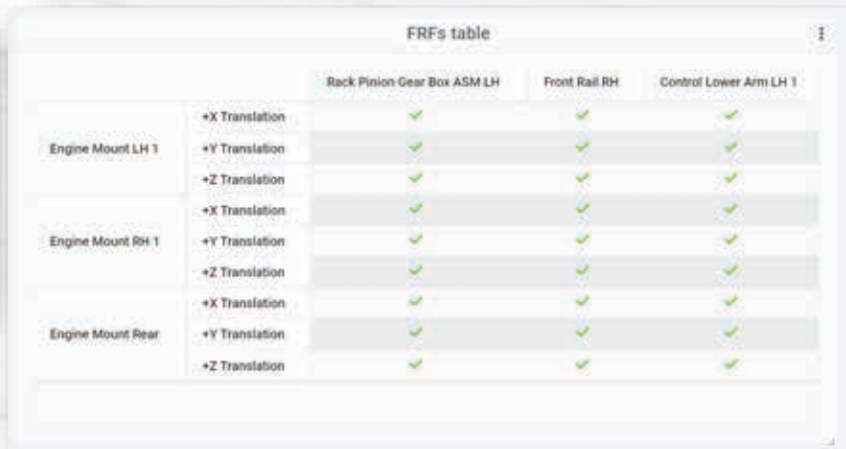
	Forc00B_VENCA_A00_Ind_001_01_01	Forc00B_VENCA_A00_Ind_002_01_01
40 Transistor	OK	OK
41 Transistor	OK	OK
42 Transistor	OK	OK
43 Transistor	OK	OK
44 Transistor	OK	OK
45 Transistor	OK	OK
46 Transistor	OK	OK
47 Transistor	OK	OK
48 Transistor	OK	OK
49 Transistor	OK	OK
50 Transistor	OK	OK

Table with values



Variable	Value
..._BASE_CAD_P180_M_1	...
..._BASE_CAD_P180_M_2	...
..._BASE_CAD_P180_M_3	...
..._BASE_CAD_P180_M_4	...
..._BASE_CAD_P180_M_5	...
..._BASE_CAD_P180_M_6	...
..._BASE_CAD_P180_M_7	...
..._BASE_CAD_P180_M_8	...
..._BASE_CAD_P180_M_9	...
..._BASE_CAD_P180_M_10	...
..._BASE_CAD_P180_M_11	...
..._BASE_CAD_P180_M_12	...
..._BASE_CAD_P180_M_13	...
..._BASE_CAD_P180_M_14	...
..._BASE_CAD_P180_M_15	...
..._BASE_CAD_P180_M_16	...
..._BASE_CAD_P180_M_17	...
..._BASE_CAD_P180_M_18	...
..._BASE_CAD_P180_M_19	...
..._BASE_CAD_P180_M_20	...

Table with curves



		Rack Pinion Gear Box ASM LH	Front Rail RH	Control Lower Arm LH 1
Engine Mount LH 1	+X Translation	✓	✓	✓
	+Y Translation	✓	✓	✓
	+Z Translation	✓	✓	✓
Engine Mount RH 1	+X Translation	✓	✓	✓
	+Y Translation	✓	✓	✓
	+Z Translation	✓	✓	✓
Engine Mount Rear	+X Translation	✓	✓	✓
	+Y Translation	✓	✓	✓
	+Z Translation	✓	✓	✓

Image



View

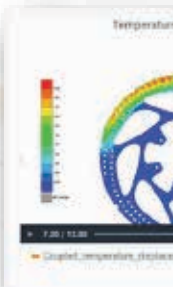
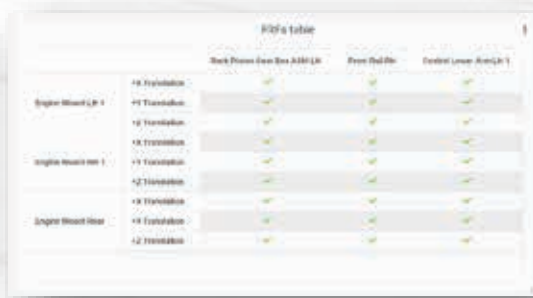


Table with curves

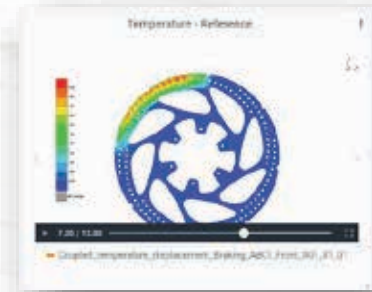


	Work Piece	Front Odb	Front Lower Arm(LH)
Front Wheel L	✓	✓	✓
Front Wheel R	✓	✓	✓
Front Wheel LH	✓	✓	✓

Image



Video

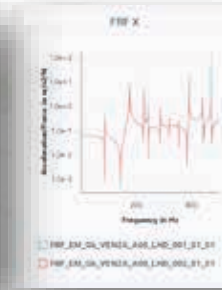
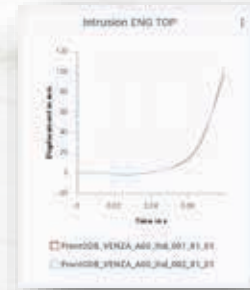
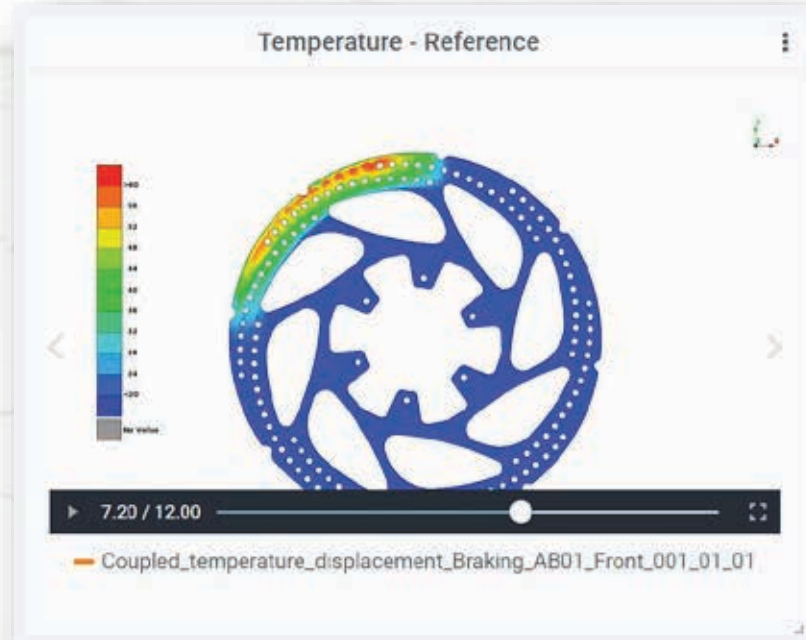
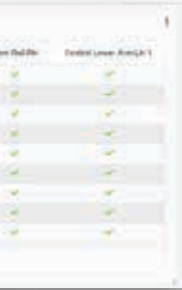


Curves

Image

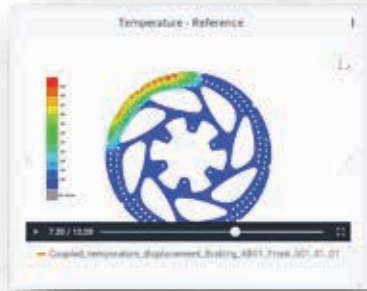
Video

Graphs

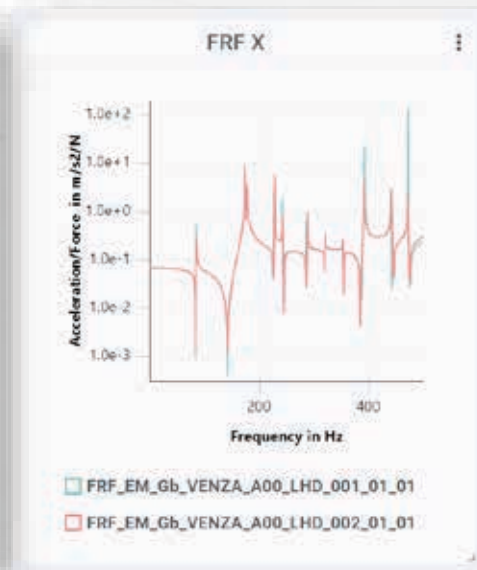
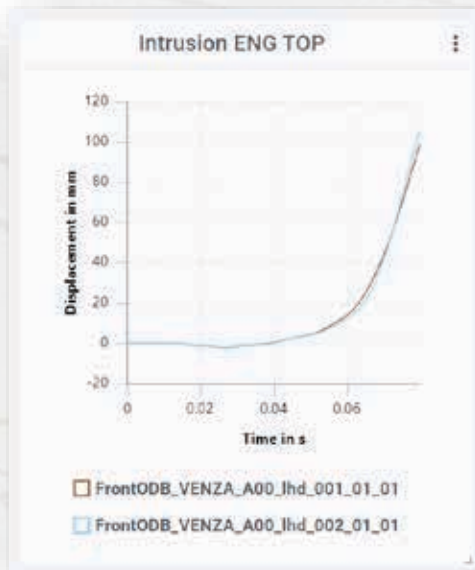


Rotational Velocity [rad/s]

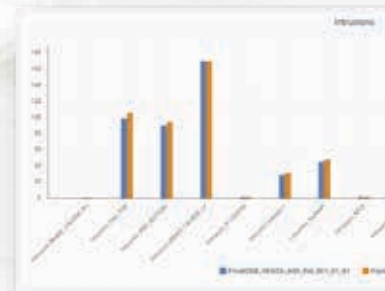
Video



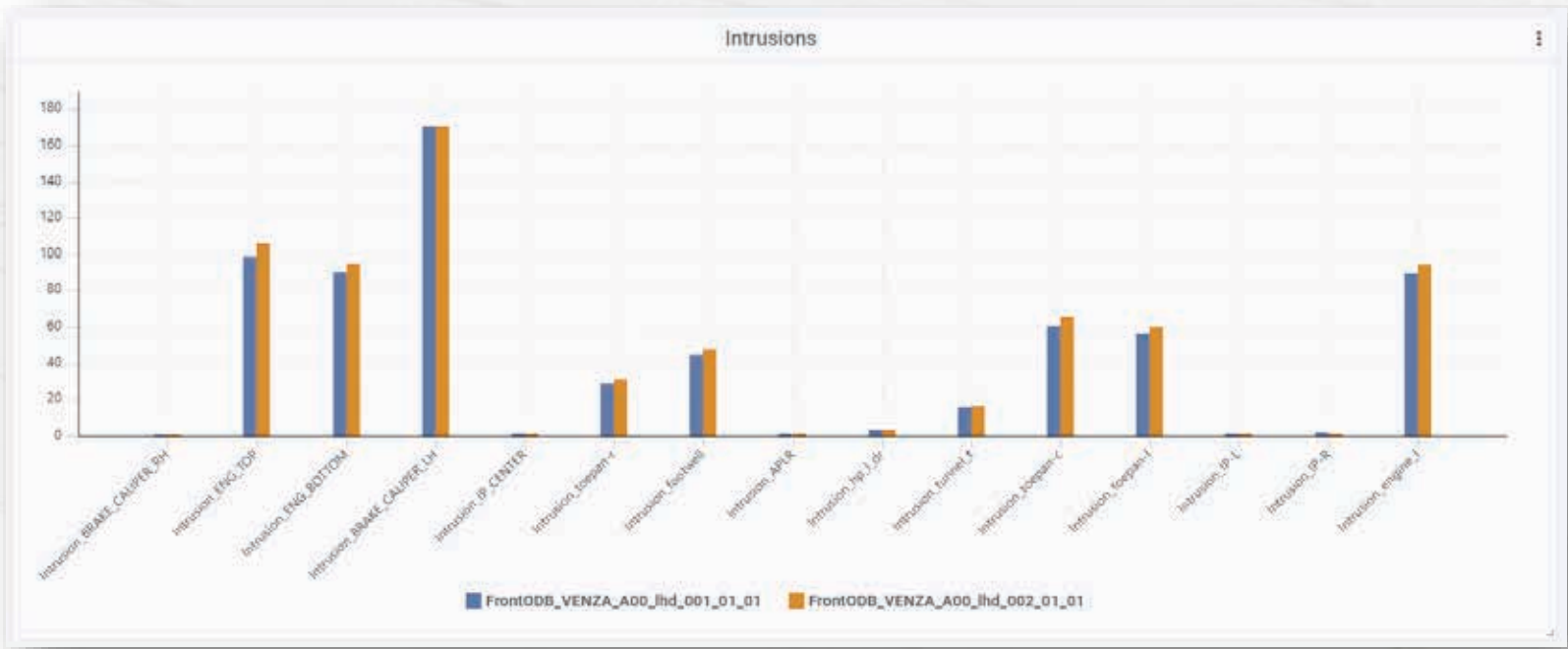
Graphs



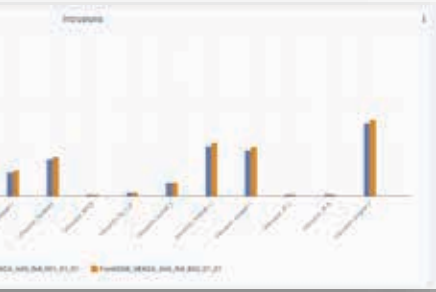
Bar charts



Bar chart



Bar chart



Scatter Chart

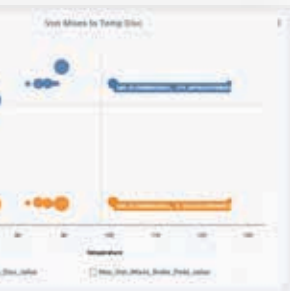


Query browser

DM Based syntax filter

M	Discipline	Model Id	Model Value	Project
B10	rot	8_padPans	L10	VENZA
2505	Assembly	8_padPans	L10	VENZA
4700	rot	mech_pans	rot	VENZA
1703	rot	8_padPans	L10	VENZA
17005	Assembly	8_padPans	L10	VENZA

Scatter Chart



Query browser

DM fixed syntax filter

Search type: Simulation_...
Query: Project=VENZA and Release=A00
Search

properties						
<input type="checkbox"/>	Id	Discipline	Model Id	Model Varia...	Project	Release
<input type="checkbox"/>	810	nvh	fr_subframe	LHD	VENZA	A00
<input type="checkbox"/>	2523	durability	fr_subframe	LHD	VENZA	A00
<input type="checkbox"/>	6703	crash	crash_assem...	lhd	VENZA	A00
<input type="checkbox"/>	7502	nvh	fr_subframe	LHD	VENZA	A00
<input type="checkbox"/>	11055	durability	fr_subframe	LHD	VENZA	A00

Send to...

Data

Panel

DM TREE PATH:

Action

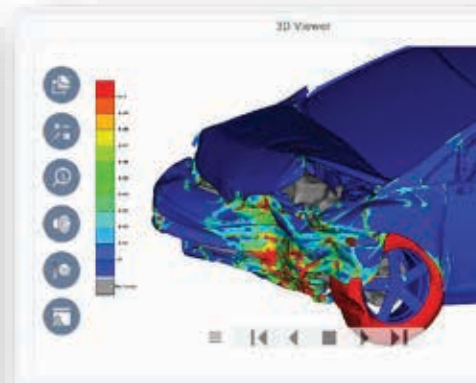
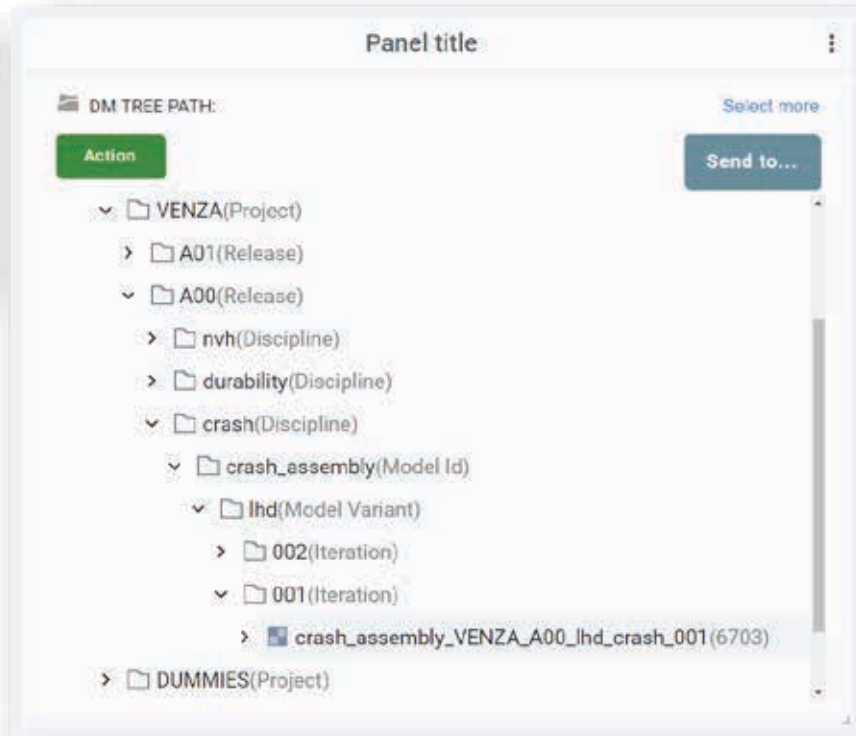
- VENZA(Project)
 - A01(Release)
 - A00(Release)
 - nvh(Discipline)
 - durability(Discipline)
 - crash(Discipline)
 - crash_assembly(Model Variant)
 - lhd(Model Variant)
 - 002(iteration)
 - 001(iteration)
 - crash_assemb

- QUMMIES(Project)

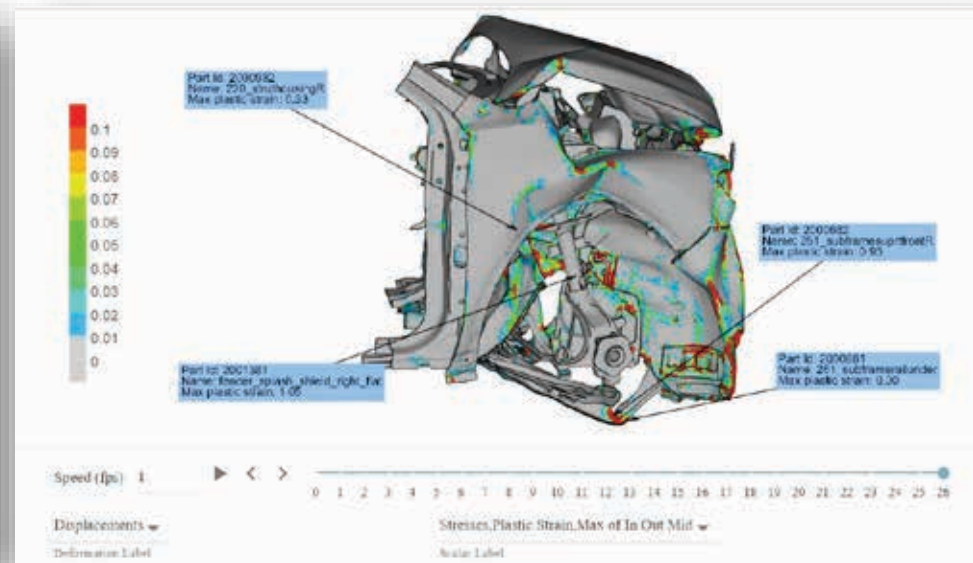
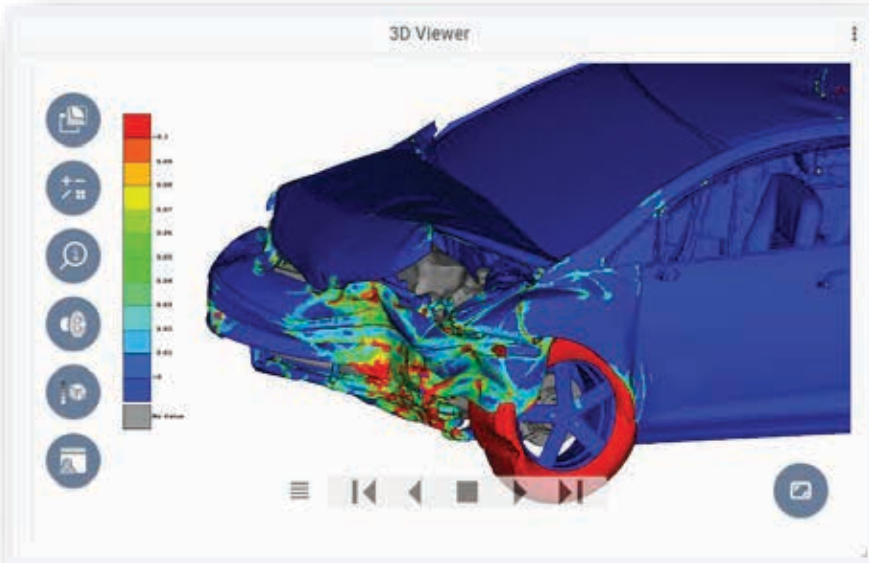
Query browser



Data tree



3d viewer





[Link to actual data](#)



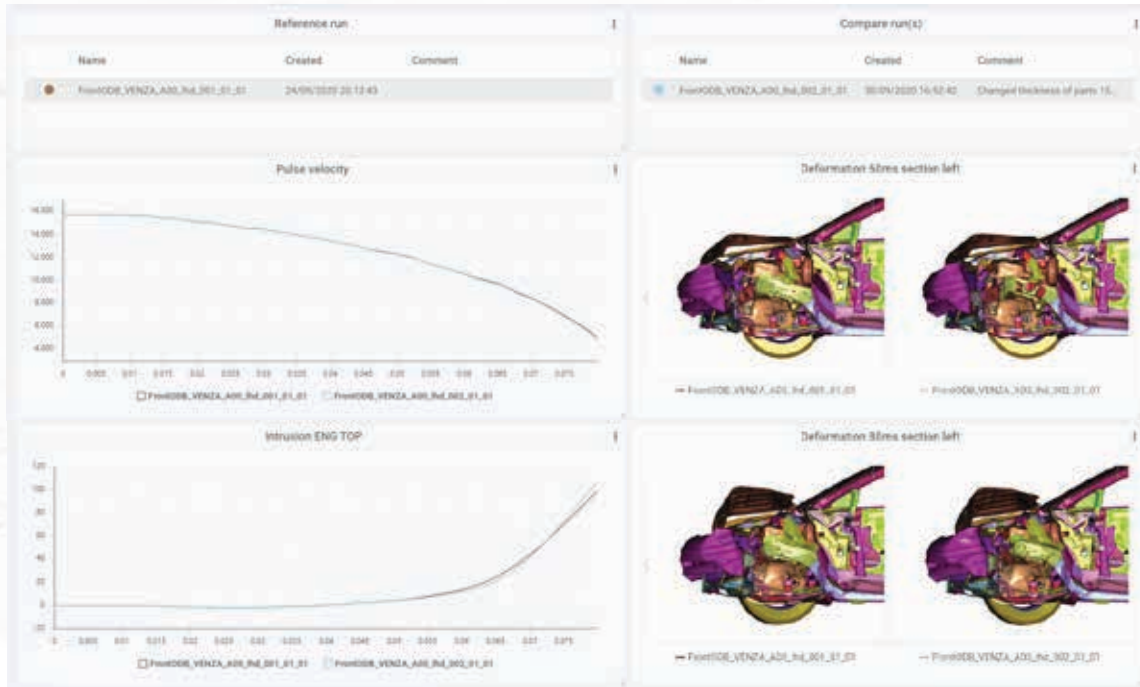
[Interactive dashlets](#)



[From overview to detail](#)

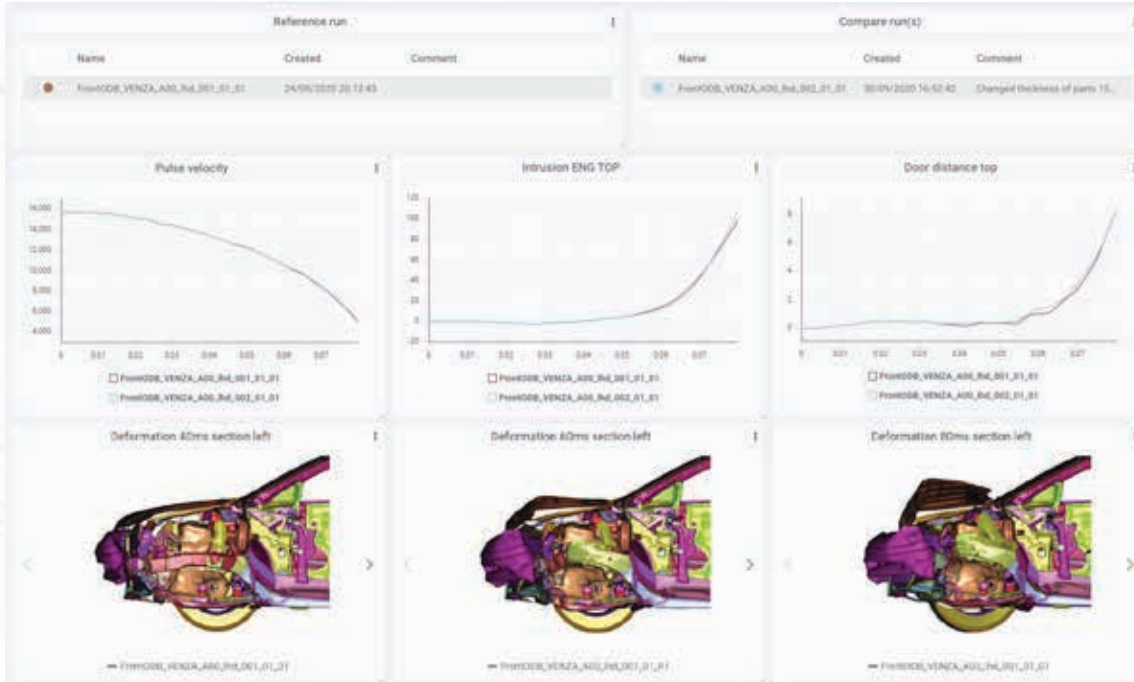


[Data overview / analytics](#)

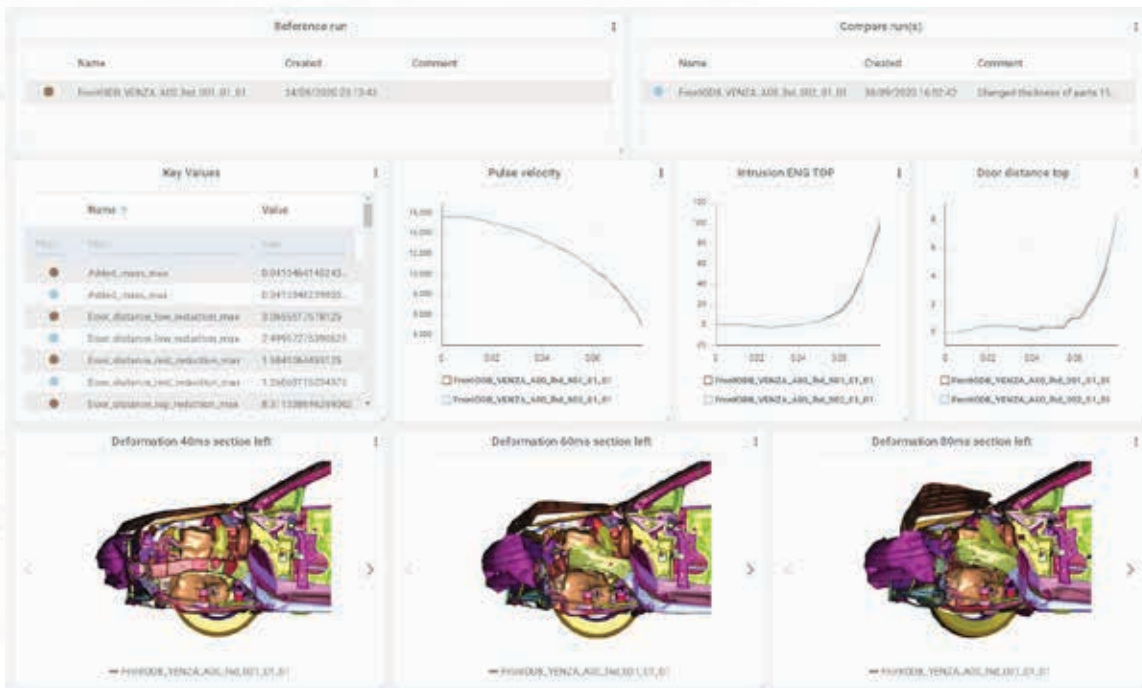


Effortless build/update dashlets from GUI





Effortless build/update dashlets from GUI



Effortless build/update dashlets from GUI



**Web
Desktop /
handheld devices**



**Simple GUI hides
complicated
server queries /
structure**



**Minimum cognitive
load for non-
experts**



**Dashlets shared:
From one to the
whole team**

***"It is fairly easy to just tick
boxes and scroll"***



Easy to install and maintain



No custom development / outsourcing



**Modular
Open to 3rd party solutions**



Any questions
(you need **ANSERS**  to) ?