

Styling and Design Innovation with 3DEXPERIENCE Platform, getting ready to generative experience

Claude Bourbigot

Dassault Systemes, CATIA Design

Industry Process Expert Director



擁抱 3D UNIV+RSES - AI 驅動產業革新

Design Challenges & Drivers

Creative Designers

CREATIVE DESIGN
from art to part



Surface Designers

SURFACE REFINEMENT
Perfection in Surface Quality



Decision Makers

PRODUCT EXPERIENCE
for decision makers



Design Quality & Compliancy

Increase Product Value: +9% on profit margin
Strengthen brand Identity & Power
Raise customer loyalty

Acceleration of Design

3 time more design products/project
From 3 days to 8 hours modeling challenges
x10 3D Design variants explorations

Creativity & Innovation

"Top innovators generate over 75% of revenue from products not in existence five years ago" - PWC survey

"Design-driven US Co Outperform the S&P500 by 228%" - DM Institute 2013

Collaborative Innovation Virtual Twin



Sustainable by Design

Societal shift.

Designers feel engaged as The Product Design has a key impact on the sustainable world
"70% people says they were ready to pay an average of 35% premium for sustainable and environmentally responsible brands"

Consumer experience economy

"Brands with superior customer experience bring in 5.7 times more revenue than competitors that lag in customer experience." FORBES Sept 2019



CATIA DESIGN & STYLING

Imagine, Create, Experience

Sustainable and Delightful Design Experience



UNIFIED DESIGN WORKFLOW
IMAGINE > CREATE > EXPERIENCE



COLLABORATIVE INNOVATION
VIRTUAL TWIN



NEXT LEVEL DESIGN GENERATIVE
DESIGN + SCIENCE

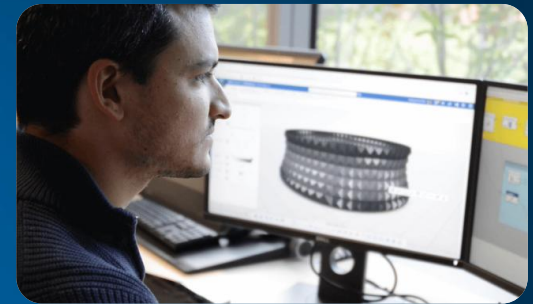
From Product Design to Experience Design Thinking



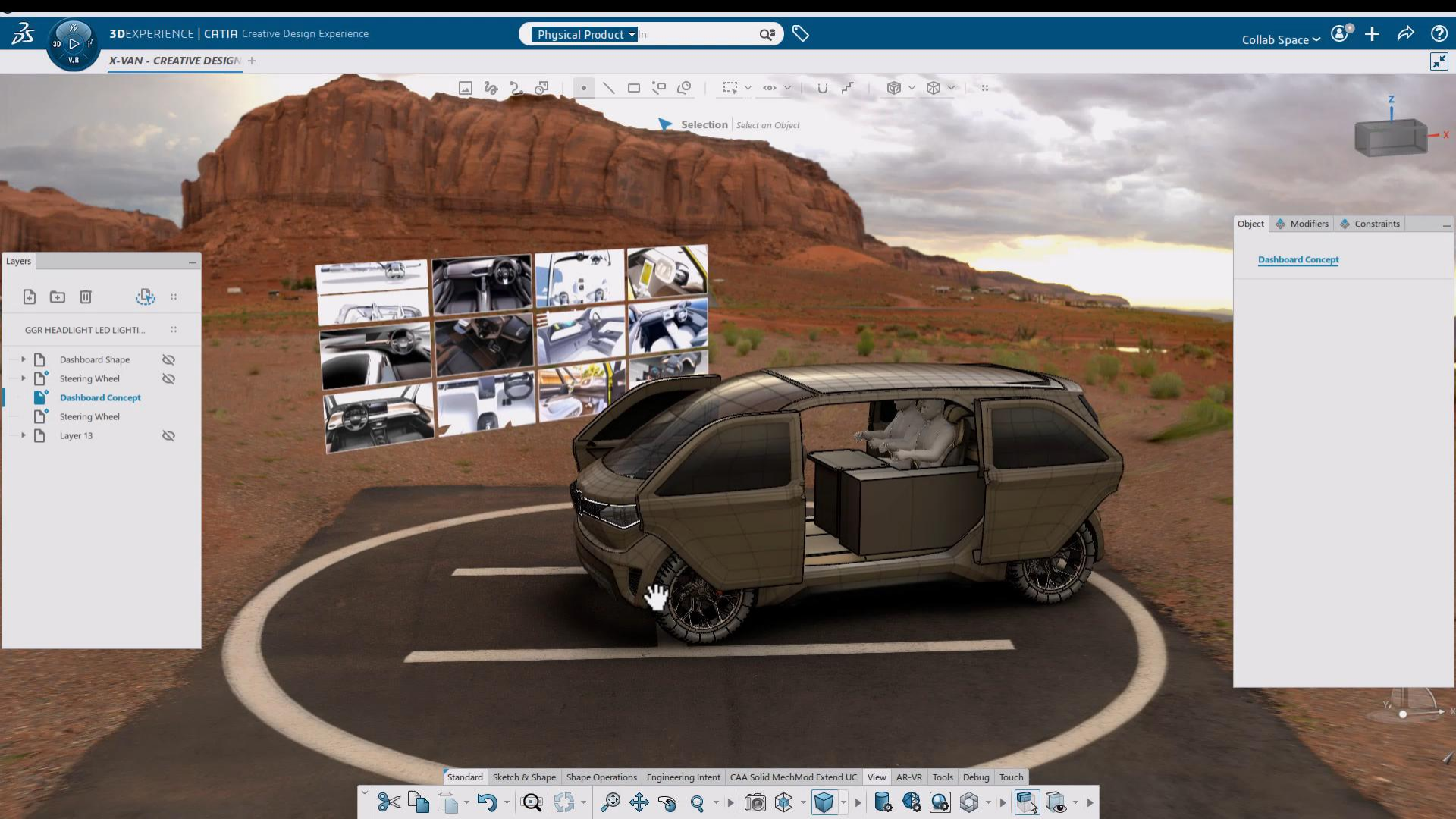
**Steerwheel
3D modeling in
MR environment**

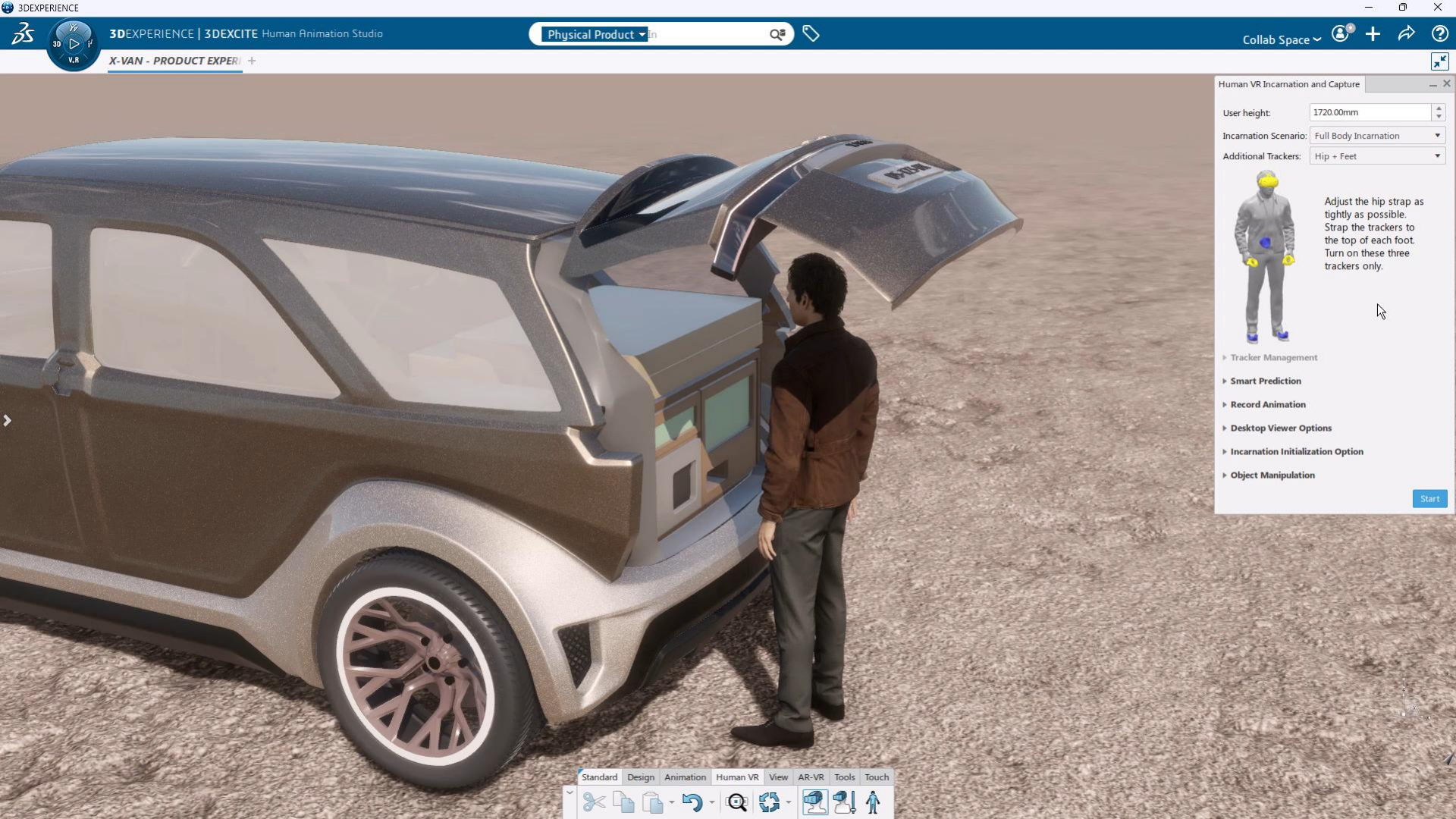


**Loading-unloading a trunk
VR experience and motion
capture**



**Light animation
With Visual Scripting**





Human VR Incarnation and Capture

User height: 1720.00mm

Incarnation Scenario: Full Body Incarnation

Additional Trackers: Hip + Feet



Adjust the hip strap as tightly as possible. Strap the trackers to the top of each foot. Turn on these three trackers only.

Tracker Management

Smart Prediction

Record Animation

Desktop Viewer Options

Incarnation Initialization Option

Object Manipulation

Start





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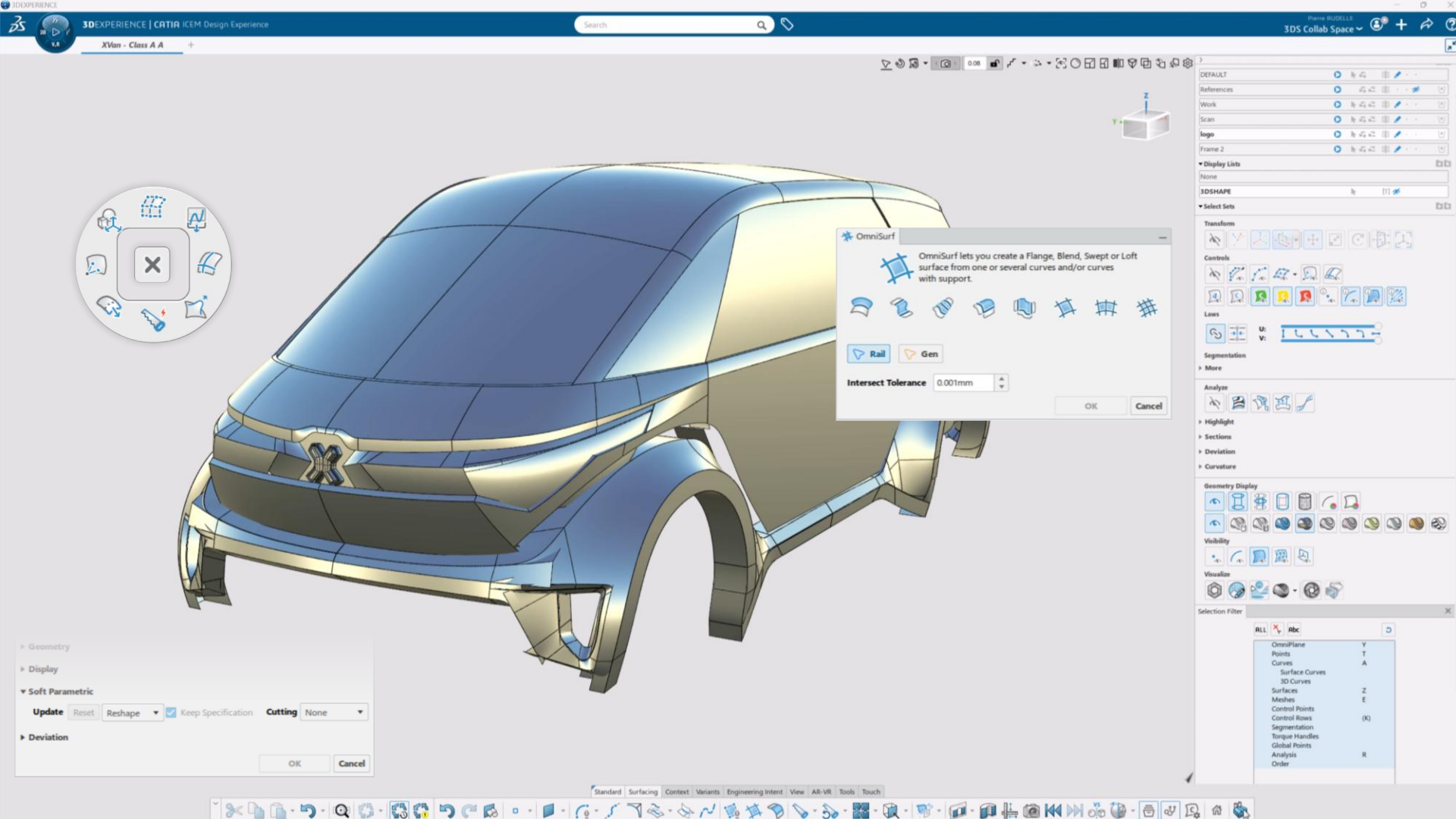
UNIFIED DESIGN WORKFLOW
IMAGINE > CREATE > EXPERIENCE

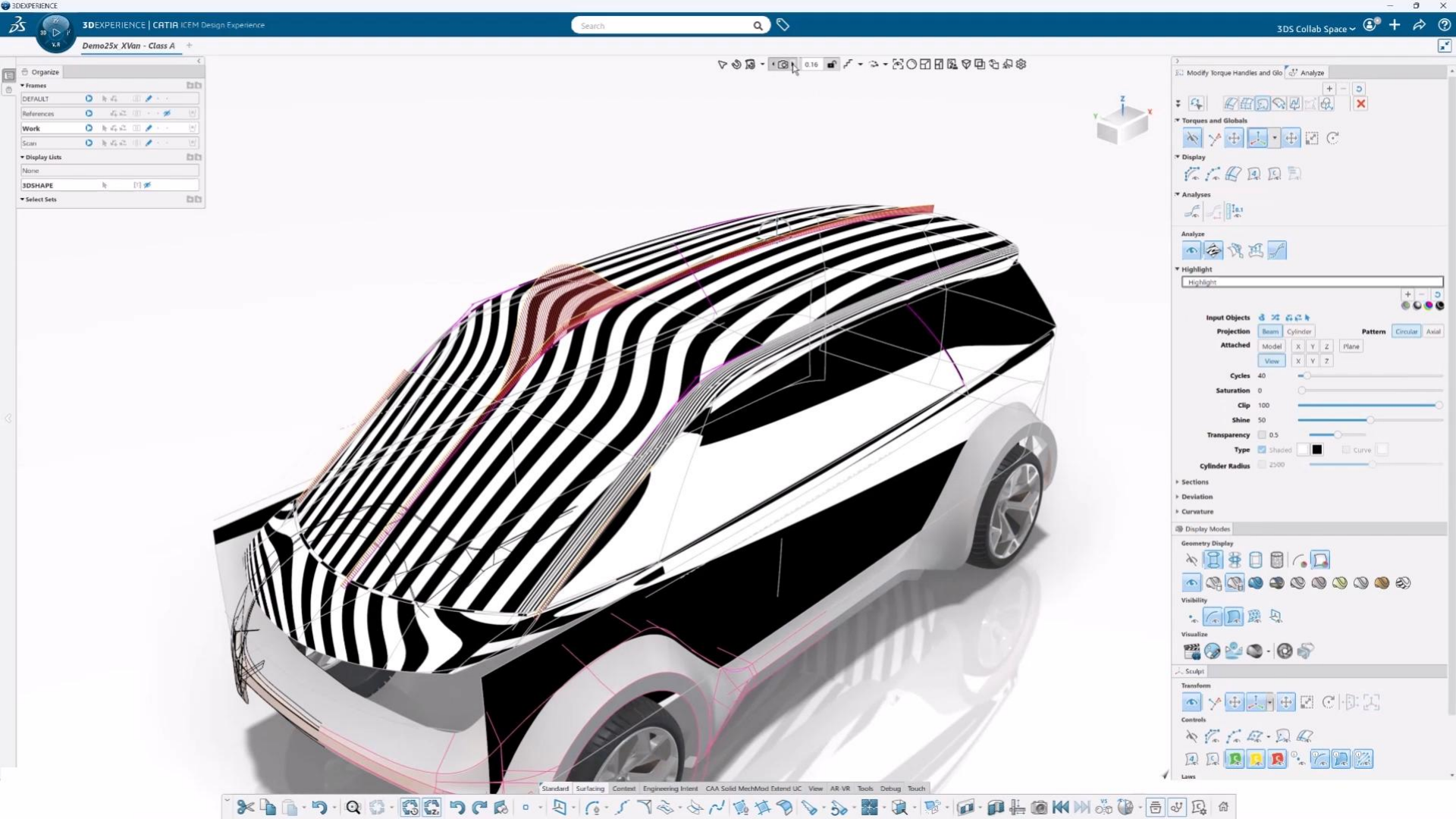


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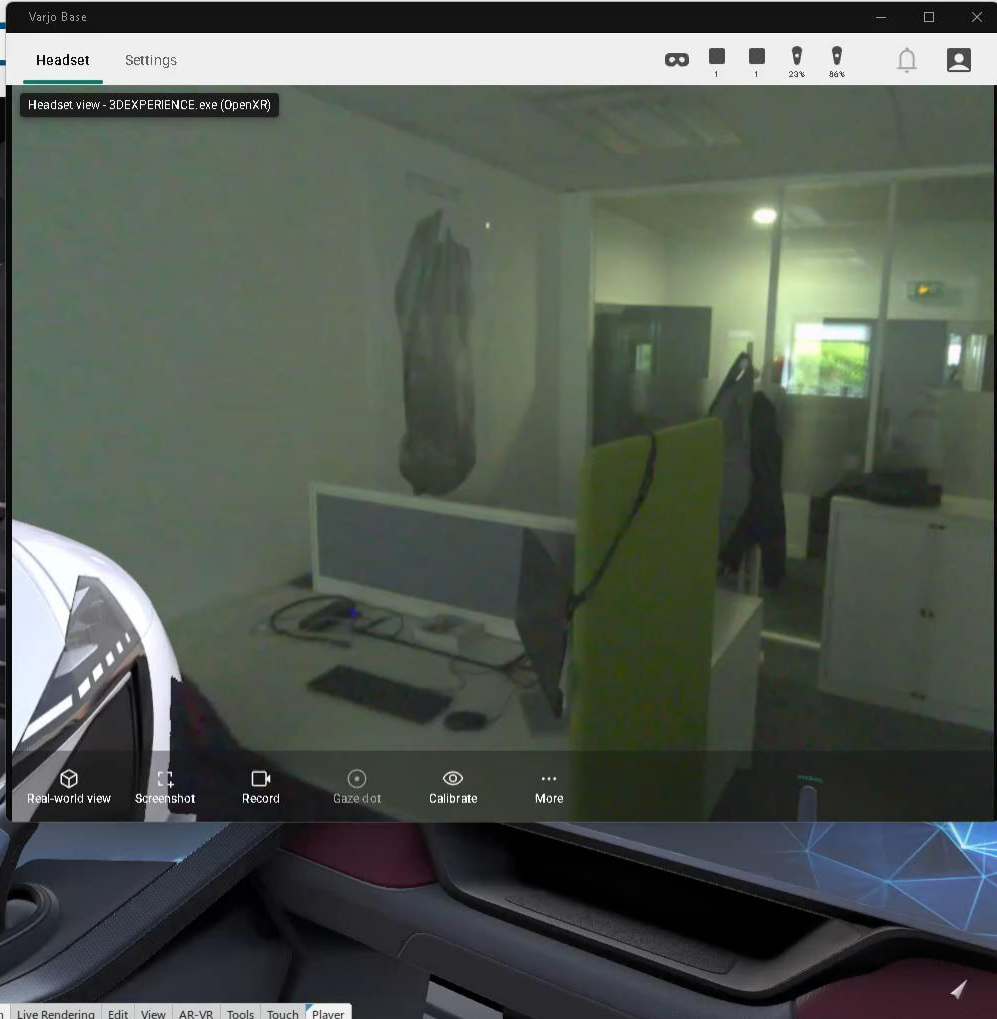


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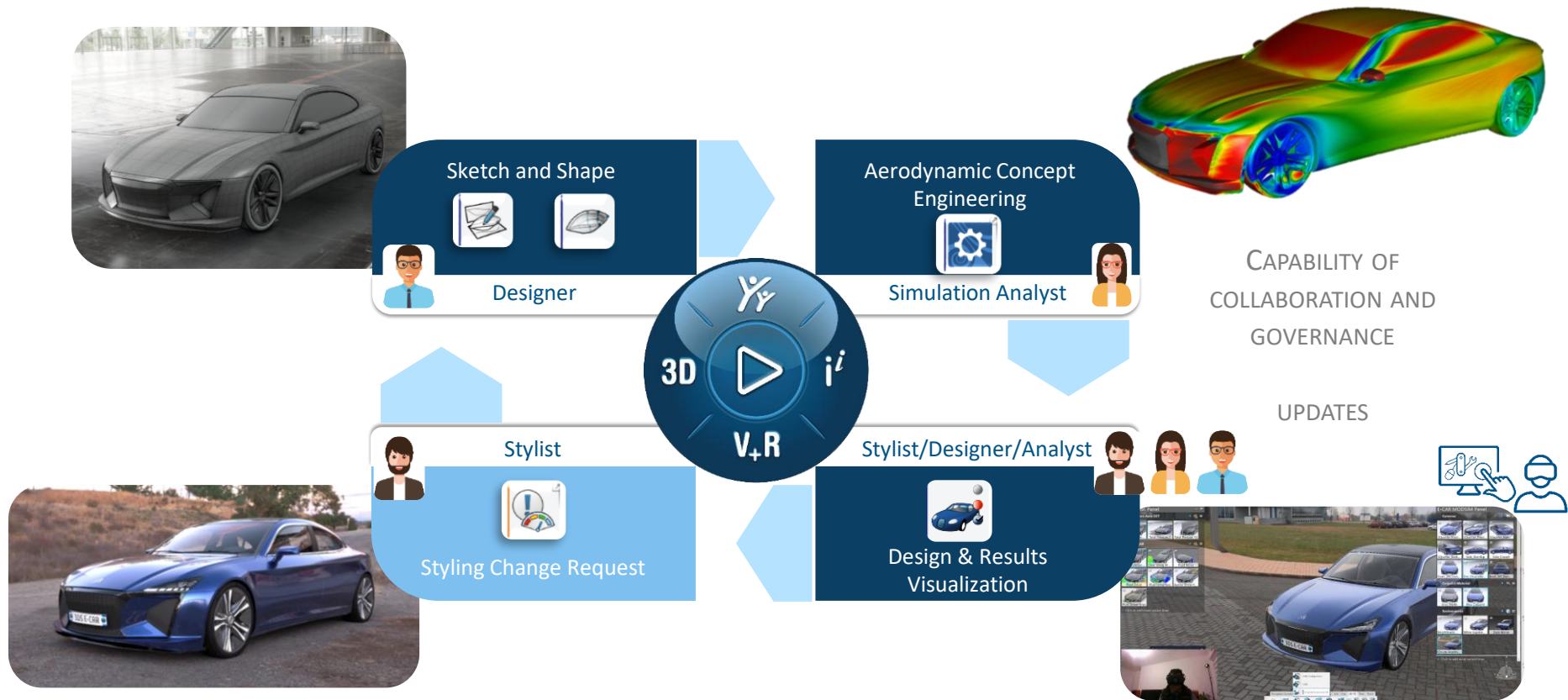


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VEHICLE SIMULATION & STYLING DECISION MAKING PROCESS



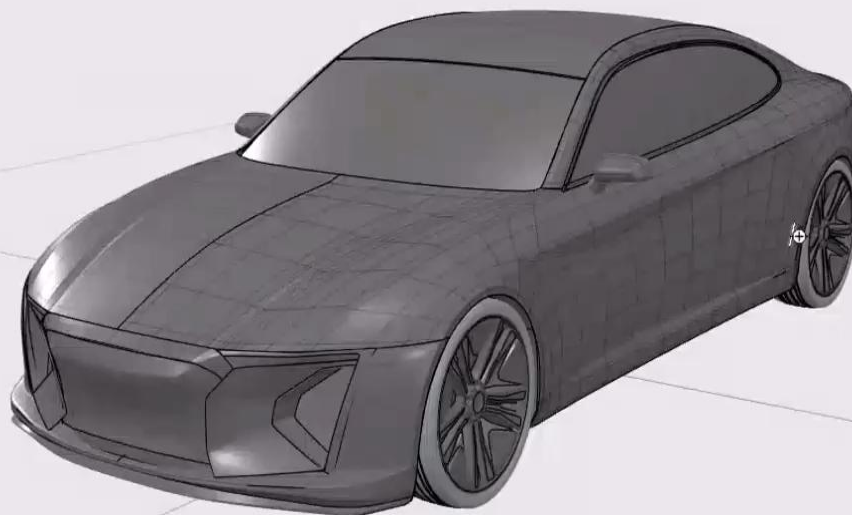


E-Car Concept D A

E-Car Concept A

E-Car Concept Comparison A

E-Car Concept D



Standard Shape Sculpt Shape Operations View AR-VR Tools Touch



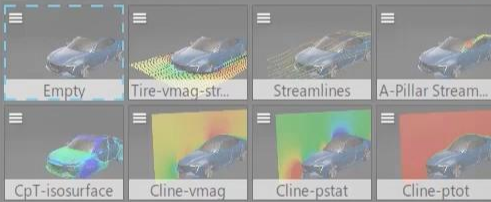
simulation_ecar_config

Simulation Results Review

Viewpoints



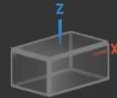
Simulation Data



Scenes



+ Click to add more variant lines



Perception Experience | Presentation | Live Rendering | Edit | View | AR-VR | Tools | Touch





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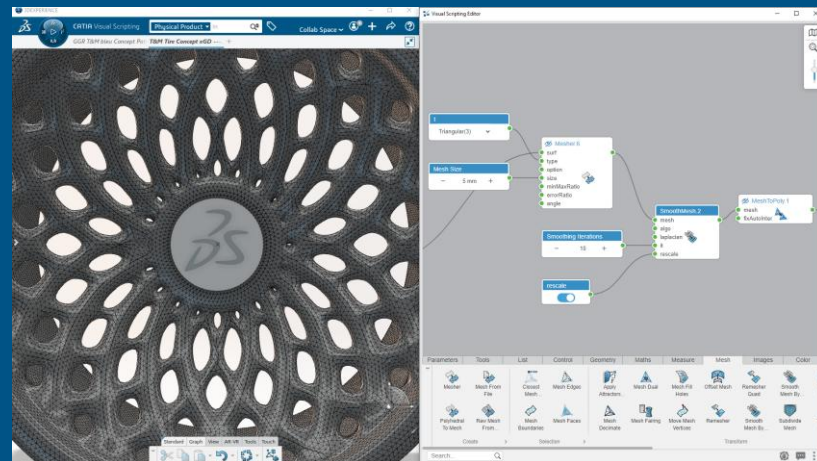
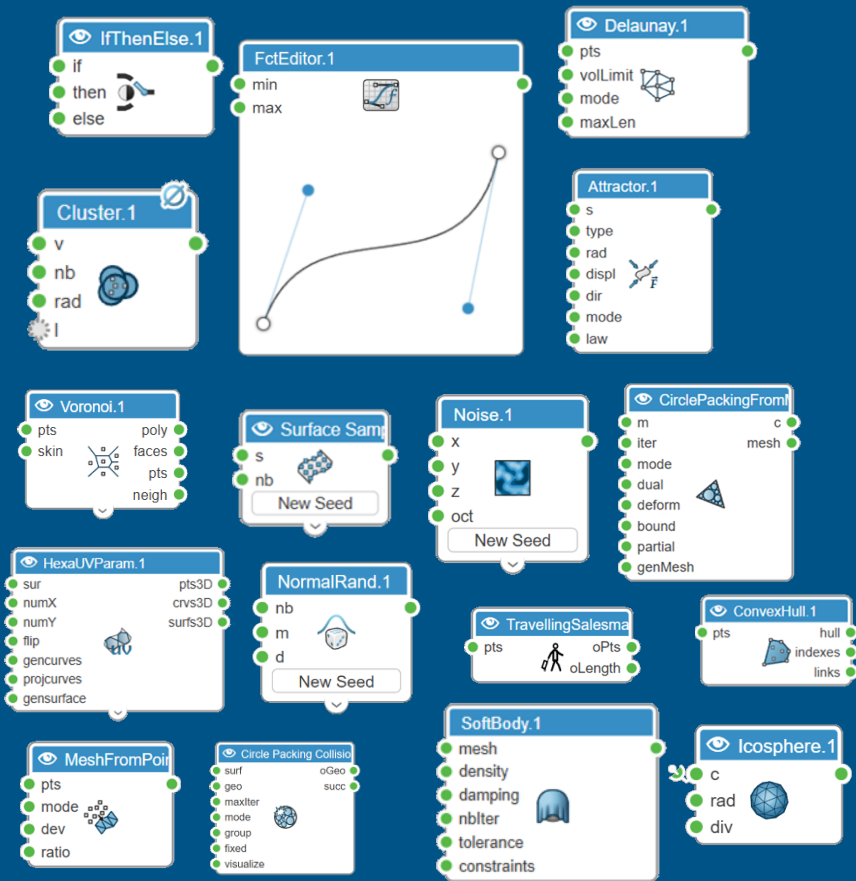


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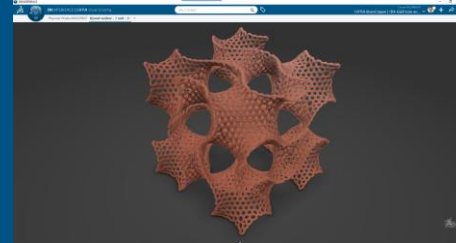
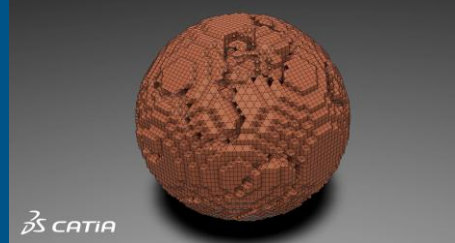
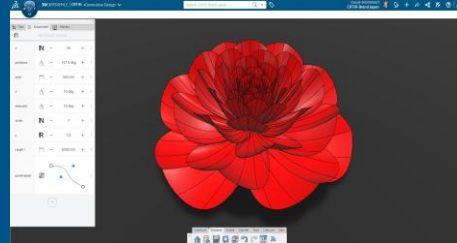
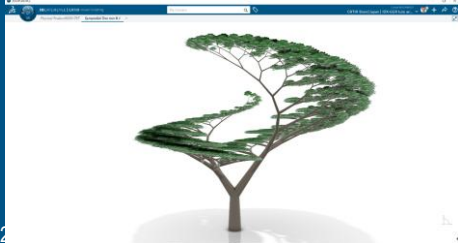
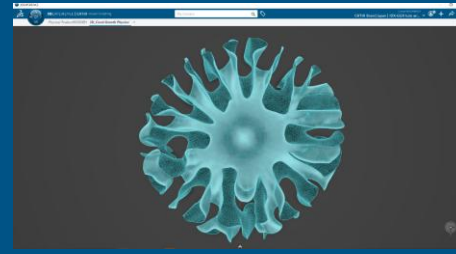
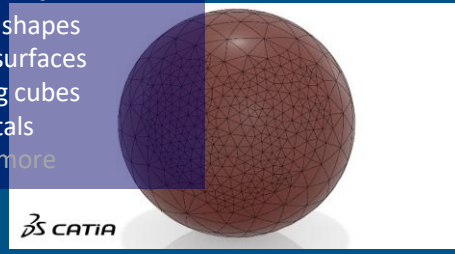
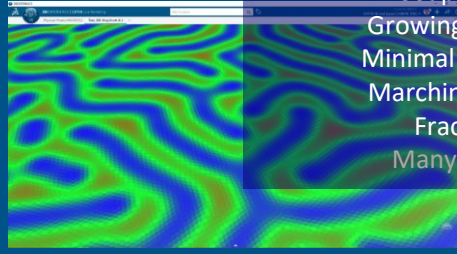
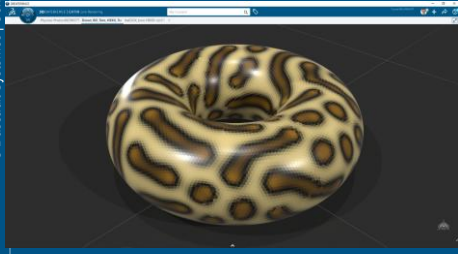
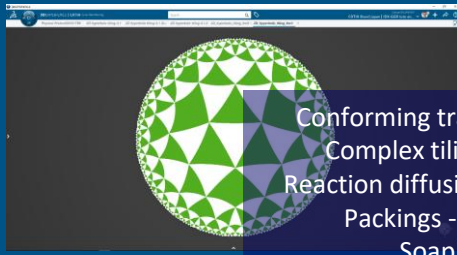
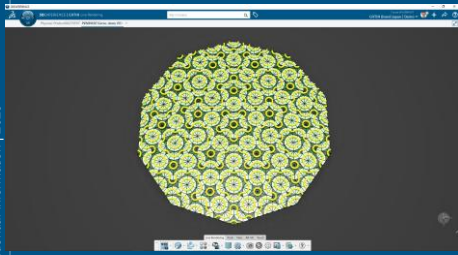
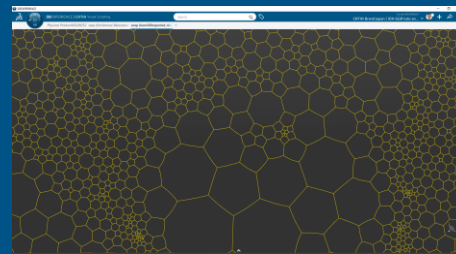
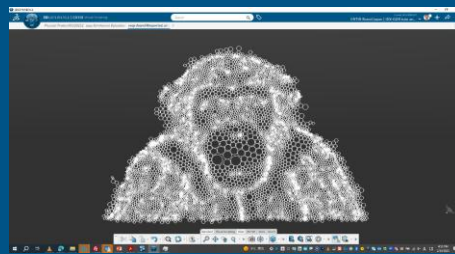
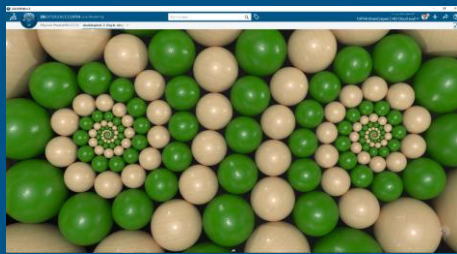
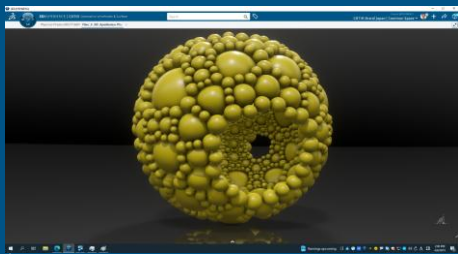


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VISUAL SCRIPTING



An app for all the apps
Graph
Management of lists
Fundamental functions



Conforming transformations
Complex tilings - mazes
Reaction diffusion phenomena
Packings - Stipplings
Soap films
Growing shapes
Minimal surfaces
Marching cubes
Fractals
Many more

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FOR INDUSTRY USE CASES

A large white wind turbine stands in a valley with steep, forested mountains in the background under a blue sky with scattered clouds. The turbine is positioned in the center-right of the frame, with its three blades extending upwards. The background features rugged, green mountains and a clear blue sky with some white clouds. The foreground is a dry, rocky valley floor with some sparse vegetation.

AIRFOIL MODELIZATION – PARAMETERS AND SHAPE

Design parameters

- Airfoil (positive): 0.1 — 0.2
- Airfoil (negative): 0.0 — -0.4
- Airfoil position: 0.0 — 0.05
- Airfoil 2 position: 0.0 — 0.05
- Scaling factor: 2 — 5
- Tip speed ratio (TSR): 10 — 100
- Teal scaling factor (TSR): 10 — 100

Response variables and objectives

Mass	Objective	Objectives	Massimize
Drag	Objective <th>Objectives</th> <th>Minimize</th>	Objectives	Minimize
Torque	Objective <th>Objectives</th> <th>Maximize</th>	Objectives	Maximize
Mass	Response Variable <th>Response Variables</th> <td></td>	Response Variables	
Drag	Response Variable <th>Response Variables</th> <td></td>	Response Variables	
Torque	Response Variable <th>Response Variables</th> <td></td>	Response Variables	

Design Space Checks: checks the robustness of the study by applying changes to the design variables for points throughout the design space.

Simulate:
User defines:

- Number of study points
- Number of simultaneous simulations

[illegible]



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CATIA CREATIVE DESIGN & ENGINEERING DAYS

Location: Science Congress Center | Munich, Germany

Date: 4-5. June, 2025

344 visitors
Of which 102 3DS
employees



GEO
Global



Industries

- Mobility
- Aerospace
- Industrial Equipment
- Home and Life style
- Academia

CATIA Disciplines TOPIC

- Creative design and surface refinement
- Concept and mechanical engineering
- Manufacturing and performance engineering
- Sustainable product lifecycle strategies



FORMAT OF THE EVENT

2 DAYS = Conference

Day 1: Plenary

Day 2: 7 Breakout Tracks



COMPANIES ATTENDEES



**ROLF
BENZ**

CLAAS

**HYUNDAI
MOBIS**

pesa



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