SOLIDWORKS SUMMIT RUSSIA 2019

16 октября 2019 г.

World Challenges

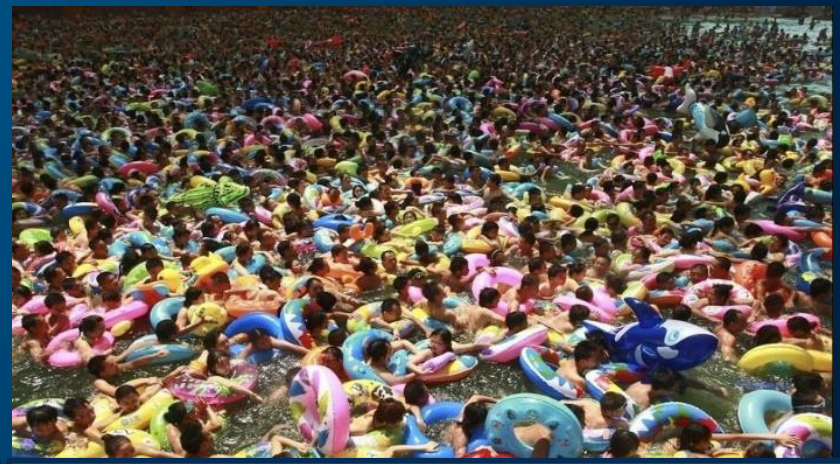
POLLUTION

CLIMATE CHANGE

RESOURCE DEPLETION

SECURITY

HEALTH



OVERPOPULATION

DASSAULT SYSTEMES

Transformational Trends

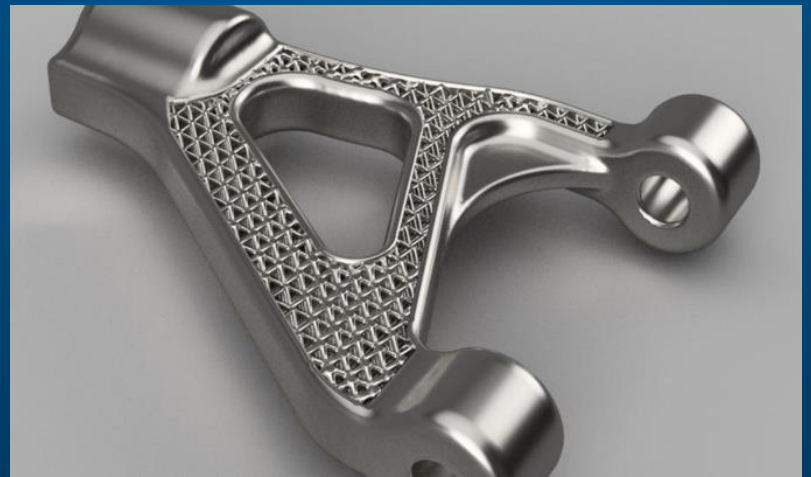
Robotics

IOT

Electrical Vehicles

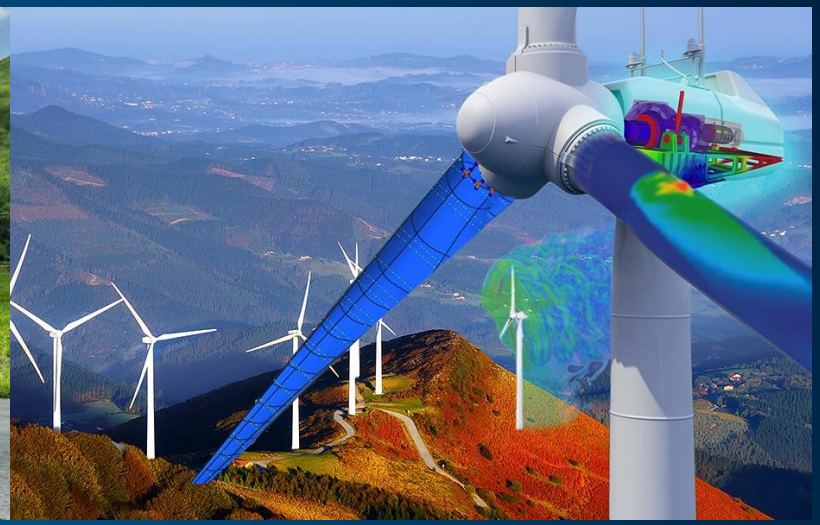
Artificial Intelligence

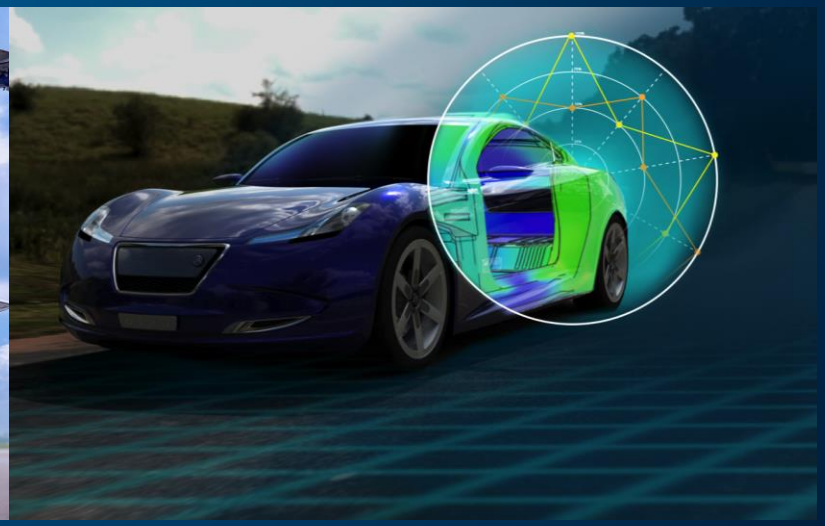
Additive Manufacturing



Virtual Reality

Simulation is Essential for Transformation





Transformation Requires Mindset Change

Leverage the Key Values of Simulation

Innovation

Optimization

Confidence

Design Space Exploration

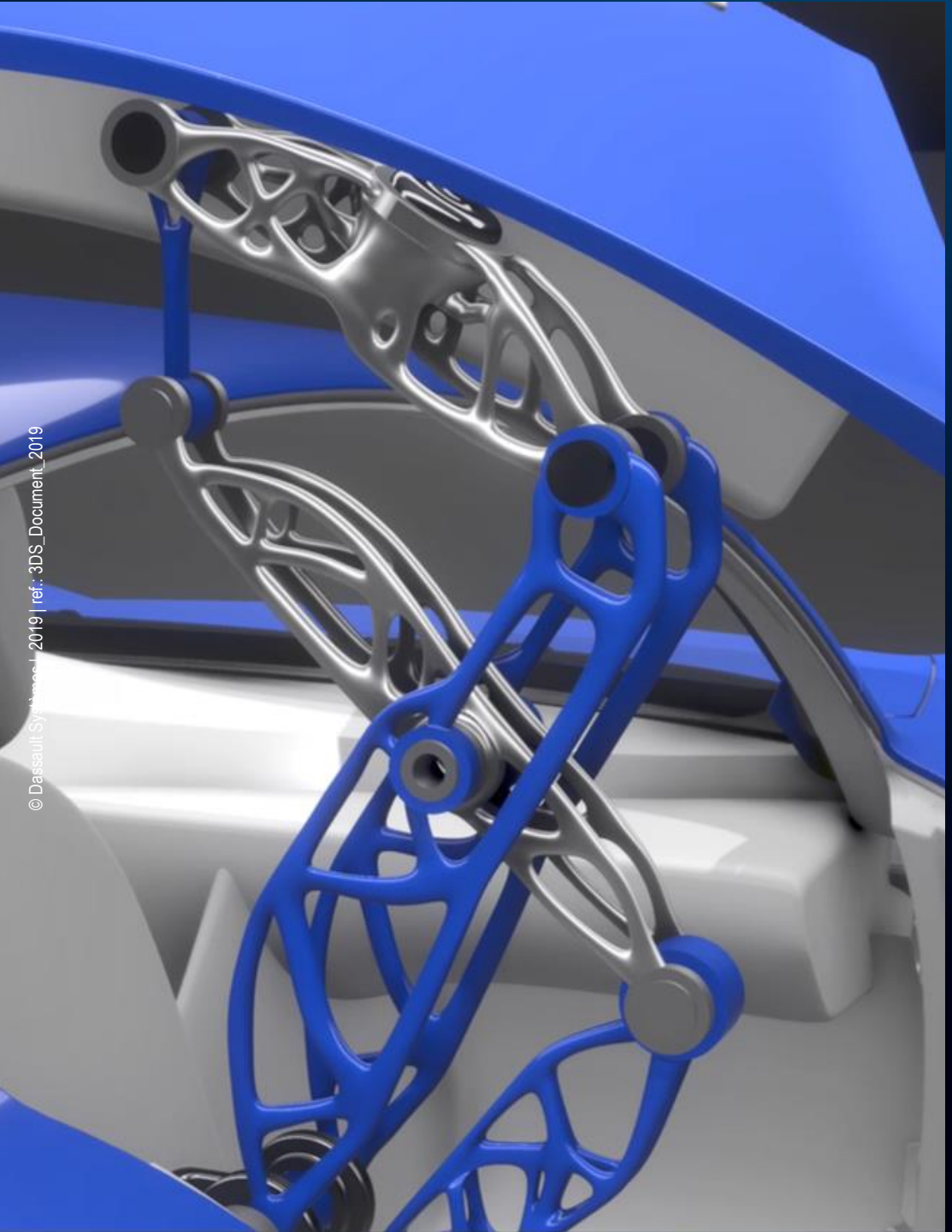
Complexity Management

Costs

Time to Market

Failure

Risk



Additive Manufacturing

build success

part properties

weight

surface finish

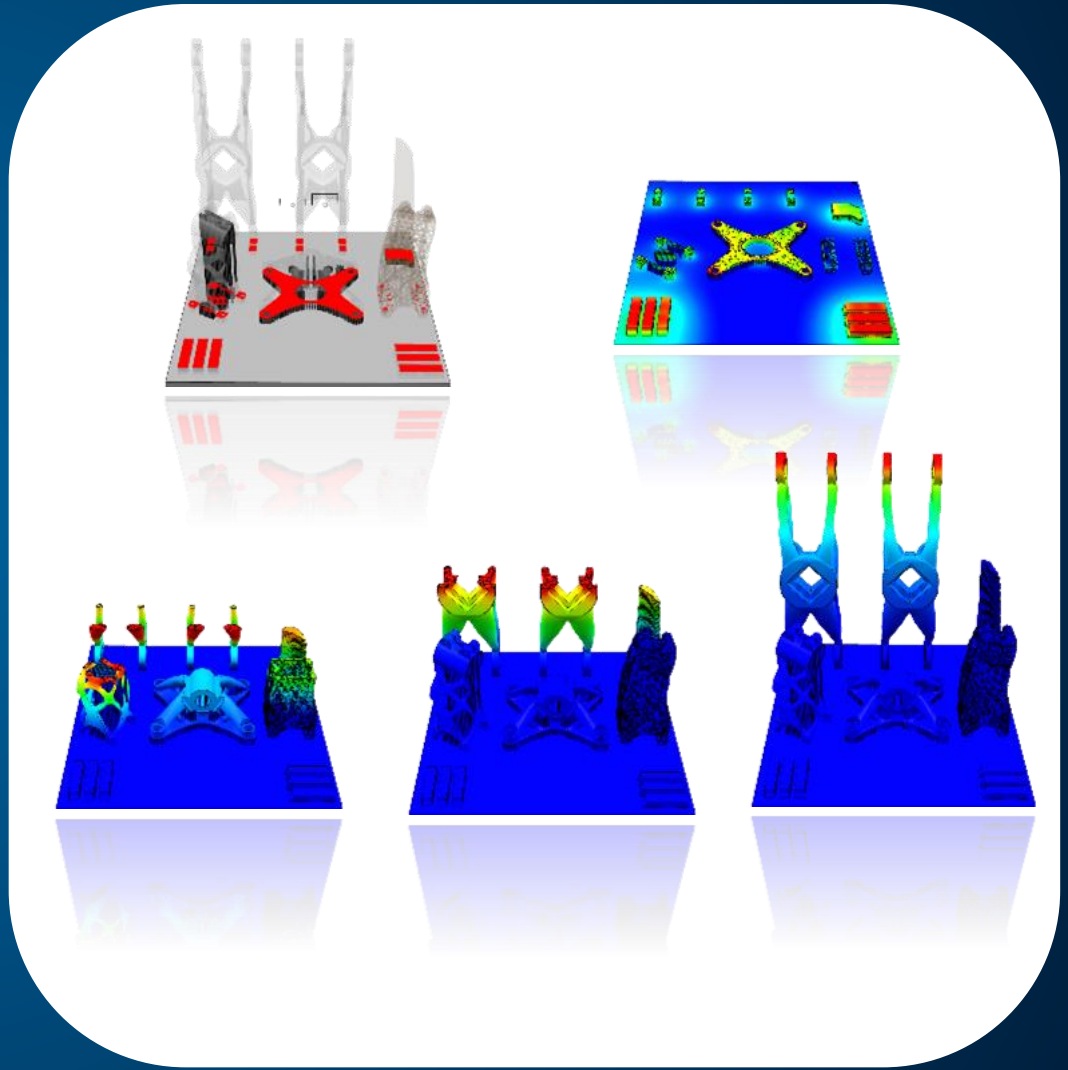
cost

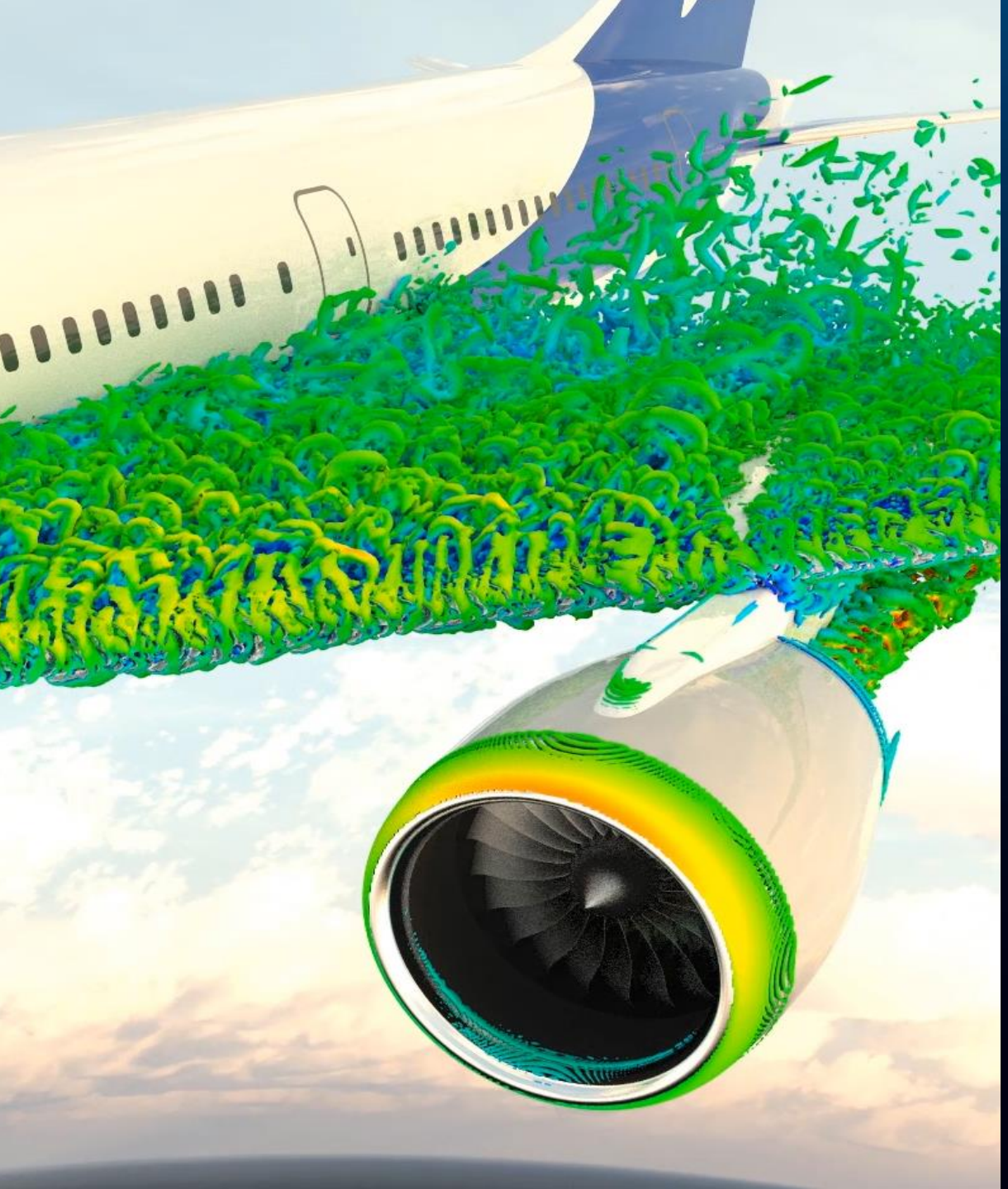
durability

DASSAULT SYSTEMES

Additive Manufacturing | Compelling Values

- Complete and comprehensive additive workflow solution
- Optimize and re-toplogize parts specifically for additive manufacturing
- Virtually test complete manufacturing builds
- Leverage scalable, multiphysics technology to manufacturing specialist while providing full access to all simulation capabilities for in-service-testing.





Aerospace & Defense

performance

communications

safety

cost

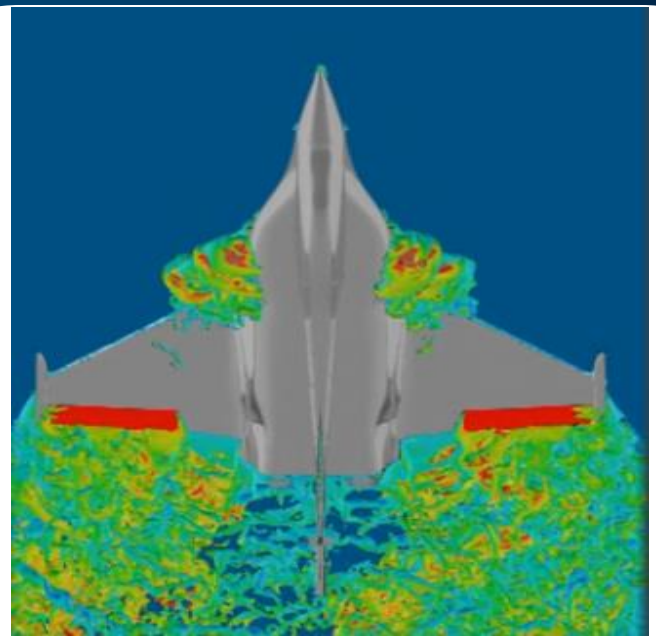
community noise

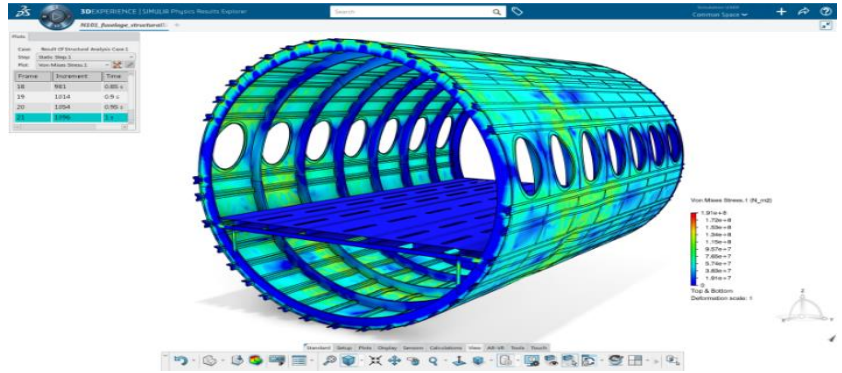
compliance

DASSAULT SYSTEMES

Aerospace & Defense | Compelling Values

- Develop and virtually validate new concepts for aircraft systems early in the design process
- Ensure compliance to functional and safety standards
- Ensure digital continuity by seamlessly linking requirements to architecture to 3D design data to simulation results
- Leverage best in class project and product management tools to ensure teams collaboration, make new configures, track changes, manage tasks, etc.





BAE SYSTEMS

BOEING

Aerospace & Defense

AIRBUS

Collins Aerospace

BOOM

DASSAULT SYSTEMES

MBDA
MISSILE SYSTEMS

KONGSBERG

Honeywell

Aerospace & Defense

THALES

GENERAL DYNAMICS

Raytheon

NORTHROP GRUMMAN

DASSAULT SYSTEMES

Industrial Equipment Engineering | Values

Drive Superior Performance with Simulation

True Collaborative Concurrent Engineering

Mechanical, Electrical, Fluids, Simulation, Manufacturing, etc.

Fast and Robust Product Development

More Engineering Productivity

Performance Driven Design

Performance Targets Reached

Quality by Design

No Design Error Reaching Production

DASSAULT SYSTEMES

KOMATSU

ABB

CATERPILLAR

TRUMPF

Kubota

Industrial Equipments

TEREX

DOVER

Parker

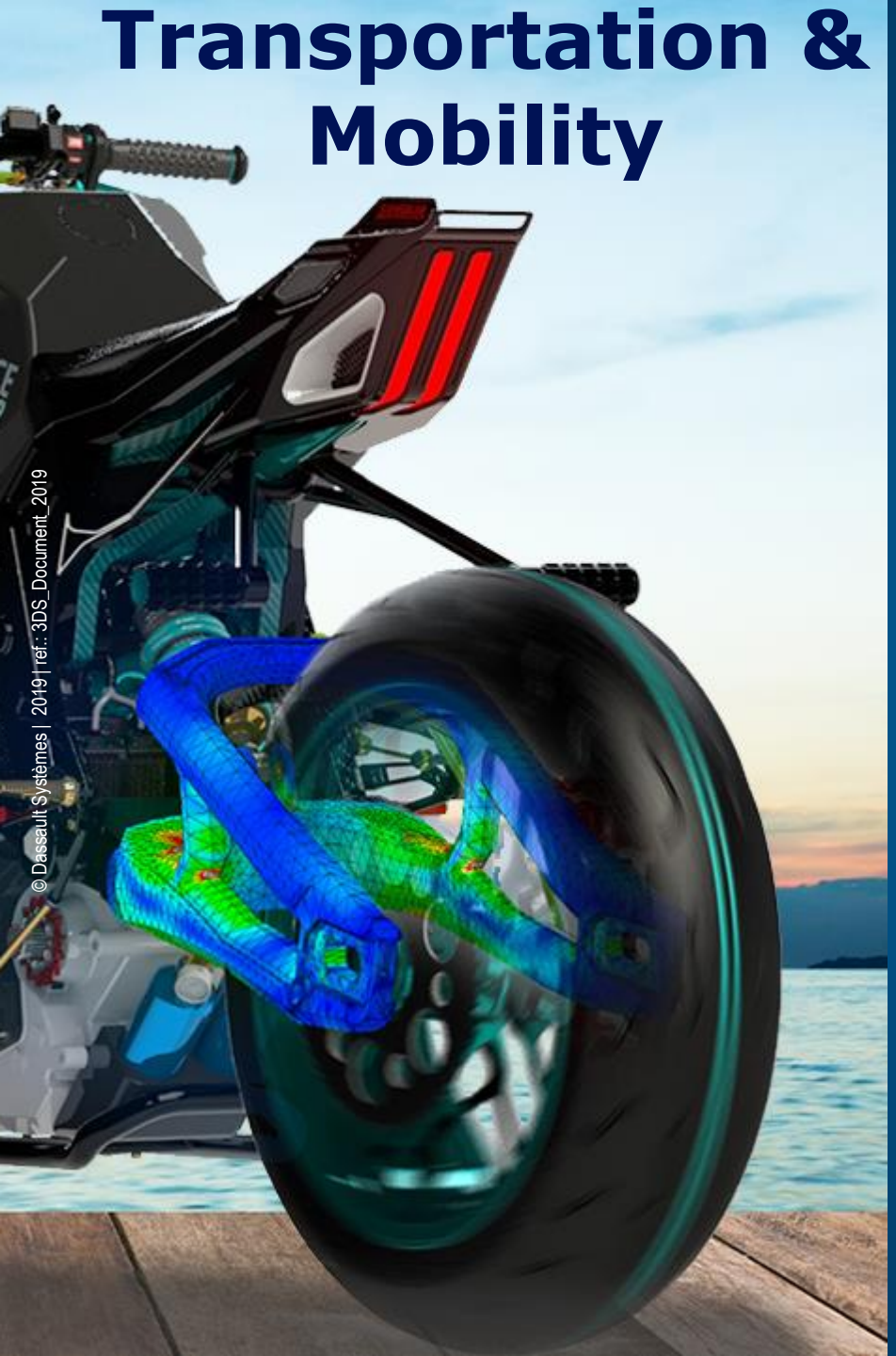
XCMG

FANUC

LIEBHERR

DASSAULT SYSTEMES

Transportation & Mobility



acoustics

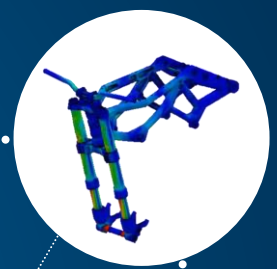
performance

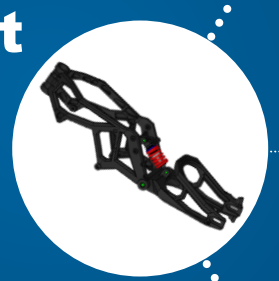
weight

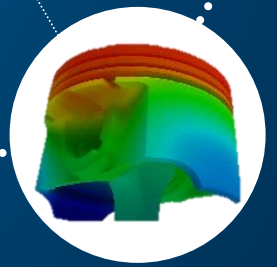
cost

durabilty

manufacturabilty

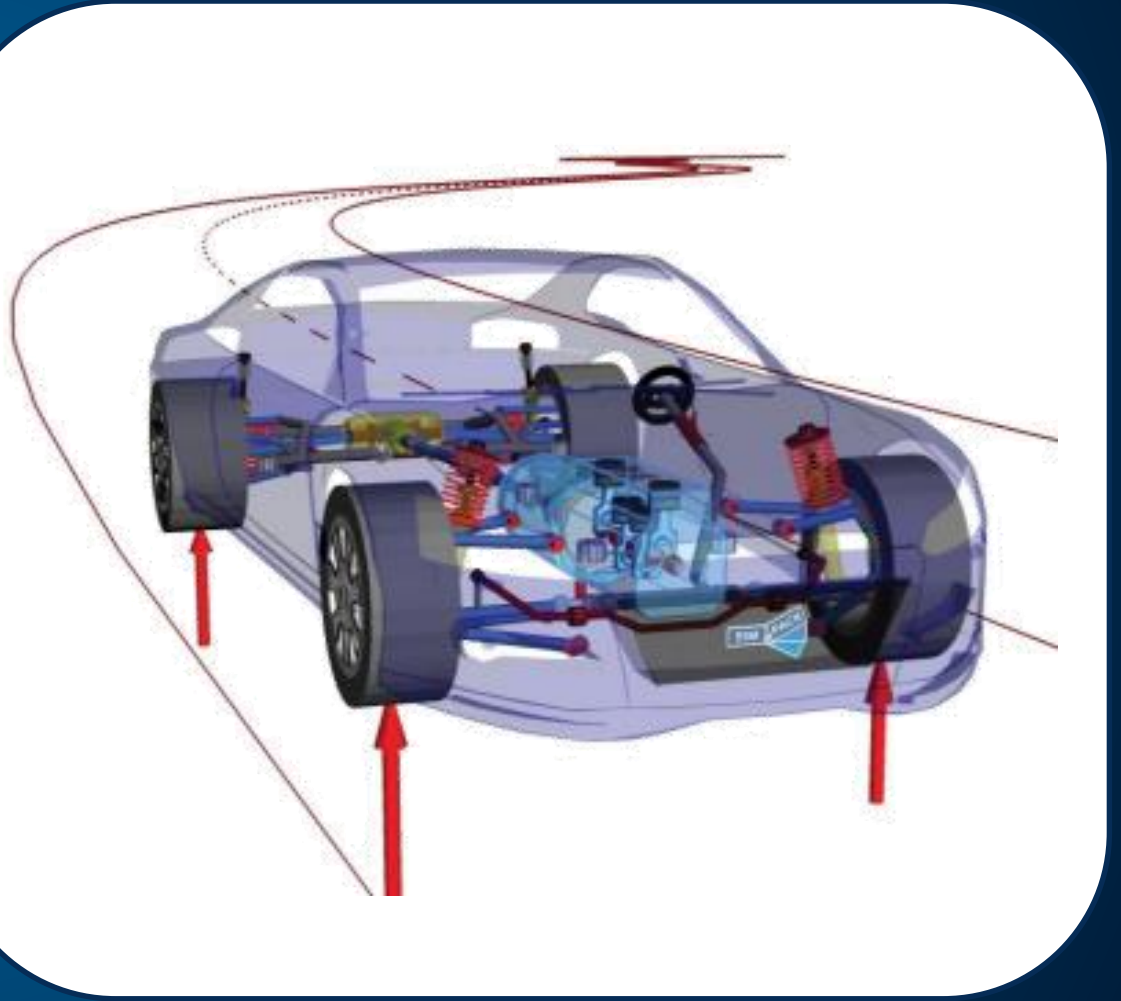






Transportation & Mobility | Compelling Values

- Reduce costs and development time
- Avoid warranty and reliability issues with detailed real-time simulation models
- Establish development process solutions with maximum efficiency and minimum costs
- Enable new development processes to support best in class innovative vehicle product engineering



Transportation & Mobility

ارامكو السعودية
Saudi Aramco

Chevron

Schlumberger

Oil & Gas

PETRONAS

TOTAL

HALLIBURTON

DASSAULT SYSTEMES

SIEMENS

Ingenuity for life

enel

eDF

Energy

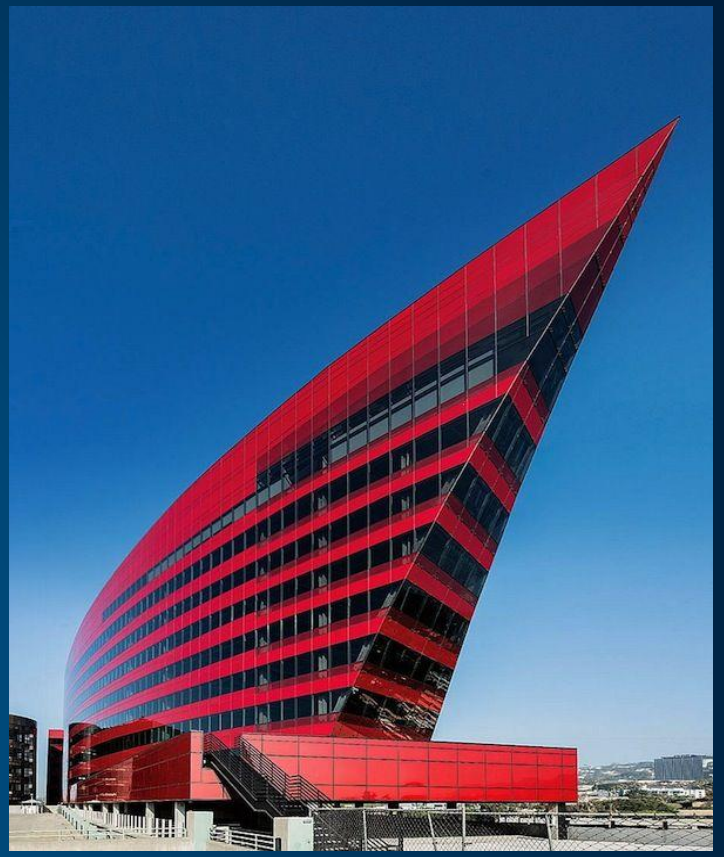
GOLDWIND

Vestas

DASSAULT SYSTEMES

VINCI

BOUYGUES CONSTRUCTION



BECHTEL

ATKINS

Construction

SNC·LAVALIN

ARUP

EIFFAGE

DASSAULT SYSTEMES

SCALABILITY

Scalable solutions to support the needs of the user

Scalability

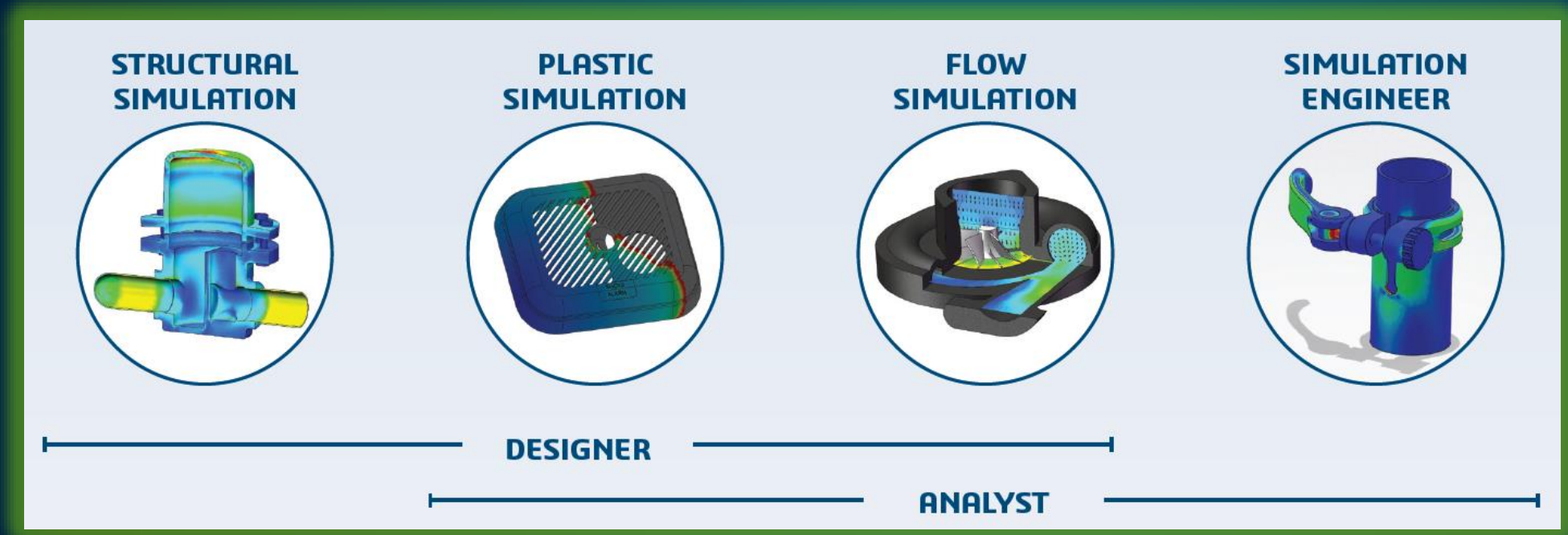
Guide design

Assess integrity and requirements

Validate and solve problem

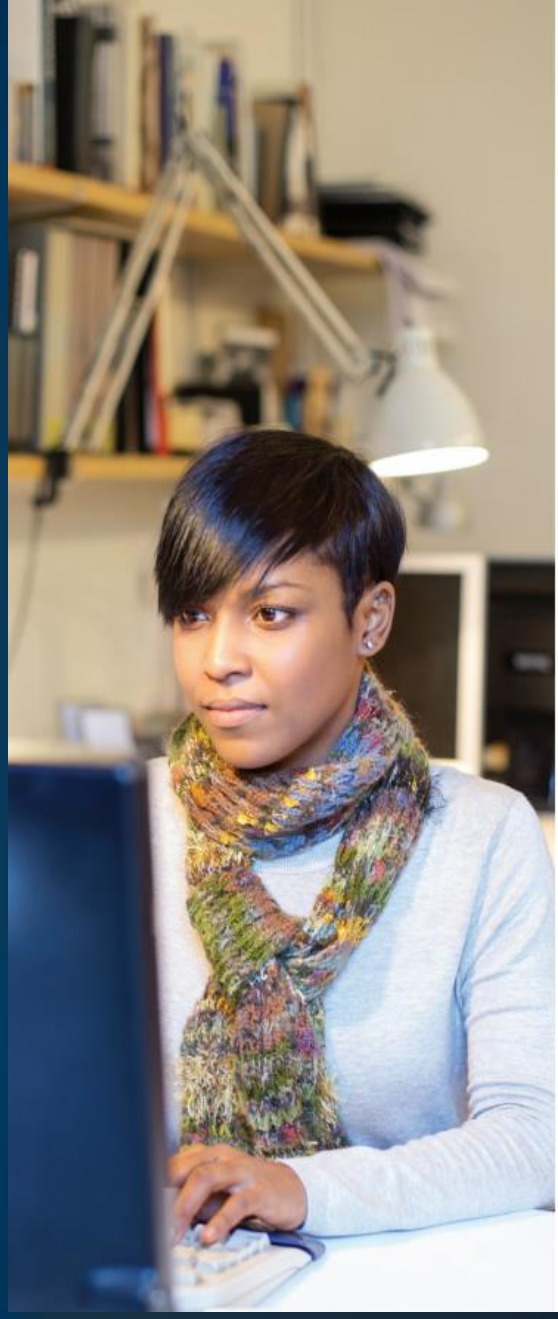
From Designers & Engineers to Analysts

Complete Solidworks Portfolio

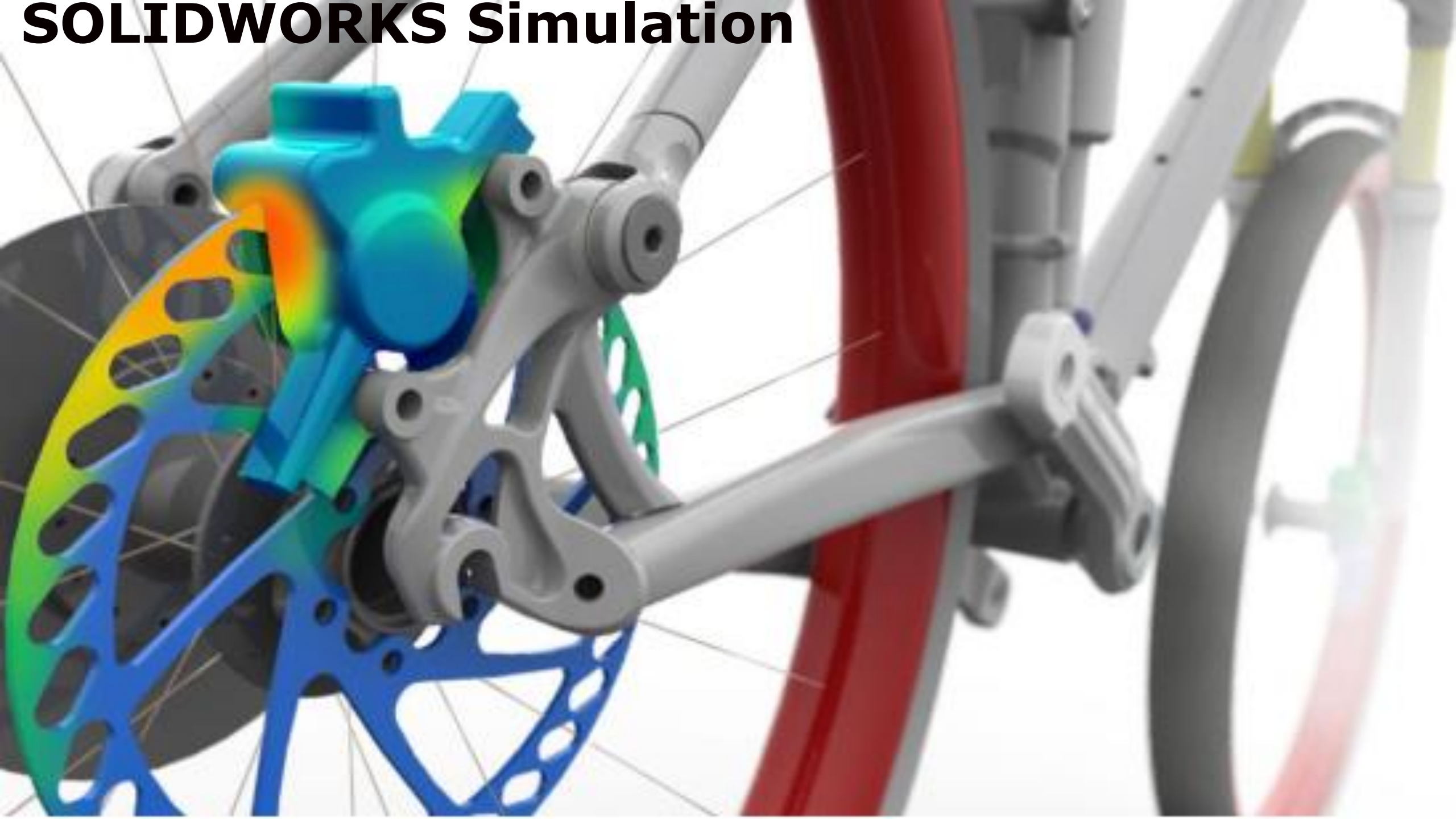


Mainstream Applications

High-End Applications



SOLIDWORKS Simulation



SOLIDWORKS Simulation

Simulation Standard

- Statics for Assemblies
- Fatigue
- Motion
- Trend Tracker

Simulation Professional

- Material Web Portal
- Frequency
- Buckling
- Thermal
- Optimization
- Bolt & Weld Check Plots
- Event-based Motion
- Pressure Vessel
- Drop Test
- 2-D Simplification
- Submodeling
- Loadcase Manager

Simulation Premium

- Nonlinear
- Time History
- Harmonic
- Composites
- Random Vibration
- Response Spectrum

Linear Dynamics

DASSAULT SYSTEMES

SOLIDWORKS Plastics

SOLIDWORKS Plastics

Plastics Standard

- Surface & Solid Mesh

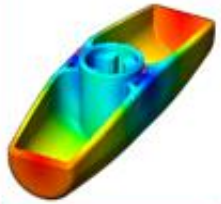
- Filling & Short Shots

- Weldlines

- Sink Marks

- Airtraps

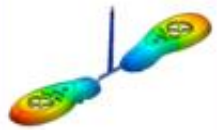
- Multiple Gates



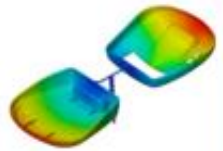
Plastics Professional

- Gas-Injection & Valve Gates

- Multiple Cavity



- Runner Balancing

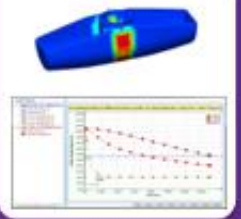


- Co-Injection

- Inserts & Overmolding

- Shrinkage

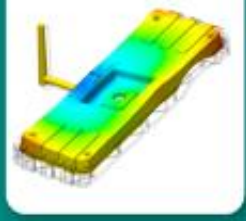
- Cooling Time



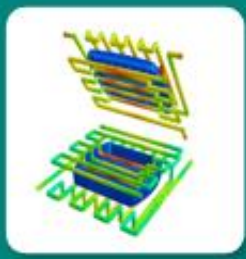
- Fiber Analysis & Birefringence

Premium

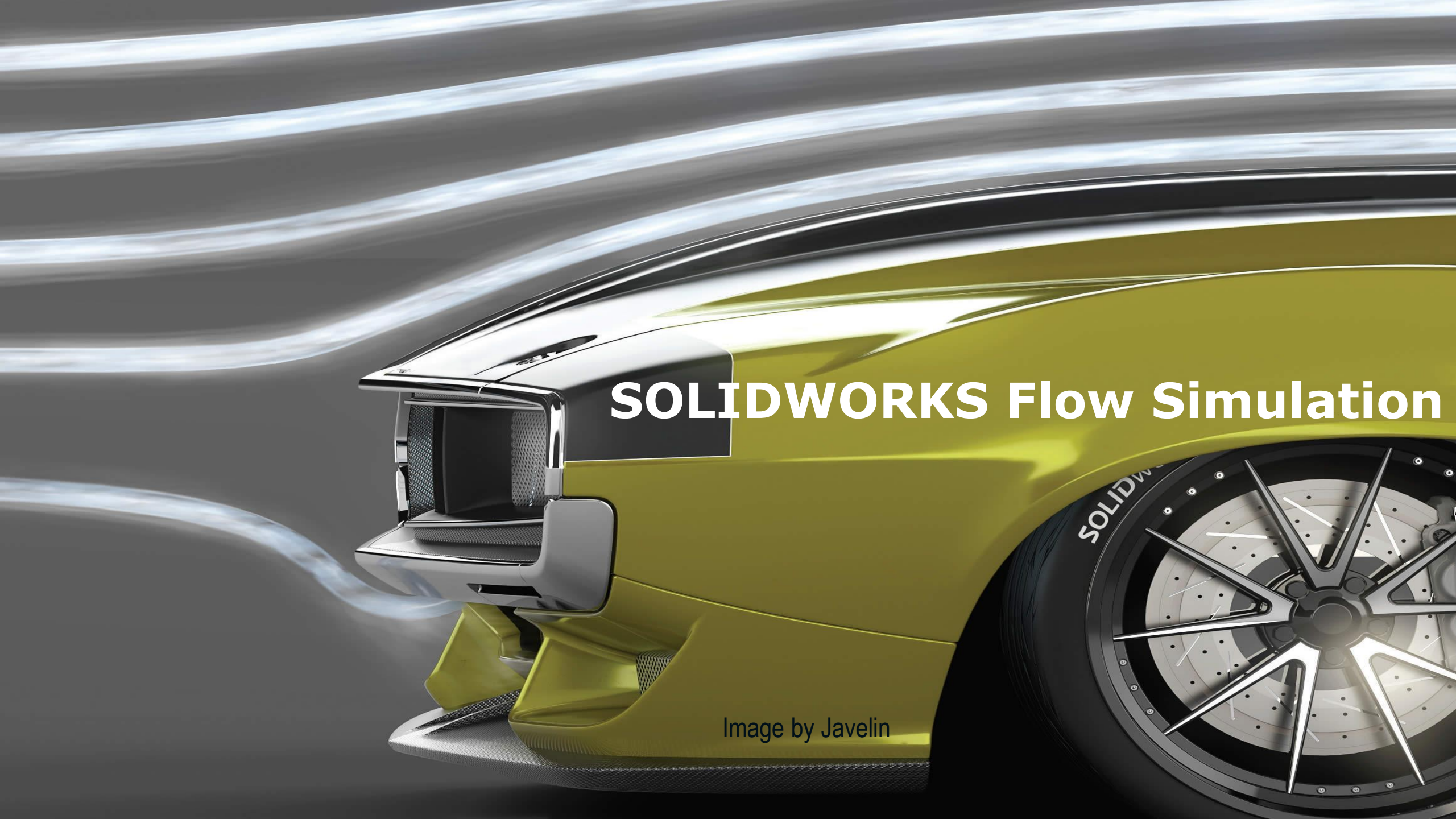
- Warping



- Advanced Cooling Analysis



DASSAULT SYSTEMES


SOLIDWORKS Flow Simulation
Image by Javelin

SOLIDWORKS Flow Simulation

Flow Simulation

- Internal & External
- Laminar & Turbulent
- Heat Transfer
- Rotating Components
- Compressible
- Non-Newtonian
- Results Exchange
- Time-dependent

Electronic Cooling

- Joule Heating
- Heat Pipes
- PCB Generator
- Extended Database

HVAC

- Advanced Radiation
- Tracer Study
- Comfort Paramaters
- Extended Database

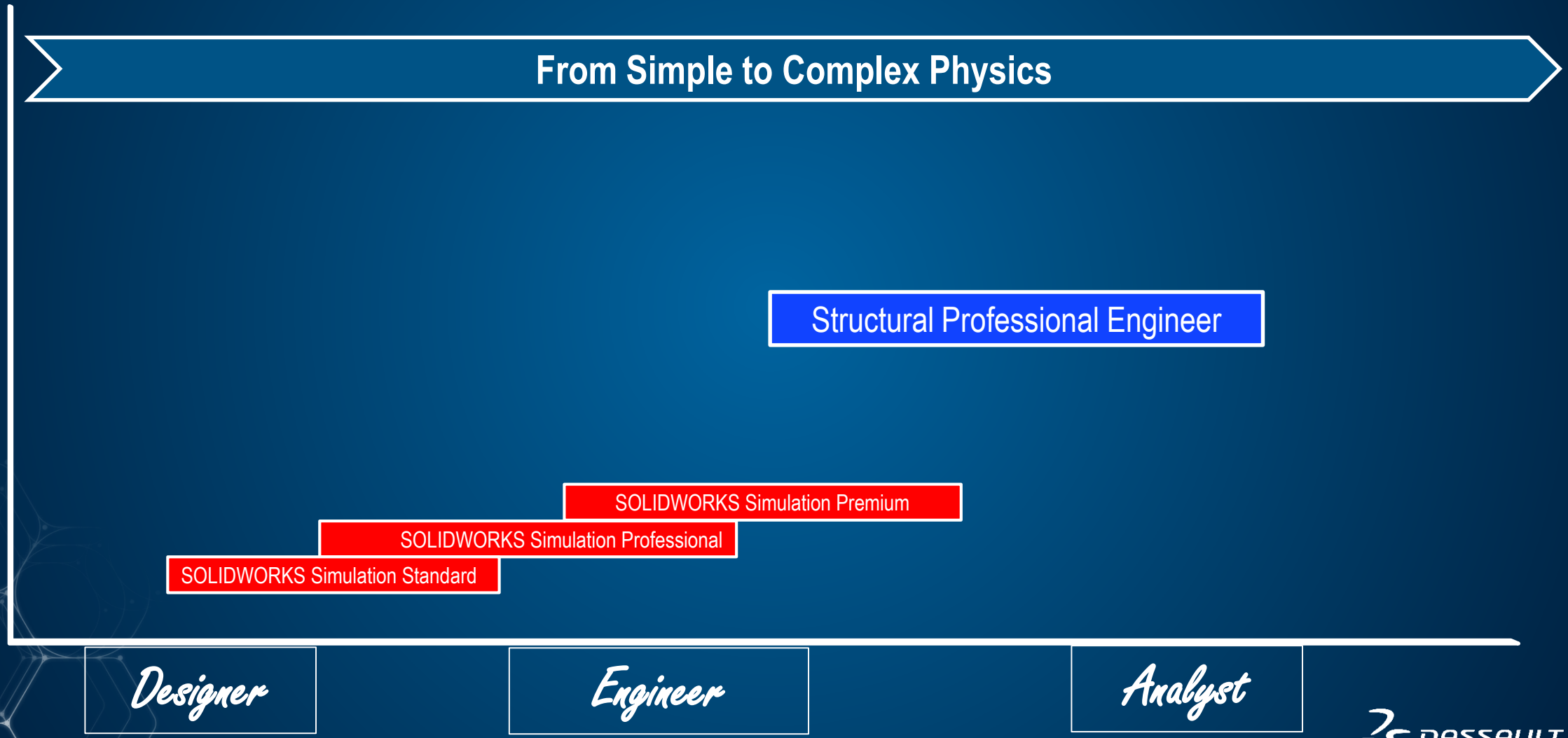
DASSAULT SYSTEMES

WHAT'S NEXT ?

DASSAULT SYSTEMES

The Structural Simulation Landscape

Expanding SOLIDWORKS Simulation with SIMULIA

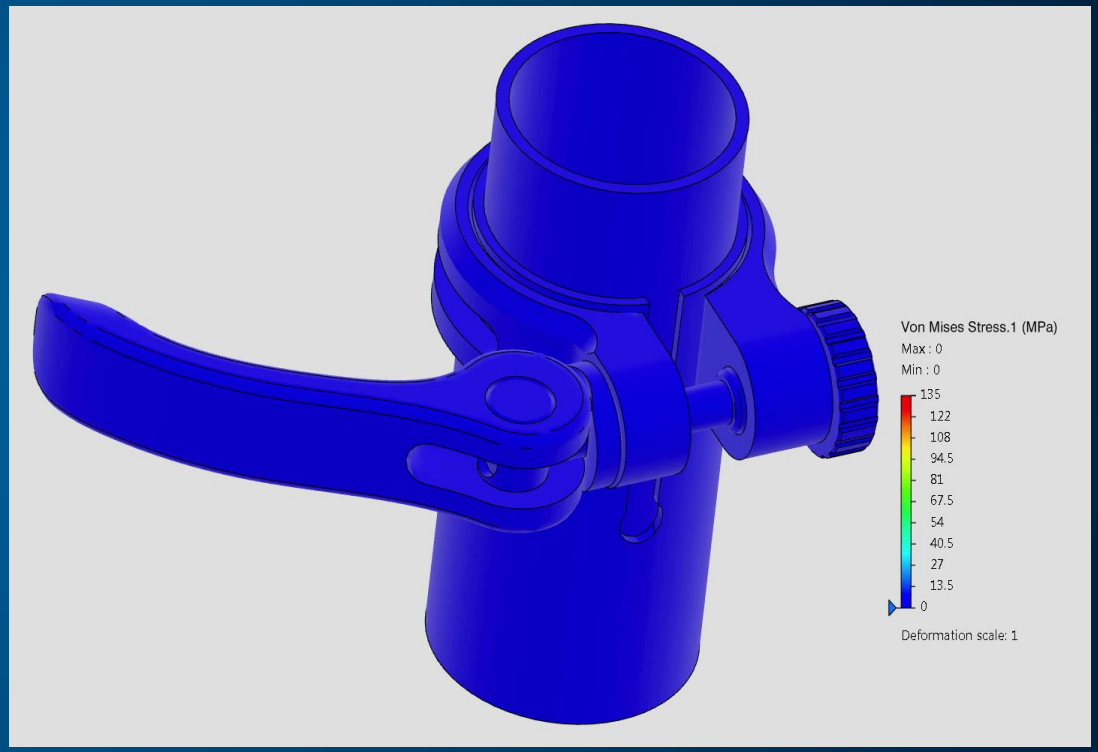


DASSAULT SYSTEMES

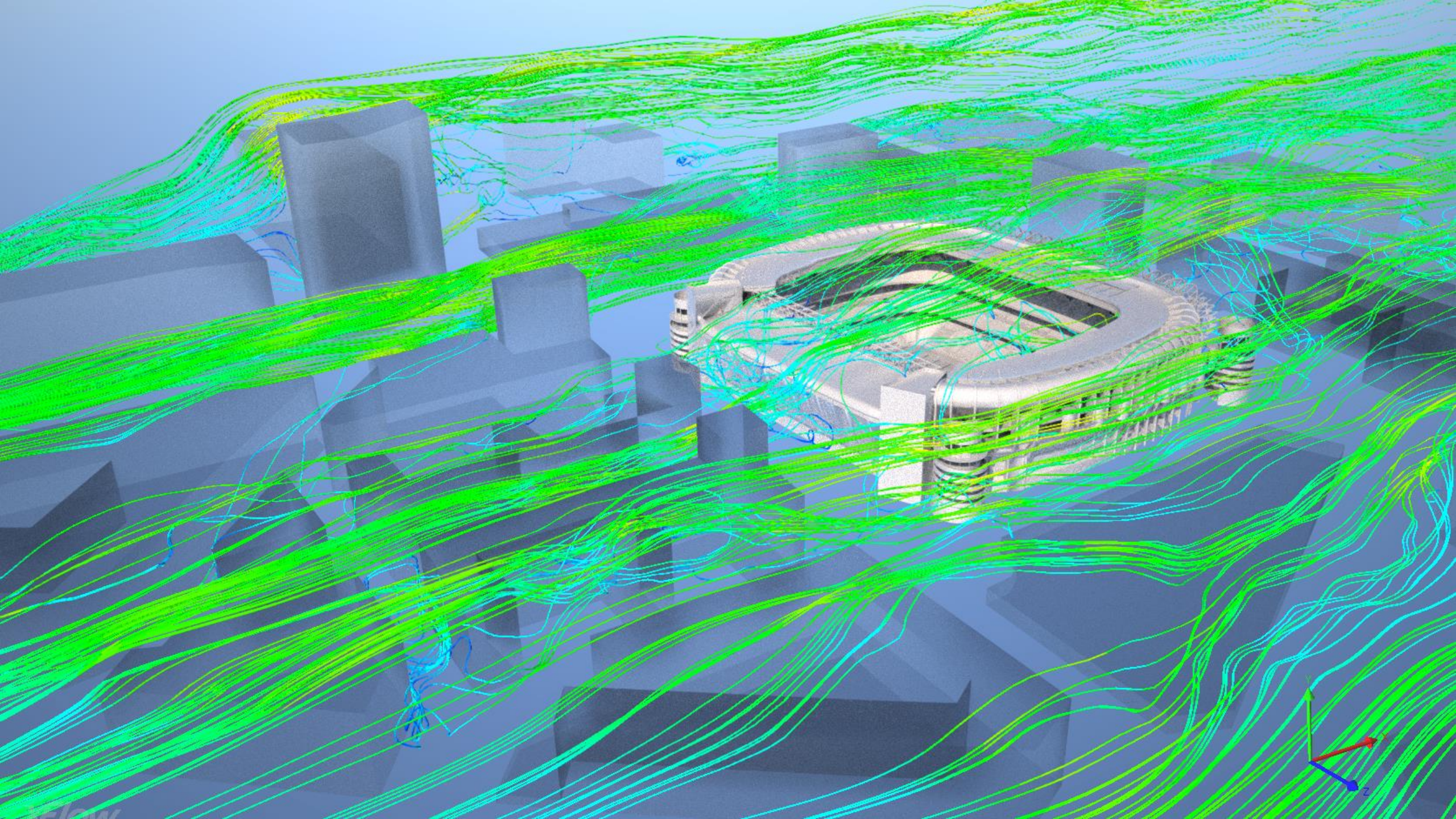
Structural Professional Engineer

Solving Complex Physics Faster with Confidence

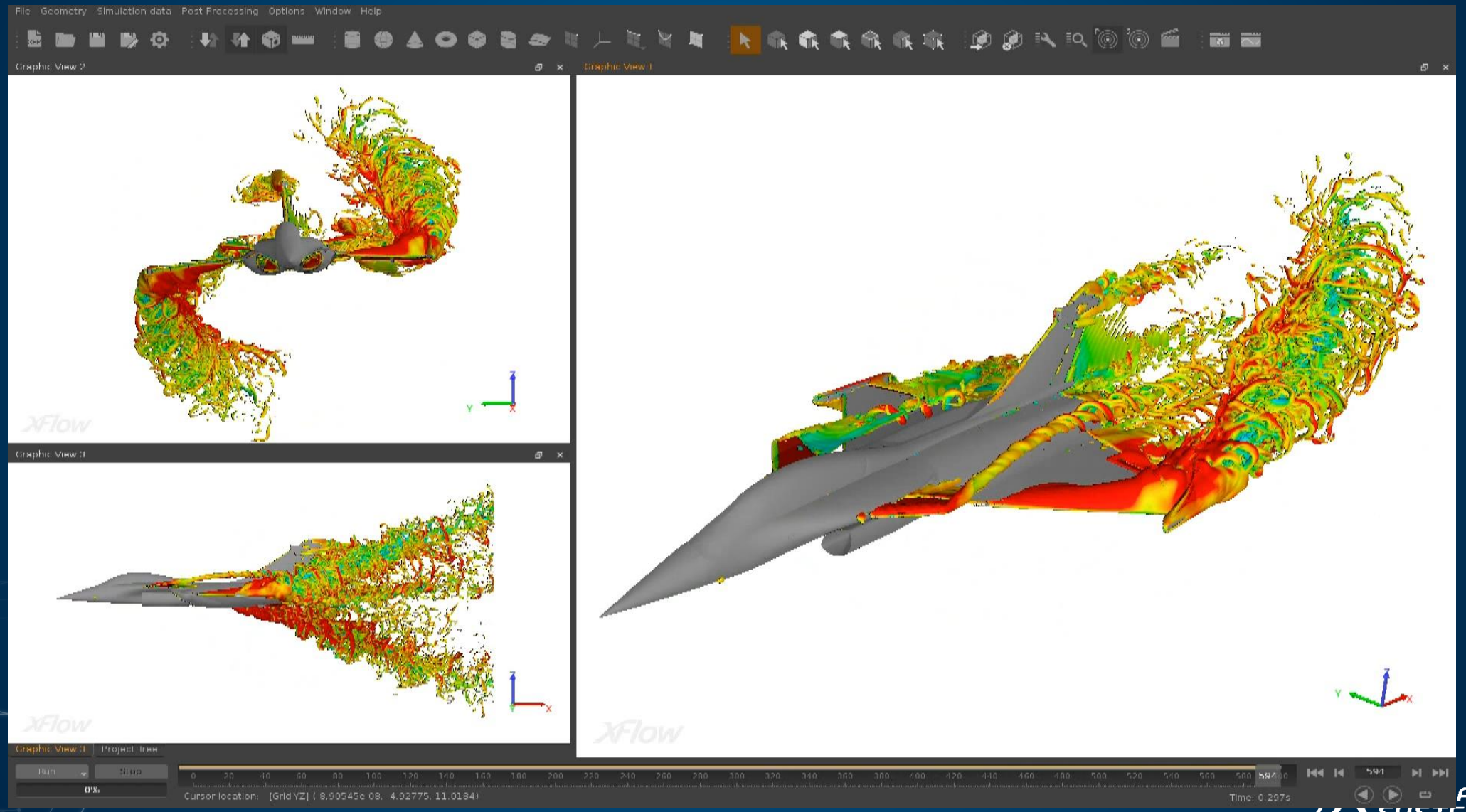
- **Powerful**
  - Market leader Abaqus FEA technology
  - Advanced & robust technology: non-linear contact & material models, meshing tools
- **Connected**
  - Automatically transfer SOLIDWORKS Simulation models, features and materials
- **Cloud-based**
  - Free-up local computer resources with high performance cloud computing
  - Improve design decisions with easy communication and secure data traceability



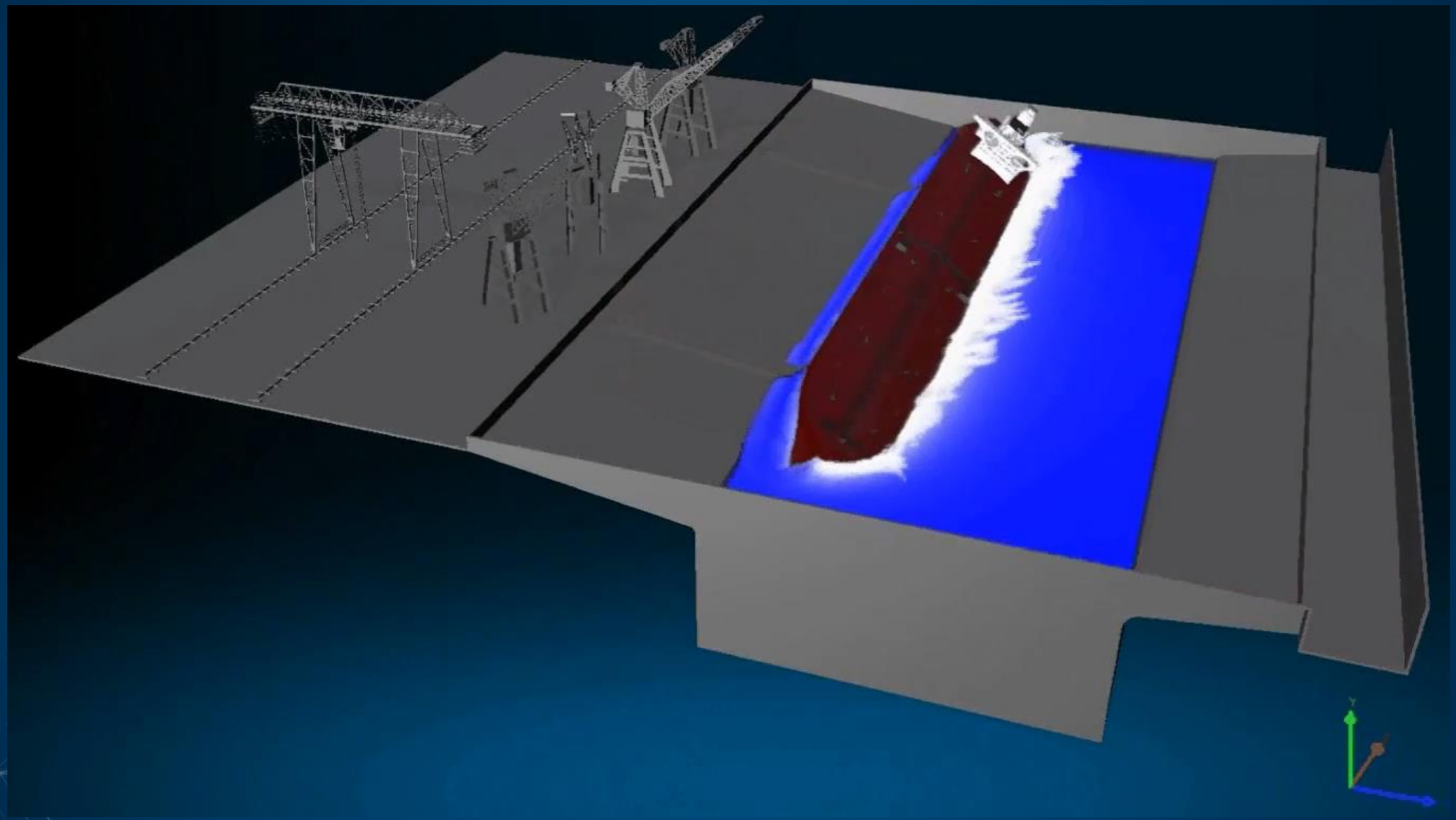
DASSAULT SYSTEMES


Z

Fighter Jet spin maneuver



Ship Launch



DASSAULT SYSTEMES

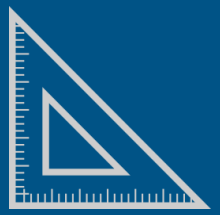
3DEXPERIENCE On-Cloud Simulation

1

Ease of use

Smart applications to remove guesswork for optimized product design

2



Technology

Realistic simulation solutions in a unified environment

3

Integration

Seamless interoperability between CAD, CAE and PLM

4

Collaboration

Platform to facilitate collaboration across the extended enterprise

5

Scalability

Scalable solutions for all user skill levels

6

Productivity

Focus on engineering problems vs manual non-value-add tasks

7

On-Cloud

Minimize hardware and software costs

Dassault Systemes simulation community to support you

Simulation for Product, Nature & Life

Global Local Presence

- 40+ Simulation Centers of Excellence
- 400+ Resellers
- Trusted Local Advisors

Growing Scientific Community

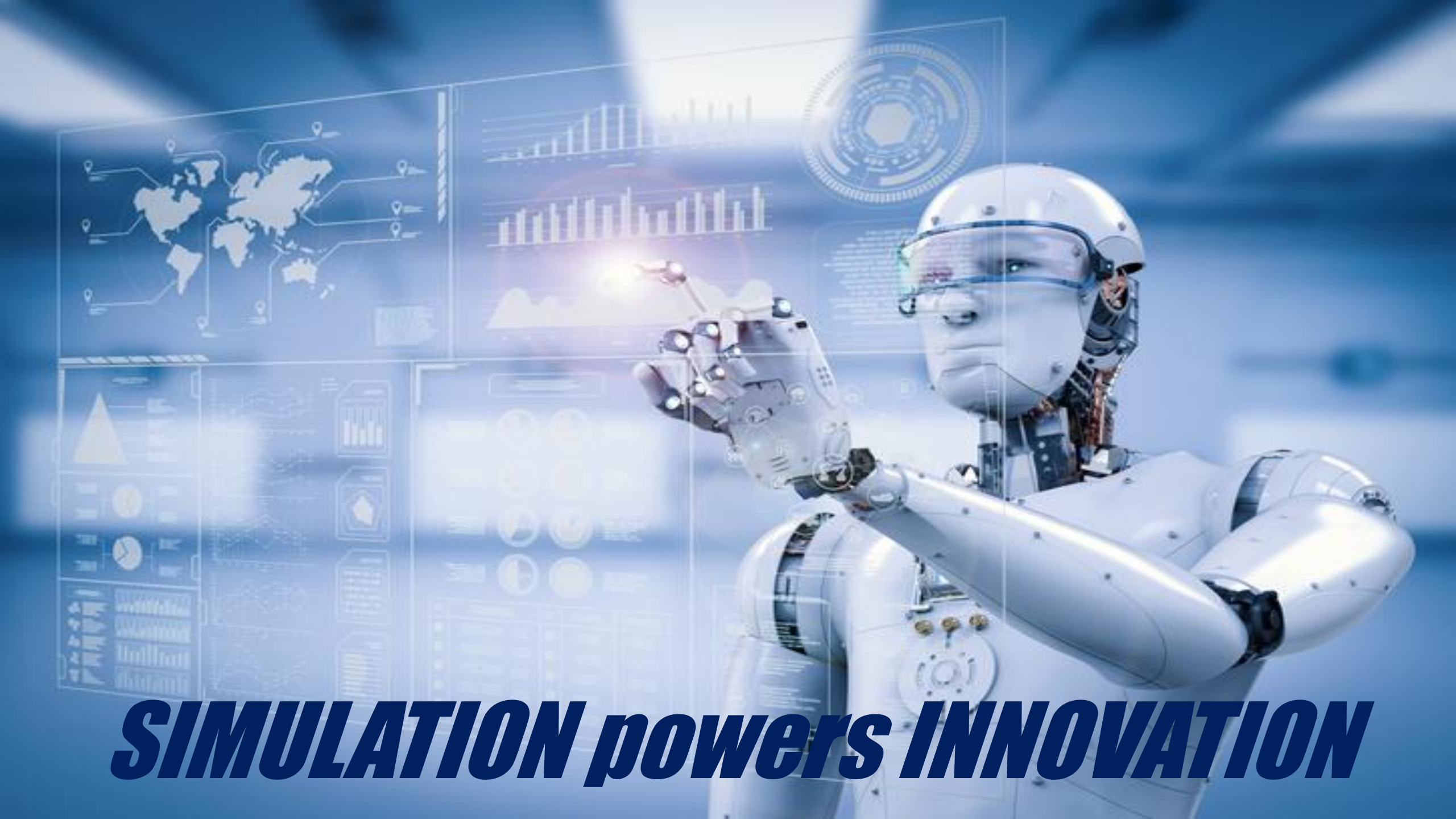
- 12 Industries
- Designers
- Engineers
- Academics
- Researchers
- Simulation Experts

Connected Partner Ecosystem

- 200+ Alliance Partners
- Complementary Software
- Components
- Hardware

Simulation Technology Leader

- Innovative Multiscale Multiphysics Solutions
- High-quality Products & Support
- Customer Satisfaction


SIMULATION powers INNOVATION