ACCELERATE PRODUCT DEVELOPMENT WITH INTEGRATED SYSTEMS ENGINEERING AND MODSIM

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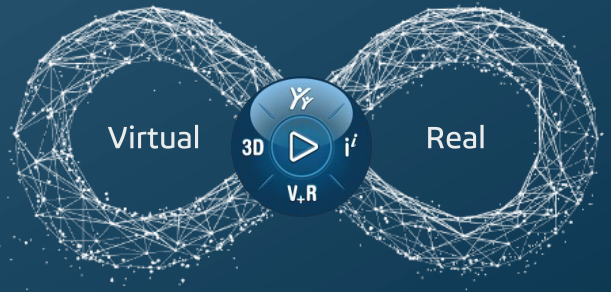
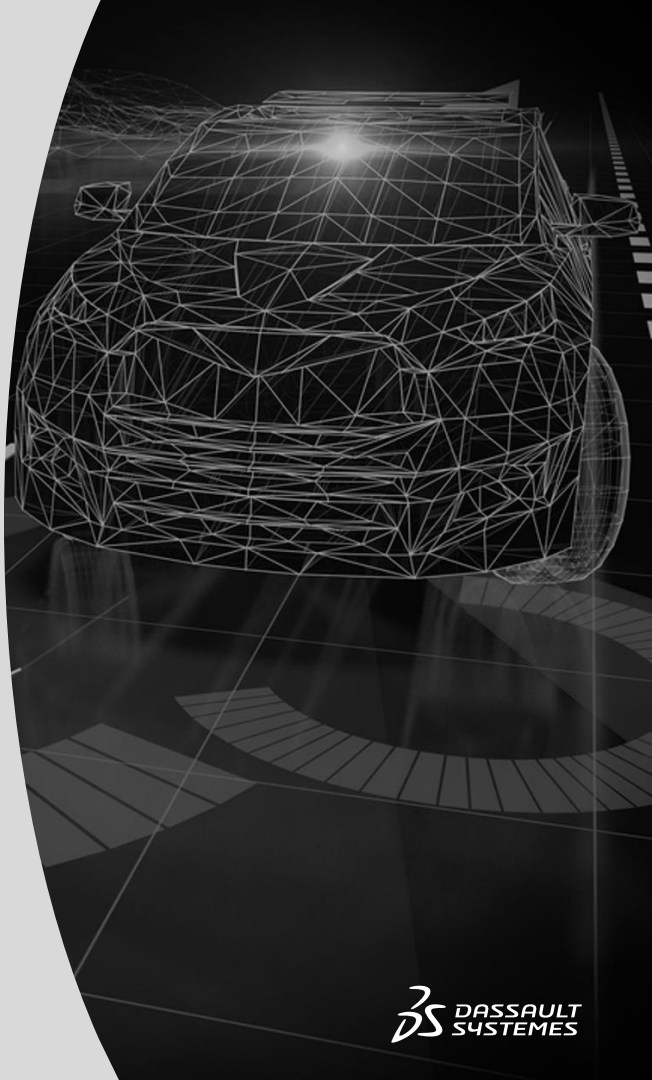


TIMES ARE CHANGING

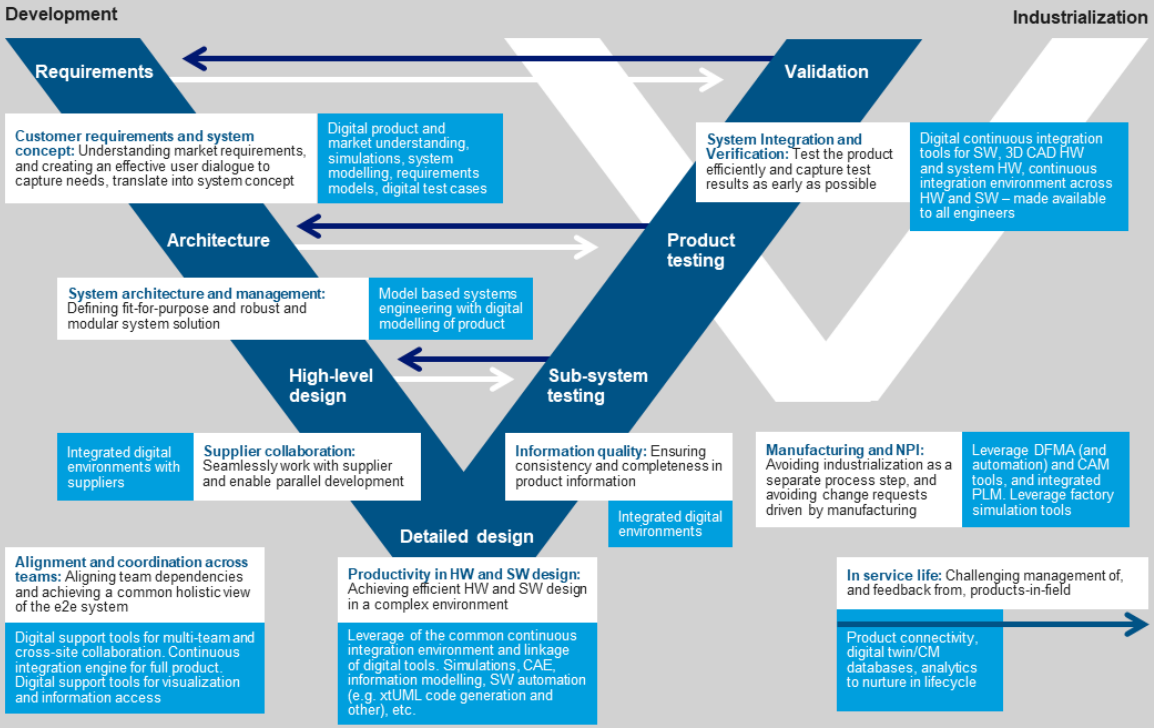
	Traditional	Challenger
Cost:[1] Overall platform development costs	€4 – 6bn.	€0,5 – 1bn.
Time: New vehicle time to market	45 - 60 months	18 - 36 months
Quality: Frequency of full vehicle tests	Monthly	Twice a day
Culture: Individual outcome responsibility	20-30%	80-100%

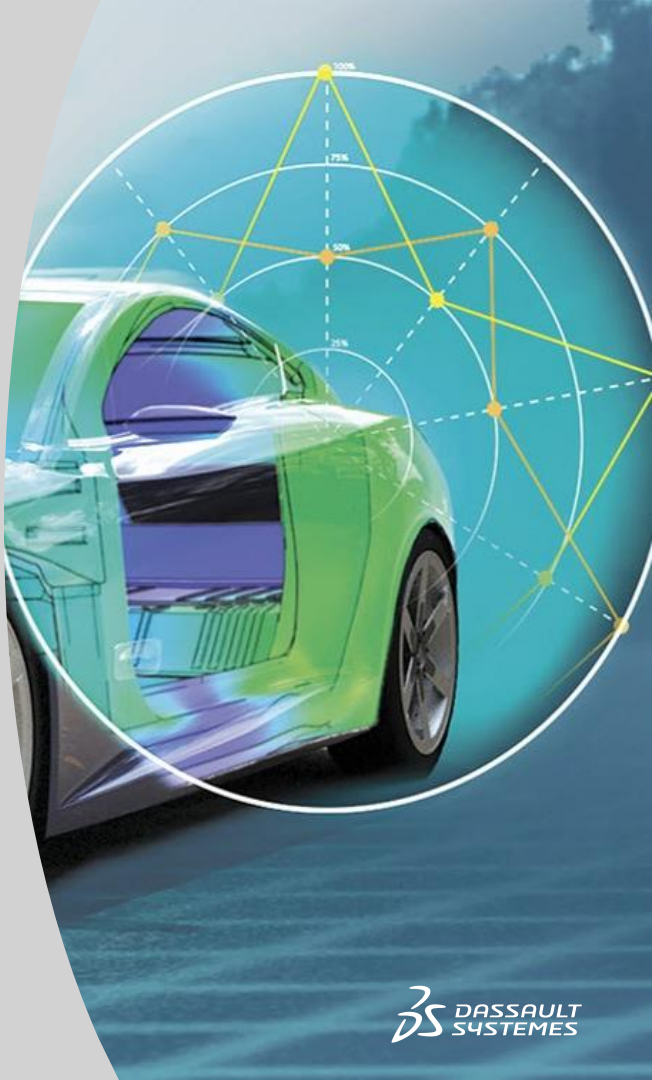
KEARNEY
Benchmark

1 – avg. values incl. PassCar segment
Source: Kearney, BinaryCore

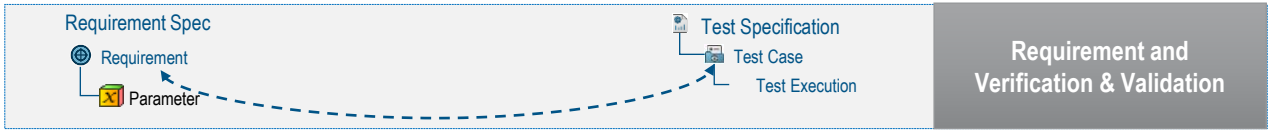


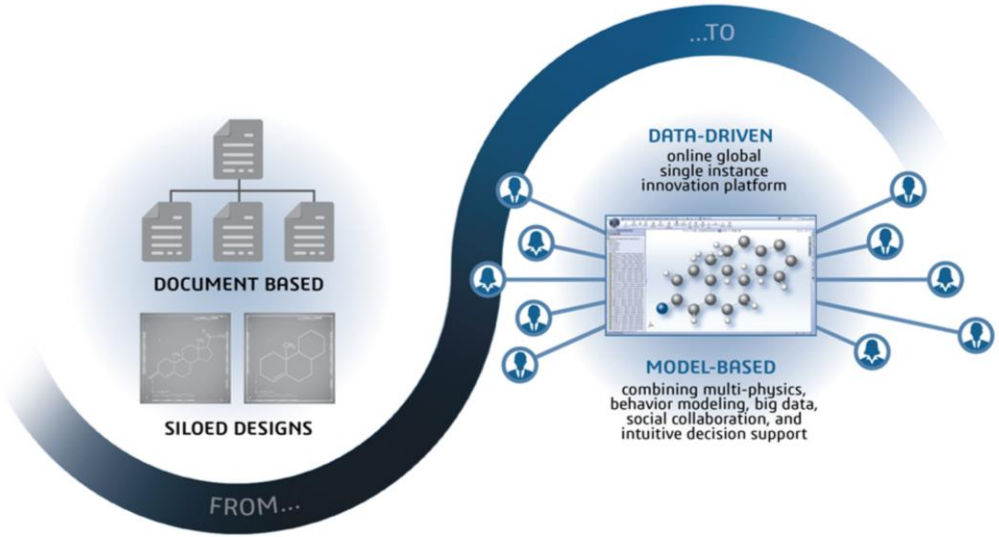
INTEGRATED ENGINEERING CHALLENGE





UNIFIED MODEL BASED ENGINEERING





Enabling 'What-If' Studies and decision making with full traceability

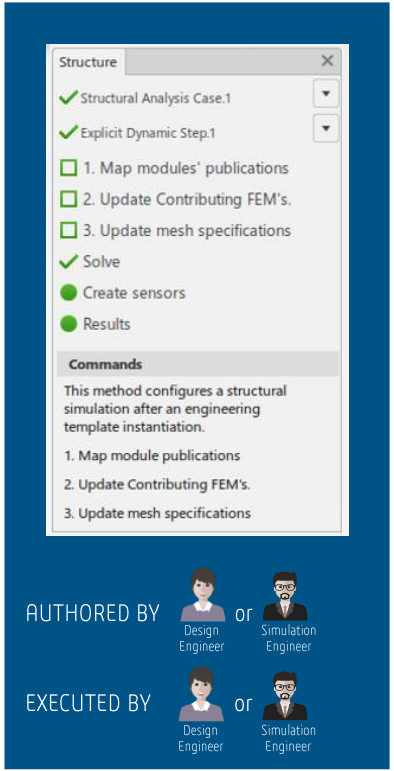
Facilitate Multi-scale & Multi Physics collaboration

Improve Product Quality

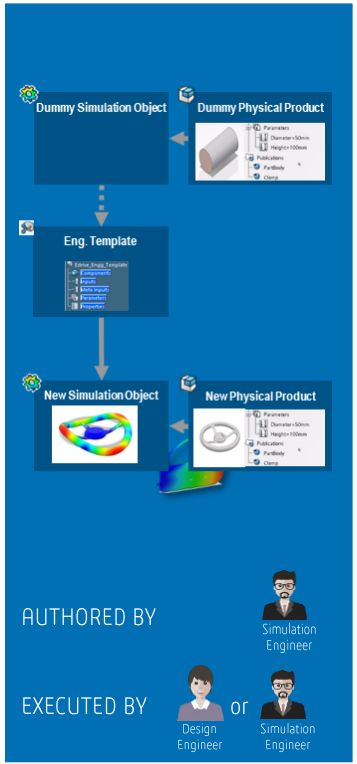
A key step toward AI/ML

SIMULATION DEMOCRATIZATION

Assisted Workflow



Templated Workflow



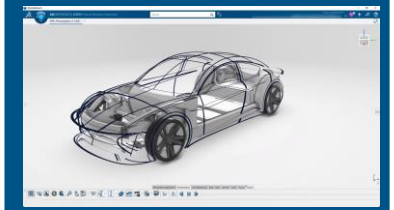
Web Interface

- Accelerate Efficiency
- Integrated Digital Environment
- Common Data Source
- Capitalize Enterprise Knowledge & Know-how

DASSAULT SYSTEMES

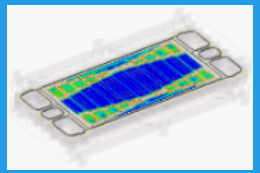
MODSIM CONCEPT, DESIGN SPACE EXPLORATION & TRADE-OFF

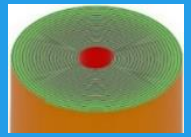
Concept Engineering



Generative Engineering

Multi-Physics/-Scale





Drive innovation

Design right the 1st time

Reduction of costly late design changes

Explore more and new designs

DASSAULT SYSTEMES

TRACEABILITY: FROM PRODUCTION TO SIMULATION

Systems Engineering

Full traceability from the physical product to the requirements

Test Management

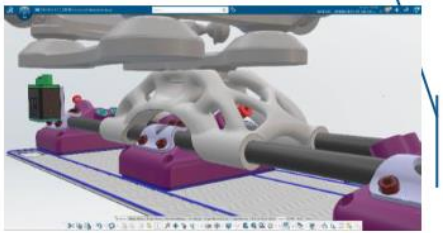
Ensure compliance with requirements and manage test plans

1

2

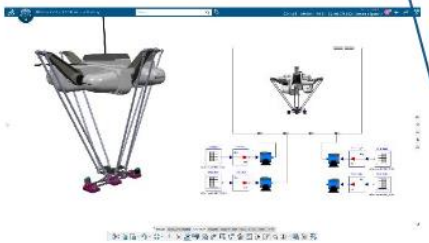
4

3



Generative Design

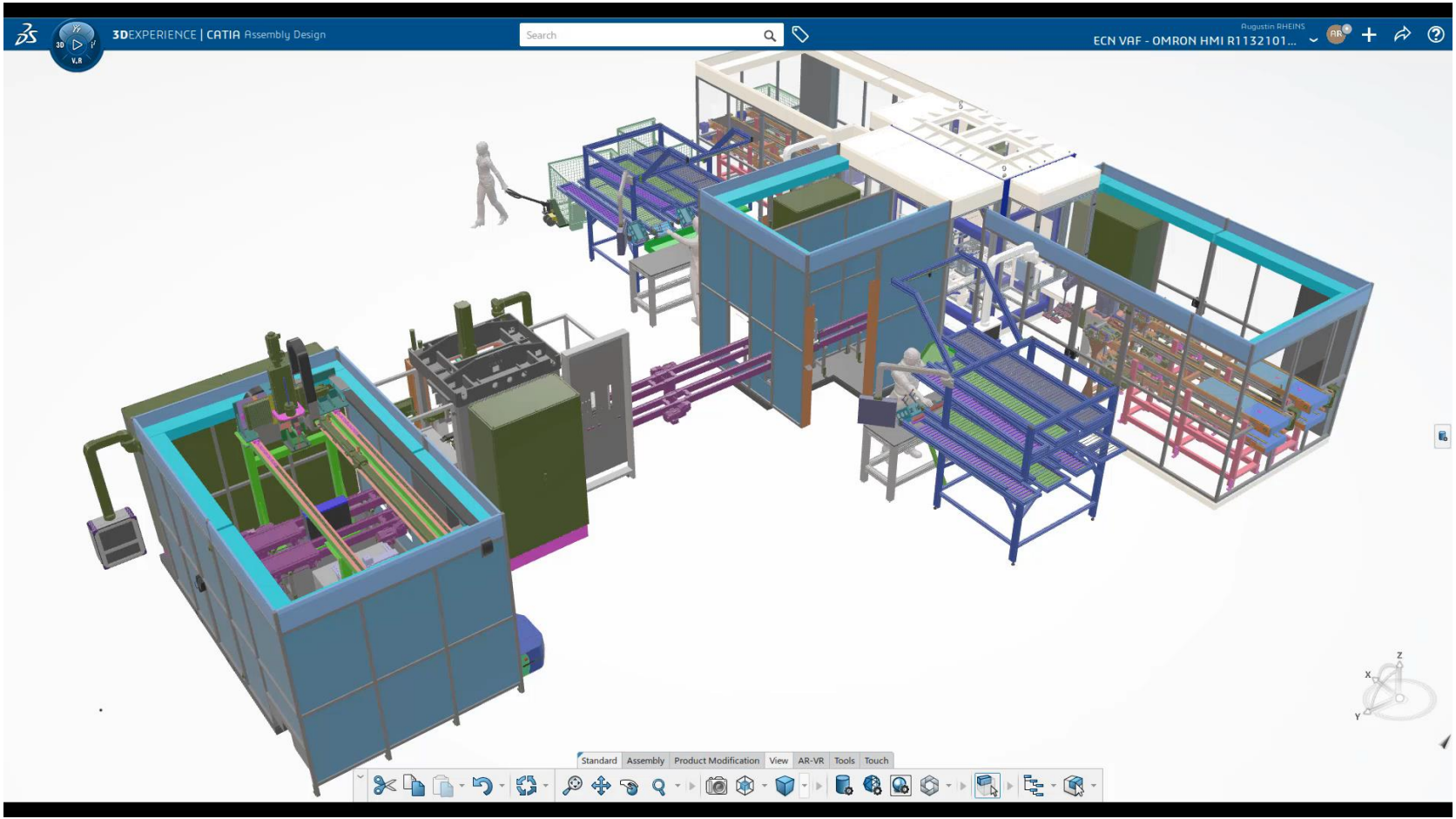
Generate functional CAD concepts and select the best lightweight design



Behavior Modeling

Accelerate understanding and validation of complex systems through early virtual simulation

DASSAULT SYSTEMES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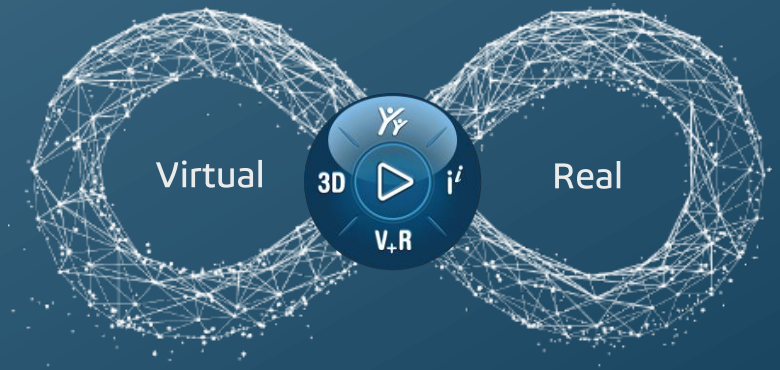
CONCLUSION



Simplify complexity
Model Based Engineering

Accelerate efficiency
Simulation Democratization and Methods Digitalization

Drive innovation
MODSIM Concept, Design Space Exploration & Trade-off

ACCELERATE PRODUCT DEVELOPMENT WITH INTEGRATED SYSTEMS ENGINEERING AND MODSIM

Platform Simulation in Electrical Engine Development – Seamless Data Flow from Requirements to Assembly Planning

Nicolas Brossardt, BMW AG

Morten Huber, 3DS

Florian Hübler, 3DS

Streamlining Concept Structure Engineering for Faster, Smarter Development

Stefan Mertz, 3DS

Michel Schäfer, 3DS

Dive Deep into the Efficient Development of Future Air-Rescue Vehicles Using MODSIM

- **Lucas Lindner, HORYZN**

DASSAULT SYSTEMES

Virtual Worlds for Real Life

THANK YOU FOR YOUR INTEREST