3DEXPERIENCE®

SIMULATION-DRIVEN DESIGN OF COMPOSITES

DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

Our company

A purpose-driven company

Combining Art, Science & Technology
for a more sustainable world

20,000 passionate people

From 133 countries
188 sites
One global R&D / 69 labs

Long-term driven

Majority shareholder control
Revenue: €4,5 billions*
Operating margin: 30,2%*

*Figures as of FY 2020 / Non-IFRS

12,260 partners

Software, Technology & Architecture
Content & Online services
Sales
Consulting & System Integrators (C&SI)
Education
Research

290,000 customers

11 industries in 140 countries
26 million users
Game-changing
3DEXPERIENCE platform

Our legacy

1981
3D Design

1989
3D DMU
Digital Mock-up

1999
3D PLM
Product Lifecycle Management

2012
3DEXPERIENCE®
platform

2020
Virtual Twin Experience of **Humans**

3DEXPERIENCE® platform

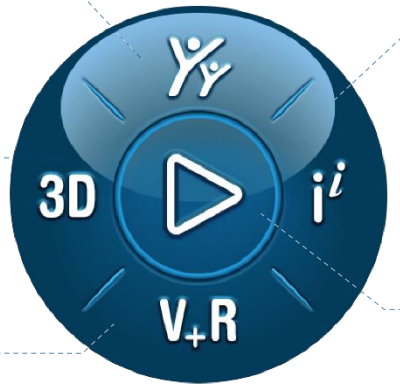
Social & Collaborative

3D Modeling

Simulation

Information Intelligence

Real time **3D**EXPERIENCE®

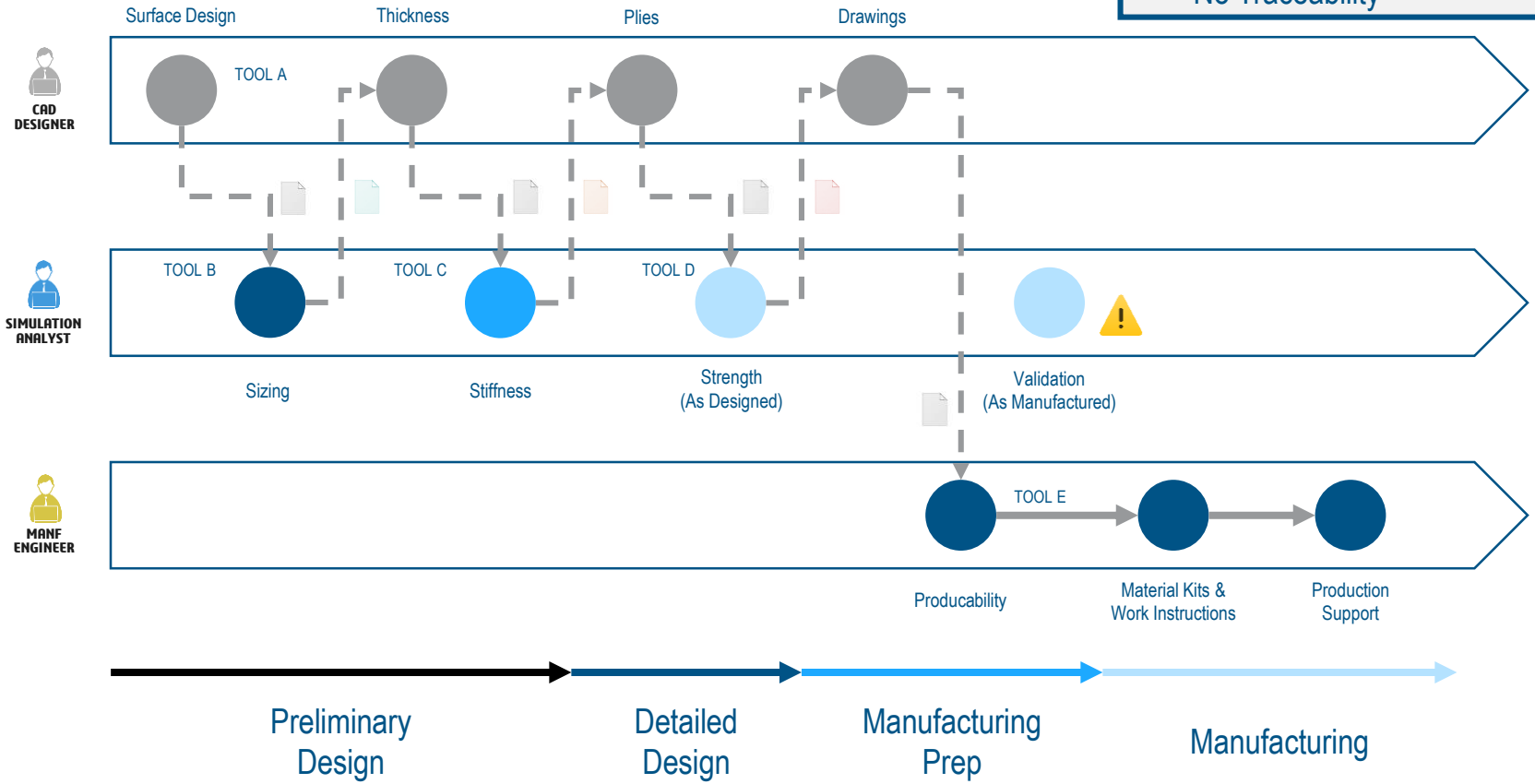


3DEXPERIENCE®

DASSAULT SYSTEMES

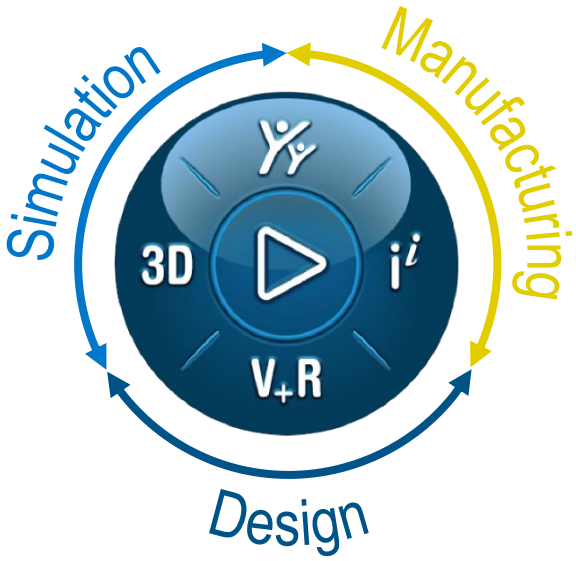
COMPOSITES ENGINEERING (AS IS)

- SLOW
- Disconnected People, Tools and Data
- No Digital Continuity
- No Traceability

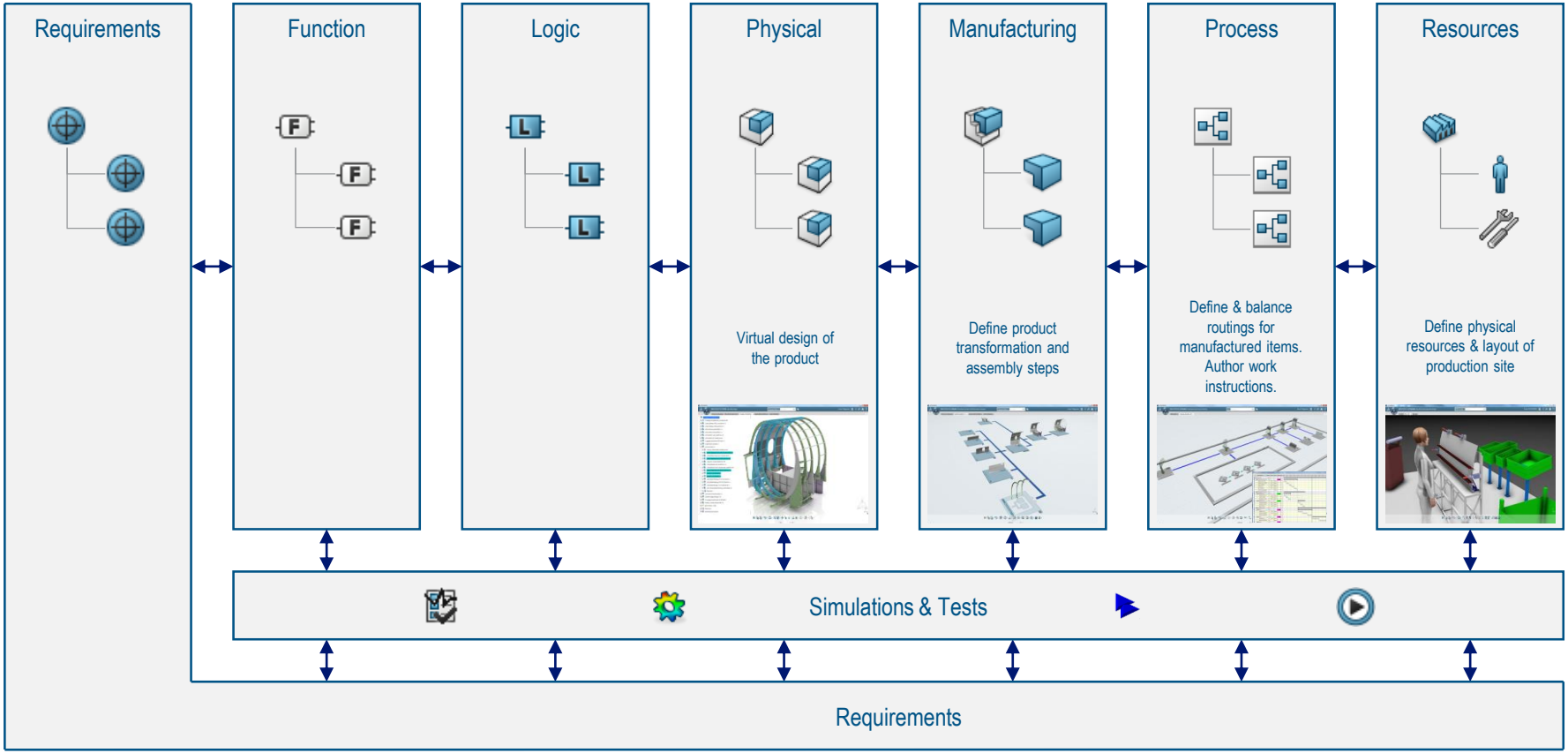


3DEXPERIENCE COMPOSITES ENGINEERING

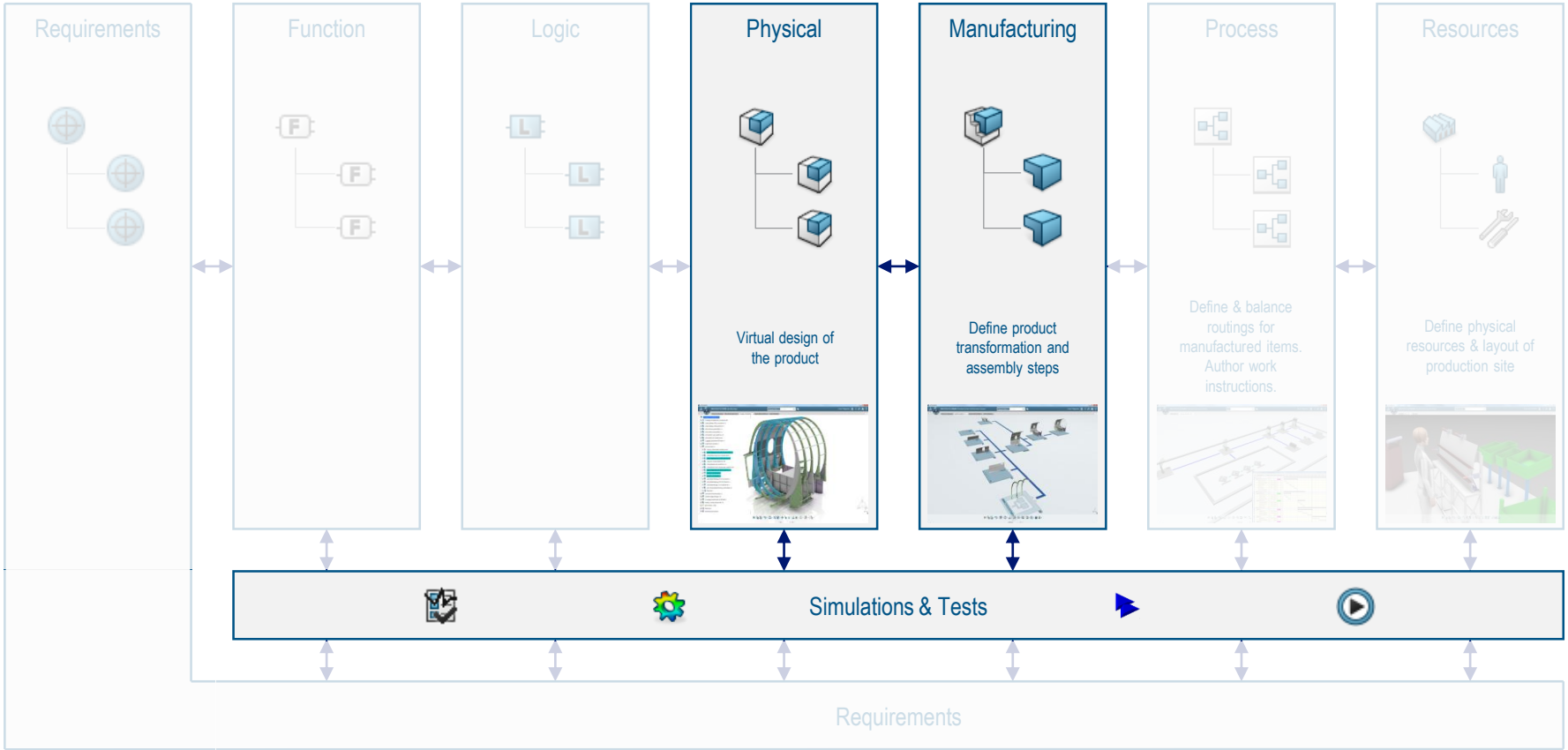
- Shared data between disciplines (geometry, material properties, ply properties)
- Rapid iterations inclusive of all disciplines
  - Design
  - Manufacturing
  - Simulation
- Assess more design alternatives to make informed decisions
- Multiple manufacturing processes (e.g. braiding, forming, hand lay-up)



3DEXPERIENCE STRATEGIC DATA MODEL

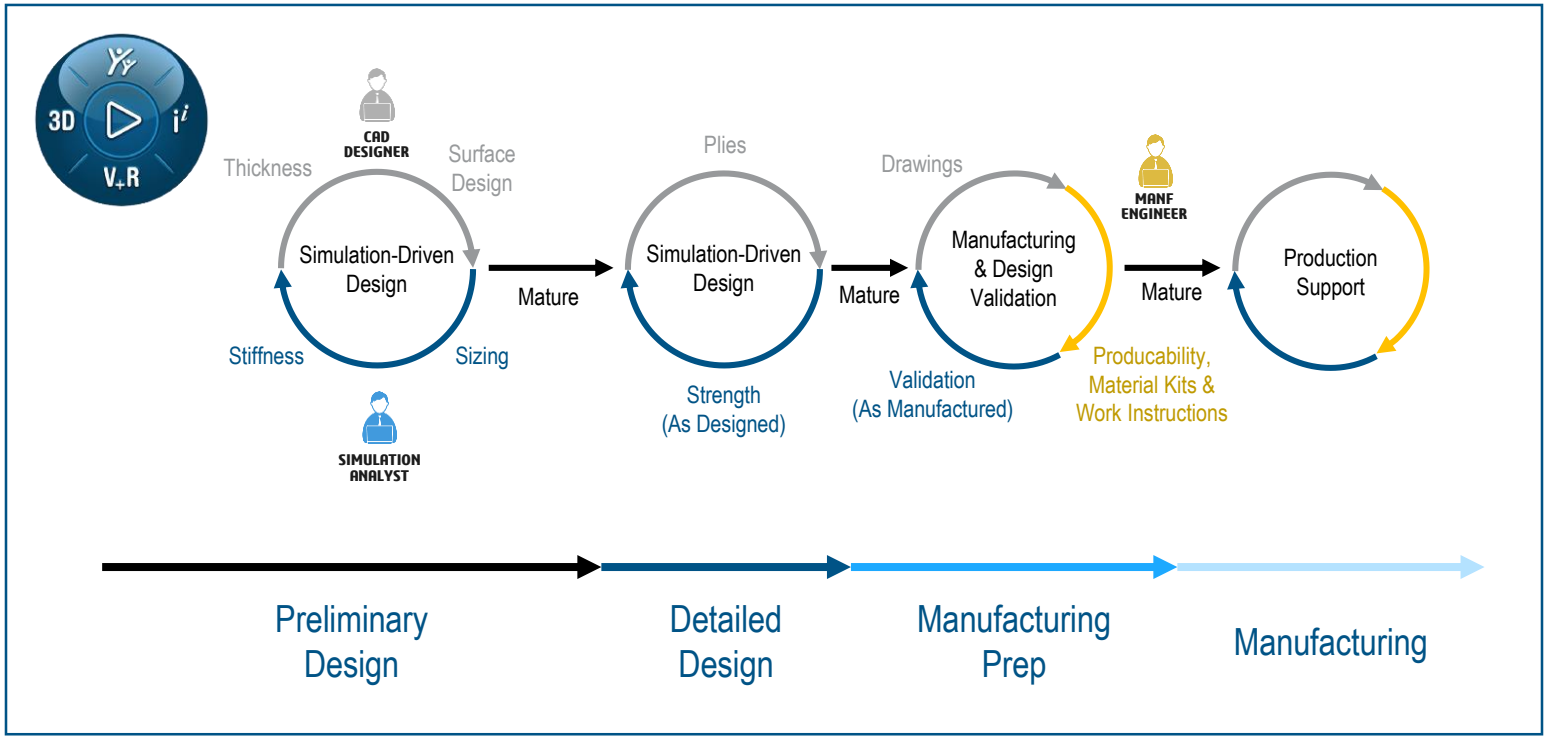


3DEXPERIENCE STRATEGIC DATA MODEL



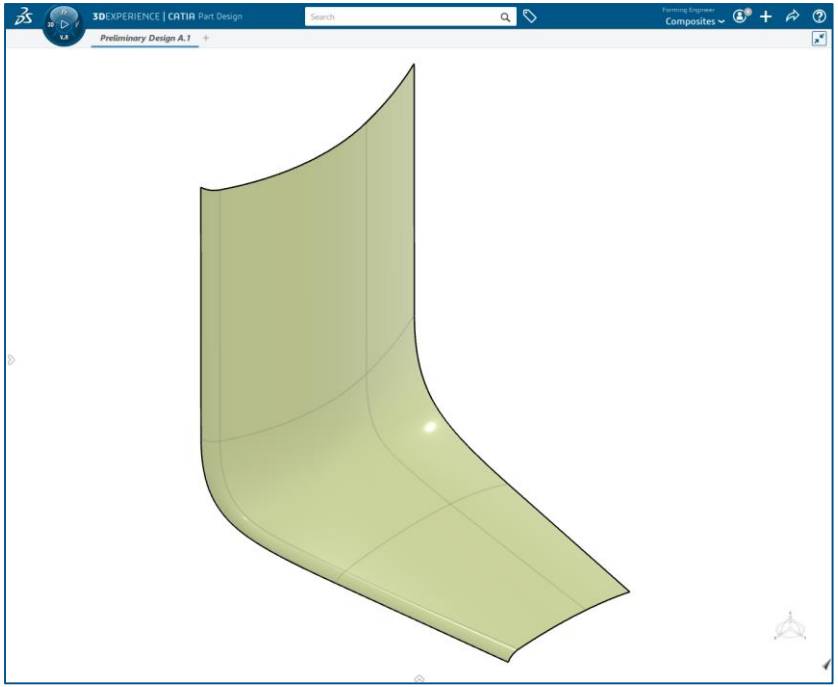
COMPOSITES ENGINEERING (TO BE)

- ✓ FAST
- ✓ Collaborative Platform: 1 Tool & Data
- ✓ Digital Continuity
- ✓ Automatic Traceability



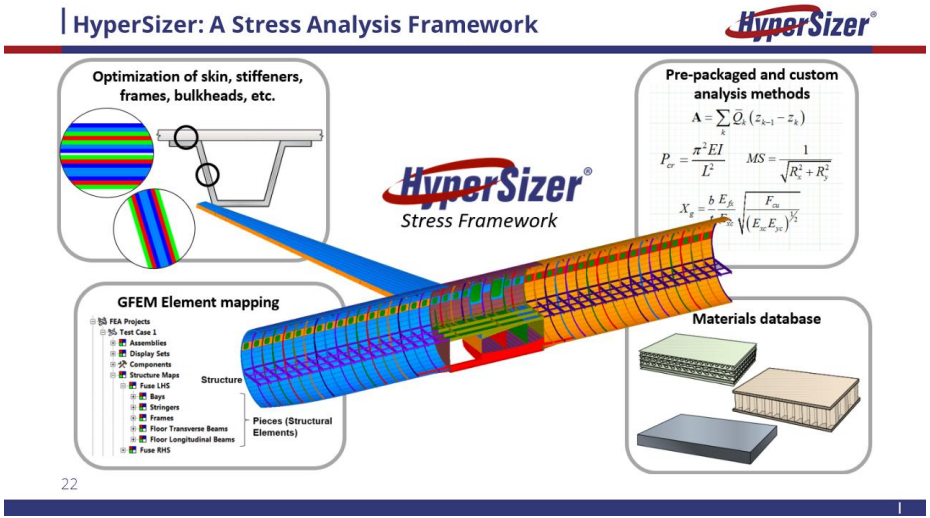
PRELIMINARY DESIGN

Surface Design & Initial Sizing



Surface Design

3D Geometry



Initial Sizing

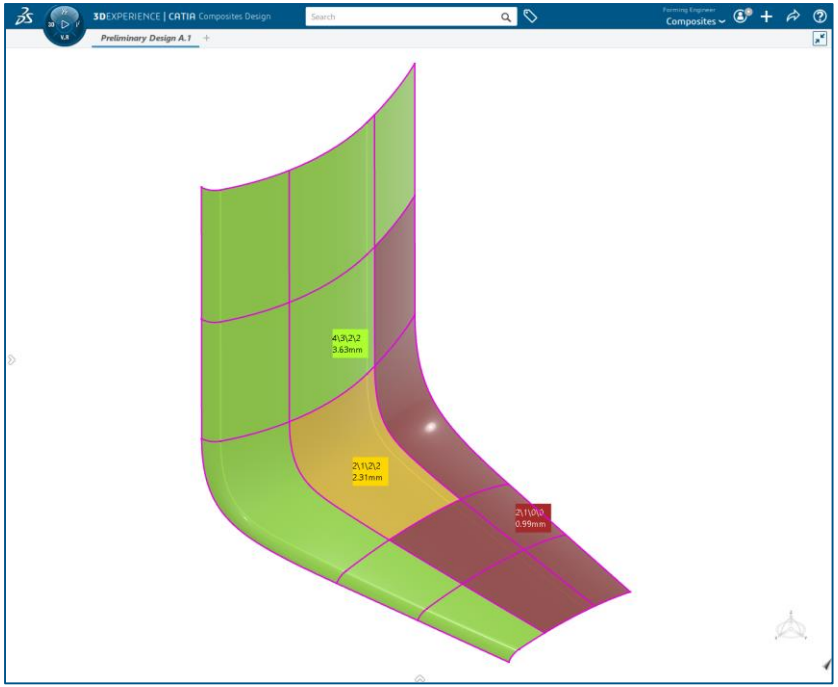
Partner Solution

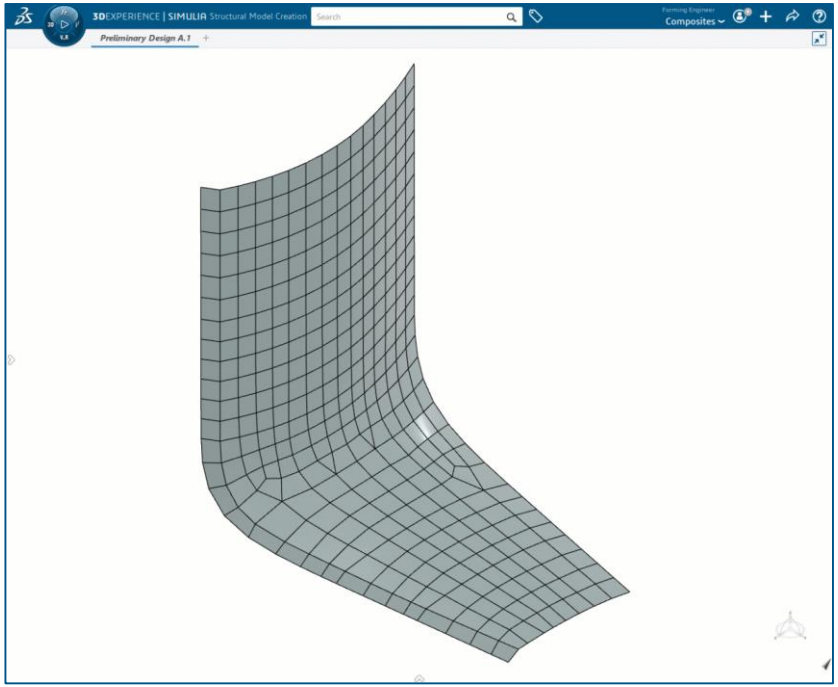
Sizing

PRELIMINARY DESIGN

Grid Design & Stiffness Assessment

3D Geometry, Composite Grid Definition, Materials



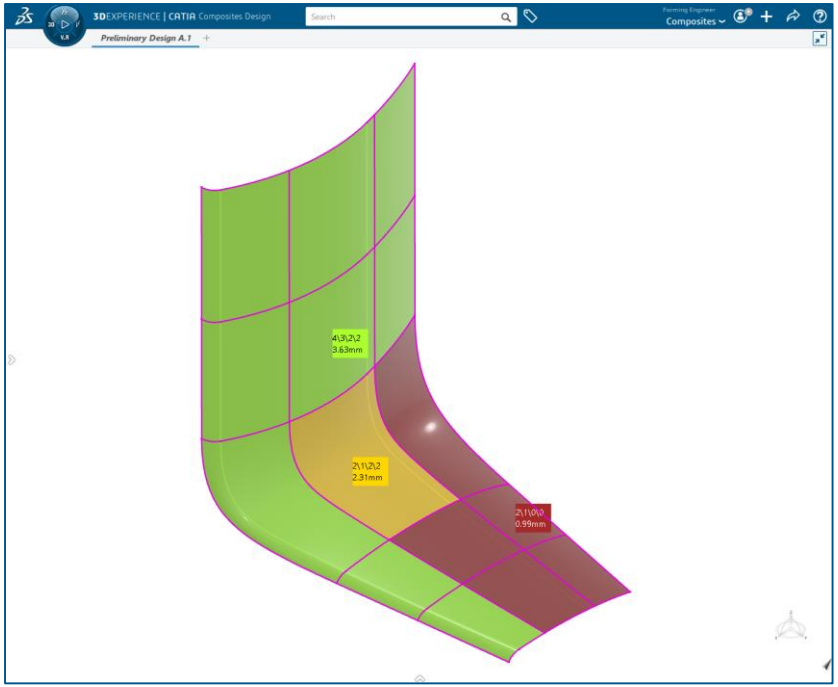


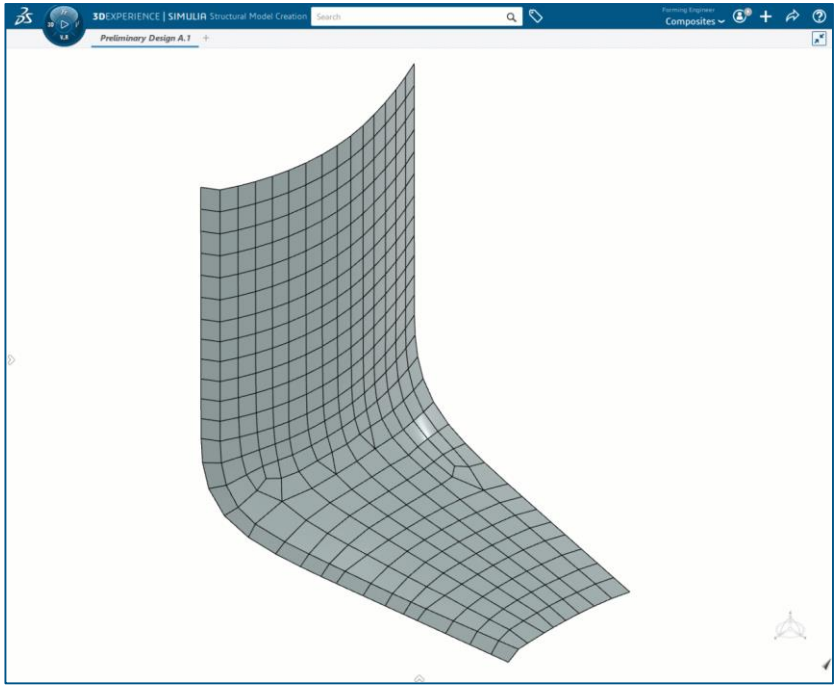
Stiffness Assessment

DESIGN ITERATION

Grid Design & Stiffness Assessment

Automatic Update



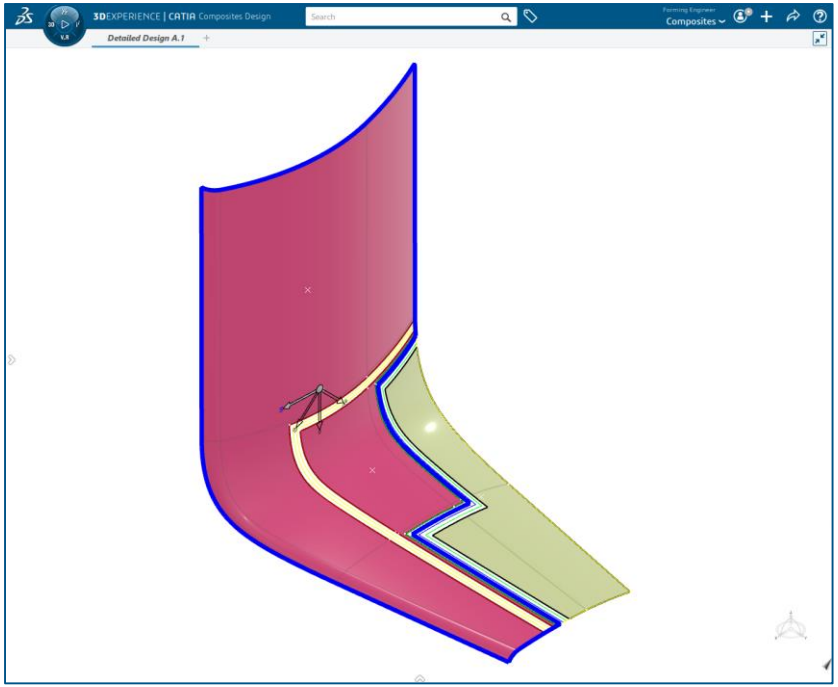


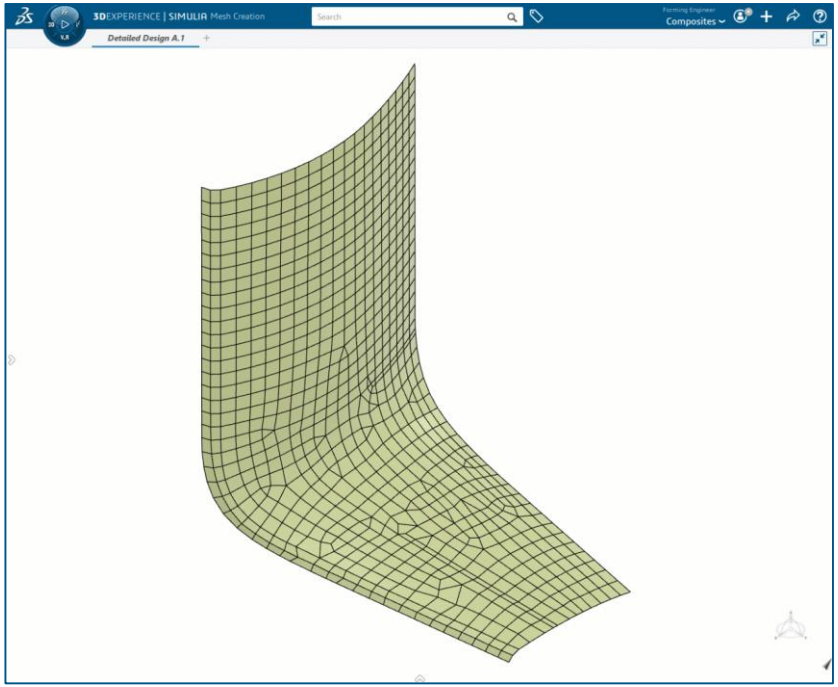
New Stiffness Assessment

DETAILED DESIGN

Ply Design & Strength Simulation

3D Geometry, Composite Ply Definition, Materials

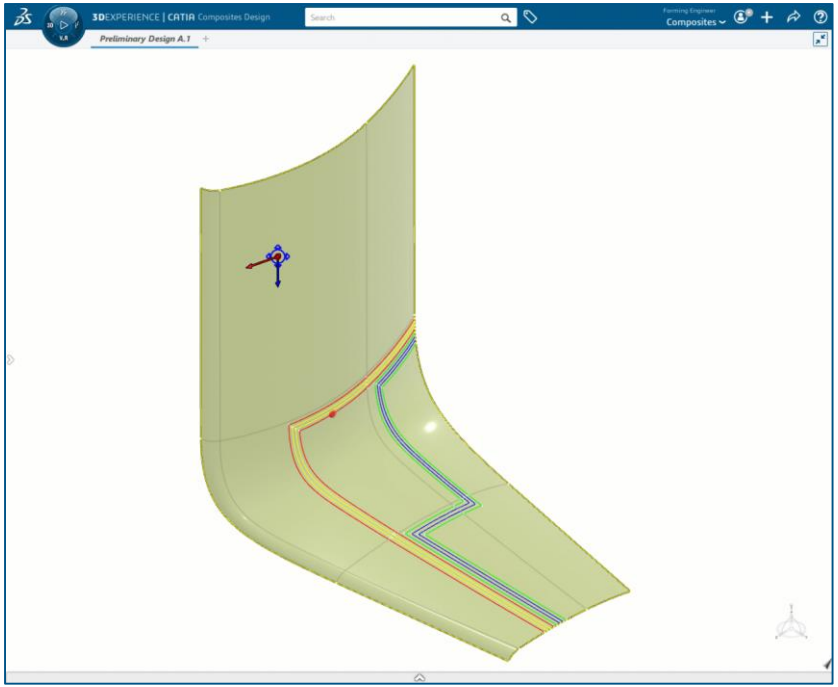




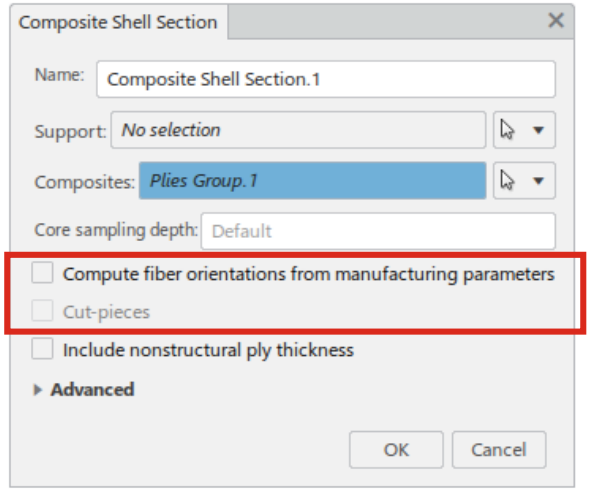
Validation
(As Designed)

MANUFACTURING PREP

Producability & Strength Validation (As Manufactured)



As Manufactured Orientations
Cut-pieces



Validation
(As Manufactured)

DASSAULT SYSTEMES

3DEXPERIENCE COMPOSITES ENGINEERING

- Supporting all phases of product development
- Shared data between disciplines (geometry, material properties, ply properties)
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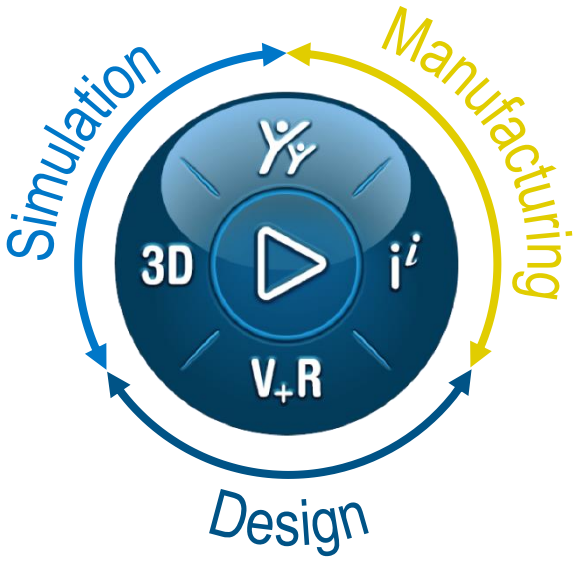


IF WE
TM