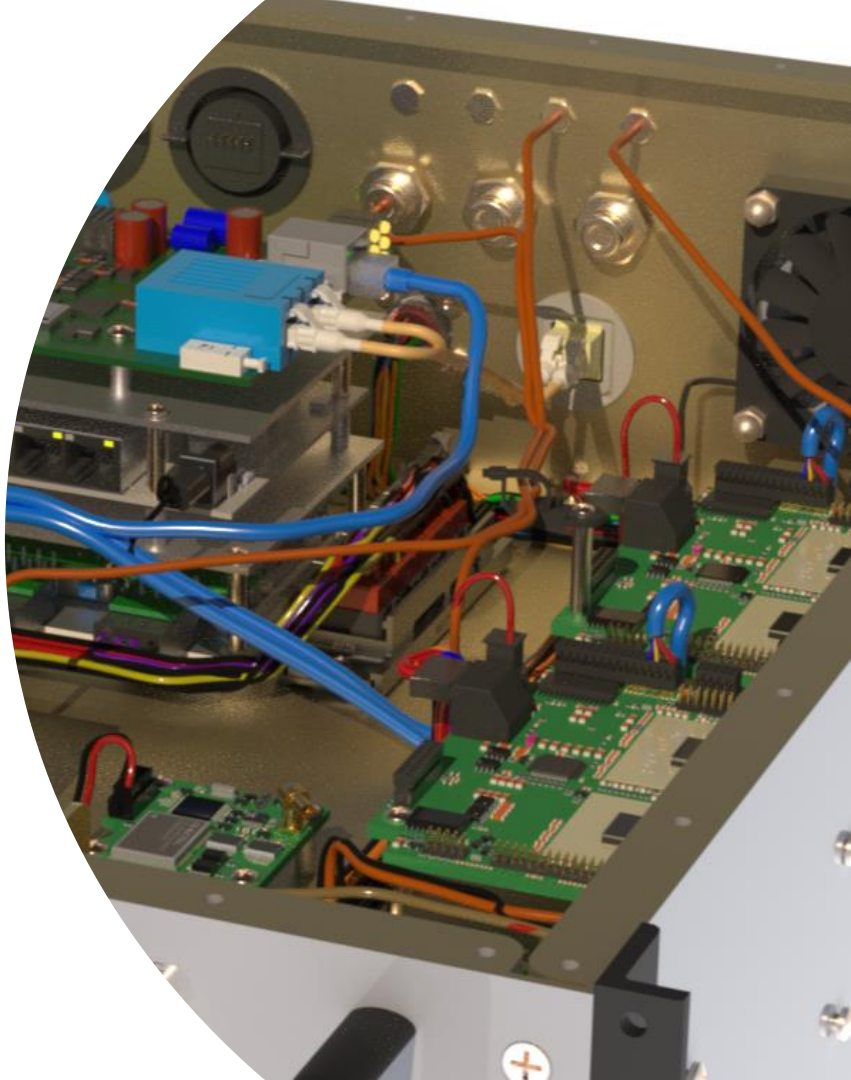
3DEXPERIENCE®

SOLIDWORKS ELECTRICAL

Bring Your Wire & Harness Design into the 2020s



DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

Who is EMA Design Automation?

ELECTRONICS EXPERTS

Cadence & Dassault High Tech Partner

Semiconductor, Electronics, and Electrical (E2E)

EDA IP, Training, Services

LARGE WW CUSTOMER BASE

4000+ Customers WW

Multi-Geo Account Deployments

EXAMPLE CUSTOMERS

Google, GARMIN, Medtronic, amazon, GoPro, COVIDIEN, Meta, BOEING, FLUKE, Texas Instruments, stryker, intel, Microsoft, BOSE, CREE, RIVIAN, Whirlpool, SONOS, Skydio

E2E IS IN OUR DNA

30+ Years of Design & Systems Integration Experience

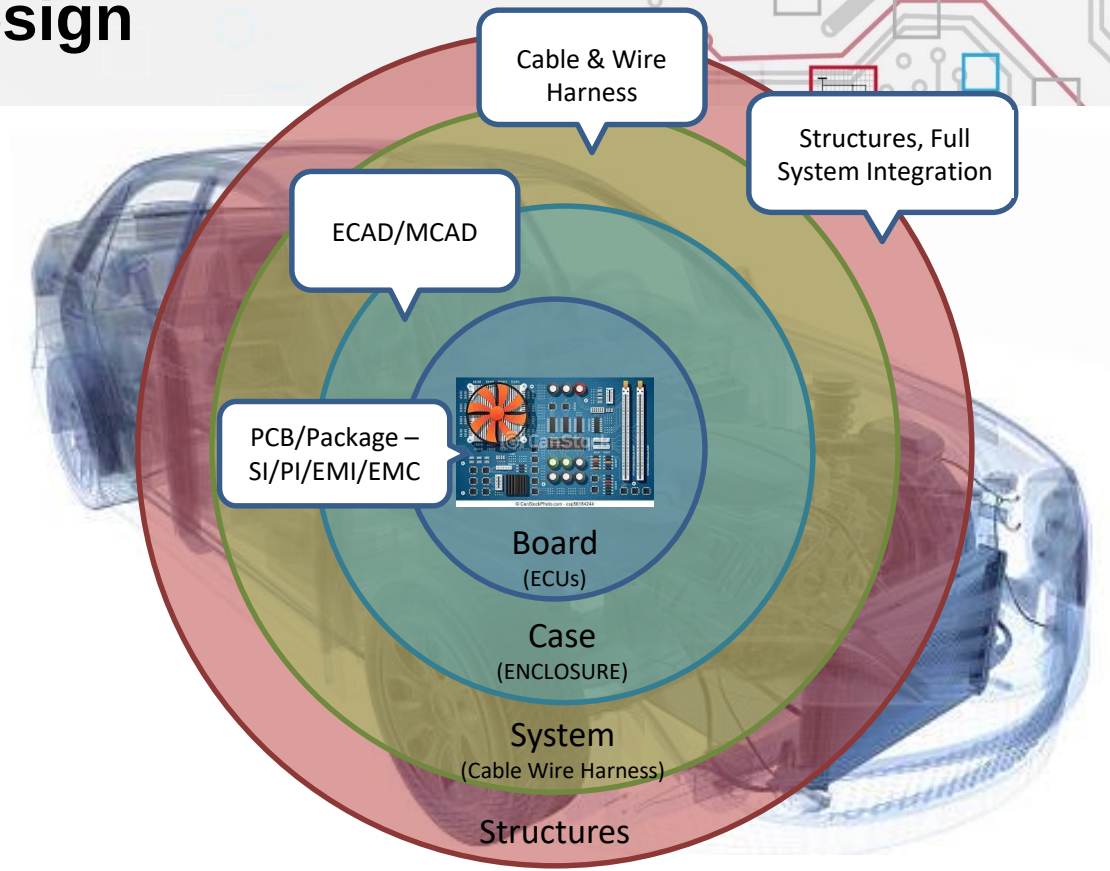
Regular Speakers on Electronic / High-Tech Design Topics

ENGINEERING FOCUS

Staffed with experts in Electrical Engineering, PCB Design, Simulation, and Data Management

Electronics System Design

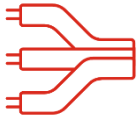
- Focus on Electronics & Electronic System Design
- Support Customers at all Phases and Enable Seamless Integration
- Cable & Wire Harness is a Key Piece of the Process



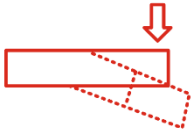
EMA Design Automation

3D CAD

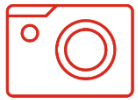
COLLABORATION



ELECTRICAL DESIGN



SIMULATION SOLUTIONS

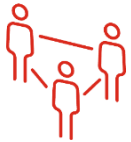


VISUALIZATION

DATA MANAGEMENT

CAM

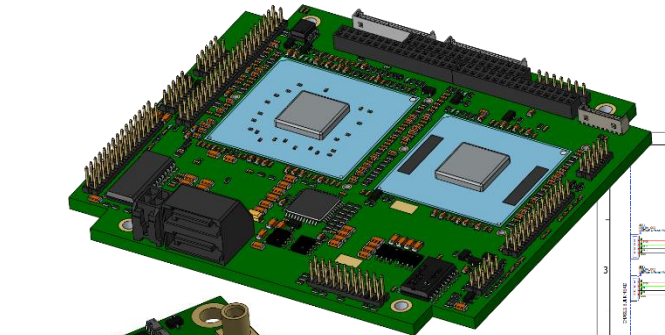
2D CAD

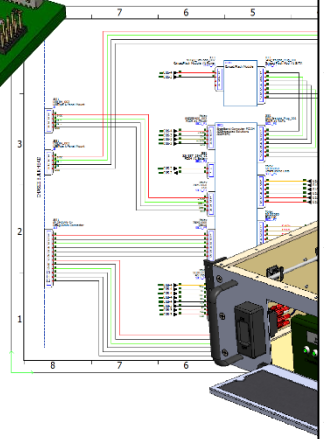


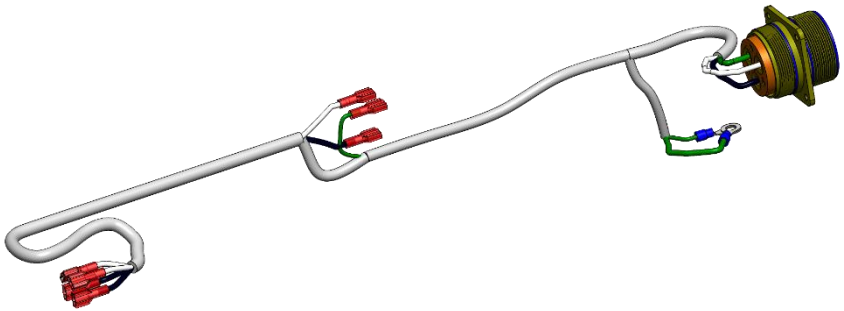
TECHNICAL
COMMUNICATION

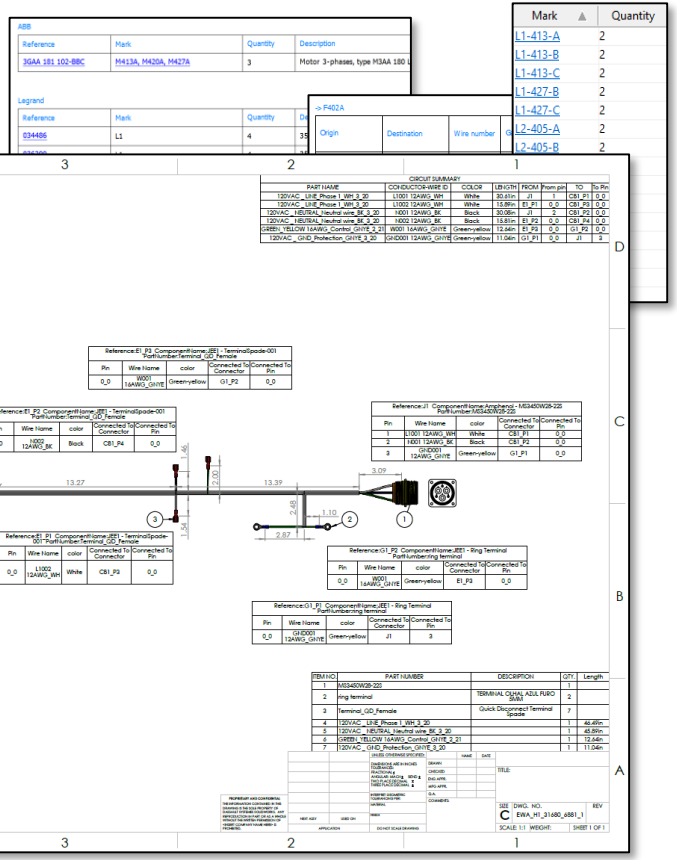
PRODUCT
CONFIGURATOR

EXPANDING INTO SYSTEMS DESIGN



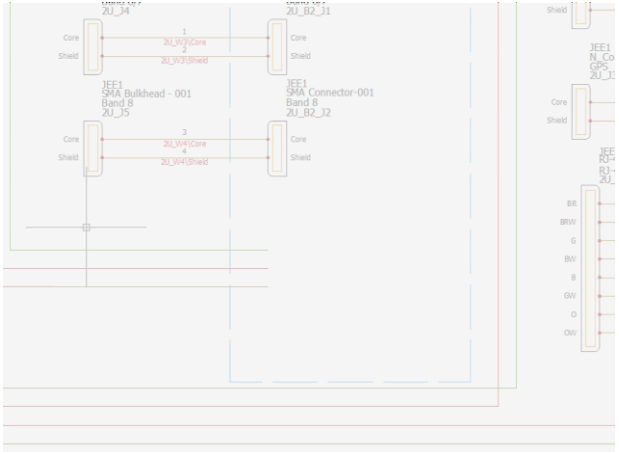




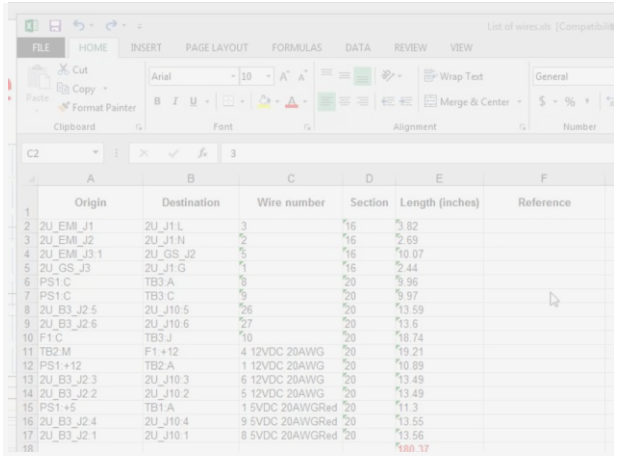


DASSAULT SYSTEMES

THE TYPICAL DESIGN PROCESS

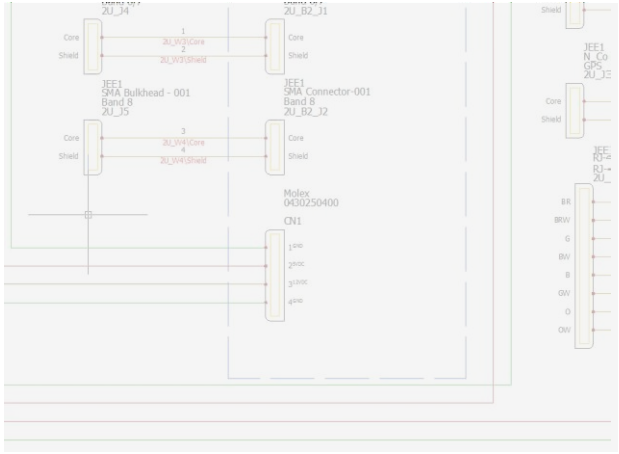


Logical Definitions
Part Selections
Cable Drawings



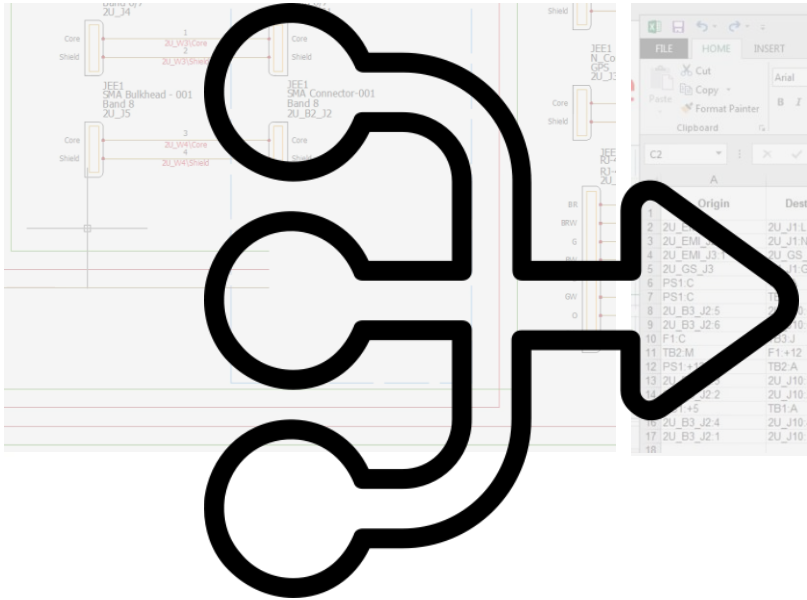
	A	B	C	D	E	F
1	Origin	Destination	Wire number	Section	Length (inches)	Reference
2	2U_EMI_J1	2U_J1:L	3	16	3.82	
3	2U_EMI_J2	2U_J1:N	2	16	2.69	
4	2U_EMI_J3:1	2U_GS_J2	5	16	10.07	
5	2U_GS_J3	2U_J1:G	1	16	2.44	
6	PS1:C	TB3:A	8	20	9.96	
7	PS1:C	TB3:C	9	20	9.97	
8	2U_B3_J2:5	2U_J10:5	26	20	13.59	
9	2U_B3_J2:6	2U_J10:6	27	20	13.6	
10	F1:C	TB3:J	10	20	18.74	
11	TB2:M	F1:+12	4 12VDC 20AWG	20	19.21	
12	PS1:+12	TB2:A	1 12VDC 20AWG	20	10.89	
13	2U_B3_J2:3	2U_J10:3	6 12VDC 20AWG	20	13.49	
14	2U_B3_J2:2	2U_J10:2	5 12VDC 20AWG	20	13.49	
15	PS1:+5	TB1:A	1 5VDC 20AWGRed	20	11.3	
16	2U_B3_J2:4	2U_J10:4	9 5VDC 20AWGRed	20	13.55	
17	2U_B3_J2:1	2U_J10:1	8 5VDC 20AWGRed	20	13.56	
18					180.37	

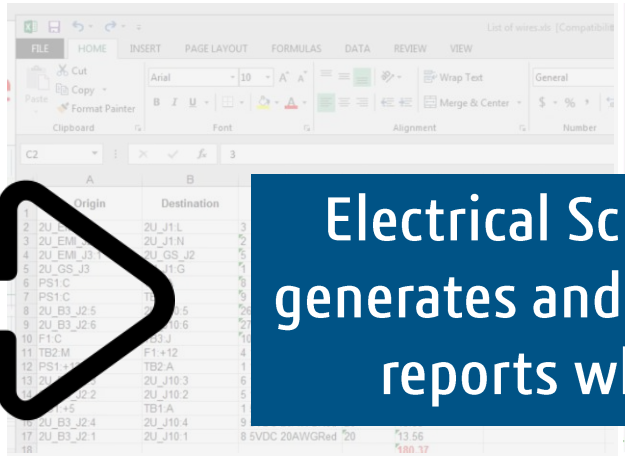
Create BOMs
From-To Wire Lists
Cable Detail Reports

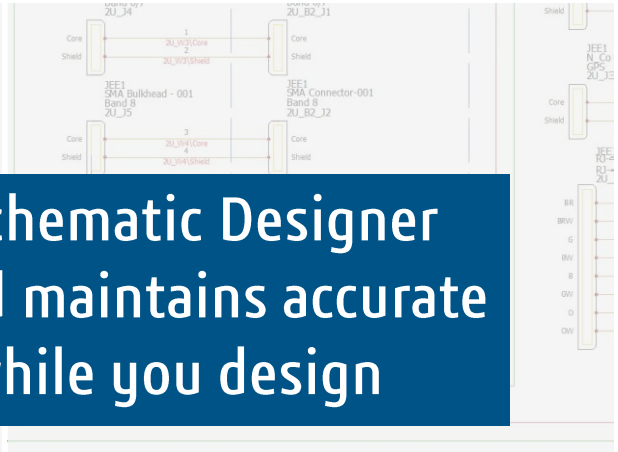


Audit Drawings
Audit BOMs
Verify Connection Points

DIFFERENTIATOR



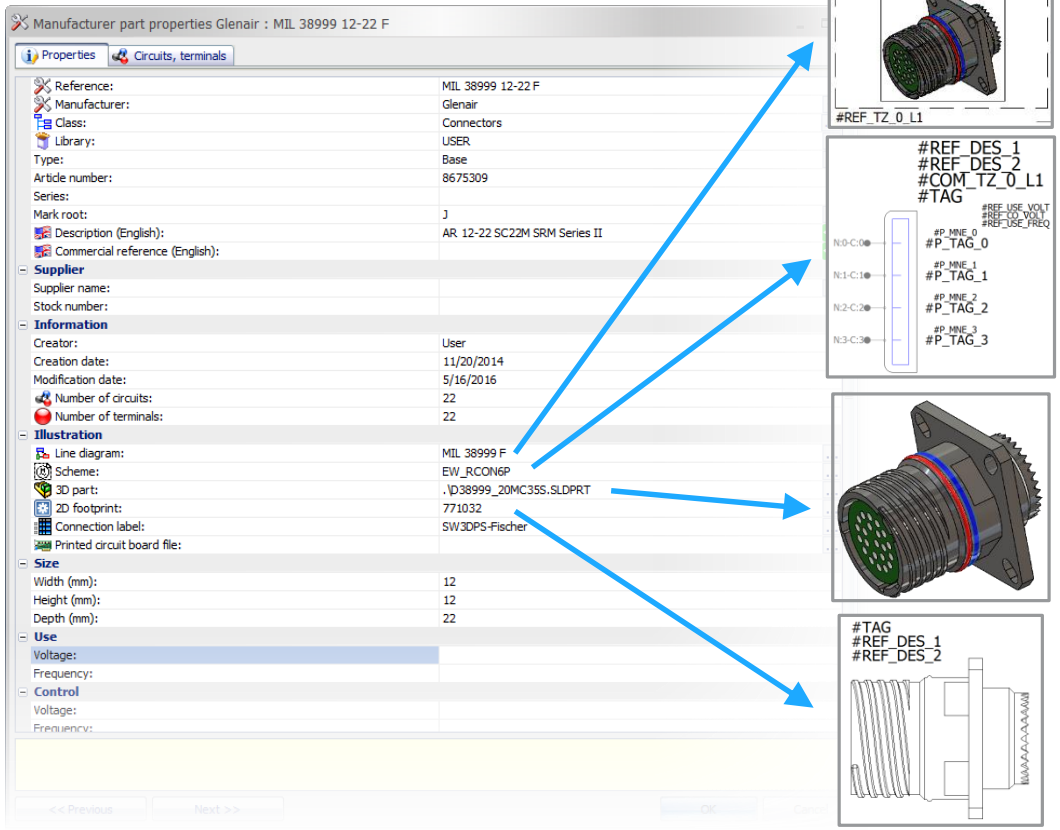




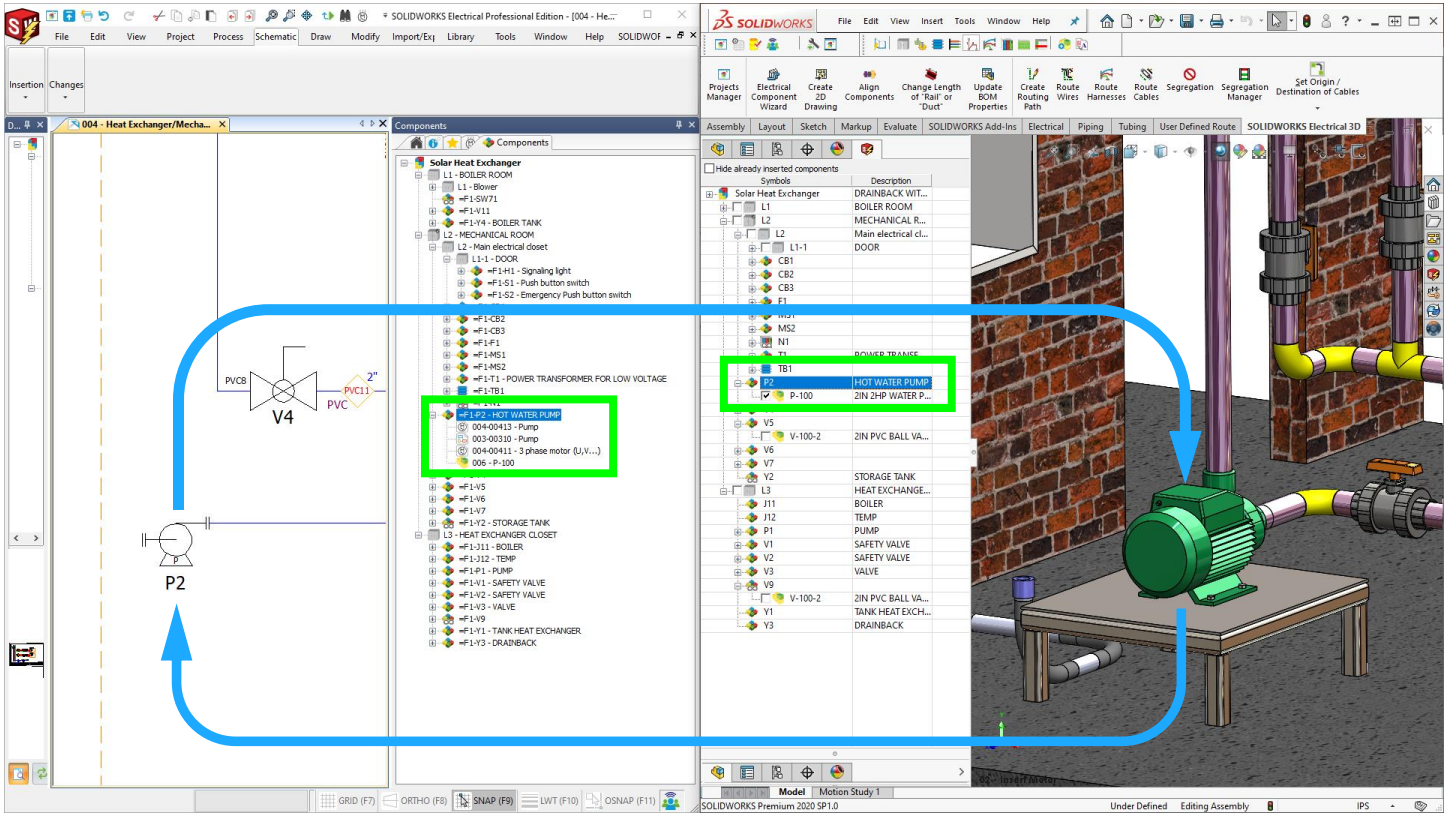
Electrical Schematic Designer generates and maintains accurate reports while you design

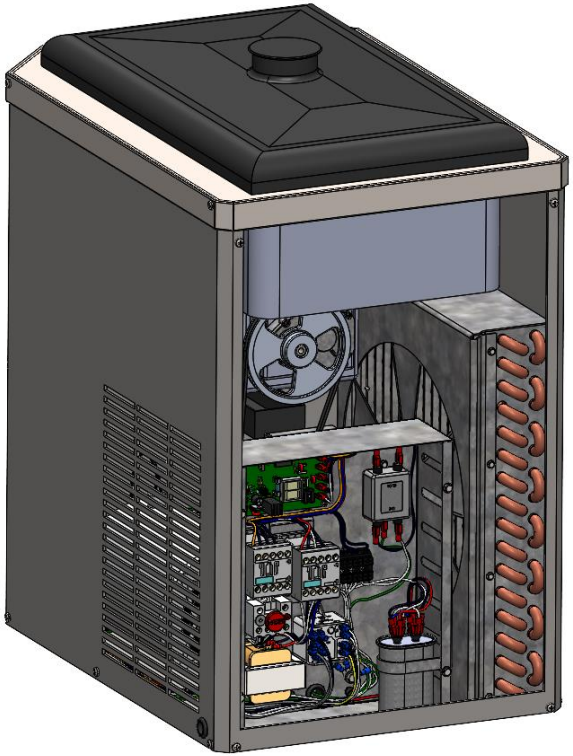
LIBRARY ORGANIZATION

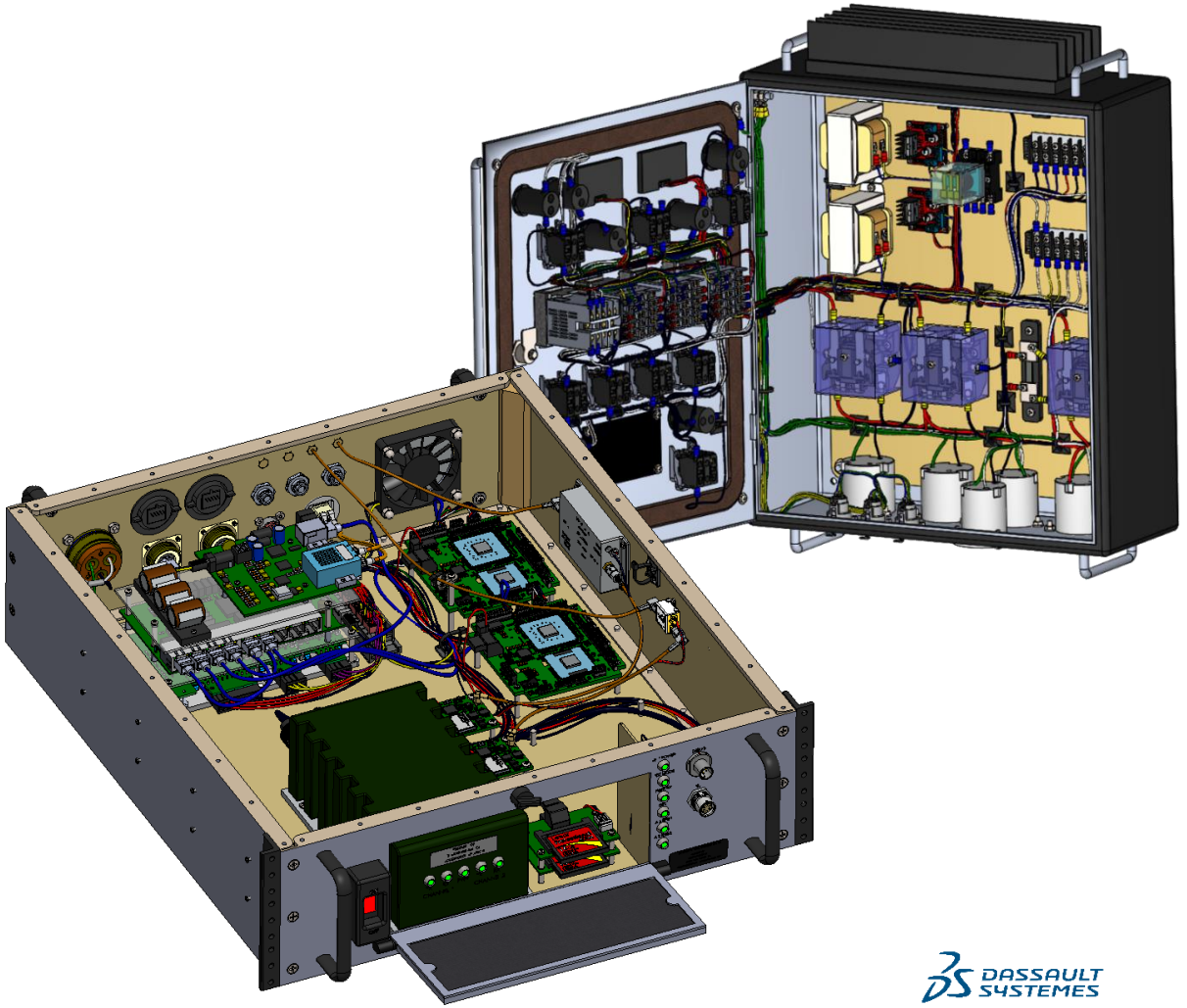
Within the **Manufacturer Part Library,** each part can include any necessary metadata AND establish a link to varying graphical representations.



BIDIRECTIONAL COMMUNICATION

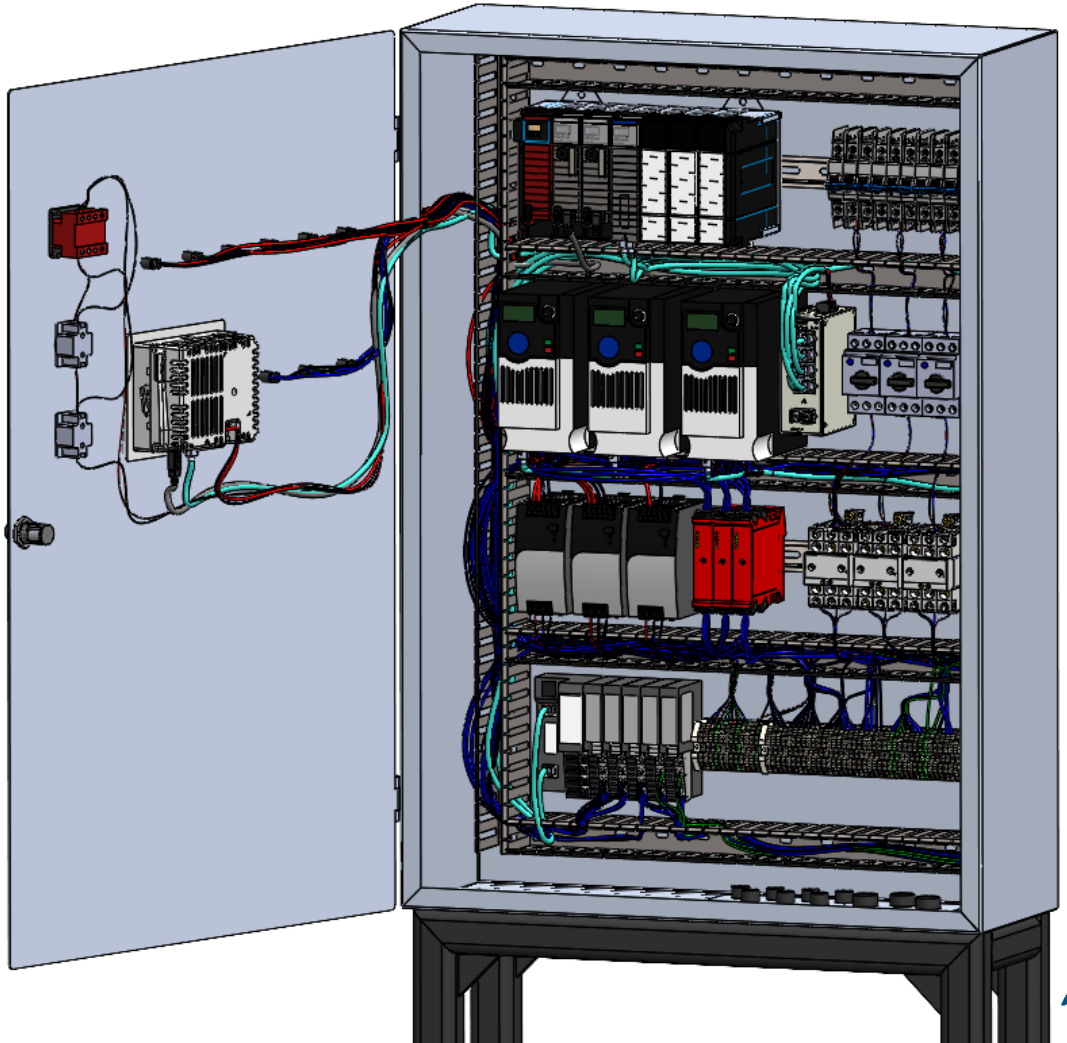






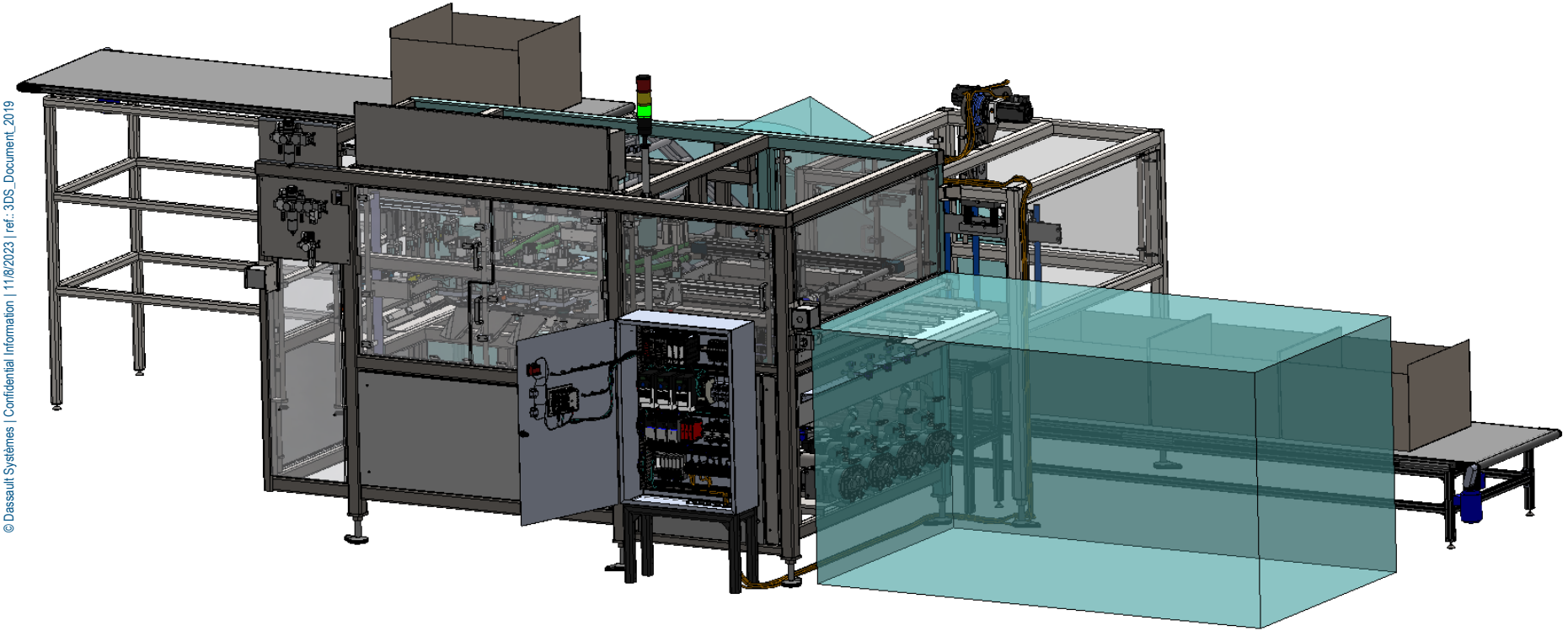
SOLIDWORKS

DASSAULT SYSTEMES



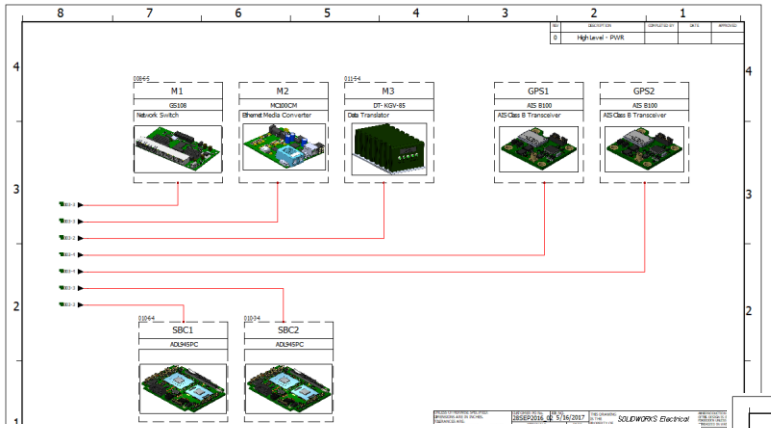
SOLIDWORKS

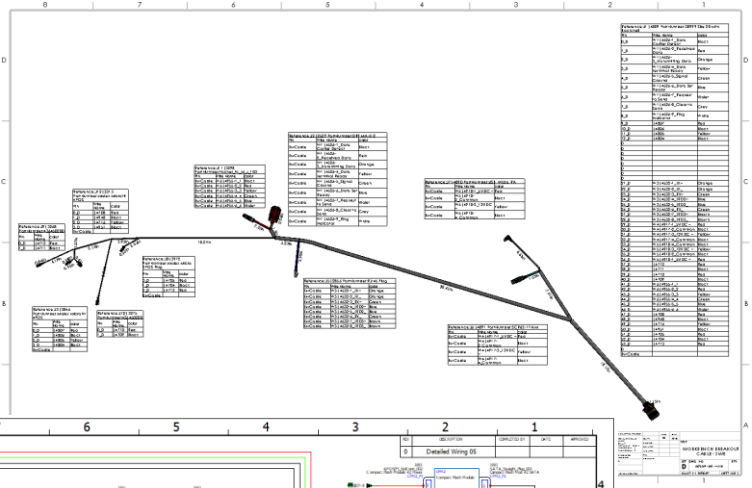
DASSAULT SYSTEMES

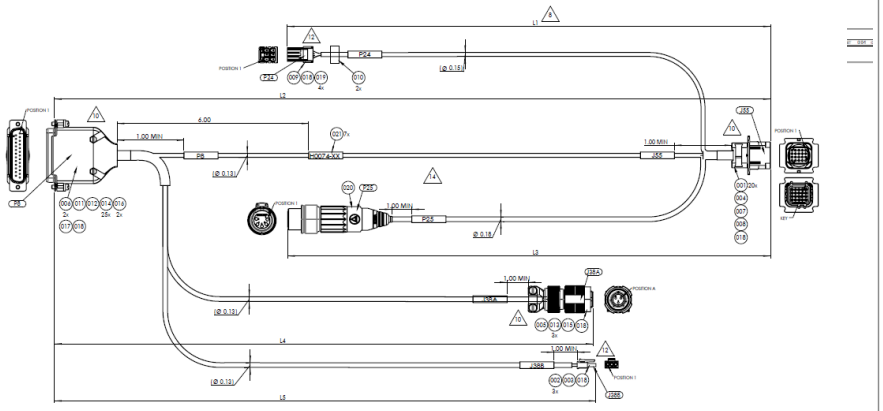


SOLIDWORKS

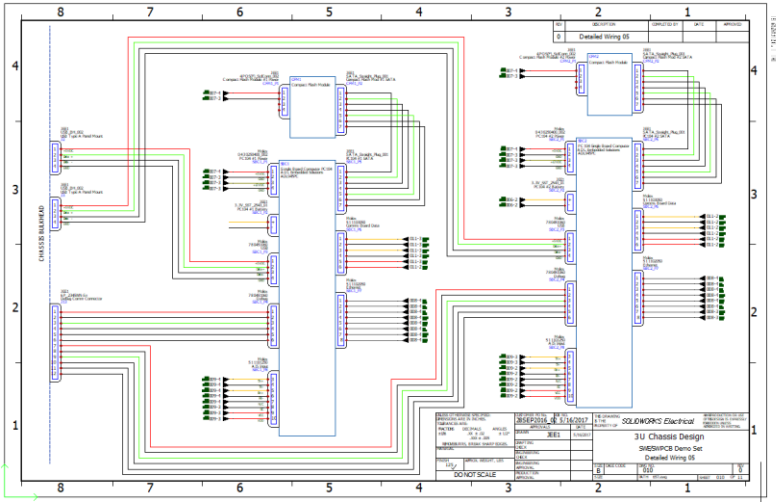
DASSAULT SYSTEMES



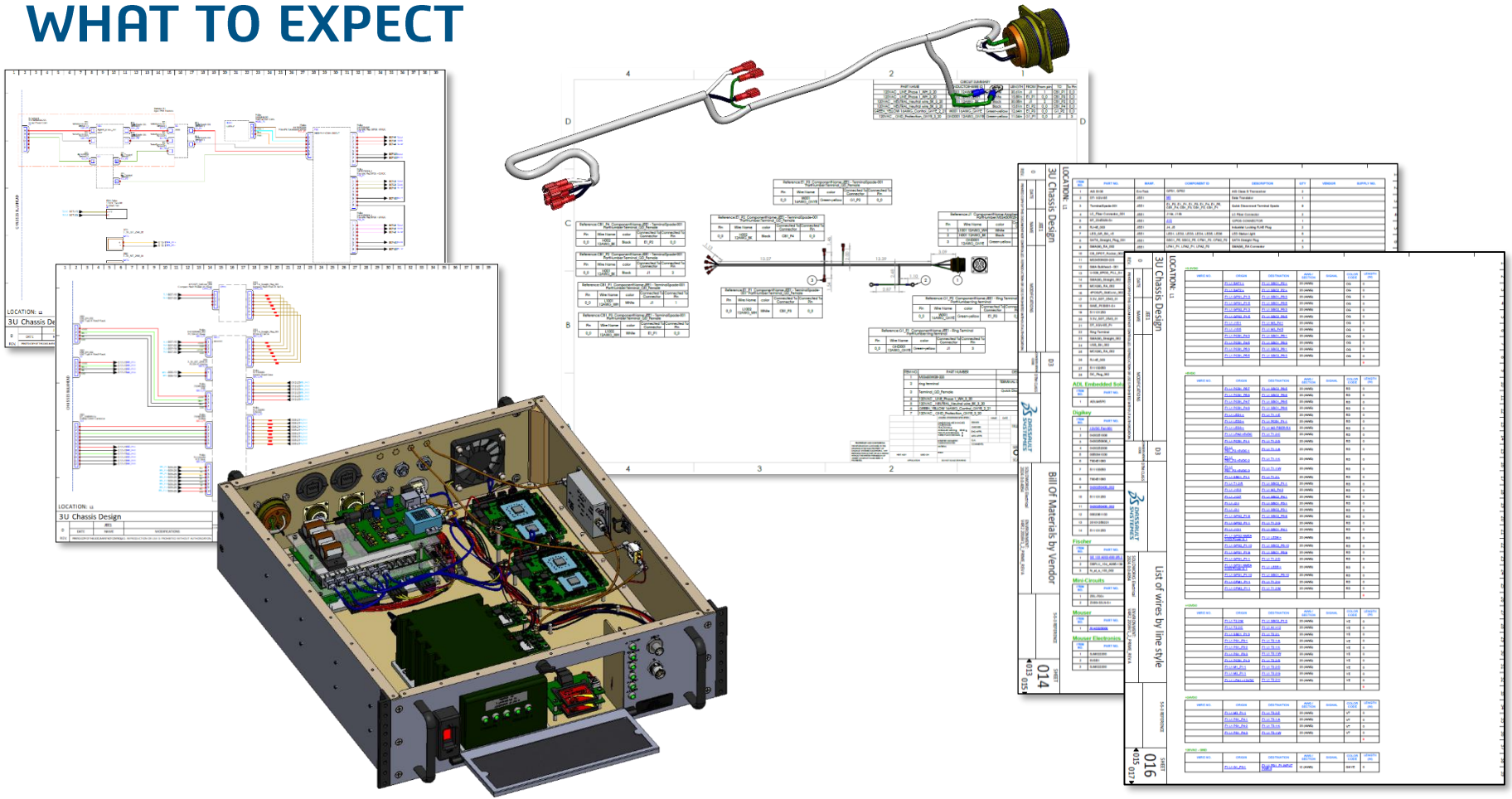




DASH NUMBER	LENGTH L1	LENGTH L2	LENGTH L3	LENGTH L4	LENGTH L5	MAX WEIGHT (lbs)
01	103	32	111	85	79	1.68

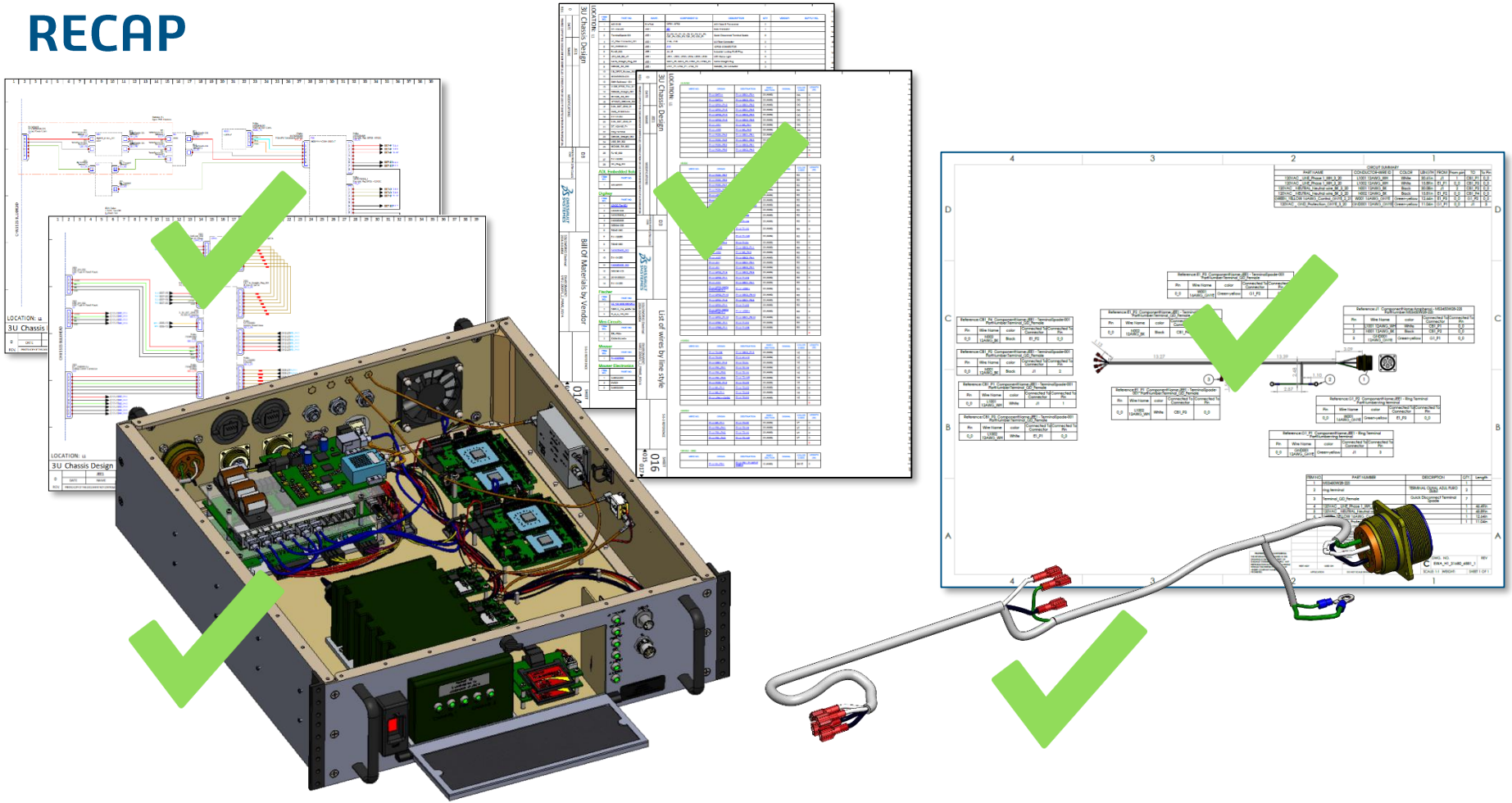


WHAT TO EXPECT



LET'S GO LIVE...

RECAP


3U Chassis Design
Bill Of Materials by Vendor
List of wires by line style

OVERALL BENEFITS

- Increase Communication and Collaboration Between the Electrical and Mechanical Design Teams
- Increase in Productivity
- Improve Time to Market
- Eliminate Hidden Costs
- Ensure Consistent Manufacturing and Assembly
- Reduce Manufacturing Defects and Scrap
- Streamline Development

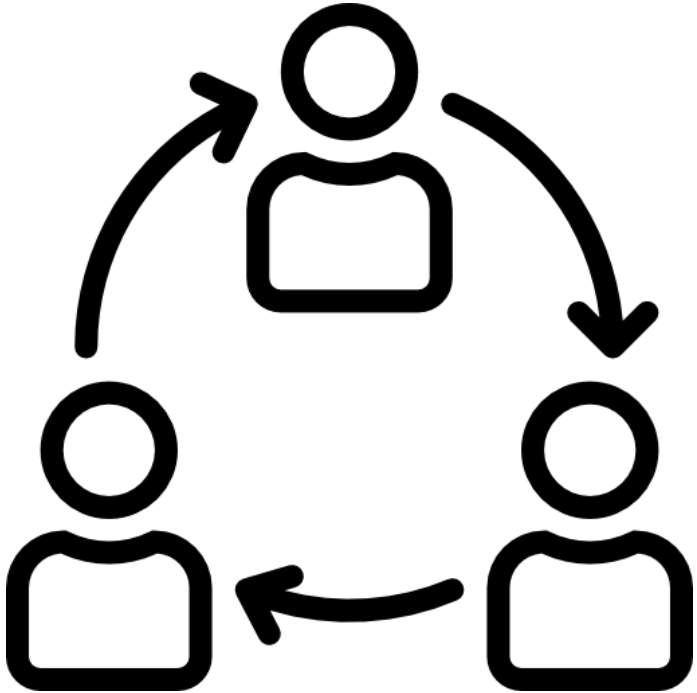
SOLIDWORKS

DASSAULT SYSTEMES

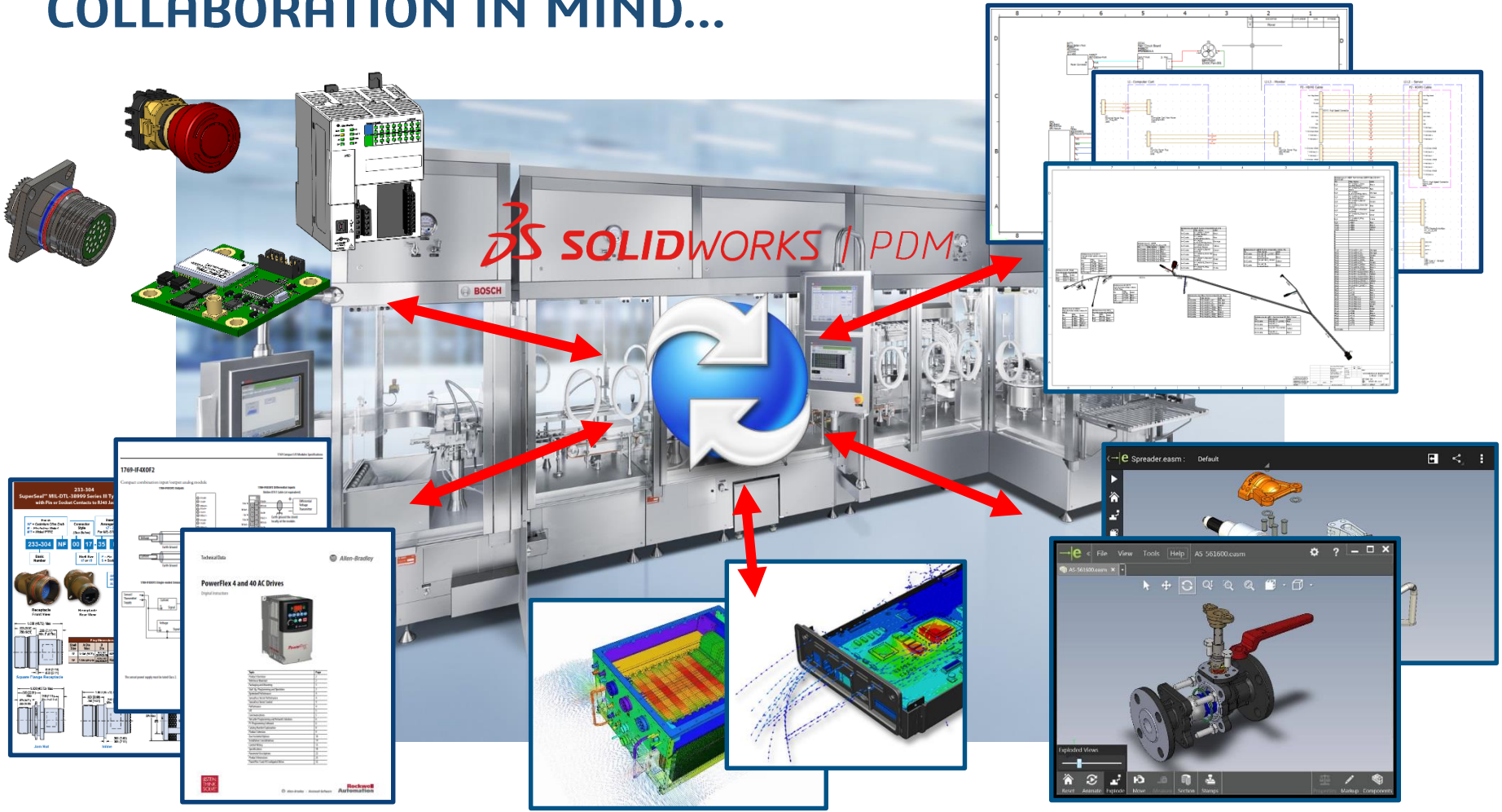
COMMUNICATE SUCCESSFULLY

Who else can I share my data with?

- Management Team
- Design Teams
  - Electrical
  - Mechanical
  - Analysts
- Assembly Team / Shop Floor
- Network/CAD Admin Team
- Marketing
- Logistics
- Field Services
- External Services

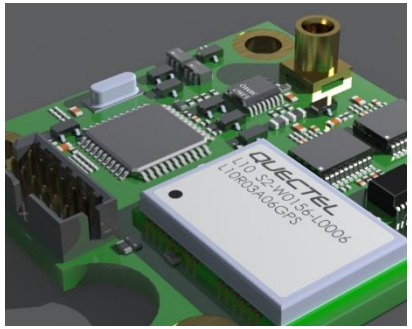


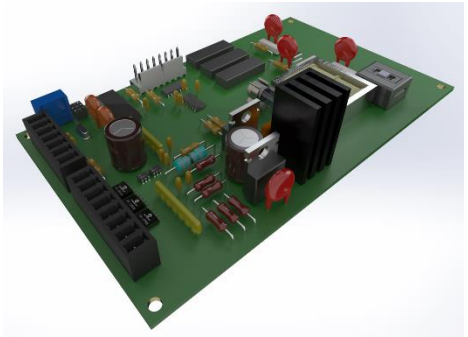
COLLABORATION IN MIND...

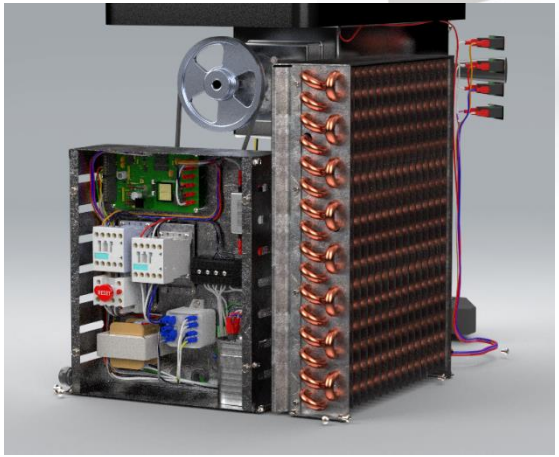


COLLABORATION IN MIND...

Renderings / Marketing Material

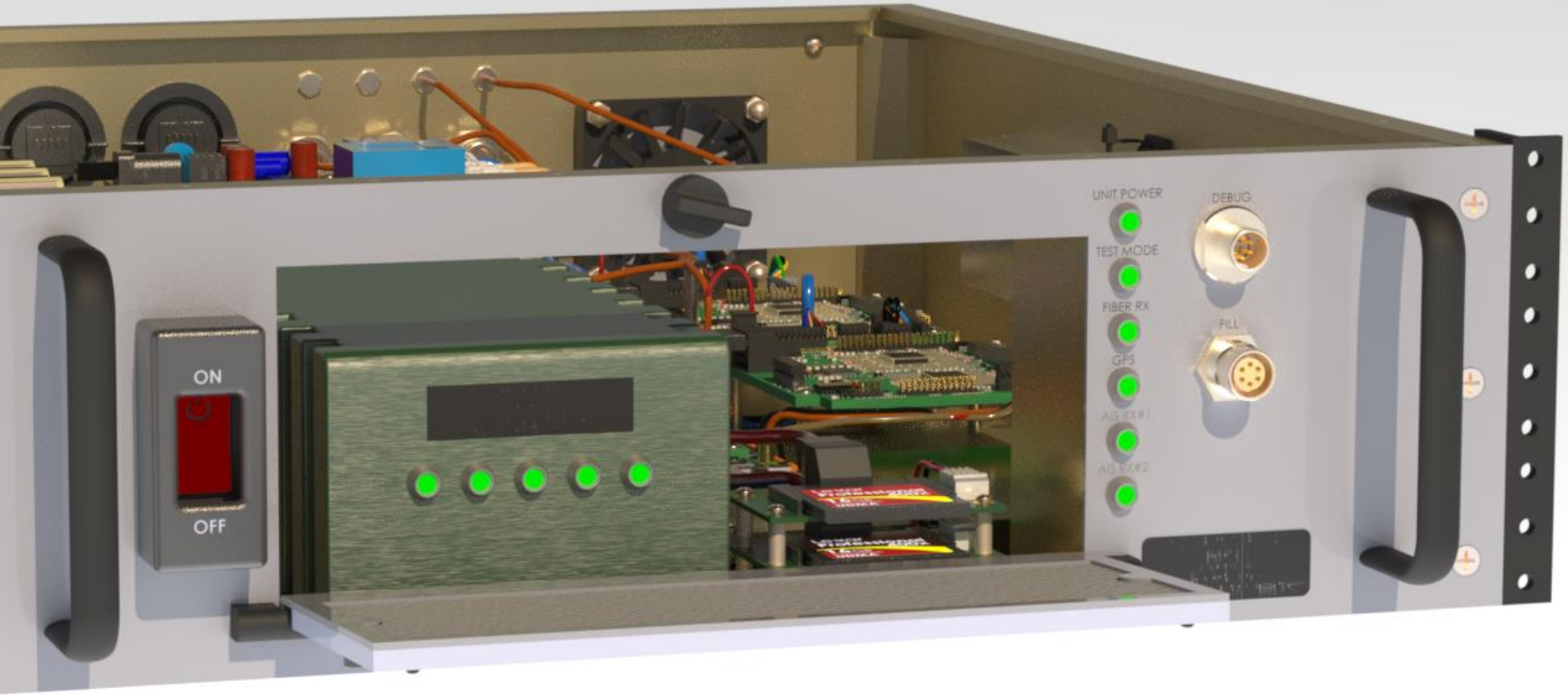






DASSAULT SYSTEMES

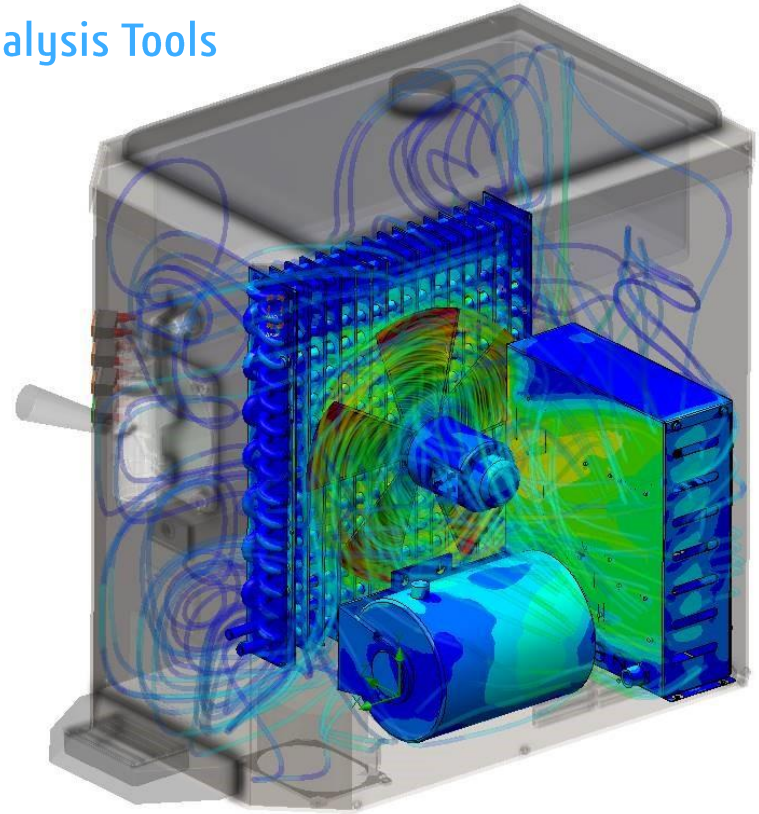
COLLABORATION IN MIND...

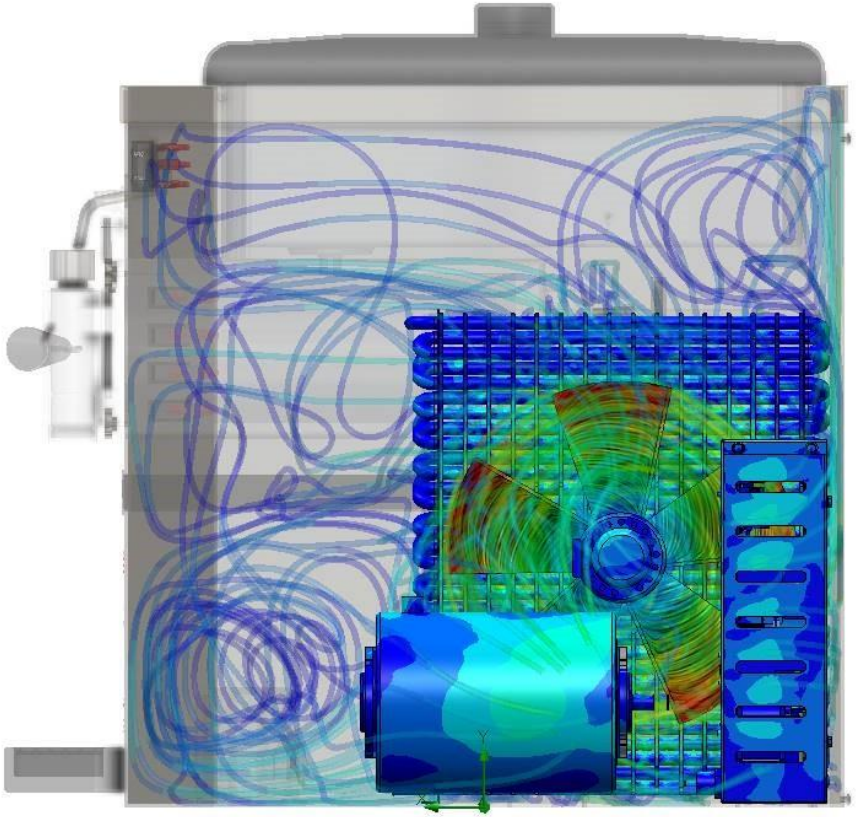



ADD MIX
MIX OUT
CLEANING SOL
READY

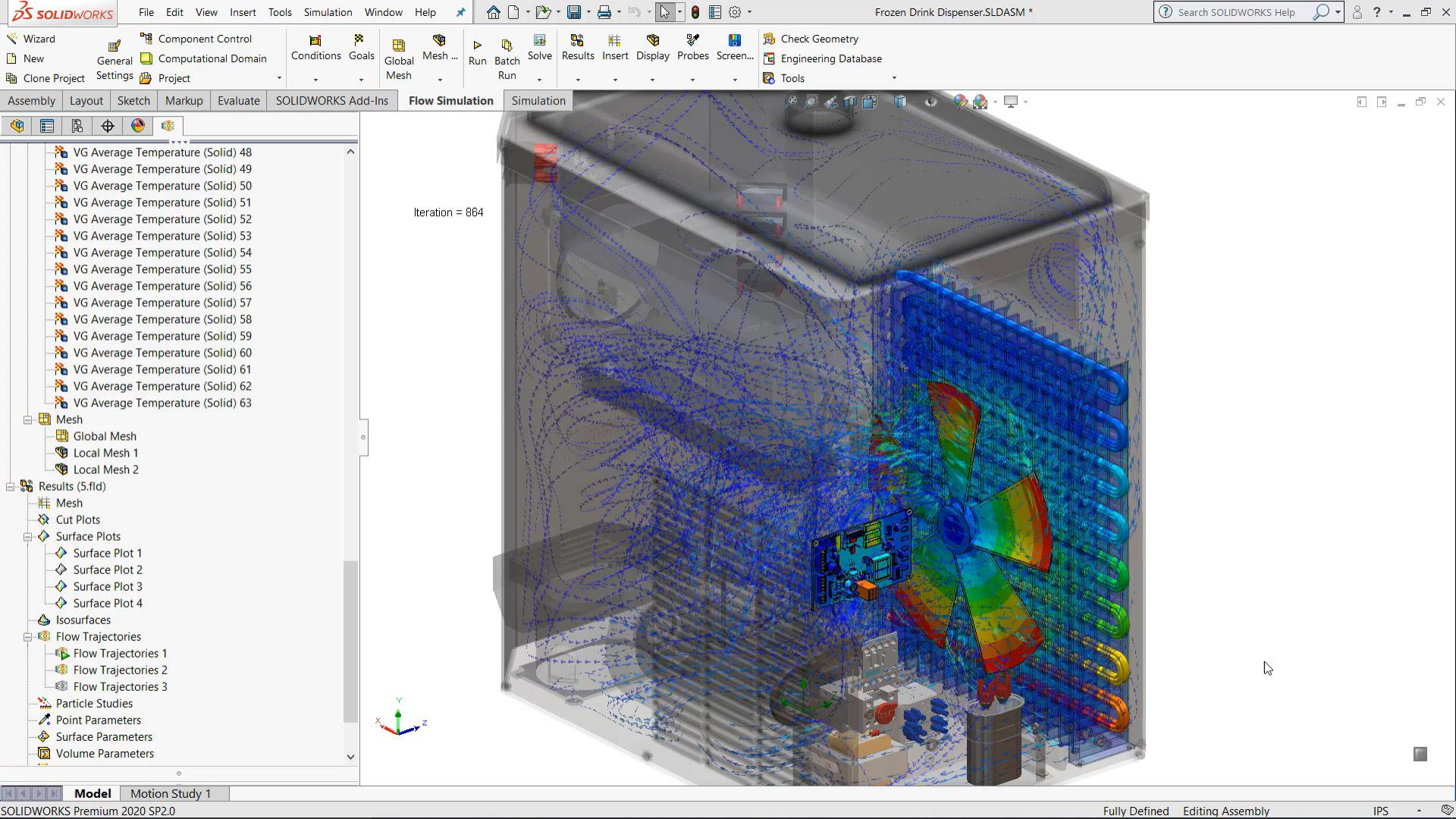
COLLABORATION IN MIND...

Analysis Tools





DASSAULT SYSTEMES


File Edit View Insert Tools Simulation Window Help
Frozen Drink Dispenser.SLDASM *
Search SOLIDWORKS Help
Wizard
New
Clone Project
General Settings
Component Control
Computational Domain
Project
Conditions
Goals
Global Mesh
Mesh ...
Run
Batch Run
Solve
Results
Insert
Display
Probes
Screen...
Check Geometry
Engineering Database
Tools
Assembly Layout Sketch Markup Evaluate SOLIDWORKS Add-Ins Flow Simulation Simulation
VG Average Temperature (Solid) 48
VG Average Temperature (Solid) 49
VG Average Temperature (Solid) 50
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VG Average Temperature (Solid) 61
VG Average Temperature (Solid) 62
VG Average Temperature (Solid) 63
Mesh
Global Mesh
Local Mesh 1
Local Mesh 2
Results (5.fld)
Mesh
Cut Plots
Surface Plots
Surface Plot 1
Surface Plot 2
Surface Plot 3
Surface Plot 4
Isosurfaces
Flow Trajectories
Flow Trajectories 1
Flow Trajectories 2
Flow Trajectories 3
Particle Studies
Point Parameters
Surface Parameters
Volume Parameters
Iteration = 864
Model
Motion Study 1
SOLIDWORKS Premium 2020 SP2.0
Fully Defined
Editing Assembly
IPS

QUESTIONS?

EMA | Design Automation Website


Thank You for Attending!