



General

General





ersion_25.10.000/ANSA/profiles/default

Manage Profiles

Profiles

Company dir

User dir

Team dir

Linked pr

default (Current)	✓	✓		default
Molding	✓			
Composites	✓			
CFD	✓			
Durability	✓			
Viewer	✓			
NVH	✓			
CrashSafety	✓			
Customer Profile 3		✓	✓	default
Customer Profile		✓	✓	default
Customer Profile 2		✓	✓	default
				total 11

Details

Name

Customer Profile 3

Description

Linked profile default

Contents

Info

User directory

> defaults

Team directory

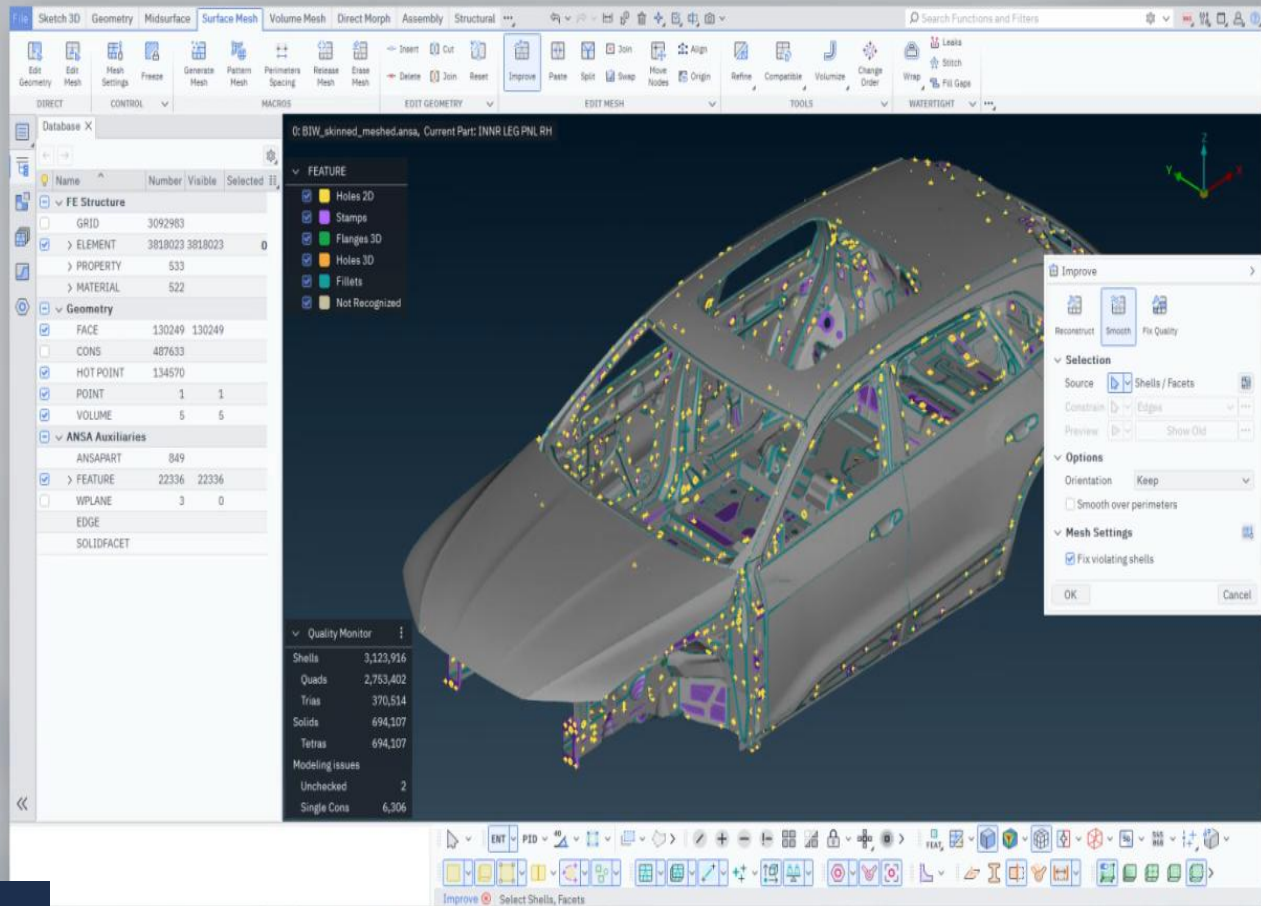
> defaults

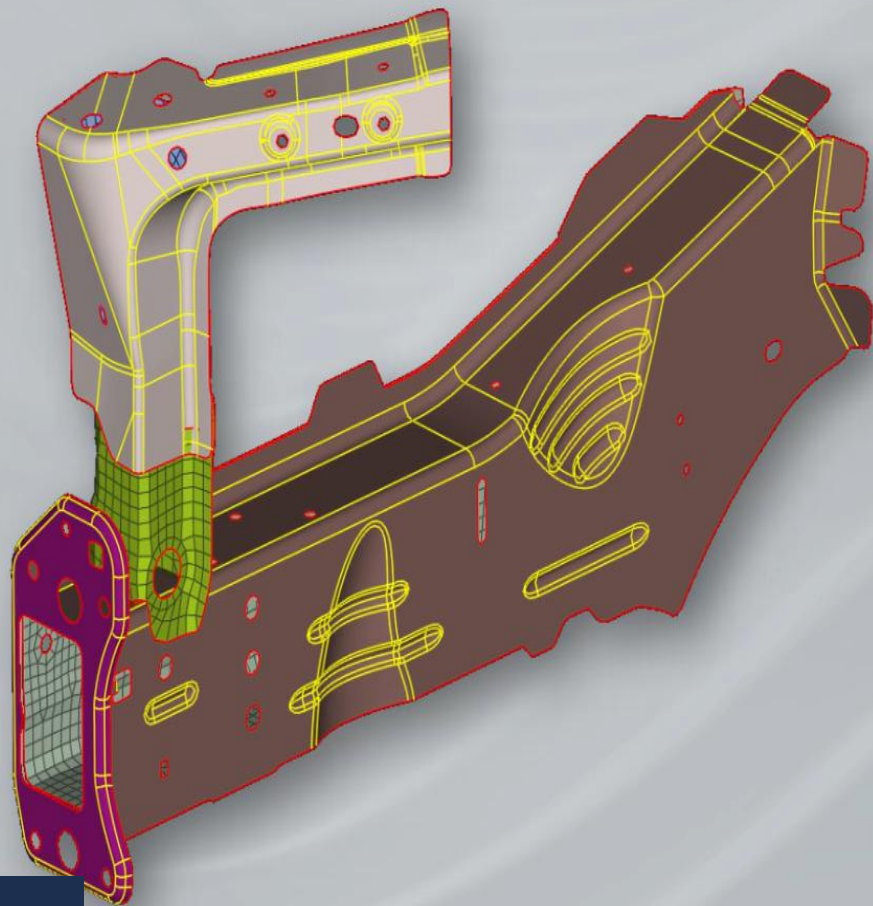
> gui

Exploit

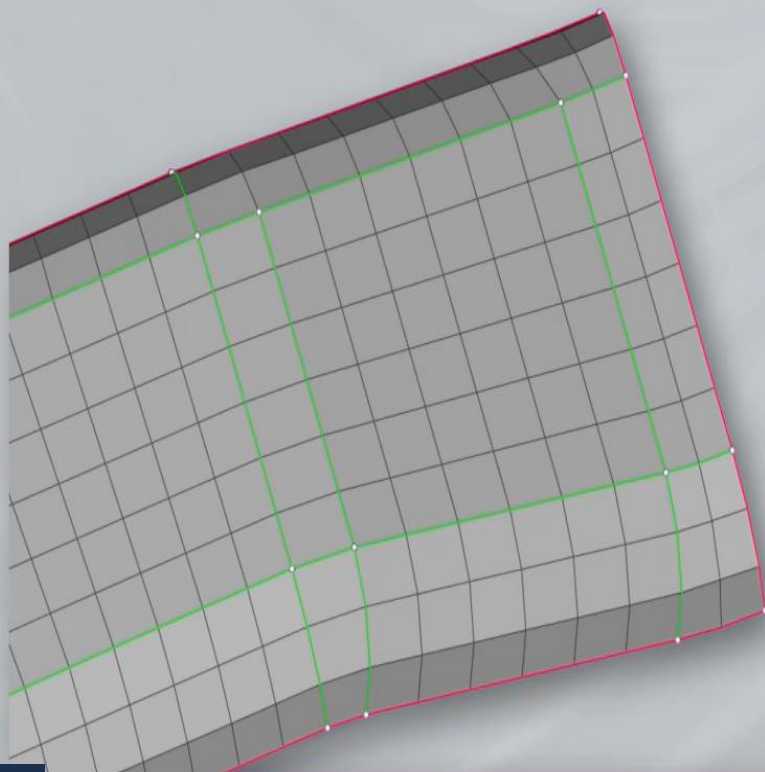
Profile-based Settings

Work in
Dark theme





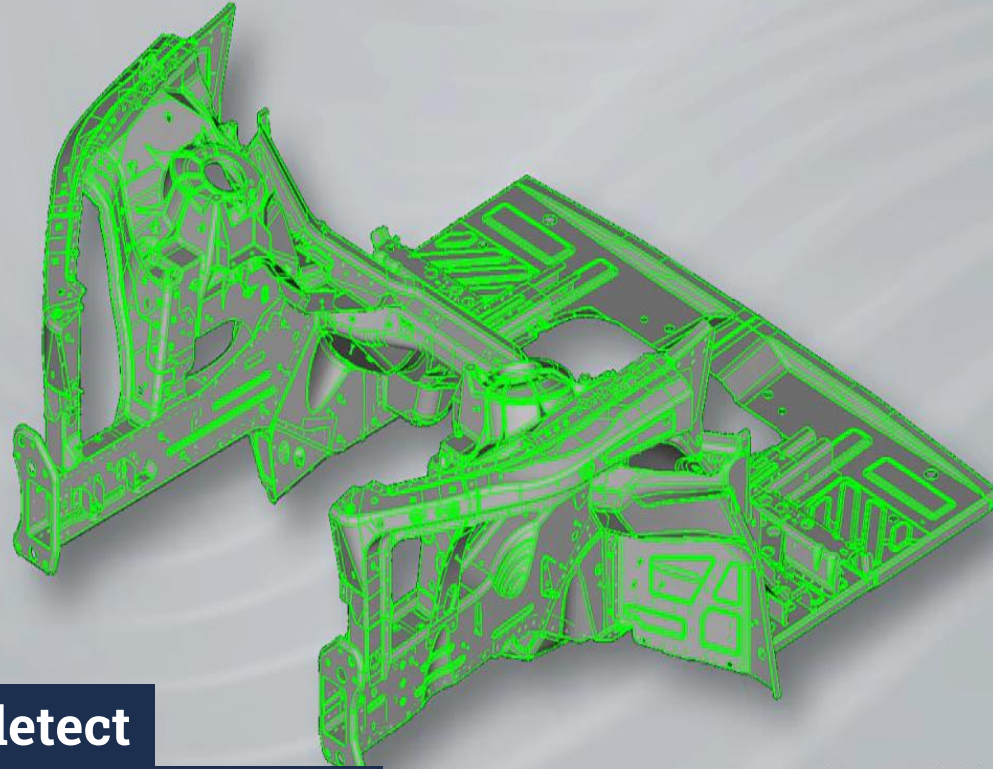
**Control your
model transparency**



**Access context
menu directly**

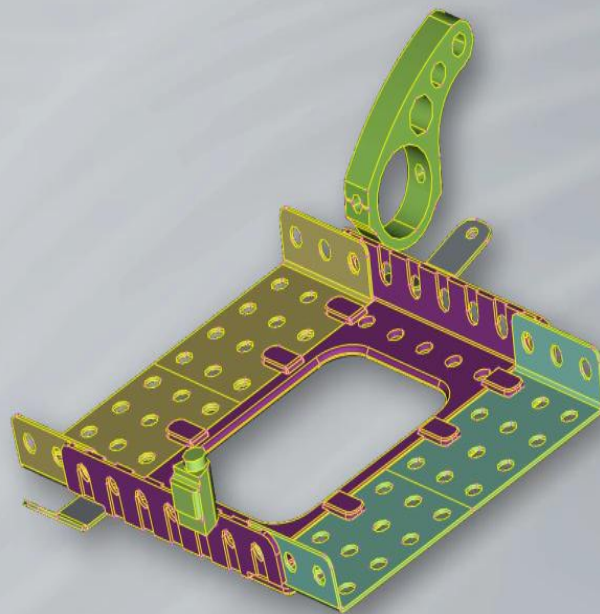
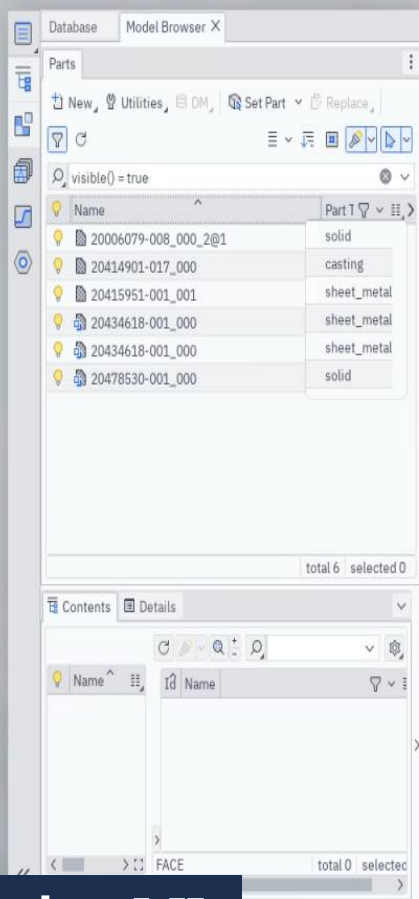


**Select entities
in a direct and smart way**

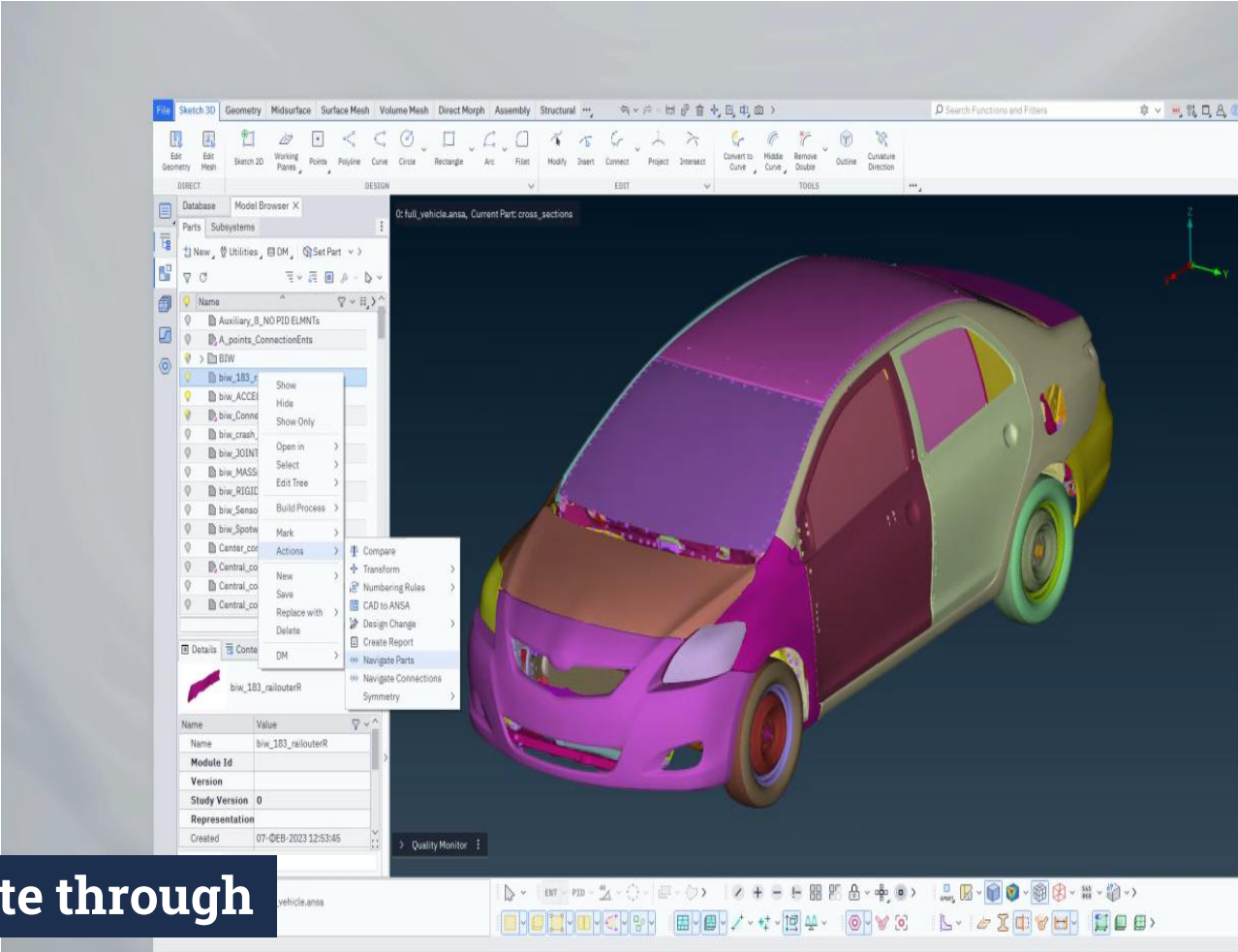


**Automatically detect
& handle L/R symmetric parts**

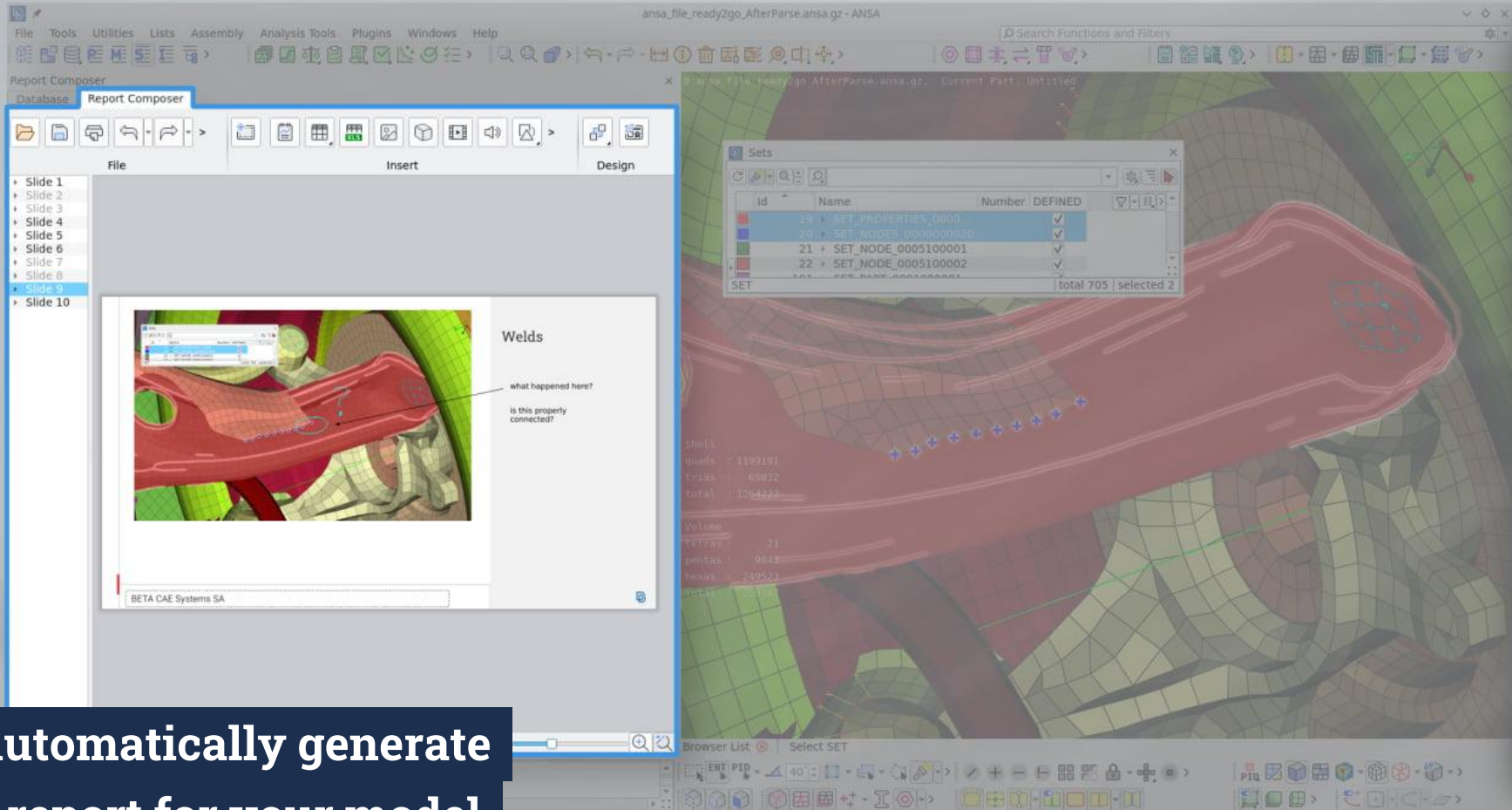
Courtesy of Caresoft Global Technologies, Inc.



**Detect
Part Type using ML**



Navigate through
Parts



**Automatically generate
a report for your model**

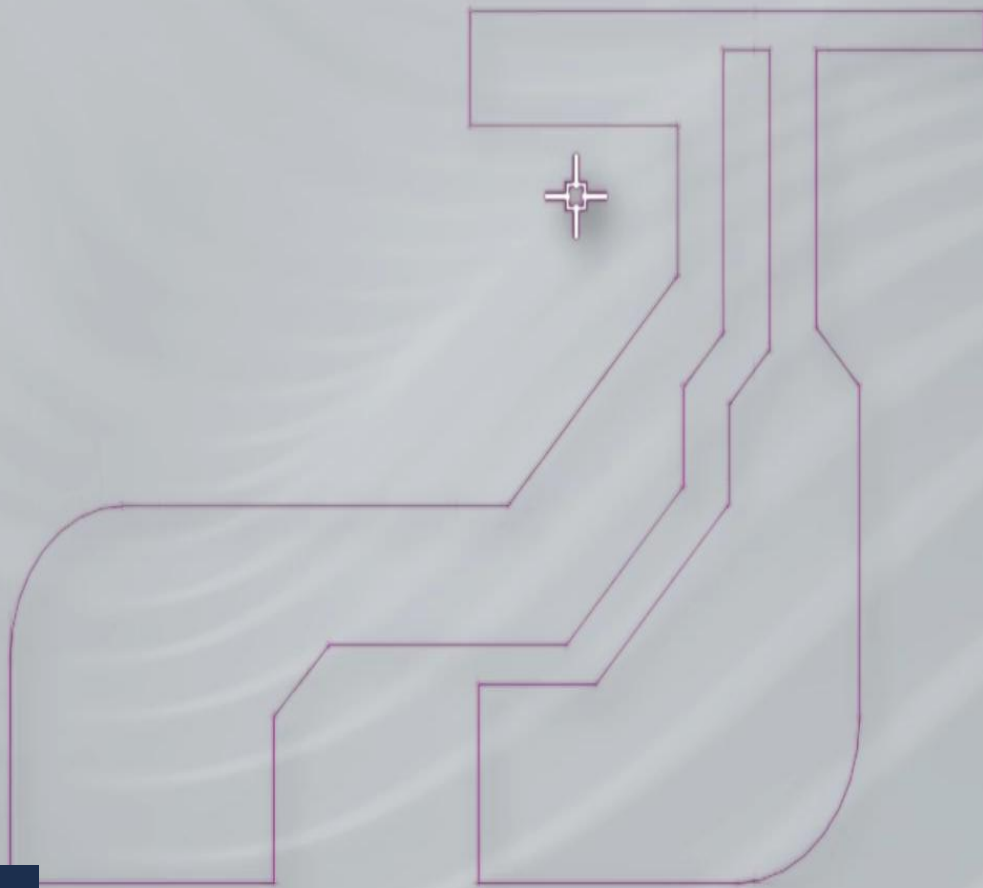


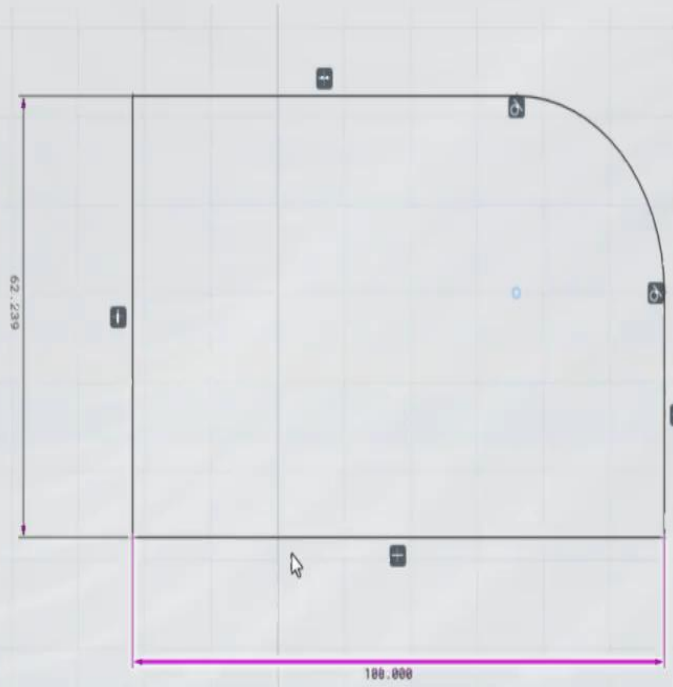
Geometry

Geometry

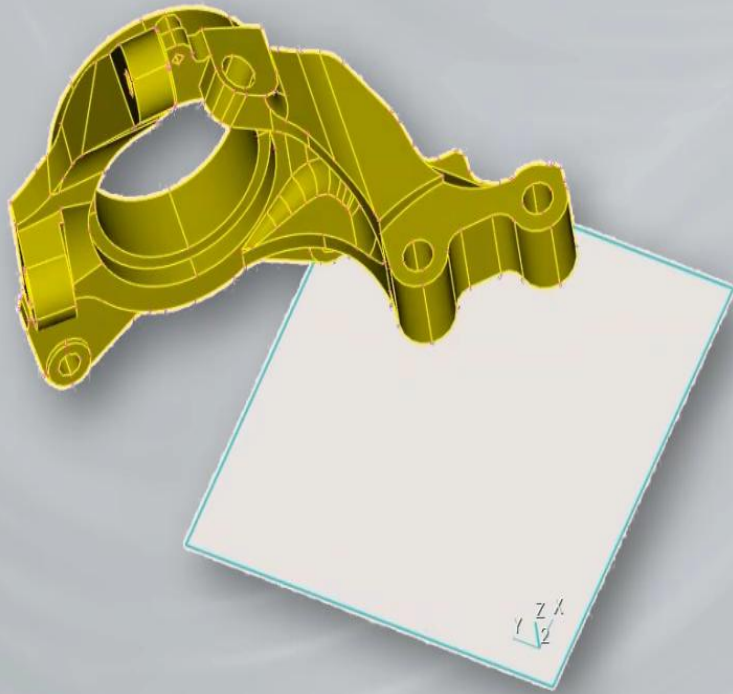


**Directly edit
planar polygons**





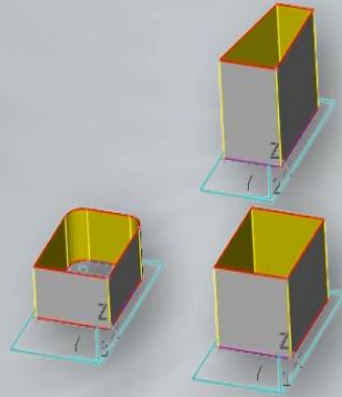
**Parameterize your sketches
to facilitate optimization processes**



**Project your
geometry into sketch**

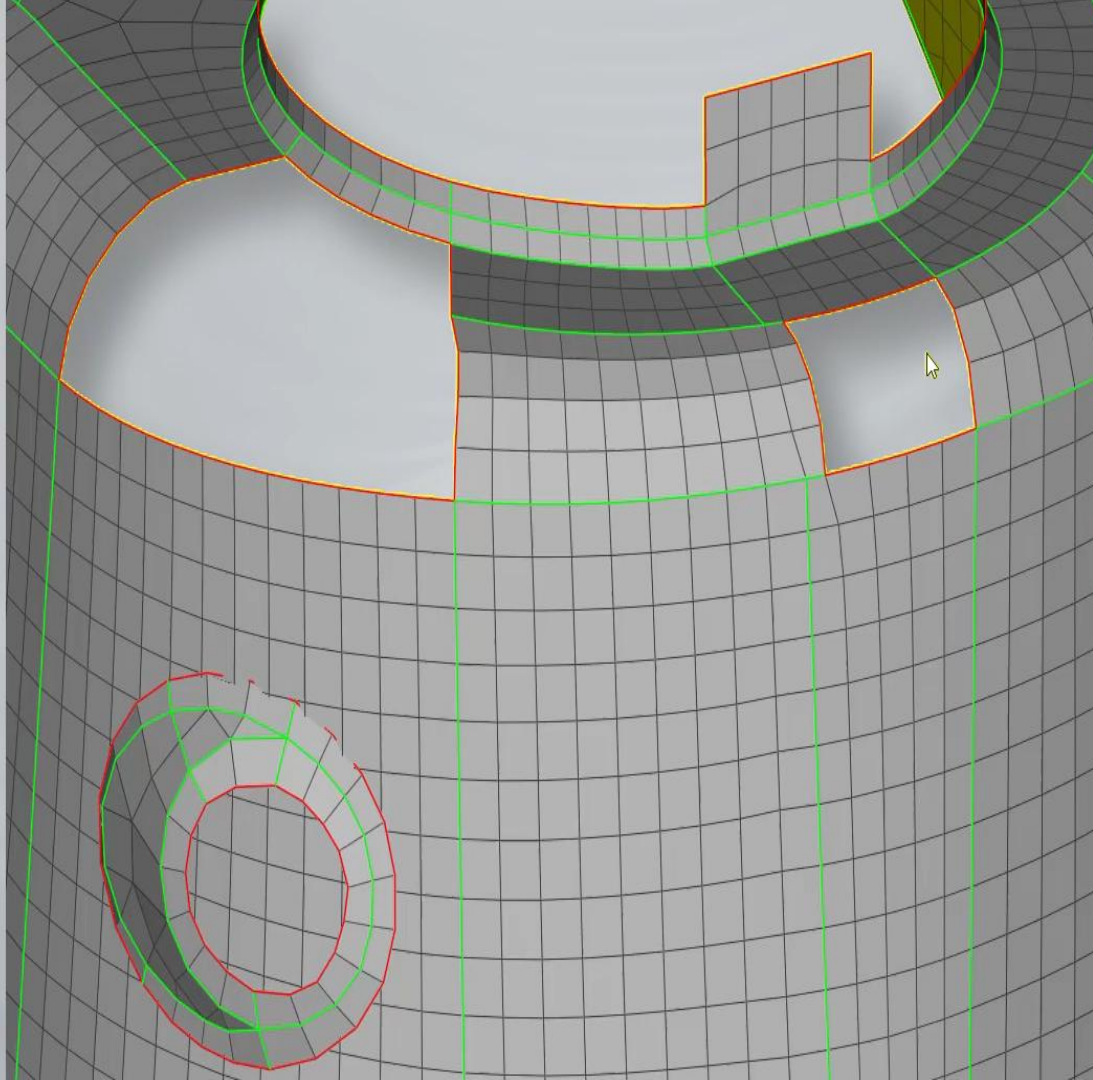


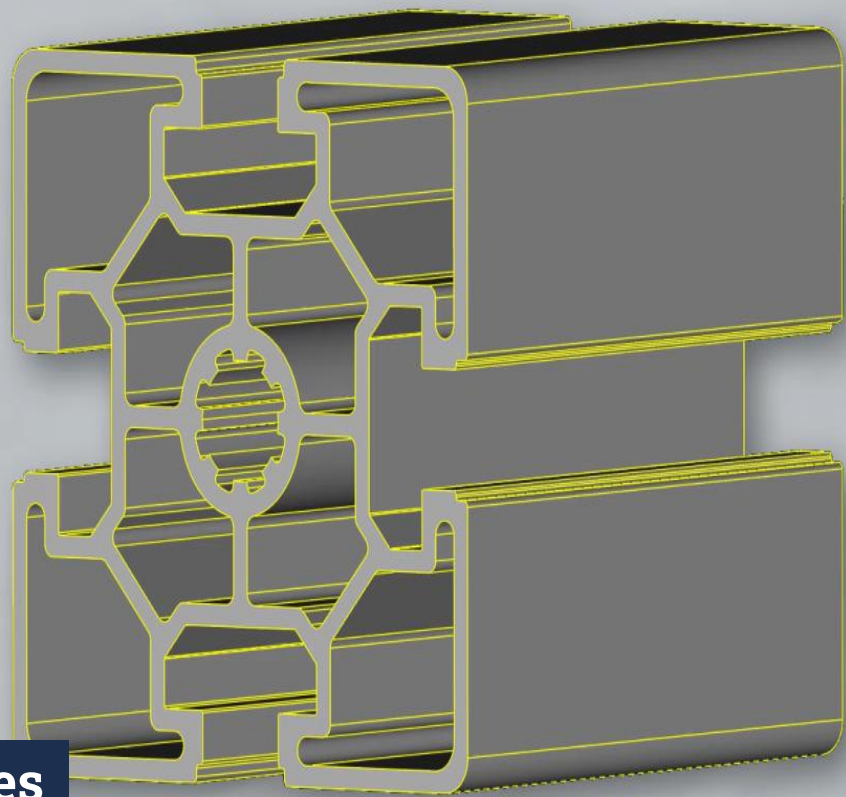
**Create a geometry
plane-cut on sketch**



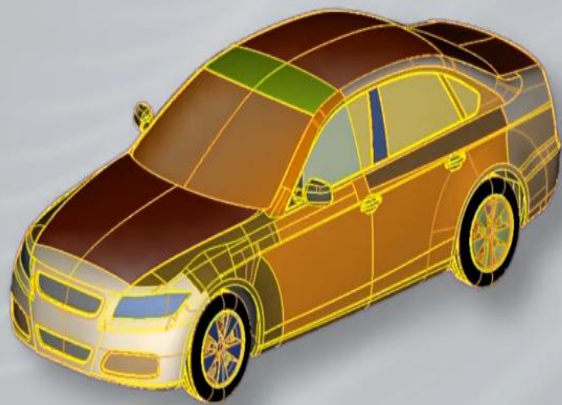
**Apply transformations
on your sketches**

**Directly edit
faces or FE**

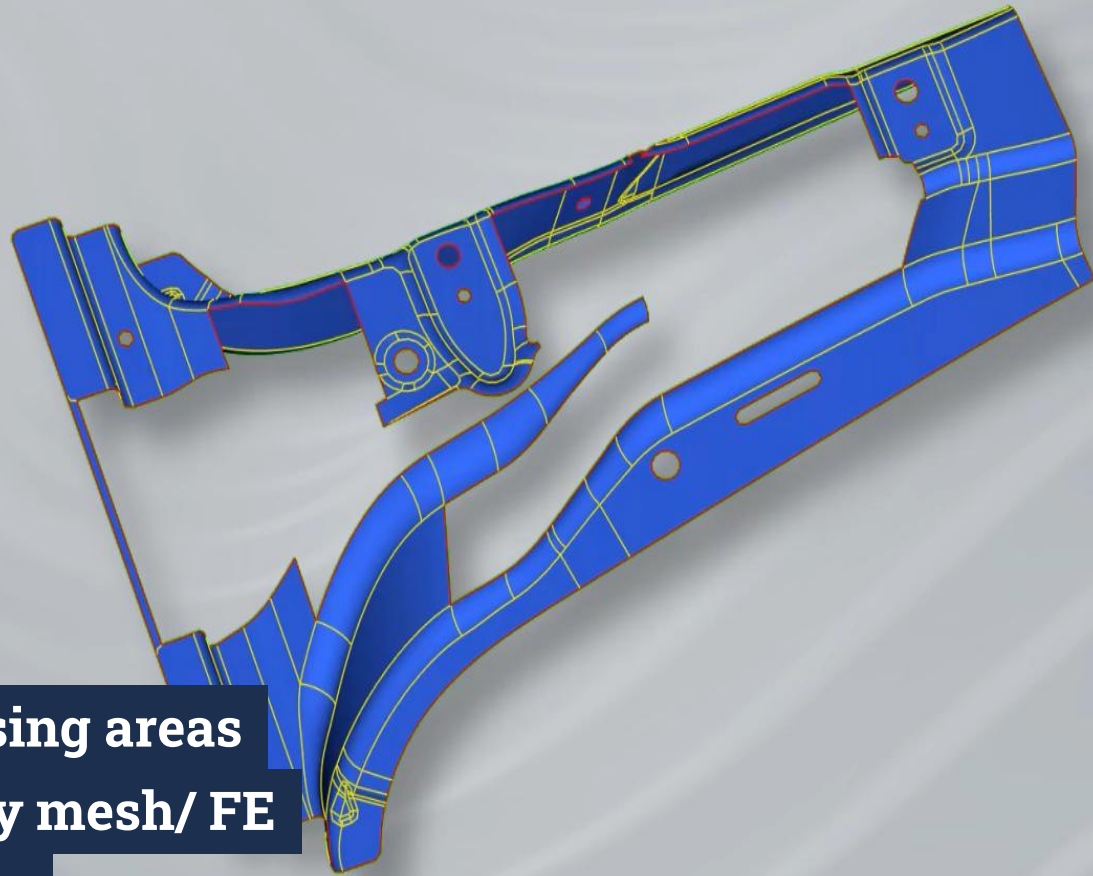




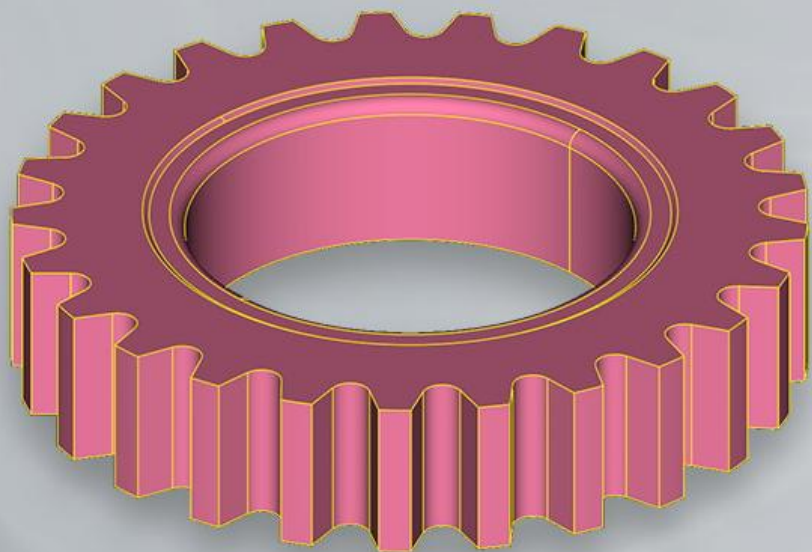
**Create middle curves
on complex profiles**



**Add primitive shaped
volumes to your model**

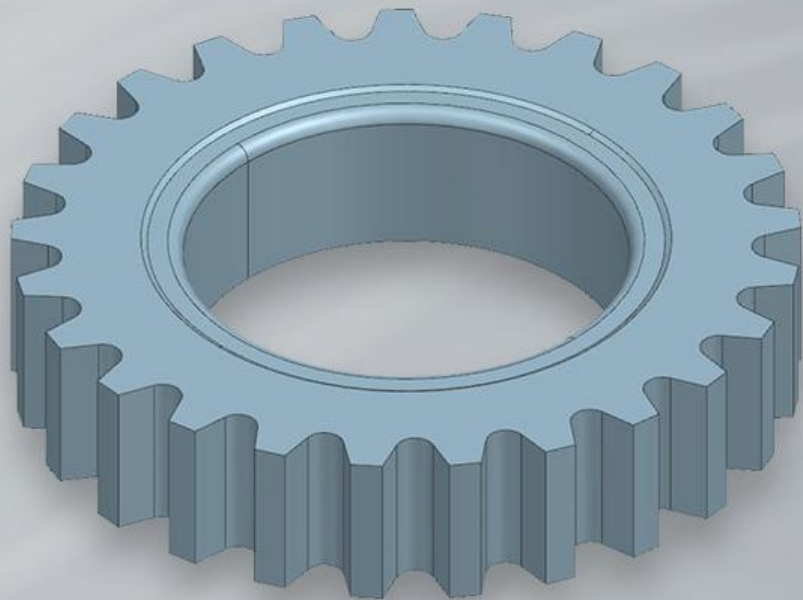


**Fill & cut missing areas
with geometry mesh/ FE
in a smart way**

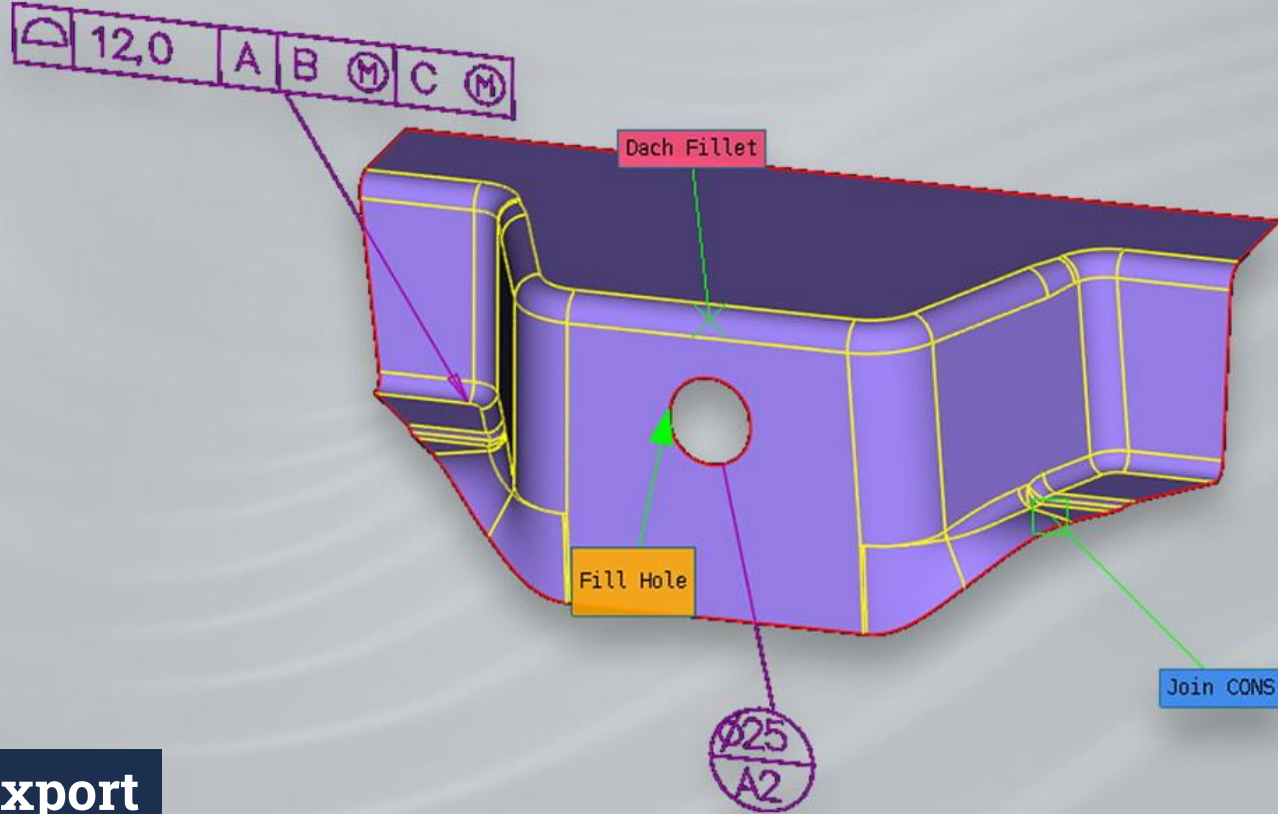


ANSA

**Output geometry
in JT format**



CAD



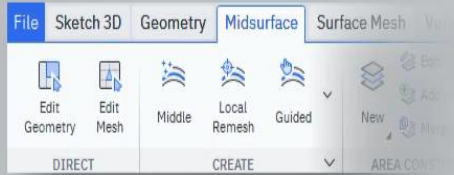
**Import & export
CAD PMI annotations via JT file**



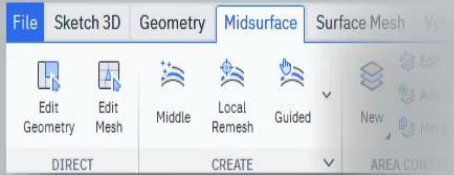
Mid-Surface

Mid-Surface

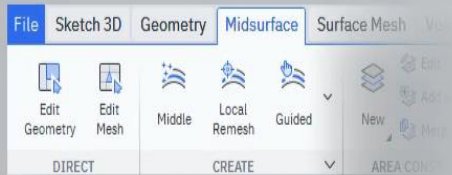




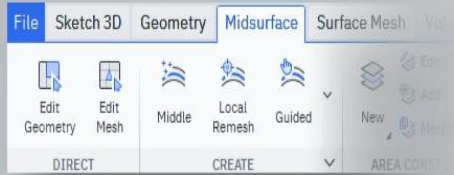
**Generate midsurface
with a common function**



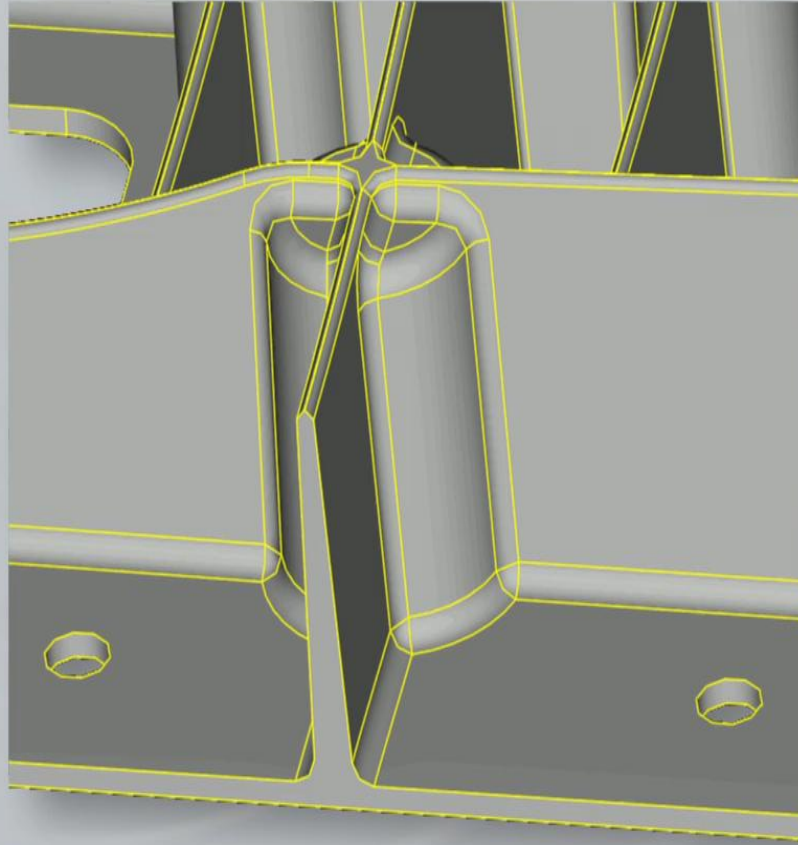
**Create midsurface automatically
overcoming unclean geometry**



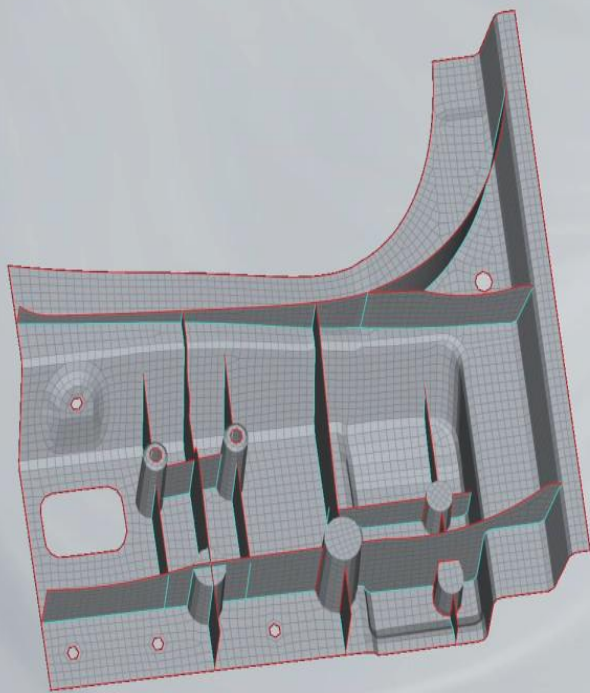
**Successfully handle
tailor blanks & design details**



**Report success rate
& problematic regions**

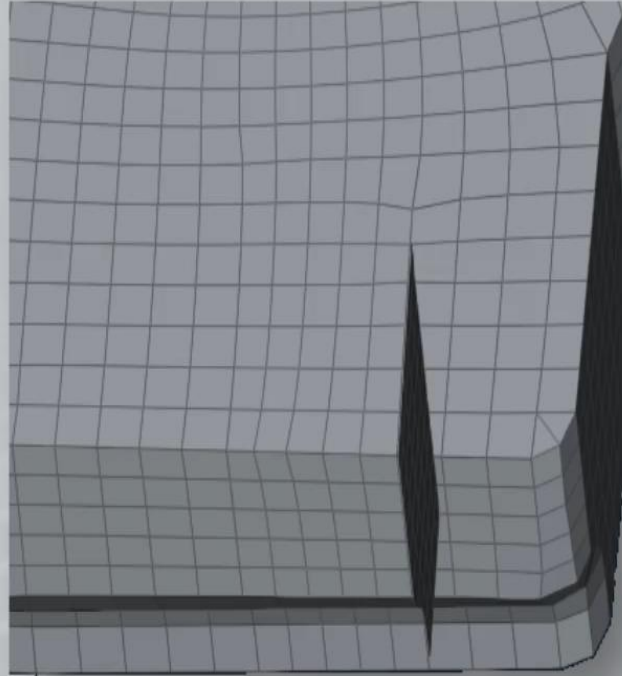


**Locally remesh
your Middle Mesh results**

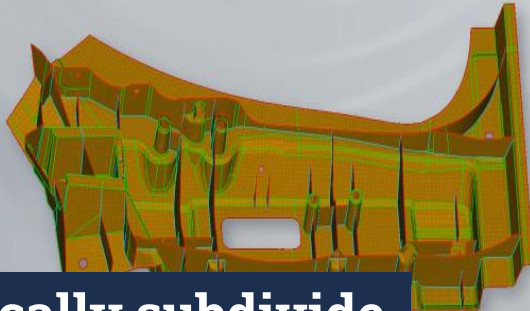
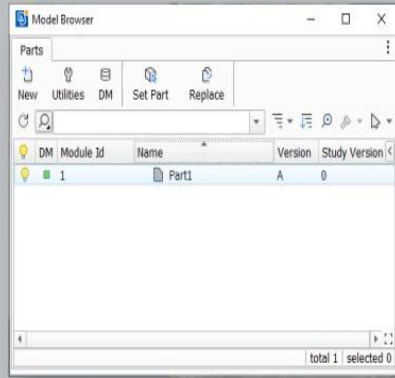


Old FE Result

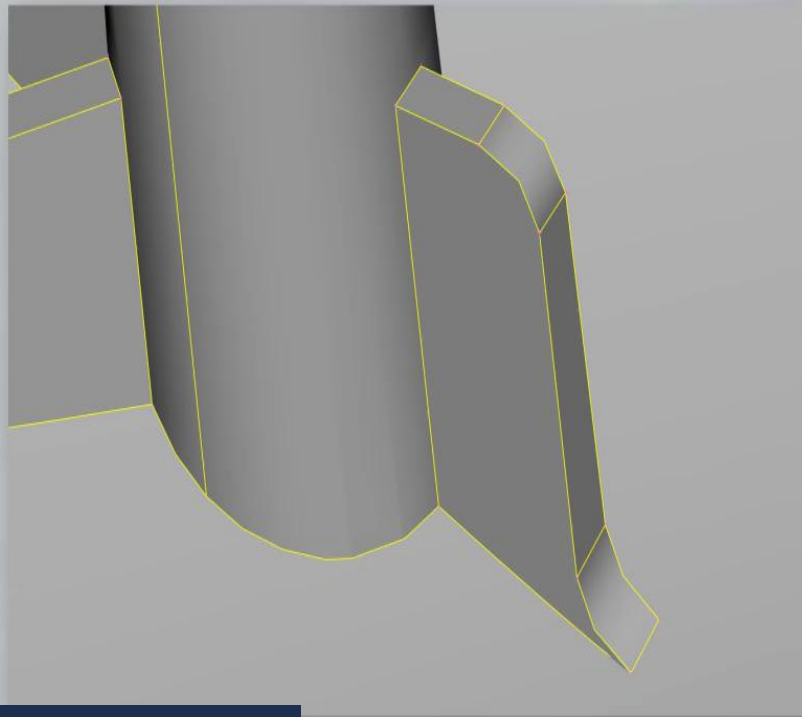
**Automatically update
your Middle Mesh to new geometry**



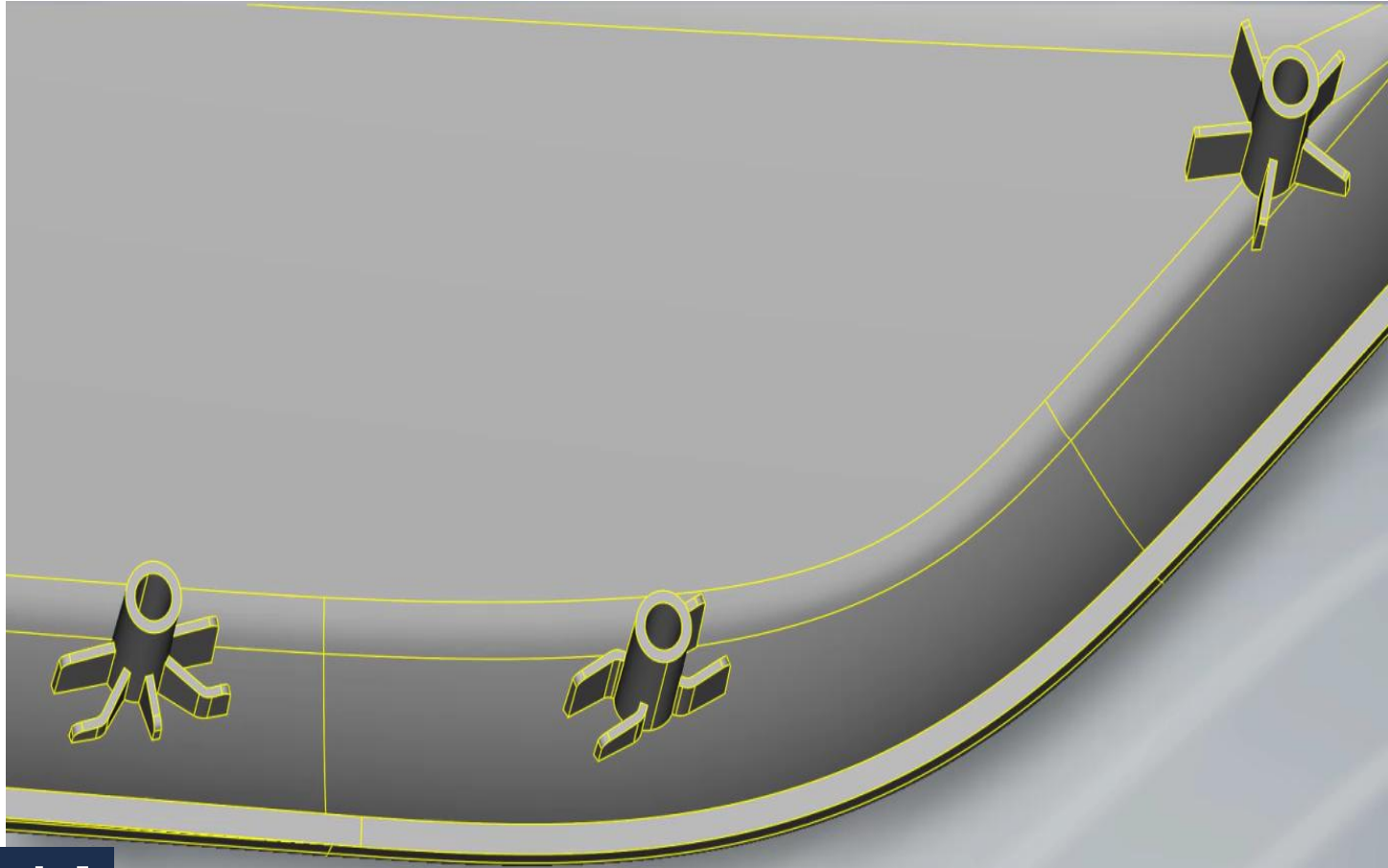
**Automatically detect and
handle Middle Mesh thick areas**



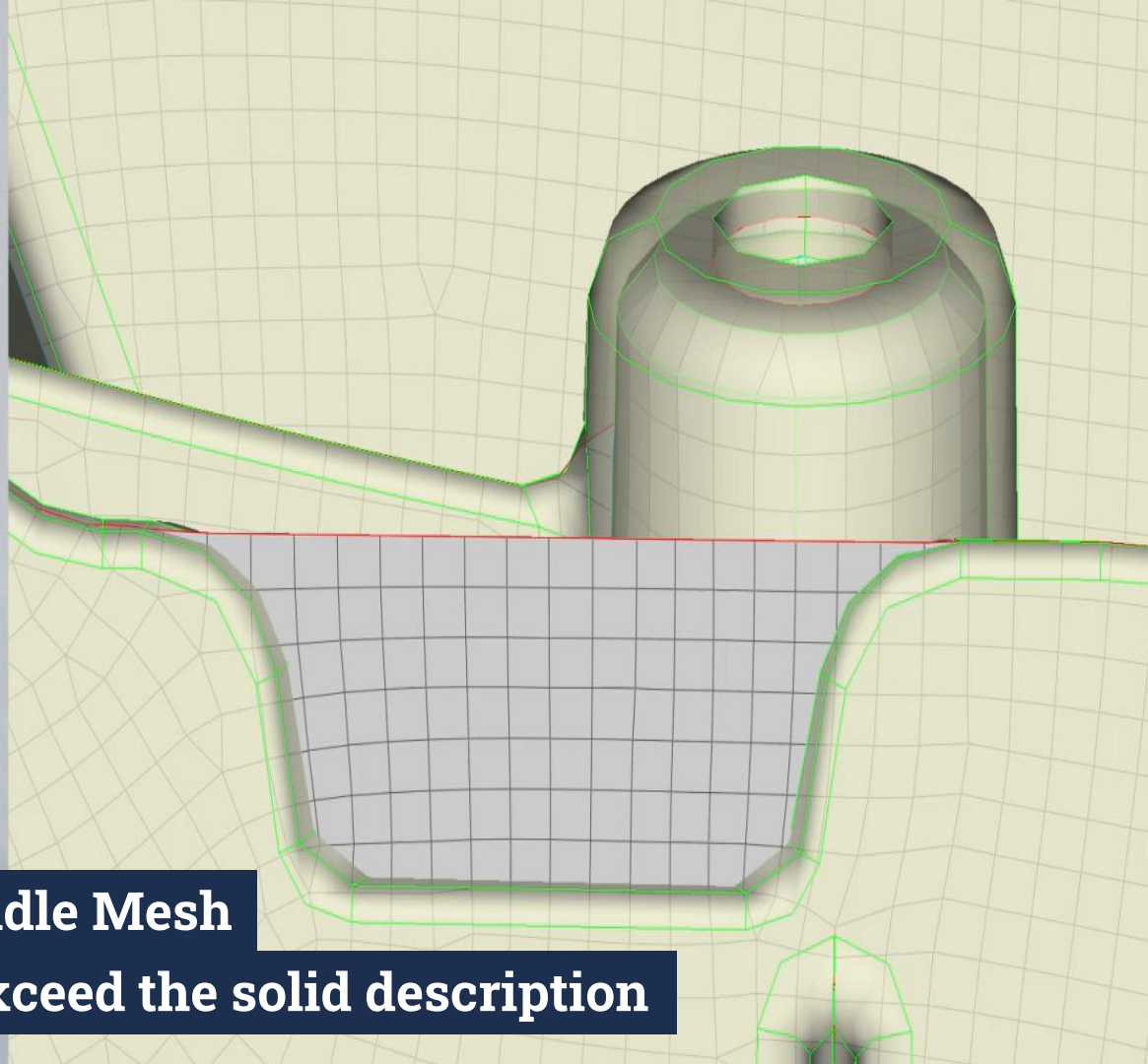
**Automatically subdivide
Middle Mesh to distribute workload**



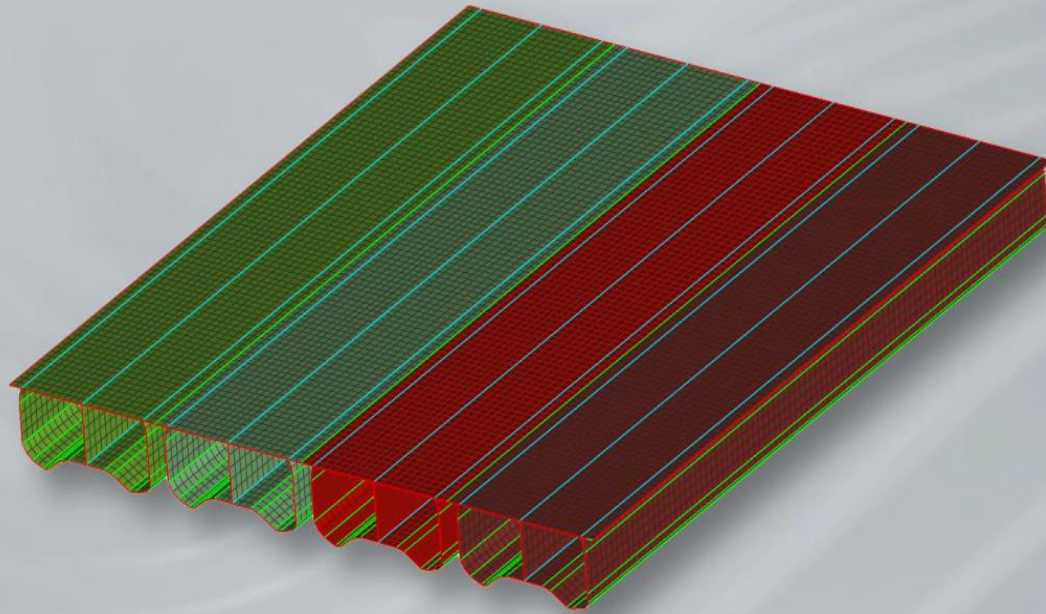
**Receive accurate middle mesh
on single bounds**



**Get special
treatment on tubes**



Remove Middle Mesh
areas that exceed the solid description



**Automatically generate FE or
middle curve on extruded cross sections**



Mesh INTEGRATION



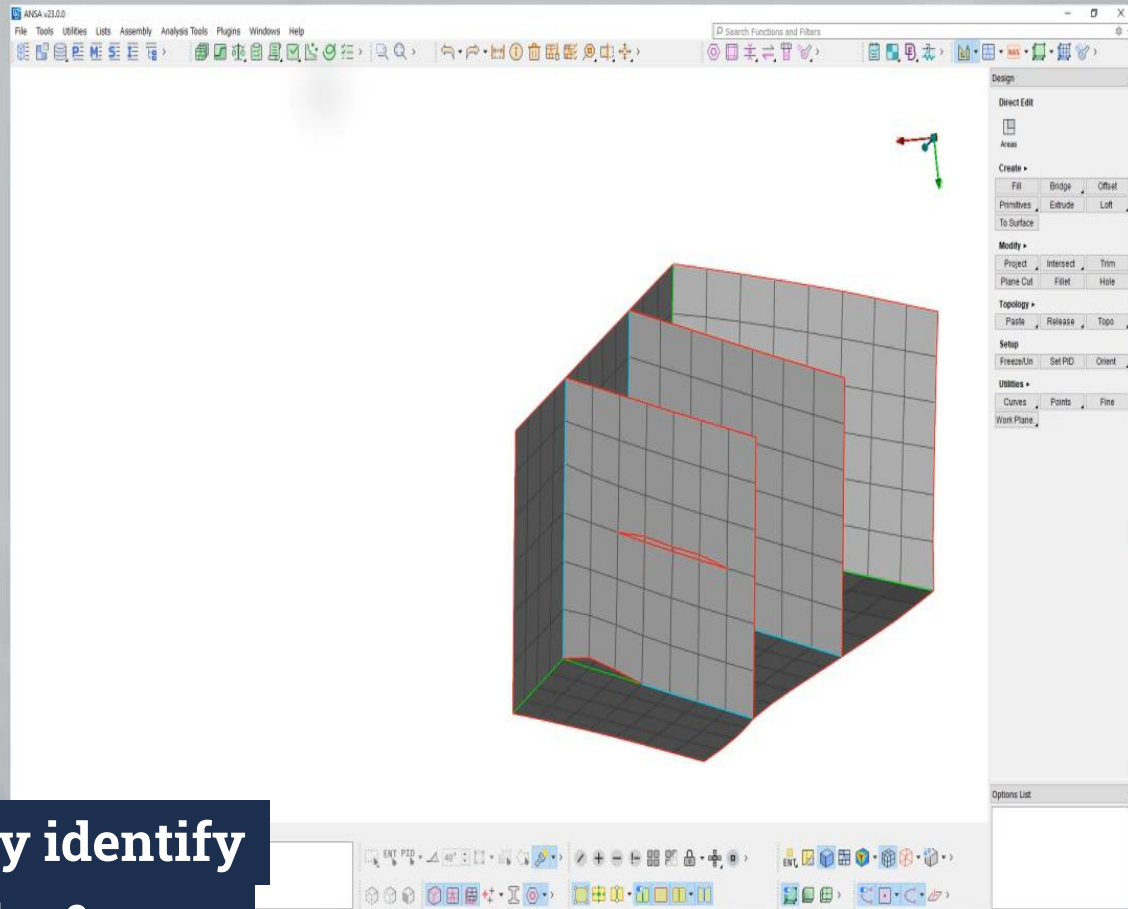
Compare parameters

Compare ☐ Show inactive items ☐ Show only differences

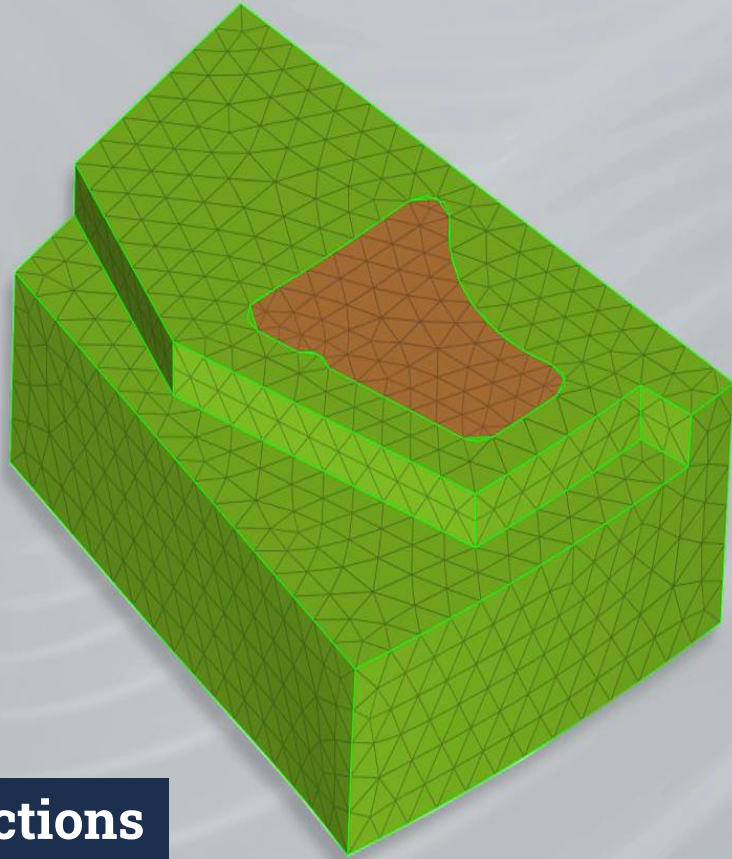
Parameters	Fine	Middle	Coarse
Mesh Parameters			
Name	2 mm	3 mm	5 mm
Basic			
General			
Mesh type	Solids Structural Mesh	Solids Structural Mesh	Solids Structural Mesh
Element type	Tria	Tria	Tria
Element order	1st Order	1st Order	1st Order
Existing mesh	Erase	Erase	Erase
Target length	2.	3.	5.
Distortion distance	20. %	20. %	20. %
Distortion angle	30.	40.	50.
Minimum length	0.5	1.	1.5
Perimeters distance	0.5	0.4	0.7
Maintain thin sides	true	true	true
Existing features	Clear	Clear	Clear
Orientation	Fix	Fix	Fix
Joined perimeters	Reset	Reset	Reset
Solid Structural			
Maximum aspect ratio	4.	4.	4.
Feature line angle	10.	10.	10.
In the same connectivity group	false	false	false
Force 2 rows if width > flag	false	false	false
Options			
Features			
Fix Quality			
Quality Criteria			
Name	2 mm	3 mm	5 mm
Solids			
aspect ratio			
Active	true	true	true
Calculation	NASTRAN	NASTRAN	NASTRAN
Failed	8.000000	8.000000	8.000000
skewness			
Active	true	true	true
	ABAQUS	ABAQUS	ABAQUS
	0.100000	0.100000	0.100000

Apply Cancel

**Compare your Mesh Settings
between different sessions**

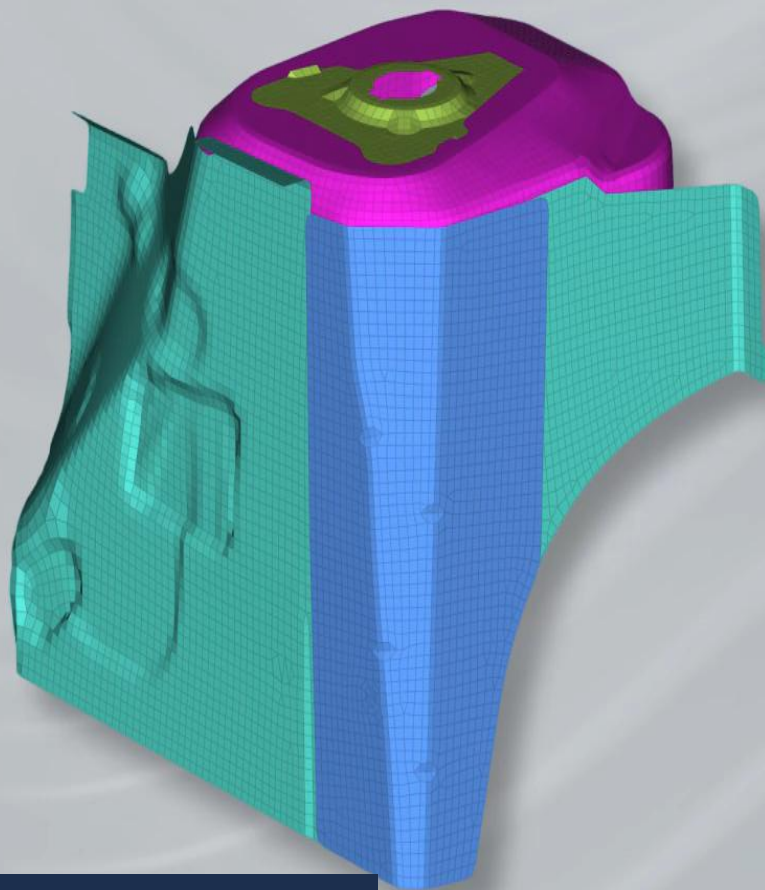


**Automatically identify
& fix FE cracks & gaps**

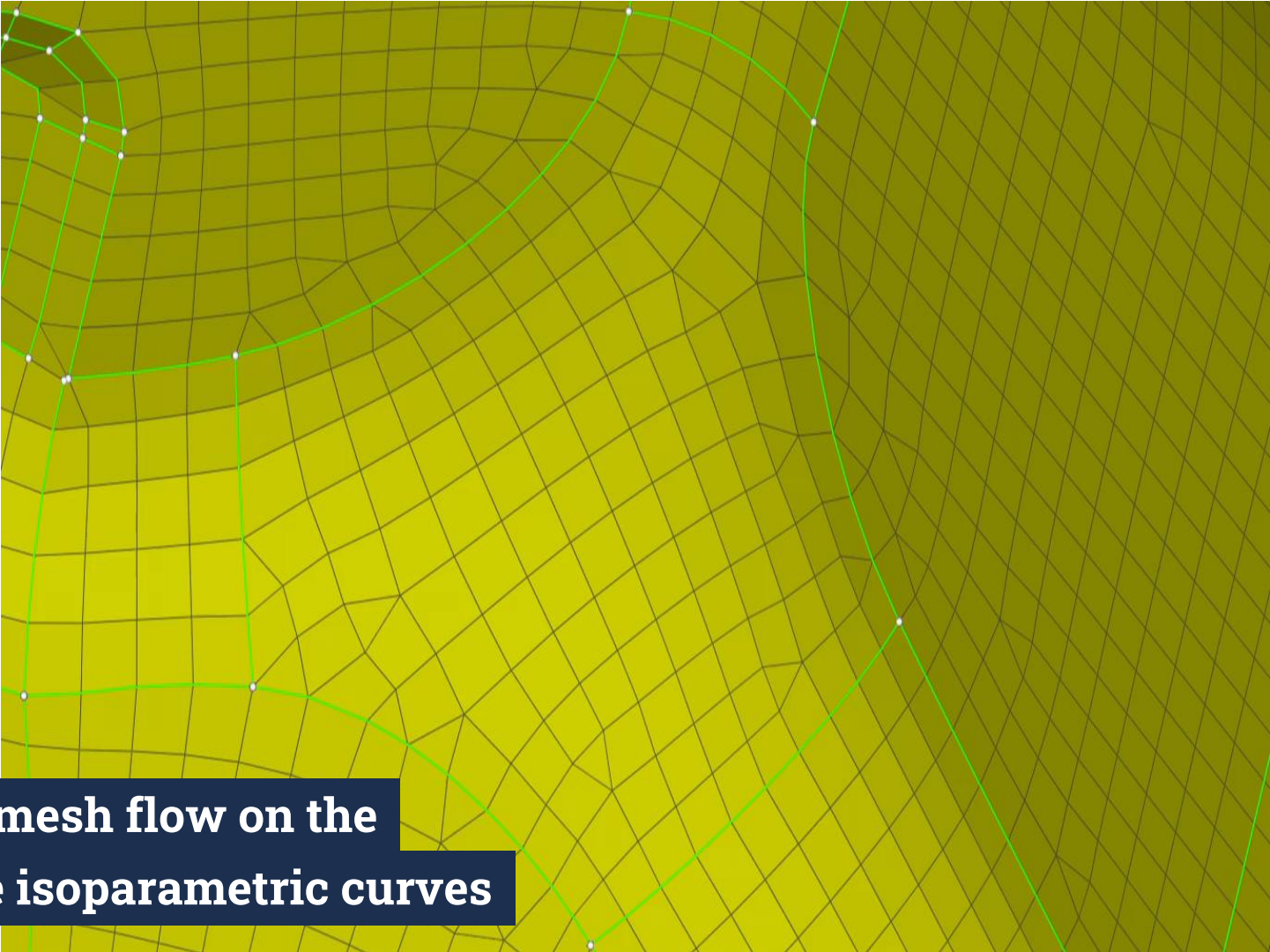


Identify & fix intersections

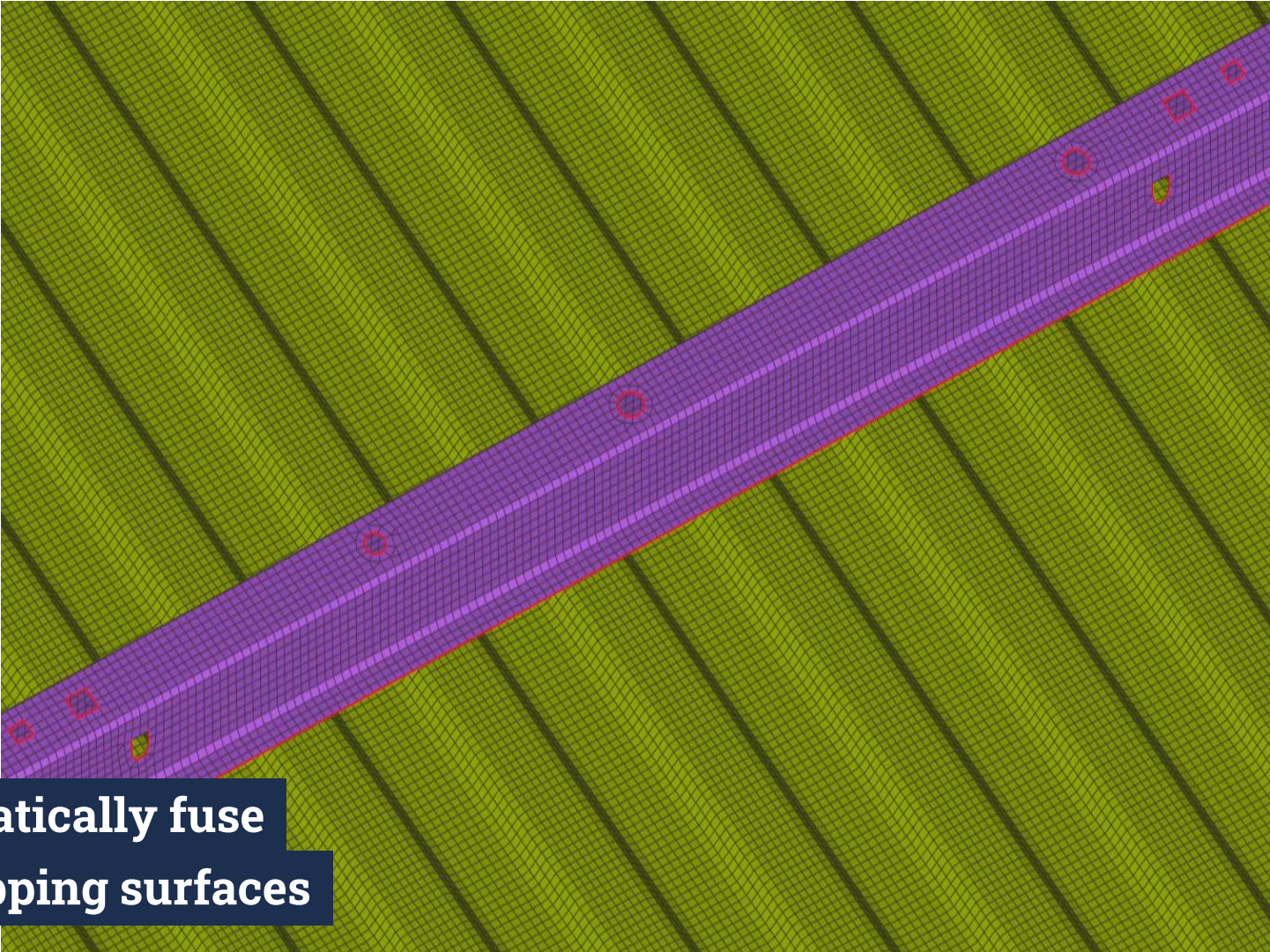
Create compatible solid structural mesh



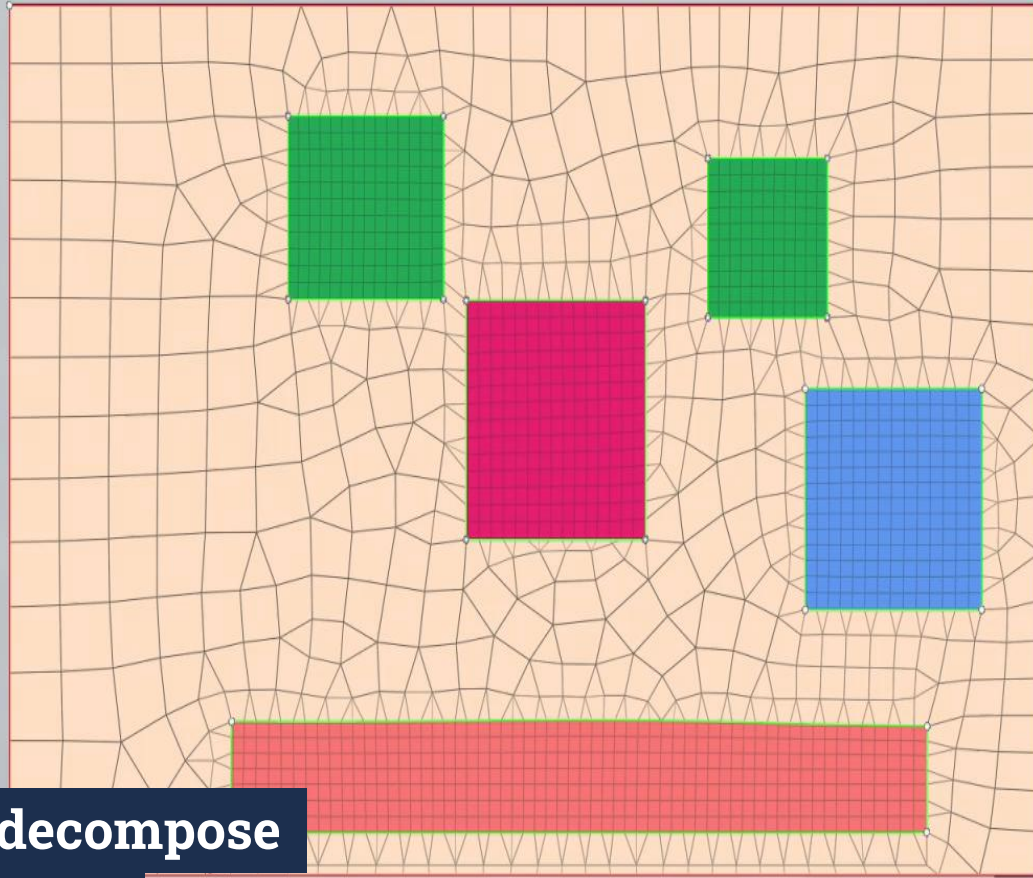
**Inspect & fix
parametric penetrations real-time**



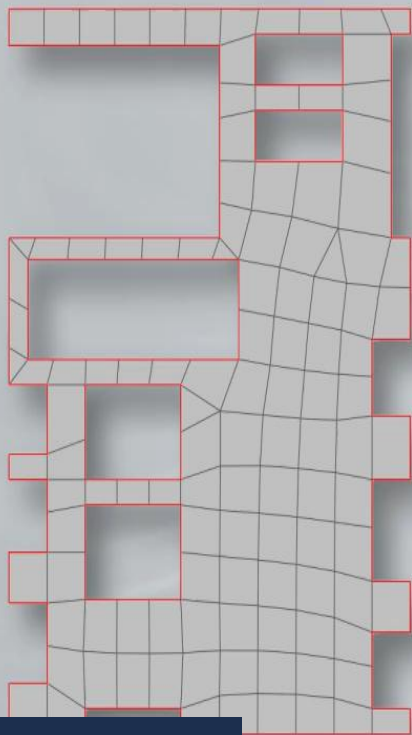
**Create mesh flow on the
surface isoparametric curves**



**Automatically fuse
overlapping surfaces**



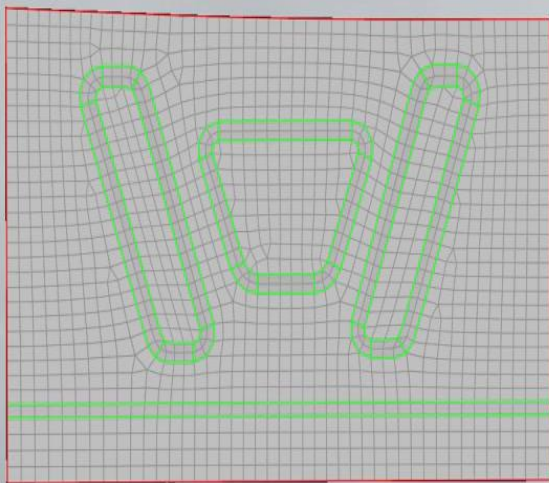
**Automatically decompose
into 4-sided macros**



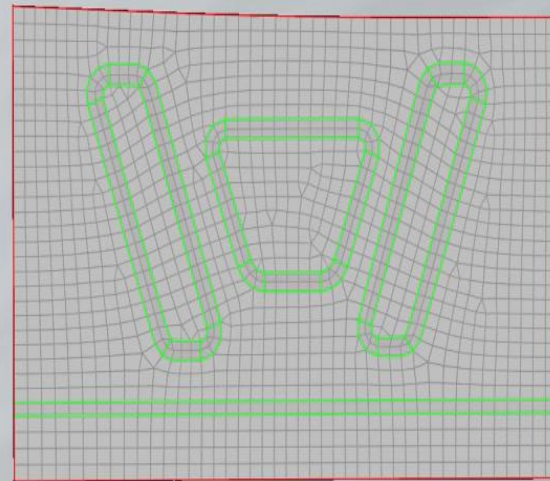
**Automatically decompose
into 4-sided macros**



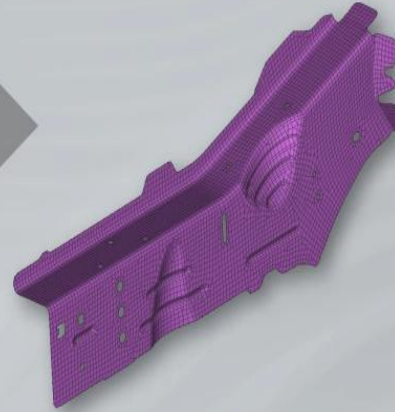
Less Trias



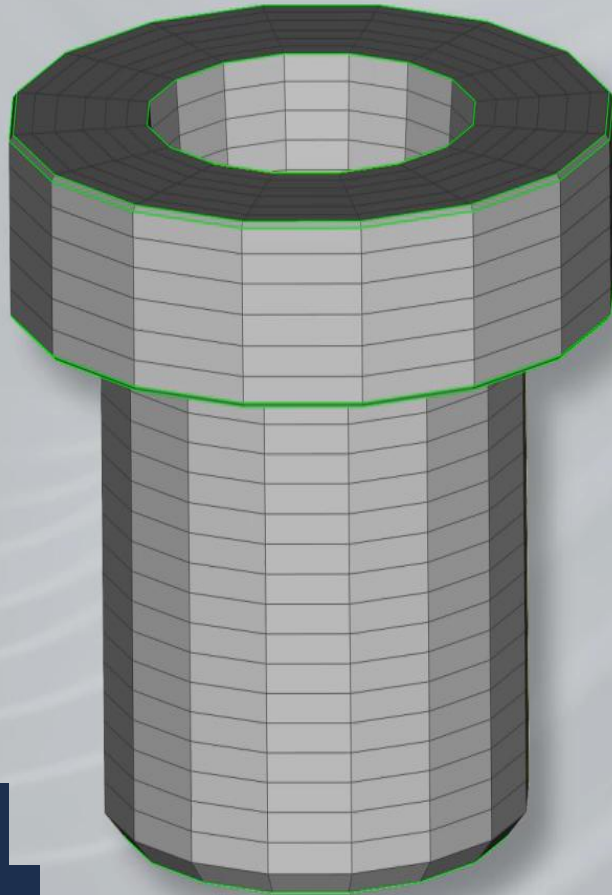
Better quads orthogonality



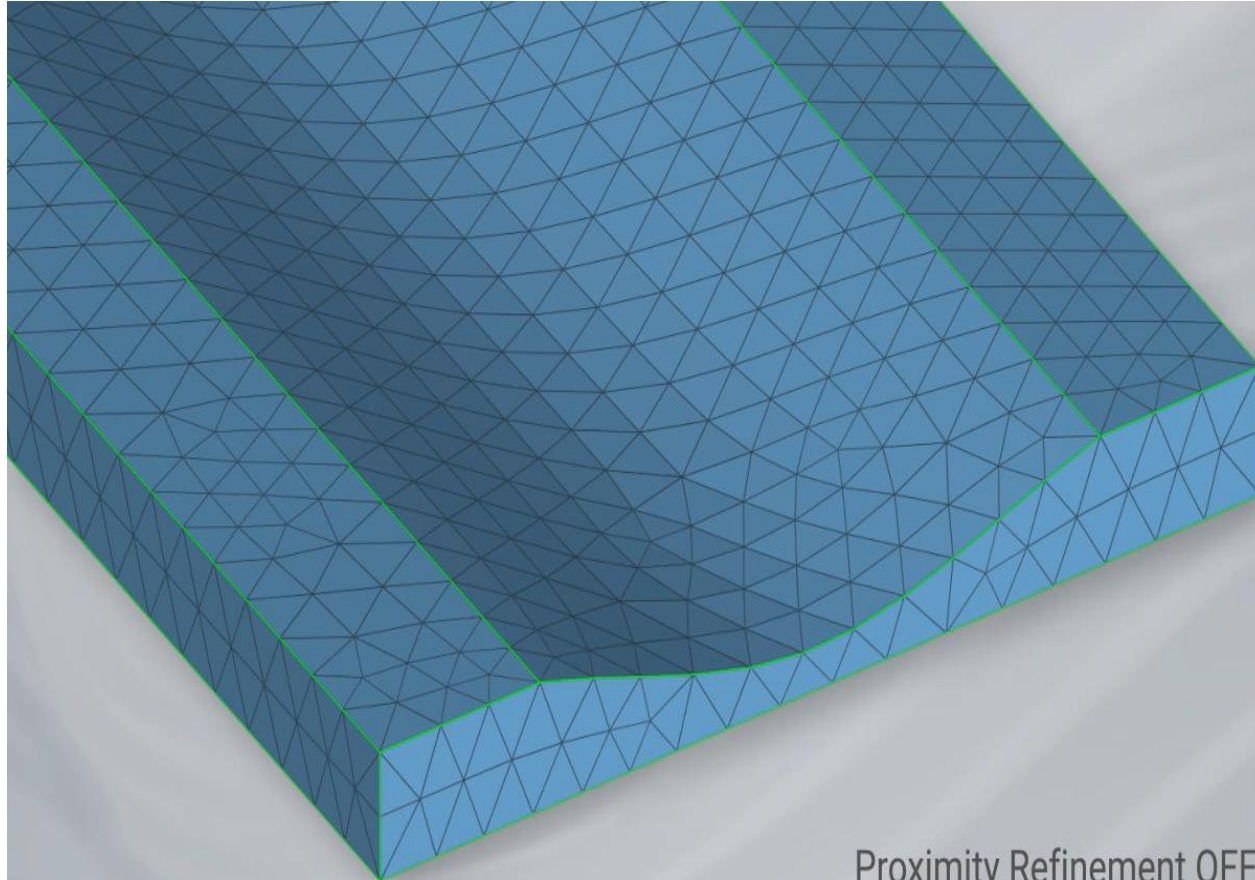
**Eliminate trias
generation**



**Generate mesh
based on model type**

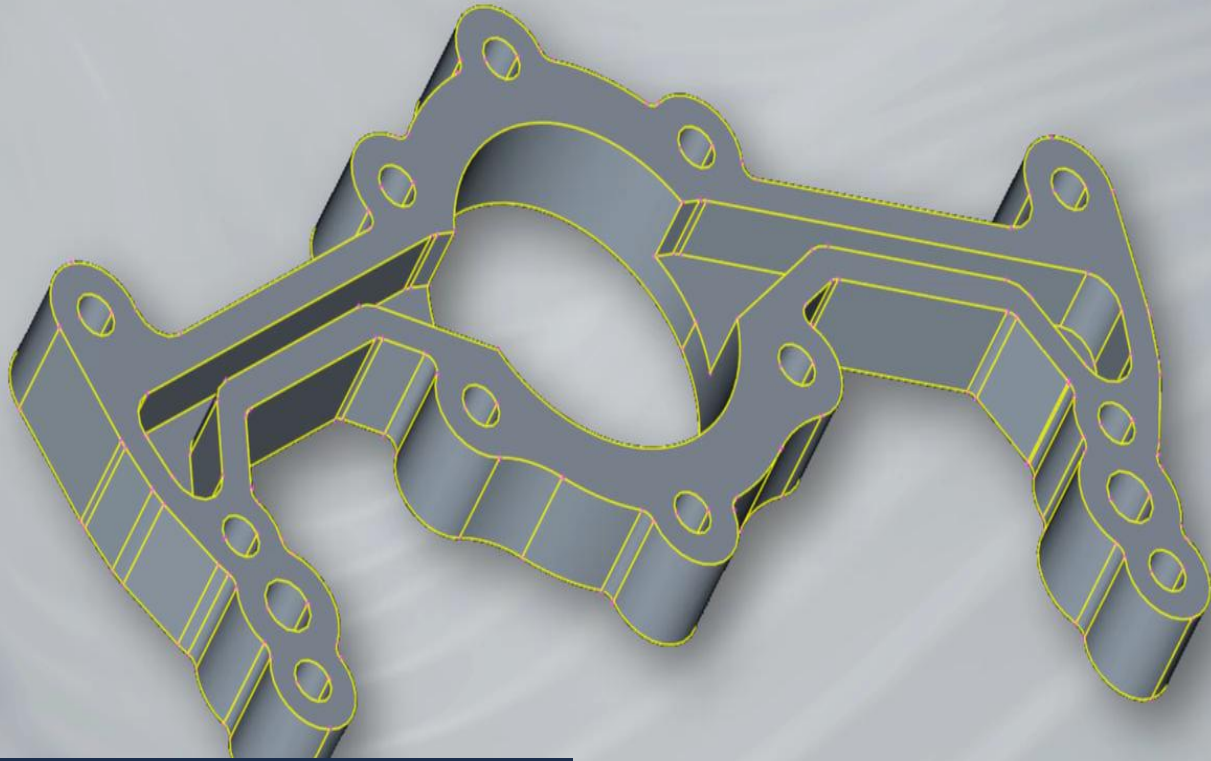


**Automatically identify
& edit revolute FE solids**

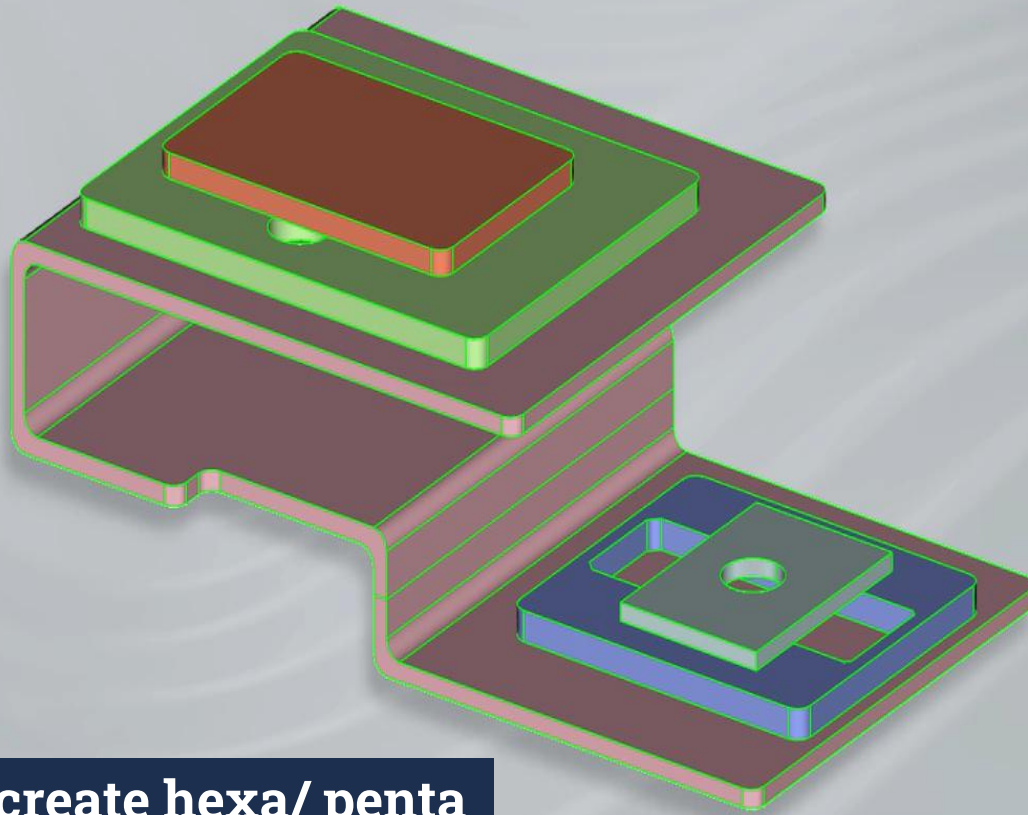


Proximity Refinement OFF

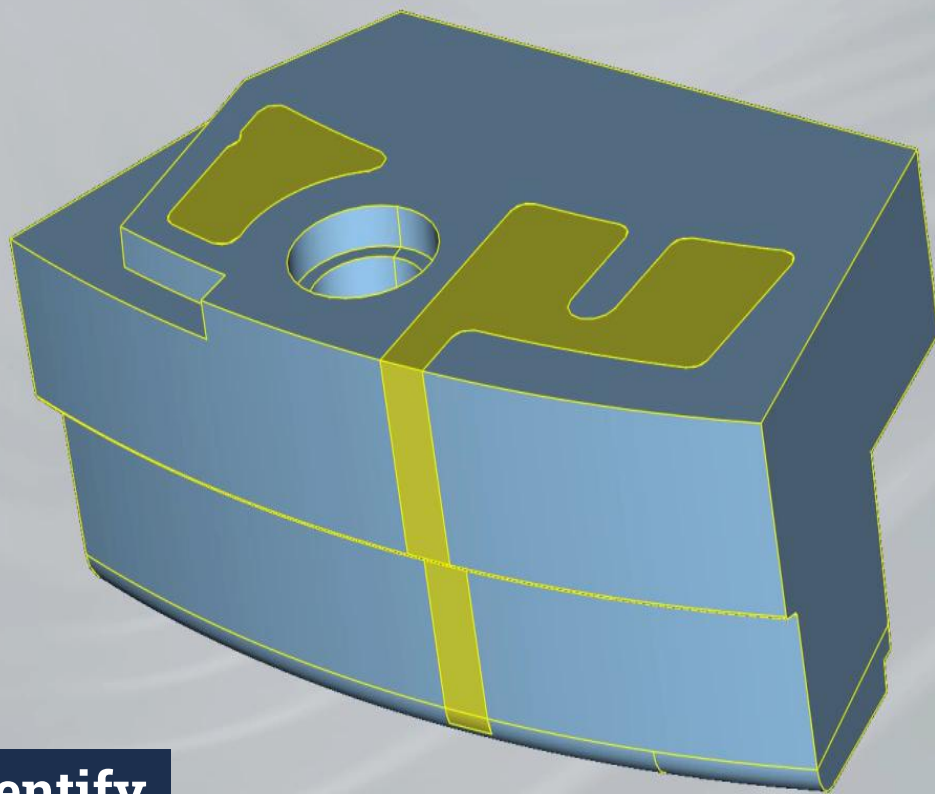
**Automatically enhance your
quality at small thickness regions**



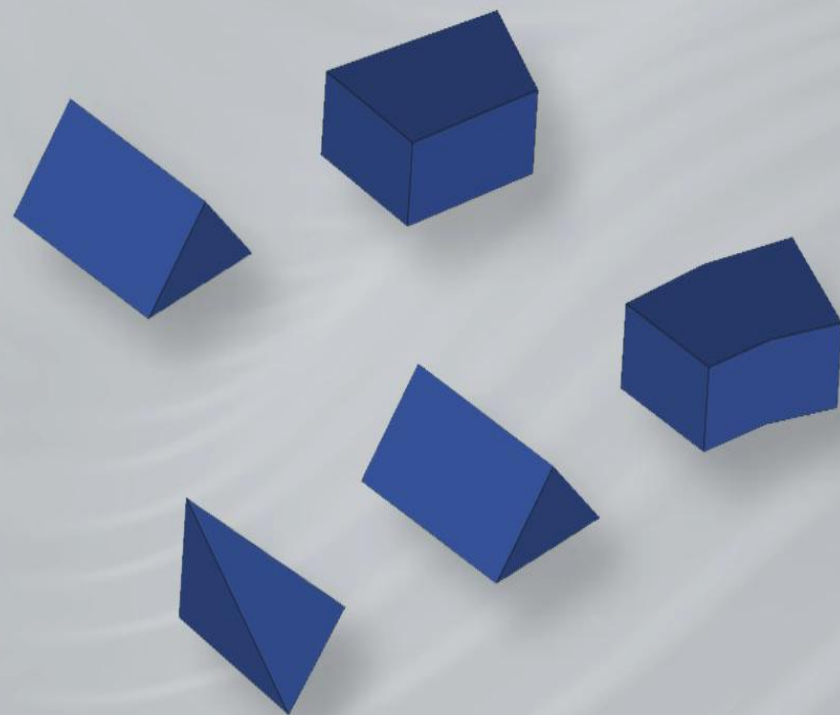
**Automatically create mappable
sub-volumes for hexa/ penta mesh**



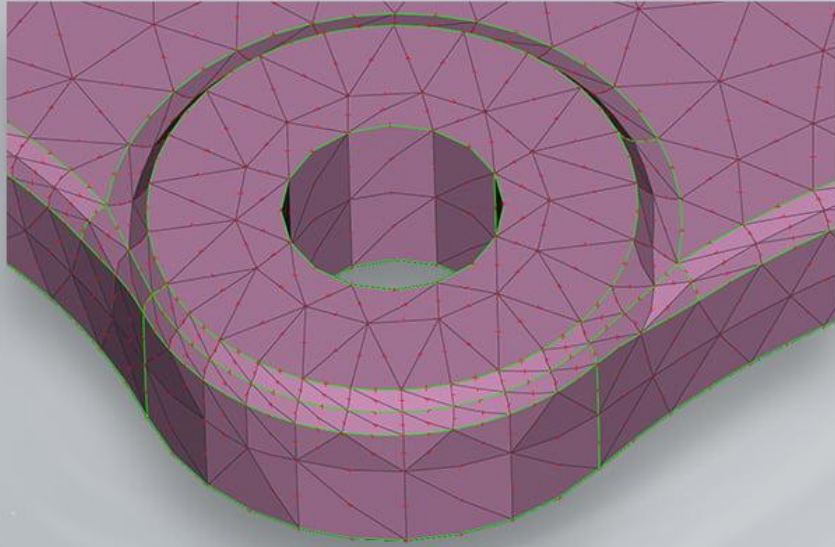
**Automatically create hexa/ penta
solids on extrusion direction**



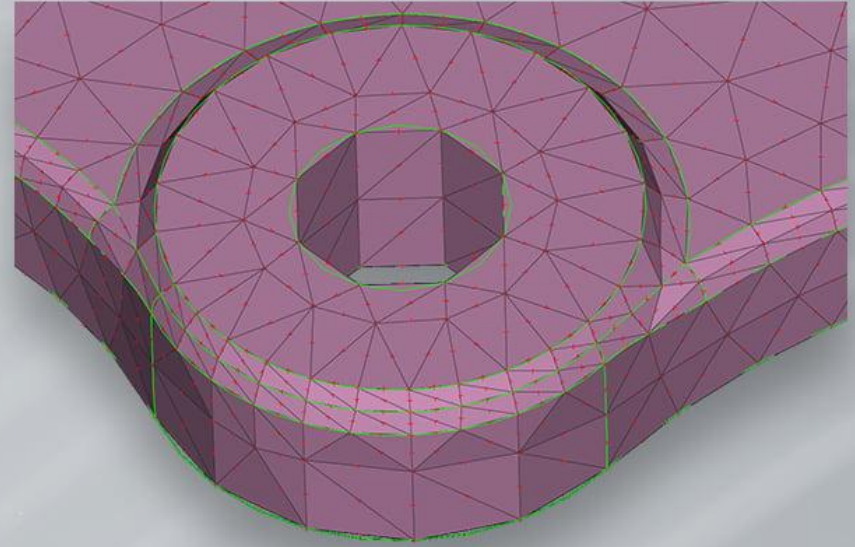
**Automatically identify
& connect overlapping faces**



**Create
high order solids**



On geometry



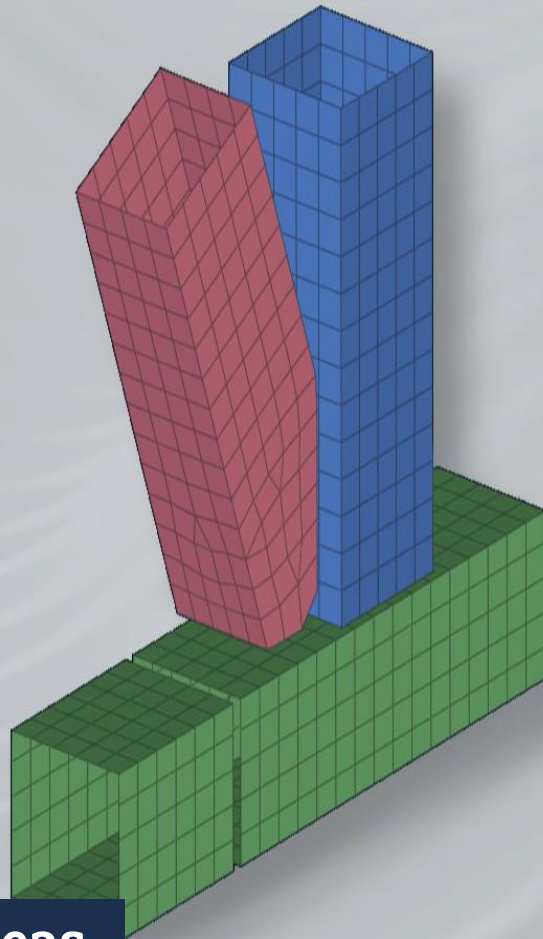
Collinear

**Place 2nd order nodes
at edge midpoint instead of on geometry**

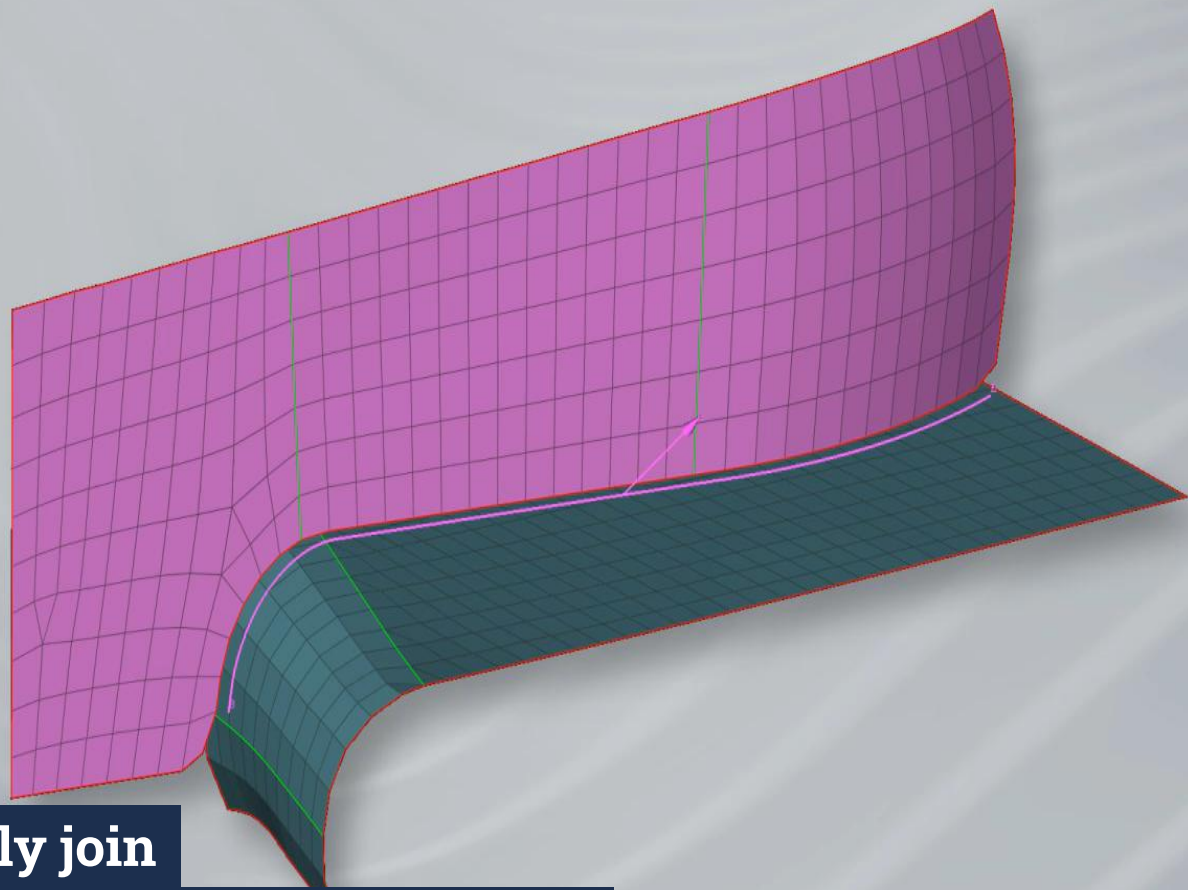


Connections & Assembly

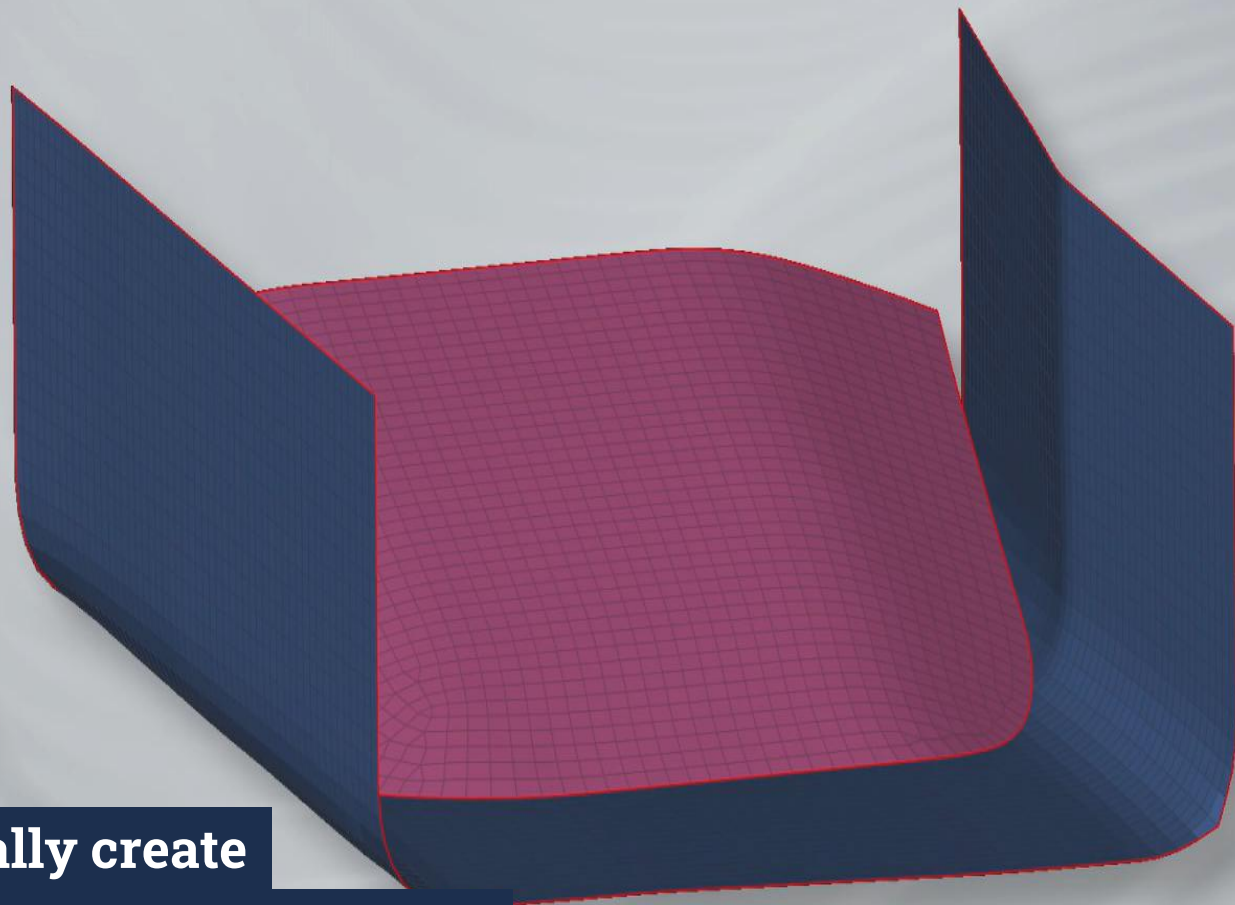




**Automatically create
seamwelds at junction areas**

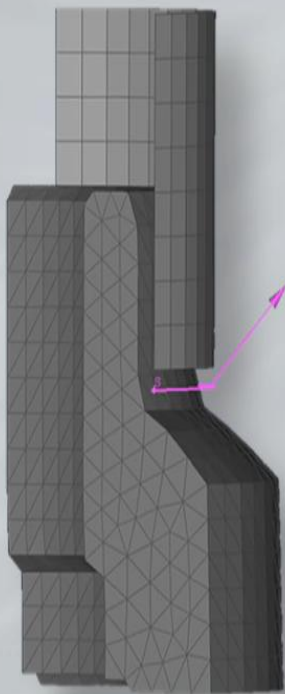


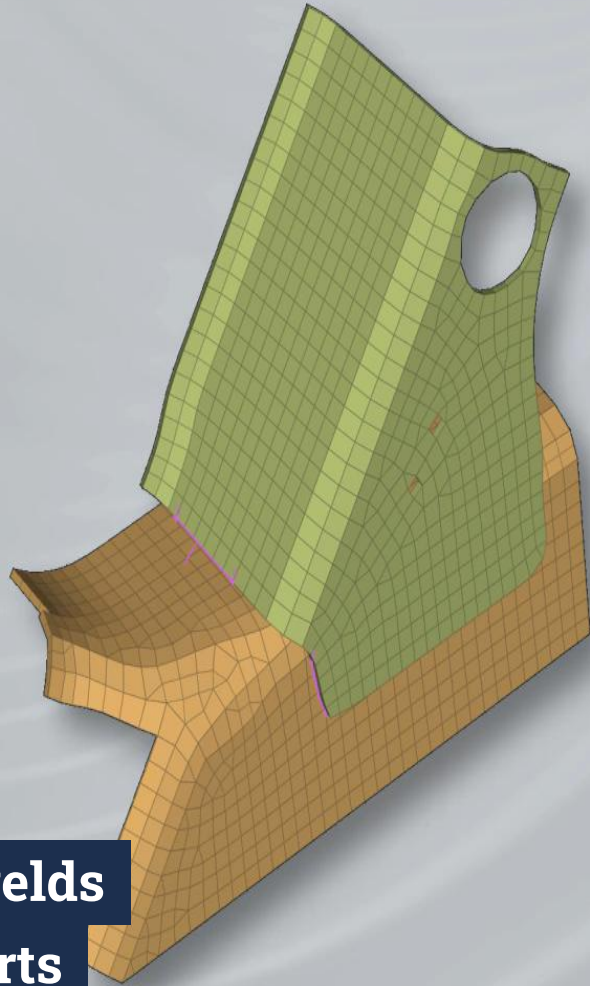
**Automatically join
perimeters around your seamwelds**



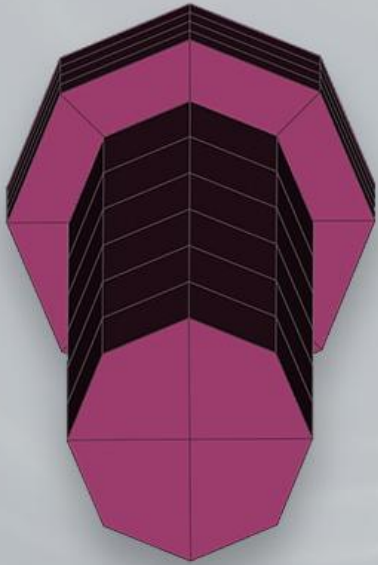
**Automatically create
hybrid Y-Joint & Overlap weld**

**Create FEMSITE
shells on solids**

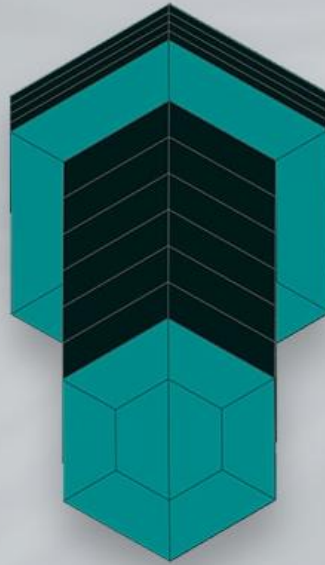




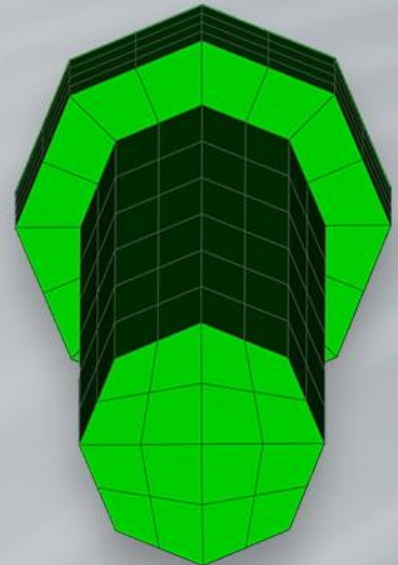
**Generate shell seamwelds
on solid connected parts**



4-quad octagon



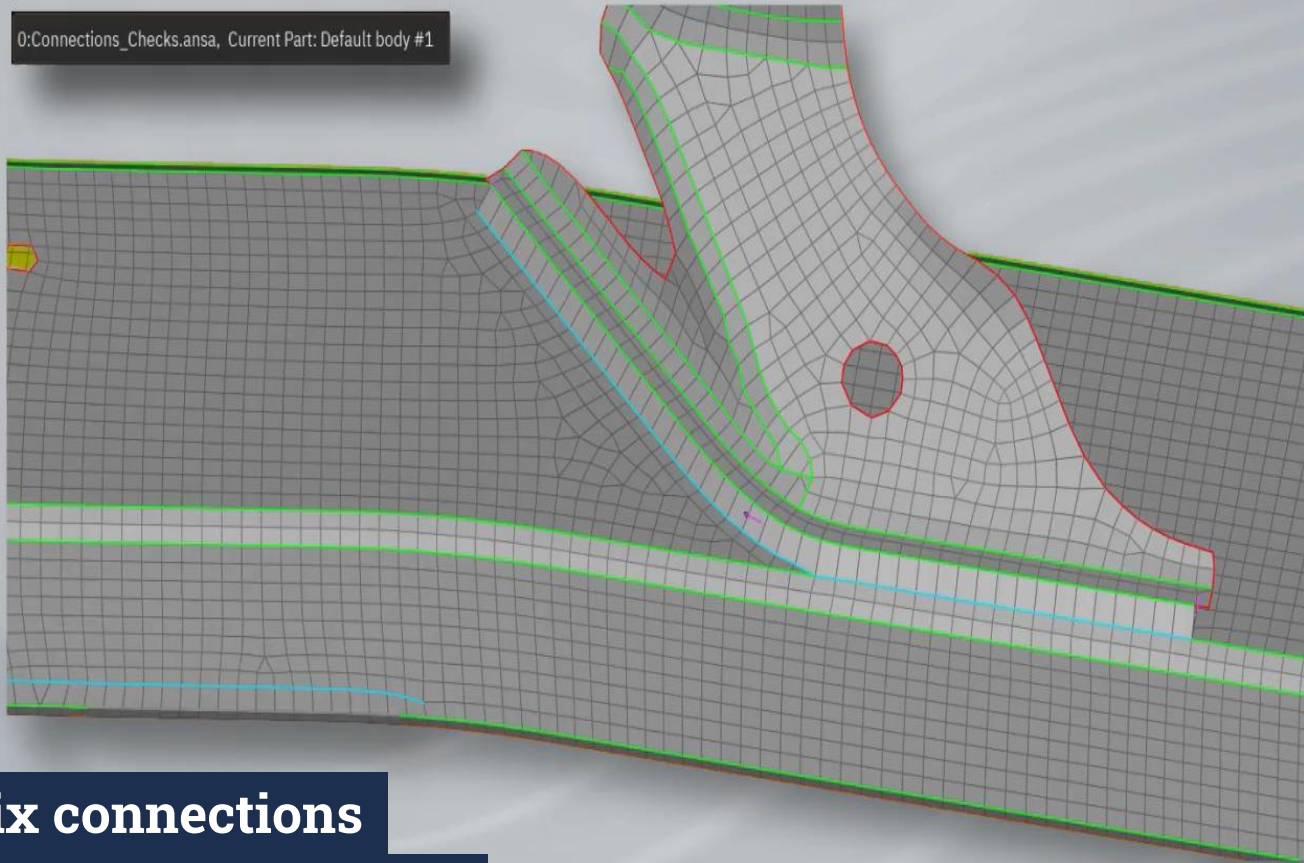
8-quad hexagon



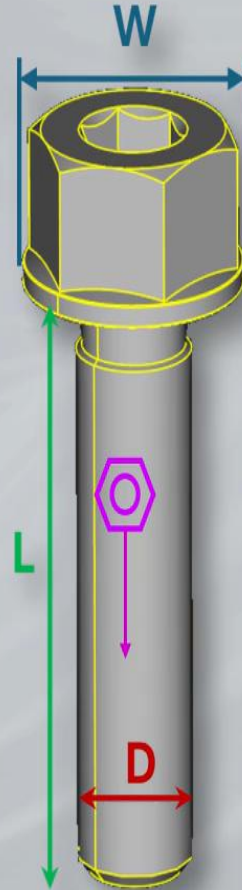
16-quad octagon

**Select between
different Solid Bolt patterns**

0:Connections_Checks.ansa, Current Part: Default body #1



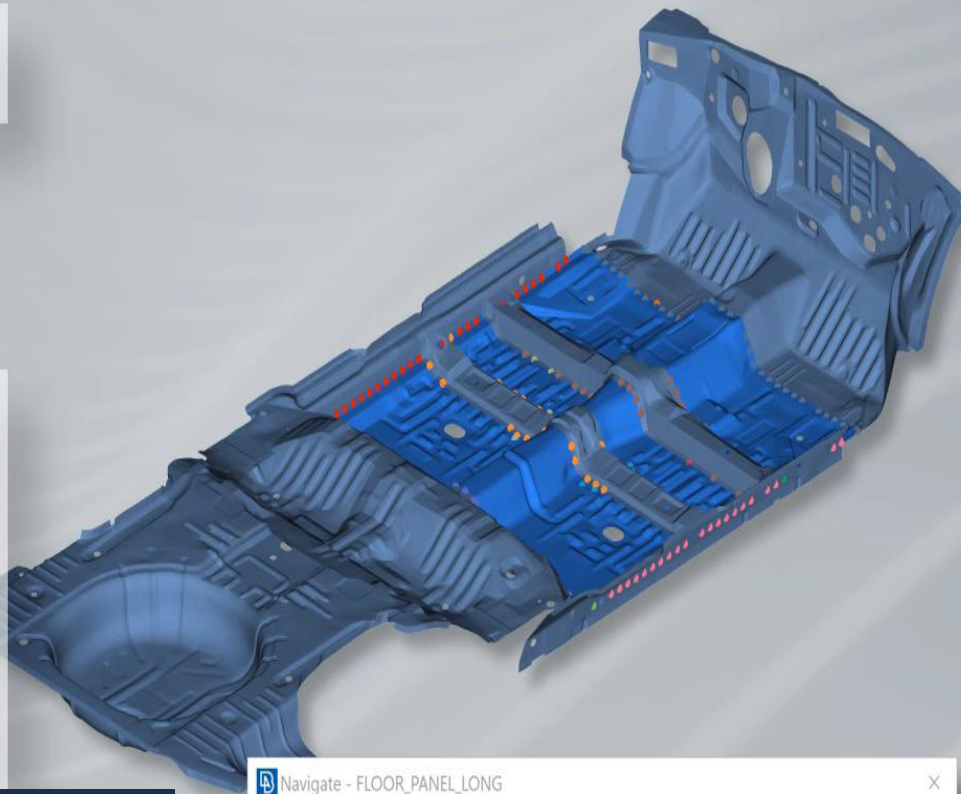
Check & fix connections
FE Representation real-time



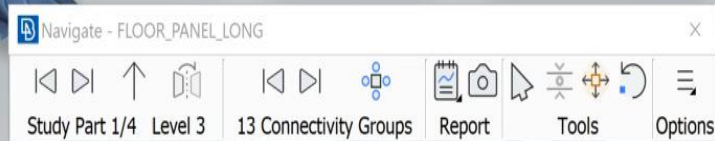
**Automatically create
bolts from their geometry**

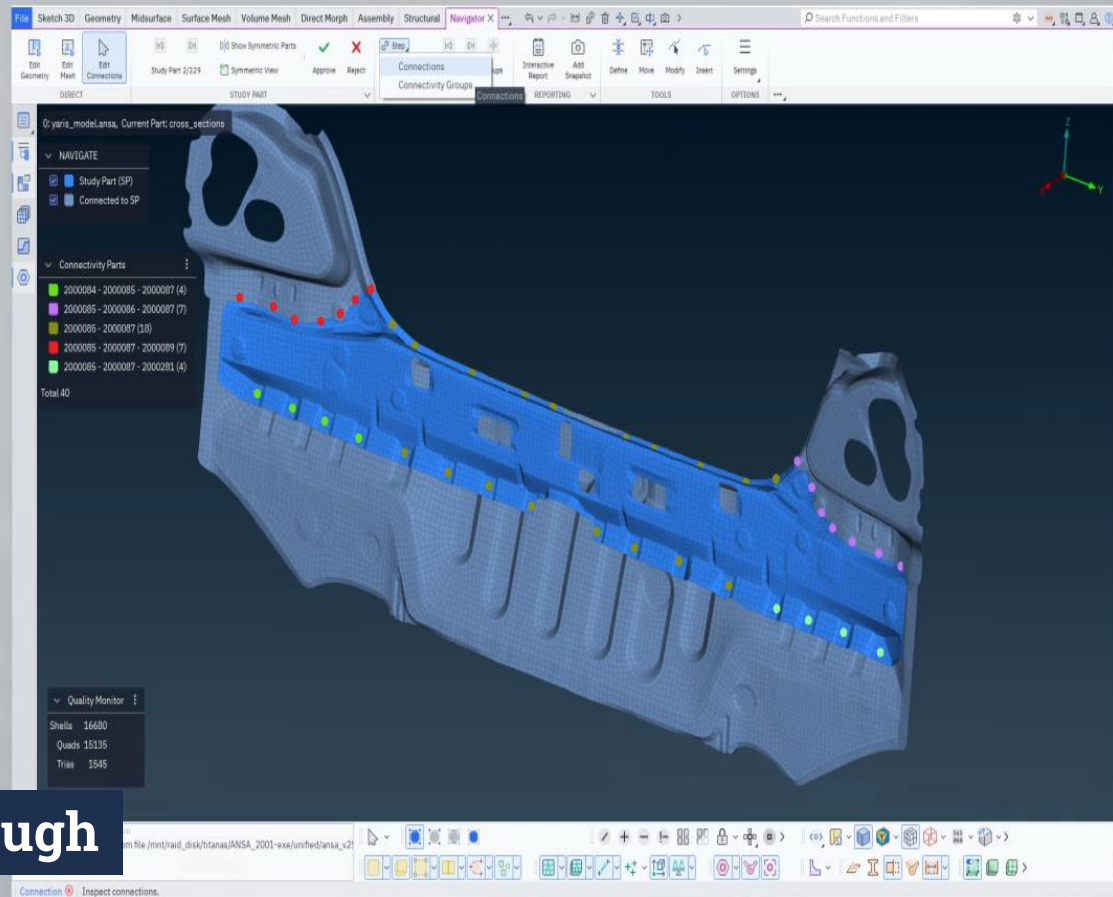


107014 - 108006 - 108016_1 (1)
107014 - 108016_1 (35)
108001 - 108016_1 (51)
108001 - 108016_1 - 119001_1 (1)
108002 - 108016_1 (25)
108002 - 108016_1 - 119001_1 (1)
108004 - 108016_1 (24)
108006 - 108016_1 (2)
108009 - 108016_1 (1)
108014 - 108016_1 (4)



**Navigate through your model
to check connectivity**





**Navigate through
Connections**

Connection Report

Date 8 May, 2023

Total Welds: 2571

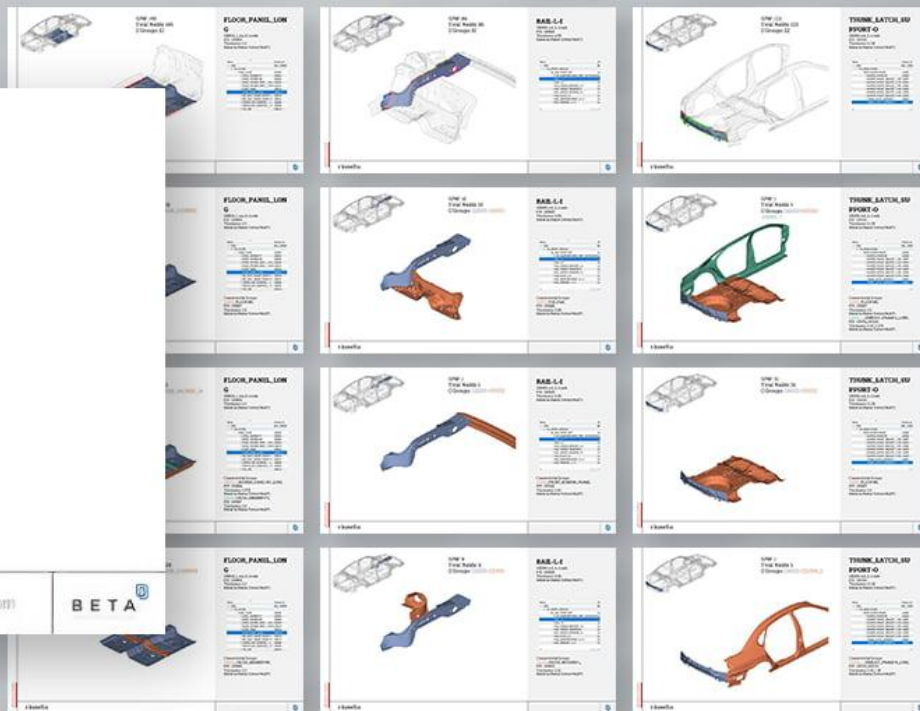
- Spotwelds: 2456
- Adhesives: 115

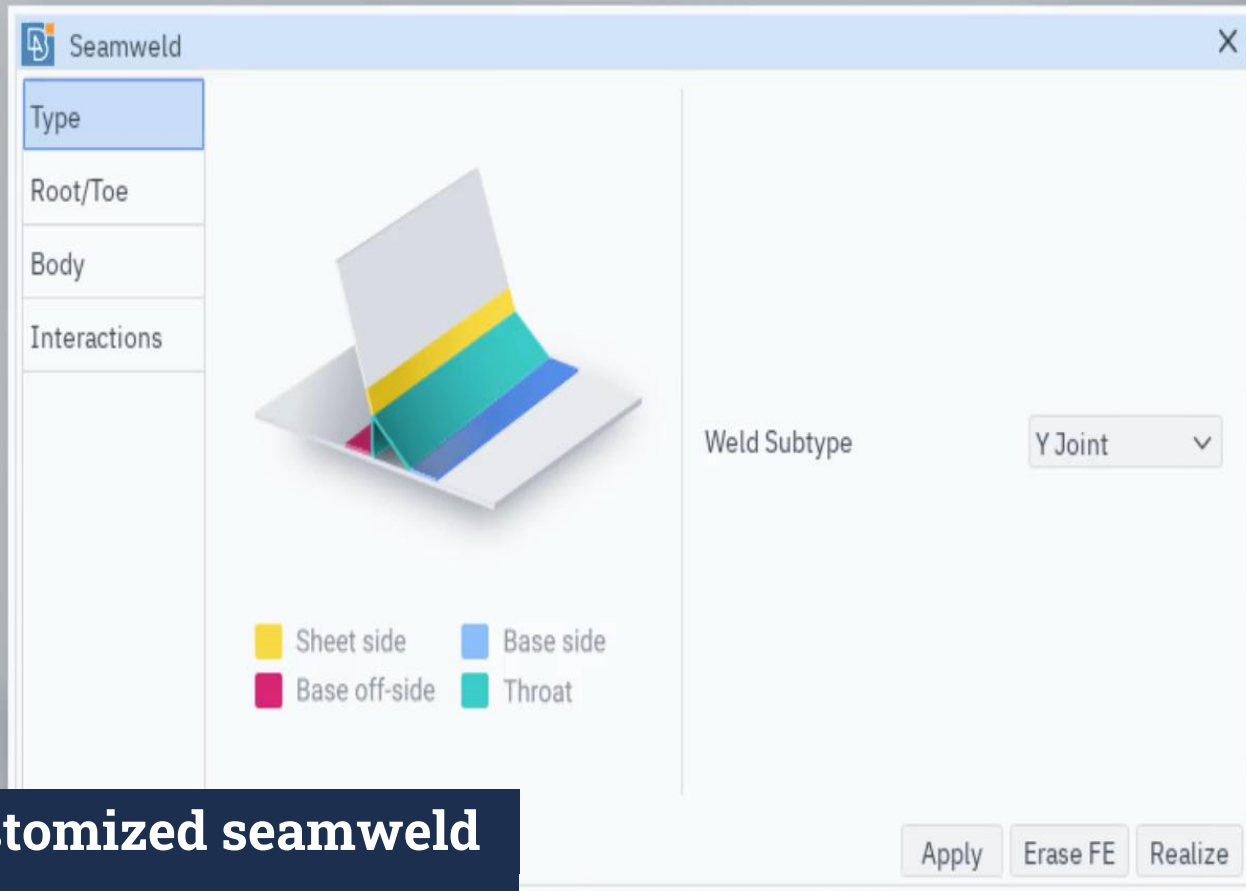
Filename: version221x_master_failure_time_with_spotwelds_blank_opttool.ansa.gz

www.beta-cae.com

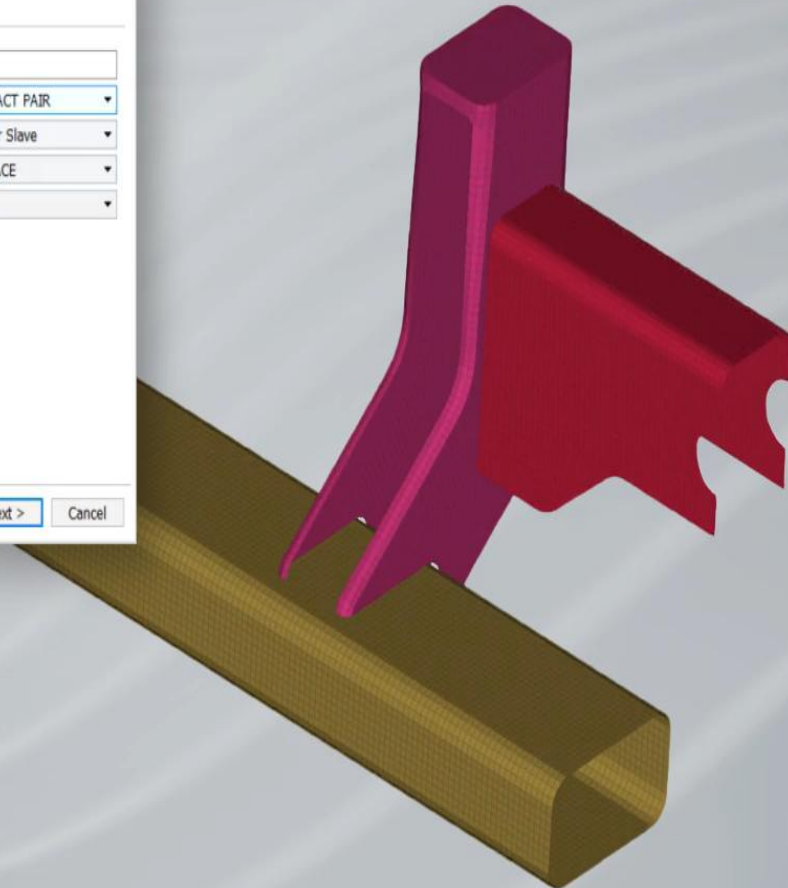
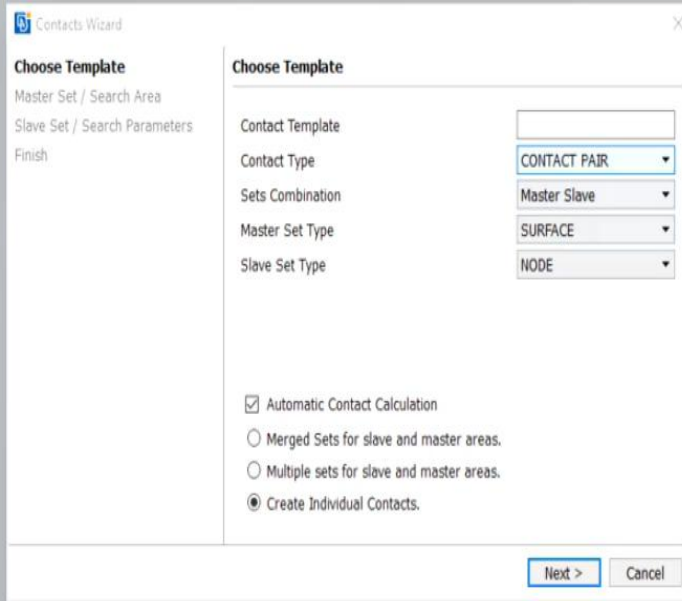


Create
a navigation Report

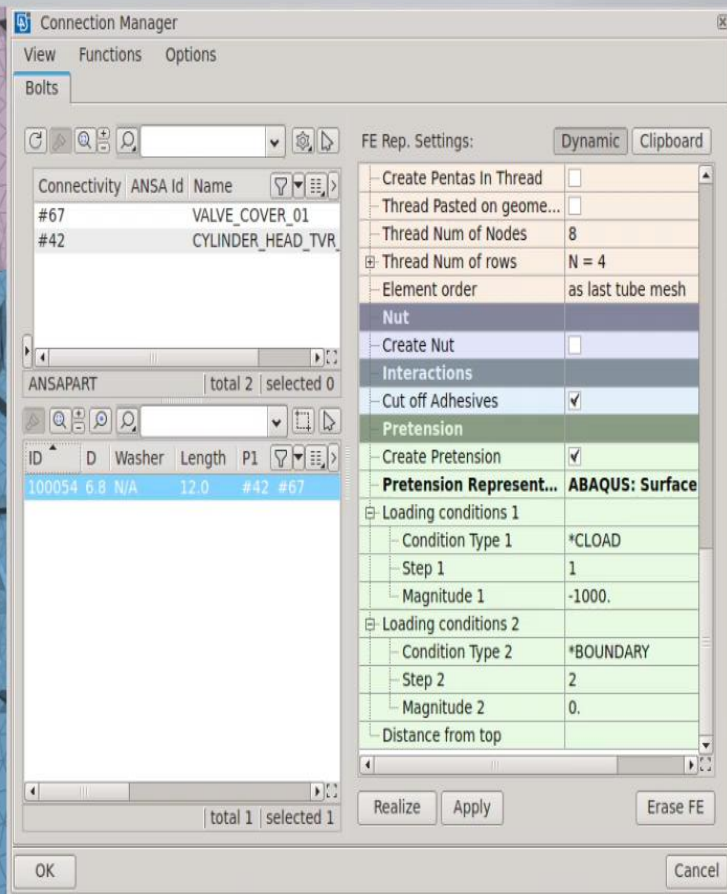
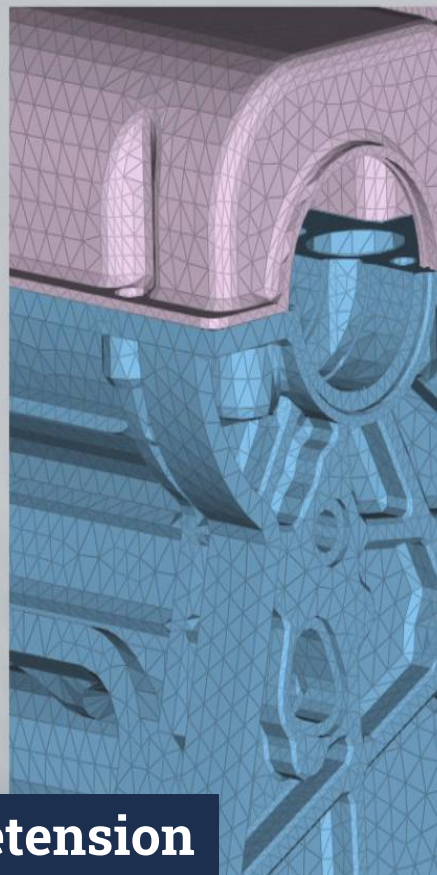




**Design customized seamweld
FE Representations in parallel**



**Automatically
define Contact**



**Generate pretension
parametrically for Solid Bolt**