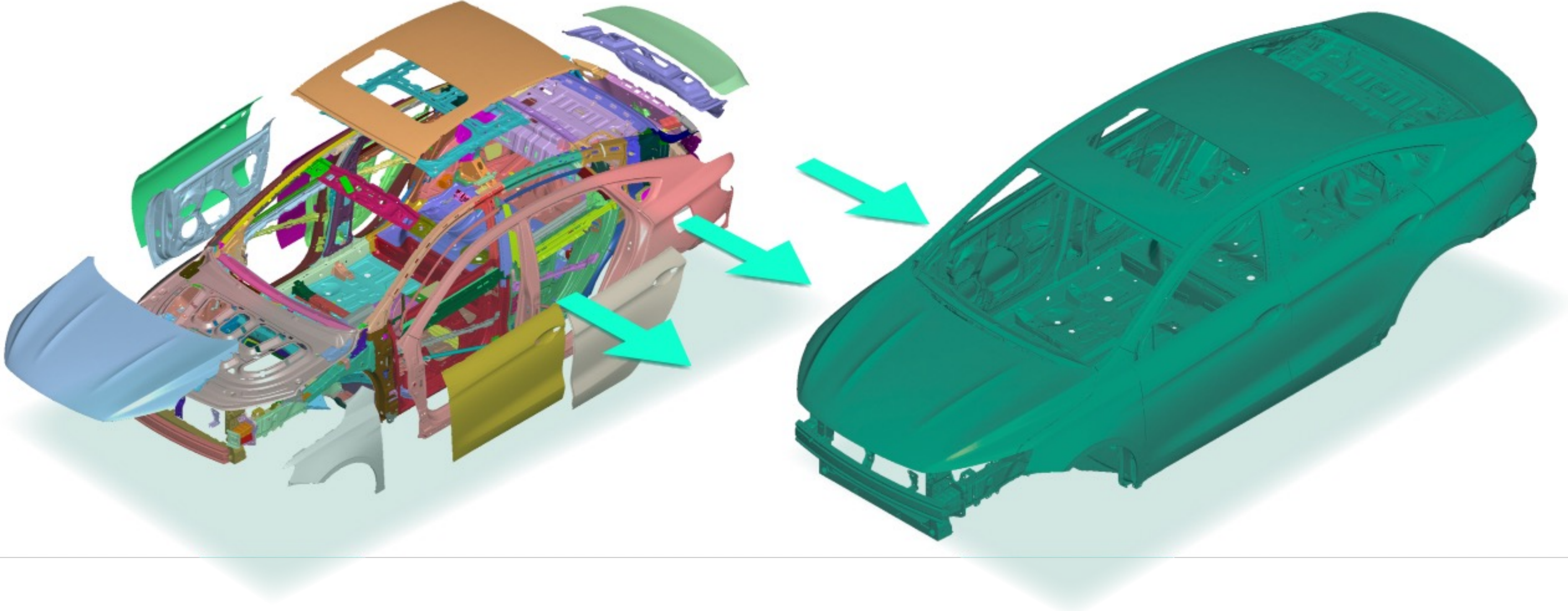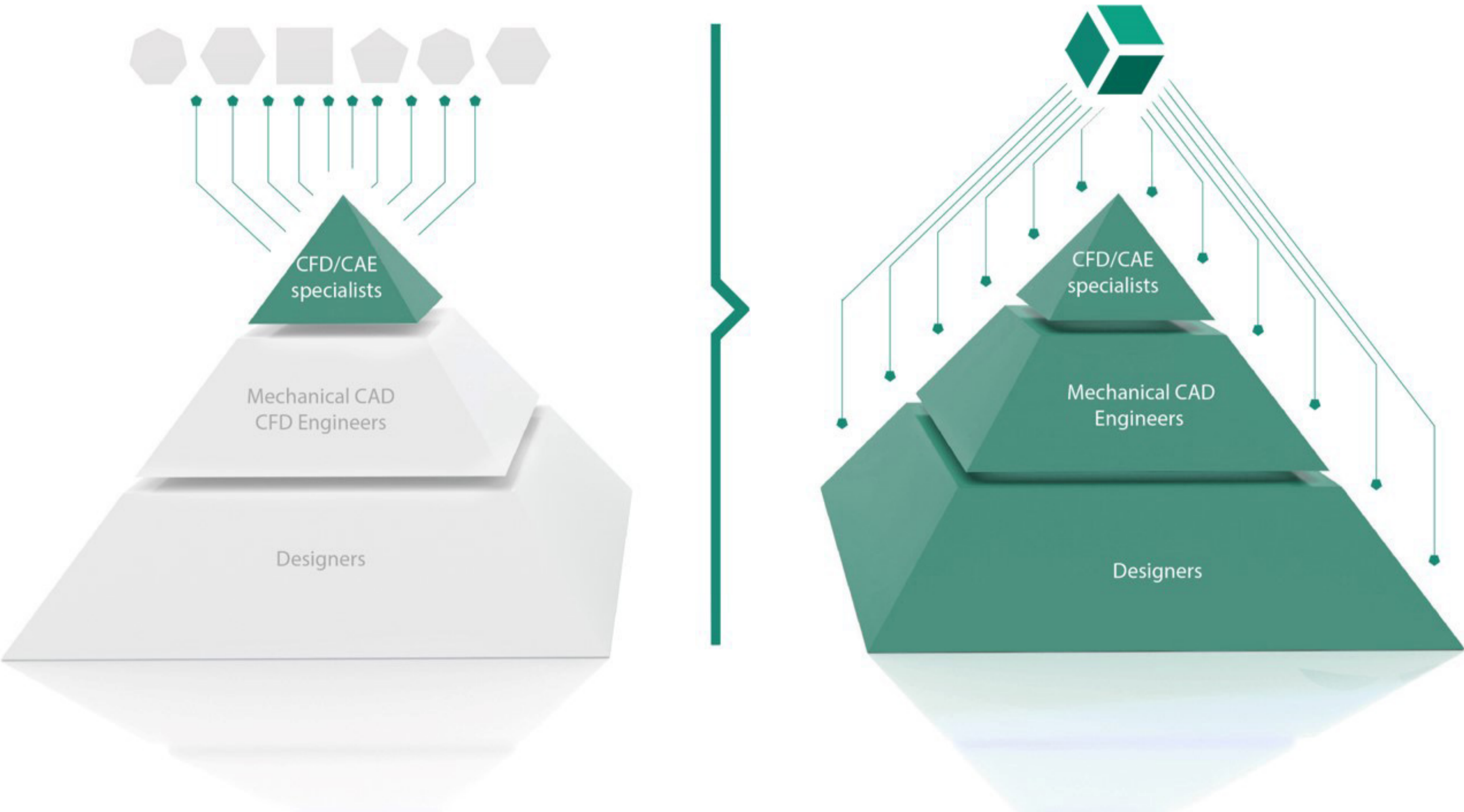# alsim
Data Cleaning

Bridge CAD & Simulation
autonomously

ess

NEXT GEN SOFTWARE SOLUTION
FOR MESH PREPARATION

Introducing Alsim Vision:
Democratize the simulation – CFD for SMEs

Main reasons for getting alsim Data Cleaning

Fully automatic
CAD data preparation

Watertight geometries
ready for simulations

Delivering optimized data
Autonomously with no need
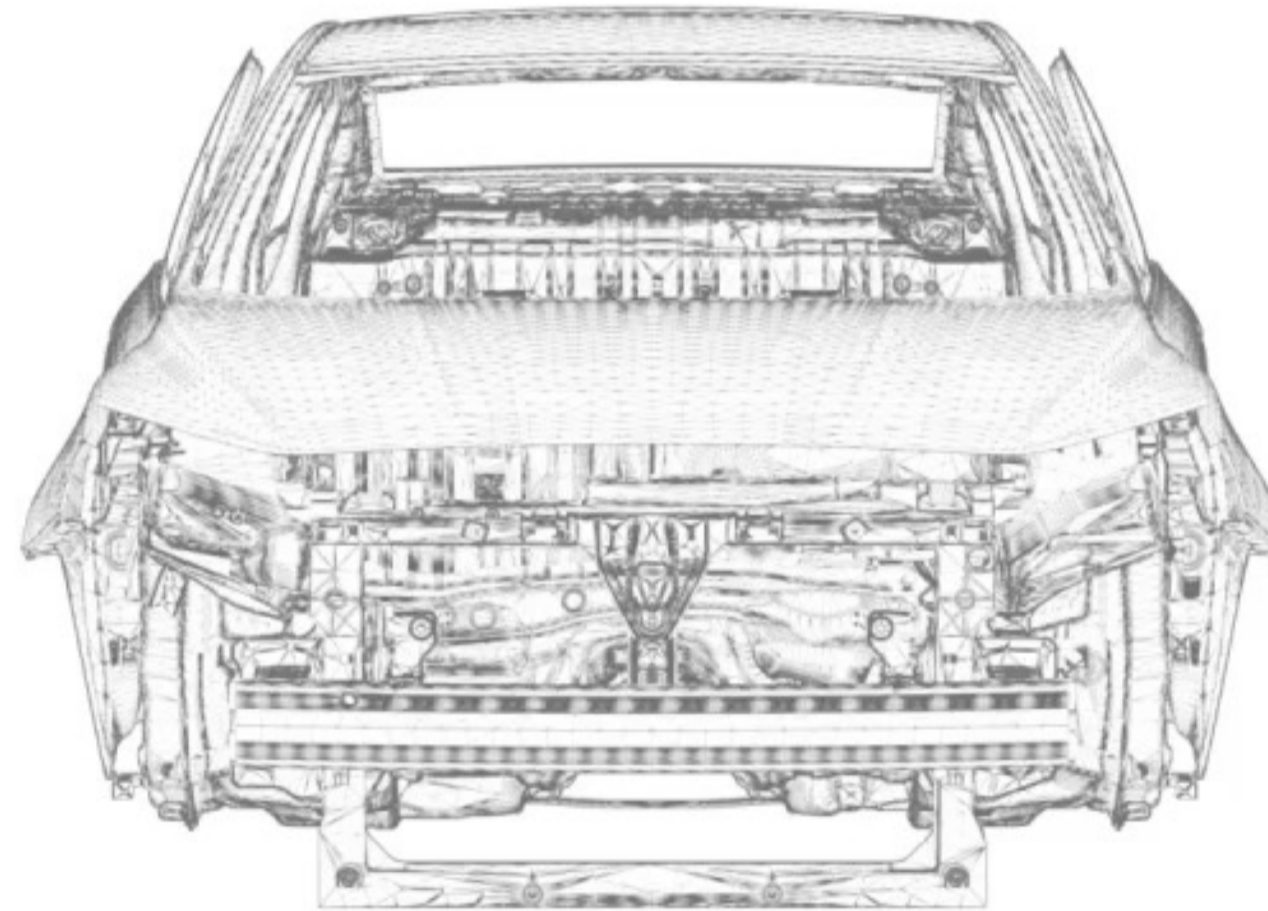Of deep knowledge of 3D software

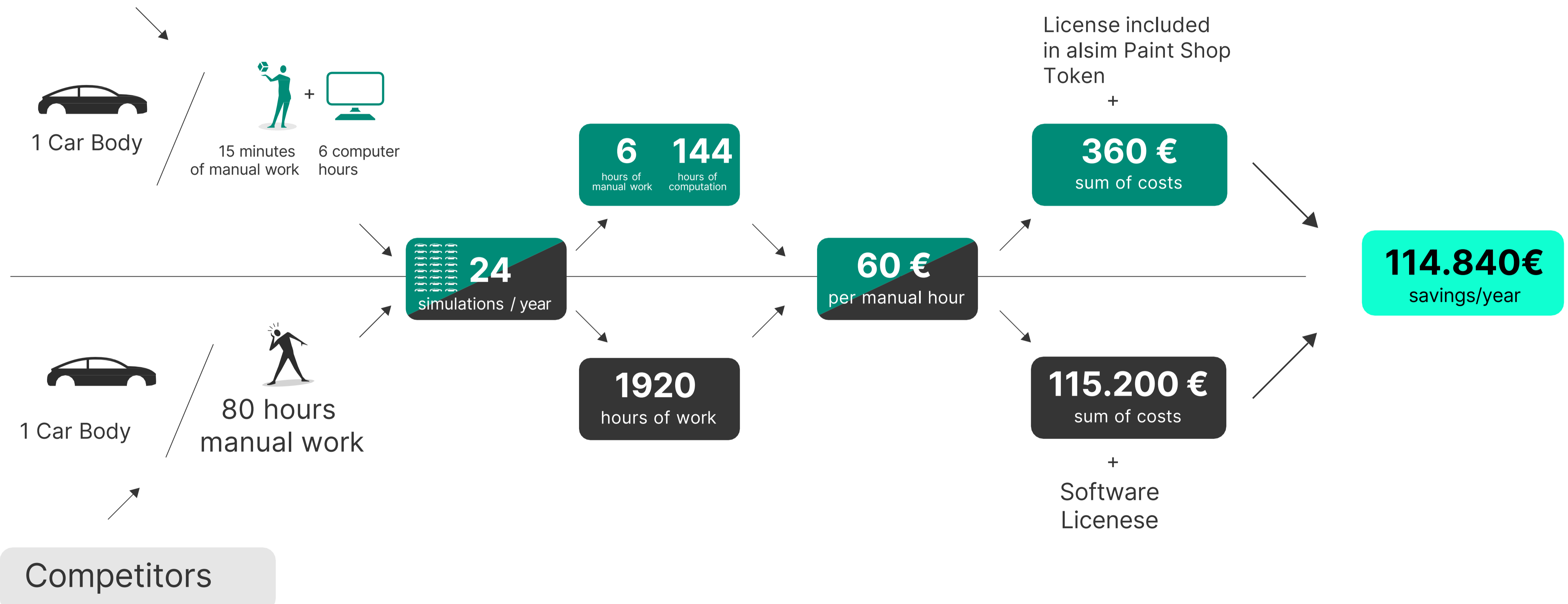# Manual Steps to prepare data for simulations can be tedious

1 → 2 → 3 → 4 → 5

Manual CAD Cleaning

Surface Mesh Generation

Offset Surfaces

Boolean Unit Wrapping & Merging Intersection Faces

Surface Mesh Cleaning Volume Mesh Generation

Alsim Data Cleaning offers fully automatic approach

Input

3D Scan

CAD

JT, Nastran, STL, WRL,...

alsim Data Cleaning

- Repair
- Merge
- Reduce
- Prepare

Export

3D Print

CFD

CAE

The software was developed to optimize data for simulation.
It is impossible to reach such results by manual efforts.

Return of Investment

alsim Data Cleaning (logo)

1 Car Body → 15 minutes of manual work + 6 computer hours

24 simulations / year

6 hours of manual work **144** hours of computation

60 € per manual hour

License included in alsim Paint Shop Token +

360 € sum of costs

114.840€ savings/year

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1 Car Body → 80 hours manual work

1920 hours of work

115.200 € sum of costs

+ Software Licenese

Competitors

Main reasons to use alsim
Data Cleaning

Unique

Only autonomous **data cleaning** and **pre-processing** software world-wide

Functional

Makes **CAD** or mesh **ready** for **simulation**

Fast

Connects **complex mesh extremely quickly**
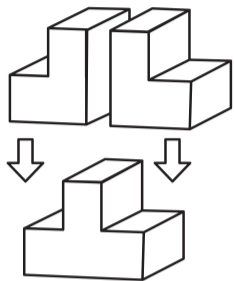
(e.g. body in white in about 6 hours)

Versatile

A **wide range** of supported **formats**
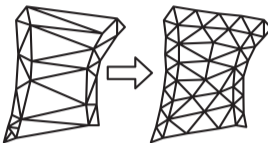
(CATIA, NX, NASTRAN, FLUENT, STAR CCM+, OPENFOAM)

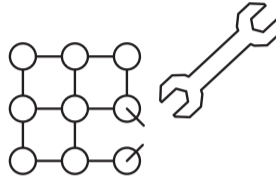## User friendly

A powerful command line with a **user-friendly GUI**

Features

Merge

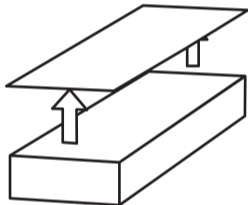Merge different parts of the mesh to become one object

Remesh
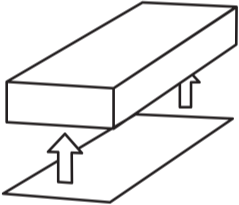
Create a more efficient and smoother mesh

Repair

Repair broken parts of your mesh to ensure a valid outcome
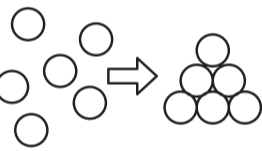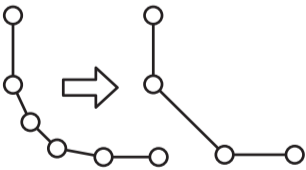
Sheet to Solid

Transform plane objects to solid ones

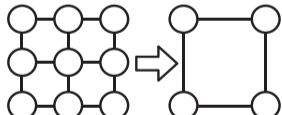## Solid to Sheet

Transform solid objects to plane ones

Prepare

Prepare your mesh for Simulation, printing etc.
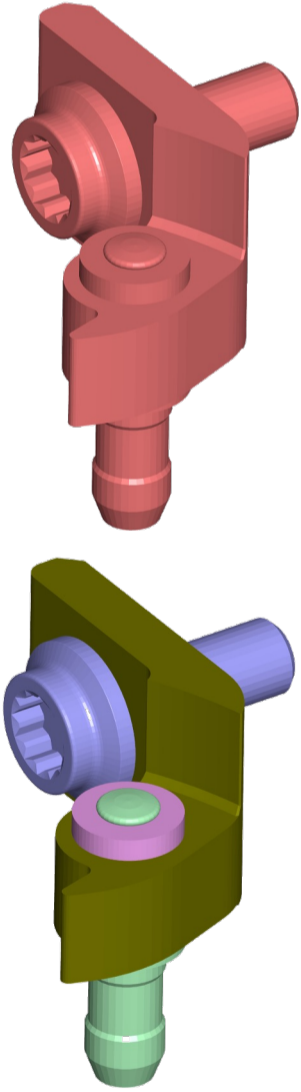
De-feature

De-feature your mesh

Reduce

Reduce your mesh to increase performance

ess

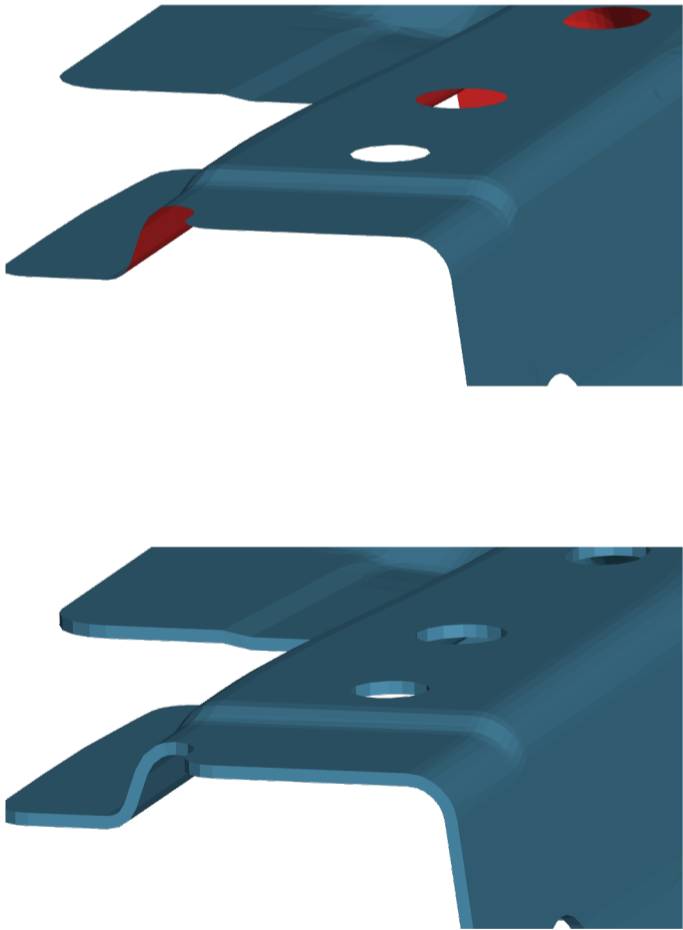# Automatically performed operations of alsim Data Cleaning step by step
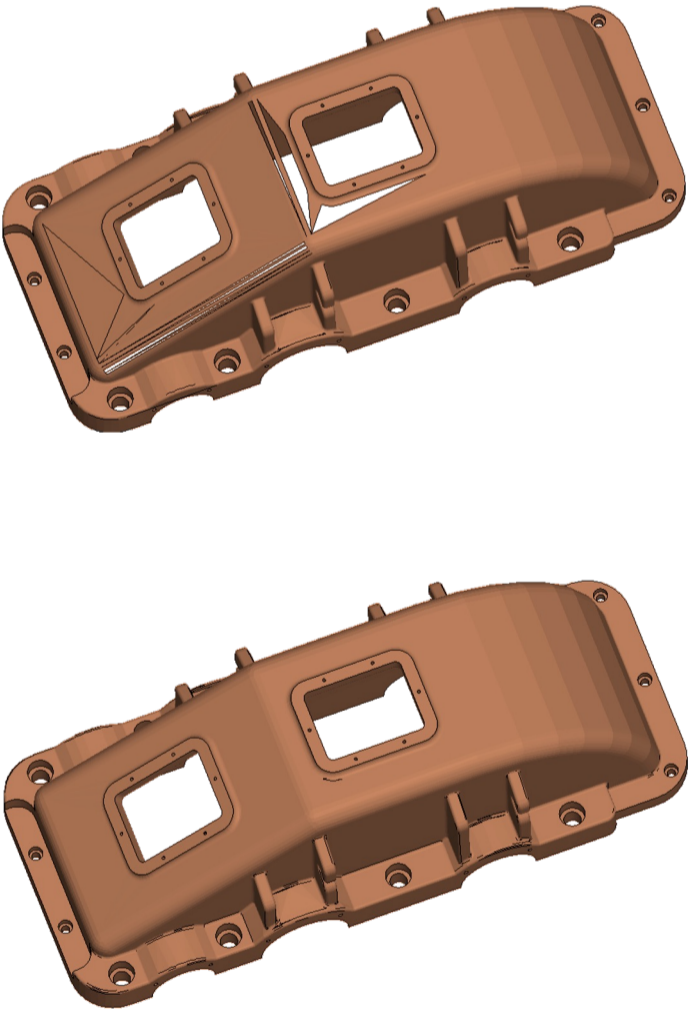

1 Split Parts

2 Remove Duplicates
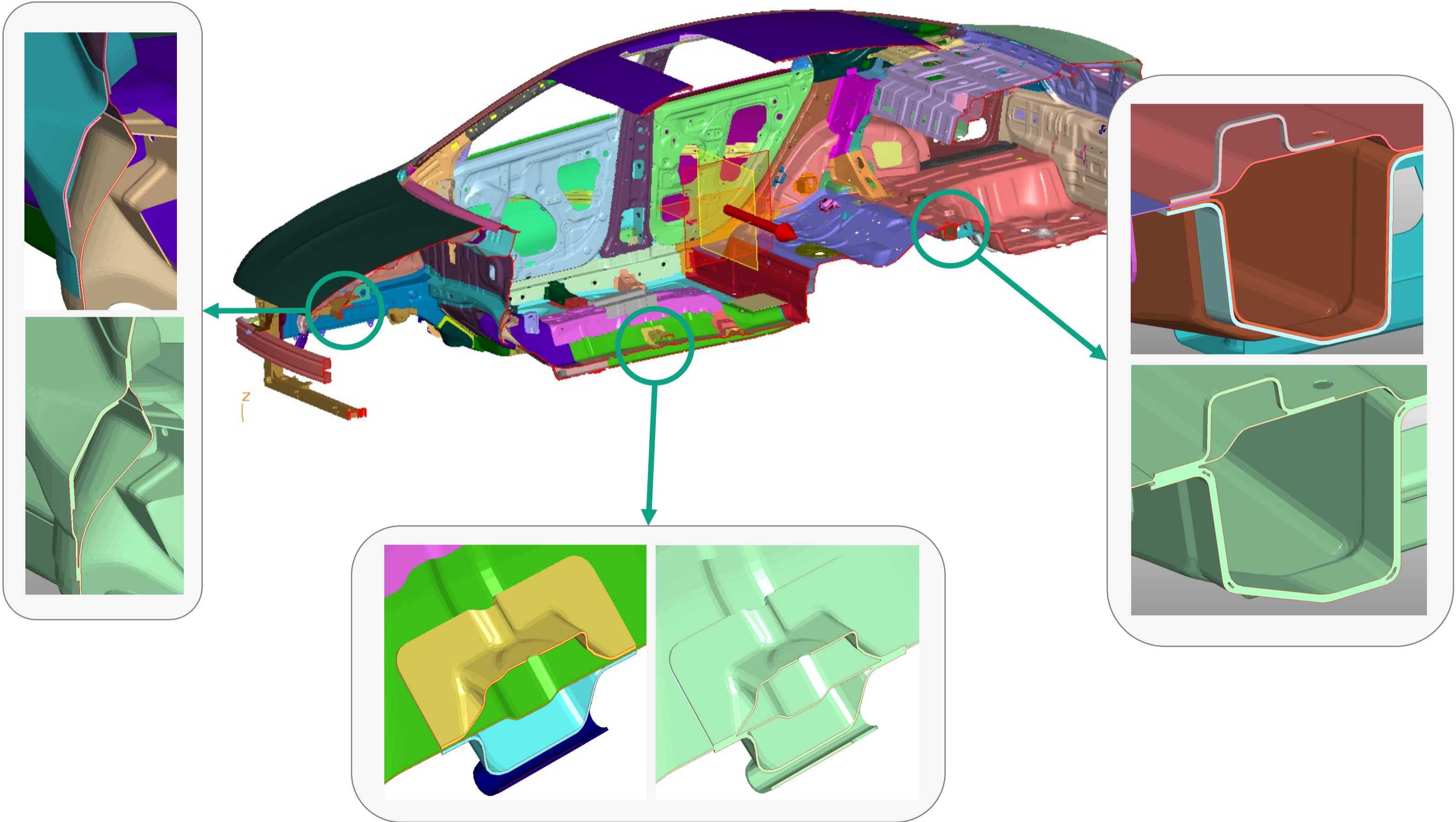
3 Sheet to Solids

4 Repair Solids

5 Merge Parts

Showcase: BIW Mesh for CFD in 6 hours automatically!

alsim Data Cleaning

Time	Step
30 mins	Split
15 mins	Remove Duplicates
15 mins	Sheets to Solids
3 hrs	Repair
2 hrs	Connect

6 hours calculation time

ess

Thank you

![ess logo]

Let's Work Together

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