# SIMUFORM®
# SIMILIA

## Power additive for virtual layout

**Automotive Circle**
**Car Body Parts**
**27.-29.September 2022 | Bad Nauheim, Germany**

Your contact: Dr. Christian Klimmek
klimmek@simuform.com | + 49 231 398 189 66

SIMUFORM®

# Efficiency

**K**nowledge on all relevant data
**just-in-time**
from any source, at any time, at any place.

# Heterogenous engineering data, storage and access

**SIMUFORM®**

**Local site A**
File based data
Feasibility check

**Local site B**
File based data
Simulation
- NVH
- Crash
- Fatigue

**Local site A,B,C (spread information)**
Document management system
Technical documents and requirement sheets

**Global storage**
PDM-PLM System
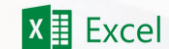Geometry CAD design

**Local site B**
ERP-System
Supply chain management

**Local site C**
File based data
Cost calculation

Excel

**Supplier based storage**
Local database
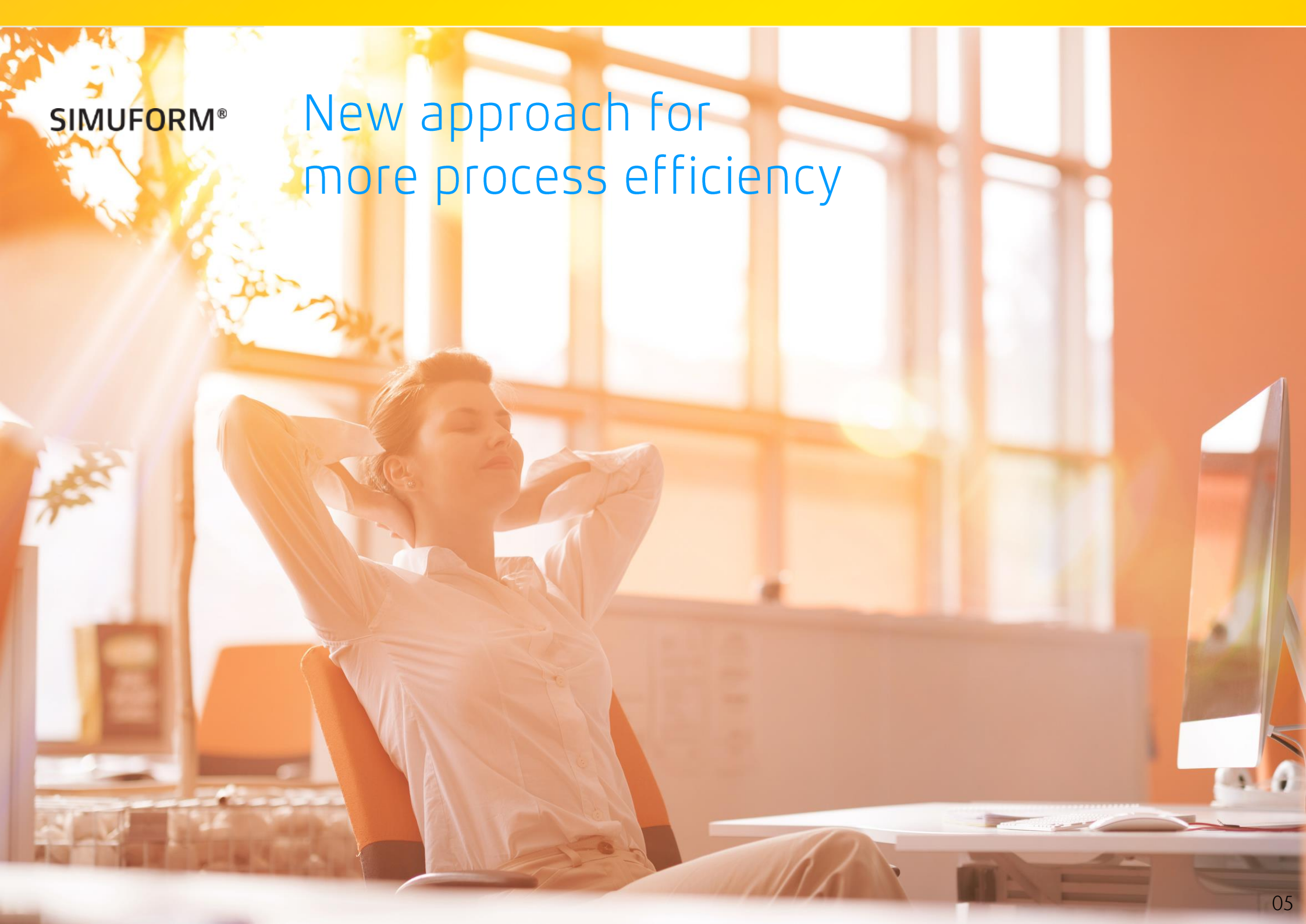Process, tool and manufacturing design.

# Pain points

- Loss of engineering know-how

- Redundant work is costly in terms of time

- Redundant work is costly in terms of ressources

- Lack of quality due to higher failure probability

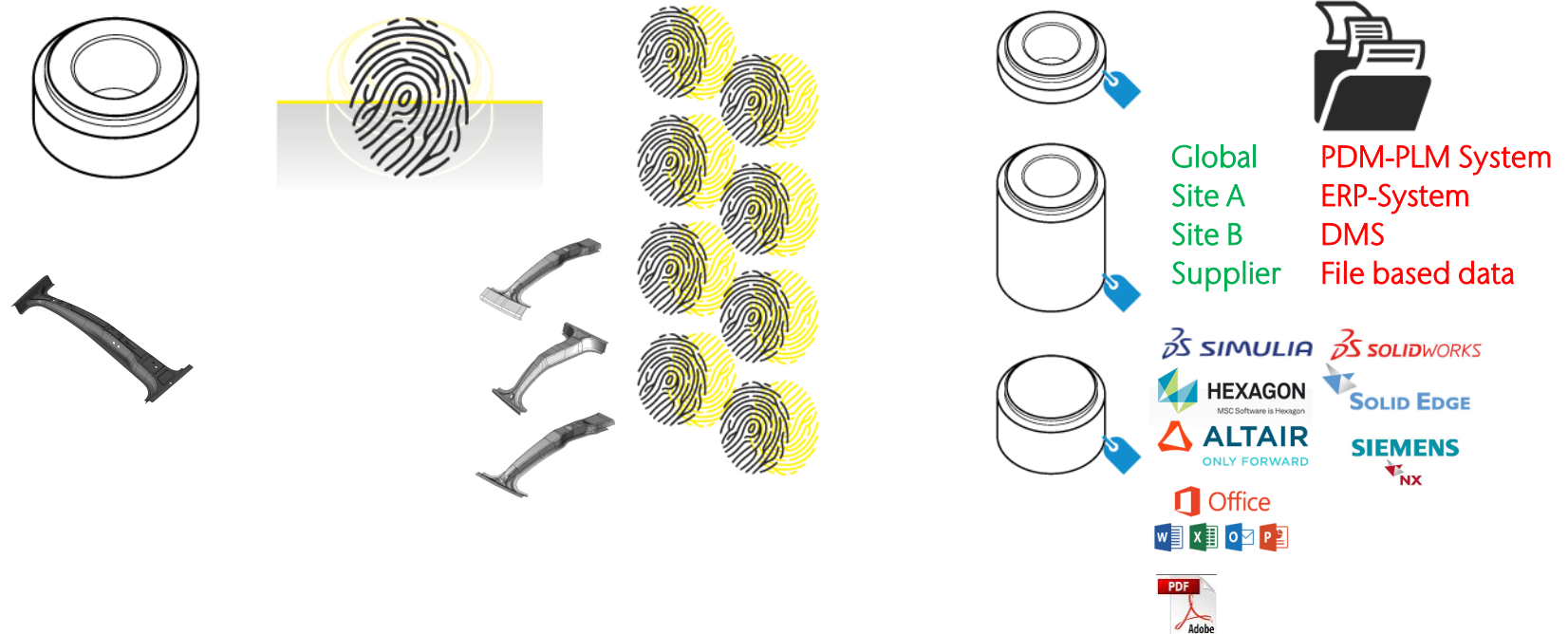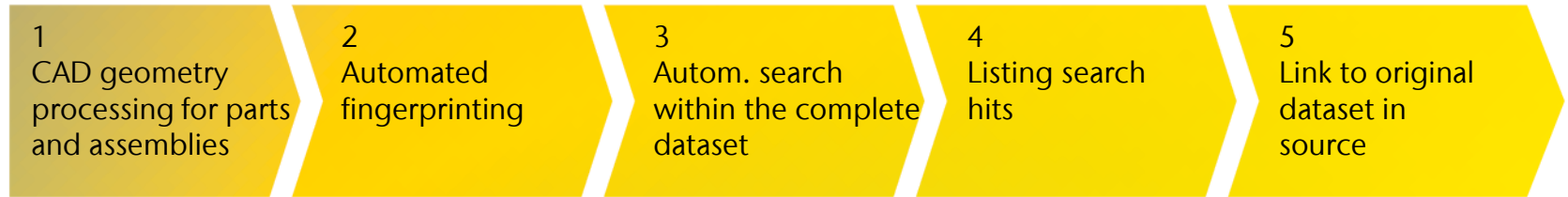- In total: Loss of efficiency

# New approach for more process efficiency

# New approach:
# Deep dive into smart search technology

**SIMUFORM®**

- Automated data processing.
- > 0.5 Mill. geo queries per second
- In memory computing
- Invariant 3D-search
- Format independent
- Storage independent
- Location independent

1) 3D-GEO-FINGERPRINT for fast geometrical retrieval.

2) Sophisticated and automated data indexing.

3) Integrated business logics for smart data-mesh.

| 1 CAD geometry processing for parts and assemblies | 2 Automated fingerprinting | 3 Autom. search within the complete dataset | 4 Listing search hits | 5 Link to original dataset in source |
|---|---|---|---|---|

Global — PDM-PLM System
Site A — ERP-System
Site B — DMS
Supplier — File based data

DS SIMULIA   DS SOLIDWORKS
HEXAGON   SOLID EDGE
MSC Software is Hexagon
ALTAIR   SIEMENS
ONLY FORWARD   NX
Office
W X O P
PDF Adobe

# Fast data and information access

**SIMUFORM®**

- ⊕ Fast visualisation

- ⊕ Fast search within all accessed data

- ⊕ View all meta data

- ⊕ Integrated 3D-CAD-Viewer

- ⊕ Filtering ability

- ⊕ Sophisticated geometry retrieval

- ⊕ Integration in CAD systems

- ⊕ Linking data to its origin, PDM / ERP / Engineering system.

# Controlled visualization access

- Sophisticated 3D-Visualisation.

- Automated part overlay

- Red-green differential view

- Measuring ability

- Qualified model validation

- Multi-CAD-Technology

- Independent from core system
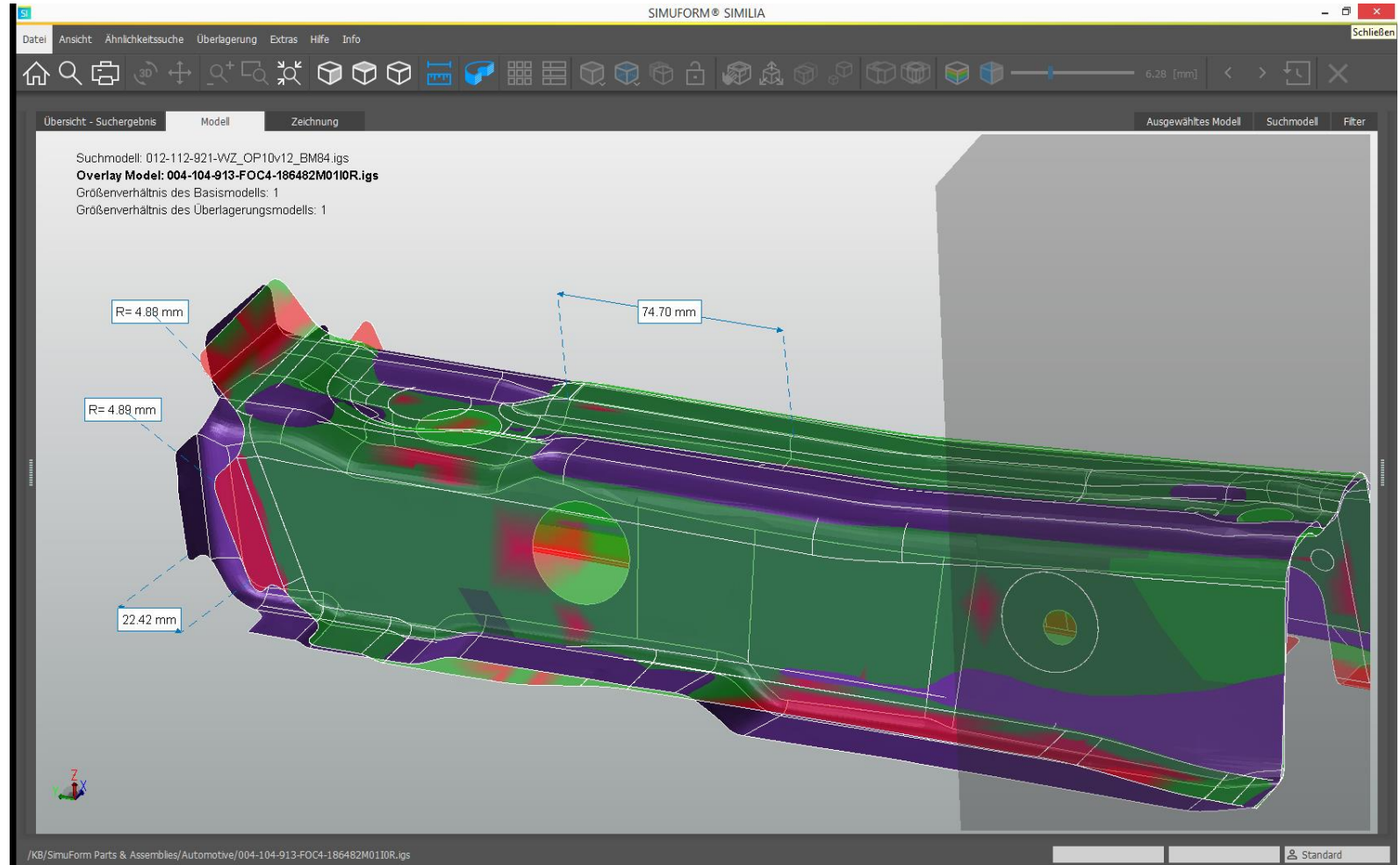
# Segment search ability

## Sub domain search

- Subdomain search for geometry elements
- Interactive selection
- Filtering operability
- Multi-CAD-Technology

**Marked segment / area**

Example: AUTOMOTIVE B-Pillar
Mark area of interest interactively.

SEGMENT SEARCH
SIMUFORM®
SIMILIA
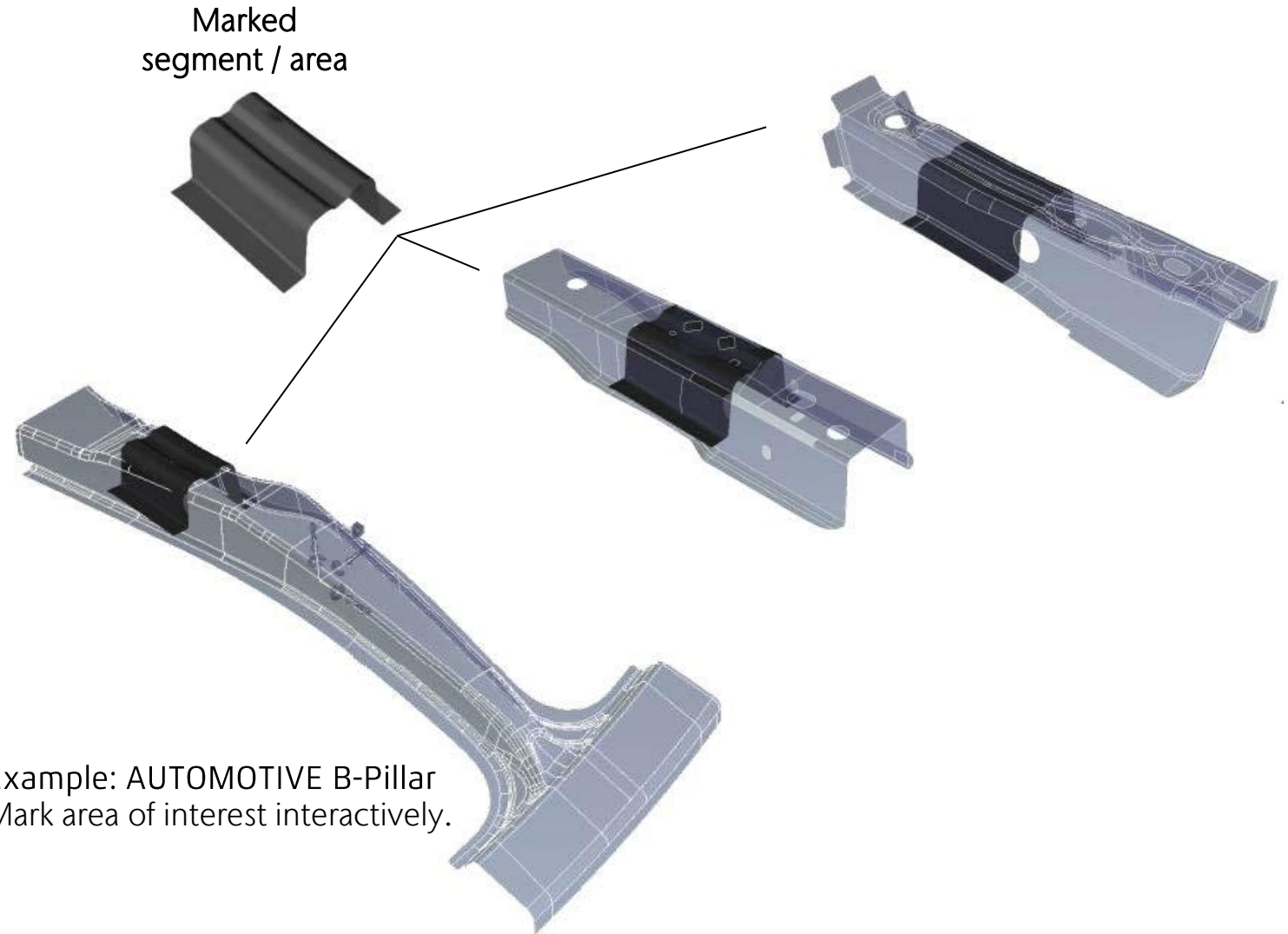
# Automation & intelligence solutions

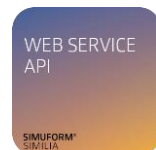| Product | Description |
|---|---|
| **SIMILIA** Automation & GATEKEEPER | Server application to monitor and check data quality and prevent duplicates at early stage automatically. Integrate it in workflows and get reports and information.<br>**Result**: High data quality and cost reduction by systematic data monitoring and reviewing. |
| **SIMILIA** Target Costing | Server application for automated cross-checking bill of materials to identify best suppliers for better pricing.<br>**Result**: More pricing confidence and better control on BOM pricing, incoming supplier quotes within supply chain management and purchasing. |
| **SIIMILIA** Product Intelligence | Server application for automated detection of assembly structures, part and assembly usage-references within the complete product diversity.<br>**Result**: Significant cost reduction by eliminating costly materials and identifying high performance materials automatically. |
| **SIMILIA** Web Service API | Web service for integrating specific functionality into core applications using modern web technology (REST).<br>**Result**: Seamless functionality integrated into core IT-Systems and mobile applications at site. |

# Key benefits
# Summary

- Efficient data and know-how reuse

- Access to similar engineering data

- Less friction in data access (Just-in-time access)

- Less redundant engineering work

- Fast support for prototyping tasks
  (access to similiar reusable components)

- Fast support for process design
  (grab existing manufacturing know-how)

- Fast early stage cost estimation / calculation
  (Similarity based cost estimation)

SIMUFORM®

„Fast time to market is the ace in your hand to be successful today. SIMILIA helps us playing aces."

Ingolf Planer, President & CEO
AME AG

**ALU MENZIKEN**
SWISS TECHNOLOGY

Thank you!