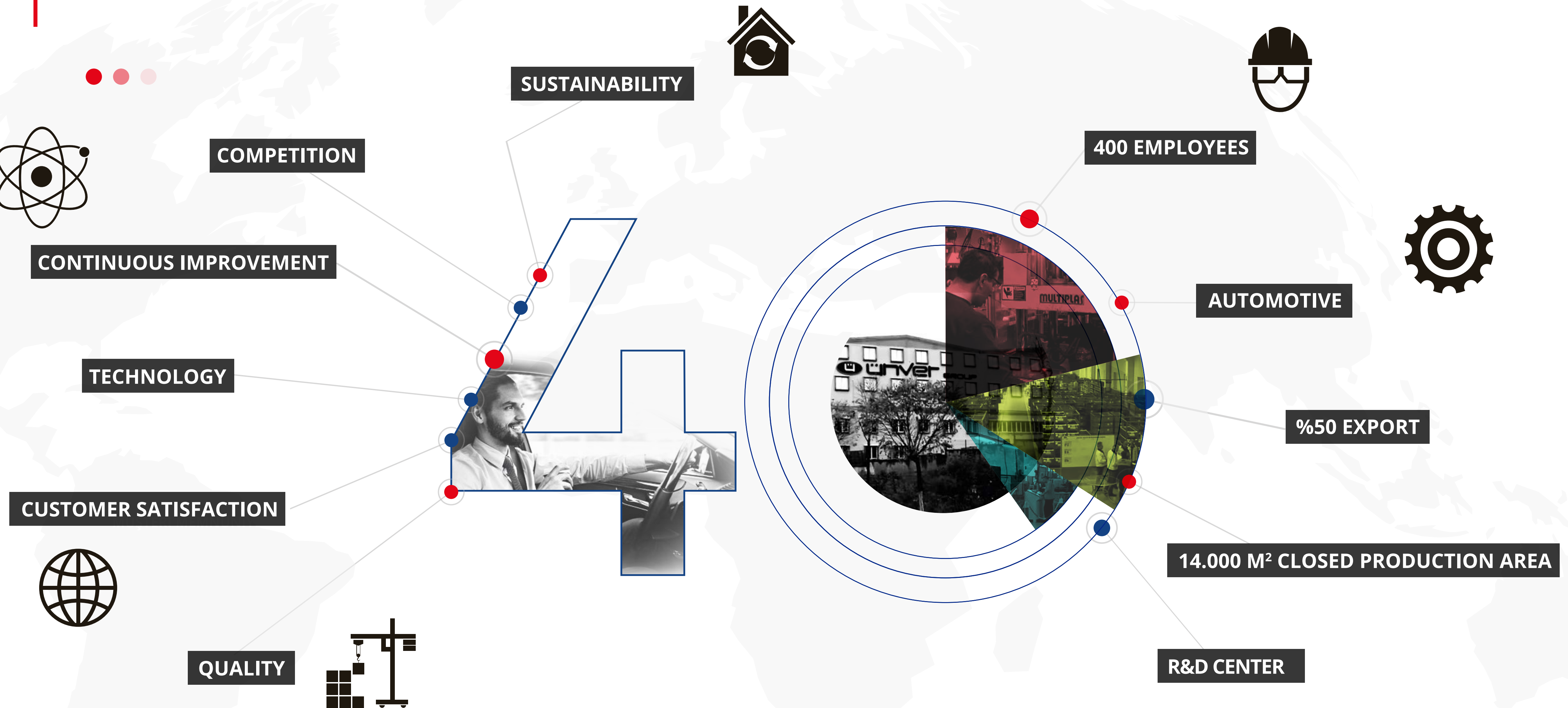


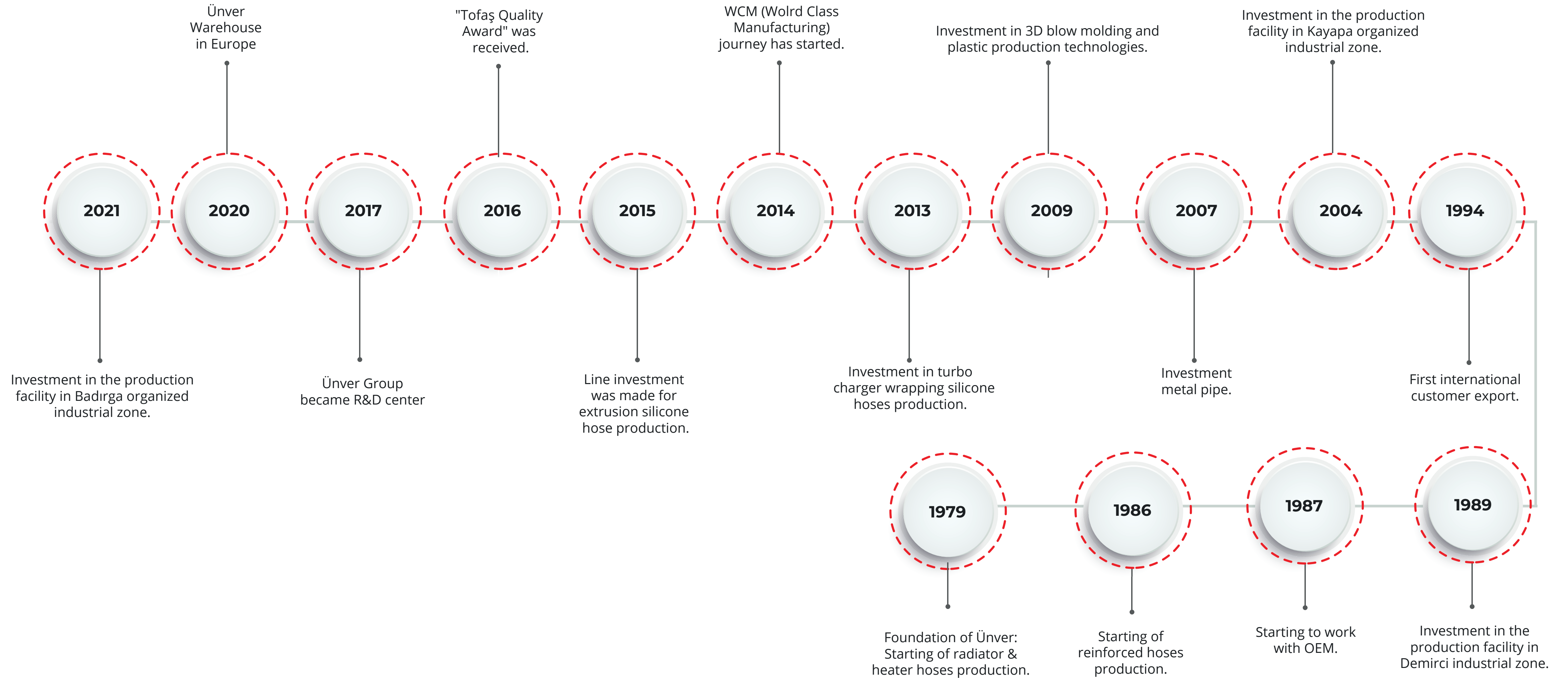


COMPANY PRESENTATION

From 1979, Until Today



History



Product Groups



AIR GROUP

1. Air Suction Systems

- Dirty Air Pipe
- Clean Air Pipe
- Vacuum Hose

2. Turbo Charger Systems

- Intercooler Inlet
- Intercooler Outlet
- Resonator



WATER GROUP

Heating and Cooling Systems

- Radiator Hose
- A/C Hose



FUEL GROUP

Fuel Systems

- Fuel Tank Filling Hose
- Lower Pressured Fuel Hose



OIL GROUP



Product Groups

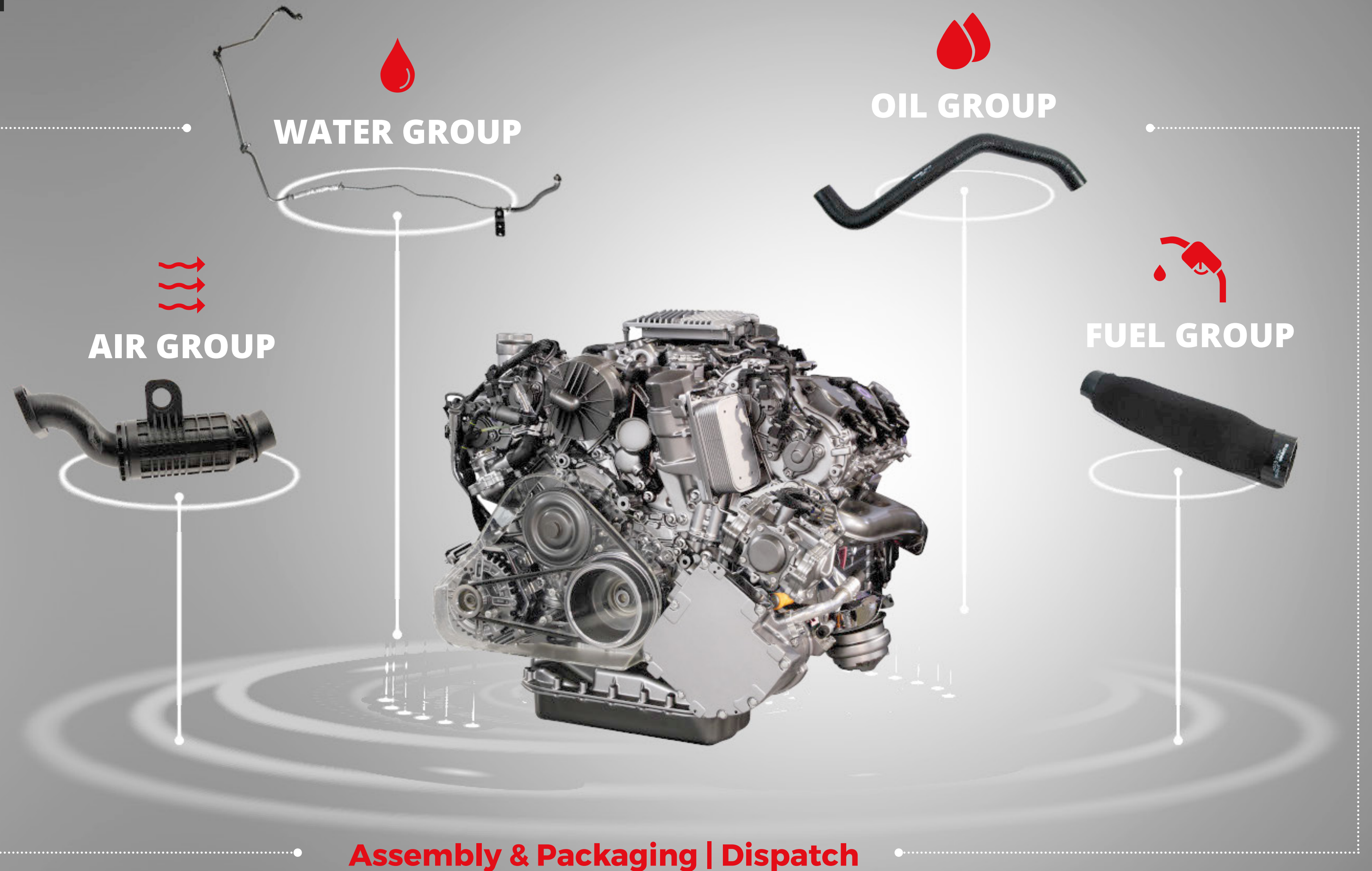


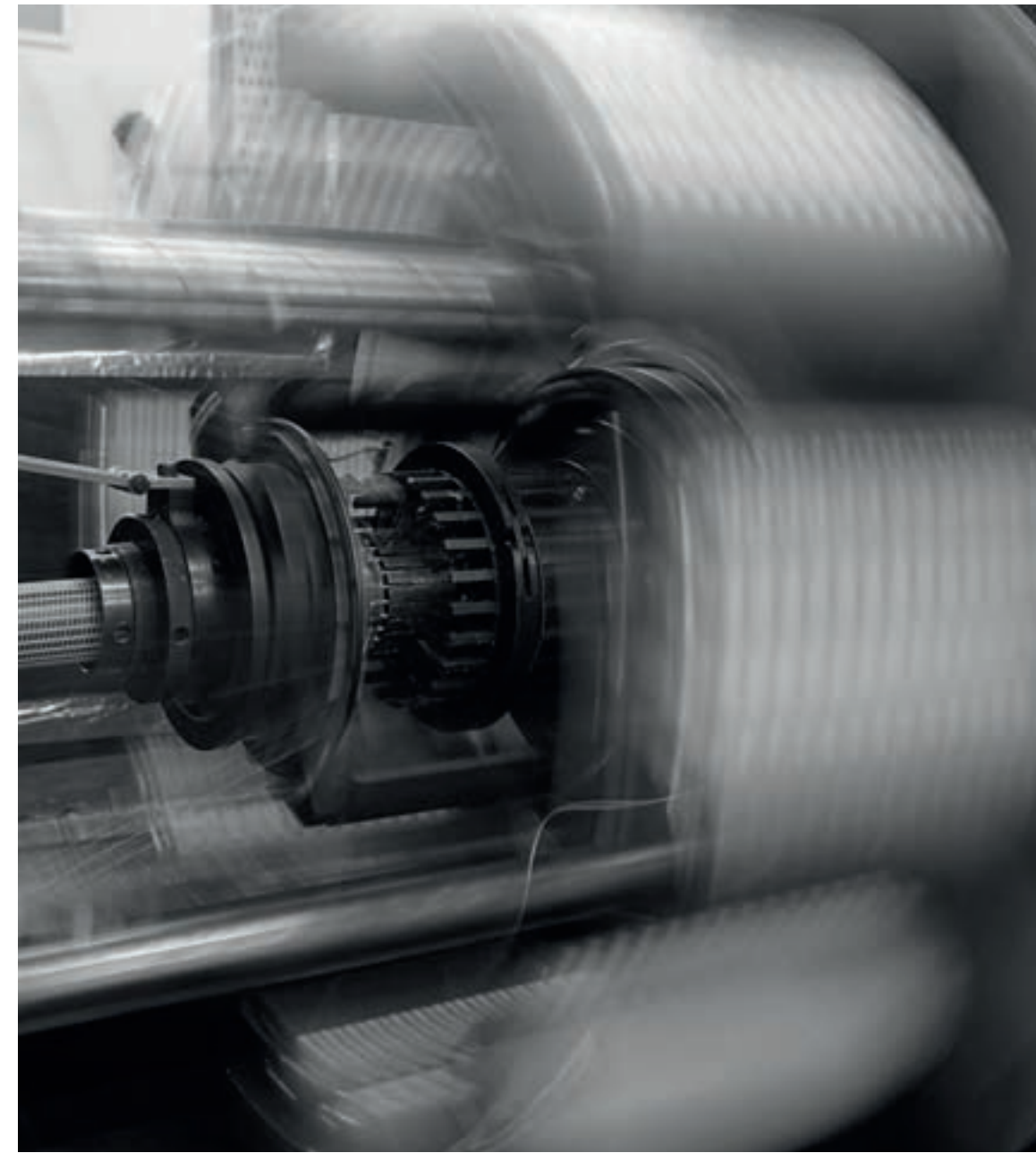
Rubber Hose
Production

Bended Metal Pipe
Production

Plastic Pipe & Part
Production

Slicone Hose
Production





The experience
of 40 years
which has been
dedicated every
day to produce
“better”



Certificates





**To have others say
“good to have you”
in automotive industry with
reliable products and services.**

Delivery Locations



UNITED STATES

MEXICO



BRAZIL



WAREHOUSE
(FRANCE)



SWEDEN

FINLAND

ESTONIA

ENGLAND

GERMANY

POLAND

FRANCE

ITALY

SPAIN

HUNGARY

TURKEY

Ünver Group quality
all over the world.

Introduction | Customers (OEM)



Volkswagen



NIKOLA™

NAVISTAR



McLaren

DAIMLER

DAF
A **PACCAR** COMPANY

Otokar

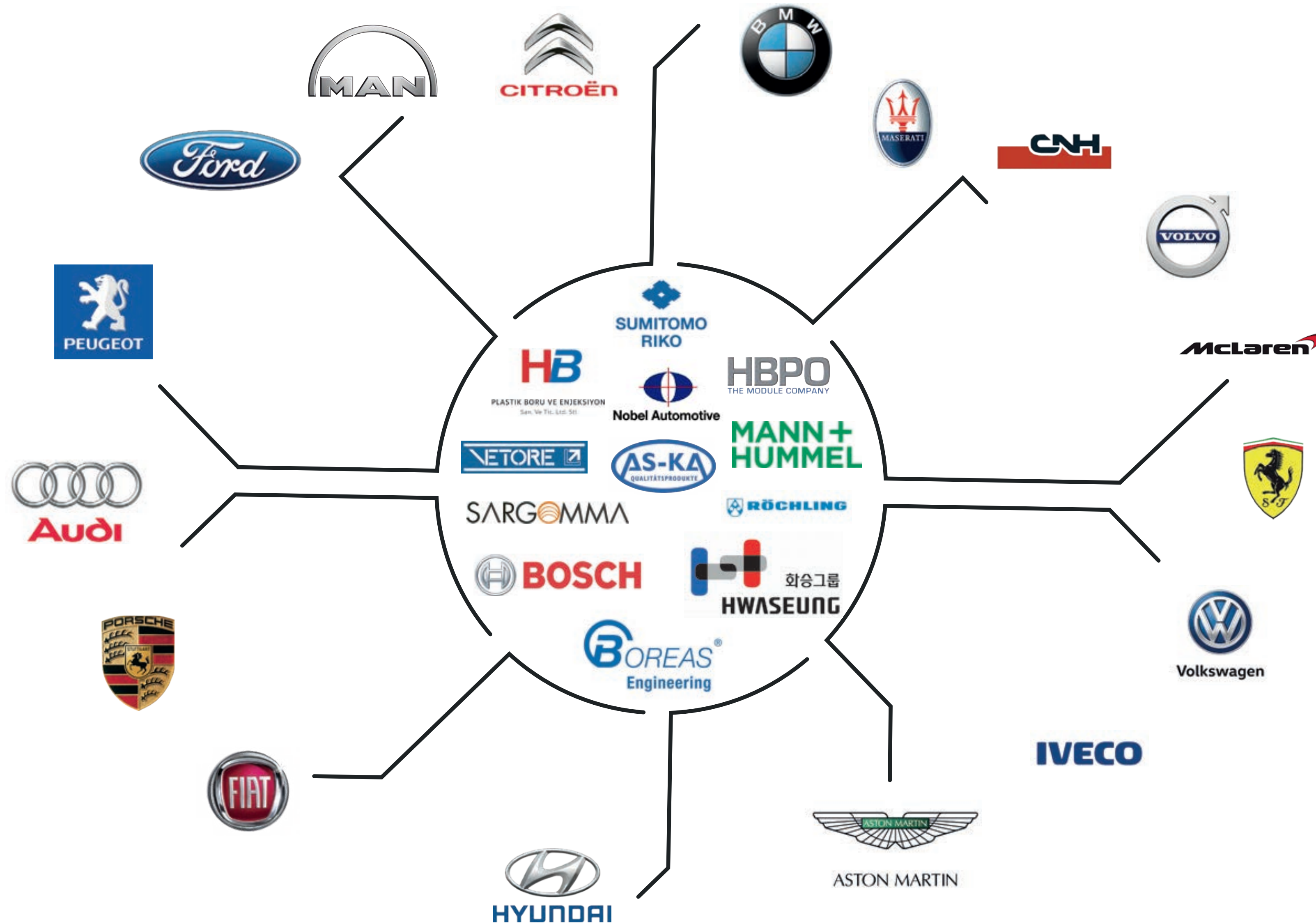
ISUZU

BMC



KARSAN

Introduction | Customers (TIER 1)



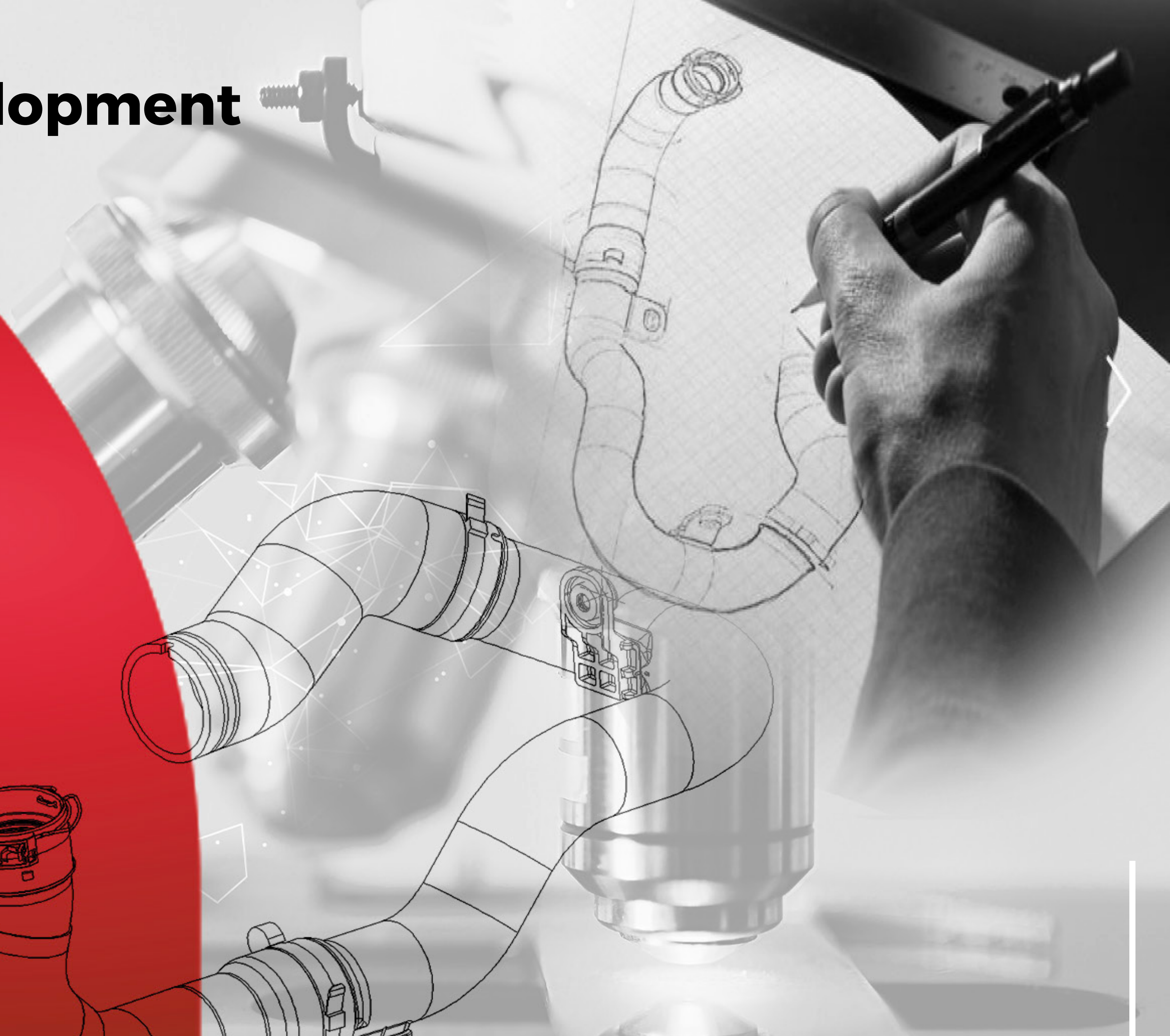
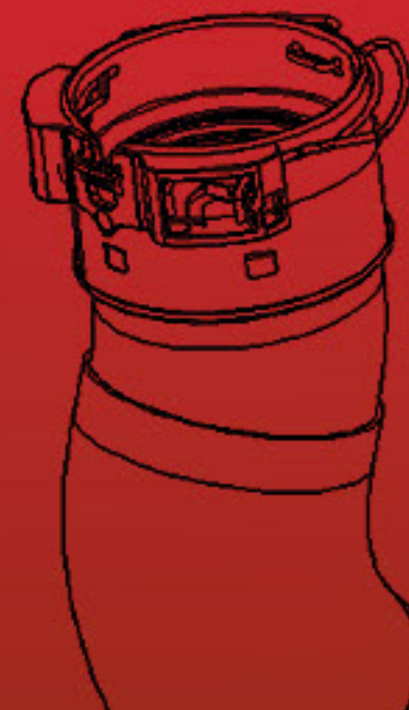
Since the day
we started, we
evolve by strong
R&D culture
and **add value**
to our business
with science..



Research and Development



**Unver Group
R&D Center
certificate was
approved and
awarded by
government in
June 2017**



Research and Development Laboratory



Material Testing

- Rheological Properties
- Hardness Tests
- Mechanical Tests
- Aging Tests
- Compression Set
- Melt Flow Index
- HDT/Vicat Heat Deflection Temperature

Product Testing

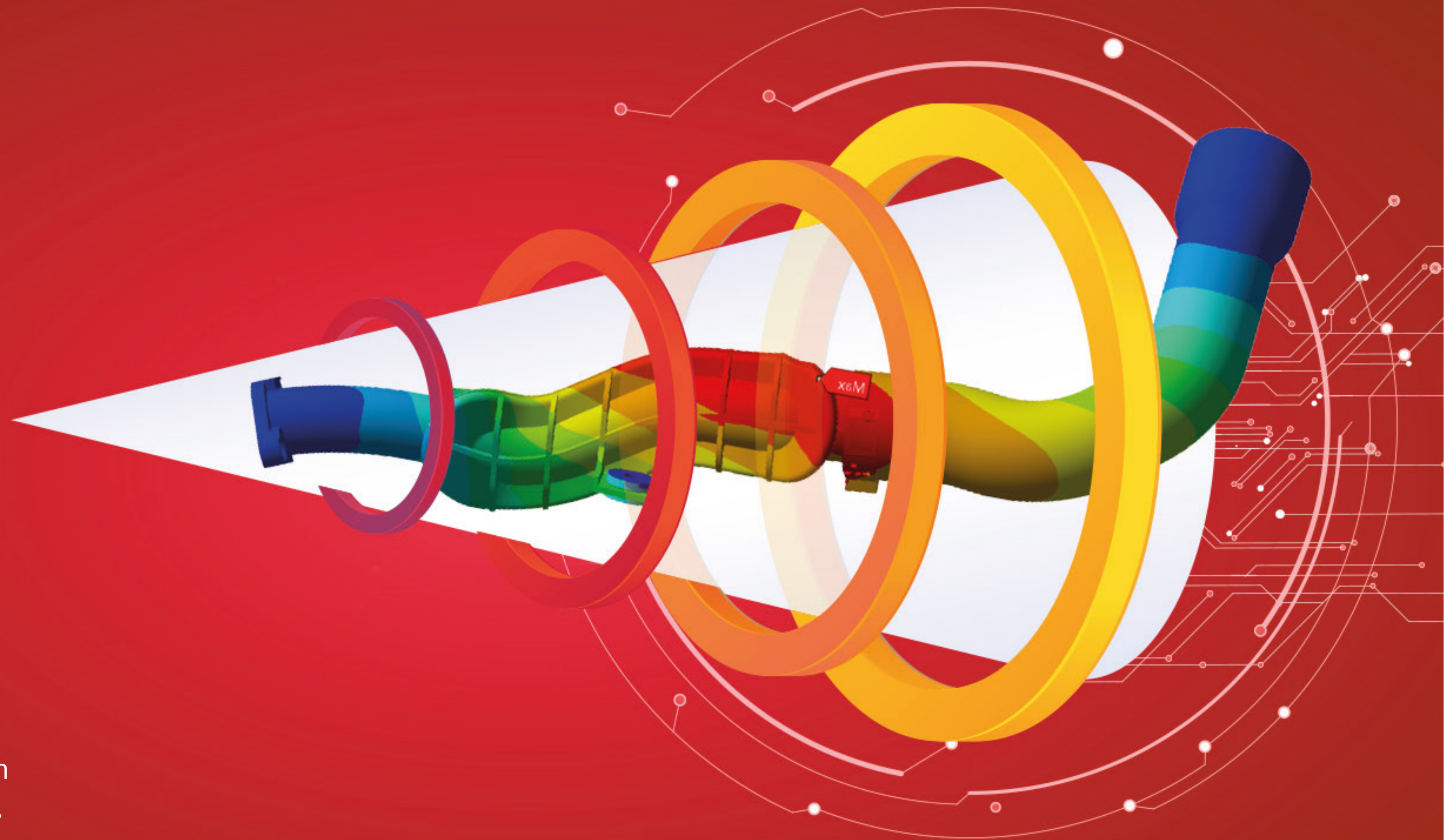
- Impulse Tests
- Burst Pressure Tests
- Diameter Change Tests
- Vacuum Collapse Tests
- Cleanliness Tests
- Leakage Tests
- Low Flexibility Tests
- Vibration Tests



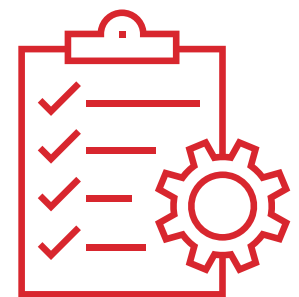
Not only producer, but also solution partner...



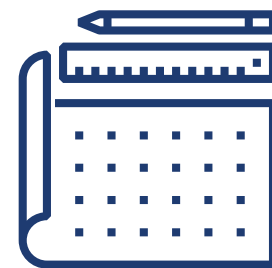
We provide co-design services to our customers at every stage at the projects, with our R&D center and qualified engineer team.



Project | Design



Project
Management
and Technical
Review



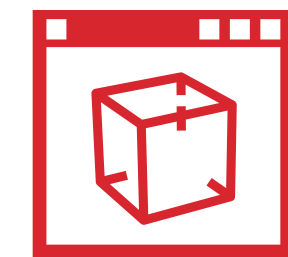
Design and
Installation
FMEA



Design &
Analyses

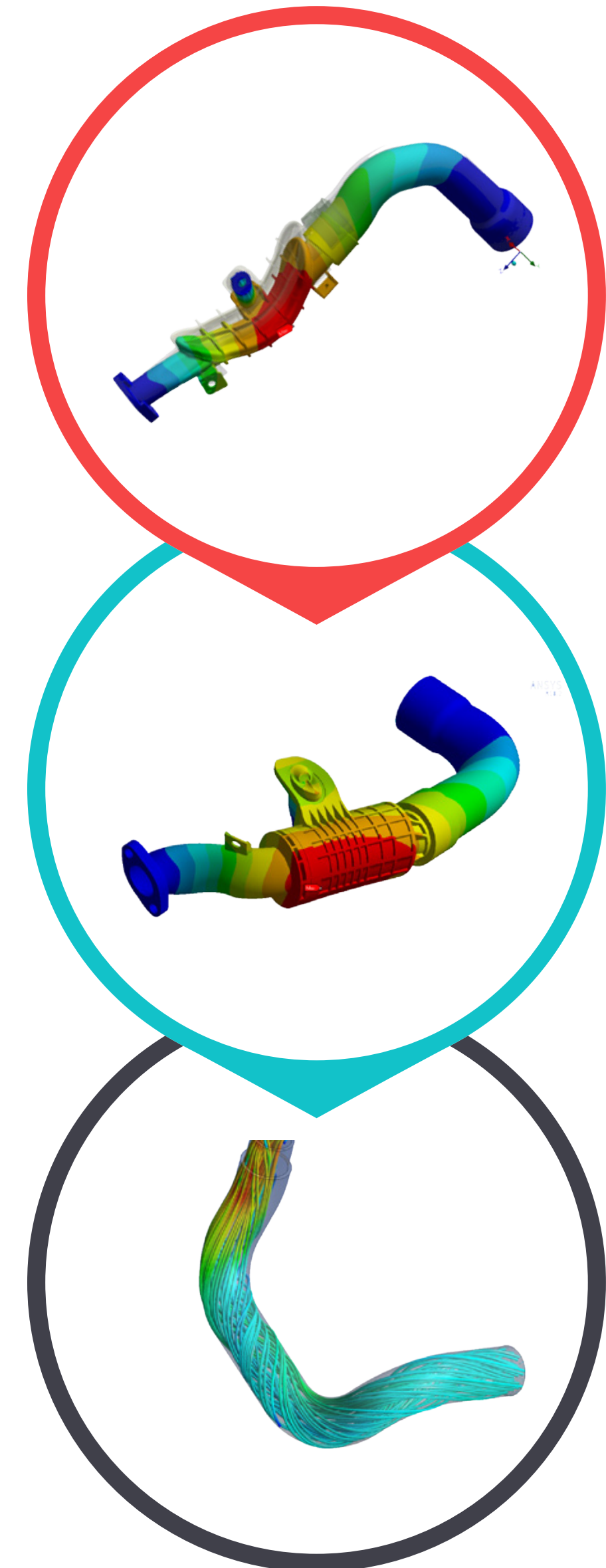
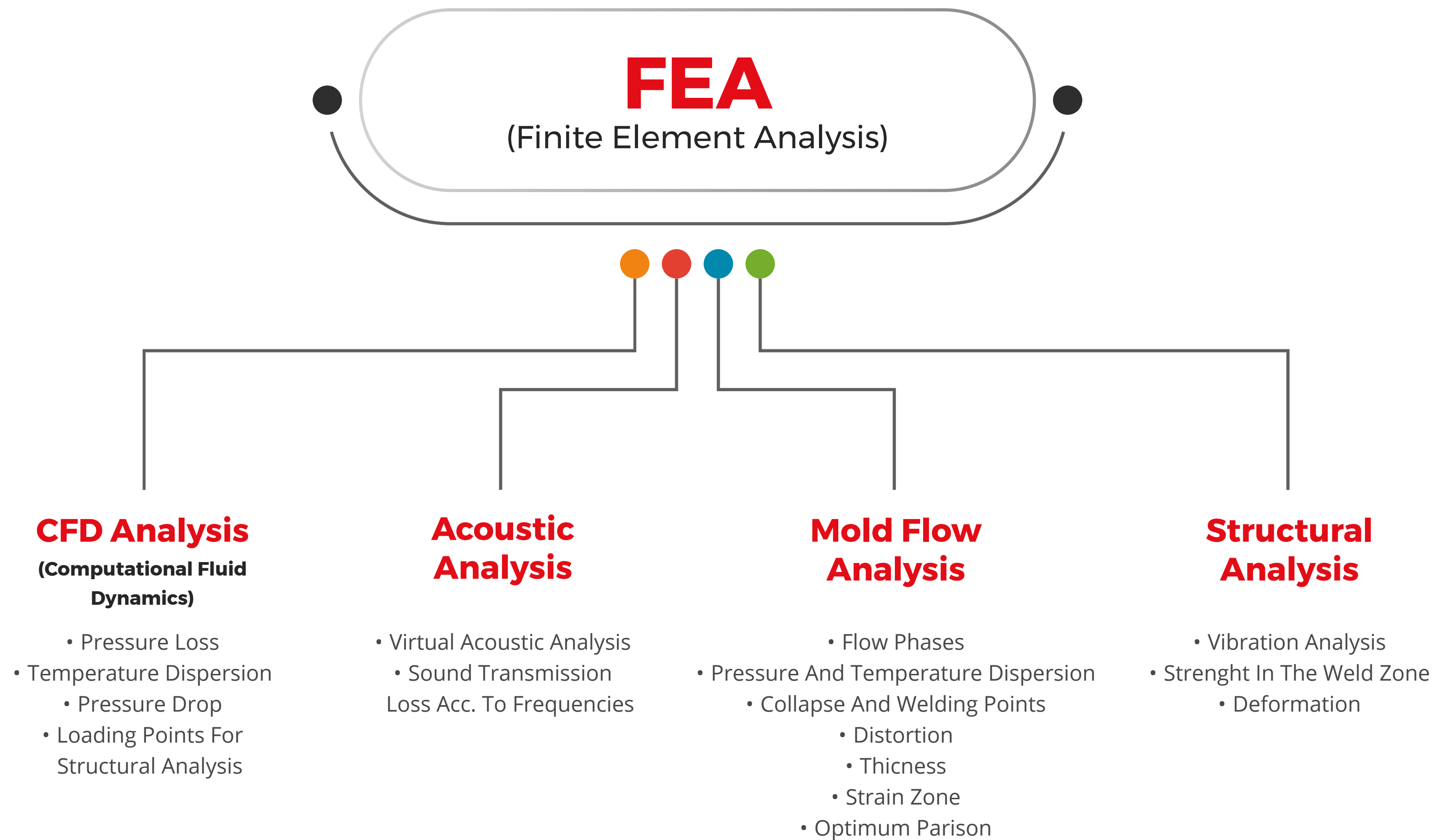


3D Prototyping
and Testing

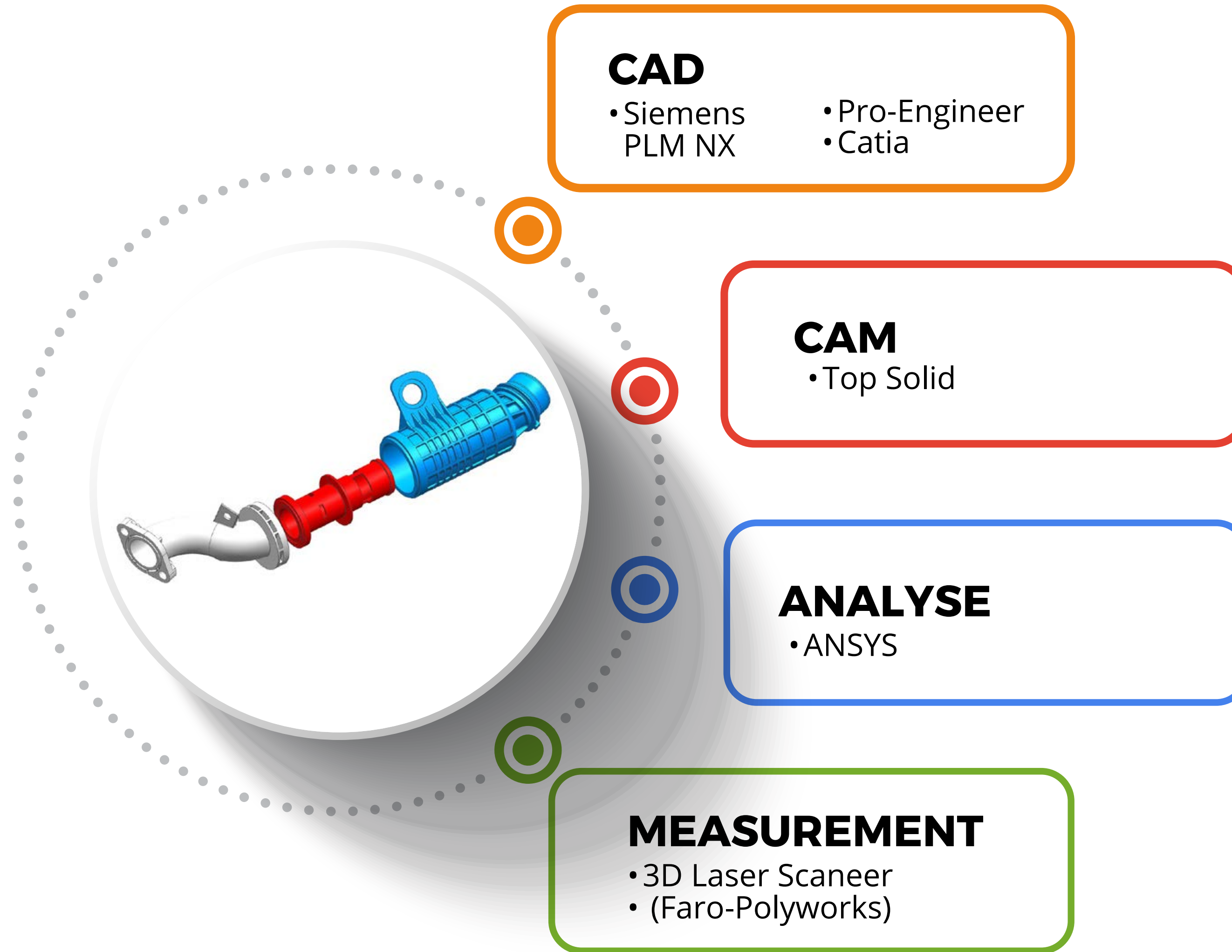


Creating Drawing
in 2D or 3D

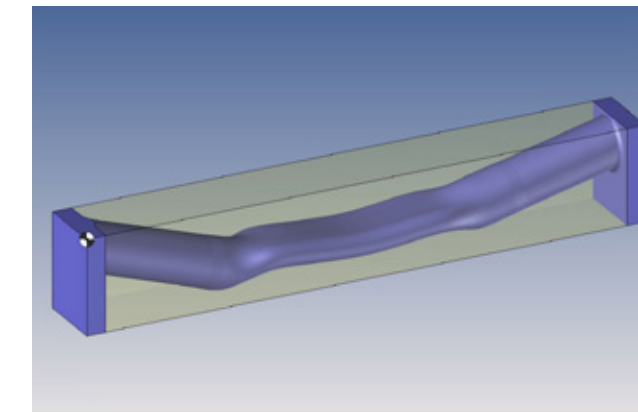
Project | Design Capabilities



Project | Design Capabilities

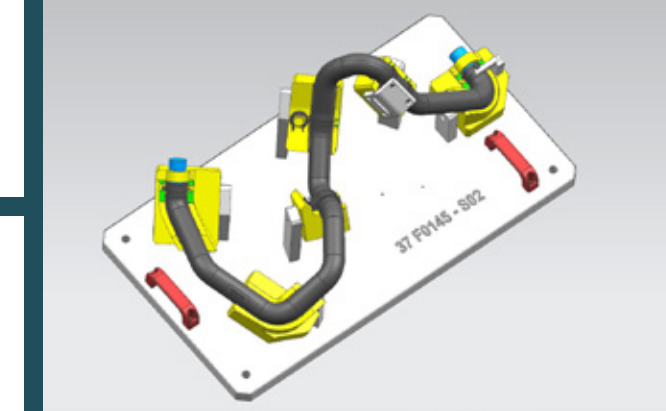


Project | Design - Toolshop

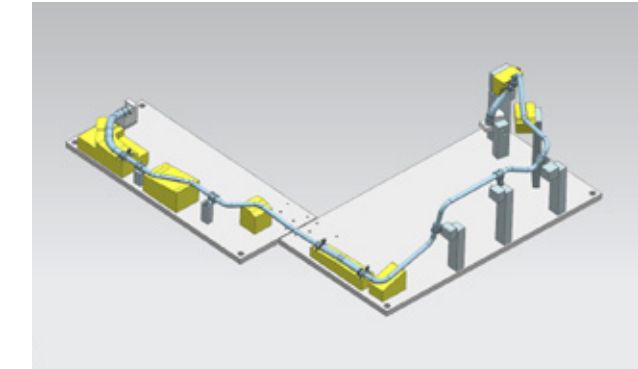


Mandrel

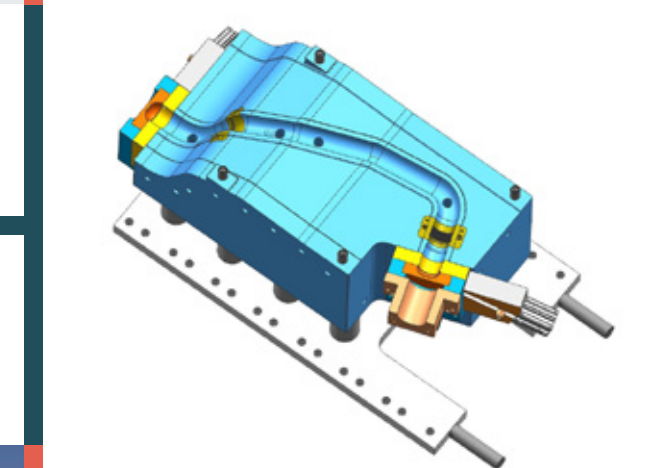
Master & Control Fixture



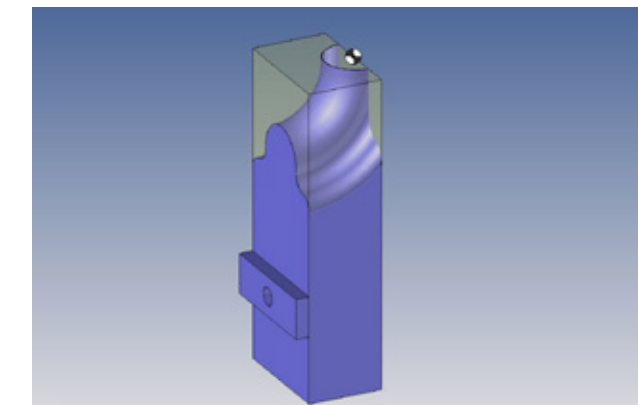
Assembly Equipments



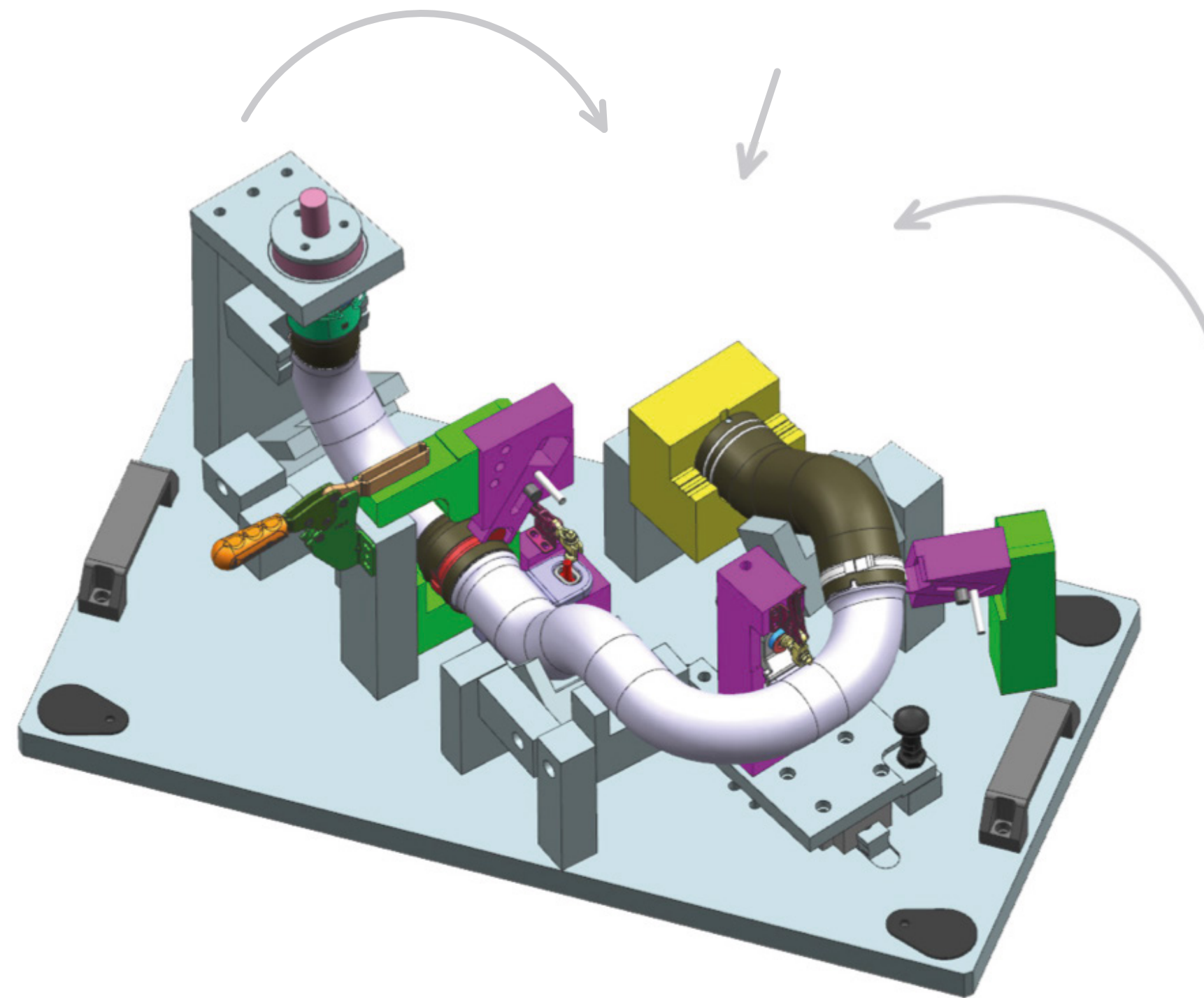
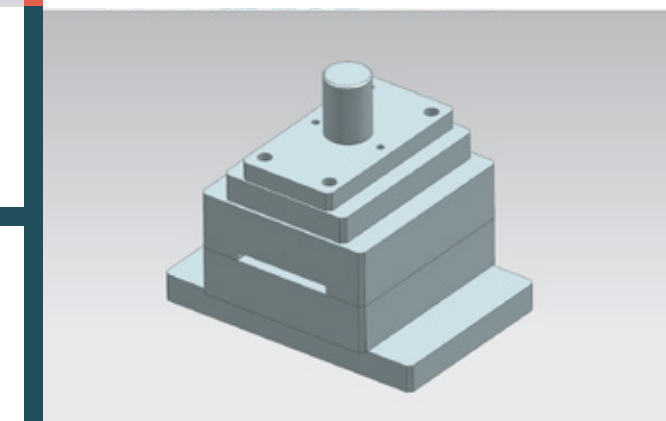
Plastic Injection Mould



3D Blow Moulding Moulds



Sheet Metal Mould



Production | Rubber Compound Mixing Line



The compounds are produced in Rubber Mixing Line with an automated process which is eliminated the operator function.

- Automatic Dosing
- Mixing
- Batch Off

- EPDM
- CR
- ECO
- CSM
- ACM - AEM
- NBR - HNBR
- FKM
- FVMQ / VMQ
(FVMQ/VMQ is being mixed in a seperated area)



Production | Rubber Hose



- **Extruder Lines**

- Single & Multilayer Extruders
- Co-Extruder
- Plain Knitting
- Cross Knitting
- Automatic Cutting
- X-Ray Control
- Laser Control
- Online Traceability

- **Autoclave Lines**

- Online Pressure Control
- Online Temperature Control
- Online Cycle Control
- Automatic Cooling



Production | Metal Pipe



- **Bending Line**

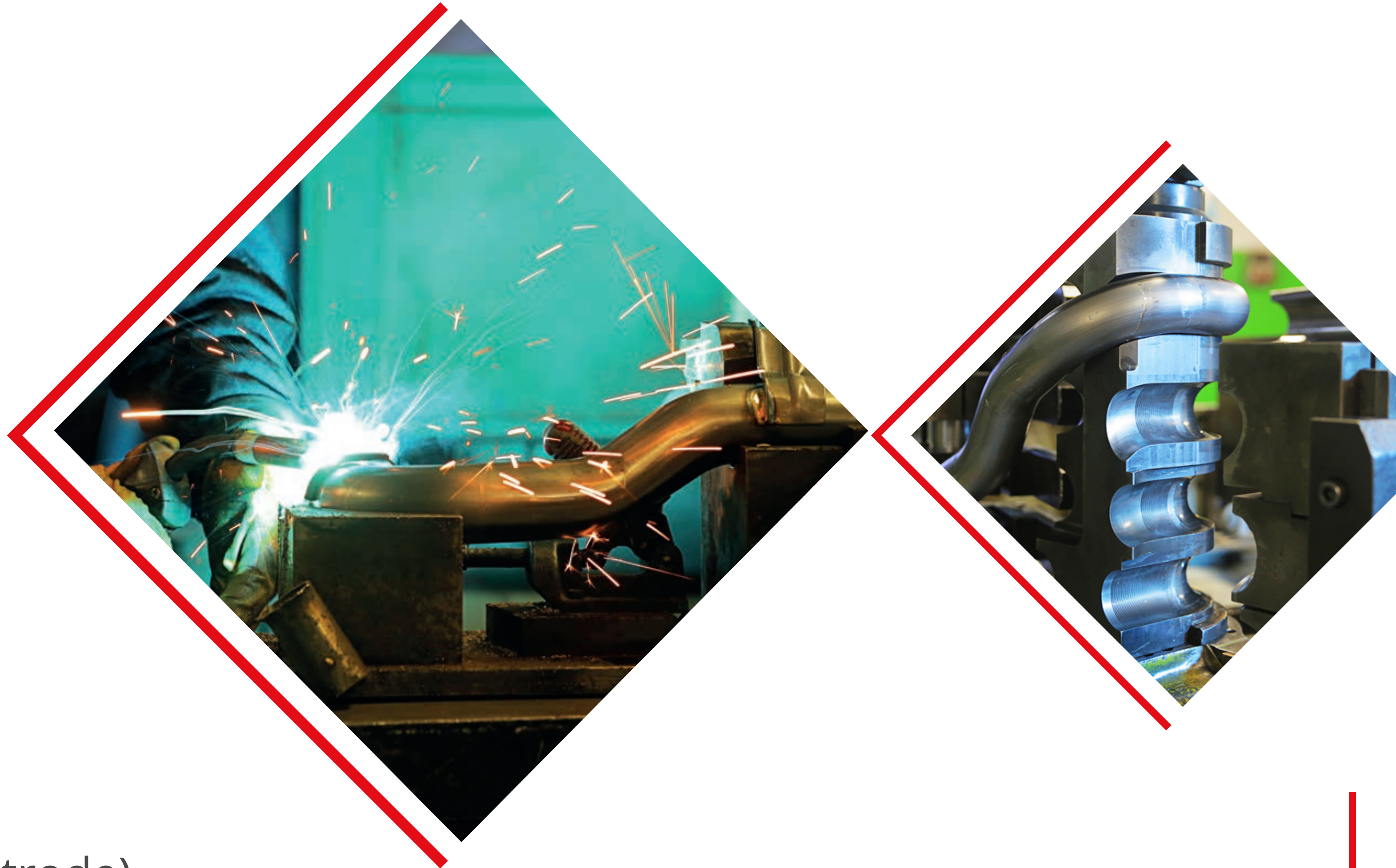
- Cnc Tube Bender
- Pipe End-Cutting
- Pipe End-Forming

- **Eccentric Press Line**

- Metal Forming

- **Welding Line**

- Gas Welding
- Braizing Welding
- Tig Welding (Argon)
- Oxygen Welding
- Electric Arc Welding (Electrode)



Production | Plastic Pipe



- **3D Suction Blow Moulding Lines**

- 1,5 It Blow Moulding Machine
- 2 It Blow Moulding Machine
- End Cutting Machine
- Milling Machine
- Drilling Machine
- Bushing Machine

***Non-filled & Glass Fiber Filled Grades**

PA6 & PA66, PE, PP, PPS



We are offering our customers weight & cost reduction with plastic tubes through **3D Suction BlowMolding Process.**

Production | Plastic Injection



- **Injection Lines**

- 350 tones (horizontal)
- 100 tones (horizontal)
- 100 tones (vertical)



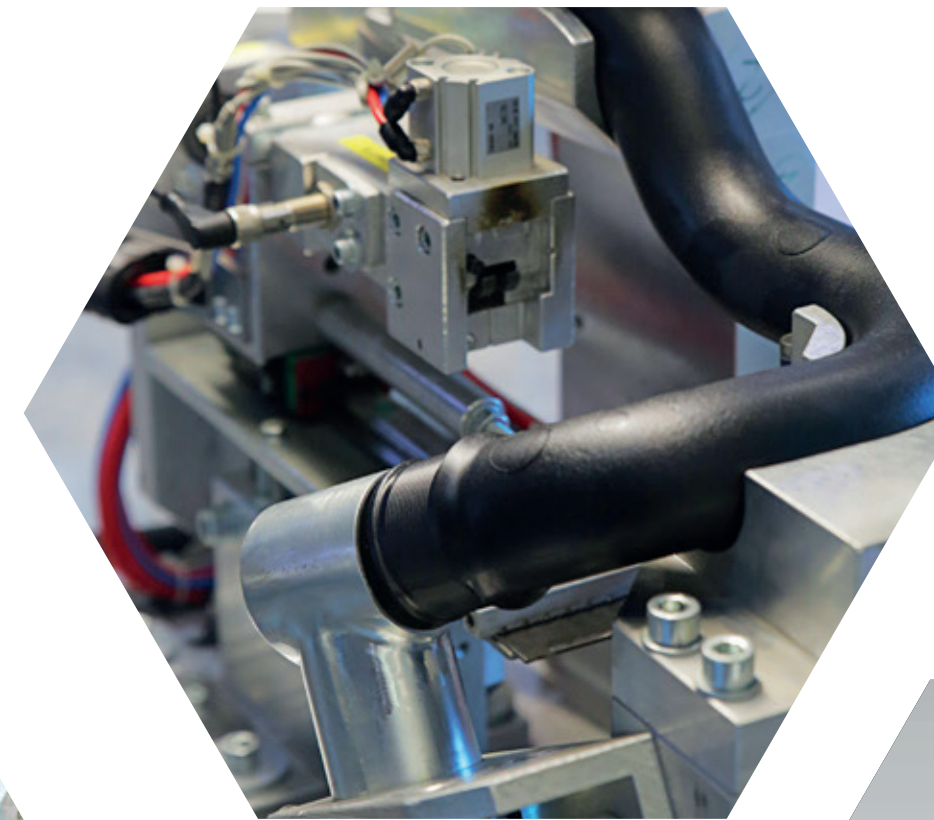
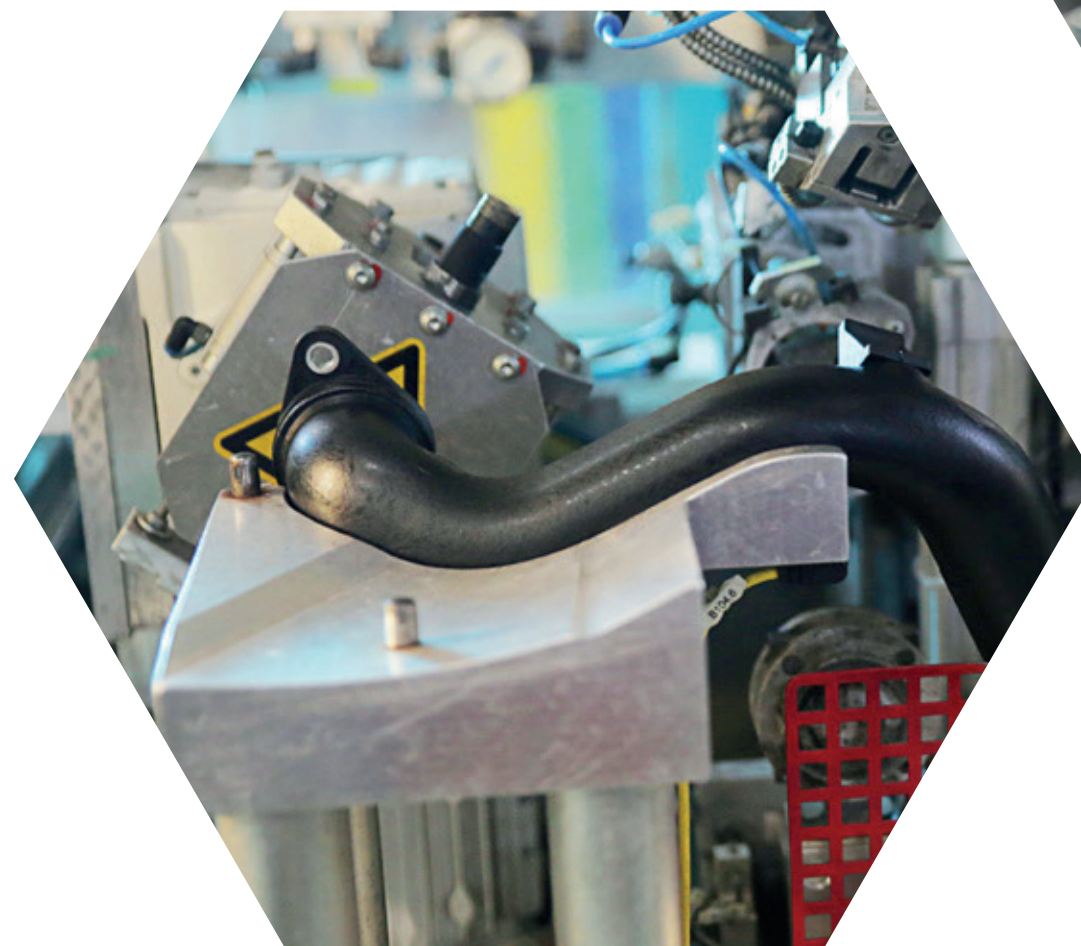
*** Non-filled and Glass Fiber Filled Grades**
PPS, LFT, PA6, PA66, PC/ABS,
PPO, LCP, PP, PPR, PVC

Production | Plastic Welding Line

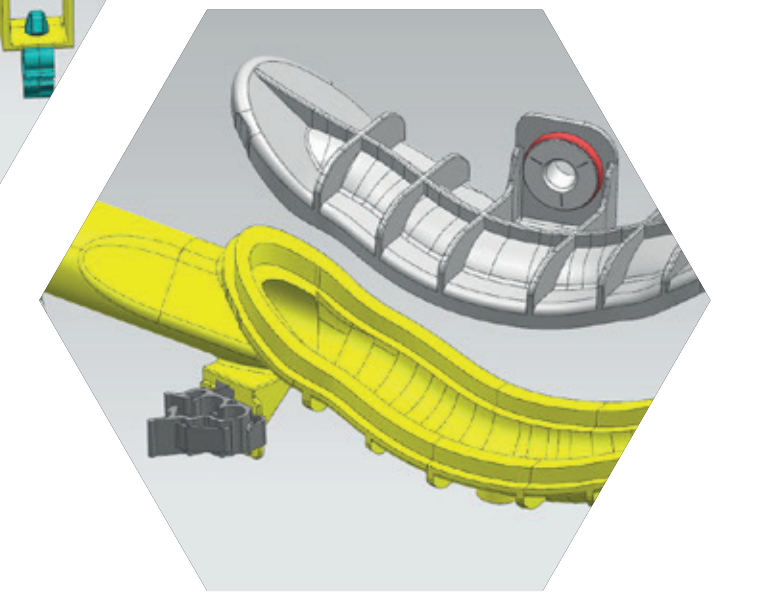
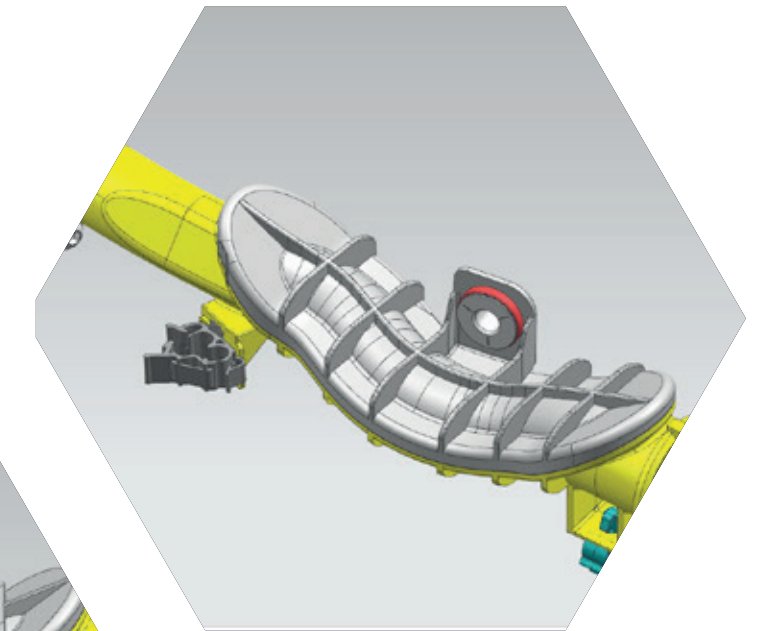
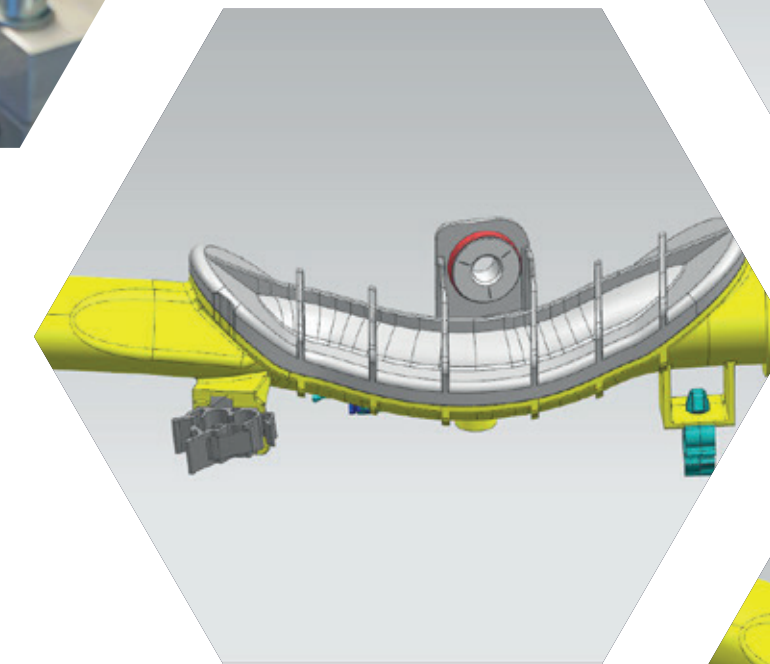


By hotplate
and vibration
welding
processes
plastic tubes
are combined
with
plastic
brackets

Hot Plate Welding



Vibration Welding



Production | Silicone Hoses



Wrapped

Unver Group is capable to produce multiple layers silicone hose via **wrapped** method



Extrusion

Unver Group is capable to produce single reinforced layer silicone hose via **extrusion** method



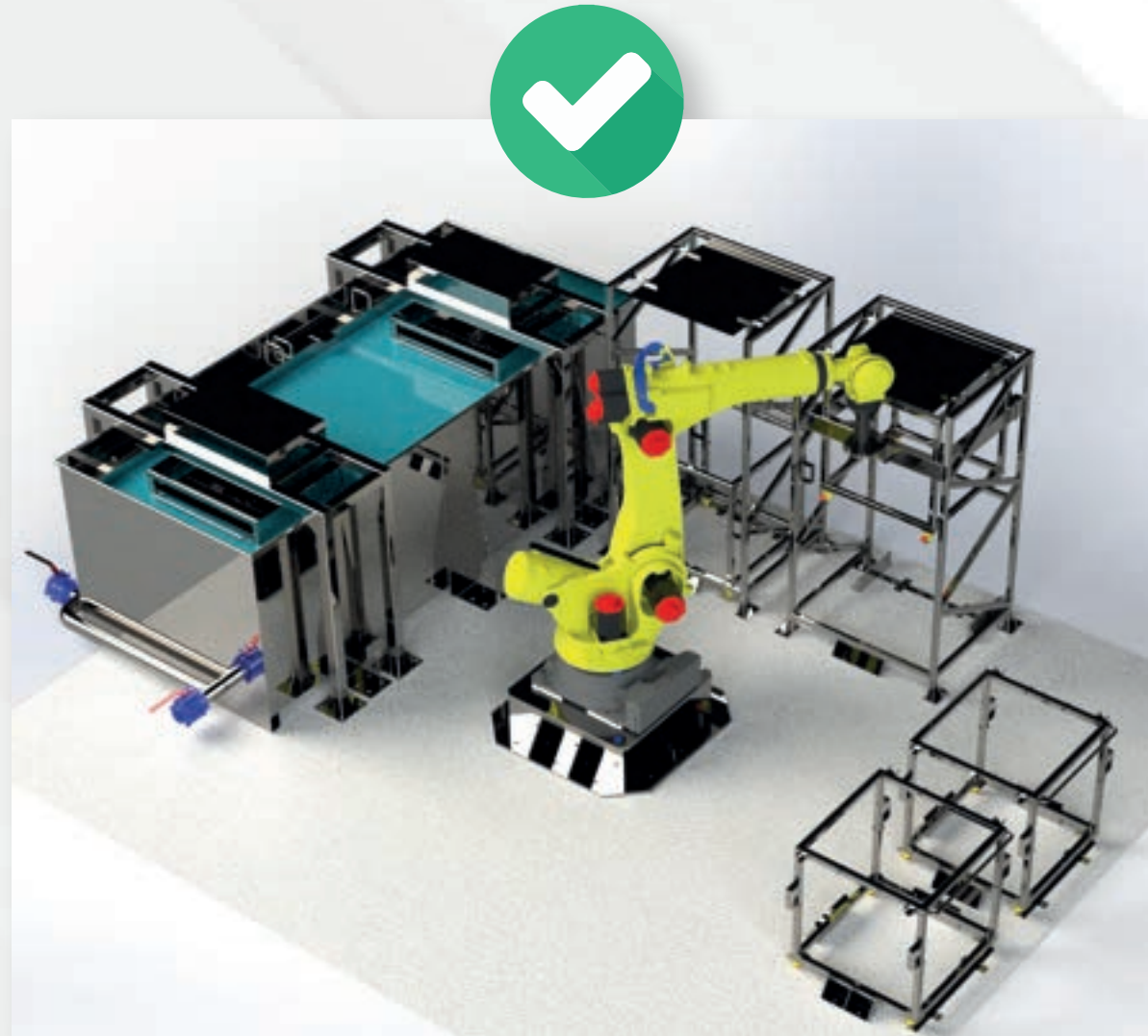
Production | Assembly



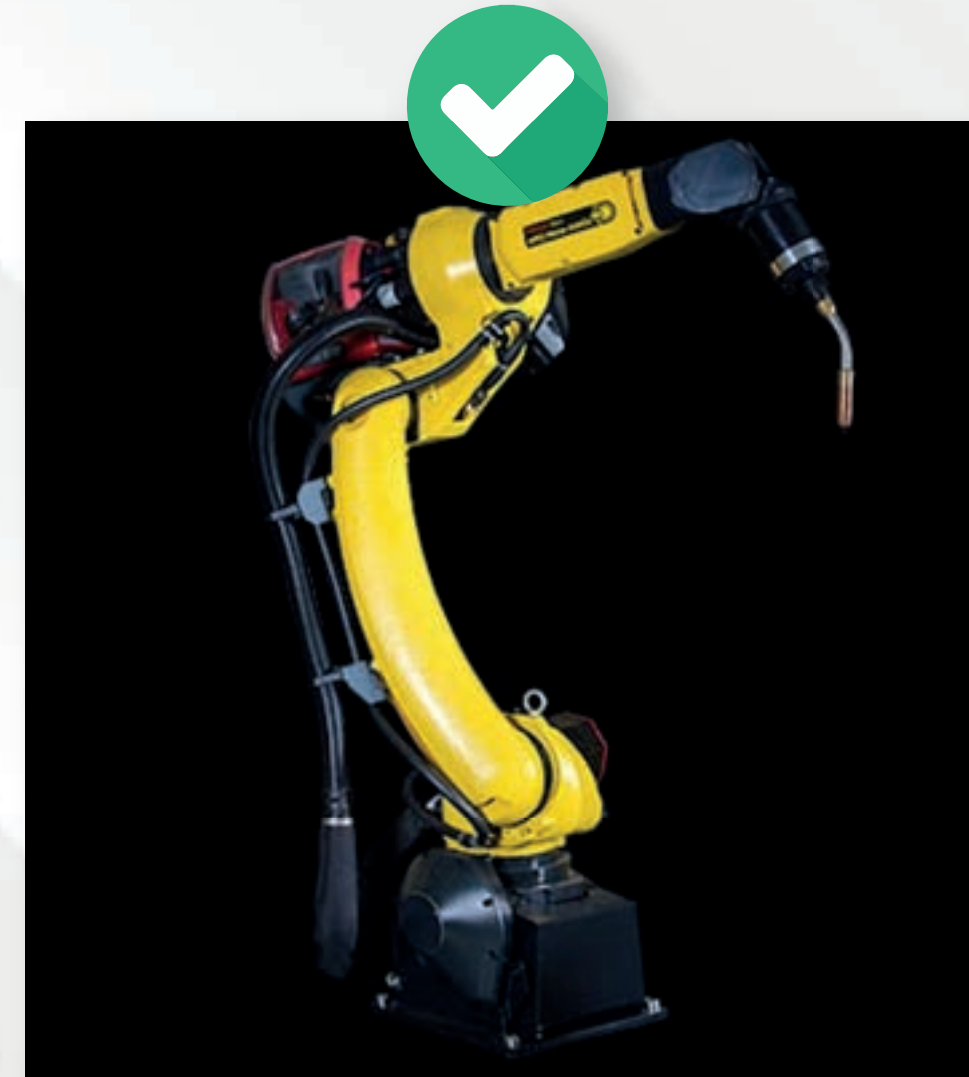
- Lean Production System
- Robotic Assembly System
- Poka-Yoke Systems



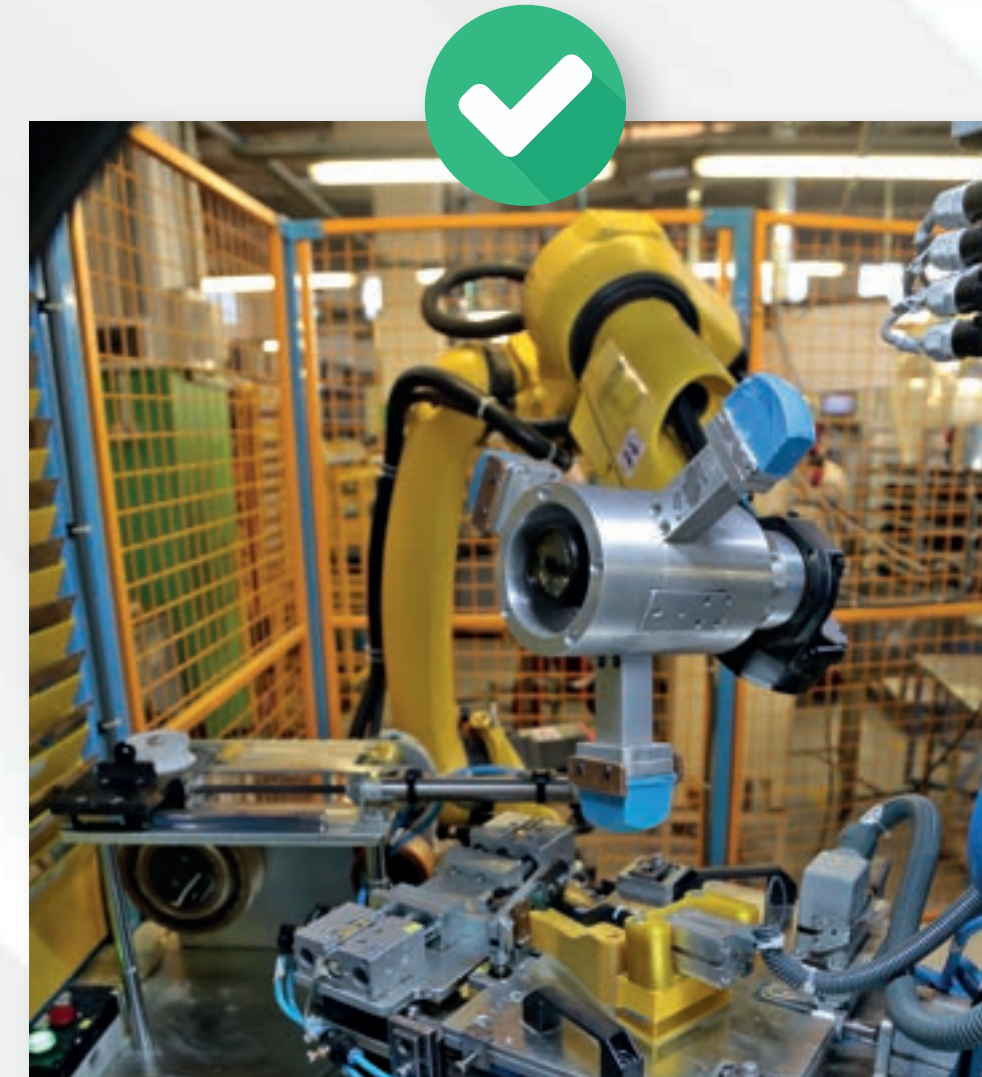
Realized Investment



**Full Automation Robotic
Hose Washing Machine**



**Robot Welding
Machine**



**Full Automation
Robotic Assembly
Line**



**3D Plastic Blow Molding
Machine**

Planned Investments



**A New Factory
Investment**



2023

**Wrapping Silicone
Production Line**



2023

**Plastic Extrusion Line
Investment for Electric
Vehicles**



2023

**Full Automation Dough
Mixing Line**



2023



www.unvergroup.com