



Your global product development specialist

TOOLING DIVISION PRESENTATION

Date :

Place :



TOOLING

Issue Date: 12/04/2019





1 ARRK Group



2 Tooling Division
- what do we do?



3 Tooling Division
- why us?



4 Portfolio

ARRK

ARRK GROUP



Engineering

Prototyping

Tooling

Low Volume Production



TOOLING

Issue Date: 29/07/2016

40

companies

15

in countries

70 years

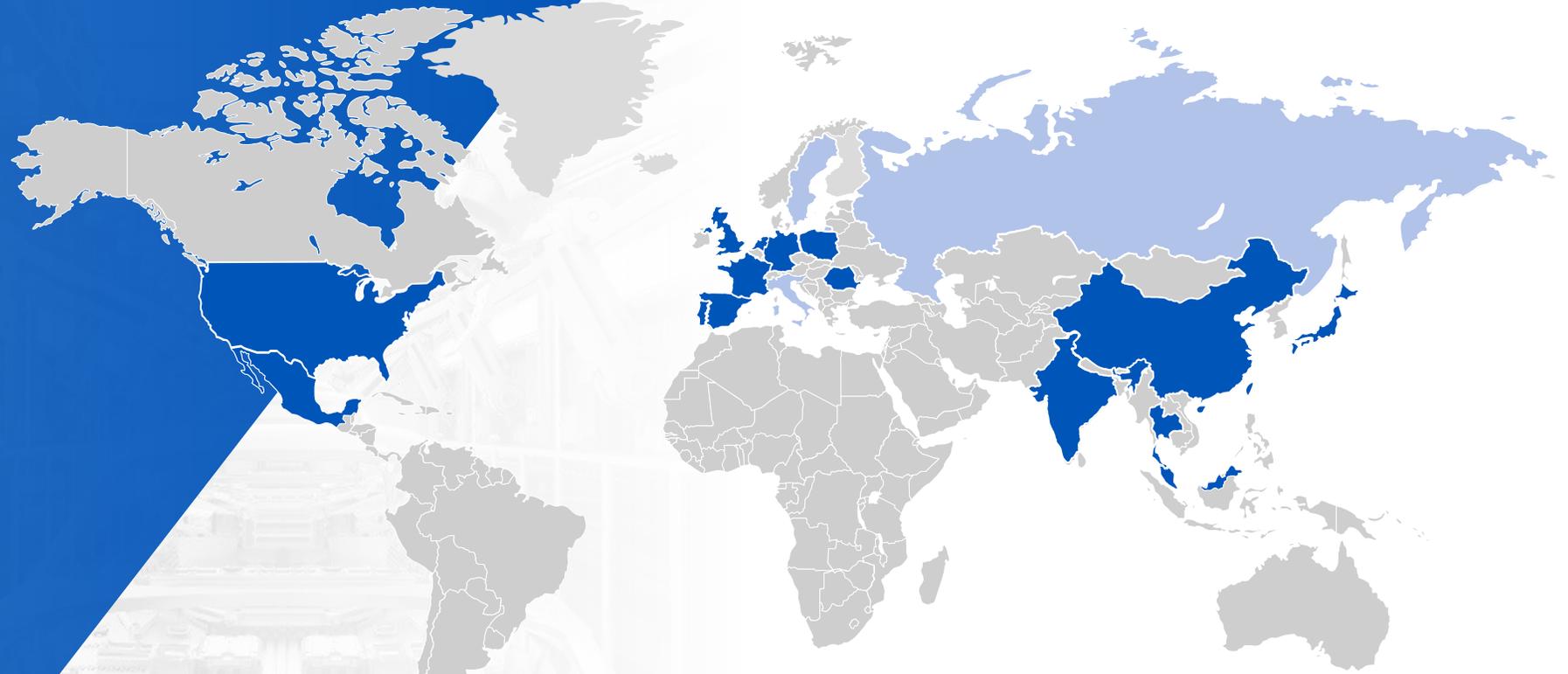
of experience

3 500

employees

350 m€

yearly turnover



THE 4 DIVISIONS OF ARRK



PROTOTYPING

Rapid Prototyping, 3D Printing, Additive Manufacturing, or Model making and a lot more.

TOOLING

Support with a comprehensive Tooling capability.

DESIGN ENGINEERING

Implement product development from virtual engineering to prototypes and low volume production.

LOW VOLUME PRODUCTION

Support with a wide variety of low volume production solutions for plastics, metals, and composites components.





TOOLING DIVISION - WHAT DO WE DO?



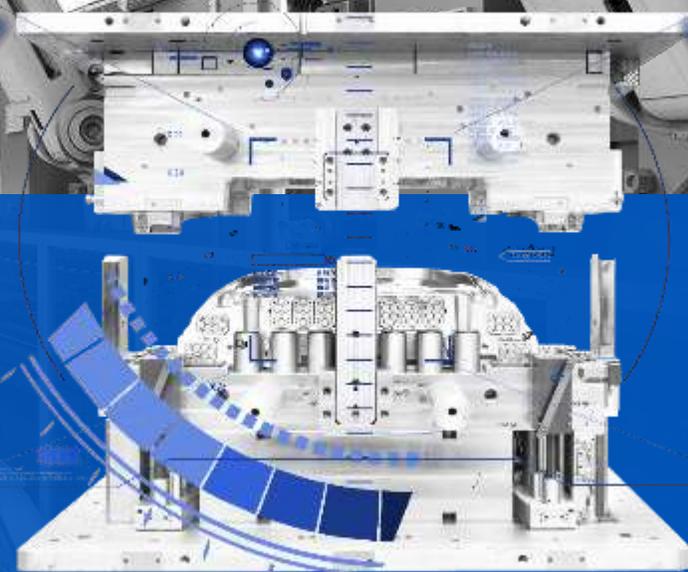
TOOLING DIVISION PRESENTATION



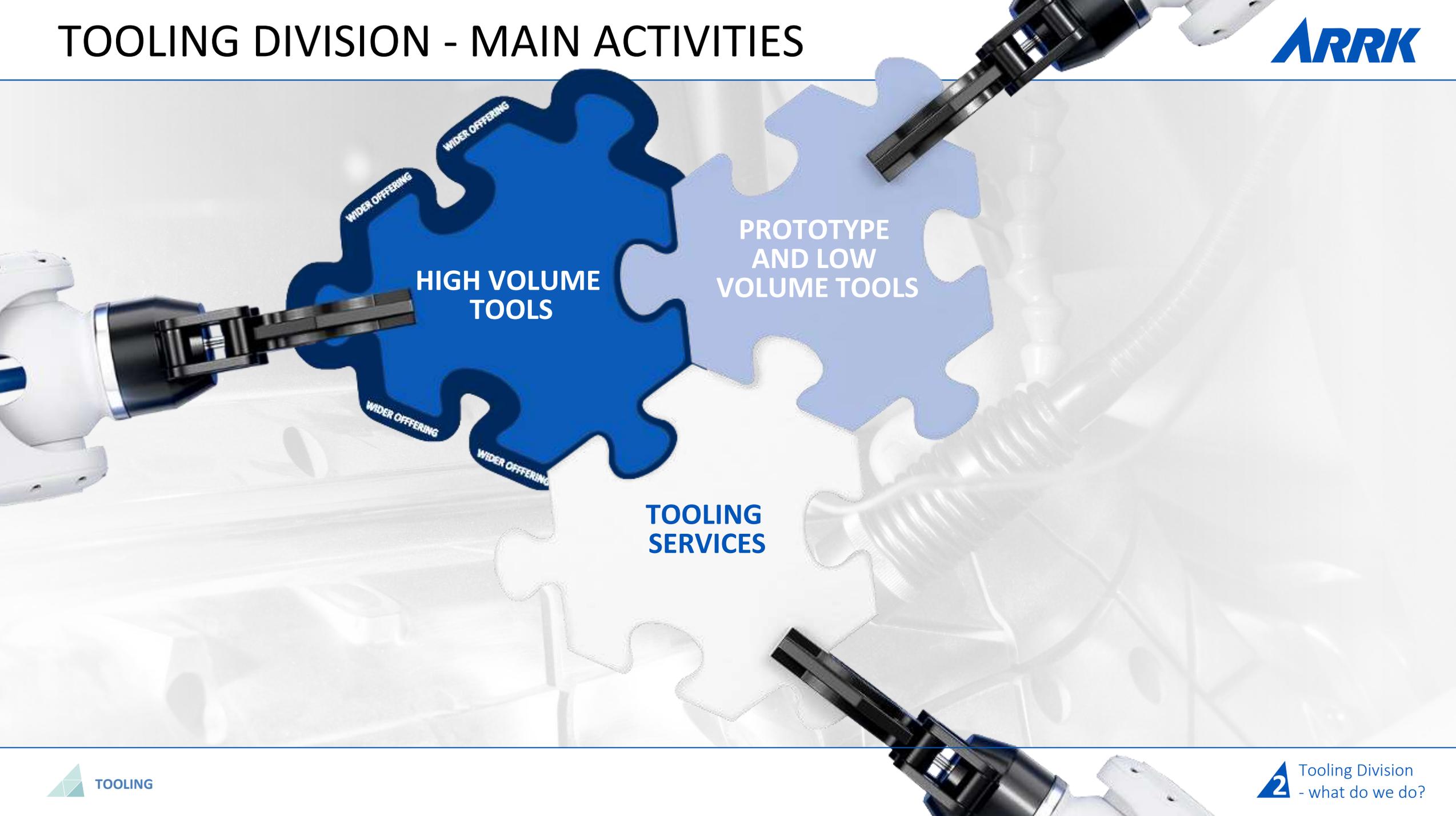
TOOLING
Issue Date: 29/07/2016



Injection Tools ..FOR HI-END CLIENTS



TOOLING DIVISION - MAIN ACTIVITIES



**HIGH VOLUME
TOOLS**

**PROTOTYPE
AND LOW
VOLUME TOOLS**

**TOOLING
SERVICES**

WIDER OFFERING
WIDER OFFERING
WIDER OFFERING
WIDER OFFERING



HIGH VOLUME TOOLS

300

Tools delivered a year

Tools up to

50T

Front and rear bumper

Front end

Fenders

Under bonnet cover

Instrumental panels

Tailgates

Rocker Panels

Roof frame

Spoilers

Door panels

Grills

Central Console

Wheel arch liners

ENGINEERING:

Design to cost
& CAD Data
Management

Moldflow

Thermal
analysis

Warpage
management



HIGH VOLUME
TOOLS

AUTONOMOUS PROJECT MANAGEMENT:

Manage the project from A to
Z using **customers standards**



Detailed reports
after each trial

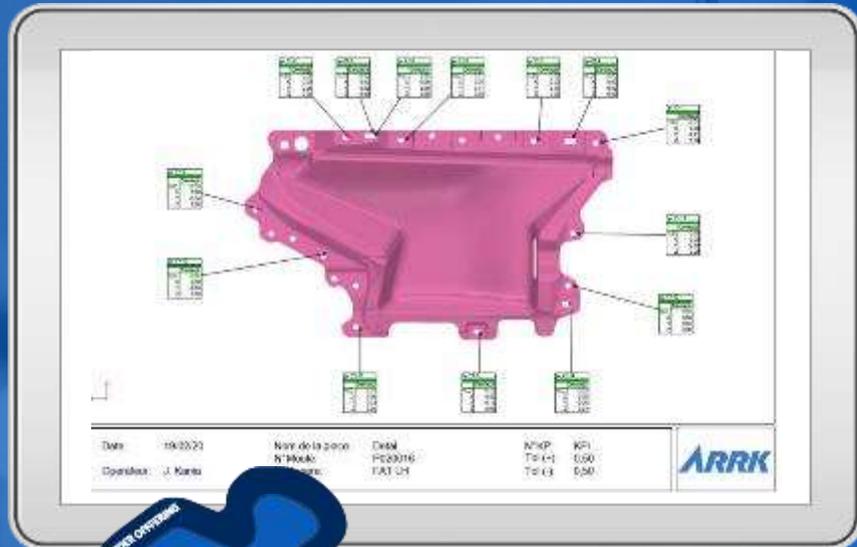
Try-out
management

TOOLING DIVISION - WIDER OFFERING



QUALITY INSURANCE:

Dimension report of the part



HIGH VOLUME TOOLS

Our responsibility of the part dimensions – saving time, no need to be on our site

COMMISSIONING ON PRODUCTION SITE:

Provide the tool with equipment

Turn-key product delivered to production plant



Production



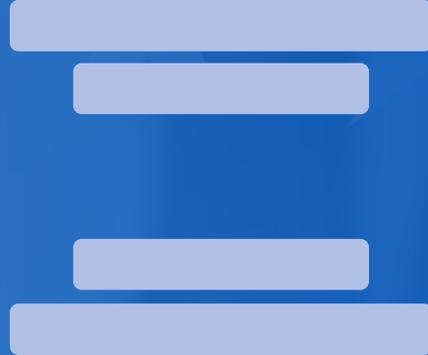
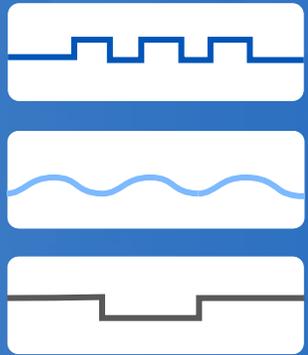
Assembly / Customisation



Delivery

50%

Reducing invest
in comparison
to serial tool



- Concept adapted to the customers' needs
- From 200 to 100 000 parts yearly
- Part production in ARRK Plants (France, UK, PL, India, China)
- Running in automatic
- No compromise on quality

PROTOTYPE
AND LOW
VOLUME TOOLS

Serial raw material

Up to
500



Patented technical solution

10
weeks lead
time

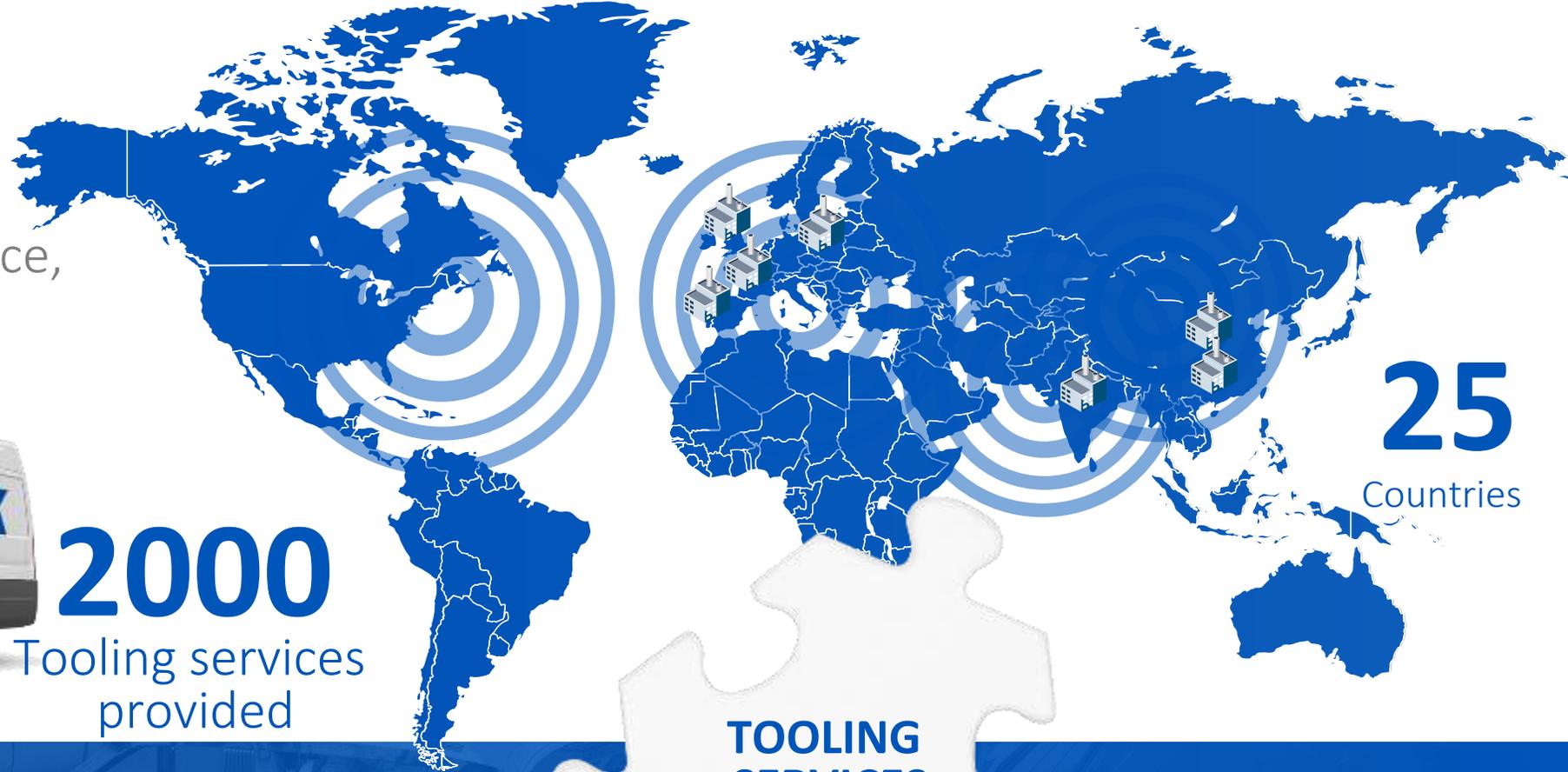
Complex

modification, maintenance,
repairs and step 2



2000

Tooling services
provided



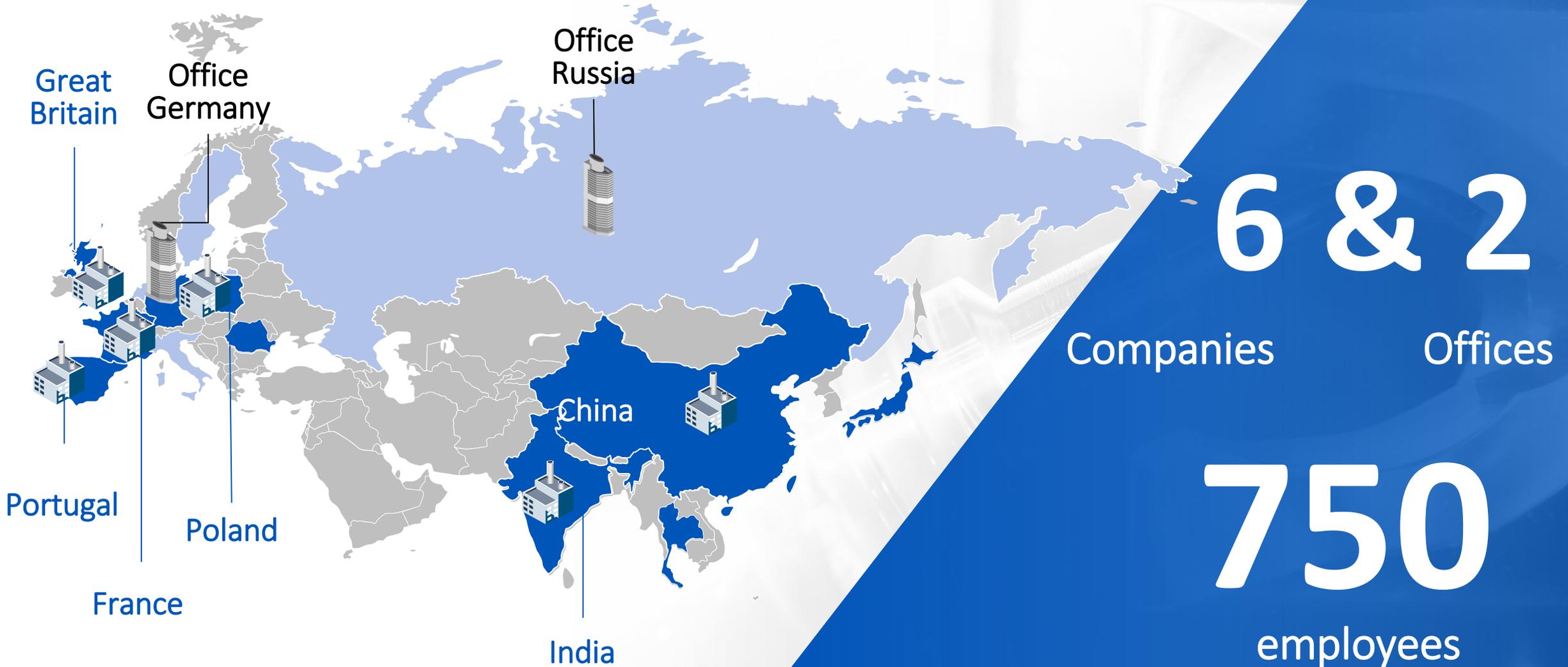
25

Countries

Services of injection molds

We can provide our service in your company





ARRK Polska



Bydgoszcz

Large and complex tools
UP TO 55 TONS

Bumper and large prototype tools in less than 10 weeks, innovative LVP tools

All kind of tooling services in Germany, Central Europe and Scandinavia



ARRK France



Tools

UP TO 50 TONS

R&D and innovative tooling concept in collaboration with customers and clusters

All kind of tooling services in France



ARRK PTC
Petersfield Technical Centre



Tools **SERVICES**

Tool Service and Maintenance
“Step 2” Imported Tool Support

2nd Party Modifications

Customer Crash Repairs

Mobile Laser Welding
and Tool Maker Support



ARRK Portugal



Tools

UP TO 30 TONS

High volume serial tools

Prototype tools

Low volume tools

Technical and project team



ARRK India



Tools

UP TO 50 TONS

Tools for passanger vehicules

Tools for commercial vehicules
and motorcycle industry

All size of prototype tools with
competitive price and leadtime

All kind of tooling service in India



Bydgoszcz



La Séguière



PTC



Marinha
Grande



Pune

ARRK Wuhan



Tools

UP TO 50 TONS

All size of tools for Chinese and export market

All kind of prototype and LVP tools with very competitive price and leadtime

All kind of tooling services in Wuhan area



ARRK Dongguan



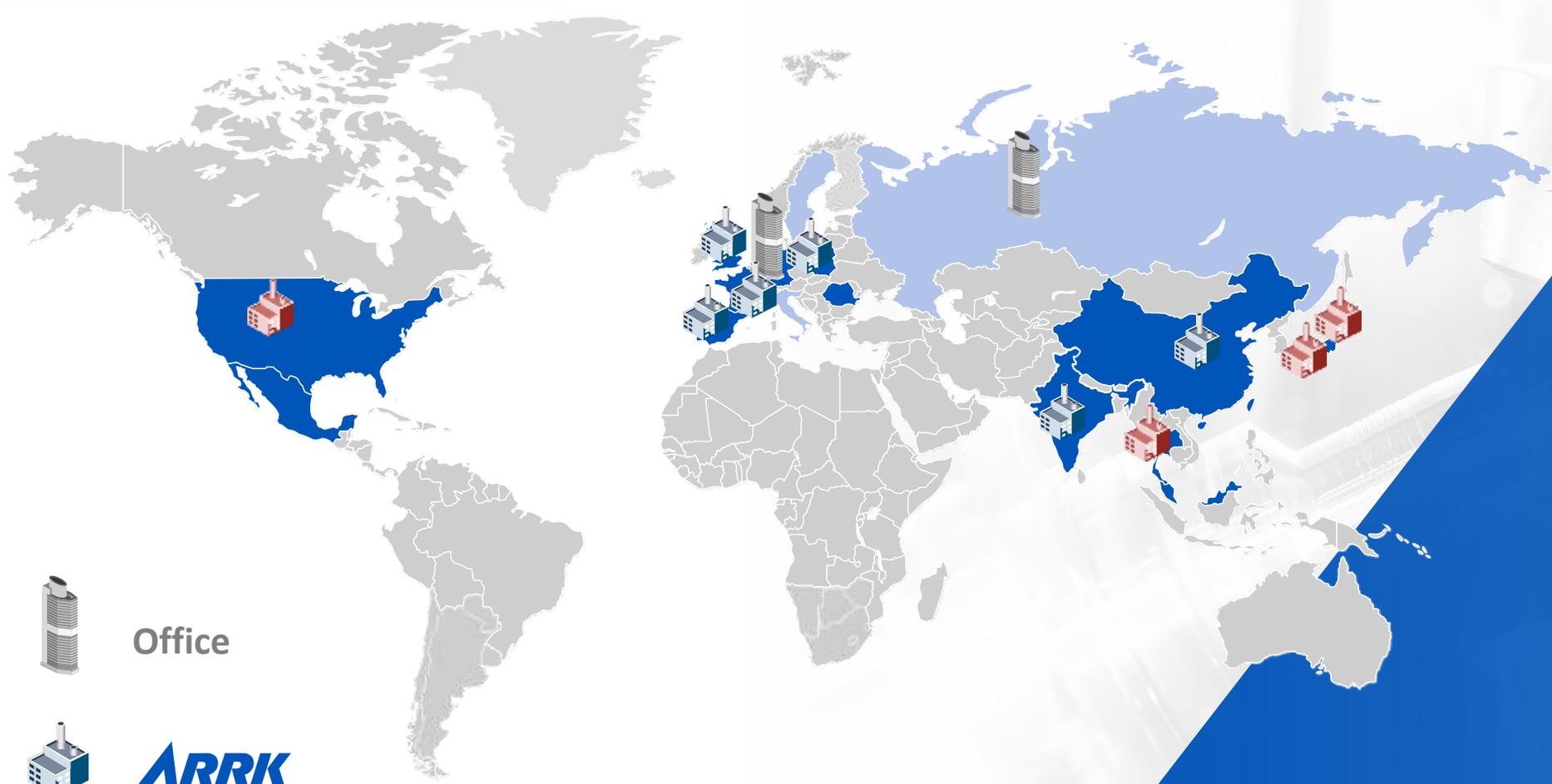
SMALL TOOLS

Small tools for Chinese and export market

Small size prototype tools with small lot prototype and serial batch production



TOOLING DIVISION



ARRK TOOLING

700 staffs

75 m€ sales

6 & 2 sites

KYOWA

320 staffs

60 m€ sales

4 sites



Office



ARRK



KYOWA

ARRK

TOOLING DIVISION – WHY US?



TOOLING DIVISION



TOOLING
Issue Date: 29/07/2016

Your idea

Our concept and technology

Our competent team is always able to adjust to the customers' expectations

Your quality expectations

Our quality process

Our quality procedures together with strong technical background allows us to deliver tools in the best quality

At Your required place, time and the budget

On time, in the requested place and in Your budget

Thanks to our Know-How and flexibility we can adjust to the customers' deadline and budget to deliver the tool or service at the customers' door

**WE ADJUST
TO YOUR
PROCEDURES AND
EXPECTATIONS**

42

90

160

12

21

Project Managers



Flexibility and listening to customers' expectations

Engineers



Software support (Catia V5, Work NC)

Bench workers



Technical expert opinion

Injection Experts



Adapted Injection machines with robots

Hand in hand with customers

Quality Control Experts



SPC, PPAP, MSA

Supported by Metrolog X4, PC-DMIS, Autodesk

FRIENDLY AND HEALTHY WORKING ENVIRONMENT



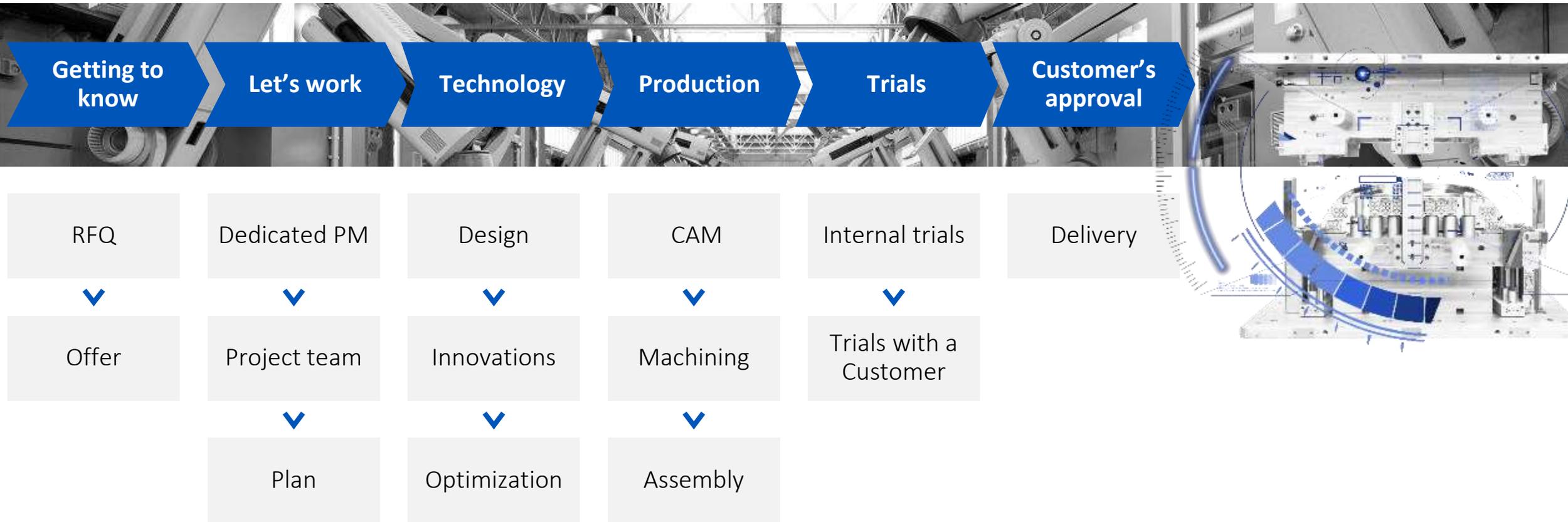
Health and safety culture

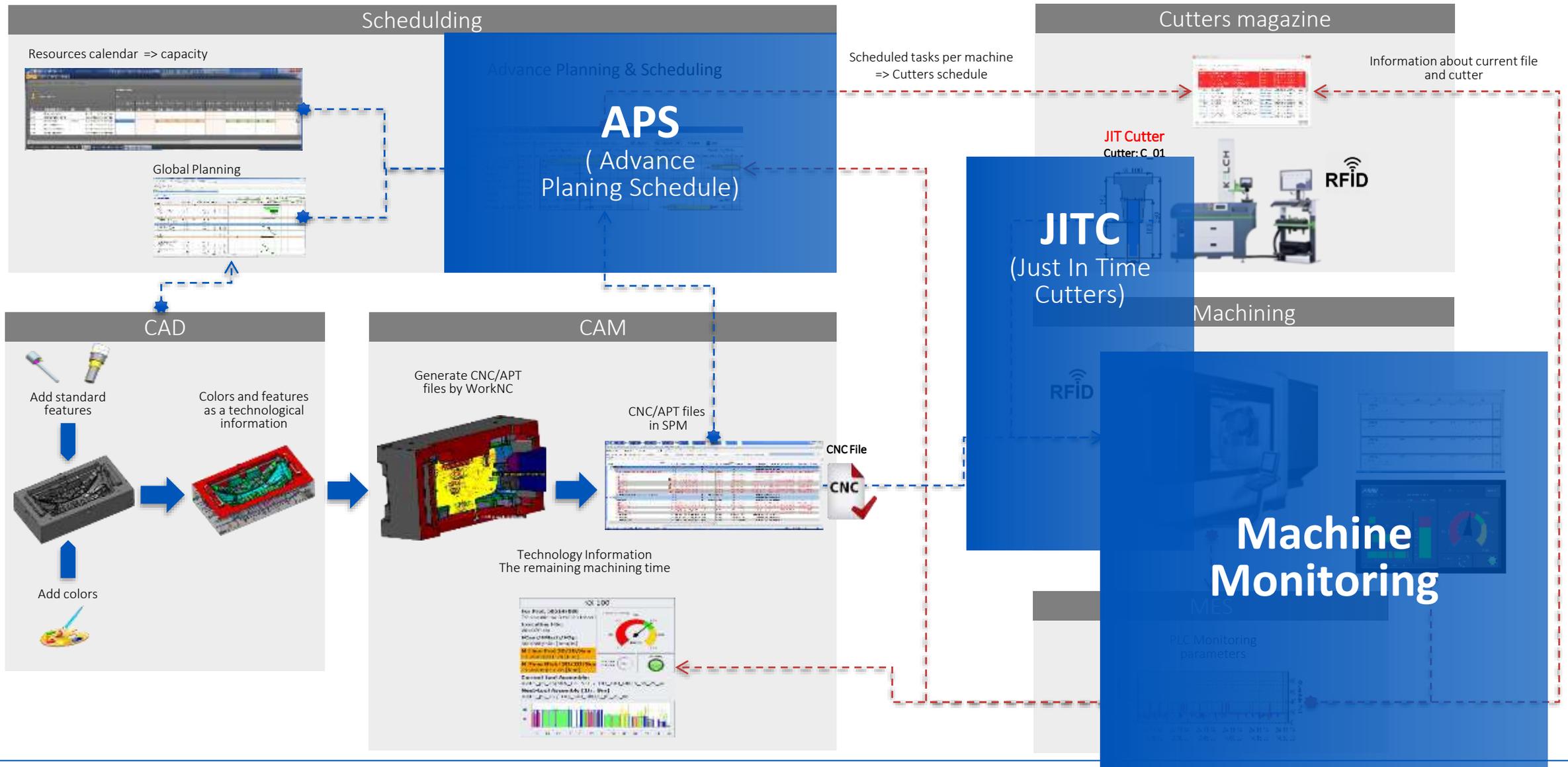
Raising awareness
for safe and prudent
working

Raising awareness
for risks

Health and Safety
training for all
employees and visitors

Complex production from a project to injection tool tryouts





MATRIX ORGANIZATION

We create dedicated teams to adjust to the customers' expectations



SYNERGY EFFECT

Thanks to the global management and cooperation of all Tooling Division business units we achieve synergy effect.



WE WORK GLOBALLY

Our global footprint allows us to work with automotive business leaders from all over the world and let us be proactive with new solutions



WE CAN THINK LOCALLY

Having the companies all over the world we can secure each customer with the individualized service and constant support

FRAME TOOL/LVP

Mold with Exchangeable cartridges



OVER MOULDING

Organo-sheet with steel inserts

QUALITY CERTIFICATION FROM 4 BUSINESS UNITS

China Wuhan
ISO 9001



China Wuhan
ISO 45001



China Wuhan
ISO 14001



Poland



India



France



GUARANTEE
of the highest quality



Global reach

Modern machine park

Skilled specialists



ARRK

PORTFOLIO – newest projects



ARRK Polska



TOOLING

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TECHNOLOGY :

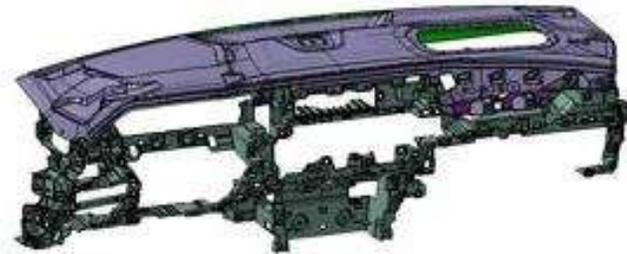
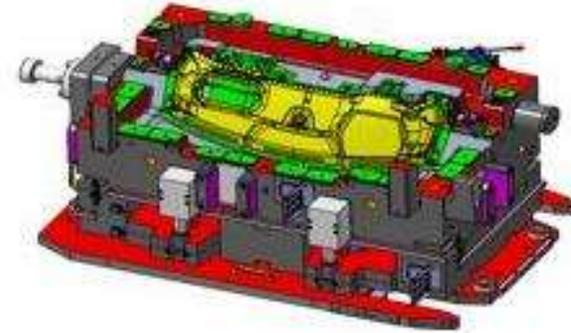
6 tools manufactured in ARRK Poland

Serial injection tools

Instrument panels

Customer

Faurecia



TECHNOLOGY :

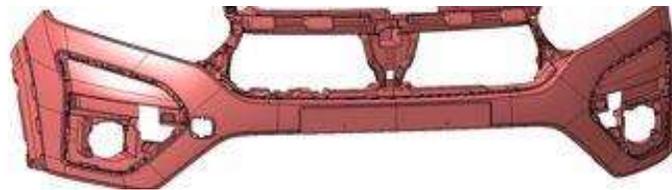
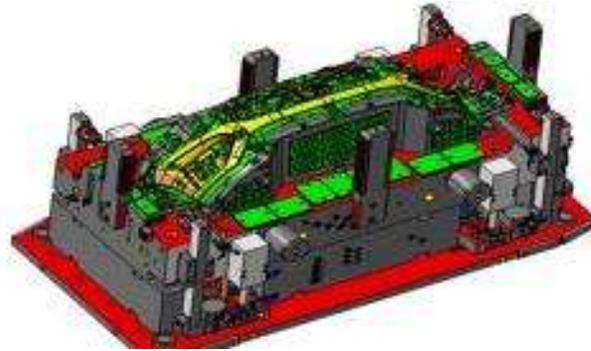
10 tools manufactured in ARRK Poland

Serial injection tool

Bumpers for several production plants

Customer

Renault



TECHNOLOGY :

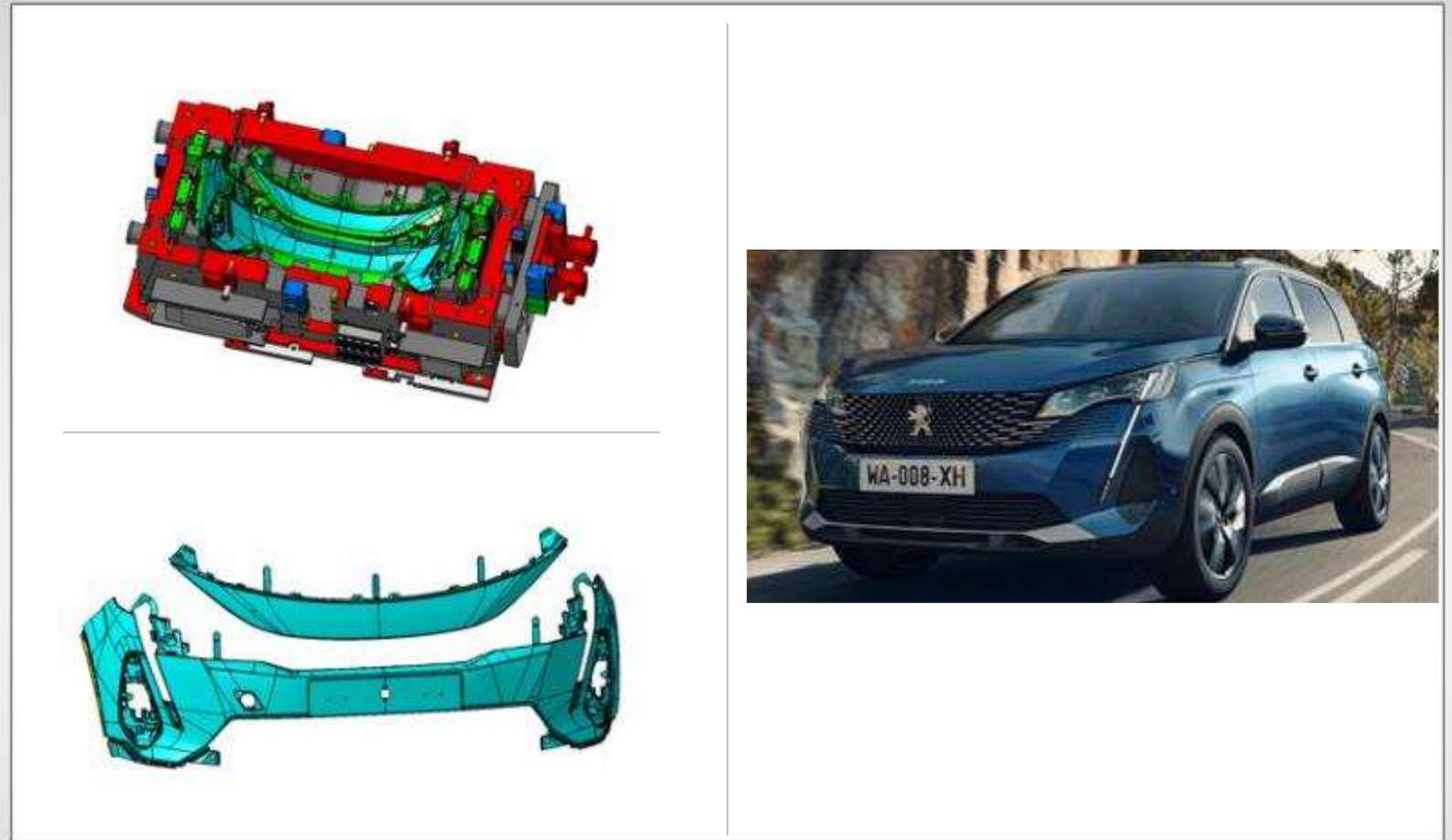
3 tools manufactured in ARRK Poland

Serial injection tool

Bumpers for several production plants

Customer

Plastic Omnium



HONDA JAZZ – FRONT BUMPER

TECHNOLOGY :

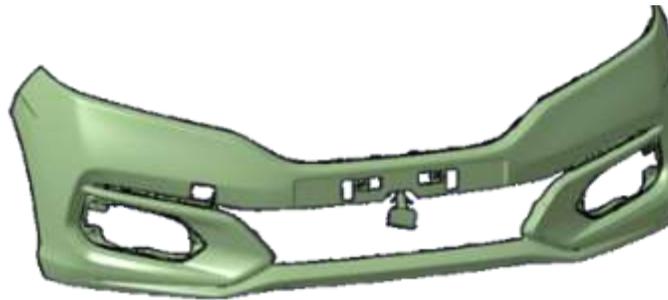
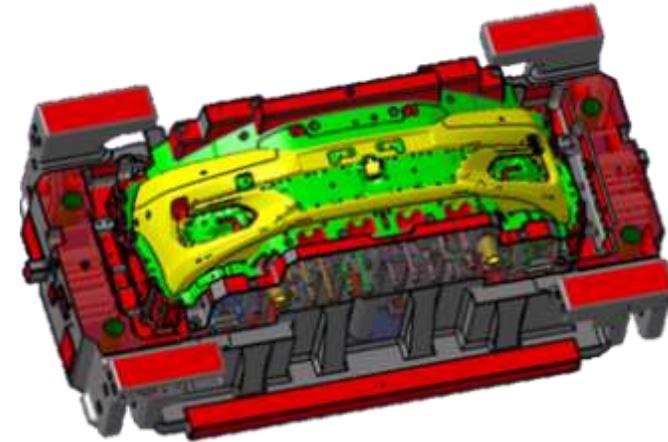
Tools manufactured in ARRK India

Serial injection tool

Front bumper

Customer

HONDA



HONDA JAZZ – REAR BUMPER

TECHNOLOGY :

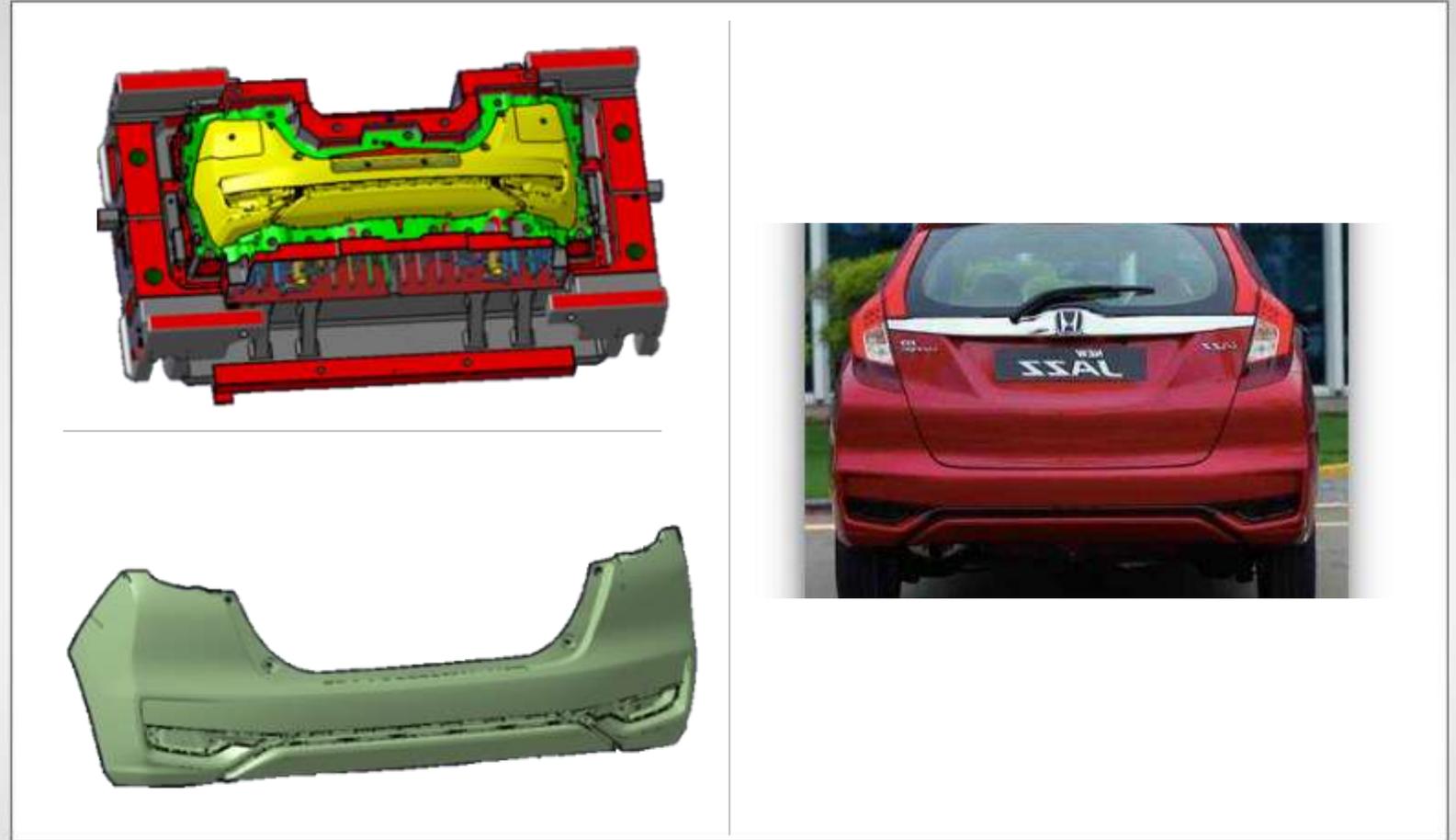
Tools manufactured in ARRK India

Serial injection tool

Rear bumper

Customer

HONDA



TECHNOLOGY :

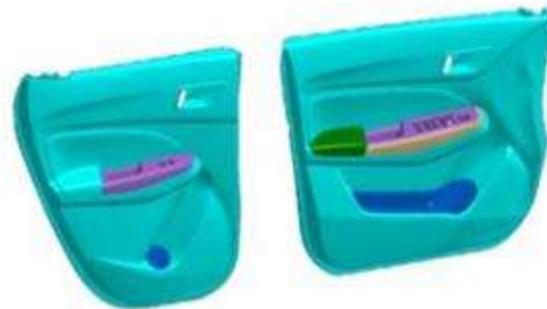
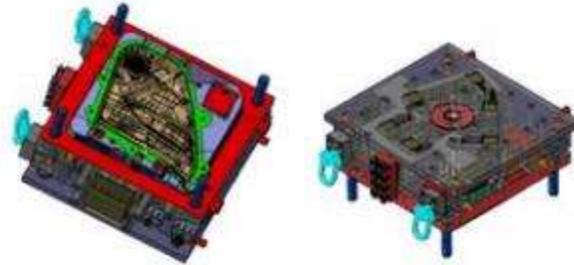
Tools manufactured in ARRK India

Serial injection tool

Door panels

Customer

MARUTI SUZUKI



ISUZU V-Cross Instrument Panel (RHD and LHD)

TECHNOLOGY :

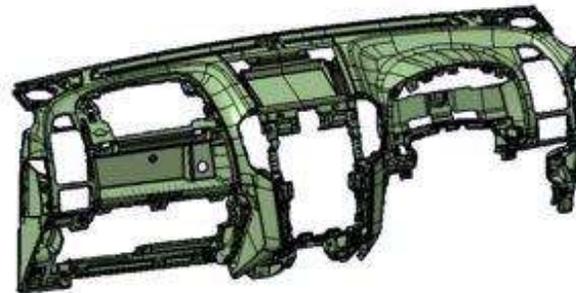
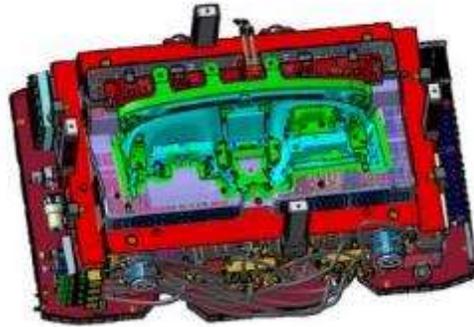
Tools manufactured in ARRK India

Serial injection tool

Instrument Panel RHD and LHD with
Zero PL at air duct slider

Customer

Faurecia



TECHNOLOGY :

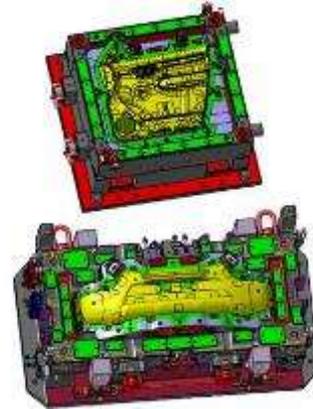
2 Tools manufactured in ARRK India

Serial injection tool

Rear Bumper and Door Trims

Customer

Maruti Suzuki



TECHNOLOGY :

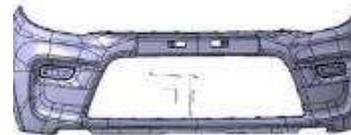
2 Tools manufactured in ARRK India

Serial injection tool

Front Bumper and Grill

Customer

Maruti Suzuki



TECHNOLOGY :

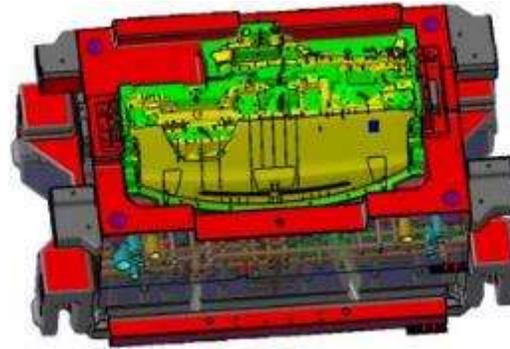
1 Tool manufactured in ARRK India

Serial injection tool

Instrument panel

Customer

Honda



TECHNOLOGY :

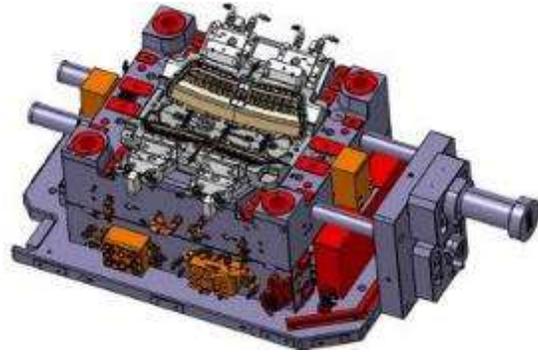
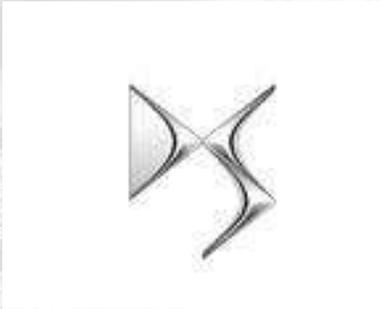
8 Tools manufactured in ARRK China

Serial injection tools

Instrument panel parts

Customer

Faurecia



TECHNOLOGY :

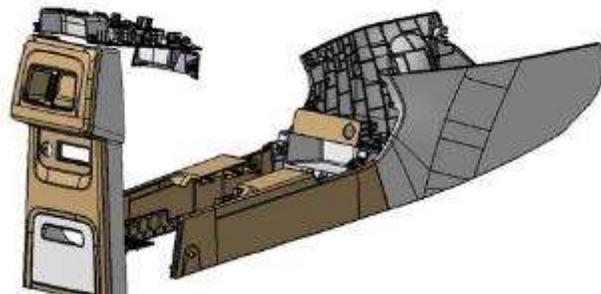
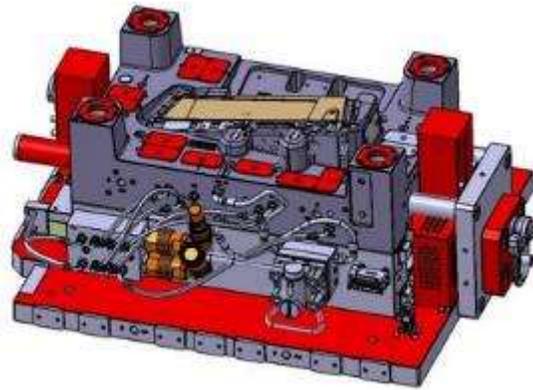
15 Tools manufactured in ARRK China

Serial injection tools

Center console parts

Customer

Faurecia



TECHNOLOGY :

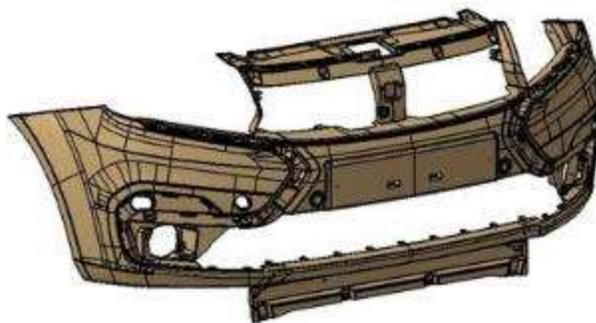
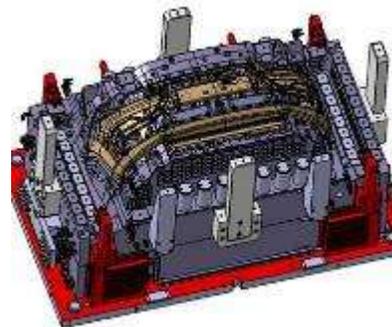
1 Tool manufactured in ARRK China

Serial injection tool

Front bumper

Customer

Avtovaz



HONDA CR-V HYBRID

TECHNOLOGY :

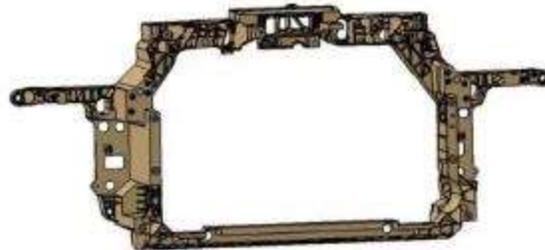
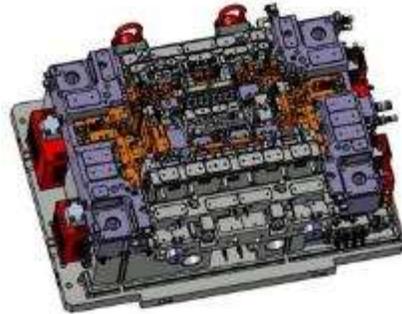
1 Tool manufactured in ARRK China

Serial injection tool

Front End (warpage management)

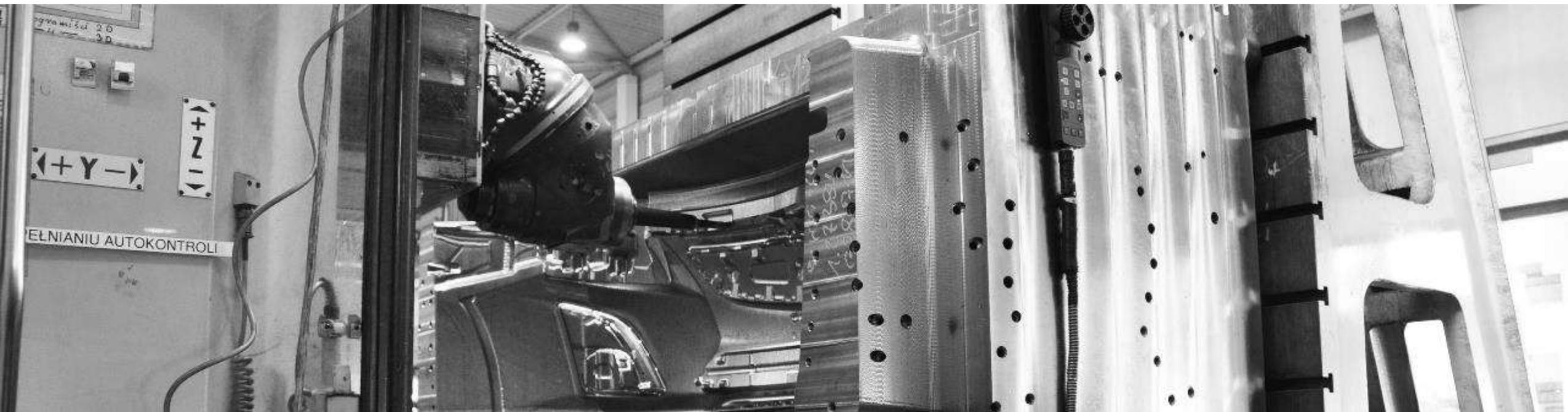
Customer

Valeo





PORTFOLIO- previous projects



ARRK Polska



TOOLING

Issue Date: 29/07/2016

TECHNOLOGY :

16 Tools manufactured in ARRK Poland

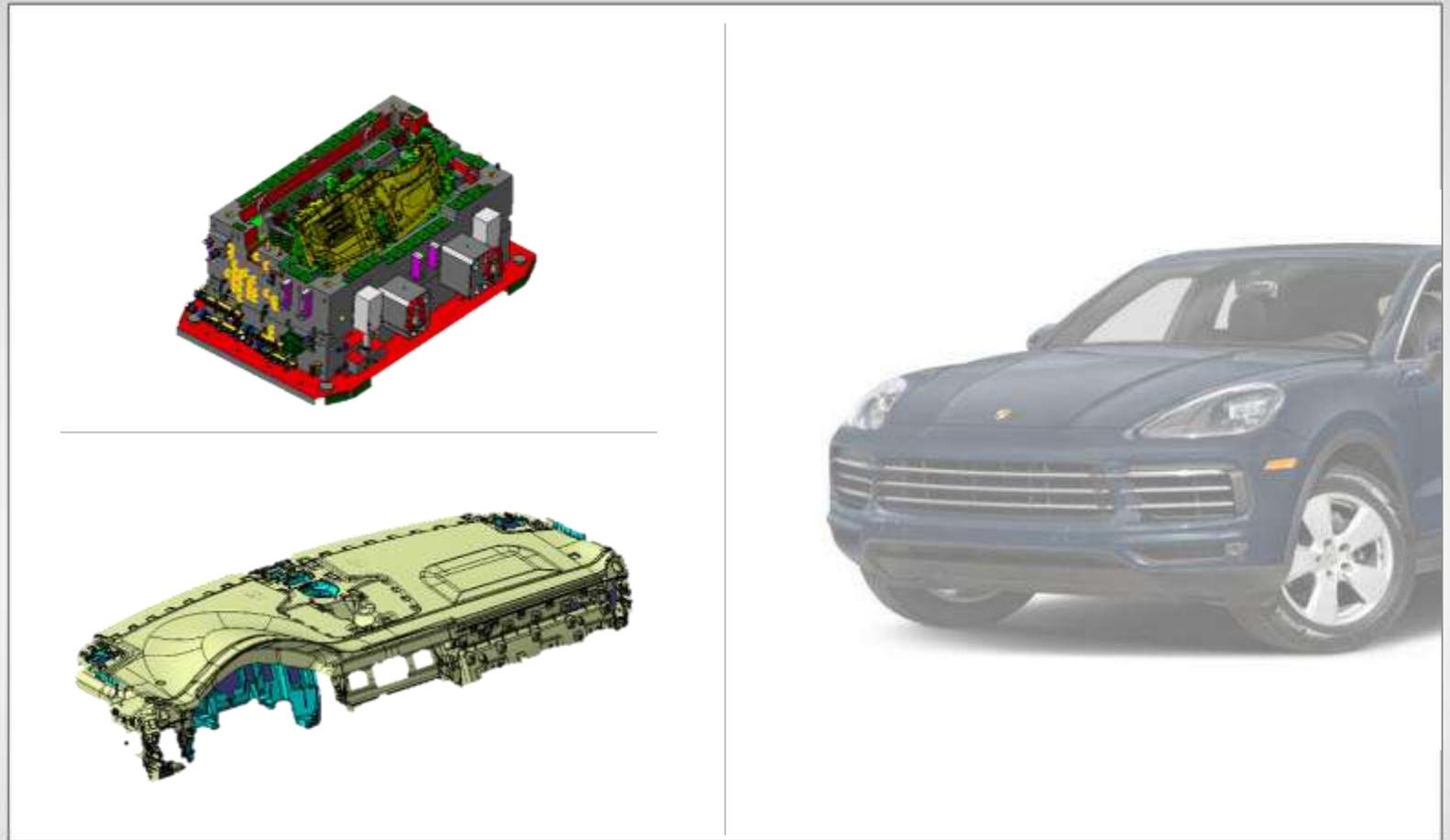
High volume concept

Foaming injection

Customer

TIER 1: FAURECIA

PORSCHE



TECHNOLOGY :

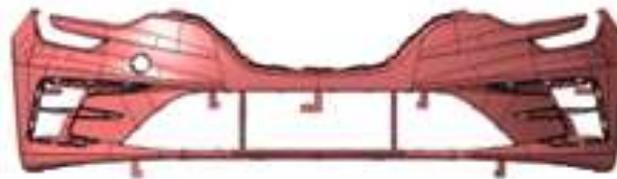
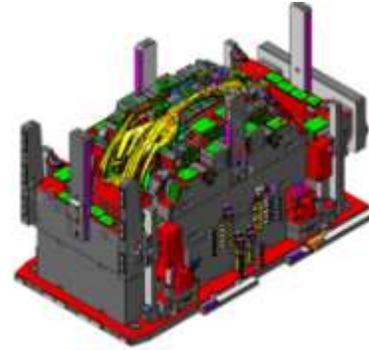
3 Tools manufactured in ARRK Poland

High volume concept

Customer

TIER 1: PLASTIC OMNIUM

RENAULT



TECHNOLOGY :

4 tools manufactured in ARRK Poland

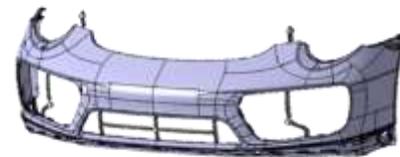
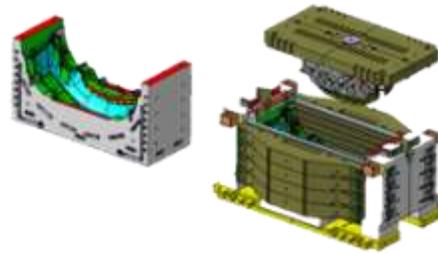
Prototype parts

Using Pretension Tools

Customer

TIER 1: SPG

PORSCHE



TECHNOLOGY :

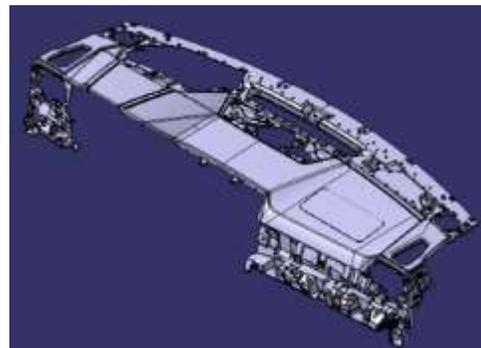
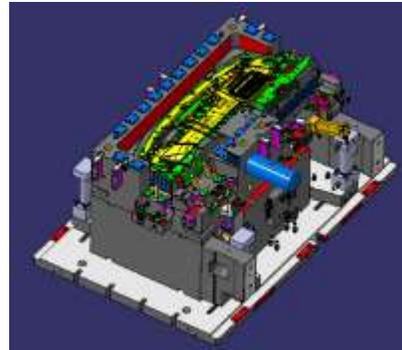
2 tools manufactured in ARRK Poland

Low volume concept

Customer

AUDI (LAMBORGHINI)

TIER 1: ANTOLIN



TECHNOLOGY :

7 Tools manufactured in ARRK Poland

High volume concept

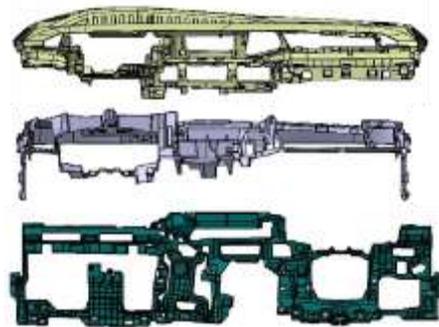
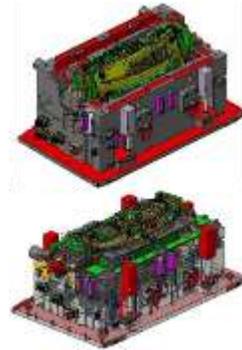
Customer

TIER 1: FAURECIA

VOLKSWAGEN



Volkswagen



TECHNOLOGY :

4 Tools manufactured in ARRK Poland

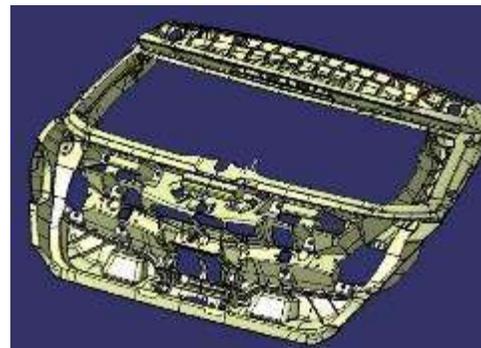
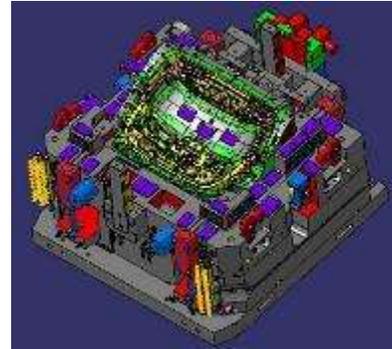
Tailgate - High volume concept

First tailgate in injection concept

Customer

TIER 1: PLASTIC OMNIUM

PEUGEOT



TECHNOLOGY :

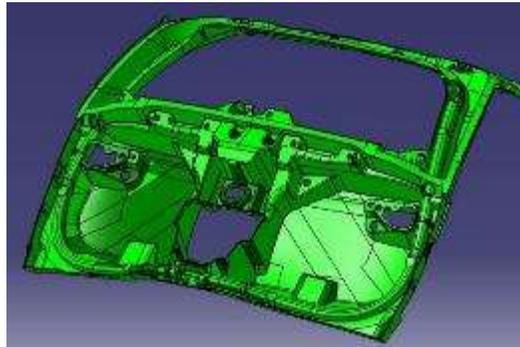
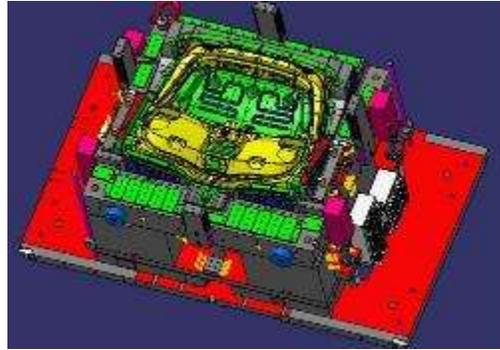
Tools manufactured in ARRK Poland

Tailgate - Water Injection

Renault innovation department

Customer

RENAULT



TECHNOLOGY :

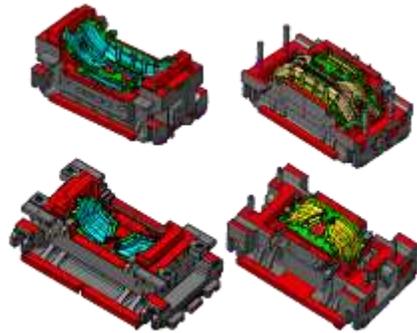
Tools manufactured in ARRK India

Serial injection tool

Front and rear bumpers

Customer

HONDA



TECHNOLOGY :

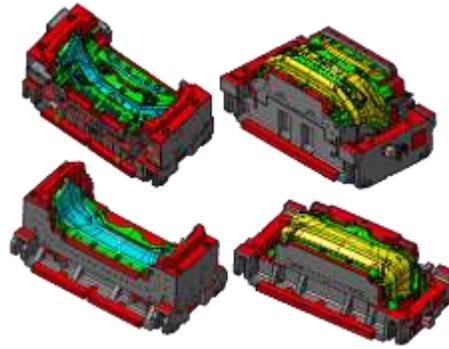
Tools manufactured in ARRK India

Serial injection tool – bumpers

Renault innovation department

Customer

HONDA



TECHNOLOGY :

Tool manufactured in ARRK India

Serial injection tool

Rear bumper

Customer

FIAT



TECHNOLOGY :

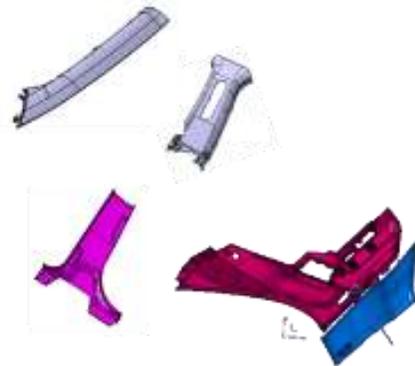
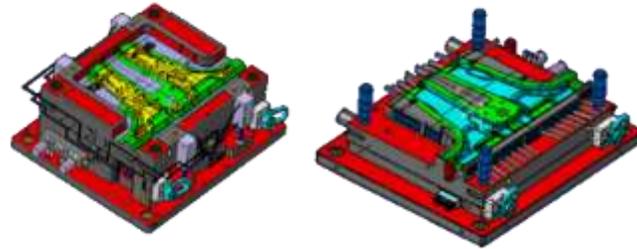
Tools manufactured in ARRK India

Serial injection tool

Pillar trims

Customer

TATA



TECHNOLOGY :

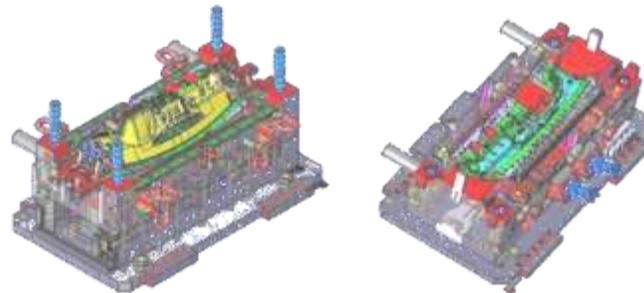
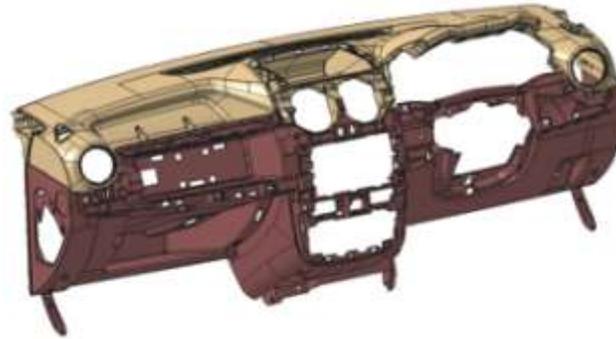
Tools manufactured in ARRK India

Serial injection tool

Instrument panel

Customer

RENAULT



TECHNOLOGY :

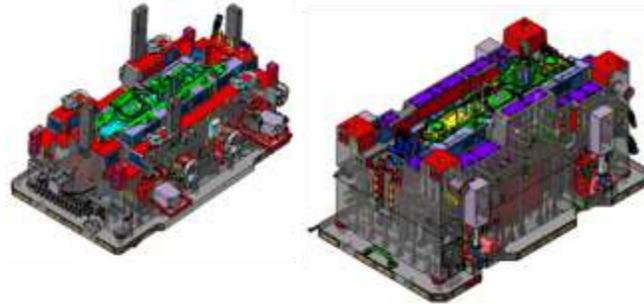
Tools manufactured in ARRK India

Serial injection tool

Instrument panel

Customer

RENAULT



TECHNOLOGY :

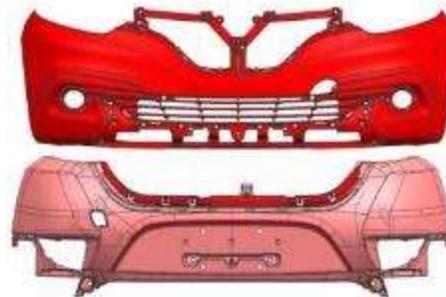
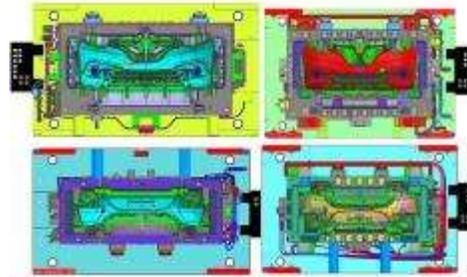
Tools manufactured in ARRK Wuhan

Serial injection tool

Front & rear bumper

Customer

RENAULT



TECHNOLOGY :

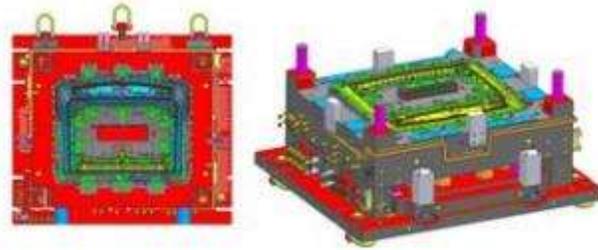
Tools manufactured in ARRK Wuhan

Serial injection tool

Roof frame

Customer

AUDI



TECHNOLOGY :

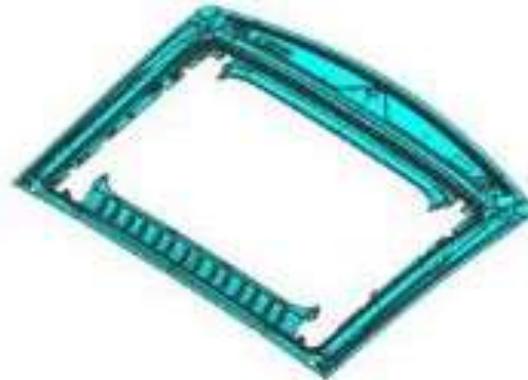
Tools manufactured in ARRK Wuhan

Serial injection tool

Roof frame

Customer

AUDI



TECHNOLOGY :

Tools manufactured in ARRK Wuhan

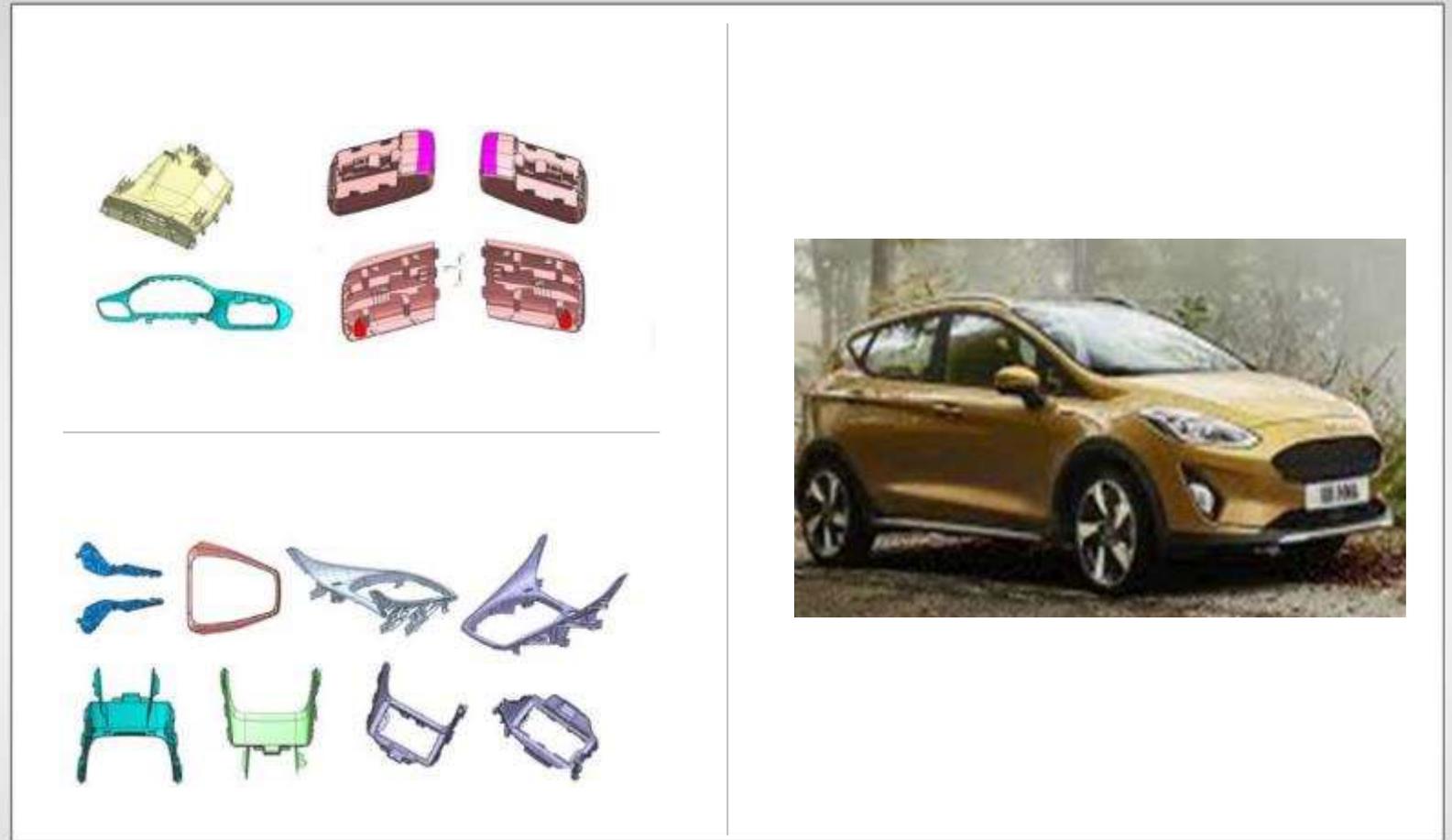
Gear shifters, Control panel

Serial injection tool

Customer

FORD

TIER 1: FAURECIA



TECHNOLOGY :

Tools manufactured in ARRK Wuhan

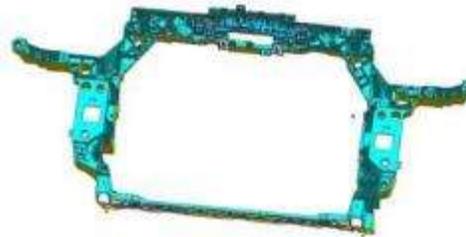
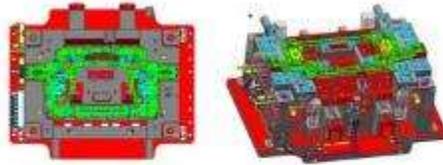
Roof frame

Serial injection tool

Customer

HONDA

TIER 1: VALEO





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Tooling

Low Volume Production