

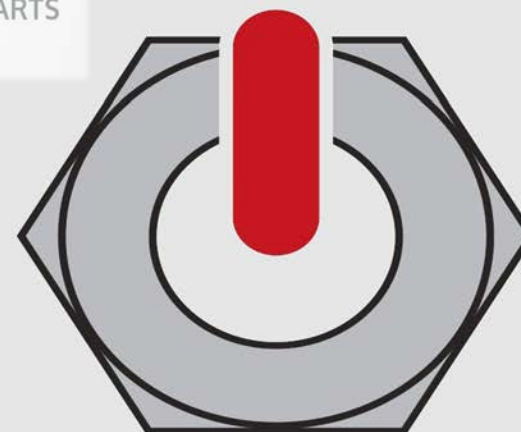


Saint Petersburg
AUTOPROM NORTH WEST
December 2017

SPECIAL IN SHAPES AND MATERIALS
SPECIAL BOLTING AND FASTENERS / COLD AND HOT FORGED PARTS



OPTIMA
ENGINEERING
SYSTEMS



PowerMetalItalia

SUMMARY

1.0 Companies Introduction

- 1.1 Meccaniche Morandi History
- 1.2 Key Figures
- 1.3 Power Metal Italia History
- 1.4 Key Figures
- 1.5 Aggregate

2.0 Capabilities

- 2.1 Technology & Capacities
- 2.2 Information Technology
- 2.3 QMS & Laboratory

3.0 Products

- 3.1 Automotive, Trucks and Agricultural Machines Range
- 3.2 Oil & Gas, Power Generation Range
- 3.3 Construction & General Industry Range
- 3.4 Special Range by turning and milling
- 3.5 Special parts aluminium alloy

4.0 Market & Strategic Sectors

- 4.1 Main Markets
- 4.2 Strategic Sectors
- 4.3 Reference List

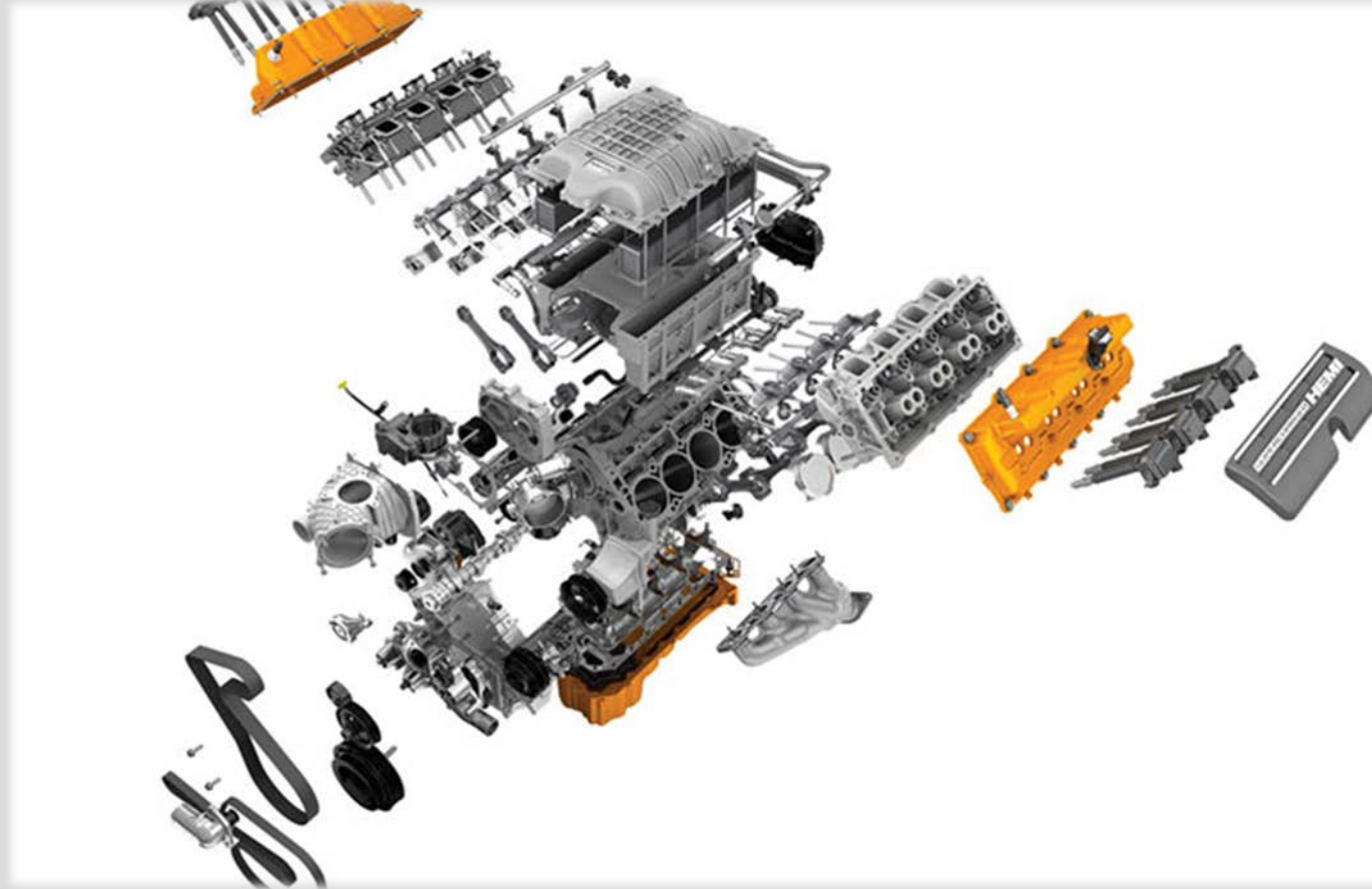
5.0 Russia Project

- 5.1 Strategic Partnership
- 5.2 Road Map in Russia
- 5.3 Targets in Russia
- 5.4 Project Strength Points



COMPANIES INTRODUCTION

1.0



MECCANICHE MORANDI HISTORY

over 80 years of professional activities

Meccaniche Morandi srl is a family owned company based in the Milan area.

Meccaniche Morandi srl produces special fasteners and mechanical parts according to customers designs

1934	↓	Establishment of the company
1965	↓	First Hot Forging Press
1968	↓	First Cold Forging Machine
1999	↓	In-House Heat Treatment Department
2000	↓	AD Merkblatt W0 Certification
2003	↓	ISO 9001 Certification
2004	↓	PED Certification
2006	↓	First Automatic 100% Inspection Machine
2017	↓	Strategic Partnership Morandi-Power Metal
2017	↓	Strategic Partnership Morandi-NAPAC-OES



KEY FIGURES

Staff	50 pax
Net Sales (2017)*	15,0 M usd
EBITDA (2017)*	18,3 %
Productive Capacity	12.000 Tons/Year
Covered Area	10.000 sqm

* forecast



POWER METAL ITALIA HISTORY

over 14 years of professional activities

Power Metal Italia srl is a family owned company based in the Florence area.

Power Metal Italia srl is specialized in Customization of the product based on Customer requirements

2004	↓	Operation Start
2006	↓	Company Foundation
2015	↓	ISO 9001 Certification
2015	↓	U.N. United Nations (ONU) Supplier accreditation
2016	↓	New Factory Plant in Florence area
2017	↓	Strategic Partnership Morandi-Power Metal
2017	↓	Strategic Partnership Power Metal Italia-NAPAC-OES



KEY FIGURES

1.4

Staff	12 pax
Net Sales (2017)*	4,5 M usd
EBITDA (2017)*	30,3 %
Covered Area	1.500 sqm

* forecast



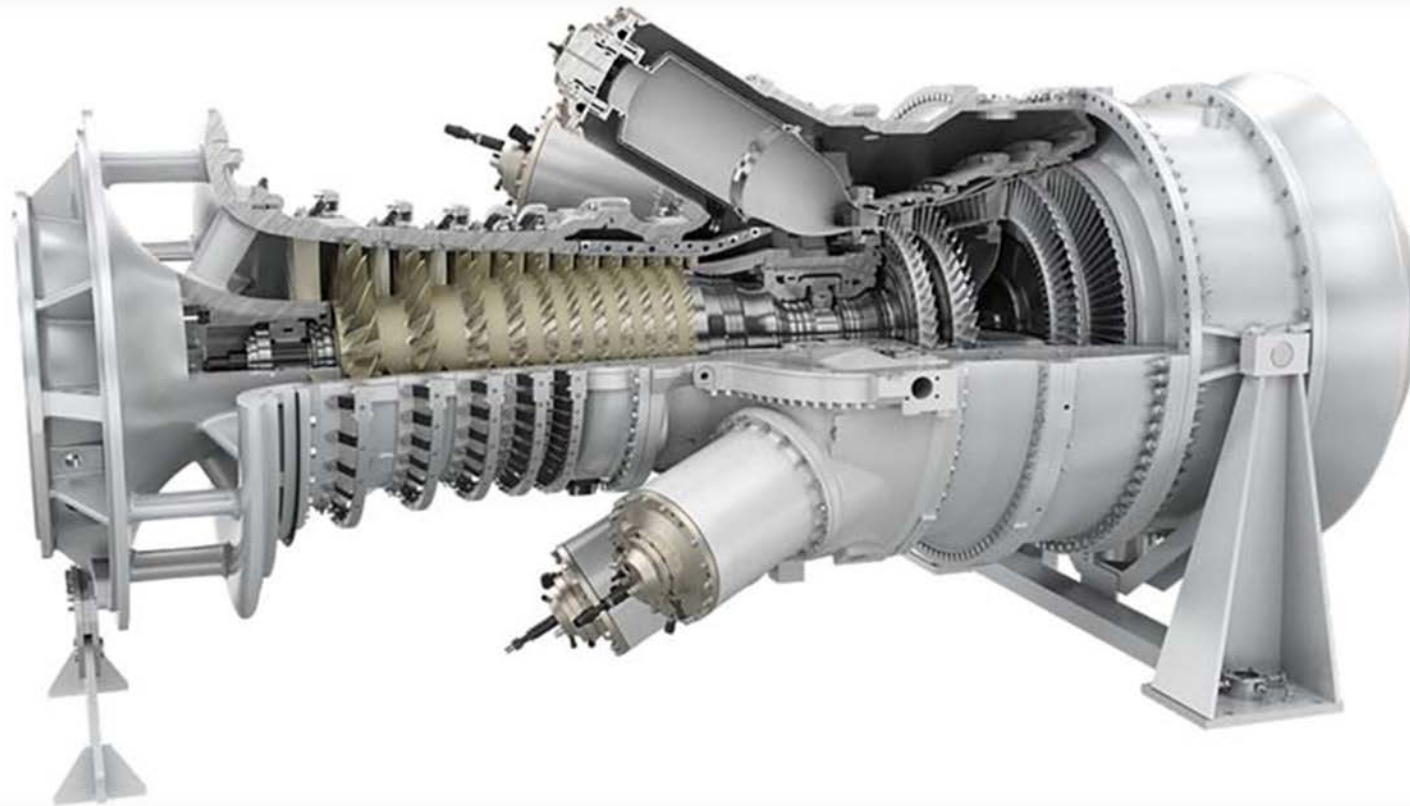
AGGREGATE

1.5

Staff	70 pax
Net Sales (2017)	20,5 M usd
EBITDA (2017)	23,0 %
Covered Area	12.500 sqm

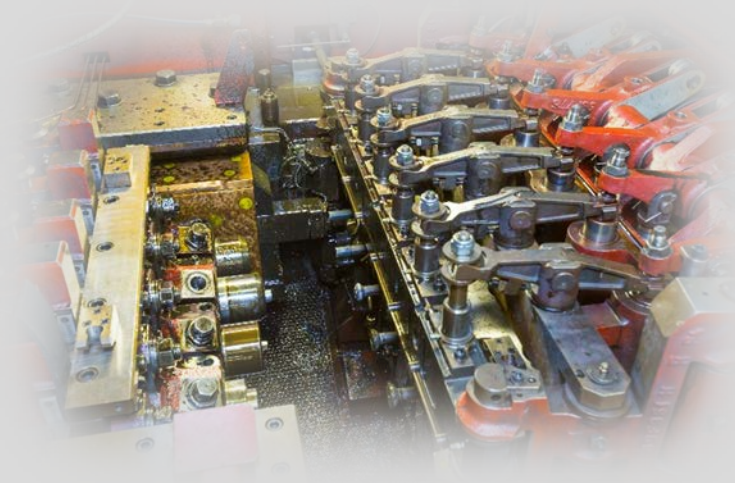
CAPABILITIES

2.0



Cold Heading

- 12 Cold Heading Machines
- 11.000 Tons/year
- 60 Million Pieces from Ø6 to Ø33
- Alloy steel, Stainless Steel, High Temp SS (A286)



Hot Forging

- 3 Screw Press + Electro-Upsetting Up to Ø60
- Alloy steel, Stainless Steel, High Temp SS, Exotic Materials



In-House Heat Treatment

Nitrogen & Endogas Controlled Atmosphere

- Automatic continuous Furnace “OLIVOTTO” (500 kg/h)
- N.2 Chamber Furnaces (400 kg/cycle)
- Well Furnace (250 kg/cycle)
- N.3 Rotating Furnaces (100 kg/cycle)
- N.3 Muffle Furnace (25 kg/cycle)

Thread Rolling

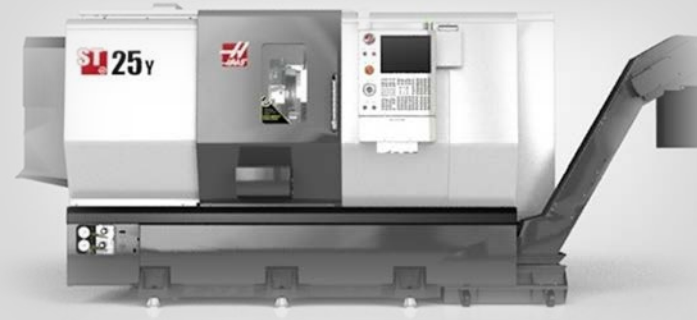
- N.3 Automatic Thread Rolling Machines – Flat Dies
- N.4 Automatic Thread Rolling Machines – Planetary Dies
- N.2 Manual 2 Dies Thread Rolling Machines From Ø6 to Ø60



TECHNOLOGY & CAPACITIES

2.1

Turning Milling and Cutting for custom pieces



N.1 Turning CNC HAAS ST25Y

CNC lathe w / YAxis; 12 "x21" (305x533mm) maximum capacity 3.0 "(76mm) bar 31.75" (806mm) swing, ± 2.00 " ($\pm 50,8$ mm)

N.1 SINICO TR60/4-350

Automatic cutting machine, milling and centering Cutting diameter from 6mm to 80mm
Cutting length 40mm to 350mm Speed forward 25 meters per minute

N.1 CNC HAAS UMC-750SS

Super-Speed 5-Axis Vertical Machining Center; 30" x 20" x 20" (762 x 508 x 508 mm), with 500 mm integrated high-speed 2-axis trunnion rotary table, high-speed 40+1 side mount tool changer, 1200 ipm (30.5 m/min) rapids
Wireless Intuitive Probing System, power-failure detection module, 75-gallon (284 liter) flood coolant system.



CNC CAD/CAM “MISSLER SOFTWARE”

Top solid

Thanks to the possibility to complete programming the automated machines in the workshop without having to multiple systems, and the related technology, we are able to obtain:

- Tollerances Management : software allows the application of tolerances directly on 3D model, without passing through the two-dimensional paper
- Modifications Managements: The system manages the lifecycle of parts. Moreover, in case of modification of the part, the system will automatically update the production cycle without the requirement to implement it anew.
- Import and Adaptation to external files: Due to the very powerful modeling functions and the large number of interfaces allows us to clean, remove simplify and adapt the received geometry to facilitate the creation of the model that will manufactured.



100% Inspection and Sorting

“DIMAC” Machine
Eddy current crack detection
Optical inspection of threads
Eddy current hardness class sorting
etc.



Internal Laboratory Testing

Tensile Testing Machine
Hardness Testing Machines
Charpy Impact Test Machine
Quantometer
Optical comparator
Fischerscope
etc.



PRODUCTS

3.0



Automotive, Trucks and Agricultural Machines Range

3.1

MAIN PRODUCTS:

- Ball Pins
- Wheel Bolts
- High Strength Bolts
- Special Parts



Oil & Gas, Power Generation Range

3.2

MAIN PRODUCTS:

- High Temperature/Pressure Fasteners
- Exotic Materials
- Special Coatings



Construction & General Industry Range

3.3

MAIN PRODUCTS:

- Special fasteners
- T-Head Bolt
- Hollow shape parts



Special Range by Turning and Milling

3.4



Special Parts Aluminium Alloys

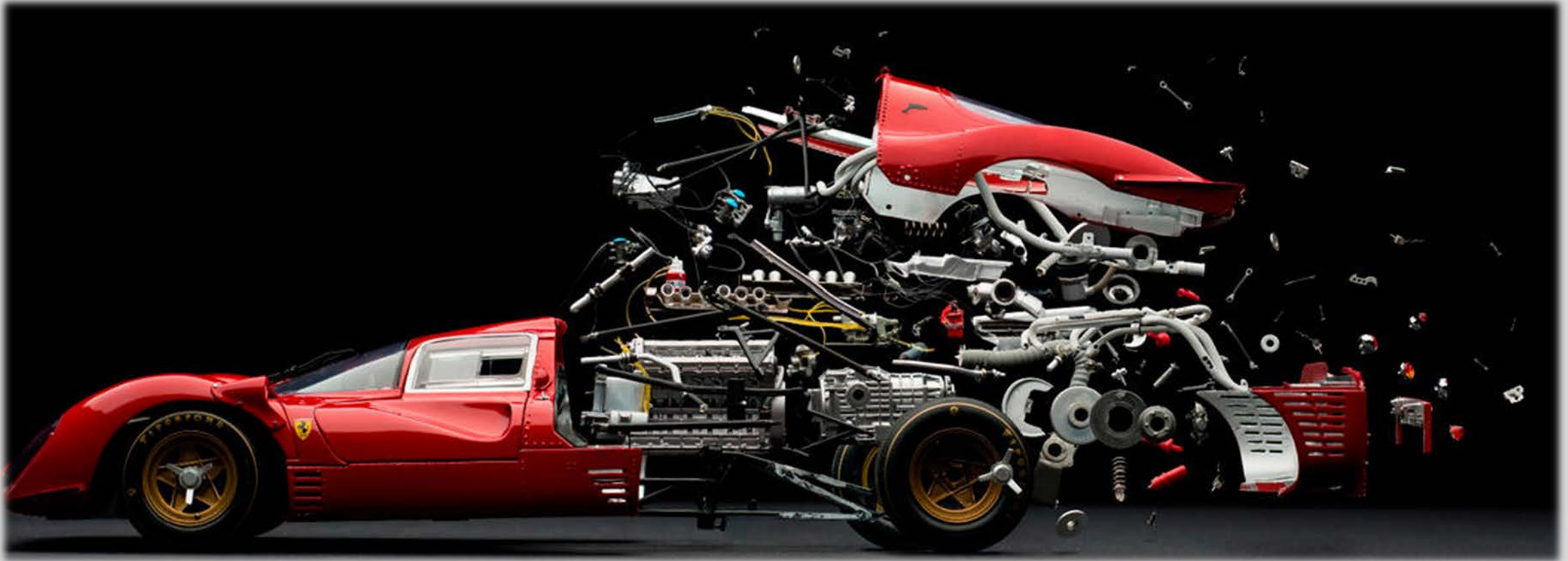
Space and aircraft industry

3.5



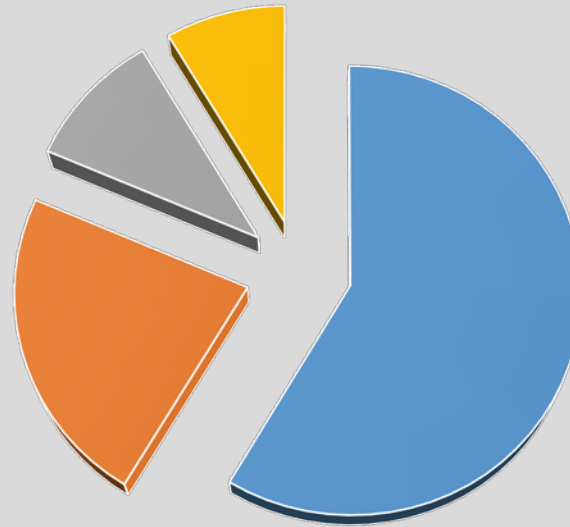
MARKET & STRATEGIC SECTORS

4.0



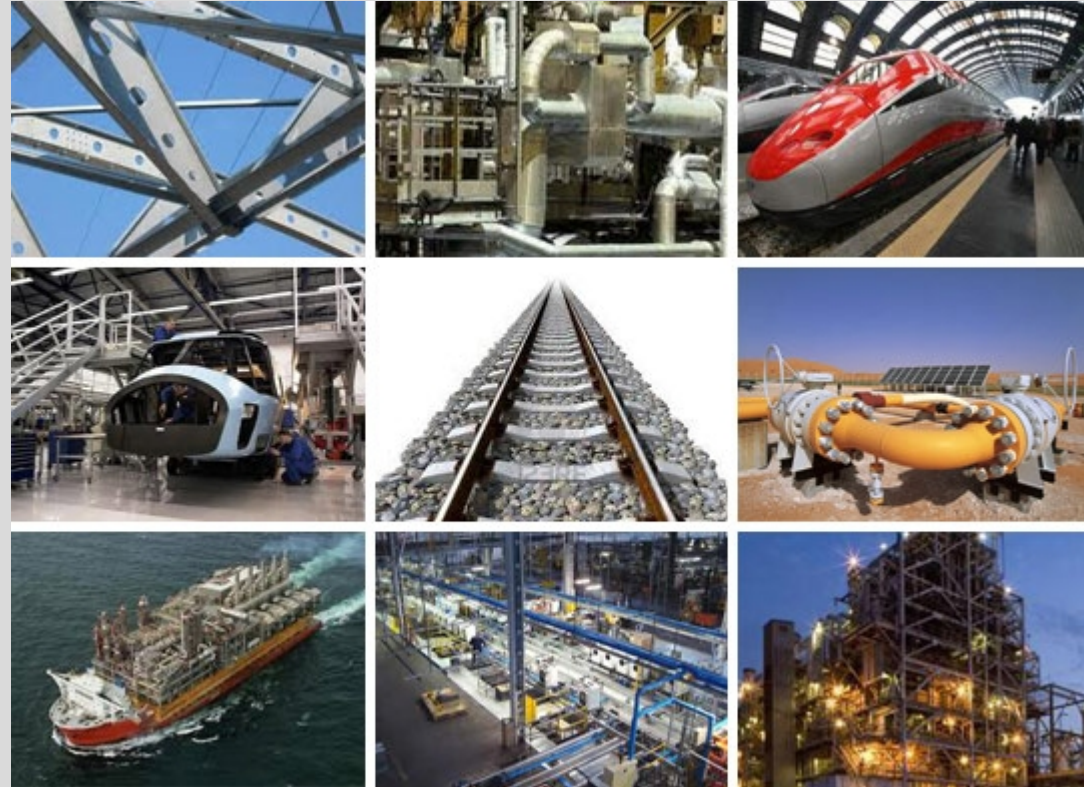
MAIN MARKETS

- Automotive, Trucks & Agricultural machines
- Oil & Gas
- Construction
- General industry



STRATEGIC SECTORS

- Automotive Industry
- Mechanical Industry
- Electrical Mechanical industry
- Automation
- Chemical Plant
- Solar Plant
- Pumps and Valve
- Naval Shipyard industry
- Railway Industry
- Road Barrier
- Metallic Carpentry
- Oil & Gas
- Space end Aircraft industry



REFERENCE LIST

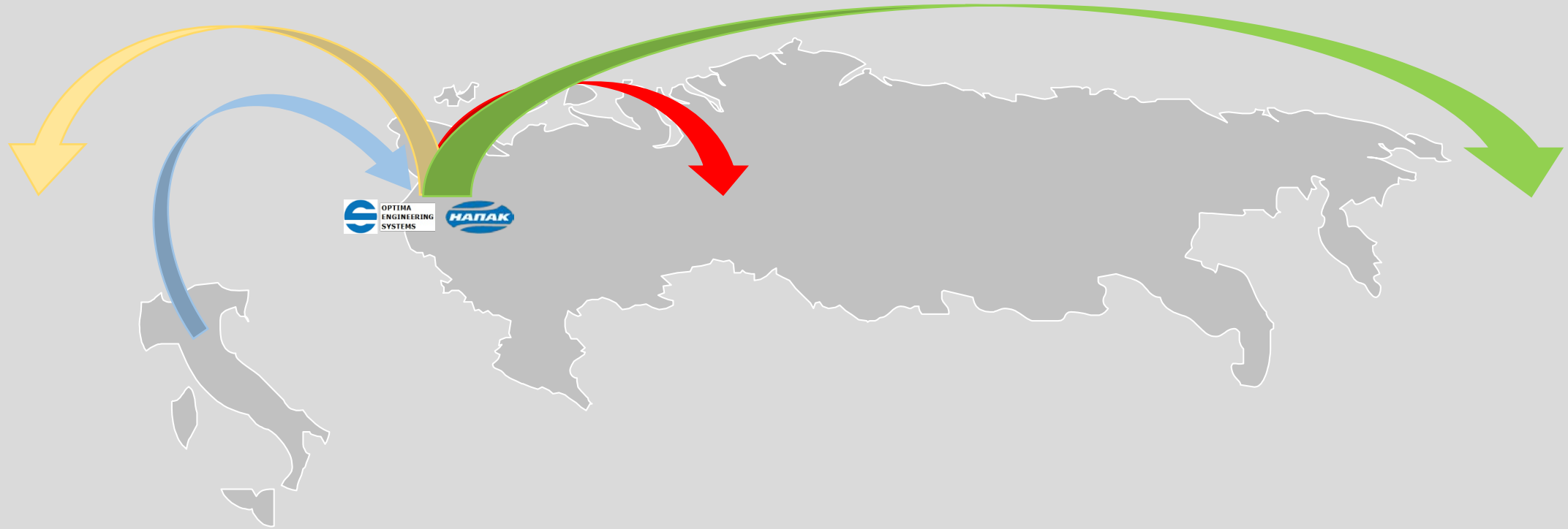
Key Customers (mainly focus on Automotive):

- General Electric (www.ge.com)
- O.N.U. United Nations (www.un.org)
- Iveco (www.iveco.com)
- Ferrari (www.ferrari.com)
- FCA Group (Fiat auto) (www.fiat.it)
- FCA Group (Alfa Romeo) (www.alfaromeo.it)
- FCA Group (Lancia) (www.lancia.it)
- Maserati (www.maserati.it)
- BMW (www.bmw.com)



RUSSIA PROJECT

5.0



STRATEGIC PARTNERSHIP

5.1

- 2017 Agreement with Russian NAPAC & OPTIMA ENGINEERING SYSTEM Organization for the promotion of the Group in the Russian and CIS Market and Technological Partnerships in Russia.
- 2018 A new Italian partner will join the group for Oil & Gas's valves production
- 2018 A new Italian partner will join the group to bring «Aluminium die casting technology» related to Automotive sector



ROAD MAP IN RUSSIA

5.2

- 2017 Establish a Representative Office of Italian Group based in Saint Petersburg
- 2018 Approach Customers in all strategic sectors
- 2018 Contacts with Russian Partner for production's relocation project
- 2018 New Italian Partners' Introduction to the Russian Market



TARGETS IN RUSSIA

Strategic Russian Partnership

- Definition of the Partnership main elements
- Development of Technological Projects
- Implementation of Special Training programmes

Technological Support

- Support in the formation of the technological parts
- Development of Technological Projects
- Support in the process know how transfer on site



PROJECT STRENGHT POINTS

- Capabilities
- Flexibility
- Wide Range of Applicable Solutions
- Time Response
- High Skills
- Quality Management and Certifications
- Strongly Motivated Group





THANKS
for your attention

www.meccanichemorandi.it

www.powermetalitalia.it

