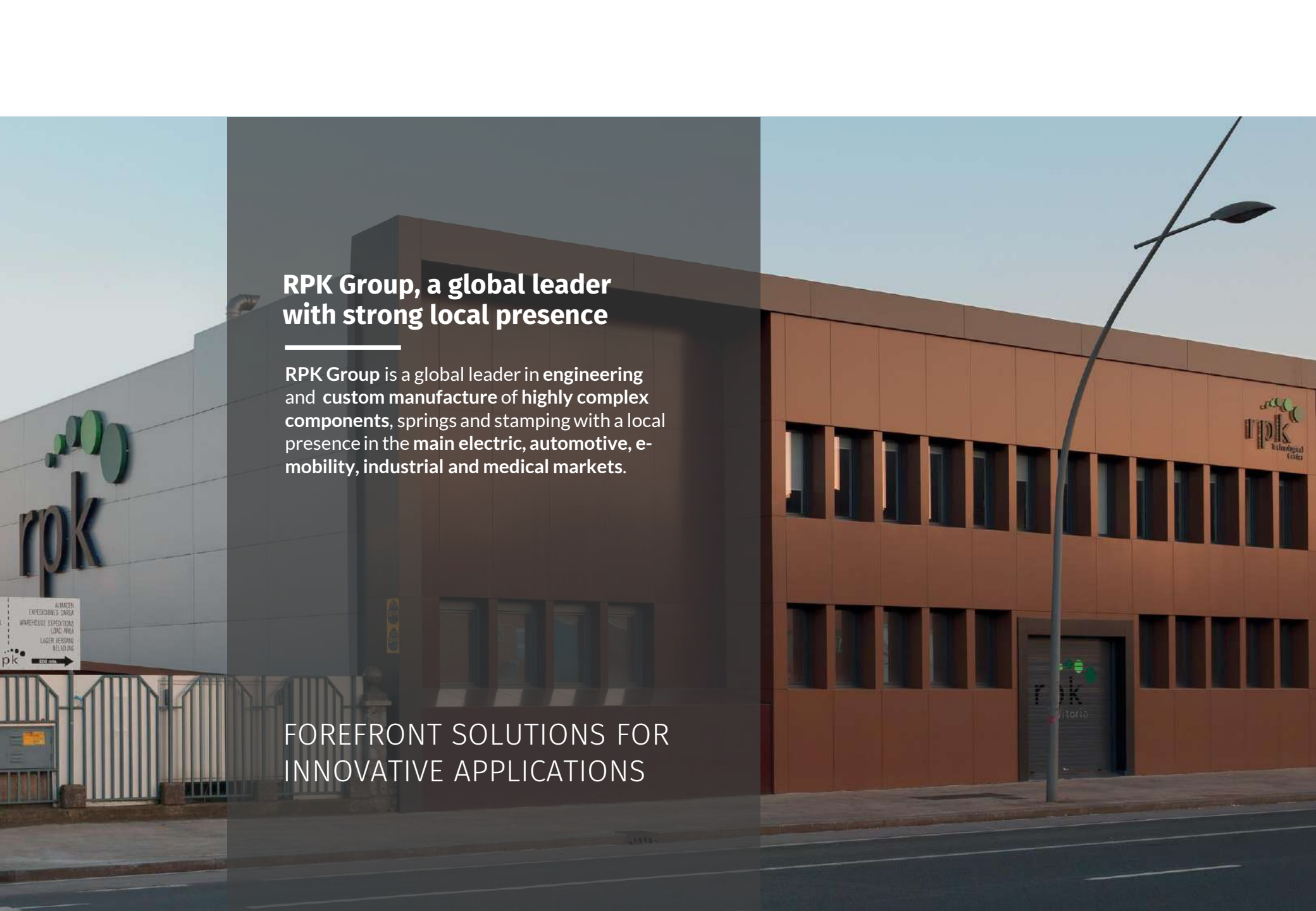




rpk

ELECTRICAL VEHICLES  
SOLUTIONS

A photograph of a modern, two-story industrial building with a brown facade and large windows. The RPK logo is visible on the building's exterior. A dark grey semi-transparent box is overlaid on the left side of the image, containing text. A street lamp is visible on the right side of the building.

## RPK Group, a global leader with strong local presence

RPK Group is a global leader in engineering and custom manufacture of highly complex components, springs and stamping with a local presence in the main electric, automotive, e-mobility, industrial, and medical markets.

FOREFRONT SOLUTIONS FOR  
INNOVATIVE APPLICATIONS

# RPK TECHNOLOGICAL CENTER

PASSION FOR ENGINEERING

Our cutting-edge **Technology Center** at our state-of-the-art factory in Vitoria-Gasteiz is home to our team of **20 engineers**, who work closely to develop solutions to real-world engineering challenges and bring new technologies to the market.

All the **knowledge** generated at the RPK Technological Center is shared in real-time with our engineering teams around the world, and vice versa.

**WE'RE CLOSE TO YOU BUT HAVE THE REACH AND CAPABILITIES OF A GLOBAL LEADER**



# RPK TECHNOLOGICAL CENTER

PASSION FOR ENGINEERING



## OUR ENGINEERING TEAM WILL SUPPORT YOU IN:

- **Creating, designing and developing unique components from scratch or improving the performance or characteristics of an existing part**
- **Guiding you through the design and manufacture stages, providing advice on processes and materials, to achieve an optimal, custom solution**
- **Developing in-house machines and tooling, packing and vision control specifically for your components**

# EV & HYBRID APPLICATIONS

## MAIN APPLICATIONS



BATTERY MANAGEMENT SYSTEM  
(BMS)



DC-DC CONVERTER



INVERTER



CONNECTORS

# HIGH-PERFORMANCE POWER DISTRIBUTION

## BUS BARS

EXPERTS IN DIFFERENT MANUFACTURING TECHNOLOGIES SUCH AS PRECISION STAMPING, BENDING AND CNC MULTI-SLIDE FORMING, TO DESIGN BUS BARS FROM THE POINT OF VIEW OF A BETTER COST-EFFECTIVE SOLUTION

Our flexible bus bar manufacturing process ensures consistent, reliable connections, even under vibration. Many design factors, including material thickness, surface cleanliness, and plating thickness, contribute to the performance of our bus bars.

- **MATERIALS:** COPPER, ALUMINIUM, BRONZE OTHER MATERIALS AS REQUIRED
- **OVERMOLDING**
- **HARDWARE INSERTIONS**



# BENEFITS

## BUS BARS



Different manufacturing technologies to meet your requirements: precision stamping, bending or CNC Multi-Slide forming



Our group is in good financial health, key to being able to guide your company in new challenges. New 3,400 m2 pavilion exclusively focused on bus bars inaugurated in 2023



Our RPK Technological Center is equipped with the latest control equipment to test the requirements of the bus bars



# BENEFITS

## OF DEVELOPING, PROTOTYPING, AND MANUFACTURING BUS BARS WITH RPK GROUP

### VALIDATION OF SERIAL MANUFACTURING TECHNOLOGY THROUGH PROTOTYPING

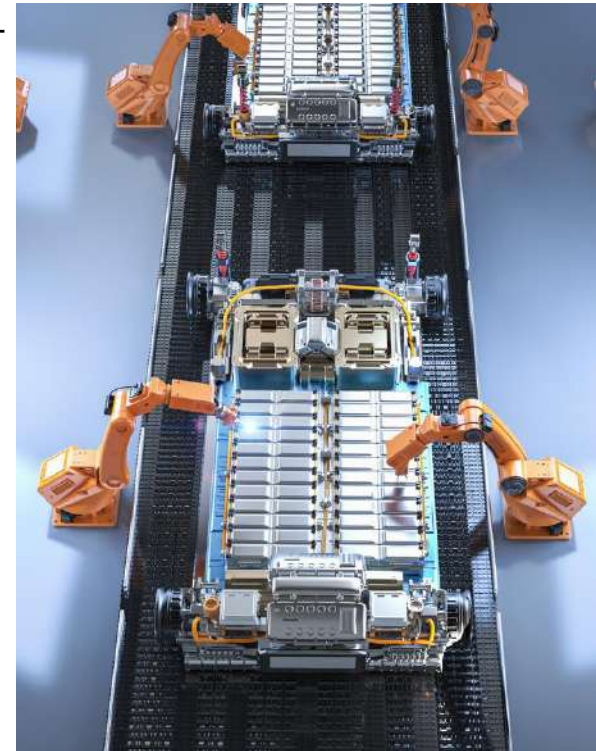
- Our expertise extends to various manufacturing techniques, including **stamping, bending and CNC Multi-Slide forming, laser welding, insert placement, laser brazing pads, vibration, assembly, and coating.**
- **Prototypes** are a valuable testing ground for validating these manufacturing methods, **ensuring a seamless transition to serial production.**

### DYNAMIC TIME-TO-MARKET RESPONSE

- We maintain a quick response mindset, making us an ideal partner for **engineering development and seamless progression to mass production.**
- Our existing production capabilities are adapted for prototyping, allowing us to **accelerate the time-to-market for your bus bar solutions.**

### TECHNICAL VALIDATION WITH STATE-OF-THE-ART MEASUREMENT TOOLS

- Our advanced **measurement tools** enable fine-tuning of designs even before full-scale production begins:
  - **2D and 3D geometry measurement**
  - **Static and dynamic thermal testing**
  - **Mechanical testing (push out and torque out)**
- **Electrical testing (insulation, conductivity, and Kelvin contact resistance)**





# OTHER ELECTRICAL CONTACTS

CANTED COIL, GOLD & SILVER COMPRESSION SPRINGS, BENDING PARTS, SENSORS

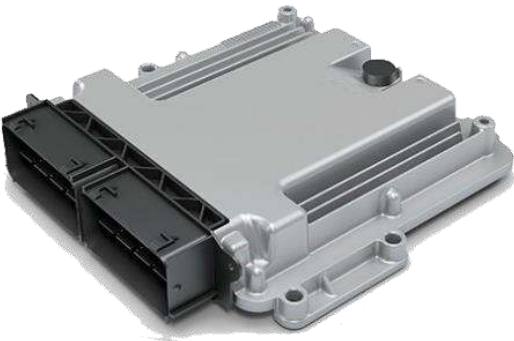
- **DIMENSIONS:** WIRE DIAMETER FROM 0.10 MM. (0.004 IN)
- **MATERIALS:** COPPER, STAINLESS STEEL OTHER MATERIALS AS REQUIRED
- **PLATING:** SILVER, GOLD, NICKEL (FROM 0.5  $\mu\text{m}$  TO 10  $\mu\text{m}$ )



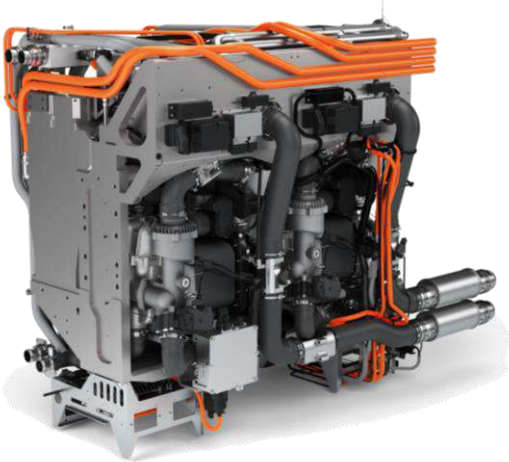
# HYDROGEN APPLICATIONS

## COMMON APPLICATIONS AND SOLUTIONS

With a deep understanding of the challenges related to material hydrogenation, we have cultivated extensive knowledge of non-hydrogenating materials to ensure the utmost reliability of our products.



FUEL CELL  
CONTROL UNITS



FUEL CELL  
POWER DISTRIBUTION UNITS



HYDROGEN INTERNAL  
COMBUSTION ENGINES  
(H2 ICE)



FUEL CELL & H2 ICE  
INJECTORS



WAVE  
SPRINGS



BUS BARS  
(FLEXIBLE,  
WITH INSERTIONS...)



COMPRESSION  
SPRINGS



RINGS & SEALS



BENDING, STAMPING &  
WIRE FORMS



CONTACT  
SPRINGS

# HOW DO WE DO IT?

## Machine development

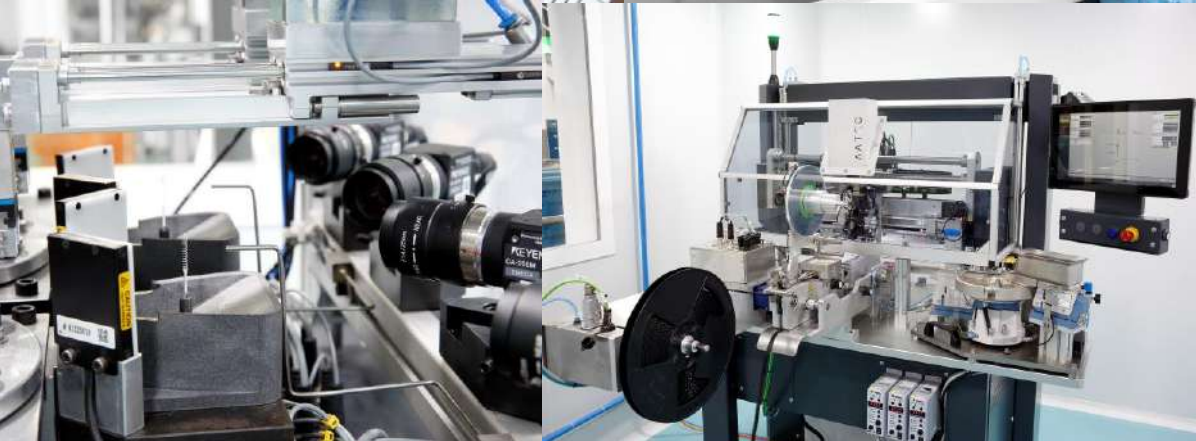
At RPK Group, we use **state-of-the-art technologies** for all our manufacturing processes, from **CNC machines** to **R&D+I projects, testing, control and quality inspection** (with **machine-integrated vision control technology for quality control**) as well as **deburring, cleaning, oiling and packaging solutions**.

We have an **in-house machine and tooling workshop** that enables us to offer flexible solutions and meet our customers' specifications.

## Materials

The choice of the right material, surface treatment and coating are critical for the final quality and safety of the product. From aluminum, copper and bronze to the most specific materials bought in from the best suppliers.





## Other Key Processes

- FEM/FEA Analysis
- Clean rooms in Europe, North America and China
- Ultrasonic cleaning
- Environment cleaning
- Custom packaging solutions in clean room such as Tape and Reel Packing
- Machine-integrated vision control technology (100% unitary control) and electric resistance
- Plastic assemblies
- Overmolding, Epoxy and Polyamid solutions
- Laser Welding
- Plating, special coatings & surface treatments
- Hardware insertions
- Deburring
- Grinding
- Cold & hot presetting
- Shoot peening & vibrating

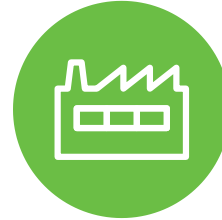
# INDUSTRIES



AUTOMOTIVE



ELECTRIC



INDUSTRIAL



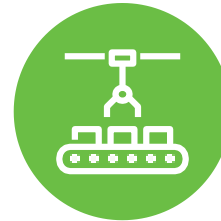
MEDICAL



E-MOBILITY



POWER TOOLS

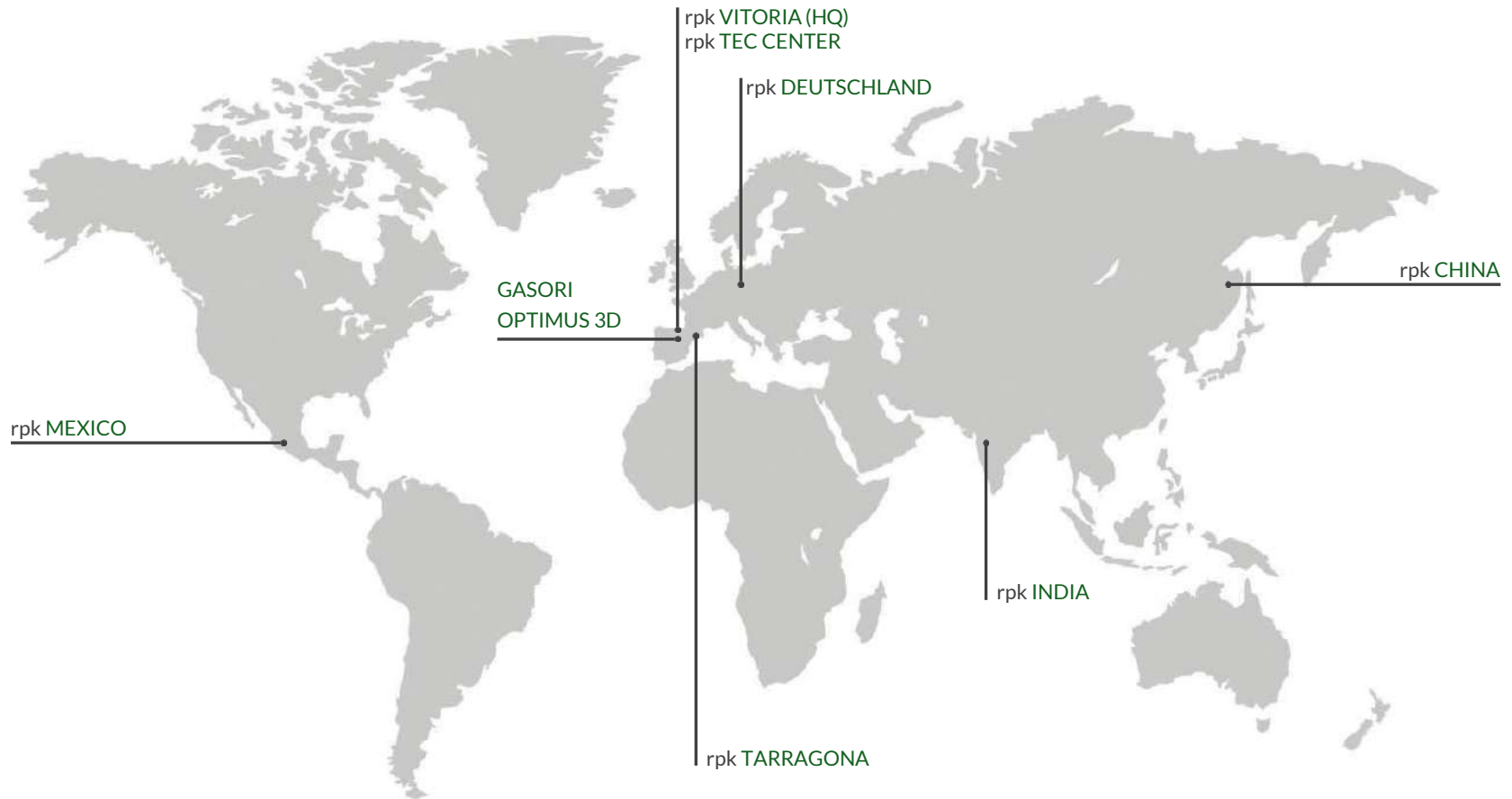


OTHER  
INDUSTRIES



CONSUMER  
GOODS

# WORLDWIDE OPERATIONS





FOREFRONT SOLUTIONS FOR INNOVATIVE APPLICATIONS

[rpk-global.com](http://rpk-global.com)