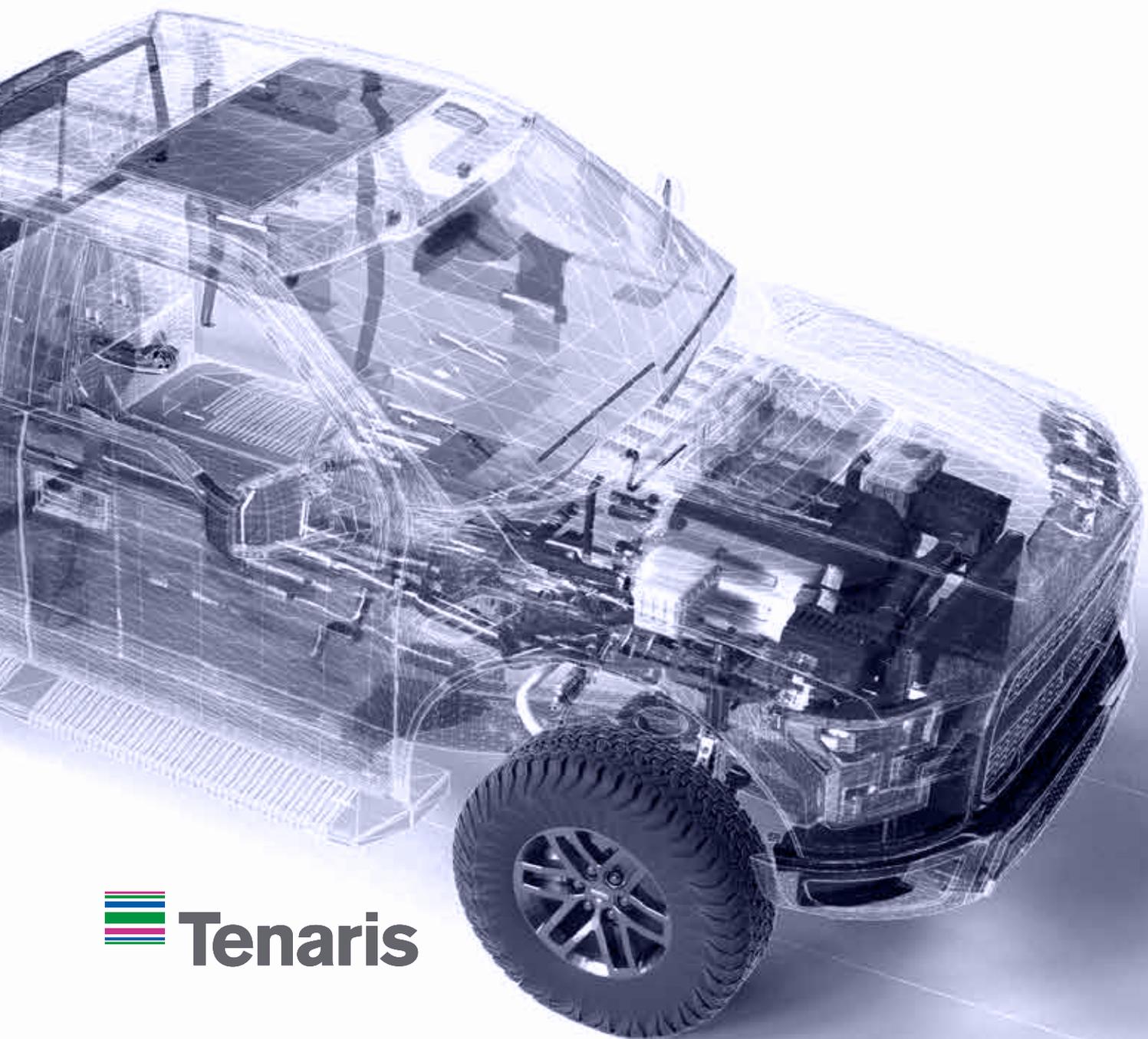


# Global solutions for the automotive industry







# Tenaris for automotive

The combination of high value-added IATF 16949 certified operations, fully-integrated manufacturing processes and its global industrial presence makes Tenaris a strategic supplier for today's demanding automotive market.

Aiming to streamline its customers' supply chain management Tenaris has built a network of automotive component centers, located in Argentina, Mexico, Italy, Romania and in China, providing a wide range of high quality products.

# A reliable leading partner

Dedicated to maximizing production process efficiency and cost-effectiveness

Tenaris has a long-term experience providing high quality automotive products and services worldwide.

Our fully integrated industrial system offers a full range of hot rolled and cold drawn seamless tubes. The aim is to add value by streamlining the customer's supply chain, permitting greater focus on core operations.

A dedicated organization based in Europe, USA, Mexico, South America and Asia is structured to meet the customer's needs by manufacturing and supplying on a just-in-time basis, adding more service content and developing innovative products.

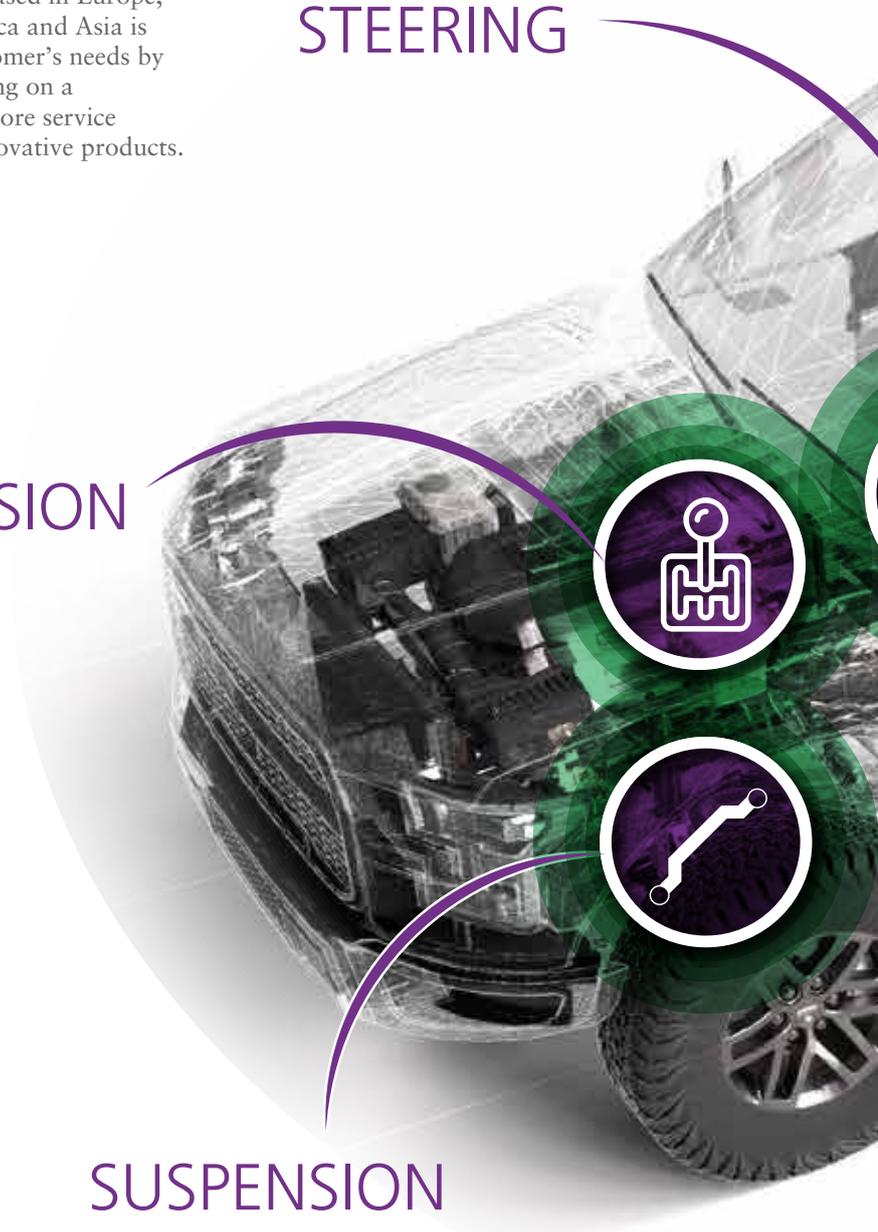
Additionally our mills in Romania, Argentina and Mexico are leading producers of seamless tubes and have dedicated automotive component centers equipped with state-of-the-art technology to perform value-added operations (such as forming, welding, etc) for automotive components to better serve automotive car manufacturers.

## STEERING

## TRANSMISSION



## SUSPENSION

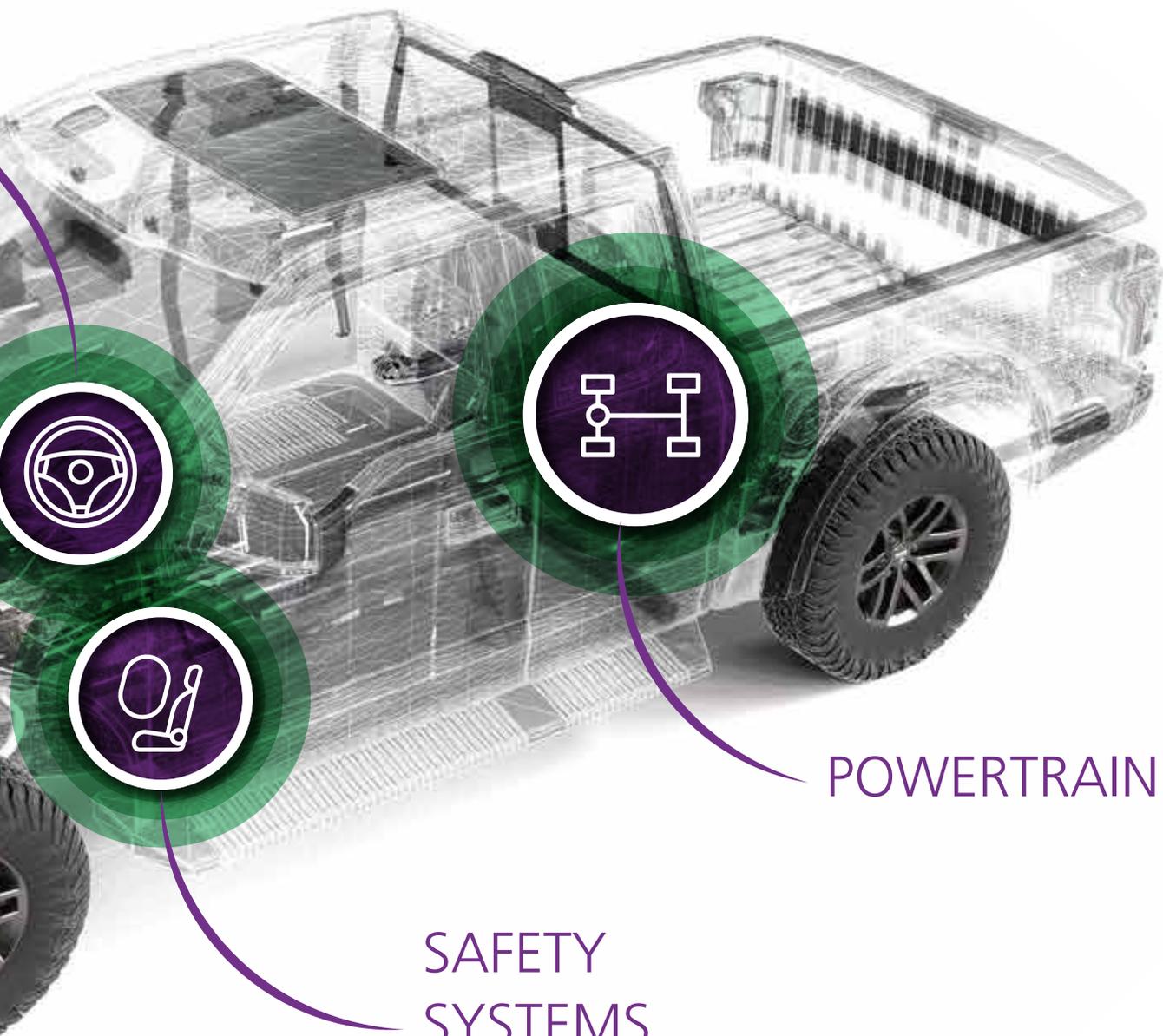


# TENARIS HIGHLIGHTS

VERTICAL  
INTEGRATION  
OF THE PROCESS

PROVEN  
AND RELIABLE  
TECHNOLOGIES

GLOBAL  
FOOTPRINT,  
LOCAL SERVICE



POWERTRAIN

SAFETY  
SYSTEMS

# Global solutions

Tenaris supplies a wide range of products for different automotive applications, both tubes and vertical integrated components,

developed through a consolidated network of research and development and component centers.



## Safety systems

AIRBAG INFLATORS



## Transmission

RING GEARS



### PRODUCTS & OPERATIONS

Tenaris designs and manufactures high quality products for application in Safety, Steering, Chassis and Suspensions, Heavy Truck and Trailer, Transmission and Powertrain components.



Steel making



Hot rolling



Cold drawing



In house heat treatments, such as quenching and tempering



## Powertrain

CONSTANT VELOCITY JOINT CAGES



## Steering

STEERING ARMS



## Suspension

AXLES AND AXLE HOUSINGS



Cut-to-length  
at specified  
tolerances



End finishing,  
including  
deburring  
and beveling



Cold and hot  
forming  
operations



Outsourced value  
added cutting  
and machining  
operations



Other secondary  
operations such  
as hole drilling  
and punching,  
all according to  
customer's  
specifications  
and design

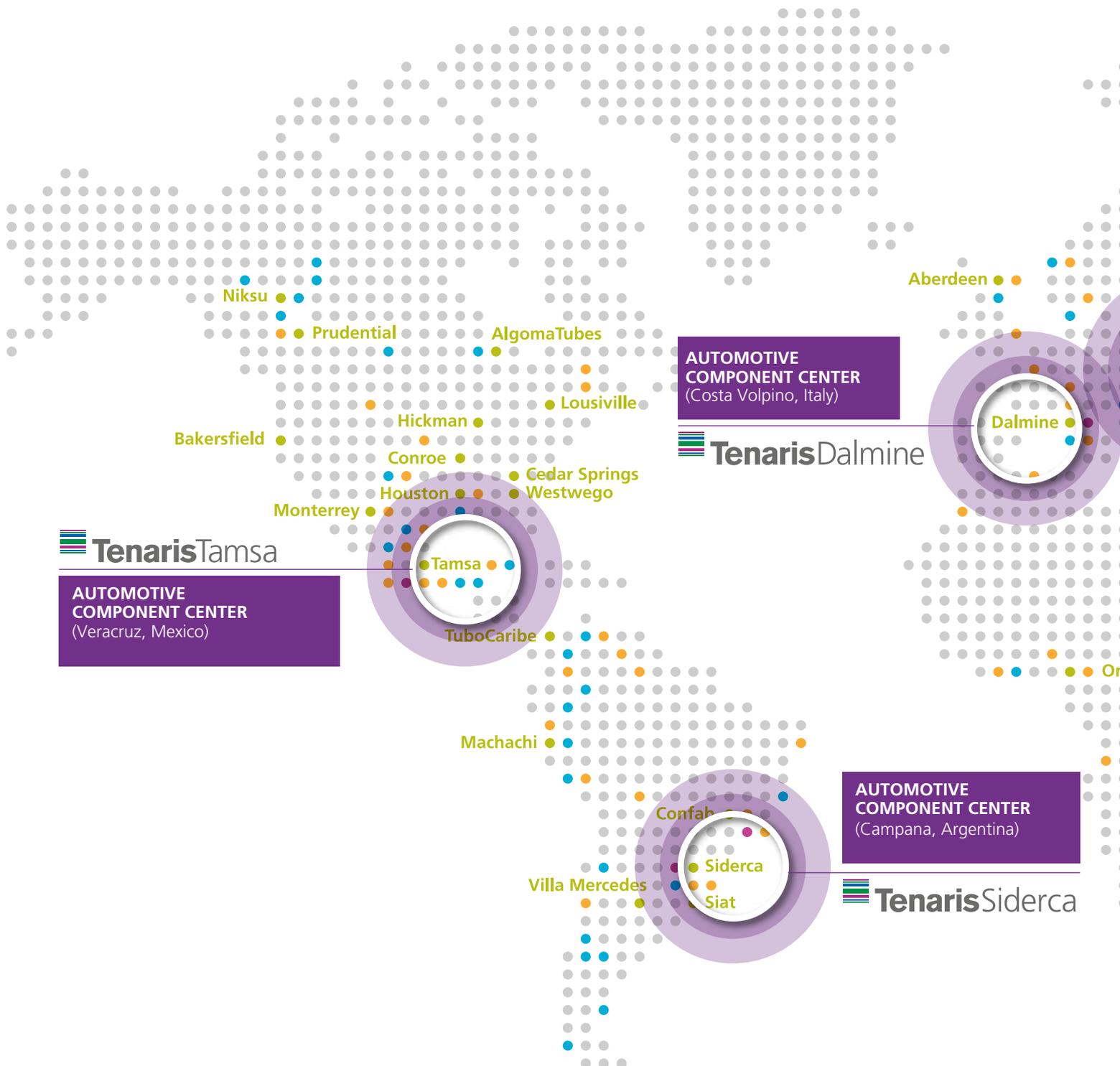


Non-Destructive  
Tests  
(customized  
techniques)

# Worldwide logistics and component centers

To address the most demanding requests for efficient logistics, Tenaris has service centers dedicated to exclusively serve the automotive sector in Europe, North and South America, Asia, in some cases close to the customer's manufacturing plant.

Tenaris manufactures and supplies automotive products with a guarantee of 100% on-time delivery performance, minimizing customer's stocking costs.



# TENARIS HIGHLIGHTS

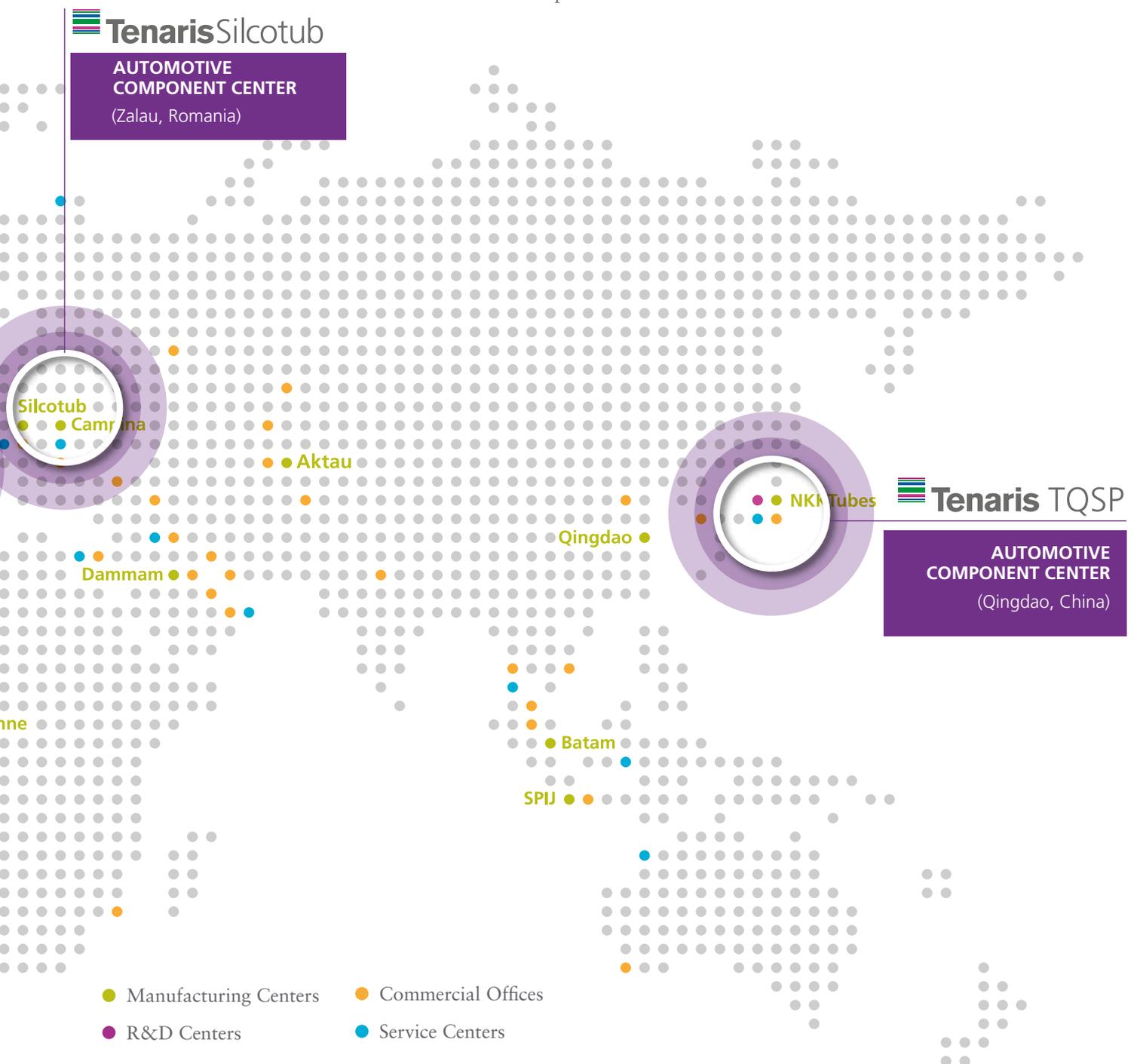
FORECAST MANAGEMENT

STOCKING AND CONSIGNMENT PROGRAMS

JUST-IN-TIME DELIVERY PROGRAMS

Finished products are also provided in special packaging to streamline the customer's assembly line and to lower assembly costs.

Tenaris provides just-in-time delivery and component traceability and documentation, in order to supply customers a final product entirely consistent with their requests, regardless of the production site where it has been produced.



# Research and development

By sharing knowledge and resources, we're able to improve our range of customized products to meet today's and tomorrow's needs.

By sharing knowledge and resources across our mills and R&D centers in Italy, USA, Argentina, Mexico and Japan we're able to improve our range of customized products to meet today's and tomorrow's needs.

Research activity is dedicated to improve formability and machinability of materials and to develop engineering properties such as yield, toughness and fatigue resistance in the most severe working conditions.

Tenaris's R&D centers are equipped with state-of-the-art technologies and can provide:

- Customized steel design
- Hot and cold forming testing
- Advanced computer modeling of processes and products
- Structural integrity
- Full-scale testing
- Advanced non-destructive testing techniques and optical measurement devices
- Welding metallurgy and technology
- Surface engineering
- CAD design and virtual prototyping
- Product and process modeling/simulation



## TENARIS HIGHLIGHTS

5 R&D CENTERS  
IN ARGENTINA,  
ITALY, JAPAN,  
MEXICO & BRAZIL

ABOUT  
360 RESEARCHERS

COLLABORATION  
WITH EXTERNAL  
R&D LABORATORIES,  
TESTING CENTERS  
AND UNIVERSITIES

### QUALITY STANDARDS AND CERTIFICATIONS

Tenaris holds the IATF 16949 certification for its automotive products manufacturing facilities.

The IATF certification applies to:

- Cold drawn facilities in Italy, Romania, Argentina and Mexico
- Hot rolling facility at the Arcore plant in Italy
- Tenaris automotive components centers in Italy, Argentina, Mexico, Romania, China

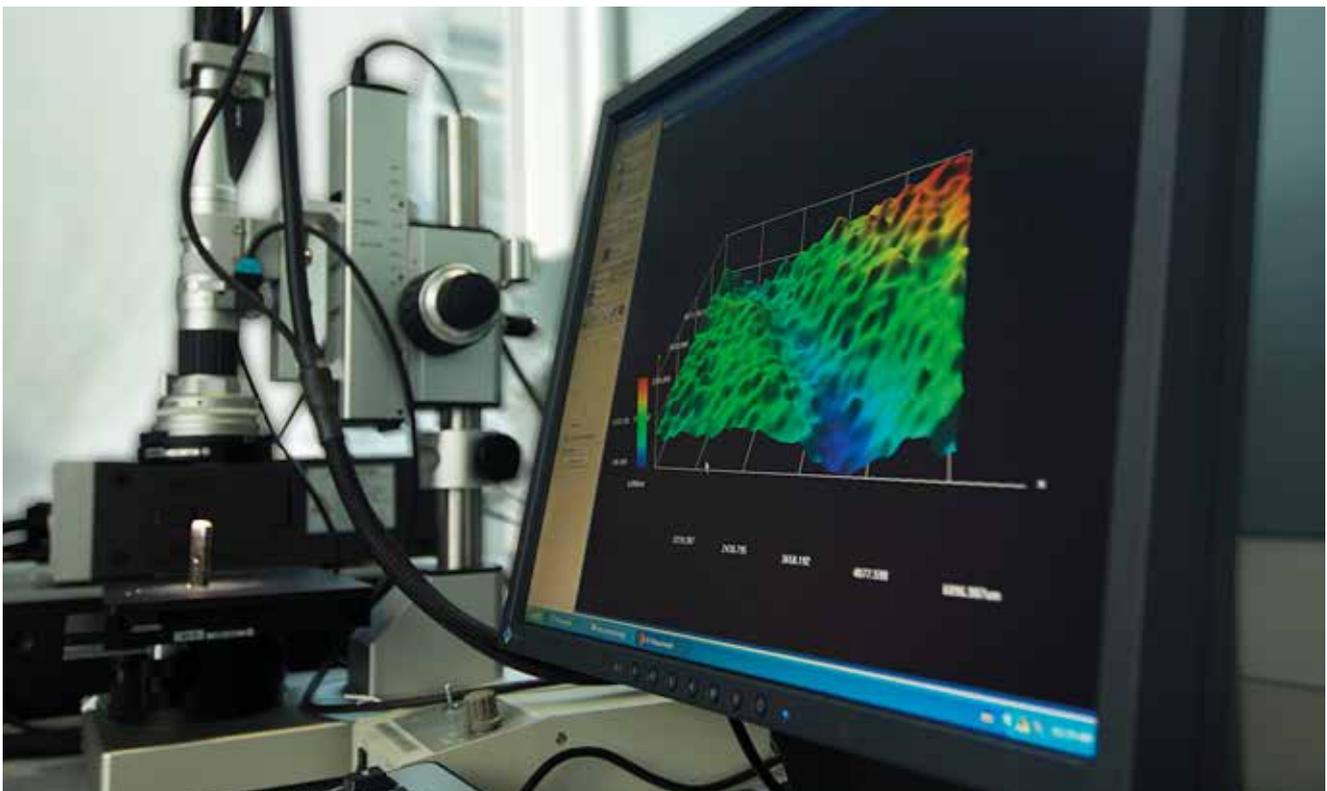
Planning are integral part of the Tenaris Quality System, becoming tools for planning and managing real-time production processes, with the aim of preventing defects and reducing variance.

The goal of continual improvement of product quality and customer service is an integral part of the Tenaris culture, with the objective of exceeding the high standards demanded by the automotive market. In particular, the methodologies typical of Advanced Product Quality

### TECHNICAL ASSISTANCE

Tenaris technicians work side-by-side with customers, providing prompt responses and effective solutions in terms of:

- Material properties
- Component optimization
- Process optimization
- Cost effectiveness



# Towards the future of sustainable steel

## TENARIS'S COMMITMENT TO THE ENVIRONMENT

Develop a long-term sustainable business model

Prevent pollution and use resources more efficiently

Minimize the environmental impact of our products and services

## KEY ACTIONS

REDUCED  
AIR  
EMISSIONS



Low NOx emission combustion systems and advanced filtration systems

RESOURCE  
SAVINGS



Advanced systems to recycle energy, waste and industrial water

ENVIRONMENTAL  
MANAGEMENT  
SYSTEMS



ISO 14001 certified environmental management system

ENVIRONMENTAL  
PRODUCT  
DECLARATIONS

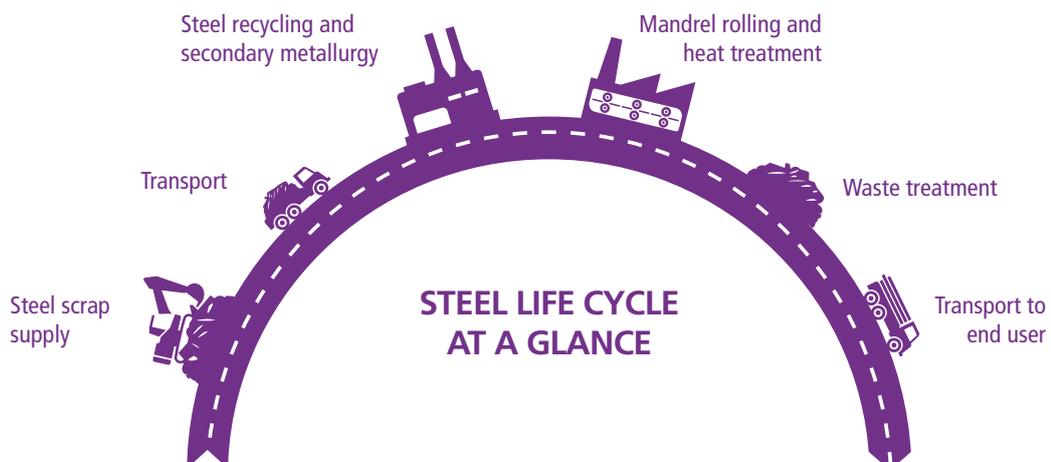
**EPD<sup>®</sup>**

## SYSTEM CERTIFICATIONS

ISO 9001:2008	ISO 14001:2015	OHSAS 18001:2007	ISO 50001:2011
Quality Management System	Environmental Management System	Health & Safety Management System	Energy Management System

## TRANSPARENCY COMES FIRST

Tenaris uses Life Cycle Assessment to evaluate its products environmental impacts throughout the life cycle





# Tenaris highlights

## MARKET SEGMENTS

Leading global manufacturer and supplier  
of tubular products and services used in:



OCTG



Hydrocarbon  
Processing



Premium  
Connections



Power  
Generation



Line Pipe  
for Offshore  
and Onshore  
applications



Industrial  
& Automotive





For further information  
[www.tenaris.com](http://www.tenaris.com)

For assistance please contact  
[automotive@tenaris.com](mailto:automotive@tenaris.com)

