



CORPORATE PROFILE

www.ntn-snr.com



With You

NTN-SNR, a leading player

1916

Creation of SRO
in Annecy (France)

1918

Creation of NTN
in Osaka (Japon)

NTN-SNR Roulements
manages and develops all
the group's activities for
Europe, South America,
Africa and the Middle East.

NTN Corporation is a world leader as designer, developer and manufacturer of bearings, linear modules, distribution pulleys, strut parts, CVJs and a supplier of services. NTN Corporation is present in all industrial, automotive and aerospace markets. NTN-SNR Roulements manages and develops all the group's activities for Europe, South America, Africa and the Middle East. Among the European leaders, the company offers its partners a unique combination of Japanese and European cultures, with the capabilities of a world player. Its two emblematic brands, SNR and NTN, are seen as references.

1946

Purchase of SRO
by Renault.
Creation of
Société Nouvelle
de Roulements (SNR)

2010

Acquisition of
SNR Roulement
by NTN Corporation.
Creation of NTN-SNR



With you, the spirit of collaboration and responsibility



The human and technological heritage of NTN-SNR contributes to its company culture characterised by proximity and commitment. The European teams develop specific solutions to anticipate and succeed in their customer's future projects in strategic markets.

They support them in their challenges in a spirit of dialogue and mutual improvement.

This sense of partnership also determines the company's social and environmental approach. The transparency of relations with customers, suppliers and partners is founded on an ethical code based on respect and responsibility. All production sites are of course ISO 14001 certified. What is more, research is creating eco-bearings that reduce CO₂ emissions, energy consumption and manufacturing raw materials. Engineers are also taking up the technological challenges of wind and solar renewable energy. NTN-SNR is driven by human and responsible values.

Expert and committed, global solutions

Bearing designer, developer and manufacturer, NTN-SNR claims unique experience in Product Life Cycle Management. Its evolving range includes maintenance, training and all the services that optimise product performance in its application. It thus engages in global solutions in partnership with the OEM (Original Equipment Manufacturers) and spare parts (aftermarket) markets.





Highly demanding fields and applications

Automotive

The main vehicle and equipment manufacturers witness to their confidence: 9 out 10 of the most sold vehicles in Europe are NTN or SNR equipped! Present for OEM, NTN-SNR proposes unique know-how on brake disc equipped with bearings. The Spare Parts activity benefits from guaranteed original quality. The leader in the wheel, suspension strut bearing and clutch release bearing markets, NTN-SNR is also very present in

transmission joints and gearboxes. Created by teams in Europe, the wheel bearing equipped with a seal having an ASB magnetic coder has become a world standard. The exclusive electric wheel-motor technology has, for its part, obtained the 2012 Automechanika prize and European Mechatronic Award. NTN-SNR is asserting itself as a system supplier for the automotive world.



- Bearings and wheel kits
- Suspension thrust bearings and kits
- Clutch release bearings
- Rollers and kits for distribution and accessories
- Air conditioning bearings
- Brake disk hubs
- Damper pulleys
- HGV bearing
- Gearbox bearing
- CVJ
- Bearings and alternators pulleys

Industry



Positioned in very high quality products and specialist solutions, NTN-SNR gives a preponderant place to innovation. This is why the industry grants the company developer partner status for their most demanding applications. Reflecting the logic of excellence, the ULTAGE bearing is the unique standard label that doubles performance. For each sector there is also a corresponding major advance. For rail, the world rail speed record is paired with recognised knowledge of Product Life Cycle Management. For mines and quarries it is the high resistance to extreme conditions that makes NTN the world No. 1. In wind energy expertise in large dimensions and high reliability makes the difference. The steel, robotic, agricultural machinery and construction industries also require advanced performance. Numerous services like assistance with the first assembly, approved training, monitoring and a complete range of lubricants optimise the use of products from the brand.



- Ball bearings
- Tapered roller bearings
- Spherical roller bearings
- Cylindrical roller bearings
- Needle bearings
- High precision bearings
- Special bearings
- Housings
- Linear guidance

Aerospace

The air and space businesses collaborate actively with NTN-SNR. The company's bearings equip major programs, among which are the European Ariane V launcher and the CFM 56 jet engine, the most widely used propulsion unit in the world.

Present on all new single aisle aircraft (Airbus A320neo, Boeing B737MAX, Embraer E Jet, Bombardier C-Series, Mitsubishi

MRJ, Irkut MC21, ...), NTN-SNR has actively contributed to the development of tomorrow's engines, such as the Leap X from CFM. The company is also a leader in helicopter transmission and rotor bearings. In a field where development, research and safety take on a superlative dimension, the continuous improvement of NTN-SNR signs the quality of the engineering and partnership.



- Aircraft engines
- Helicopter transmission and rotors
- Special equipment and products





Innovating for the world of movement

For a company guided by improvement and partnership it is essential always to contribute more efficiency and competitiveness to the players in movement. The Annecy research centre works closely with the group's R&D. 400 people and 4% of turnover are devoted to the creation of the intelligent bearings of the future and to mechatronics.

Innovation is based on a collaborative approach. The players in innovation are a force for ideas in customer developments. By sharing final users problems every day they detect, understand and anticipate tomorrow's trends.



Reduction in environmental impacts:
low torque components, new materials, electric vehicles...



Increased reliability:
innovative lubrication and sealing solutions...



Performance and life optimisation.



Intelligent products, mechatronics:
speed, angle and temperature sensors, on-board diagnostics...

Research and Development

vectors for change



Peugeot 208 FE: objective 2l/100km

NTN-SNR are relaying the manufacturer's objective: creating a «2l/100km» 208 with the same performance as a production 208. Wheel bearing adapted to aluminium pivots, low torque bearings for the transmission, engine, main shaft and hybridisation contribute over 7kg weight gain and reduce emission of CO₂/km by up to 2.8g.

Kuka: a faster, more accurate robot

NTN-SNR is the main supplier – and partner in innovation – for the high performance Kuka robot range. The bearings developed allow the transportable load objectives (6 to 10kg) to be achieved with increased speed and precision.

SNECMA: in flight on the Leap X engine

NTN-SNR produces the shaft line bearings for the LEAP engines, which will equip the Airbus A320neo, Boeing B737 MAX and Comac C919. The strategic development programme has permitted the creation of bearings up to 420 mm in external diameter, with complex shapes and materials.

Driving and protecting quality



NTN-SNR is committed to quality on all its products. These meet strict technical requirements, from design to marketing. All group sites have a certified quality policy that guarantees:

- quality in development: robust design principle,
- quality in production: control of processes and reinforcement of the production system,
- quality in sales and service: the total satisfaction principle.

The fight against counterfeiting is a major part of the quality commitment.

To respond to the risks run by passengers in an aircraft, car or train, but also to the issues of installation lifetime and financial risk, all bearing manufacturers are mobilising. Awareness campaigns are being undertaken on a worldwide scale, with press participation organised during some seizures. Joint actions with customs, the police and the courts permit the arrest of forgers. To discourage counterfeiters, NTN-SNR continuously imposes its know-how on its products and has developed a label with a hologram that is easily identifiable by customers. The safety of customers and users remains a priority.





Capacity and proximity of a world partner

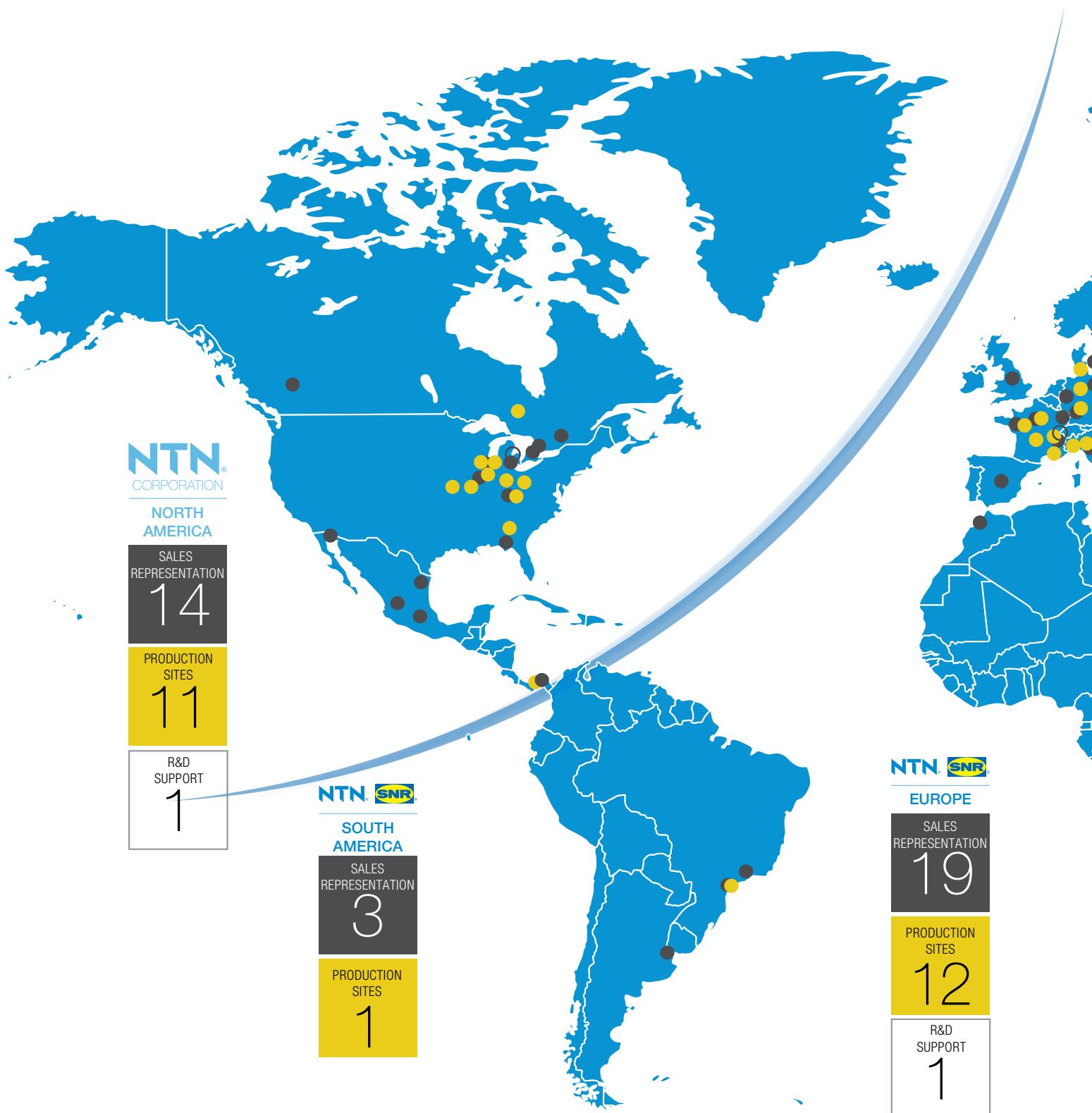
Investing in the future

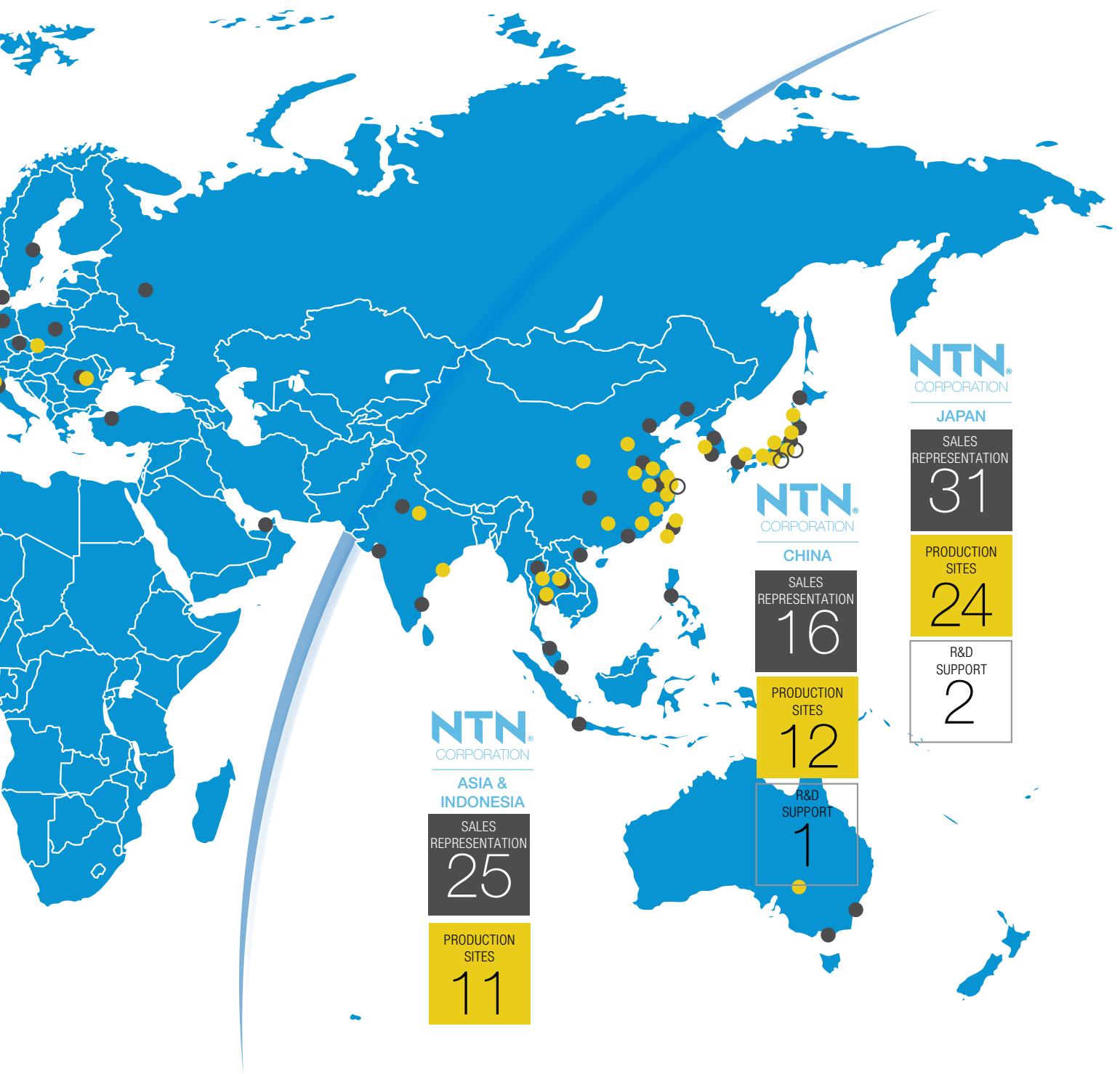
With more than 200 millions euros invested since 2010, NTN-SNR will continue its development in the coming years.

2011: new production line for railway bearings at Seynod, **2011 to 2014:** expansion of the Argonay aerospace bearings factory, **2012 to 2014:** 2 new buildings at Sibiu (transmission, logistics and heat treatment, gearbox bearings), **2013:** 3rd generation vehicle wheel bearings unit at Alès, **2012 to 2014:** new spherical roller bearing production at Turin, **2014:** new vehicle spares logistic store at Cran-Gevrier, **2014:** automated railway bearing assembly line at Seynod.

In the years to come, more investments will develop the production capacities. The automotive activity will increase its' production capacity for suspension thrust bearings and 3rd generation wheel bearings. The industrial activity will benefit from new production lines for spherical roller and rail bearings. Furthermore, the aerospace activity will develop a new workshop for new aircraft bearings and gearbox bearings.

NTN world wide plants, Research and development









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www.ntn-snr.com



● ● ● With You





CORPORATE PROFILE

KEY FIGURES

www.ntn-snr.com



With You



«A true dedicated organisation, NTN-SNR manages and develops all NTN group activities in Europe, South America, Africa and the Middle East.»

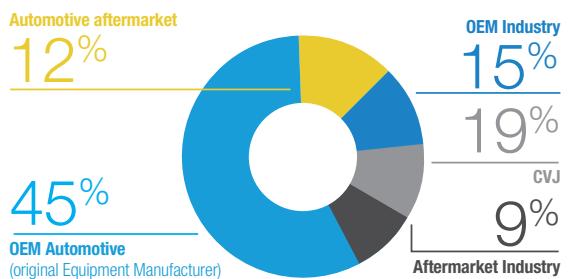
Key figures

- Brands: NTN, SNR
- Foundation: 1916
- Capital: 123.6 million euros
- Head office: 1 rue des Usines, Annecy
- President - Managing Director: Alain Chauvin
- Employees: 5.879 people
- R&D: 4% of Turnover - 400 people
- Factories: 13
- Commercial subsidiaries: 22
- Certifications: ISO9001, ISO14000, ISO TS16949, IRIS, ISO17025, AERO
- Production: 430.000 bearings per day

Turnover:

1.4 billion

euros in 2014





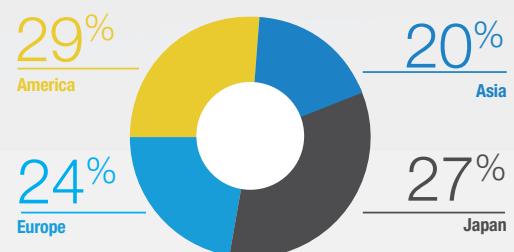
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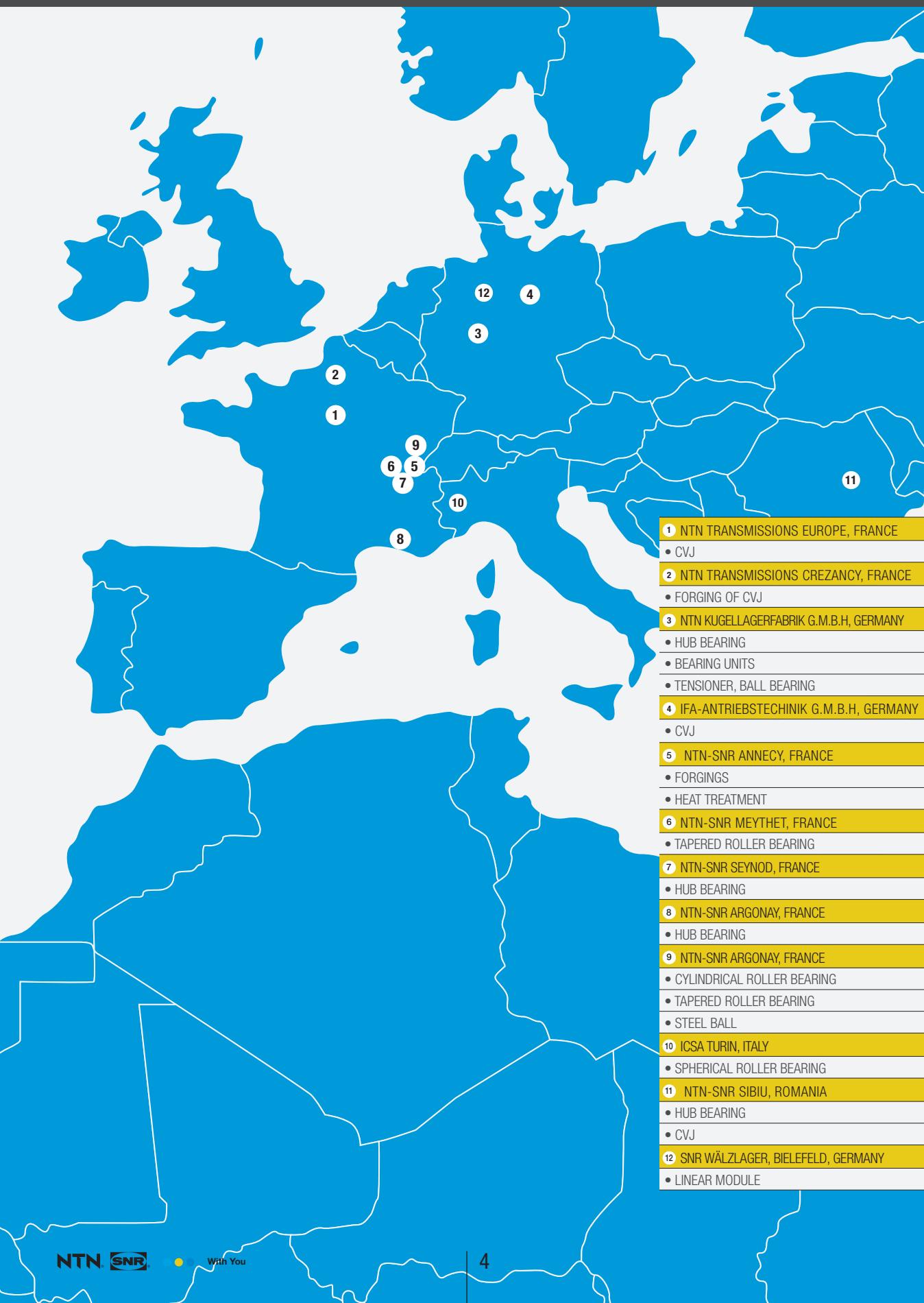
Key figures

- Trademarks: NTN, BCA, BOWER, SNR
- Date founded: 1918
- Capital: 4.3 billion yen
- Head Office: 1-3-17, Kyomachibori, Nishi-ku, Osaka-shi, Osaka 550-0003
- President: Hiroshi Ohkubo
- Employees: 23.360 people
- Factories: 71
- Commercial subsidiaries: 108

World Sales:

5.4 billion
euros in 2014





Plants in America

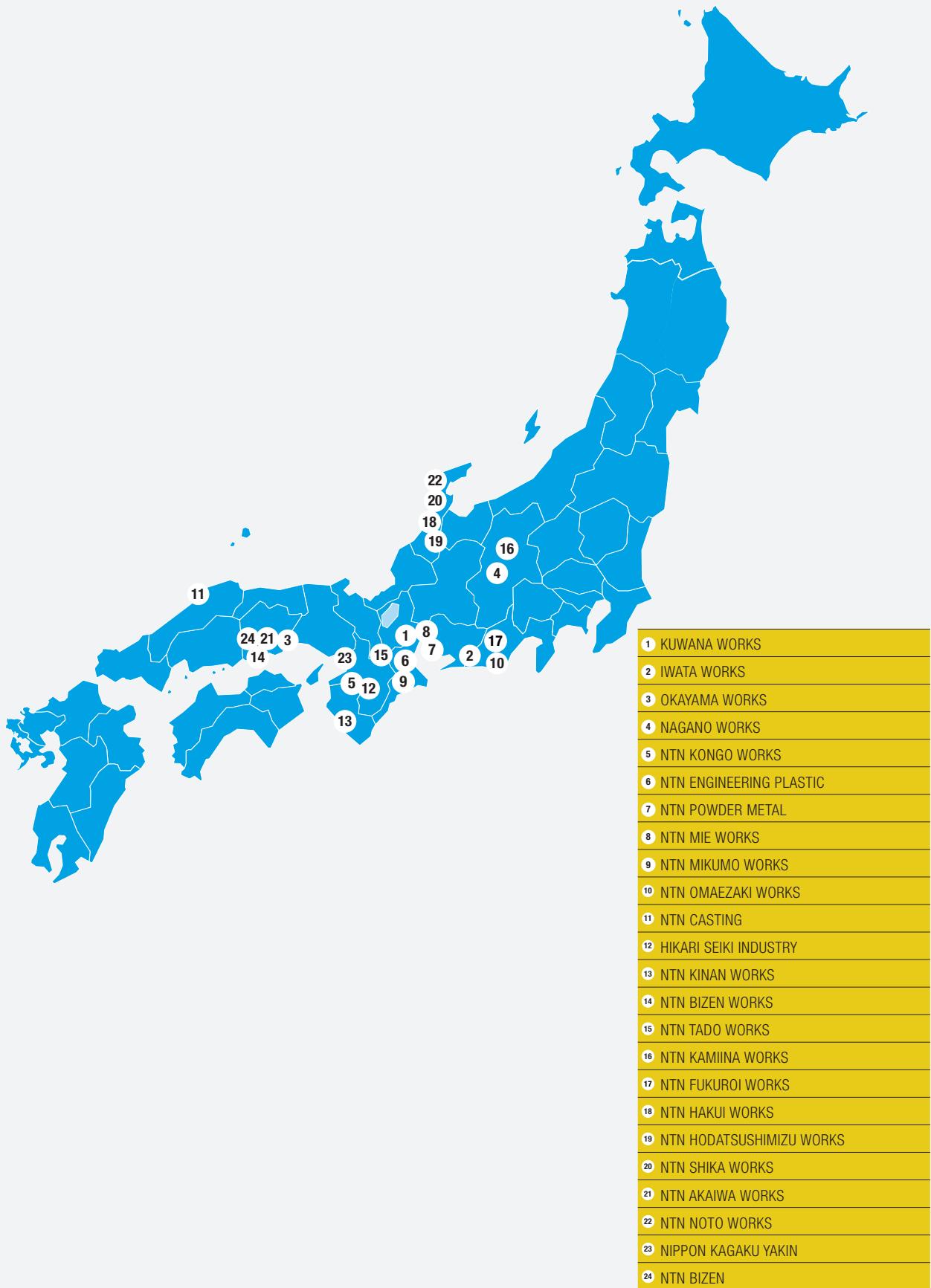


Plants in China

- ① BEIJING NTN SEOHAN-DRIVE SHAFT - CVJ
- ② NTN-LYC (LUOYANG) BEARING CORPORATION
- ③ NANJING NTN CORPORATION
- ④ NANJING PUZHEN NTN RAILWAY BEARING CO., LTD
- ⑤ NTN-RAB
 - BEARING FOR ROCKER ARM
- ⑥ OKITA TAICANG PRESS WORKS CO., LTD
- ⑦ GUANGZHOU NTN-YULON DRIVETRAIN CO., LTD
 - CVJ
- ⑧ SHANGHAI NTN CORPORATION
 - HUB BEARING
 - NEEDLE ROLLER BEARING
 - CVJ CASSETTE
 - BALL BEARING
 - PROVIDING CVJ CASSETTE TO NA AND EUROPE
- ⑨ SHANGHAI LAIEN MACHINE TOOL PARTS CORP.
- ⑩ SHANGHAI TUNG PEI ENTERPRISE CO., LTD
- ⑪ XIANGYANG NTN-YULON DRIVETRAIN CO., LTD
- ⑫ SNR BEARINGS CO. LTD

Plants in Asia

- SEOHAN-NTN BEARING CO., LTD
 - BEARING FOR WIND TURBINE
- NTN NEI MANUFACTURING INDIA - CVJ
 - CVJ
- NTN MANUFACTURING THAILAND
 - HUB BEARING
 - NEEDLE ROLLER BEARING
 - CVJ
 - TENSIONER
 - BEARING FOR ROCKER ARM
- TUNG PEI INDUSTRIAL CO., LTD
 - BALL BEARING
 - NEEDLE ROLLER BEARING
- TAIWAY LTD.
 - CVJ
- NTPT



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