FORGING VALUES



THE GROUP: MILESTONES

The Lovere plant is established by entrepreneur Giovanni Andrea Gregorini

Following a massive investment plan, begins a large-scale production of train wheels and axles

In the frame of reorganization plan for state-owned steel mills, Lovere Sidermeccanica is privatised and acquired by Lucchini Group

A massive **investment plan** is launched to
upgrade and modernize
the Lovere site with the
objective of delivering
high quality railway
components.
The **new company name**

The **new company name** and logo are changed to Lucchini RS. "RS" stands for Rolling Stock

A sales subsidiary named Lucchini Beijing (**Lucchini CN**) is established in China European strategy expansion does not stop: LBX in Belgium, Lucchini Central Europe in Austria. Lucchini Mamé Forge born of an agreement between Mamé Group and Lucchini RS

Lucchini South Africa is established in Johannesburg

Lucchini Industries is established in Italy with the objective to increase flexibility and reactivity of the industrial organizational structure

Changes of ownership

between stateowned companies ILVA, Italsider, Terni Group and finally, Lovere Sidermeccanica The European expansion starts with the foundation of Lucchini UK, Lucchini Sweden and Lucchini Poland Sinpar S.p.A. acquired 100% of Lovere Sidermeccanica. Lucchini S.p.A. is wholly owned by the Lucchini family.

A joint venture is established in China with Zhibo Transport and a 150 million Euros investment plan is launched to upgrade and modernise the Lovere site The worldwide expansion continues: a new rolling system for train wheels is inaugurated and sales subsidiary **Lucchini IN** is established in India

New important investment for an **automatic axle machining line**, wheel machining center, automatic axle forging line, heat treatment facility for heavy forged/cast components (150t)

Lucchini Tool Steel and Lucchini NA are established, in Italy and North America, respectively

Lucchini FA.RO.
was born as a
Joint-Venture
between the
companies
Lucchini Tool Steel

and FA.RO Acciai



THE GROUP: OUR VISION

The global and reliable **Partner** for the sustainable progress of mobility and industry. **Passion**, talent and creativity for advanced **Customer-orientated solutions**.

ALLinONE

Integrated production from furnace to final products



~2,500 people globally



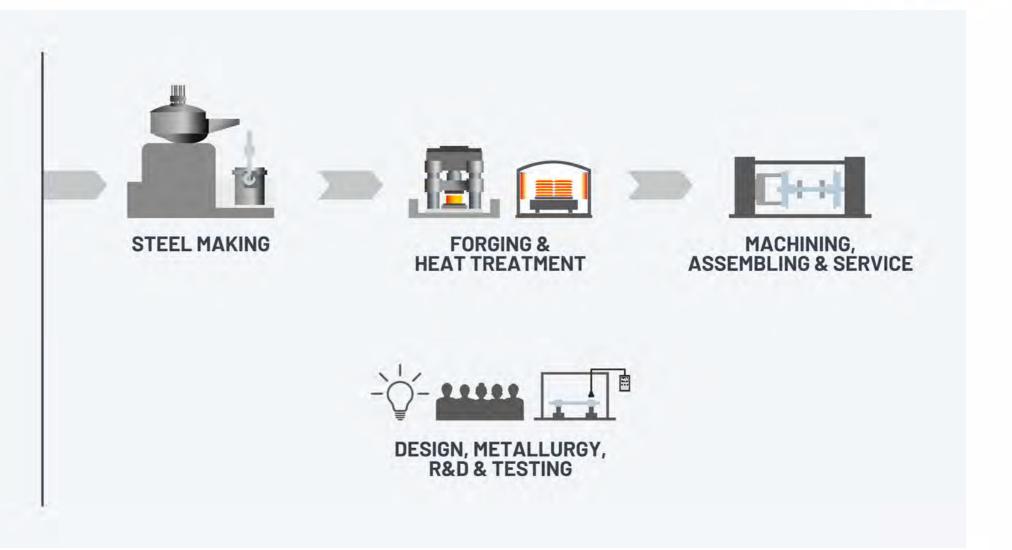
20 operation and maintenance facilities



IRONCLAD SUPPLY RESILIENCE

The Lucchini RS Group integrated production facilities guarantee:

- full product traceability
- OTD adherence
- production flexibility
- shorter lead times
- buffer stock availability.





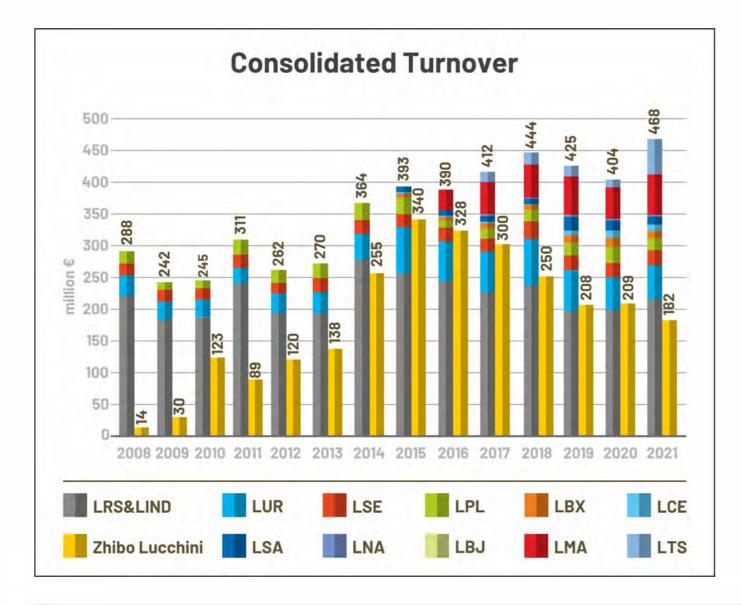
THE GROUP: MAIN DIVISIONS

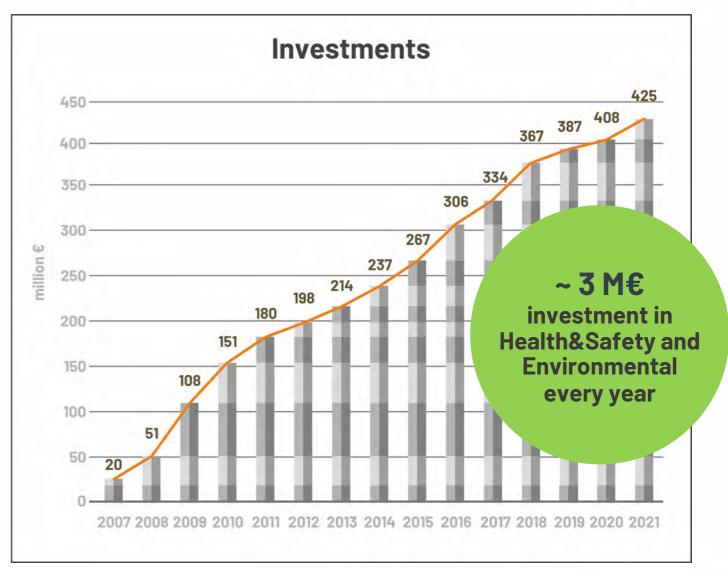






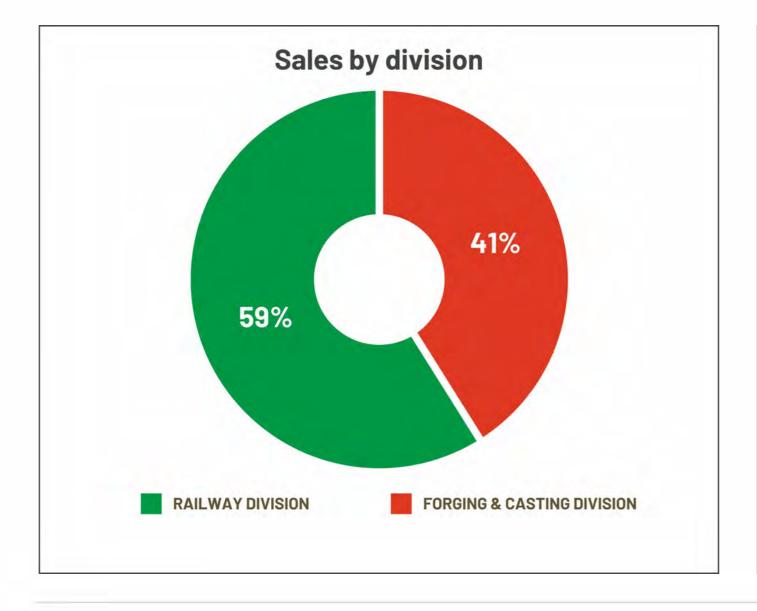
THE GROUP: FINANCIAL KEY DATA

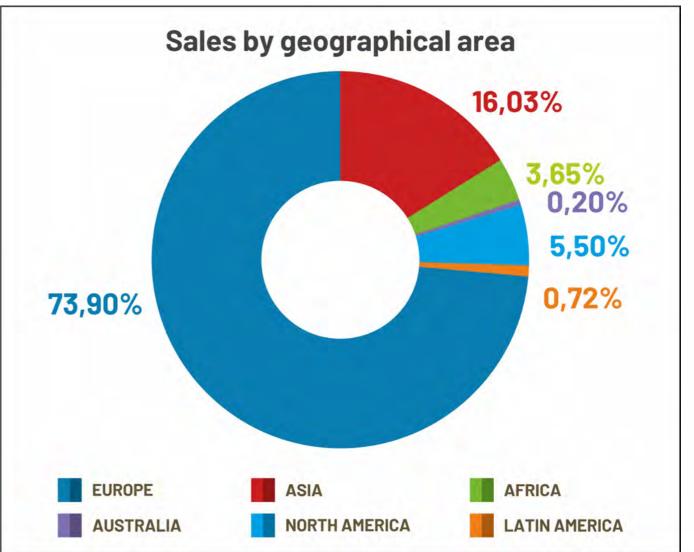






THE GROUP: FINANCIAL KEY DATA







FORGING VALUES IN RAILWAY SOLUTIONS



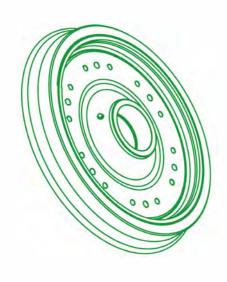
WHEELS THAT KEEP THE WORLD ON TRACK

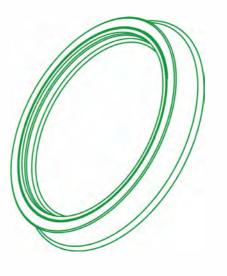
WHEELS

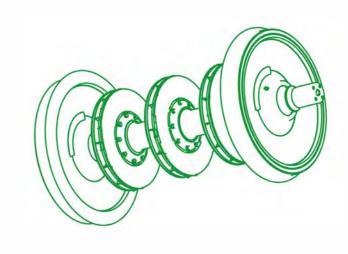
AXLES

TYRES

WHEELSETS







Up to **260,000** per year

Up to 40,000 per year

Up to 15,000 per year

Up to 12,000 per year



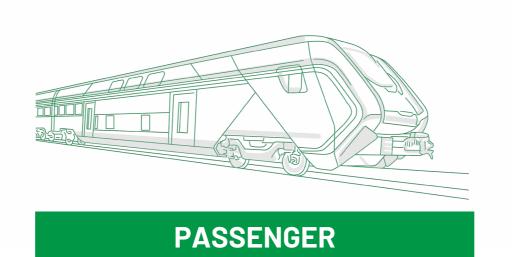
WHERE WE MAKE THE DIFFERENCE

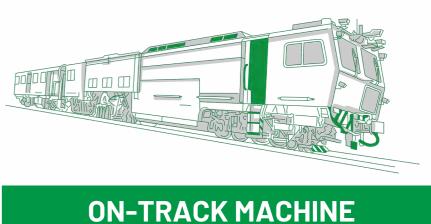






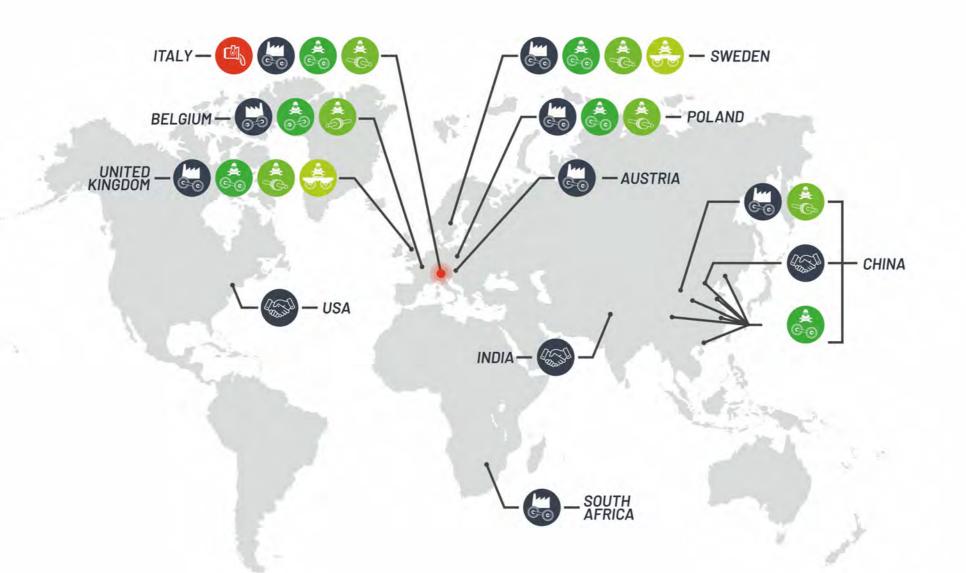








SERVING GLOBALLY



Legenda

















CONDITION BASED MAINTENANCE

Our Al-powered Smartset® Diagnostic solutions allow OEMs and train operators to **identify the suitable NDT inspection intervals** based on the unique characteristics of the service condition, bringing down maintenance stoppages. Load spectra can also be used for **wheelset design validation**.





REDUCE MAINTENANCE COST

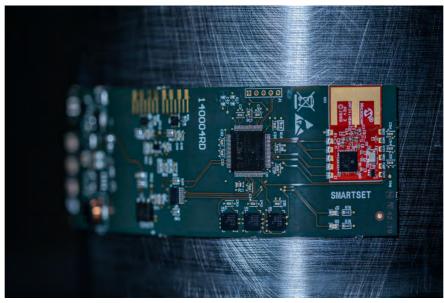


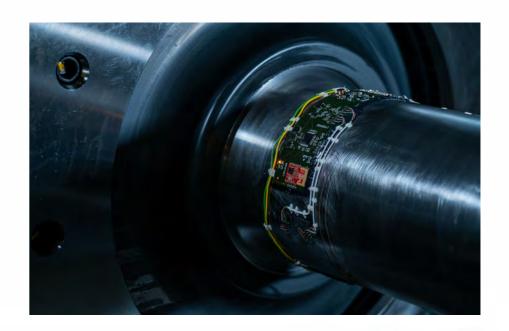
BOOST ROI















Complete range of proprietary steel grades with specific features to improve wheel performance and properties.

UPL	05®
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BEST FOR Improvement within current standards

MARKETS

Freight Wagons, Mass Transit, Light Rail Vehicles Metro, Locomotives

REF. STANDARDS EN, AAR, JIS, GOST

SUPERLOS®

BEST FORSevere environmental and loading conditions

MARKETS High Speed, Heavy Haul

REF. STANDARDS EN, BS, High Speed in China

ARCTICLOS®

Applications for Nordic and freezing environments

MARKETS High Speed, Heavy Haul

REF. STANDARDS EN

SANDLOS®

BEST FOR
Applications for desert environments

MARKETS High Speed, Heavy Haul

REF. STANDARDSAAR

HYPERLOS®

BEST FOR
Applications with
tread-braked wheels

MARKETS
High Speed,
Freight wagons







SAFETY BOOSTING SAFETY



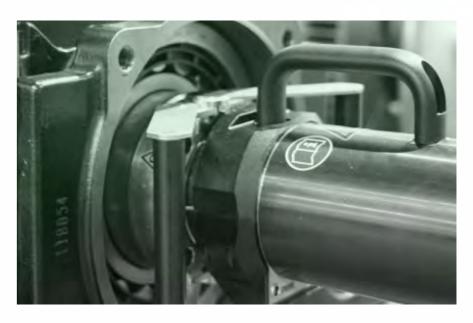
LURSAK®

Special coating system to protect the railway axle against corrosion and damage from ballast impact



LURSHELL®

Anti-impact shell for the axle, easily removed and remounted during periodical inspections



SAMT PROBE

Ultrasonic inspection probe for solid axle. The blind hole allows

- automatic and reliable inspection
- to reduce inspection time no need to disassemble the wheelset from the train







RESILIENTWHEEL

- Modular rubber components to meet customised design requirements
- Simplified maintenance and improved comfort
- Tyre steel grades are optimized to reduce wear and RCF



LIMOSET®

- Innovative portal axle design for low floor LRVs
- Modularity grants easy assembly, disassembly and inspection
- Total Life Cycle Cost is reduced



SURA®

Thermostable (i.e. "low-stress") wheels to limit deformations and internal stresses caused by thermal loads during tread braking







REDUCE TOTAL ROLLING NOISE





SYOPE SPOKES®

- Reusable
- Easy to assembly
- Able to withstand high temperatures (500°C) caused by excessive braking



SYOPE RING®

- No screws for damper fixing
- Low weight
- Cost-effective solution



SYOPE LAYERS®

- Reusable
- Easy to assembly



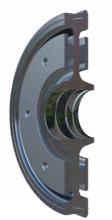
SYOPE PANEL®

- No modification of the wheel original geometry
- No screws for damper fixing
- Low weight



SYOPE BLOCKS®

- Reusable
- Easy to assembly



SYOPE BRAW®

- No modification of the wheel original geometry
- No screws for damper fixing
- Low weight
- Efficient against curve noise











TRACEABILITY SUSTAINABLE AND RESILIENT SUPPLY CHAIN



G-Local support with service centers all over the world.



Green ID document to report the Data of the exact Carbon Footprint of a product in accordance with ISO Standard 14067:2018.

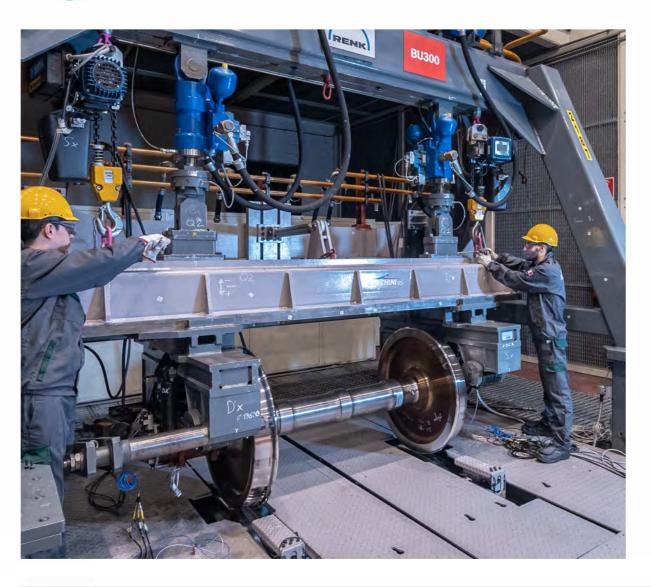


Reduced lead time thanks to a local buffer stock creation and just in time delivery service.





TESTING TESTING AND VALIDATION



FULL-SCALE VALIDATION

- Full-scale fatigue test on wheels and axles
- Crack propagation tests
- Structural tests on wheels
- Residual stress measurements on wheels and axles
- Modal and acoustic tests on wheels

"BU300"

- A full-scale roller rig for railway wheelset
- The closest simulation to real-life service of the train (able to reproduce straight and curving rolling conditions up to a speed of 300 km/h)

ACCREDITATION

• UNI CEI EN ISO/IEC 17025.



MAIN COMPANY CERTIFICATION



- 1. IRIS
- 2. AAR M-1003
- 3. ISO 14001
- 4. ISO 45001
- 5. ISO 50001
- 6. ISO 9001
- 7. RISAS
- 8. VPI
- 9. ECM EU 2019/779
- 10.ISO 3834-2 + EN 15085-2
- 11. Regulation (UE) 333/2011



FORGING VALUES



www.lucchinirs.com

