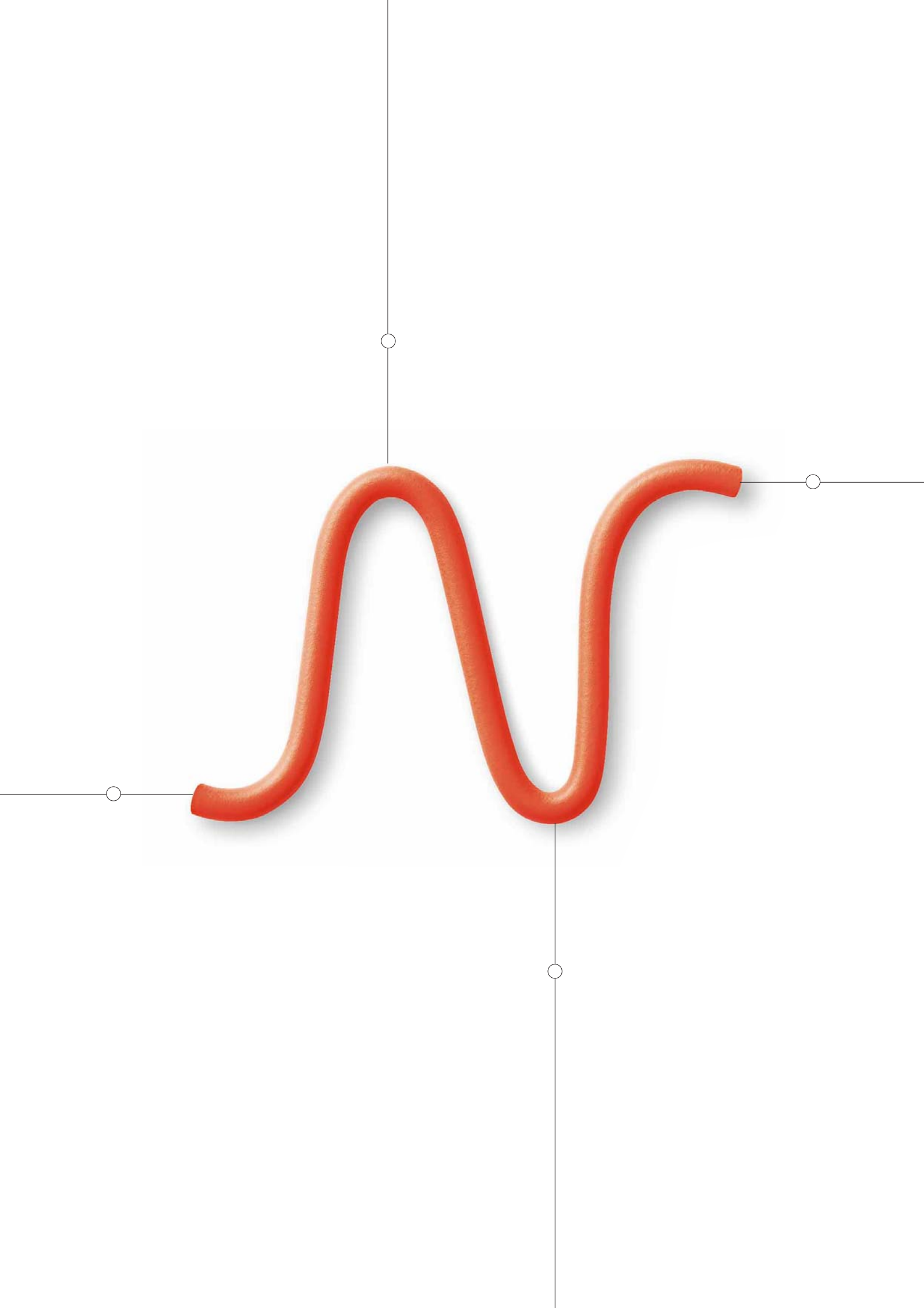


Nexans



R a i l w a y N e t w o r k s



N is your ticket to success !

Not since the dramatic expansion of the late 19th century have railroad networks experienced such feverish activity.

Today's trains are seen as an ideal solution to urbanization, demographic growth and pollution.

However, high-speed, high-capacity intercity transit requires sweeping changes to infrastructure. That's why world expenditure on trains exceeds \$20 billion yearly. Goods and passenger traffic

have more than doubled in the last 20 years, and are set to grow phenomenally until 2010.

The rail revival is widespread, both through privatization in countries like Peru, Pakistan and the Czech Republic, or the renewal of national railways in Germany, Switzerland and France. Apart from



public safety, the future development of networks is being driven by financial pressures, institutional change, market economics and a growing environmental awareness.

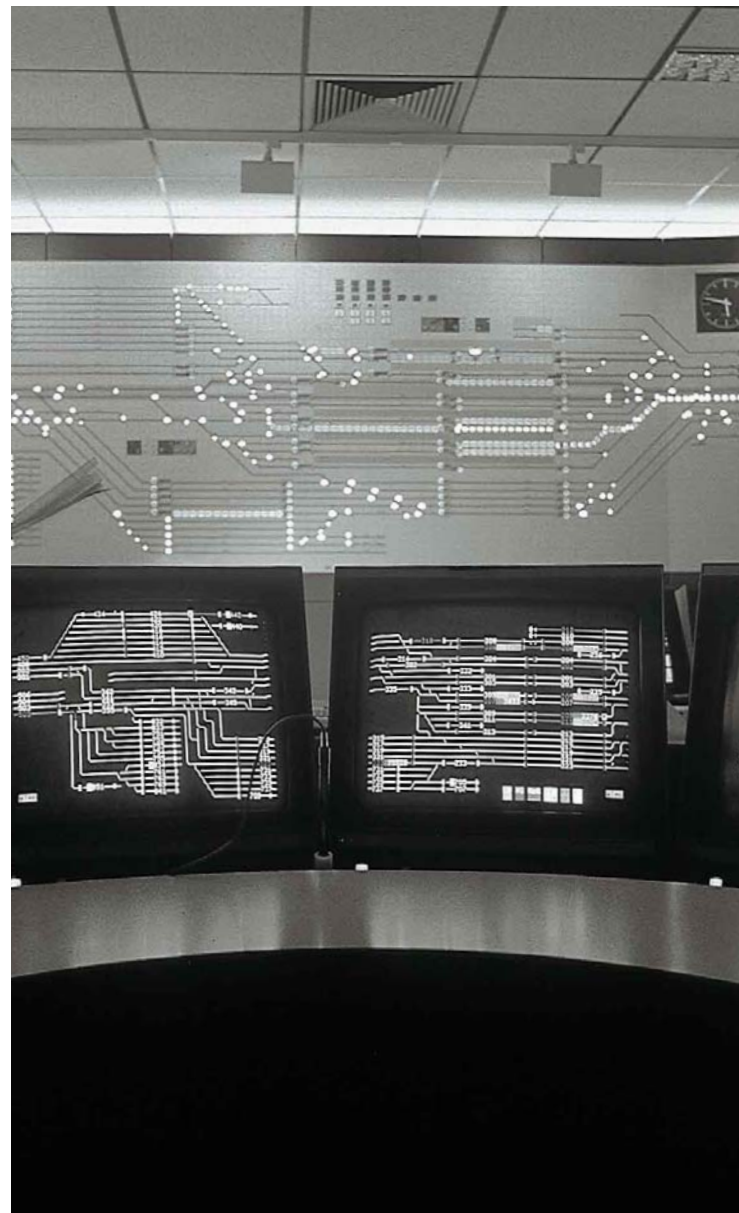
Survival and growth means that operators must:

- Modernize while avoiding excessive cost.
- Innovate while transferring R&D to suppliers.
- Prioritize comfort, safety and environmental protection.

With many years of experience in telecommunication and energy networks, Nexans is a supplier you can rely on.

Nexans produces a wide range of telecommunication and energy cables and components found in modern train systems: LANs for communications and control functions; overhead catenary cables, and diverse low, medium and high-voltage energy cables for traction and

equipment; and halogen-free fire-performance cables for public safety. In addition, we provide customized engineering, turnkey installation and maintenance, and we do ongoing R&D to keep all of our products competitive, compatible, and environmentally-friendly.





Nexans makes your systems work together:

- A wide range of communication/energy cables and components for railroads
- Delivery of end-to-end turnkey systems
- Complete signaling systems for the digitalization of switch boxes
- Modular, future-safe systems
- Custom engineering to deal with country-specific problems and standards
- Innovative technologies, processes and installation techniques
- Interconnectable solutions for cross-border system compatibility
- Dedication to the safety of the public, the system, and the environment



There's no one like  for getting you there on time.

LANs

To serve complex signaling and communications, Nexans has developed local area networks based on the latest multimode optical fiber technology.



Fiber access routing technology

Nexans' FiberArt™ optimizes fiber routing through the physical network, thus guaranteeing network integrity. This fiber management module is easily implemented as an end-to-end solution in distribution frames, splicing closures and subscriber access points.

ODFs and closures

Our modular distribution frames provide a complete architecture for main exchange nodes or point-of-presence applications. A range of L.I.N.X. splice protection closures are available for use along the line or at access points to the local loop, including in-line and dome closures for individual fiber management.

Signaling and switching cables

Copper, multi-pair signaling and switching cables are hybrid energy/telecom cables providing low-voltage energy and two-way telecommunications for field equipment. Nexans cables (from a single to 56 pairs) are sheathed and shielded to protect them both against induction (for ultra-fast TGV trains) and the elements.





 is turning trains into the safest way to travel.

Catenaries

Nexans produces complete catenary systems. Pure copper and various copper alloys are used for increased tensile strength and security at ultra-high speeds.

Energy cables

To meet the extended needs of railways (who are often power producers themselves), we provide a full range of low, medium and high-voltage cables. Nexans has developed a full range of insulated

cables that can withstand oil, heat, mechanical stress and freezing conditions.

Power accessories

Low voltage

Nexans produces low voltage cabinets as well as low voltage straight and branch joints for underground cables using a series of internationally recognized technologies.

Medium and high voltage

Nexans produces connectors to connect insulated cables with distribution and trans-

mission equipment (transformers, switches), as well as joints and terminations.

The medium voltage joints and terminations use the "cold-shrinkable" technology. This technology does not require any special tooling and guarantees the quality and safety of the installation. This material complies with European and international standards.

Fire-performance cables

In tunnels and public areas, halogen-free, fire-resistant (HFFR) cables ensure the functioning of energy, emergency and communication equipment.



 keeps your projects on track.

To facilitate the modernization, expansion and integration of railways worldwide, Nexans has taken the lead in developing highly efficient telecommunications and energy products and support.

Turnkey installations

Since railways are forced to upgrade under enormous cost pressures, Nexans has developed innovative turnkey products which include system engineering, project

management, installation and maintenance.

Complete signaling systems

All cables, signals, housings, software, implementation and commissioning include a complete systems guarantee.

This is extremely important for the continuing digitalization of switch boxes.

System compatibility

As railroads internationalize, compatibility is increasingly important. Dedicated



to modularity and open standards, Nexans cables and accessories are designed to fit into any railway system worldwide.

Security

Nexans has developed reliable products throughout the system, and fire-performance cables for public areas and tunnels to protect people, equipment and infrastructure.

Longevity

Our technology often outstrips current needs. Cable obsolescence is thus avoided, and customers can count on telecommunication and energy systems that will keep pace with growth.

Line of supply

Nexans guarantees the fast delivery of key products when and where they are needed worldwide, thus ensuring dependable, reliable network operations.



 is with you all the way down the line.

Operators must upgrade railroad infrastructure not only to increase capacity, but also to meet the challenges of competition, rising costs, and growing safety and environmental concerns.

This means investing wisely in infrastructure for future requirements.

By mastering both energy and telecommunications systems, including critical components, Nexans is a

perfect partner for modernizing and expanding your railway system.

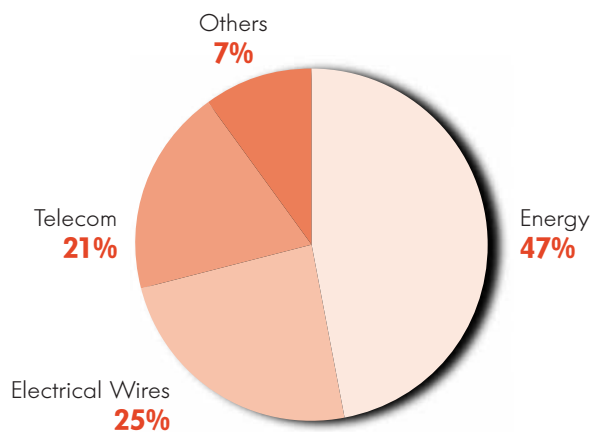
Through constant innovation, a knowledge of materials and processes, and proven expertise in the complex

railroad environment, we provide the latest, safest technologies... often custom-designed with and for you. Nexans' turnkey solutions will keep you on track... far down the line.



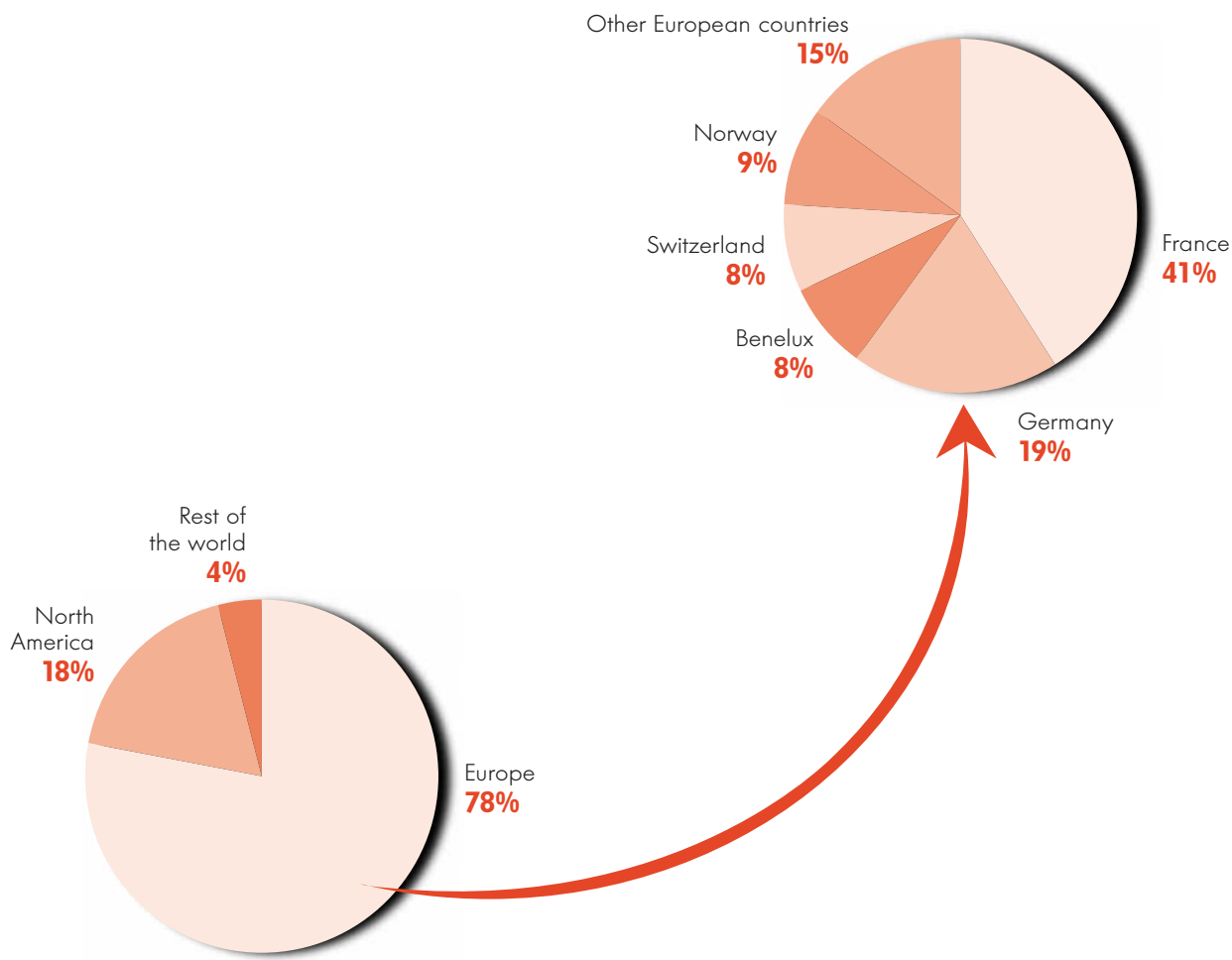
Nexans: some key figures.

- Total Sales*: 4.6 billion euro.
- Nexans Positions:
 - N° 1 worldwide for winding wires
 - N° 1 worldwide for submarine power cables
 - N° 1 European for rods
 - N° 1 European for equipment cables
 - N° 1 European for data transmission special cables
 - N° 2 worldwide for LAN cables
 - N° 2 worldwide for ground network power cables
 - N° 2 European for electrical wires



*Proforma figures. 2000 estimates at current copper price.

Total sales*
by activity



Total sales*
by origin



The logo for Nexans features a stylized, orange-red 'N' that resembles a sine wave or a running track. To the right of this symbol, the word 'Nexans' is written in a clean, black, sans-serif typeface.

The future runs through Nexans.

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