

Railway Construction Supervision and Technical Assistance

Applus+ has an extensive experience in conventional <u>railways</u> and high-speed rails (HSR). We have been involved in developing Spain's HSR network, providing services in all corridors. We deal with challenging projects, most of them, with long tunnels in complex geological conditions and major structures with different typologies. We have also been part of the metro and the underground railway system in various cities, allowing us to prove the quality of our various services.

Our portfolio includes construction supervision and technical assistance for the platform, track, electrification, and safety and communication facilities.



THE Applus+ SOLUTION

Applus+ continually explores the practical application of advanced technologies to provide innovative, cost-effective and appropriate solutions.

We have relevant experience in <u>geotechnical instrumentation and monitoring</u> and risk management.

We provide services for:

- Design review
- QA/QC
- HSE
- On-site Inspection
- Topographical Survey
- Instrumentation and Monitoring
- Testing of Materials



- Contract management
- Technical Office Service
- Expertise Advisory

Applus+ has also accomplished important goals in metro projects providing dilapidation services. We have been involved in major projects worldwide like Barcelona Metro in Spain, Doha Metro in Qatar and Riyadh Metro in Saudi Arabia.

Applus+ Norcontrol performs material tests and operational tests both in laboratories and on-site. Quality control is done from the start of the construction process to identify and control the materials and the most critical units. This action meets the expectations and needs of developers, builders, public institutions, and engineering or construction companies while verifying the proper execution of the works regarding the quality of the materials used and their correct placement and operational performance.

We have more than 30 years of extensive experience providing design, construction and operation services to both public and private organizations, which enables us to adopt quick and flexible solutions for different markets and sectors both at national and international levels.

Target customers

Our service portfolio is of interest to public administration, railway infrastructure managers, and construction companies worldwide. The various services we provided apply to the construction, extension, or improvement of a new railway line or an inservice railway line.

Key customer benefits

Applus+ value-added services provide numerous advantages to the design, construction, and operation processes.

Benefits:

- Owners are ensured that the construction complies with quality standards.
- Early detection of construction defects avoids cost overruns and delays.
- Coordination with Stakeholders.
- Worldwide coverage ensures high-quality service anywhere.
- Comprehensive service.
- Vast knowledge of the public and private fields.
- Personalised solutions and products adapted to every client.



We have a highly qualified and experienced technical team, which allows us to offer comprehensive and innovative solutions that ensure the reliability, energy saving, and sustainability of the works. Thanks to our specialists in various disciplines, we can offer a global services proposal, supported by the guarantee and strength of our laboratories.