Leading the way forward

MERMEC has been known as a reliable and pioneering developer of high-tech solutions to the railway and industry for over 30 years. With an innovation-driven culture, we distinguish ourselves by our capacity to develop in house all software and equipment that make the core of our solutions. This major competitive advantage sets ourselves apart from other vendors and takes our products and services to the next level.

MERMEC is leading the way in analytic-driven maintenance solutions offering the most comprehensive portfolio of recording cars and more than 60 different types of automated inspection and measuring systems. Smart decision support tools enable predictive maintenance.

MERMEC provides cutting-edge technology and experienced personnel for rail infrastructure monitoring as contracted services; customized campaigns able to fit customer needs from one-day testing to multi-year term program.

MERMEC offers a wide-range of advanced services from off-the-shelf hi-rail cars to custom designed measuring vehicles; from big data analysis in the cloud to flexible data reporting; from remote competence center for centralized processing, to on-site experienced professional.

Whenever railway companies are interested to preserve capital budget and avoid technology obsolescence issues while relying on the best available technology and professionals, then MERMEC is the ideal partner for flexible testing services.

MERMEC delivers complete rail signalling and train control solutions around the world to railways and rapid transits. With our world-class technologies, we are able to apply effective solutions to a wide variety of technical challenges. Our experienced engineers make MERMEC a reliable supplier providing our clients with innovative and excellent service, knowledge and expertise across technically advanced, purpose built signalling and communication systems.

MERMEC unmatched expertise in mission-critical systems development has been melt with its sought-after knowledge in safety-critical applications design to obtain a unique product portfolio including ECTS L1 and L2 turn-key solutions, LX obstacle detectors, Safety Portals and many others.
Innovation as our competitive advantage

MERMEC is currently contributing with its expertise and know-how to more than 20 international research projects of which 10 are financed by the European Union, including HORIZON 2020.

MERMEC is an Associated Member of the Joint Undertaking SHIFT²RAIL, that will be the first European rail joint technology initiative to seek focused research and innovation (R&I) and market-driven solutions. MERMEC actively participates in 13 different working groups within UNISIG, UNIFE, CEN and ERRAC.

In 2010 MERMEC became a UNISIG Associated Member, being the second signaling equipment manufacturer entering the prestigious international consortium since its establishment in 1999.

Asset Digitalization

MERMEC offers a unique bundle of state-of-the-art services specifically conceived for the creation of a comprehensive asset inventory of every item within the right-of-way.

**Asset Surveying.** Survey of long railway corridors is obtained combining two inspection methods and remote sensing techniques: aerial LIDAR using carbonfibre aircrafts and mobile terrestrial inspection using measuring trains and hi-rail track recording vehicles featuring high-resolution Telemetry and Photogrammetry.

**Data Processing.** A single comprehensive dataset is developed and normalized combining information from aerial and terrestrial surveys in a two-phase process articulated in data fusion first and objects extraction afterwards. This dataset is used to identify and localize railway objects that are finally validated and referred to track centerline.

**3D Asset Digitalization.** All extracted objects are enriched with further information (manufacturer, installation date, technical details, last inspection, ...) and integrated into a digital replica of physical assets. A web-based content-management system allows integrated data navigation from the office to conduct track inspection and asset audits.

Angel is the Italian hi-tech holding who leads a group of pioneering companies, which are global leaders and technology innovators in delivering end-to-end solutions. In addition to the measuring trains and signaling technologies for the world's railways and rapid transits developed by MERMEC, Angel includes SITAEL (satellites, advanced propulsion systems, electronics for international space missions and internet of things) and BLACKSHAPE (high-performance carbon-fiber aircrafts for leisure and training).
The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.