KEY BENEFITS

- Global project concept
- Significant cost savings through efficiency gains
- Enhanced end user service quality
- Lower operational expenses
- Increased traffic capacity
- Seamless interoperability
- Fully integrated systems solutions
- Field-proven features

INTEGRATED COMMUNICATION AND SUPERVISION SYSTEMS

The Lisbon Operational Control Centre
THE CHALLENGE
The Portuguese Railway Infrastructure Manager REFER EPE required a brand new Operational Control Centre (OCC) to boost the rail network's efficiency and capacity by integrating all of its exploration, operation and maintenance tools in one place. Five existing CTCs were replaced by the OCC, requiring not only interfacing and integration throughout but calling for new products and subsystems to be developed.

THE SOLUTION
Thales brought an international team of Railway Signalling and telecommunications specialists together, under the lead Rail Signalling Solutions team in Portugal, to design the Lisbon OCC from scratch.

A PURPOSE-BUILT BUILDING
Thales developed an entirely new process to address construction issues from the architect's drawing board to EMC screening and civil engineering. The scale of the state-of-the-art Control Management Centre was set by the size of the massive video wall required to show every single train within the OCC's operational area. CAE studies enabled planners to assess the impact of technology and operational changes in advance. Preliminary studies of the interior design's acoustics, lighting, stress and vibration ensured the future optimal operational working conditions.

Increased operational efficiency
Thanks to Thales network integration skills, the different systems were interconnected in a coherent manner, facilitating user control. Integrated systems include visualization systems (Video Wall), transmission, Voice communications (PABX), Train-to-ground Radio, Voice & Data recording, CCTV, SCADA, Audio & Video Conference.

CTC/Advanced Signalling systems
Cutting-edge solutions for train exploration communications, and the remote control of PIPC and SSI interlocking systems were developed and added to the existing command of ESTW-90 interlocking, replacing the five CTCs and merging their operational areas. Two new subsystems for Automatic Route Plan Generation and Train Descriptor for Non Controlled Areas were delivered for seamless interconnection to NetTrac 6613 ARAMIS rail traffic management (ARAMIS stands for Advanced Railway Automation, Management and Information System).

Fully Automatic Operation
NetTrac 6613 ARAMIS network management solution automatically visualises and records the actual rail traffic situation enabling automatic train route setting, operations and public information. It shows the variations of the forecasted versus the planned train movements and proposes an optimisation.

Operator user friendly Interface
The OCC gives REFER EPE seamless control of operations across the entire rail operations through graphical interfaces with modules for planning, disposition, timetable construction, control, recording, statistics, rolling stock, traffic and slot management and information distribution.

THE RESULT
Through the savings on centralised operations, maintenance and training, the new Lisbon OCC delivers the ROI REFER EPE were looking for. The Lisbon OCC confirms REFER EPE rail market leadership. The Lisbon OCC underlines Thales pre-eminent position in the industry, backed by 55 years experience with railways in the Iberian peninsula.