

GROUND TRANSPORTATION



EQUANS
YOUR PARTNER FOR INDUSTRY-
LEADING PUBLIC TRANSPORT
INFRASTRUCTURE AND SERVICES

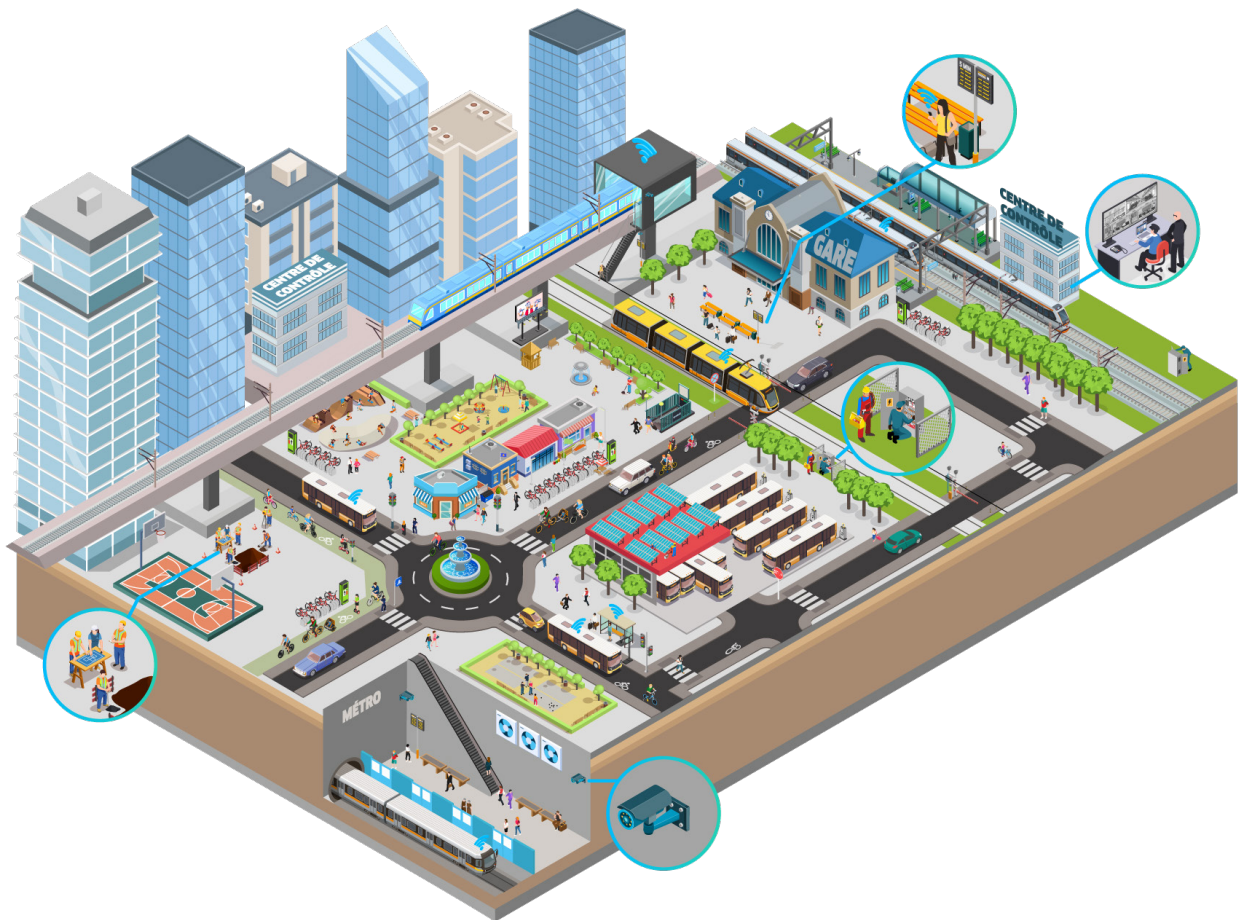


DELIVERING THE MOST RELIABLE, SUSTAINABLE AND ATTRACTIVE PUBLIC TRANSPORT SOLUTIONS

Working to improve the performance, comfort and attractiveness of transport networks across the globe, EQUANS supports clients in the transition towards a carbon-neutral world, building a future which is smarter, safer and greener for everyone.

Our range of integrated services include:

- The **Construction** and **modernization** of clean and efficient infrastructure,
- The **Digitization** of passenger and operational services
- The **Transformation** of existing infrastructure



The diversity of our expertise and the wide range of our activities allow us to carry out projects with high added value; from integrated project management to multi-technical work packages.

DESIGNING, BUILDING AND IMPLEMENTING MULTI-MODAL MOBILITY SERVICES



ELECTRICAL POWER SUPPLY AND ELECTRIFICATION

We design, install, modernize and maintain the overhead line infrastructure and low-voltage electrical distribution networks for all modes of public transport:

- Electrical substation, high-voltage traction substation
- Traction power supply & distribution
- Low-voltage power supply & distribution
- Automated system for electrical traction instrumentation and control
- Overhead contact lines for trams
- Conductor rail systems for underground lines
- Overhead line systems for railways including High-speed
- Overhead line systems for eHighways
- Outsourced and connected maintenance
- Management of phase imbalance
- Electric bus charging solution



ONBOARD CONNECTIVITY AND TELECOMMUNICATIONS SOLUTIONS

By providing a fast, reliable and secure data connection to and from a moving vehicle, we support multiple resource-intensive applications which simplify the management of transport networks.

- **Telecommunications:** Multiservice transmission network, radio communication, radio and telephone / intercom
- **Technical Supervision Systems:** Centralized Technical Management, Audio-Video Telecommunication
- **Operational Support System:** Computer-Aided Dispatch / Automatic Vehicle Location (CAD/AVL)



IMPROVING THE PASSENGER EXPERIENCE

We deliver services such as Passenger Wi-Fi, Onboard Entertainment, and Real-Time Information which improve the experience of those travelling, increase satisfaction levels and encourage passengers to use public transport more often.

- **Passenger Wi-Fi:** Allow passengers to stay connected and increase productivity while they travel
- **Onboard Entertainment:** Give travelers access to a range of content, including movies, TV shows, audiobooks, and games
- **Real-time Journey Information:** Connect passengers to useful information regarding their journey via in-vehicle displays or mobile web portals

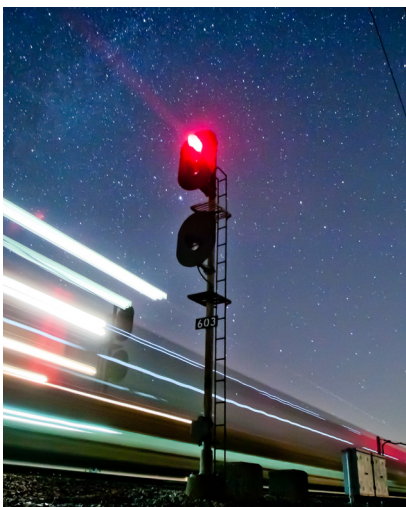
GUARANTEEING THE QUALITY, SAFETY, RELIABILITY AND PERFORMANCE OF YOUR INFRASTRUCTURE



ENHANCING OPERATIONAL EFFICIENCY

Putting operators in constant communication with their vehicles lays the foundations for a range of services which increase operational efficiency, improve schedule adherence and reduce costs.

- **Pre-trip inspection:** Keep the driver updated on the general interior / exterior condition of the vehicle
- **Real-time Automatic Passenger Counting System:** Can be used to manage vehicle capacity limits and keep passengers informed of busy / quiet areas
- **Fleet Management:** Allows operators to keep track of the location of each vehicle within a fleet



SIGNALING SYSTEMS

We install and maintain signaling systems, ensuring safety through designs which meet the specific requirements of each facility.

- **Deployment of Signaling Systems:** Conventional lines (ARGOS) and high-speed lines, metro and tram
- **DRolling Stock depot, multi-modal platforms**
- **Analogue and / or digital signaling equipment certified up to SIL4**
- **Specific signaling systems based on N.S1 relays and / or based on SIL2 / SIL4 digital platforms**
- **Outsourced and connected maintenance**



ELECTRO-MECHANICAL SAFETY / SECURITY EQUIPMENT

Protecting passengers and staff is the number one priority for transport authorities and operators. We design, install and maintain services which keep those traveling safe throughout their journey.

- **Ventilation of underground structures**
- **Full-scale smoke and fire tests (Smoke Extraction)**
- **Platform Edge Doors (PEDs)**
- **Digital Video Surveillance Systems**
- **Fire Detection Systems**
- **Safety Sound Systems**



SUPPORTING YOU OVER THE LONG-TERM

Engineering and Management of Complex Projects

1



Studies:

Integration, sizing, engineering, comparative analysis (pricing study).
Selection and supply of equipment and services.
Financial arrangement

2



Construction:

Planning, project management, project implementation
Risk management and EHS performance

3



Commissioning:

Checks and validation
Systems control
Start-up

4



Multi-technical maintenance:

Real-time operation of equipment
Supervision of overall performance

5



Engineering – financing – green mobility:

Energy supply and Smart grid
Electric bus charging solutions
Energy recovery
Smart lighting network
...

OUR REFERENCES

2 200 EMPLOYEES DEDICATED TO THE TRANSPORT BUSINESS WORLDWIDE

40 COUNTRIES COVERED BY OUR ACTIVITY

200 REFERENCES

700 MILLION EUROS IN TURNOVER



EQUANS X DEUTSCHE BAHN AG

Location: **Germany**

VDE 8.2 / HIGH-SPEED-LINE ERFURT - HALLE/LEIPZIG (HIGH SPEED)

- Complete execution planning works
- Construction of catenary system
- 9.9 km overhead line system installed (Re100 design)
- 8.9 km overhead line system installed (Re200/Re200mod design)
- 250.2 km overhead line system installed (Re250/Re330/SICAT H designs)
- 2,808 masts erected, 7,037 cantilevers installed
- 8.8 km of medium-voltage cable and 36.2 km of control cable installed
- 28.9 km traction power line installed
- 172 km of return conductor installed

@Powerlines Group



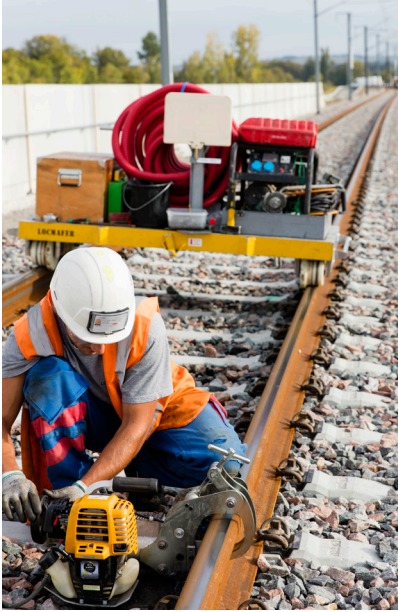
EQUANS X LA SOCIÉTÉ DU GRAND PARIS

Location: **Paris – Ile-de-France**

TRACTION WORKS FOR LINES 16 AND 17 OF THE GRAND PARIS EXPRESS NETWORK

Production and supply, from the 20kV public grid, of a 1500 VDC electrical power supply to the trains; as well as:

- Production and distribution of high-voltage electricity to the Traction units, including associated equipment
- Electric Traction facilities for the Aulnay Operations Centre and its access track
- Instrumentation and control of the Traction equipment, raised access floors for technical services in the Traction buildings



EQUANS X LISEA

Location: **France**

CONSTRUCTION OF A HIGH-SPEED LINE BETWEEN TOURS AND BORDEAUX

- Design and production of the signaling instrumentation and control system, including the telecommunications system and traction power supply facilities
- Integrated tests, dynamic tests, driver training
- Implementation of energy optimization solutions (ventilation by earth-air heat exchanger instead of air conditioning) and deployment of 19 SIL2 Crosswind Detection safety systems to adapt the speed of the train according to the wind



EQUANS X LOTHIAN BUSES

Location: **Edinburgh (Scotland)**

IMPLEMENTATION OF OPERATIONAL SUPPORT AND PASSENGER INFORMATION SYSTEMS TO FACILITATE THE OPERATION OF A NETWORK OF MORE THAN 700 BUSES

- Supervision of all vehicles: Computer Aided Dispatch and Automatic Vehicle Location (CAD/AVL), Control of start of service, time before or behind schedule, programming of diversions, shifts...
- Supply of real-time information: Traffic status, journey time, waiting time, stops near the location of the user's smartphone... via the Navineo Intelligent Transportation Systems and Services solution
- Passenger Wi-Fi and Application Platform: Providing Lothian passengers with the best possible onboard experience, enabling them to stay productive while they travel

crédit photo : Keith McGillivray



EQUANS X SNCF

Location: **France**

DEPLOYMENT OF A BROADBAND WI-FI CONNECTION FOR 203 INTER-CITY TRAINS AND NIGHT TRAINS THROUGH ICOMERA (A SUBSIDIARY OF EQUANCE), THE WORLD'S LEADING PROVIDER OF WIRELESS INTERNET CONNECTIVITY FOR PUBLIC TRANSPORT

- For each carriage, integration of Icomera's powerful X3 (Rail) mobile Internet connectivity and applications gateways
- Availability of Wi-Fi along with free online entertainment services for all passengers

EQUANS supports cities, industries and companies in the tertiary sector, providing them with solutions to the challenges posed by the energy transition in the form of turnkey and bespoke packages.

EQUANS experts apply all their expertise in pursuit of three aims: optimizing the use of energy and resources, greening energies and reinventing living and working environments.

EQUANS guarantees its clients a single point of contact and a combination of complementary offerings that go beyond energy. The company is committed to achieving results and its 50,000 employees, who operate throughout France (900 sites), have expertise in an extremely diverse number of areas, ranging from the design and operation of infrastructure & services, to funding, installation and maintenance.

EQUANS is part of the ENGIE Group, one of the world's leading low-carbon energy and services groups whose purpose is to act to accelerate the transition towards a carbon-neutral world.
Turnover: €10 billion

To find out more, visit : <https://www.equans.com/en>