

Alstom in The Netherlands is one of the major suppliers of transportation solutions. The company focuses on supplying innovative rolling stock solutions such as tramways, metros, regional and high-speed trains. With its state-of-the-art signalling solutions, Alstom succeeded the first implementation of the European standard ERTMS level 2 on the BetuweRoute and Hanzelijn lines and the equipping of trains with ERTMS on-board equipment, as well as new interlocking for the ProRail network. Alstom also supplied the latest CBTC signalling platform for the Amsterdam metro in both track and metro vehicles and the signalling system for Rotterdam metro. Alstom, as a local ECM level 1-4 certified service partner with advanced remote monitoring, is managing an increasing number of maintenance projects and long term service agreements. The company has 11 locations in the country to serve closely its customers : **Ridderkerk** for services, **Nieuwegein** depot for tram maintenance, 6 depots in **Rotterdam** for locomotives, urban and train maintenance and **Utrecht and Amsterdam** as project offices for signalling solutions.



: ACTIVITY 1 – ROLLING STOCK

- Last technologies of rolling stock solutions for urban transit, mainline travel, regional and high-speed transport and freight, such as the Coradia Stream to answer the needs of NS or the hydrogen train Coradia iLint to replace legacy diesel trains.



: ACTIVITY 2 – RAIL SIGNALLING SYSTEMS

- Full-solution provider of urban and mainline signalling projects (design, delivery, installation and commissioning, maintenance, safety case)
- Improving current installed base with latest standards ERTMS Level 2, Baseline 3
- Upgrading and maintaining the full installed base of signalling systems and subsystems, traffic control center, interlockings and tracks objects
- Frontrunner on innovation Automatic Train Operation



: ACTIVITY 3 - SERVICES

- ECM (entity in charge of Maintenance) level 1-4
- On-board signalling maintenance
- Provision of daily availability of fleet with execution of preventive and corrective maintenance as well as overhaul and damage repair.
- Fleet support center with HealthHub predictive maintenance to optimize availability of fleets of vehicles, cost and passenger satisfaction through data systems
- A range of services guarantees the availability of systems: parts & repair, overhaul, modernization, renovation and support services using the latest technologies as remote monitoring.

KEY FIGURES

| | |
|-----------------|--|
| 470 | employees |
| 11 | locations |
| 5 | CO2 level performance |
| > 700 | vehicles in commercial service |
| >200 | vehicles in daily maintenance including the Utrecht tramways |

MAIN REFERENCES

A large presence in the public transport with over 700 vehicles in commercial service and the latest signalling and services solutions

ROLLING STOCK

- 113 tramways Citadis in Rotterdam for RET
- 167 metros in Rotterdam for RET
- 28 metros Metropolis in Amsterdam for GVB
- 72 tram-trains Regio-Citadis in The Hague for HTM
- 176 VIRM double deck trains for NS
- 69 Sprinter trains
- 100+ TRAXX Locomotives for multiple operators

SERVICES

- Preventive, corrective maintenance on rolling stock for customers such as NS, Utrecht tramway fleet and multiple freight operators
- Remote monitoring, and partner in reliability and availability of rolling stock and subsystems for over 300 vehicles .
- Maintenance of on-board/trackside ERTMS systems



SIGNALLING

- Complete urban signalling system for the Rotterdam Metro, including Hoekse Lijn
- Complete CBTC (Communications-Based Train Control) signalling systems for the Amsterdam Metro network and vehicles (North South Line)
- ERTMS safety system on tracks on the Betuweroute the Hanzelijn and Amsterdam-Utrecht line
- ERTMS on-board equipment in freight locomotives
- Upgrading and maintaining the full installed base of interlockings and detection systems for ProRail

NEW SOLUTIONS

- Development of fully compliant STM ATB NG
- Successful GoA2 tests on the Betuweroute in 2018 and full automatic (GoA4) shunting tests in 2022, paving the way for Automatic Train Operation (ATO) in the Netherlands
- Alstom hydrogen train Coradia iLint successfully tested in Groningen and Friesland in March 2020

PROJECTS ONGOING

Innovative solutions to provide a smart and sustainable mobility of tomorrow



- Production, test & homologation of 99 ICNG intercity trains to operate on the main national rail network and the high-speed line HSL-Zuid.
- CBTC equipment for the Amsterdam metro vehicles and trackside of the "RingLine"
- Adapting ERTMS Baseline 2 for Baseline 3 training purposes of NS drivers on Amsterdam-Utrecht line and Hanzelijn
- Retrofit of 34 locomotives from Beacon Rail with ERTMS Baseline 3 operating in the Netherlands, Belgium and Germany
- Modernization of the Copenhagen Metro fleet
- Providing daily availability of the Utrecht tram fleet (54), through preventive & corrective maintenance, overhaul and damage repair, including the signalling system
- Digital services for the 28 M5M6 vehicles metro fleet operating the Amsterdam North South line
- Integral maintenance on diesel and electric locomotives for operators as DB Cargo and Alpha Trains
- Each year, maintenance, overhaul and damage repairs on more than 1000 wagons
- Modernization program for VIRM double deck trains of NS with auxiliary IGBT power converters and with the diagnosis system.

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