

In Belgium, Alstom is a major national player in sustainable mobility with **1 Development Center (ERTMS) and 1 Components Development Site (CDS) in Charleroi**, and **a major production site in Bruges**. The Development Center is dedicated to signalling for railway mainlines. The Components Development Site focuses on traction system, auxiliary power supply for train onboard applications, and on energy recovery solution for urban networks. The development of these activities is based on significant **R&D** investments to ensure safer and more efficient rail transport, offering environmental solutions. Alstom holds several maintenance contracts at both Charleroi and Bruges sites and renovation activities in a **at Fleurus** workplace. The **Alstom Belgium headquarter** is in **Brussels**.



KEY FIGURES BELGIUM

2100	headcounts
4	Sites, office and depot
150	Projects around the world
20	R&D programmes



SIGNALLING

- Charleroi Development Center develops and deploys the European standard ERTMS (European Railway Traffic Management System) and national signalling solutions for both trackside and trainborne subsystems. These systems manage train safety and increase train frequency.
- Alstom Belgium is at the forefront of the development of autonomous transport systems (ATO), maximising network capacity, energy savings and punctuality.



COMPONENTS & ENERGY SOLUTIONS

- Charleroi Components Development Site develops traction systems and auxiliary converters to be integrated into Alstom's train portfolio (Metro, Regional trains, Commuters Train & Tramways) and drive energy recovery projects around worldwide networks.
- Alstom Belgium drives a large portfolio of R&D programs for new solutions to reduce train energy consumption and energy recovery for infrastructure applications.



MANUFACTURING (BRUGES)

- Painting, final assembly and testing of trains as the M7 regional trains for SNCB.



SERVICES & PRODUCT INTRODUCTION

- A panel of services is offered to guarantee the availability of systems: crash repair, parts and repairs, modernisation, obsolescence management, measurement of availability indicators, technical support, training of operators, Integrated Service Readiness, tools and test benches using new technologies.

MAIN REFERENCES

Innovation for more efficient and sustainable mobility

ROLLING STOCK

- 300 M5 trains for SNCB
- 550 M6 trains for SNCB
- 220 M7 trains for SNCB
- 400 tramways for the STIB
- 84 tramways for De Lijn
- 47 tramways TEC

SIGNALLING

- Development and implementation of the European signalling system ETCS and of national signalling systems for amongst others Infrabel, STIB, TEC, Network Rail (trackside subsystems) and for amongst others SNCB (Belgium), CFL (Luxembourg), DB (Germany), OBB (Austria), SBB (Switzerland), and main rolling stock manufacturers (trainborne subsystems) with a world first for ETCS level 2 Baseline 3 on Denmark and Norway fleets.

COMPONENTS SOLUTIONS

- More than 100 worldwide projects within a large portfolio of traction & auxiliary systems for Urban, Commuters & Regional trains.
- Development of an integrated Traction & Auxiliary Converter (iTAC) for tramways application

SERVICES

- Contracts for the maintenance, repair and modernization of signalling onboard and trackside equipment for SNCB, Infrabel, STIB, TEC, CFL, SBB and OBB.



R&D

- HESOP™ is an urban solution of energy recovery, already in revenue service in London, Milan, Panama, Sydney, Dubai, Riyad.
- OBES™ is a new solution for On-Board Energy Storage developed for tramway platform
- Automatic Train Operation (ATO) tests were successfully carried out in Belgium, Luxembourg and the Netherlands with GOA2 level (driver supervision) and with GoA4 level (unattended operation).

PROJECTS ONGOING

More than 150 projects on the 5 continents



- Production, test & homologation of :
 - 747 M7 trains for SNCB
 - 90 trams NG for STIB
 - 34 Coradia Stream High Capacity for CFL
 - 10 Traxx locomotives for CFL Cargo and
 - 24 Traxx locomotives for SNCB
- Production of 1700 signal cabins integrating the electronic interlocking system supporting the Belgian network modernization.
- Development, homologation and deployment of ETCS solutions & national safety systems for cross-border trains for European operators
- Development of ATO system for the CFL Coradia Stream trains
- Traction system based on silicon carbide technology for metro applications (Riyadh, Dubai, Hanoi,...)
- Design and production of new traction systems for pilot cars of the M7 trains (SNCB) and for 99 ICNG trains (NS)
- Renovation of 47 tramways for TEC Charleroi
- Maintenance of Traxx locomotives for DB Cargo

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