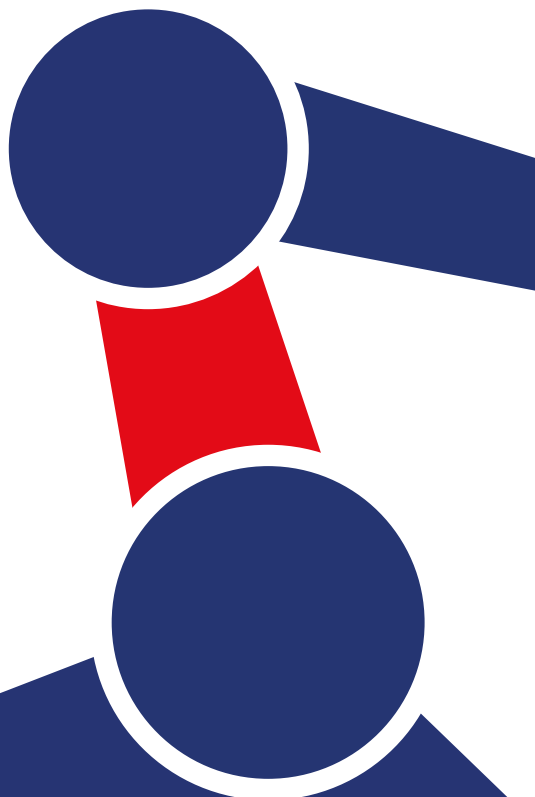


FRENCH RAIL EXCELLENCE



1

EUROPE'S #2 RAIL NETWORK

The French rail sector is made up of 1,300 companies (90% of which are SMEs). It generates revenues of €4 billion, of which 30% is made from exports. It is ranked second in Europe (behind Germany) and third globally. It employs 30,000 people and generates 84,000 indirect jobs in France. (SIFER; National Industry Council, 2019)

2

WORLD-CLASS INFRASTRUCTURE

In 2019, France was the second European country in terms of passenger traffic with 98.4 billion passenger-kilometers. It is ranked first in terms of international traffic with 10 billion passenger kilometers, ahead of Germany (5.7 billion) and the United Kingdom (2 billion). (Eurostat, 2020)

3

#1 FORM OF PUBLIC TRANSPORT

More than 59% of passenger journeys are carried out by train, compared with 32% by bus, coach or tram, and only 9% by air. Of all means of transport, train travel represents 12% of total traffic, and less than 1% of greenhouse gas emissions from the transport sector. (Ministry for the Ecological Transition, 2020)

4

THE DIGITAL OPEN LAB AND PREDICTIVE MAINTENANCE

Created in 2018 by SNCF, the French Railway Industries Association (FIF) and Railenium, the Technological Research Institute for the railway sector, a public/private open innovation platform, brings together around thirty major industrialists in the French rail sector. They co-develop and test digital innovations in real conditions, including AI and the Internet of Things, to anticipate maintenance operations on the rail network.

5

MOVE TOWARDS DRIVERLESS TRAINS

In 2019, SNCF carried out tests in the Paris region on a train equipped with remote control technology, moving further towards automated trains, which are scheduled to be rolled out in 2023 (SNCF). Meanwhile, Alstom, SNCF, Altran, Apsys and the Railenium technological research institute are carrying out level three and four tests on freight trains. (L'Usine nouvelle, 2020)

6 TGV-M, THE TRAIN OF THE FUTURE, MADE IN FRANCE

Set to be rolled out in 2023, the TGV-M trains will be produced in the Alstom workshops in La Rochelle (Charente-Maritime) and the carriages in the Belfort production facility (Bourgogne-Franche-Comté). These trains of the future will have a capacity of 740 seats (up more than 20% compared with the current version). What's more, they will be made using 97% recyclable materials and will generate 32% fewer CO2 emissions, with a 20% reduction in energy consumption and 30% reduced maintenance costs. (L'Usine nouvelle, 2020)

7 HUGE INVESTMENT FROM KEY PLAYERS

In 2020, the SNCF invested €6.2 billion in the rail sector, compared with €5.6 billion the previous year, with €500 million to modernize stations and €450 million to improve daily train services, up from the €330 million provided in 2019. (SNCF, 2021). In 2020, the acquisition of the Canadian giant Bombardier Transport by Alstom for nearly €6.2 billion significantly raised the French manufacturer's profile, making it the world's second rail company (Alstom, 2020). The Grand Paris Express, the largest development project in Europe, will attract nearly €36 billion in investment. (Grand Paris Express, 2020)

8 FRENCH EXPERTISE WINNING OVER THE WORLD

In 2020, Alstom carried out automated train tests in Germany. Contracts for the delivery of regional trains: €194 million in Italy, €800 and €350 in Australia (Alstom). Worldwide, one in two highspeed train and metro projects and 60% of automatic metro projects benefit from the expertise of SNCF teams. The company The company generates onethird of its revenues internationally (SNCF).

9 STRONG REGIONAL FOCUS

The Hauts de France region is the leading rail region in France. It is home to five of the world's largest manufacturers (Alstom, Bombardier, Siemens, Millet, Faiveley), more than 200 suppliers and subcontractors, research centers, and nearly 14,000 employees in the sector. (Nord France Invest)

10 INTELLIGENT AND CARBON-FREE MOBILITY SOLUTIONS

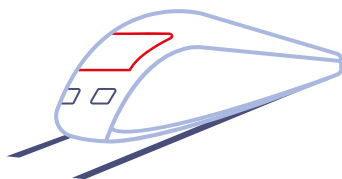
hydrogen fuel cells from French manufacturer Alstom to serve its rail network north of Milan. Bombardier transport, now in the fold of Alstom, is developing trains capable of running on batteries, meanwhile, Breton startup Exid C&D is developing the Taxirail, a flexible, lighter, autonomous, and semi-electric rail module. (L'Usine nouvelle, 2019)



#1

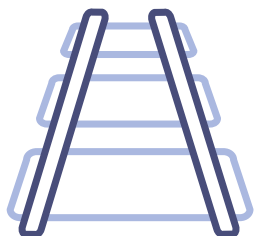
HOST COUNTRY IN EUROPE FOR INDUSTRIAL INVESTMENTS

(EY)



TGV HIGH-SPEED TRAIN: CRUISING SPEED OF MORE THAN 300 KM/H (185 MPH)

(SNCF)



EUROPE'S #2 RAIL NETWORK

(SIFER, 2019)



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