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# TEXELIS

## The Innovative Light Train: Cutting-Edge Rolling Stock Designed in France on Rails Soon



Tomorrow's transport: a dynamic rural world, with a futurist silhouette

The Innovative Light Train will be in the spotlight during InnoTrans 2022 held in Berlin this month.

Texelis and its partners launched the Innovative Light Train concept in 2020. The project presents a new approach to rolling stock with an eco-friendly transmission (hydrogen and battery cells), light materials, no bogies to reduce the weight, and various additional innovations

that combine to create a new and interesting choice for rural and regional lines. Its light weight allows it to cope with older rural rail lines, with fewer track maintenance costs involved. Overall, the new design will save 30% on current rural train production costs.

For this project, Texelis's power transmission system will bring the newest wheel/traction links in the industry and enable an innovative train, which is both light in weight

and eco-friendly.

Our Project Objectives: Light Structure, Lower Carbon Footprint, Lower Costs

Funded by ADEME, led by SNCF, together with Texelis, Thales, CAF, Alstom, Wabtec, FERROCAMPUS, Capgemini, Cerema, Ektacom and the RAILENIUM Technological



Research Institute, the Innovative Light Train aims to revive ‘regional services’ and improve mobility between regions while reducing transport costs for passengers.

With less costly set-up and maintenance, the Innovative Light Train allows for the testing of new work and maintenance techniques. Its advanced technology will lead to lower overall lifecycle costs, as well as vehicle automation.

Digitalisation will enable simplified traffic management. The modernisation of signalling and the digitalisation of the driver interface will ensure that trains arrive on time.

The implementation of technological innovations will reduce track wear by limiting the impact of dynamic forces and axle loads, while ensuring better passenger comfort and safety. Its electric motor and weight will reduce its carbon footprint.

Developed by Texelis, the futuristic ground connection system eliminates the need for a bogie and allows substantial savings in energy and maintenance costs.

The Innovative Light Train will call at regional and rural stations, revamping local rail lines, and boosting activity in places where rail was no longer an option.

This key innovation will enable remarkable performance in terms of energy savings (batteries, hydrogen) and speed (100 to 120 km/h) while maximising passenger comfort and safety.

We aim to implement these

*The Innovative Light Train will act as a rural people mover with high frequencies and speeds from 100 to 120km/h*

technological innovations and launch a first prototype between 2024 and 2026.

Through this project, Texelis and its partners are committed to going beyond current railway concepts by proposing a train that will achieve complete carbon neutrality: a great way to contribute to the railway industry's efforts to limit negative effects on the environment and climate.

With a 90 million EUR budget, the Innovative Light Train project is partly funded by ADEME, the French Agency for Ecological Transition.

SNCF will bring its know-how and industry expertise together with Tier I railway industry names in addition to Texelis. CAF will design the entire train body, Wabtec will provide the brake, door and pneumatic systems as well as the energy management, while Alstom will provide the hydrogen system which will add to the batteries.

## Where Can You See the Innovative Light Train at InnoTrans?

### Hall 20, Booth 570

Texelis will be exhibiting several models of the train, including a ground liaison design and animations of the Innovative Light Train.

### Hall 4.2, Booth 130

CAF will also present models of the Innovative Light Train and video animations.

### Hall 6.1, Booth 108

Capgemini will showcase its expertise to support the rail transformation in a highly connected, digitalised and sustainable world.

### Hall 3.2, Booth 400

Railenium Institute will organise a speaking corner on the Innovative Light Train on **Tuesday 20 September, 4pm.**

## About Texelis

Texelis has been designing and producing axle systems and power transmissions for military vehicles, metros, trams, buses, and airport people movers for over 40 years.

Its key expertise consists in the conversion of any type of power-generated engine force into the most efficient vehicle movement.

The company employs over 300 people and operates from a 35,000m<sup>2</sup> manufacturing facility on the outskirts of Limoges, France.

The company's turnover was 91 million EUR in 2019. Texelis has been providing its expertise in power transmission and engineering solutions in several metro projects such as Montreal, Mexico, Santiago, Paris, Marseille, Lyon, Lausanne and Lille, as well as tram systems around the world.



Connecting to main transport hubs is key to regional dynamics in Europe: The Innovative Light Train in Bordeaux-St. Jean Train Station