

5G connectivity for Railways

Keynotes

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Expectations for 5G in Urban Mass Transit areas, and for 5G corridors as High Speed Lines.

- ◆ 5G needs : Passenger connectivity combined with Train Digital Operation.
- ◆ Models of cooperation between telecom operators, railways, and industries
- ◆ On going CEF2 Digital projects



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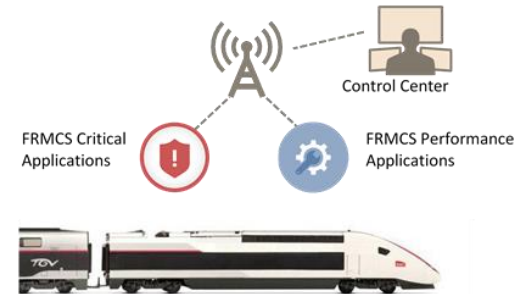
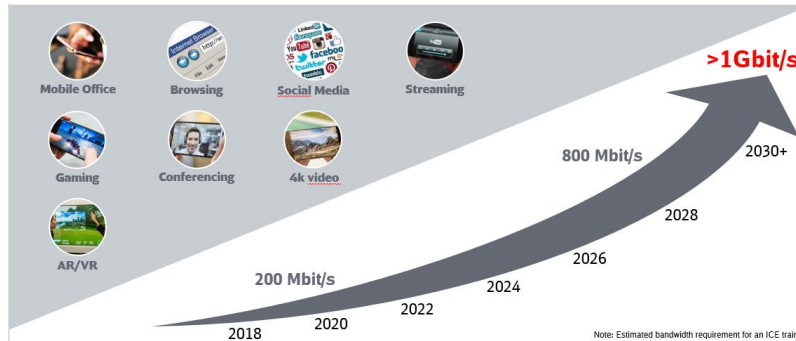
5G needs : Passenger connectivity combined with Train Digital Operation.

CEF 2 Digital enables the financing of 5G infrastructure for cross-border rail coverage.

The 5G Future Railway Mobile Communication System (FRMCS) was introduced in the CEF 2 Digital work program, thanks in particular to the detailed explanations provided by EIM/CER/UIC in the Strategic Deployment Agenda (SDA) document "5G CONNECTIVITY AND SPECTRUM FOR RAIL."

The SDA states that the deployment of 5G along rail corridors should serve both needs:

- ✓ passenger connectivity needs (the "Gigabit Train" concept)
- ✓ the digitalization of rail operations (the "FRMCS" concept)



Illustrations issues du document EIM/CER
SDA for the Gigabit Train and Digital Rail Operations

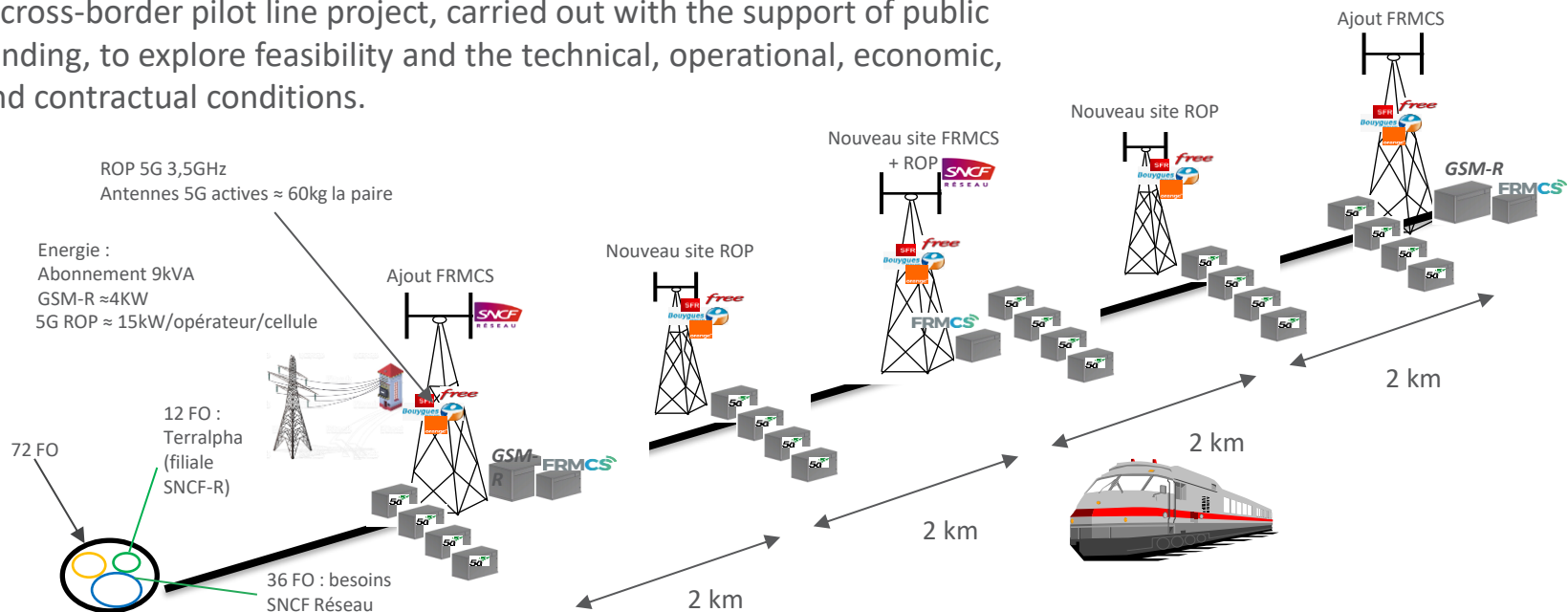


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Models of cooperation between telecom operators, railways, and industries

Potential savings in the co-construction of public 5G coverage for passenger use and dedicated 5G coverage for rail operations.

A cross-border pilot line project, carried out with the support of public funding, to explore feasibility and the technical, operational, economic, and contractual conditions.



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On going CEF2 Digital projects



Cross-Border Corridors

5G infrastructure along a rail cross-border section

- High-Speed Line Between Paris and Brussels
- Mass Transit Line between Metz and Luxembourg

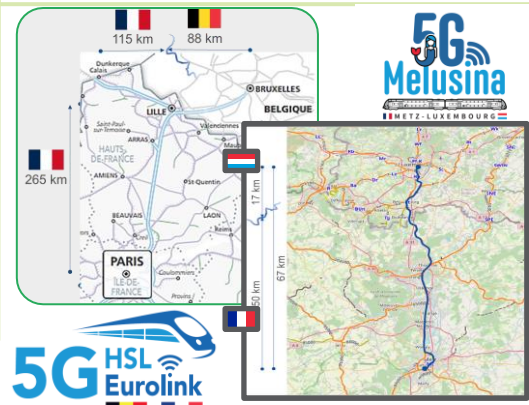


Environmental impact

- Target EU Climate Goals
- Shifting transportation onto rails, reduces carbon footprint.
- Mutualize infrastructure reduces carbon footprint

Rail Operations

- FRMCS specification & test validations for 2027
- FRMCS will support ETCS Level 2



Connectivity

- Improve the connectivity in train by 5G Coverage



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