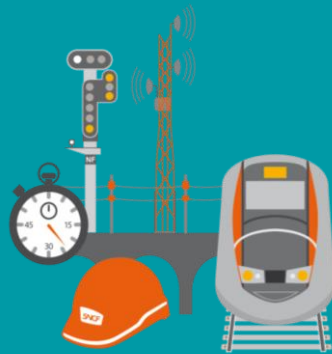


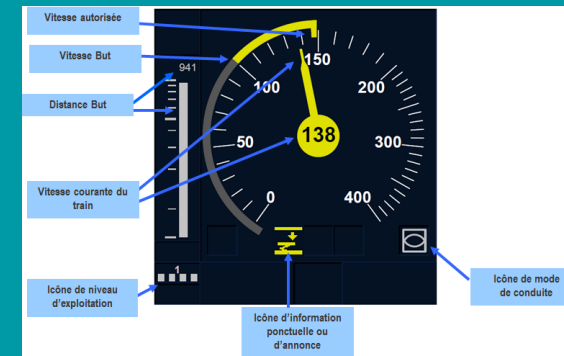
# ERTMS in France

## Successes and challenges

CCRCC – 15<sup>th</sup> November 2017

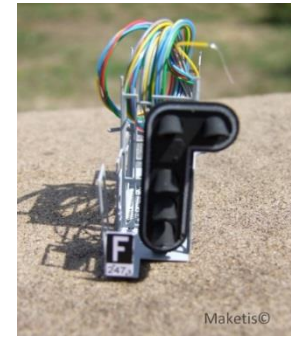


Version 0.0



ERTMS European Railway Traffic Management System

# AGENDA



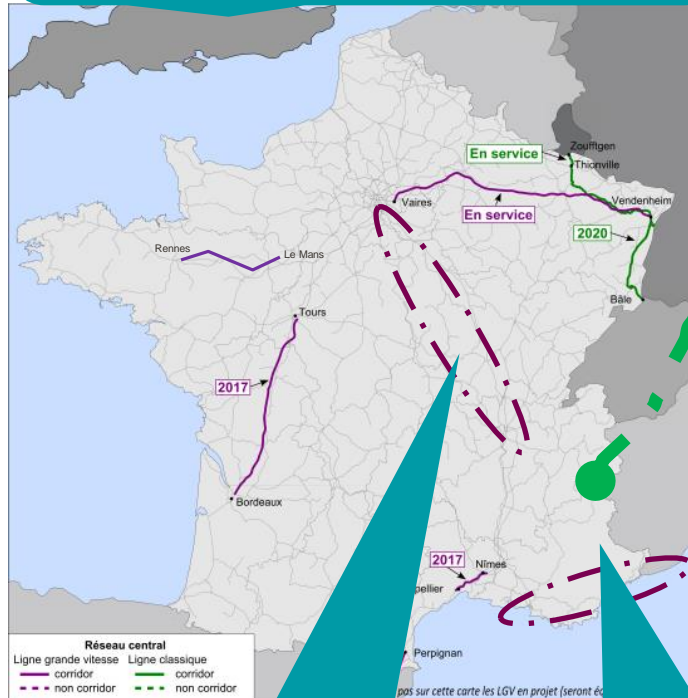
## WORK DONE / WORK IN PROGRESS

- + CURRENTLY IN OPERATION : 1000 KM OF DOUBLE TRACK
- + 2 MAIN PILOT PROJECTS : PARIS – LYON HSL AND MARSEILLE-VINTIMIGLIA CONVENTIONAL LINE
- + LESSONS OF EXPERIENCE

# STATE OF ART OF ERTMS ROLLOUT IN FRANCE

## AND NEXT STEPS

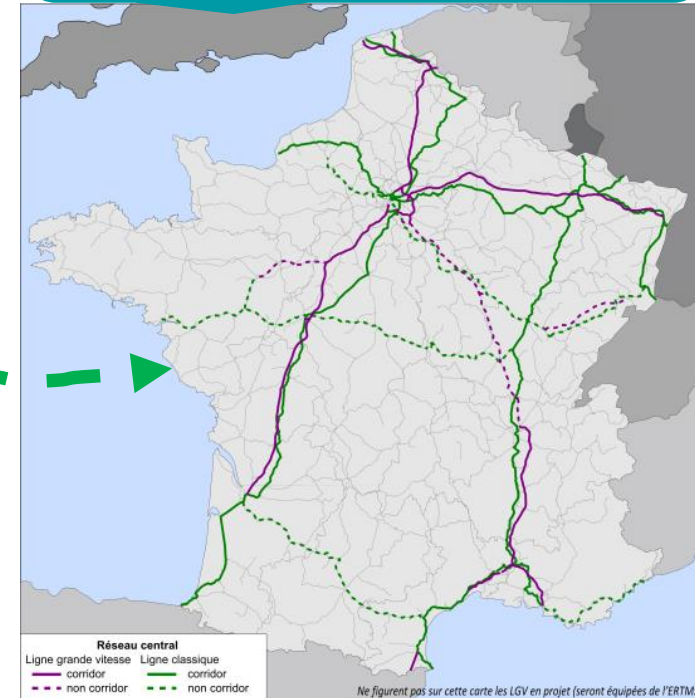
2017 :  
- 1 000 km in operation  
and - 2 pilot projects: 800 km



Paris-Lyon HSL  
(450 km – 250  
trains / day)

Marseille-Vintimiglia  
conventional line  
(250 km Main Line –  
300 trains/day)

Coming years :  
TEN-T core network in  
France



# BENEFITS OF EACH PILOT PROJECT

## PERFORMANCE WILL INCREASE

### Marseille – Vintimiglia line

- Resilience: the number of delayed trains due to an incident is divided by 2 (100% due to ERTMS)
- Reliability / availability: Interlocking fully new
- Operational Staff reduction
- Capacity increase : + 30% achievable under certain conditions including more investments: power supply, triple track...

### Paris-Lyon HSL

- Capacity increase : from 12 to 16 path = + 20%
- Resilience: ~no impact of track works on the number of paths (while paths reduced to 10 without ERTMS)
- Reliability / availability: Interlocking fully new
- Operational Staff reduction



**WEAK FINANCIAL RETURN ON INVESTMENT DESPITE SOCIO-ECONOMIC PROFITABILITY AND POSITIVE EXTERNALITIES IN RAILWAY SECTOR**



# WHAT ARE THE LESSONS TO BE LEARNED?

WHICH ARE USEFUL FOR THE FULL ERTMS DEPLOYMENT STRATEGY

- **ERTMS reduces time intervals between trains**

Between 20 to 40 %

- **The impact on capacity increase does not only depend on ERTMS**

Because some trains are slower than others

- **ERTMS deployment shall be designed as part of a broader digital strategy in order to guarantee positive impact on rail performance**

- **ERTMS deployment shall be done according to expected services**

Under these conditions, ERTMS will become obvious.

- **-> The main issue is the weak return on investment compared to high socio-economic profitability**

Most projects do not generate sufficient revenues to cover the total investment costs.

 **PRIORITY TO EXPECTED SERVICES ACHIEVABLE WITH ERTMS, HAVING IN MIND THE WEAK ROI** 

# ANY QUESTIONS ?

# ANSWERS IF POSSIBLE...

