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International Forum | June 9, 2023 | Prague
High-Speed Rail in Europe & Private Capital
Contracting & Financing Options for the Czech HSR

PPP High-Speed Line Bretagne-Pays de la Loire (BPL)



Patrick Leweurs

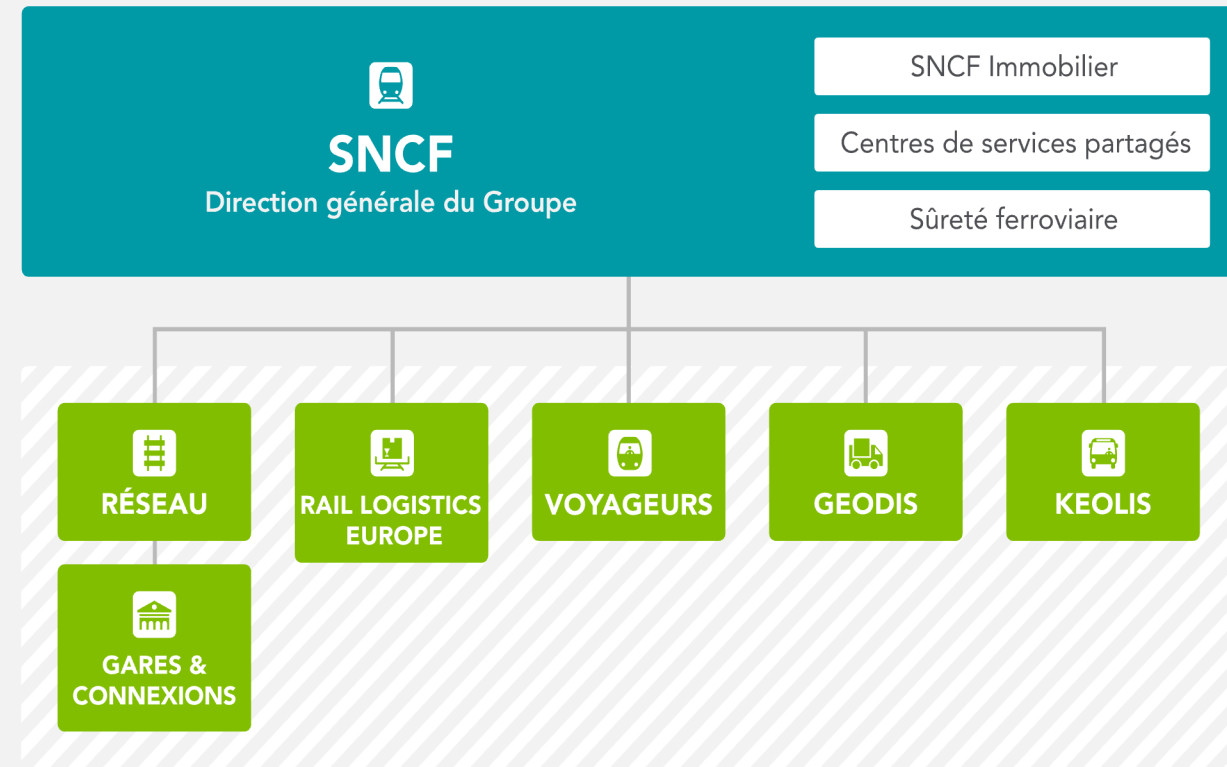
Director of PPP BPL (2012-2022), SNCF Réseau



Summary

- SNCF Reseau
- BPL HSL presentation and financial partners
- Scope of the PPP (organization & planning)
- Challenges and focus

Company Profile SNCF RESEAU



Key informations

HSL Bretagne-Pays de la Loire (BPL)

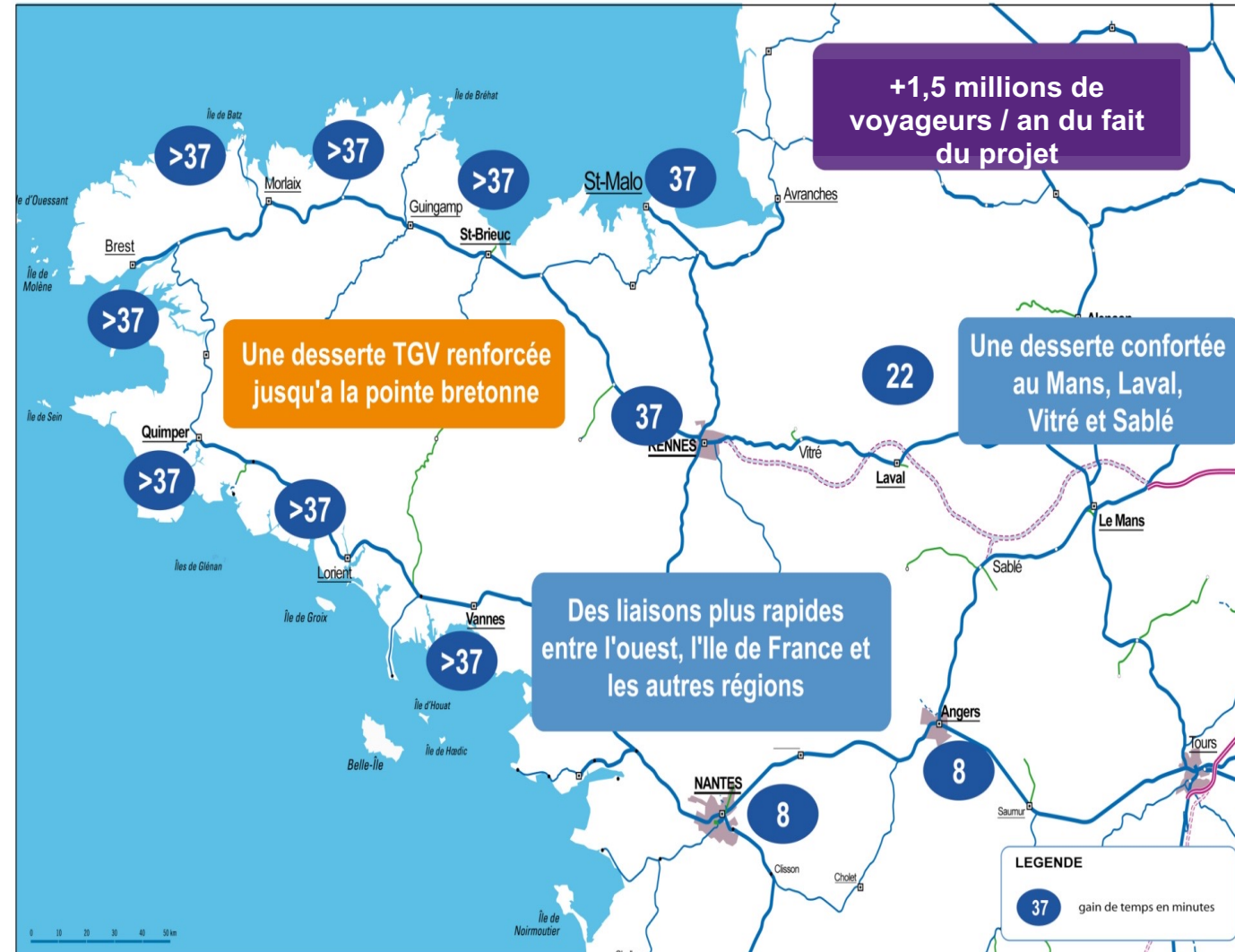
Country	France
Between cities	Le Mans – Rennes =>1H25 Paris/Rennes in July 2017
Lenght	182 km (high-speed line) 32 km (conventional line) 8 connections 214 km in total - no new station
Max. speed	320 km/h commercial speed 350 km/h conception speed
CAPEX	3,3 bln. EUR
Total funding [bln. EUR]	0,85 Local authorities 1,40 SNCF Réseau 0,91 Government
Construction phase	7/2012 – 6/2017 (5 years)
Operating phase	7/2017 – 2036 (20 years)
Revenues	Availability Payments



Background & Highlights

HSL Bretagne-Pays de la Loire (BPL)

- HSL project that is an extension of HSL built in 1989 to connect the entire Brittany peninsula.
- HSL that serves the medium-sized towns on its route: Le Mans, Laval, Vitré, Rennes.
- TGV services preserved thanks to a service agreement that commits SNCF (operator) for the long term.
- Willingness to bring time savings to the entire Brittany and Pays de Loire regions (simultaneous works to save time on classic line: elimination of level crossings, development of stations into multimodal interchange hubs, etc.).
- Regional trains operated with TGVs on HSL.



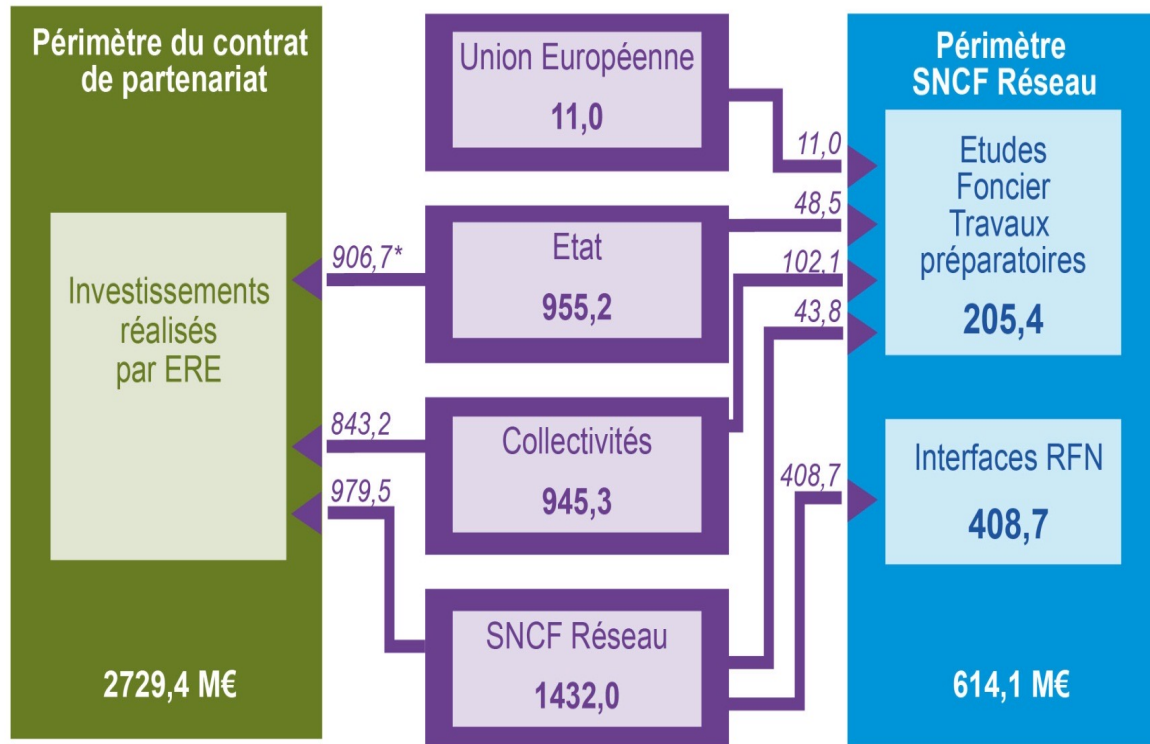
Financing

HSL Bretagne-Pays de la Loire (BPL)

Projet LGV Bretagne-Pays de la Loire (hors FST)

en M€ courants

Coût d'investissement global 3 343,5 M€

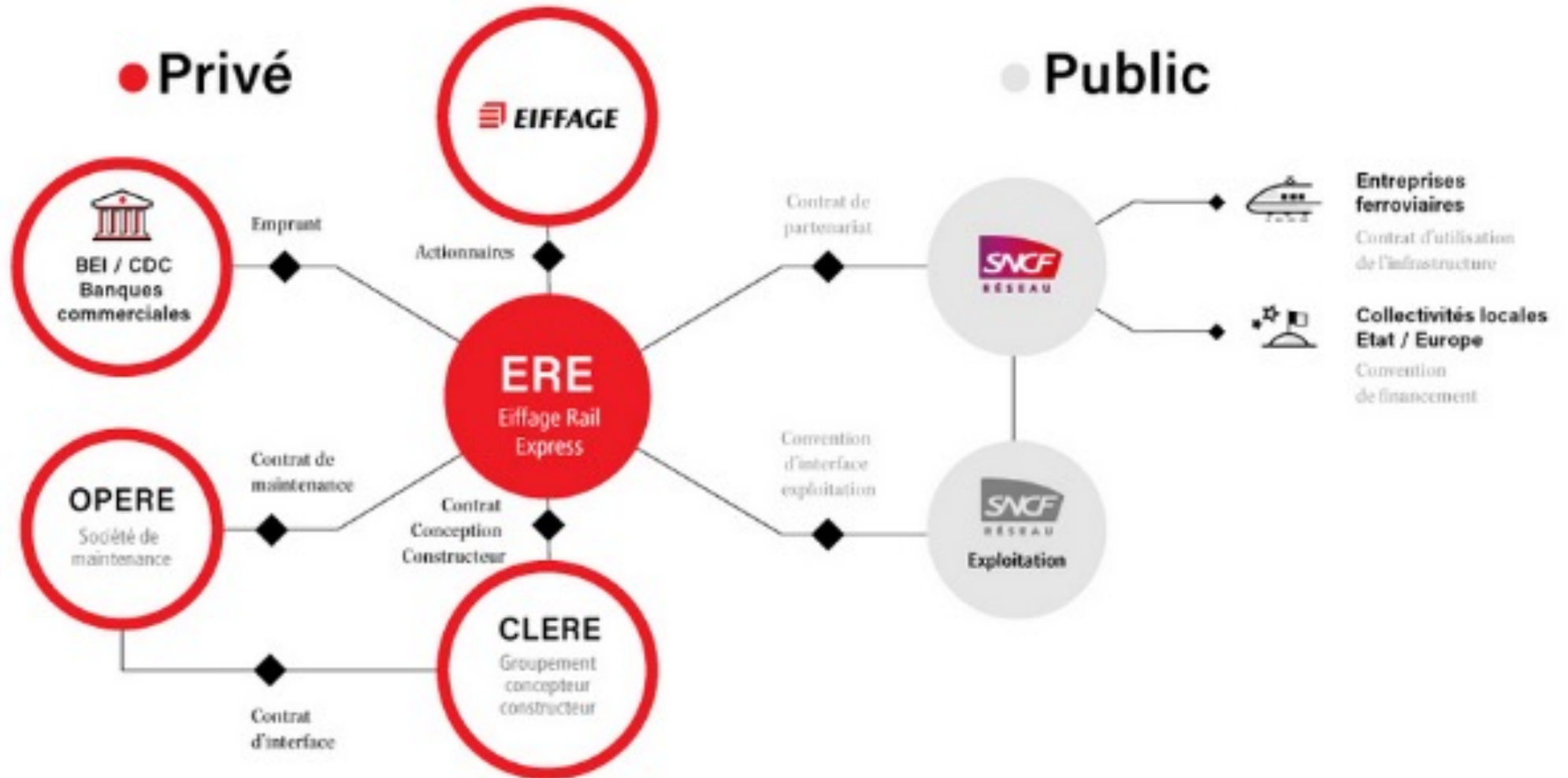


* Montant acquitté sous forme de loyer immobilier

Payment mechanism

- PPP:
- Support funds were paid to Eiffage during construction, every month as work progressed (part from Local authorities and part from SNCF Réseau).
- Eiffage obtained financing from private banks (1,2 Bln €)
- Eiffage earns a fixed rent based on traffic volume and compliance with the quality criteria set out in the contract.
- 8 local connections: built and funded by SNCF Réseau

Organisation of the PPP BPL



□ OPERE :
Maintenance

□ CLERE :
Design-build consortium

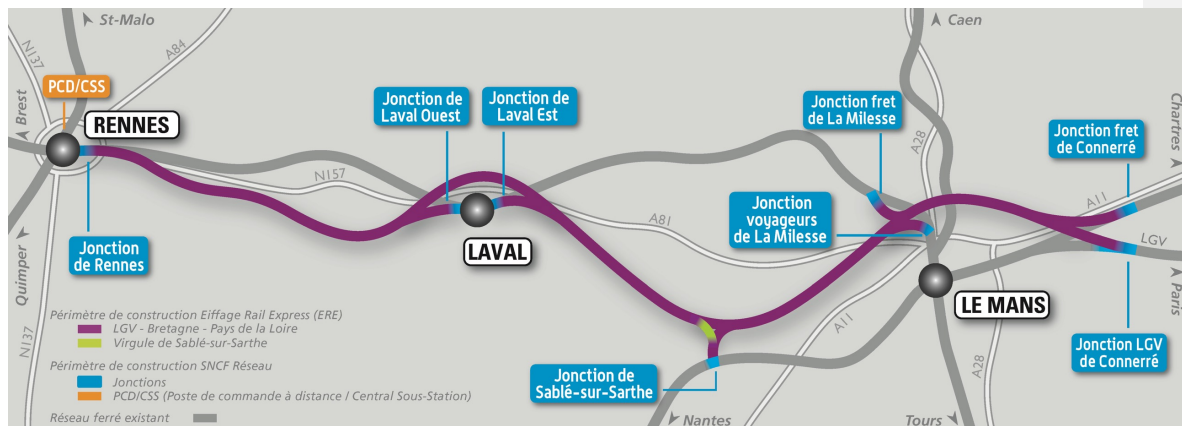
Scope HSL Bretagne-Pays de la Loire (BPL)

ERE responsibilities (in purple on the map)

- ERE is responsible for the final design, construction, operation, maintenance, renewal and financing of the line within its scope (182 km)
- Honouring the commitments made by the French State during the declaration of public utility phase (2000 commitments)

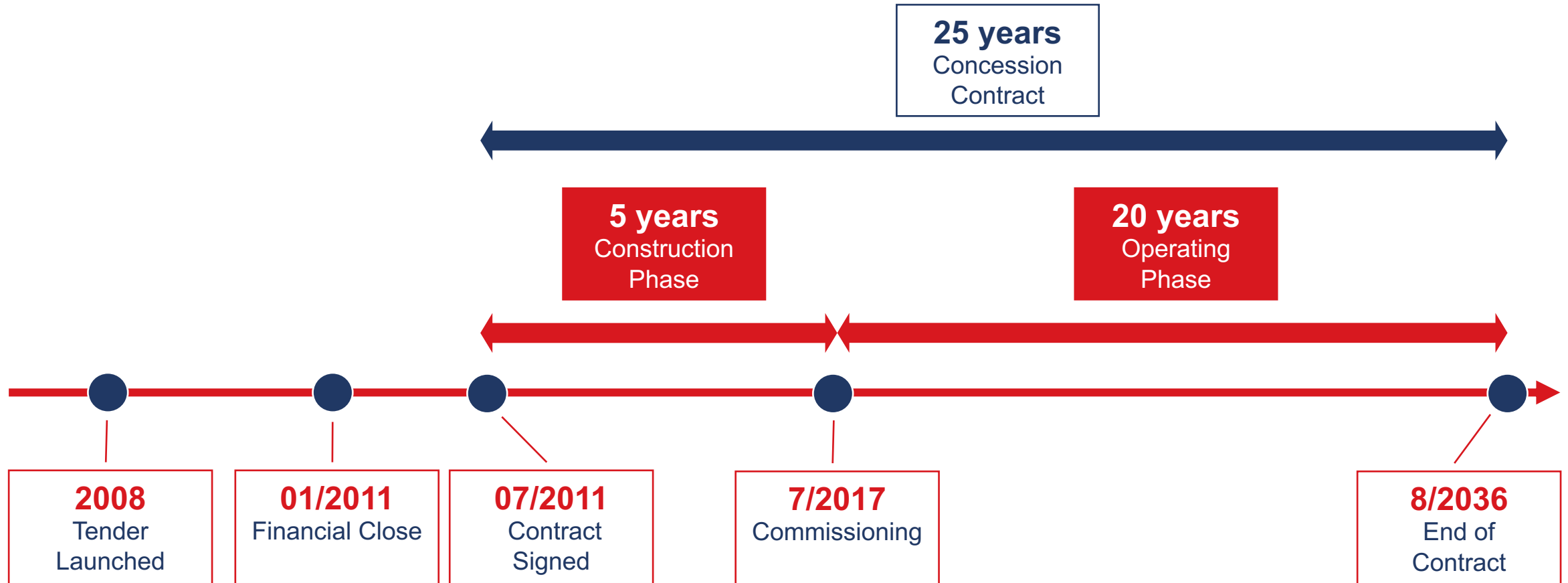
SNCF Réseau responsibilities (blue/orange on the map)

- Managing the contract and relations with institutional partners
- Design studies up to the preliminary design, Declaration of Public Utility, Land acquisitions
- Train operation and power supply
- All interfaces with the existing network:
 - 8 junctions
 - Centralized Technical Command and Power supply substation
 - Facilities for centralised management of the GSM-R network
 - Telecommunication network



Timeline

HSL Bretagne-Pays de la Loire (BPL)



Background & Highlights

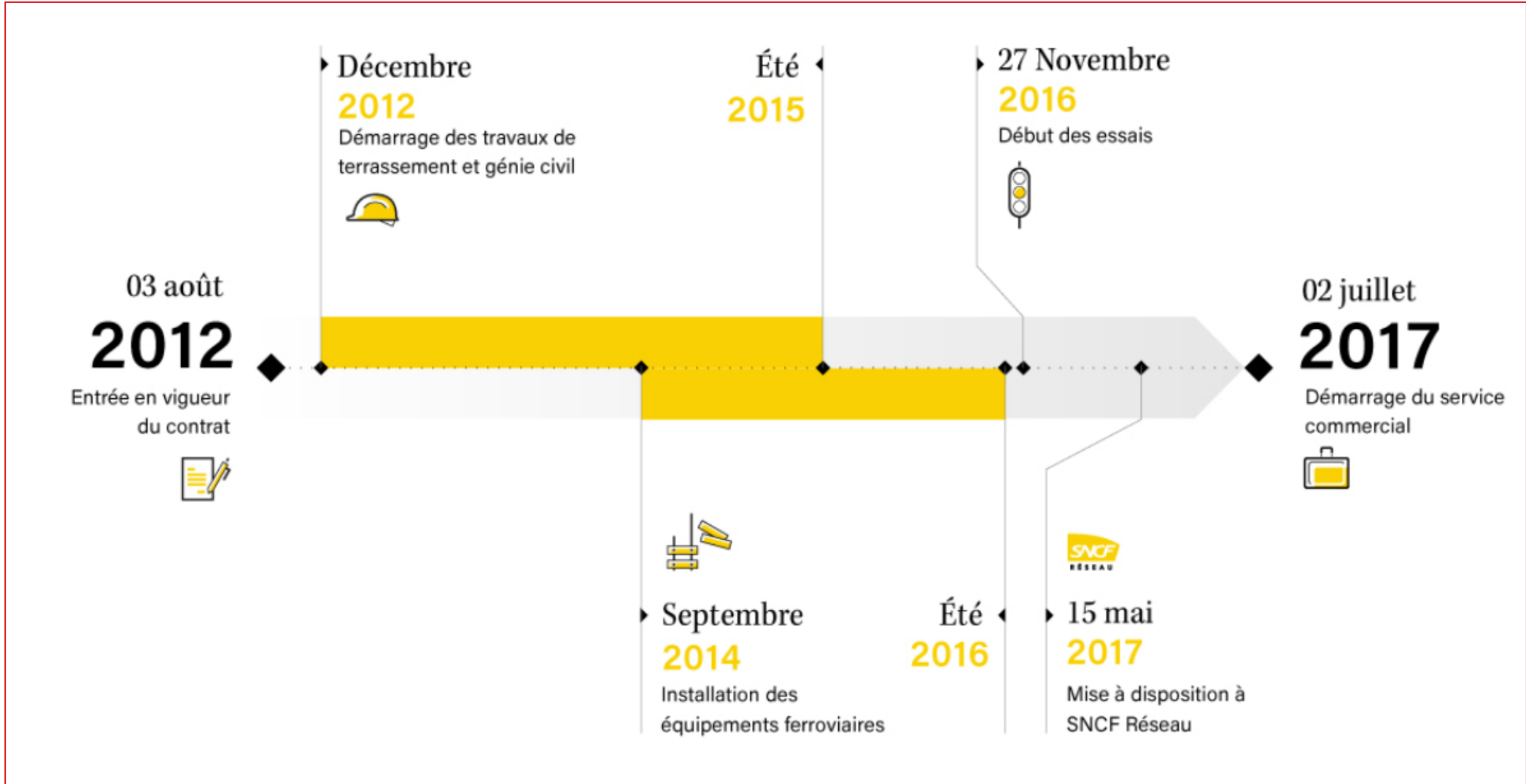
HSL Bretagne-Pays de la Loire (BPL) PPP

- Mobilisation private funds 1,2 bln € => Project acceleration
- Transfer of risk to the PPP partner
- Shorten construction phase (5 years in total incl. 2 years for civil engineering and bridges (240): huge penalties if no compliance of time delivery
- Economic development for local companies required by the contract (more than 30% during the construction phase : 1,450 local jobs & 700 million € in local economic benefits)



Background & Highlights

HSL Bretagne-Pays de la Loire (BPL) construction phase



Challenges

HSL Bretagne-Pays de la Loire (BPL)

Technical focus:

- Construction costs **15 mil Eur/km** (3,300 mil Eur/214 km)
- 5 years works (2012-2017)
- 3 signalling systems : TVM300, ERTMS (L2 & L1)
- TGVs and Regional trains and Freight trains on HSL
- 7 sections of 30km each all completed in 2 years (26 Mm³ of earthworks, 550 machines and 4,500 workers working at full capacity)
- Innovations introduced by ERE limited due to reticence of banks:
 - Asphalt platform for more than 50% of the length (100km)
 - Electric welding of 108m long rails
 - Reinforced soil walls (MSE), withdrawal of permanent telephones on the line



Background & Highlights

HSL Bretagne-Pays de la Loire (BPL) ppp

- Innovations such as :
 - Asphalt base platform (100 km),
 - 3 signalling systems at the same time: TVM300 and ERTMS (L2 & L1)
 - Electric welding of 108m long rails
- PPP : ERE a new railway company
- Dedicated organization of SNCF Reseau to manage the PPP and the interface package (technical, management, operation, etc.).



Challenges

HSL Bretagne-Pays de la Loire (BPL)

Economical focus:

- More than €700 million benefits generated locally during construction (accommodation, catering, local facilities, etc.)
- More than 1,400 unemployed people recruited during construction
- Special fund :14 M€ allocated to the municipalities crossed by the HSL to finance local facilities (allocated proportionally according to line length)



Technical challenges

HSL Bretagne-Pays de la Loire (BPL)

Organisationnal focus:

- Active presence of SNCF Réseau from start to end and national mobilisation of all domains (engineering, experts, signalling, operations, maintenance, redesign of all timetables in western France to optimise connections with other trains).
- Very early land purchases (from 2005)
- Management of multiple interfaces by SNCF Réseau (technical, organisational, operational, maintenance) => strong risk management
- Rigorous contract management as a potential source of claims



Technical challenges

HSL Bretagne-Pays de la Loire (BPL)

Environnemental focus:

- Compensatory measures for €55 million
 - Long-term monitoring
 - Modern, environmentally-friendly HSL
 - More than 2,000 commitments made by the State respected (under the control of the State but the responsibility of ERE)



d'ouvrages permettant
la libre circulation
des eaux superficielles :

9 viaducs

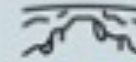
plus de
200

ouvrages
de franchissements
hydrauliques



de plus de

90 aménagements
écologiques pour les cours
d'eau traversés



de **27 km**

de protections acoustiques



de plus de

80 bassins

de gestion des
eaux pluviales



de plus de

210

ouvrages permettant la libre
circulation de la petite faun
terrestre et piscicole



près de

120 mares

permettant d'héberger
les espèces d'amphibiens



de la plantation de

118 km

de linéaires de haies,

de **91ha**
de massifs boisés

de plus

de **2 200**
arbres tiges



de **27** passages

pour la grande faune terrestre

Contact details

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Thank you your attention.

More information > www.ceskainfrastruktura.cz



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