



High Speed Rail and PPPs

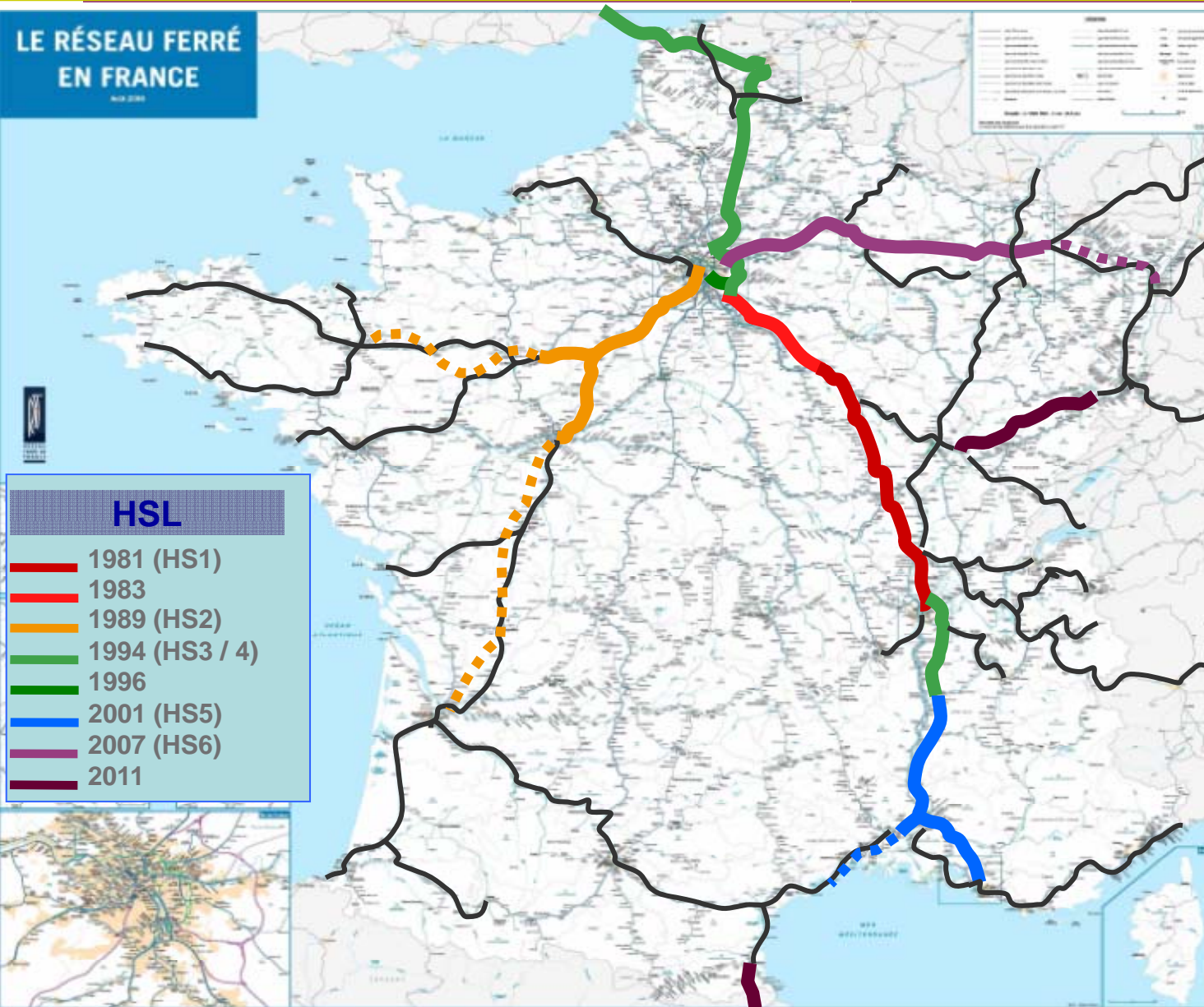
Lessons from the French experience

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November 3, 2011



French HSR network – 1981 through 2011

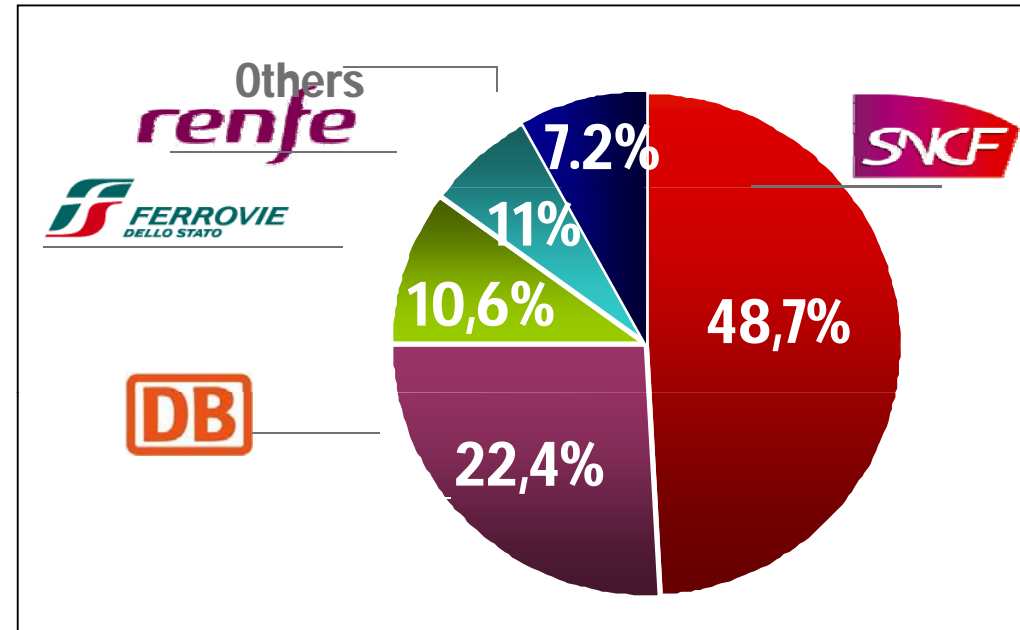
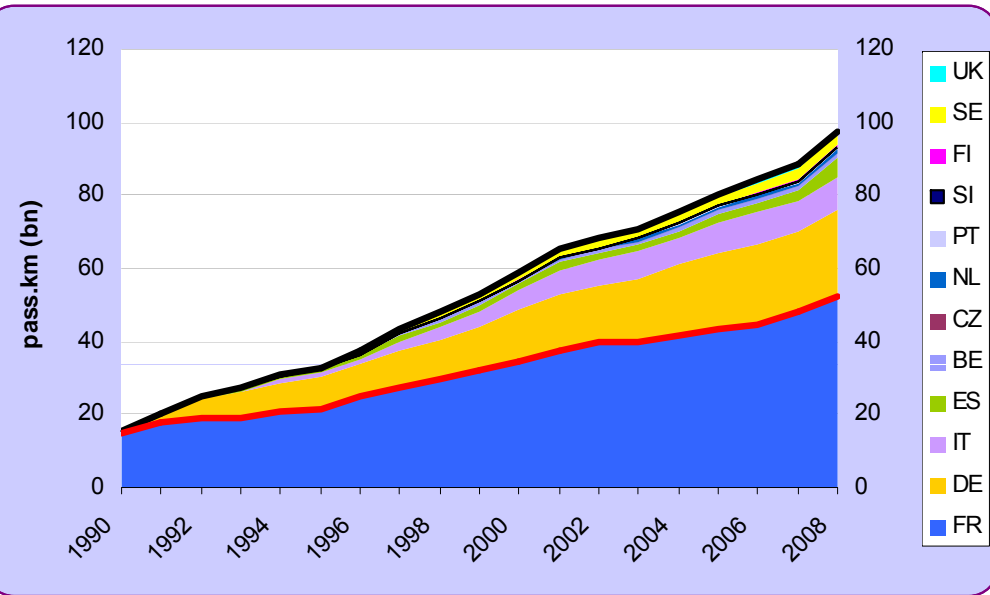


- 1,300 miles of HSL
- 3,000 miles of conventional lines used by HSR

Everyday :

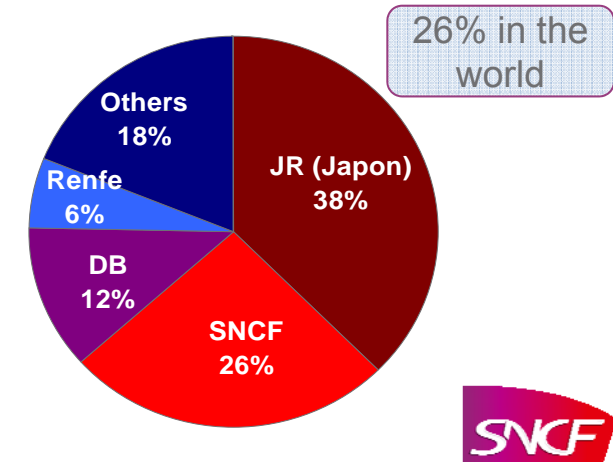
- 700 domestic TGVs
- 200 int'l TGVs
- 250 stations (230 in France)
- up to 130 trains/direction on the busiest routes

The largest HSR operation in Europe

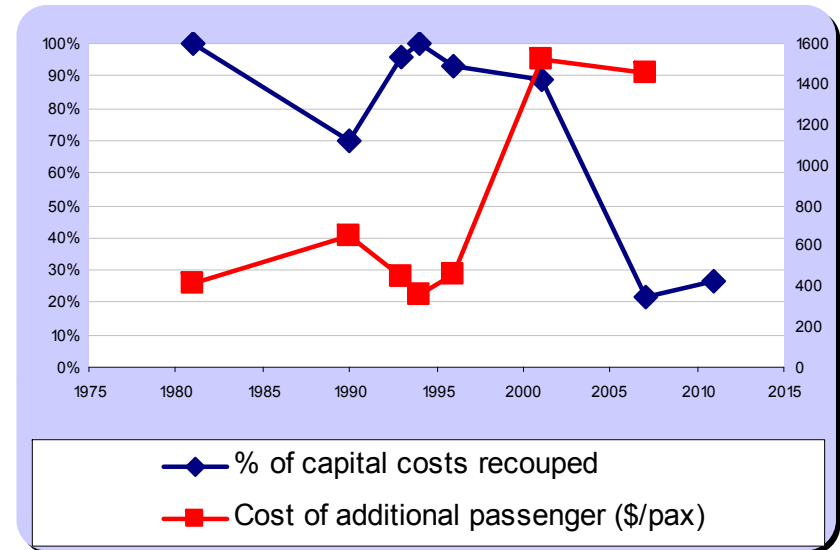
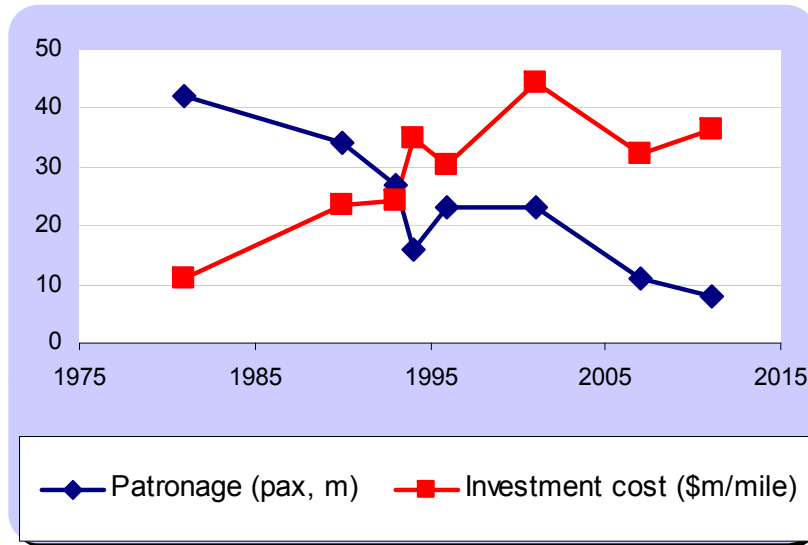


- **122M** passenger took SNCF TGV in 2010, including **98.5M** in high speed trains in France and **23.4M** in international trains
- SNCF Voyages is **high speed leader** in Europe
- TGV represents more than **90%** of SNCF long distance revenue
- Total turnover of SNCF Voyages : **7.2 billion €** in 2010, including **24%** on international trains (1,7 bn€)
- SNCF Voyages has launched several successful **brands & offers** to reach many customer targets (iDTGV, iDNIGHT, TGV Pro, TGV Family,...)

Sources: Annual report SNCF



The impact of HSR on the French economy

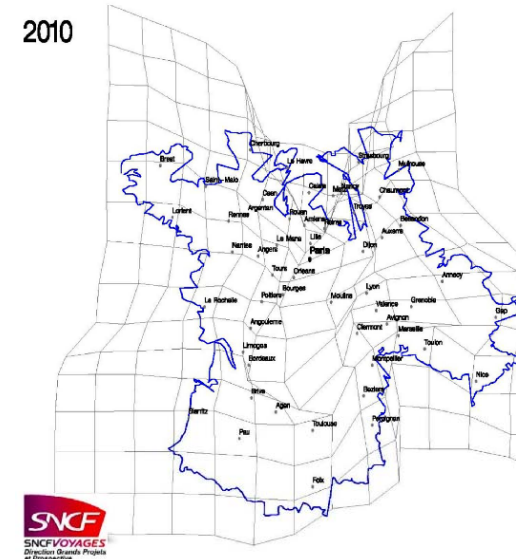


Source : Taroux & Chapulut (2010), own calculations

- ✓ **Total capital cost : \$32.5 bn** (2010 value)
from grants (**\$9.4 bn**) & farebox (**\$23.1 bn**)
(but conventional network already existing)
- ✓ **Total value creation : \$190 bn**
(time saved, increased productivity of transport system, externalities)

Sources: French Ministry of Sustainable Development

2010



Experience with rail PPPs in the world

Already in XIXth century...

in France : 40 years concessions (extended to 99 years), right of way granted to the companies, public loan guarantees

in America : land grants (175m acres = Germany, Italy & Switzerland put together)

PPP's are coming back as a way to ease project financing and improve project management efficiency

Recent experience accross Europe...

International : Eurotunnel, Perpignan-Figueiras

Sweden : Arlanda Express

Netherlands : HSL Zuid

Spain : Olmedo – Ourense

France : Orlyval, GSM-R, SEA, BPL, CNM

UK : CTRL/HS1

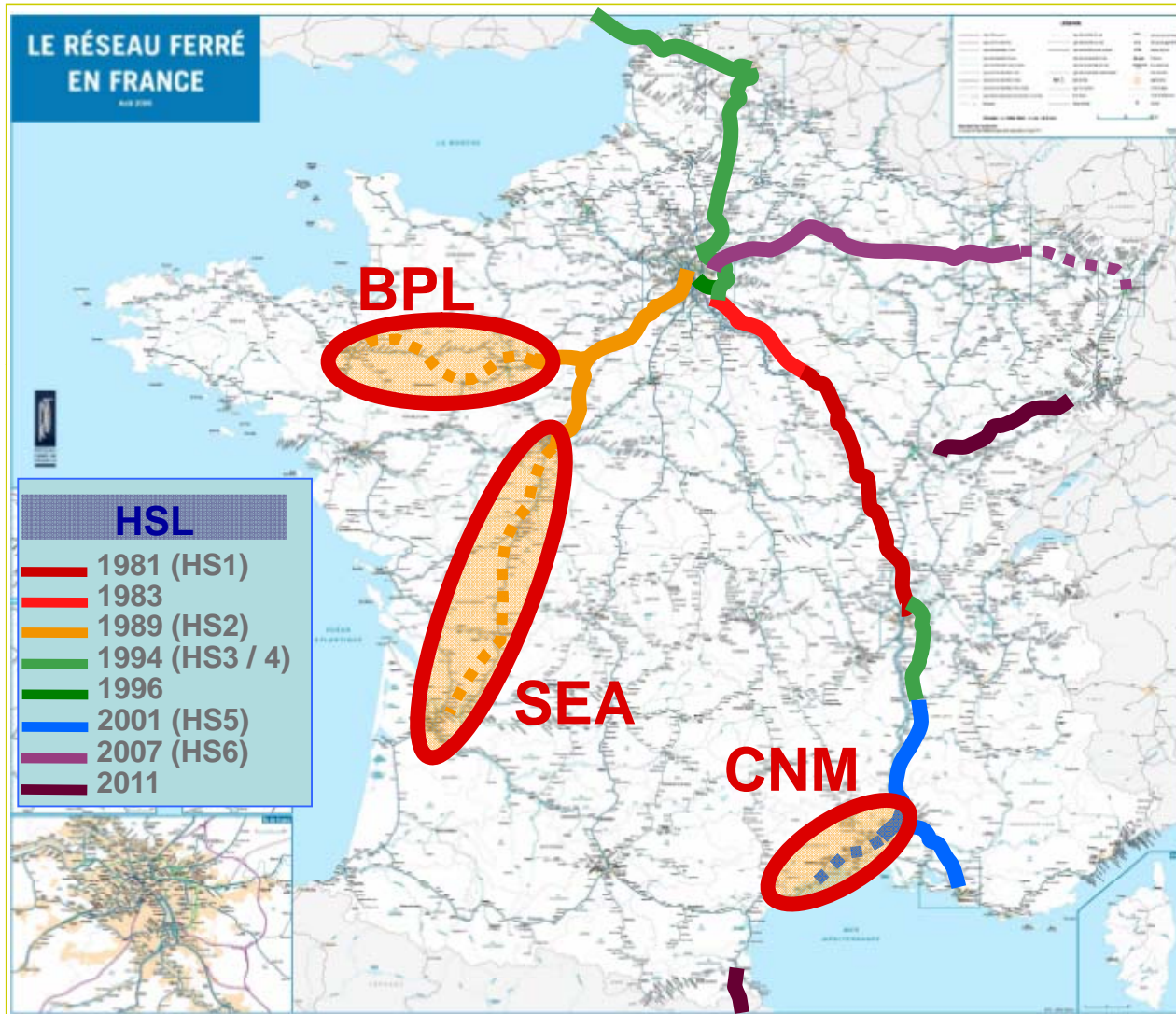
... and abroad

Taiwan : High speed rail

USA : Denver commuter rail

South Africa : Gautrain

France has the largest rail PPP program in the world



4 PPP contracts :

- ✓ GSM-R : equipment of 8,000 miles with telecom system, contract signed (02/2010)
- ✓ SEA : 200 mile HSL, contract signed (06/2011)
- ✓ BPL : 134 mile HSL contract signed (07/2011)
- ✓ CNM : 50 mile HSL, award in progress

Two rail PPPs in France

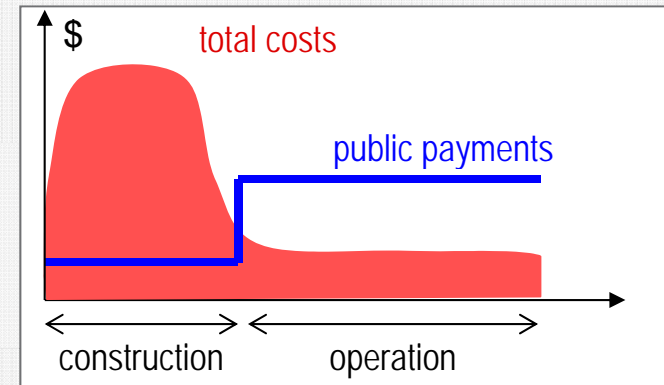
GSM-R

Investment cost : \$1,0 bn over 5 years

Sum of public payments : \$1,4 bn (investment + capital costs)

Experience :

- harder to find private debt than expected
- public guarantees on loans / public invest. banks (EIB, CDC)



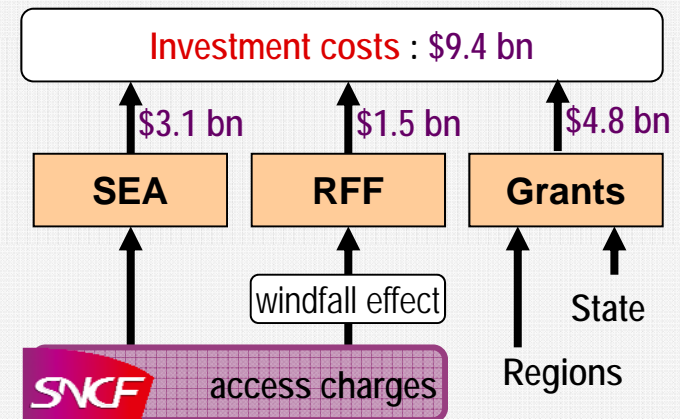
SEA

Contract signed in June 2011

Investment cost : \$ 9.4 bn (+\$ 1.5 bn on conventional network)

Experience :

- very complex political issue (57 public authorities !)
- public guarantees on loans / public invest. banks (EIB, CDC)
- ridership forecast / risk sharing credibility ?



Diversity of rail PPPs in the world

	◀ private	Commercial risk	public ▶
infra & transport	Airport express : Heathrow, Arlanda, Lyon		
	THSR (Taiwan) Gautrain (SA)	Eurotunnel (FR/UK)	
infra only	SEA (FR) Perp. – Figueiras (FR/ES)		GSM-R, CNM, BPL (FR) HSL Zuid (NL)
transport only	HSA (NL)	UK passenger franchises long distance	regional



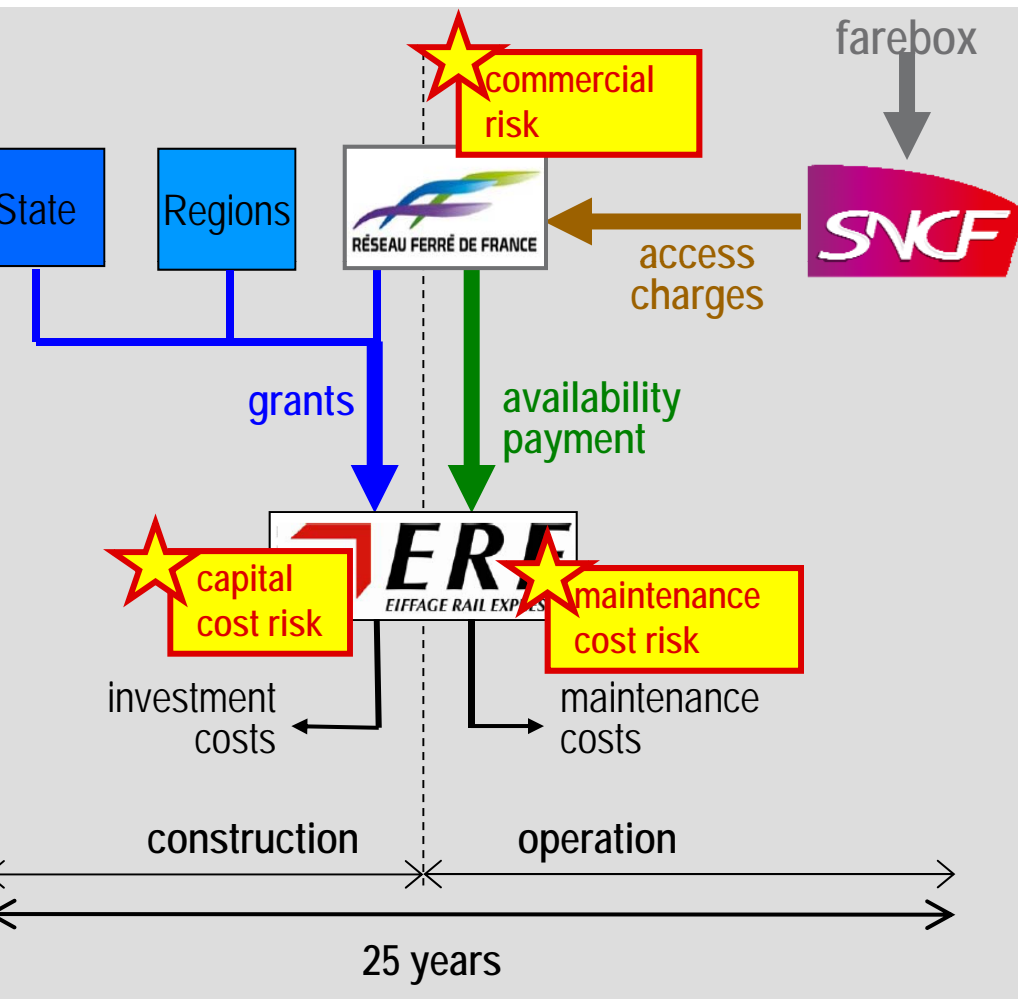
But **many failures**, especially when private sector retains commercial risk
Ridership forecasts most frequently over-optimistic

Heathrow Express	-50%
CTRL	-60%
Taiwan HSR	-60%
Arlanda Express	-50%
AREX	-92%
Eurotunnel	-60%

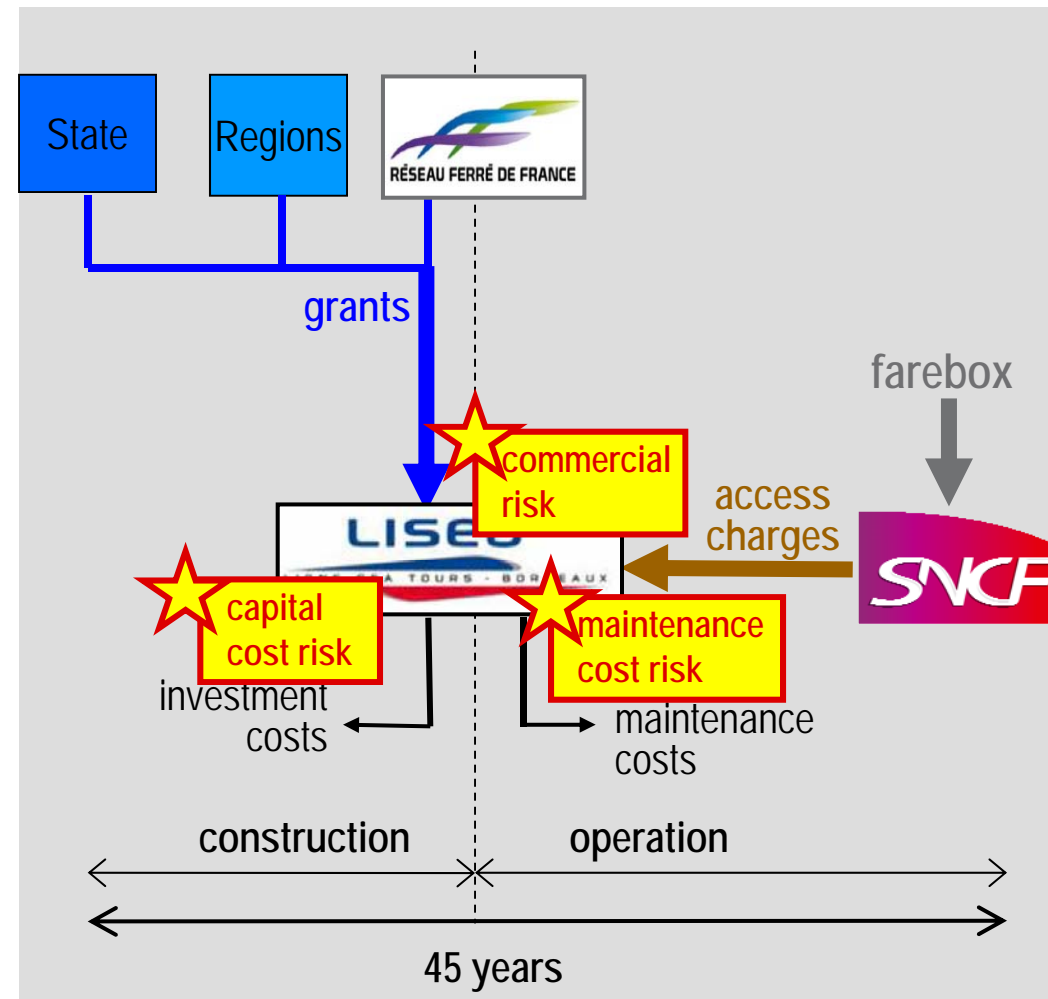


Two types of PPPs for high speed lines

Partnership contract (BPL)



Concession contract (SEA)



Key messages

About HSR in general...

- HSR created value can be much larger the actual investment costs
- Hard to recoup significant share of capital costs with ridership below 25m/year and investment costs above \$25m/mi

About PPPs in HSR...

- **Wide diversity of PPPs for HSR, everything is possible :**
 - infrastructure only, transport only or infrastructure + transport
 - commercial risk can be born by public or private sector
- **Very bad record** of private sector bearing commercial risk
- **Strong financial involvement of public sector** necessary : loan guarantees, public investment banks...



Thank you for your attention
