SNCBL Rolling stock assets and Capex analysis

ValueScan.be

1. Owned Locs

Owned

Type	Model	Number of Loc's	Average age [years]	Ownership	Book Value 31/12/2013	Renting out	Homologation
T77		110 (9 in standstill)	10	BLOG	• Asset value of EUR 112m (EUR 30m for 27 owned and EUR 82m for 83 usufruct)	3 to Captrain 4 to OSR BE	92 B 18 B-NL-D
T13		43	13	Financial lease from SNCB until 2035	• Asset value EUR 50.8m • Leasing debt EUR 67.8m	21 to Sibelit	B-F-LU

(different assets in PUMA case study 08/07 :
98 T77 Diesel locs for EUR 95m (23 owned for an amount of EUR 17m and 75 in a usufruct structure with SNCB for an amount of EUR 78m). The usufruct locs will become full property of SNCB Logistics over the period 2018-2031. Full ownership will be obtained free of charge at the end of the contract.)

A. Locomotives T77, mainly Belgium, limited use in Netherlands/Germany, only 100kmh, 1560 Hp

The SNCB Class 77 is a class of 4 axle B'B' **diesel** hydraulic locomotive designed for shunting and freight work manufactured at the beginning of the 2000s by Siemens and later by Vossloh at the Maschinenbau Kiel plant in Kiel, Germany for the National Railway Company of Belgium (SNCB/NMBS).

The initial order for 90 locomotives was given to Siemens in 1997 to replace an aging diesel fleet; the railway opted for a locomotive suitable **for both shunting and mainline use**, rather than separate classes. Unlike many other MaK locomotives which use a MTU or CAT 12-cylinder V engine the locomotive has an ABC 6-cylinder inline engine. Due to **its relatively low power** the locomotives work in multiple on heavy freight trains. The first locomotive was delivered in October 1999, and worked satisfactorily; a second order for 80 locomotives was given in June 2001. The first locomotive entered service in February 2004. **All 170 units were operational by June 2005.**

SNCB number	Radio control	Cab Radio	ATB	Notes
7701 –7718	Yes	Yes	No	Fitted with Automatic coupler; not approved for Netherlands
7719 –7728				Approved for limited operations in Netherlands[5]
7729 –7770	No			
7771-7790			Yes	Approved for Netherlands[8] and Germany (2004);[9] PZB system
7791 –7865		No	No	Can operate in Netherlands when in multiple with locos with ATB or radio[8]
7866 –7870		~	Yes	Fitted with ATB and PZB in 2008 for work in Germany (Iron Rhine line)[10]

17 can not operate in Netherlands 7701-7718
51 limited operations in Netherlands 7719-7770
19 Approved for Netherlands and Germany (2004) PZB system 7771-7790
74 Approved for Netherlands, BUT need a loco with radio or ATB 7791-7865
4 Approved for work in Germany (Iron Rhine line in 2008) 7866–7870
Now 110 on the balance sheet of BLOG !!!
only 18 are ok for Netherlands and Germany, most likely from the 7771-7790 batch
some of the other 92 can be combined to operate in Netherlands or are restricted to Belgium.

110 BLOG T77 => book value 112m **27 owned @ 30m**
83 usufruct @ 82m, owned by SNCB, will transfer by 2038

Best T77 peer : NS Class 6400 has 49% out of services (overcapacity/second hand ?) 1580Hp
For Nederlandse Spoorwegen 120 of these locomotives were built, numbered 6401-6520 between 1988 and 1994. The locomotives became the property of NS Cargo, and then Railion Benelux when the company merged with DB Cargo in 2000. The locomotives subsequently became the property of the successor companies; Railion Nederland, then DB Schenker Rail Nederland (part of the DB Schenker group). Some locomotives have had PZB (Indusi) or Memor safety systems installed to allow operations in Germany or Belgium. The present company is the result of the merger of DB Cargo AG with NS Cargo NV. Later, the Danish cargo company DSB merged into the company. It further acquired the Italian cargo carrier Strade Ferrate del Mediterraneo (SFM) in 2004 and further acquired the Swiss cargo carrier Brunner Rail Services GmbH. In addition it purchased a 20 percent stake in Swiss BLS Cargo AG in 2007. In 2008 it increased its stake in BLS Cargo AG to 40 percent. The holding company is based in Mainz. 92% of the shares are held by DB AG (through its Logistics subsidiary DB Schenker), 6% by NV Nederlandse Spoorwegen and 2% by Danske Statsbaner.
The locomotives often work in pairs or in threes on heavy trains.
In November 2010 two units were sold to Eurotunnel in 2010 to operate alongside the existing Class 0001 locomotives. in November 2010 Eurotunnel announced it was to acquire two more "Krupp rescue locomotives" with co-financing from Eurostar**, at a cost of €1.3 million for +-18 yr old Locs.**
Due to the economic downturn of the late 2000s**, in 2011 numbers** 6401-6410, 6419, 6420, 6443-6460, 6462, 6471-6475, 6480-6494, 6496, 6498 and 6501-6503 **were out of service = 58 trains or 49% of the total fleet !**

Other T77 peer : The Eurotunnel Class 0001, 1270 hp
The Eurotunnel Class 0001 Bo-Bo diesel-electric locomotives were built by Maschinenbau Kiel (manufacturers designation DE 1004) between 1991 and 1992. They are very similar to the NS 6400 Class .In 2007 the locomotives were fitted with **diesel particulate filters** for the exhaust gases, which replaced the exhaust scrubber wagons that were previously coupled to the engines

- ⇨ **Environmental regulation** has put a lot of financial strain on the truck transport sector

Table 6
Stage III A Standards for Rail Traction Engines

Cat.	Net Power	Date	CO	HC	$HC+NO_x$	NO_x	PM
	kW		*g/kWh*				
RC A	130 < P	2006.01	3.5	-	4.0	-	0.2
RL A	130 ≤ P ≤ 560	2007.01	3.5	-	4.0	-	0.2
RH A	P > 560	2009.01	3.5	0.5*	-	6.0*	0.2
* HC = 0.4 g/kWh and NO_x = 7.4 g/kWh for engines of P > 2000 kW and D > 5 liters/cylinder							

Rail competes with truck, which suffers more from environmental regulation and congestion. Moving freight by rail is 4 times more fuel efficient than moving freight on the highway. Trains can move a ton of freight nearly 450 miles on a single gallon of fuel.

Other Diesel freight after 2000,
Vossloh G1000 BB, 2002, 1500 Hp, Luxemburg, 69 units produced
The Voith Gravita 2008, 800 -2500 Hp, Germany DB, 130 units, locomotives are a new family of diesel-hydraulic locomotives built by Voith Turbo Lokomotivtechnik GmbH & Co. KG.. Available in a range of configurations from 4 to 6 axles, they are designed for shunting and light and medium freight operations.

Trend towards faster trains for freight
In the 1990s the de-monopolisation and liberalisation of the railways of member states of the EU meant that private companies could access formerly state-owned track. With this came numerous private operators running locomotives on the main line for the first time. These locomotives were suitable for pulling fairly heavy freight consists as well as shunting. However track access charges (as well as the necessity not to interrupt passenger trains) meant that on the main lines freight trains must run much faster than they did in an industrial environment.

TRAXX, DB Schenker operates 400 TRAXX capable of 140 kmh

Bombardier TRAXX is a modular product platform of electric and Diesel-electric mainline locomotives built by Bombardier Transportation, built in both freight and passenger variants. The first version was a dual voltage AC locomotive built from 2000 for German railways; later versions include DC versions, as well as quadruple voltage machines, able to operate on most European electrification schemes: 1.5/3.0 kV DC and 15/25 kV AC. The family was expanded to include diesel powered versions in 2006.

LOCOMOTIVE leasing company **Akiem** has signed a contract **worth €33m** with Bombardier for the delivery **of 10 140km/h Traxx DC** locomotives, with an option for up to 10 additional units placing the

value of the contract at approximately €65m. The 3kV dc locomotives will be used for freight transport in Poland and Italy and delivery is scheduled between the third quarter of 2015 and the first quarter of 2016. At the end of 2008, SNCF founded a new subsidiary for locomotive leasing; **Akiem**. SNCF locomotives that are underutilized will become available for lease via Akiem. One can think of modern Prima electrics and diesel-electrics, but also a part of the fleet of 80 Traxx locomotives which will be delivered by Bombardier from 2010. In the beginning, 233 locomotives worth EUR 430 Million will be transferred. **Their number will increase to 400 by 2013**.

20-22 valued at 0.80-0.85m EUR + 0.245m revisions

- Réponse à l'appel d'offres d'Arcelor en République Tchèque :
  - Offre avec réserves déposée le 13/05/2014
  - Flotte visée: 20 à 22 locomotives T77 15
  - Prix d'acquisition par AKIEM compris entre 0,8 et 0,85 EURm (avant opérations de révision)
  - Points de divergence entre AKIEM et SNCB Logistics à date :
    - Le prix d'acquisition (0,945 EURm) demandé par SNCB/SNCB Logistics est trop élevé pour que l'offre d'AKIEM soit attractive, étant donné les opérations de révision nécessaires (0,245 EURm / locomotive) ;
    - Le souhait de SNCB/SNCB Logistics d'assurer l'ensemble de la maintenance patrimoniale n'est pas acceptable, les matériels devant être maintenus sur place (dans les ateliers tchèques d'Arcelor) par CMI ;
    - La négociation contractuelle entre AKIEM et SNCB Logistics n'est pas satisfaisante : SNCB Logistics a fait parvenir, ce jour, un *executive summary* et non un mark-up du contrat transmis par AKIEM. Au regard des montants et de la durée de l'engagement, les termes précis du contrat doivent être agréés au plus vite.

B. T13, into France and Luxembourg, max speed 200kmh, 7000hp, Financial lease

The SNCB class 13 are a type of mixed use 200 km/h **multivoltage electric** locomotive of type Tractis designed by Alstom in the late 1990s for the Belgian and Luxembourgish railways (CFL class 3000). The locomotives operate push-pull trains, as well as freight trains. At the beginning of the 1990s SNCB had a requirement to renew its mainline locomotive fleet: it required fast high power passenger locomotives for intercity trains, as well as needing replacements for SNCB diesel locomotive classes which dated to the 1950s and were used **on freight trains for the steel industry on the Maas-Athus line and into Luxembourg.** These requirements led to the decision to acquire a universal locomotive design. The design specifications included a minimum top speed of 200 kilometres per hour (120 mph) and capability to operate under 3kV DC and 25kV AC electrification.

2. Rolling stock market fundamentals

A diesel locomotive 1000-1500 Hp costs between 1.75 to 2.3 million dollars.

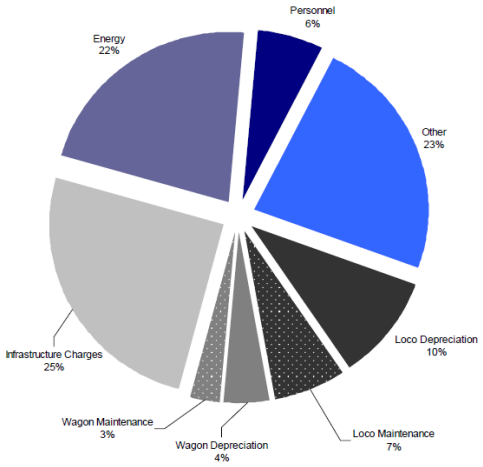
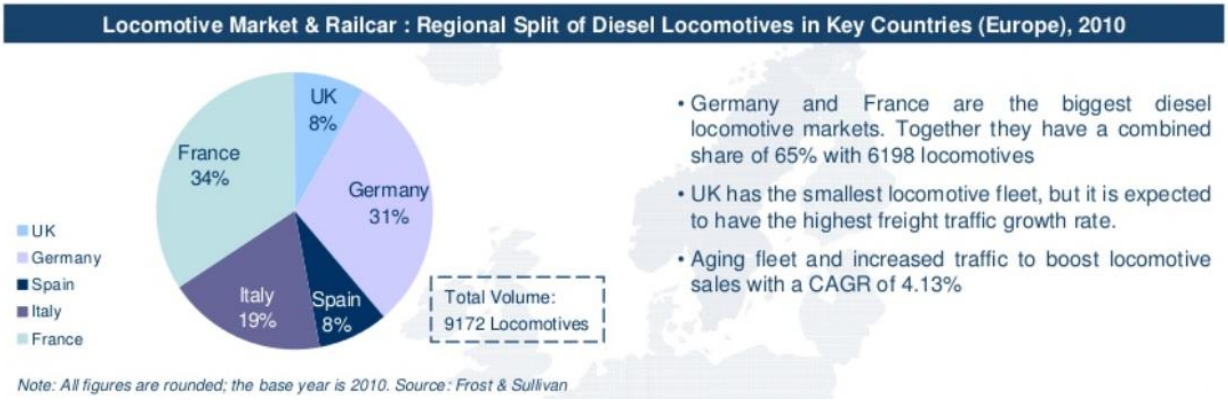
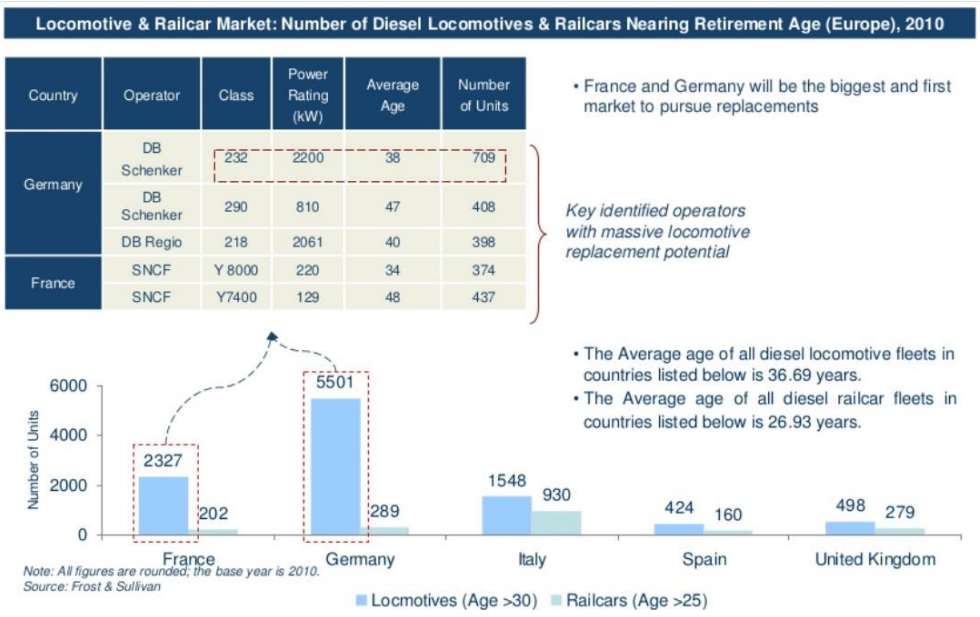
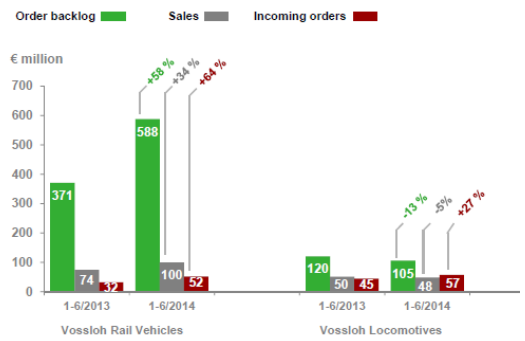


FIGURE 36: COSTS PERCENTAGES EXAMPLE OF A DOMESTIC TRAINLOAD IN GERMANY. SOURCE: TUB INTERNAL KNOWLEDGE BASED ON PREVIOUS PROJECTS CALCULATIONS.



Replacement accelerates as France and Germany have to





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LOCOMOTIVES

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1 2 3 4 5 6 7 8 | 1-50 of 398

Category	Type	Pic	Name	Q	State	Details
Other	Offer		GE 45 ton switching locomotive	1	USA	Details
Locomotives	Offer		SW 1200	2	Tennessee	Details
Locomotives	Request		ALCO locomotive 4-axle, 2000hp immediate purchase need	1	USA	Details
Locomotives	Offer		Diesellokomotive Henschel DHG 700 C	1	GERMANY	Details
Locomotives	Offer		GP10	1	Illinois	Details
Locomotives	Offer		SW1500	1	USA	Details
Locomotives	Offer		New Dieselhydraulische Lokomotive D 110 BB 1100 kW	1	GERMANY	Details
Locomotives	Request		Diesellocomotives with 4800 HP , used in good condition	2	Africa	Details
Locomotives	Offer		1999 Trackmobile 4150 with 810 hours	1	USA	Details
Locomotives	Offer		SD38-2s EMD Locomotives ready for sale	4	USA / Midwest	Details
Locomotives	Offer		Diesel Lokomotive KHD KK140 B, mit autom Rangierkupplungen - und günstig.	1	GERMANY	Details
Locomotives	Offer		*CF-7 Switcher Locomotive, rated at 1,500 Horsepower	1	IL	Details
Locomotives	Offer		Diesellokomotive Henschel DHG 700 C	1	GERMANY	Details

Rapid-rail.com

In the US Locomotives get scrapped for 250 USD/ton : Most locomotives have always been leased through a large banking corporation for a 15 year period. After that lease is up the railroad usually has the option to either purchase the unit (units), or turn them back. With the current situation of EPA regulations and newer locomotives getting more and more efficient all the time, it makes economic sense for the railroads to let these units go back to the lessor. Then it becomes the banks problem. Most railroads that are in the market for used locomotives (and there ARE some exceptions), are not looking for big 4000 HP six axle units. So, most of the post-1990 big power gets scrapped after the lease is up.

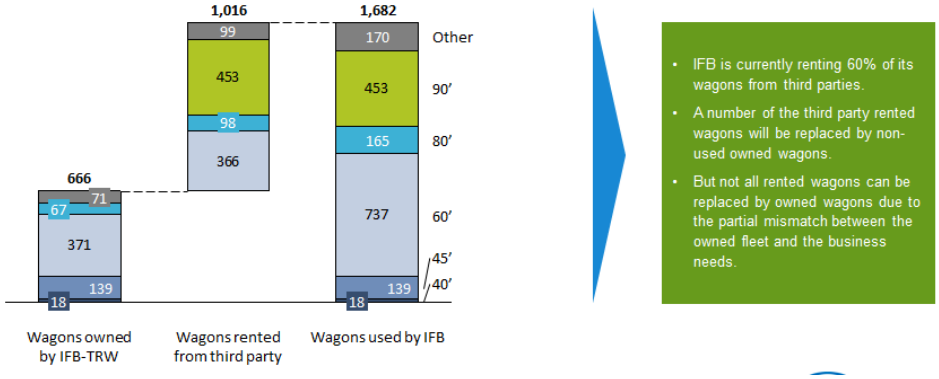
Railcars

Convential has a good match between rolling stock and internal use, 102 scrapped, 361 sold

Category of wagons	Number of wagons	Net Book Value [EUR m]	Market value [EUR m]	Average age [years]
High Quality Steel Wagons	1,884	50.2	88.5	15
Basic Quality Steel Wagons	456	2.0	8.2	40
Basic Quality Flat Bed Wagons	1,249	5.9	4.2	41
High Quality Bulk Wagons	1,049	6.4	6.9	33
Basic Quality Bulk Wagons	254	1.3	1.4	39
TOTAL	**4,892**	**66**	**109**	**29****

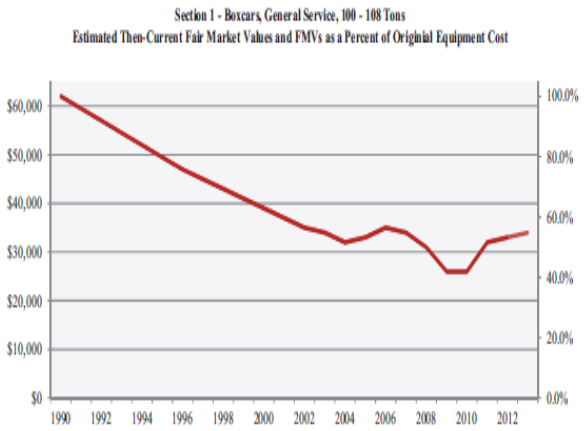
IFB mismatch

Owner	Number of wagons	Net Book Value [EURm]	Market value* [EURm]	Average age [years]
TRW	2,172	28.4	33.5	23
IFB	210	3.2	3.2**	27
TOTAL	2,382	31.7	36.7	23***



Market demand for railcars is limited

In European rail freight transportation the total amount of freight wagons has been gradually decreasing at an approximate rate of 3% per year until reaching approximately 650.000 units in the year 2010, on the other hand the offered tkm has been stagnating or slightly decreasing to reach around 400 milliard tkm in 2010 (UIC stats and Eurostat 2011).



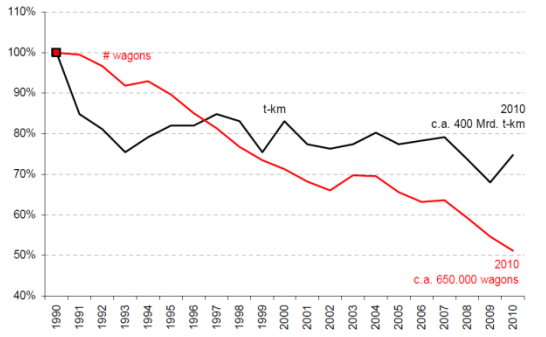


FIGURE 4: AMOUNT OF WAGONS VS. FREIGHT RAIL PERFORMANCE. (OWN ELABORATION) DATA SOURCE: EUROSTAT AND UIC 2011.

North American Rail car Fleet Makeup

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Canadian Rail Cars												
Railroad Rail Cars	112,461	113,664	112,997	157,489	152,995	159,990	163,245	157,589	152,815	142,467	14,1058	13,1920
Private Rail Cars	33,027	31,096	33,119	33,233	32,301	31,416	27,783	30,988	31,964	34,244	35,217	35,419
Totals Rail Cars	145,488	144,760	146,116	190,722	185,296	191,406	191,028	188,977	184,977	176,711	176,275	167,339

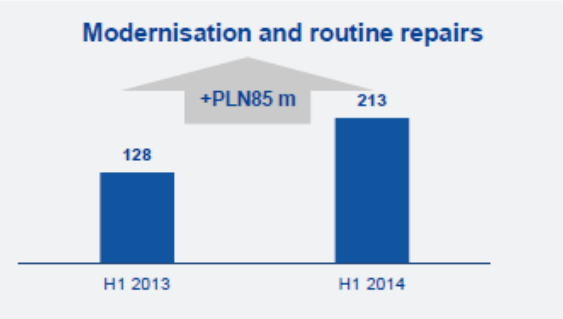
3. Capex spending Peers :

A. PKP Cargo

Cash Flow Ratios	TTM	2013-12	2012-12
Operating Cash Flow Growth % YOY	—	—	—
Free Cash Flow Growth % YOY	—	—	—
Cap Ex as a % of Sales	9.18	8.64	12.16
Free Cash Flow/Sales %	3.88	6.21	2.98
Free Cash Flow/Net Income	1.43	3.95	0.58

Over 2008-11 :
the number of owned locomotives was diminished from 3 thousand to 2.5 thousand,
the number of wagons was diminished from more than 80 thousand to 65.4 thousand units,

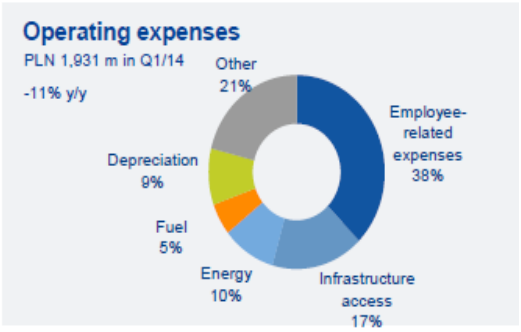
Solid Fuel 48%, Metals 14%, Construction 14%



H1 2014

- Increase in investment to PLN 257 m as expected, adjusted to the rolling stock needs (+3,000 wagons y/y)
- Replacement investment ~10% of sales
- >90% repairs within the Group, visible effects y/y in terms of improvement in the effectiveness of rolling stock companies

	H1 2014	H1 2013	2013	2012
Locomotives	2.461	2.459	2.460	2.459
Diesel locomotives	1.299	1.298	1.298	1.298
Electric locomotives	1.162	1.161	1.162	1.161
Wagons	63.010	63.488	63.105	64.174



PKP invests 64m in 10 locs for international expansion

POLAND's largest railfreight operator PKP Cargo announced on August 19 that it will invest nearly Zlotys 200m ($US 63.7m) in 10 new multi-system electric locomotives to support the expansion of its international business. PKP Cargo says it is currently examining financing options for the order and plans to issue a tender in the next few weeks. Deliveries are scheduled for 2016 or 2017. The locomotives will need to be certified for operation in Germany, Czech Republic, Slovakia, Austria, Belgium, Hungary, the Netherlands, and Italy. PKP Cargo already operates a fleet of 10 multi-system electric locomotives supplied by Bombardier and Siemens, nine of which are leased.

B. DB Schenker rail

DB SCHENKER RAIL

	2013	2012	± absolute	± %
FINANCIAL FIGURES				
Total revenues (€ million)	**4,843**	**4,926**	**- 83**	**- 1.7**
thereof external revenues	4,495	4,597	- 102	- 2.2
EBIT adjusted (€ million)	**57**	**87**	**- 30**	**- 34.5**
EBITDA adjusted (€ million)	**352**	**389**	**- 37**	**- 9.5**
Gross capital expenditures (€ million)	**182**	**371**	**- 189**	**- 50.9**
Employees as of Dec 31 (FTE)	**30,925**	**31,770**	**- 845**	**- 2.7**
PERFORMANCE FIGURES				
Freight carried (million t)	**390.1**	**398.7**	**- 8.6**	**- 2.2**
thereof in Germany	229.5	247.2	- 17.7	- 7.2
Volume sold (million tkm)	**104,259**	**105,894**	**- 1,635**	**- 1.5**
thereof in Germany	75,247	78,542	- 3,295	- 4.2
Volume produced (million train-path km)	**196.0**	**203.1**	**- 7.1**	**- 3.5**
Trains per day	**4,891**	**5,034**	**- 143**	**- 2.8**
Mean transport distance	**267.3**	**265.6**	**+ 1.7**	**+ 0.6**
Capacity utilization (t per train)	**531.9**	**521.4**	**+ 10.5**	**+ 2.0**
ROLLING STOCK				
Locomotives	**3,067**	**2,913**	**+ 154**	**+ 5.3**
Electric locomotives	1,284	1,244	+ 40	+ 3.2
Diesel locomotives	1,783	1,669	+ 114	+ 6.8

	2013	2012	± absolute	± %
Wagons	**91,930**	**101,306**	**- 9,376**	**- 9.3**
thereof in Germany equipped with K-/LL-brake shoes ("whisper brakes")	8,408	7,624	+ 784	+ 10.3
DB stock	83,574	89,082	- 5,508	- 6.2
Covered wagons	16,869	17,684	- 815	- 4.6
Open wagons	27,873	34,029	- 6,156	- 18.1
Flat wagons	37,639	35,916	+ 1,723	+ 4.8
Tank wagons	1,193	1,453	- 260	- 17.9
Leased wagons	3,522	4,149	- 627	- 15.1
Rented from third parties	8,737	8,808	- 71	- 0.8
Rented to third parties (-)	3,903	733	+ 3,170	-
Transport capacity of freight wagons (thousand t)	**5,514**	**6,038**	**- 524**	**- 8.7**
DB stock	5,085	5,318	- 233	- 4.4
Covered wagons	780	796	- 16	- 2.0
Open wagons	1,729	2,144	- 415	- 19.4
Flat wagons	2,534	2,334	+ 200	+ 8.6
Tank wagons	42	44	- 2	- 4.5
Leased wagons	250	248	+ 2	+ 0.8
Rented from third parties	636	574	+ 62	+ 10.8
Rented to third parties (-)	457	102	+ 355	-

Net financial debt/EBITDA improved

Net financial debt / EBITDA [€ million]	H1 2014	H1 2013	Change absolute	Change %
Net financial debt as of Jun 30	16,571	16,982	- 411	- 2.4
÷ EBITDA adjusted	2,554	2,460	+ 94	+ 3.8
Net financial debt /EBITDA [1] (multiple)	**3.2**	**3.5**	-	-

[1] This key indicator on a full-year basis was determined by extrapolating the figures for adjusted EBIT to the full year on the basis of a linear projection.

	H1		Change	
Revenues adjusted [€ million]	2014	2013	absolute	%
DB Schenker Rail	2,452	2,410	+ 42	+ 1.7
Capital expenditures [€ million]	2014	2013	absolute	%
DB Schenker Rail	78	66	+ 12	+ 18.2

C. US Peers also service the rail networks => much higher EBIT margins 24-33% ! and Capex 22%

	Mcap	EV	Gr-5Y	Gr	EB-2	EB-1	EB-0	EB+1	EV/sales	EV/EB	PE	52w
CSX Corp. (NYSE:CSX)	30,717	39,259	7%	4%	26%	29%	29%	28%	3.1	11.3	16.4	26
Norfolk Southern Corporation (NYSE:NSC)	32,601	40,314	8%	5%	24%	29%	28%	27%	3.4	12.9	17.7	47
Union Pacific Corporation (NYSE:UNP)	90,317	99,623	11%	8%	26%	27%	31%	31%	4.2	14.8	20.7	35
Kansas City Southern (NYSE:KSU)	12,251	14,572	12%	9%	23%	26%	28%	29%	5.6	21.7	34.1	25
Genesee & Wyoming Inc. (NYSE:GWR)	5,419	6,970	27%	4%	15%	24%	14%	24%	4.2	30.5	19.7	21

Capex ratios

Capex/Sales%

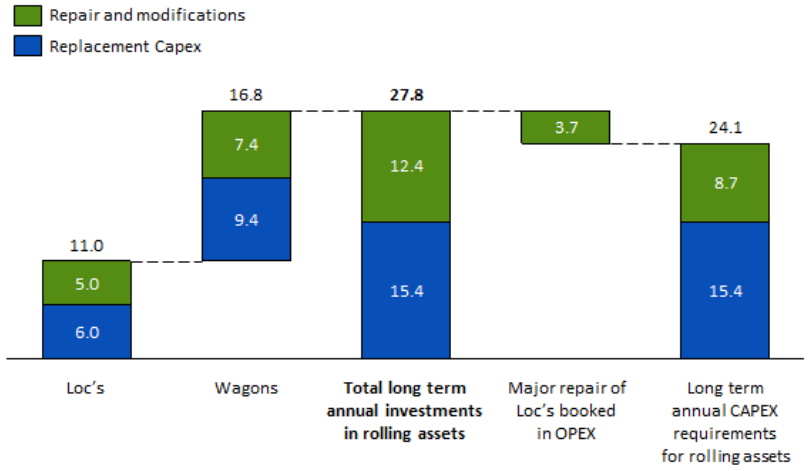
Company Name	2004	2005	2006	2007	2008	2009	2010	2011	2012
Union Pacific Corporation (NYSE:UNP)	15%	16%	14%	15%	15%	17%	15%	16%	18%
CSX Corp. (NYSE:CSX)	13%	13%	17%	18%	15%	16%	17%	19%	20%
Norfolk Southern Corporation (NYSE:NSC)	14%	12%	13%	14%	15%	16%	15%	19%	20%
Kansas City Southern (NYSE:KSU)	18%	20%	15%	23%	29%	23%	16%	24%	24%
Genesee & Wyoming Inc. (NYSE:GWR)	9%	9%	14%	19%	16%	16%	19%	22%	26%

4. Conclusion on LT Capex:

Assumptions :

Number of assets: 75 T77 loc's, 30 locotractors and 39 T13 loc's, 5167 wagons,

Lifetime of assets: 45 years for loc', 15 years for locotractors and 48 years for wagons



Including 3.7m booked in Opex = 27.8m = 6% on sales

Linear calculation for T77 = 0.543 * 75 loc / 35 yrs remaining = 1.16m Capex LT capex

Only 9 T77 had their R1 revision by end 2013 => heavy capex 2015-2017, avg 5m/year on R1 alone !

Type of loc	Intervention	Price per intervention [EUR k]	Number of interventions [#]	Total repair and modifications costs per unit over lifetime [EUR k]	Part CAPEX	Part OPEX
T77	RI1 Diesel	110	2	220		220
	RI transmissie	72	4	288		288
	RI cardanas	5	4	20		20
	RI2 diesel	245	2	490	490	
	Modifications	10	45	450		450
	TBL1+	32	1	32	32	
	Homologatie	4	1	4	4	
	ETCS	402	1	402		402
	Telematica	17	1	17	17	
	Consultancy	0,5	15	8		8
Total per loc T77				**1930**	**543**	**1388**

Linear calculation for T13 = 489 *43/32 = 0.66m per year

The rail freight market today

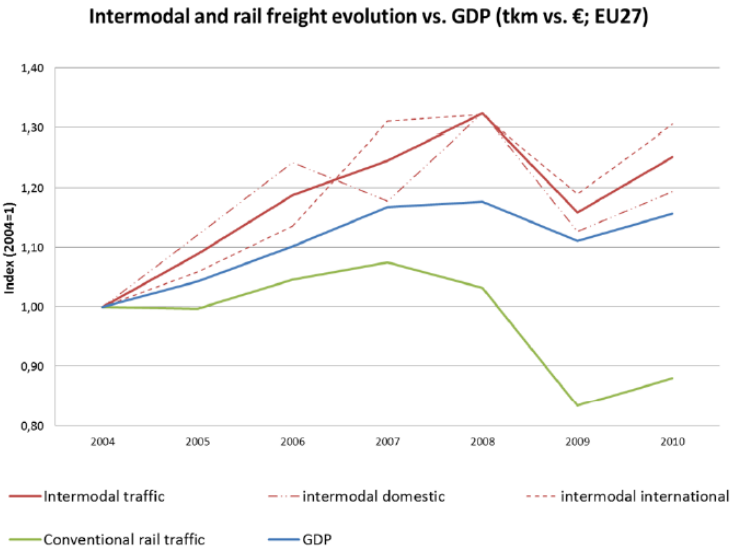
In Belgium, the Netherlands and in the Baltic States, more than 70% of rail freight is international (originating in Germany and Russia). In Germany, France and Italy, the other 3 major economies of the EU these percentages reach respectively 39%, 19% and 50%. It is also important to underline that Germany and its rail infrastructure play a central role in rail freight, representing alone 27% of all EU tonne-km, leaving far behind even the second major European rail freight market, Poland (12%)18. Germany is also at the very heart of the EU rail network: it is by far the most transited Member State (28% of all transiting tonnes-km) together with Austria (13% of transiting tonnes-km).

Evolution of the rail freight market

Since 1995, the rail modal share has grown most in Northern Europe and has fallen in Southern and Eastern Europe (less so in the Baltic States). Largest growth rates were recorded in the Netherlands (+76%), Denmark (+71%) and the UK (+66%), but also in Germany, the largest rail freight market in Europe.

Since 2007, the year when rail freight services have been **opened to competition at EU level**, traffic has continued to grow strongly in Denmark (+79%), Austria (+15%), UK (+14%), but also in Romania, Ireland, Portugal and Latvia. Intermodal rail freight is growing, but single wagonload is decreasing. The share of intermodal rail freight has grown from 15% to 18% between 2007 and 2011 – albeit mostly in Germany, Ireland and Spain.. On the other hand, the single wagonload appears to be decreasing everywhere. In Germany it went down from 39% of all tonne-km in 2004 to only 26% in 2011. The portfolio of transported goods (cf. graph) has remained stable and remains concentrated in commodities (agriculture, minerals) or products in their first stages of industrial processing (basic metals, chemicals). More than half of the decrease in traffic in 2008-2012 can be explained by specific segment evolutions. In Germany, **the increase of chemical and transport equipment** transport has not compensated important decreases in the rail freight transport **of agricultural products, coke, wood and basic metals**. In France, most of the decrease has taken place in chemicals , basic metals and metal ores. One also ought to ask whether specialisation of rail freight in commodities and basic industrial products does not make its business cycle particularly vulnerable to economic cycles (evolution of commodity prices), energy policies (choices of specific energy sources) and inventory management (commodities cost less to inventory than finished industrial products). Additionally, to be successful, railway freight needs to move into higher-added value "niches" and increase average transport distances.

Other Info

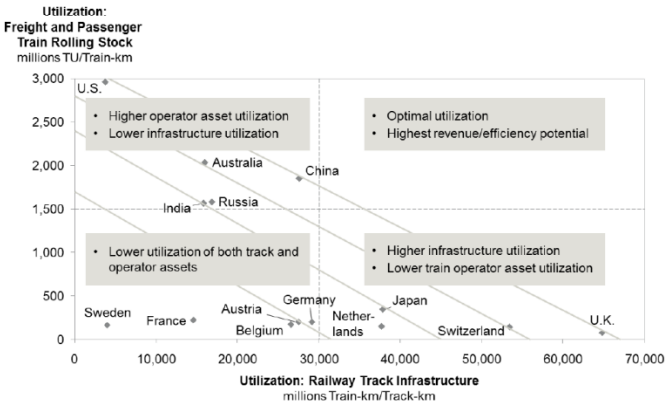


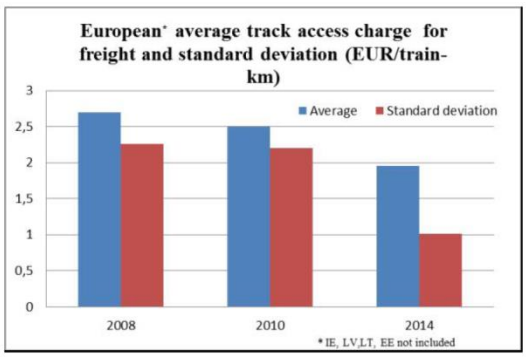
2008	EU 27			U.S.			CHINA			RUSSIA			INDIA	ARG
	10^9 t-km	10^9 t	km haul	10^9 t-km	10^9 t	km haul	10^9 t-km	10^9 t	km haul	10^9 t-km	10^9 t	km haul	km haul	km haul
Road	1900	18	106	2300	11	209	3830	22	173	180	5,2	35	n.a.	n.a.
Rail	400	1,3	**300**	3200	2,9	**1103**	2803	4	**763**	1800	1,1	**1636**	**660**	**522**
Inland Waterways	140	0,5	280	970	2	485	6116	3	1770	53	0,1	530	n.a.	n.a.
Total 3 modes	2440	20,1	121	6470	15,9	407	12750	29	435	2033	6,4	318	n.a.	n.a.
GDP ($ 10^{15})	15			14			8			2			3,5	0,6
km² (Mio.)	4,3			9,8			9,6			17			3,2	2,7
Population (Mio.)	500			310			1300			142			1100	40

Data source: Eurostat, BTS (U.S.), Federal State Statistics Service (RU), Secretaría de Transporte (ARG), National Bureau of Statistics of China, Ministry of Statistics and Programme Implementation (IN)

FIGURE 6: TRANSPORTATION PERFORMANCES AND AVERAGED DISTANCES OF TRANSPORTATION IN THE WORLD (OWN ELABORATION)

Figure 3: **Train Operator and Railway Infrastructure Utilization by Country, 2011**





Xpedys sa/nv provides multimodal logistic solutions by rail, road, and waterborne transport for conventional freight in Belgium and internationally. It transports agricultural products, such as wheat, colza, sunflower, oats, barley, sugar beets, sugar, glucose, and other cereals; automotives, including car and car parts; consumer goods; chemicals, petrol, and gas and energy products; hazardous products, and long and/or heavy products; kaolin; steel and metal products; building materials, such as granulates, pre-stressed concrete beams, metals, and chemicals; raw materials, including ore and coal, and scraps; wood and paper; semi-finished products; and industrial goods. The company also provides logistics services, such as loading and unloading, warehousing, inventory management, and on site operations; freight forwarding, dispatch, storage, and transshipment services; and a coil terminal operation for storage, inventory management, and handling of iron and steel products. In addition, Xpedys sa/nv offers services, including from rail siding to rail siding; from rail siding to warehouse, such as road transport from the warehouse; warehousing; plant to plant; warehouse to plant; and warehouse to warehouse. Further, the company's activities include monitoring of shipments, real-time information, and transparent administration. Xpedys sa/nv provides its services thorough a fleet of single wagon load, groups of wagons, complete trains, conventional cargoes, specific bulk wagons, and wagons capable of carrying various types of metal products. The company is based in Schaarbeek, Belgium with additional offices in Belgium, France, Germany, Poland, Switzerland, and the Netherlands. Xpedys sa/nv operates as a subsidiary of Sncb Logistics.

IFB nv provides integrated, intermodal transport and logistics solutions by rail and barge in Europe. It offers container transport services for transport companies, shipping lines, and forwarders; operational and commercial assistance services; multimodal logistics solutions using transport modes, including rail and barge; and terminal operations and value added logistics in Belgium, Italy, Spain, and Germany. The company was founded in 1998 and is based in Antwerp, Belgium. IFB nv operates as a subsidiary of SNCB Logistics NV/SA.