UK Rail Freight and Logistics

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Career

- British Rail graduate management trainee 1979
- Operations – yard and train crew management
- Sales and marketing, contract management
- Director Metals (& Petroleum), Trainload Freight
- Managing Director, Transrail Freight Ltd
- Marketing Director, English Welsh & Scottish Rly
- Consultancy & Strategic Advice

Railways in Britain

- Network Rail – infrastructure (Gov't owned)
- Passenger Train Operating Companies (TOC's)
- 5-20 year Route Franchises from Government
- Lease rolling stock, some fares controlled
- Freight Operating Companies (FOC's) - compete
- Private, profit- maximising companies
- Own or hire rolling stock, set own rates
- No government control – mode shift grants
- Office of Rail Regulation – licenses & safety
- Busy mixed-use railway: passenger primacy

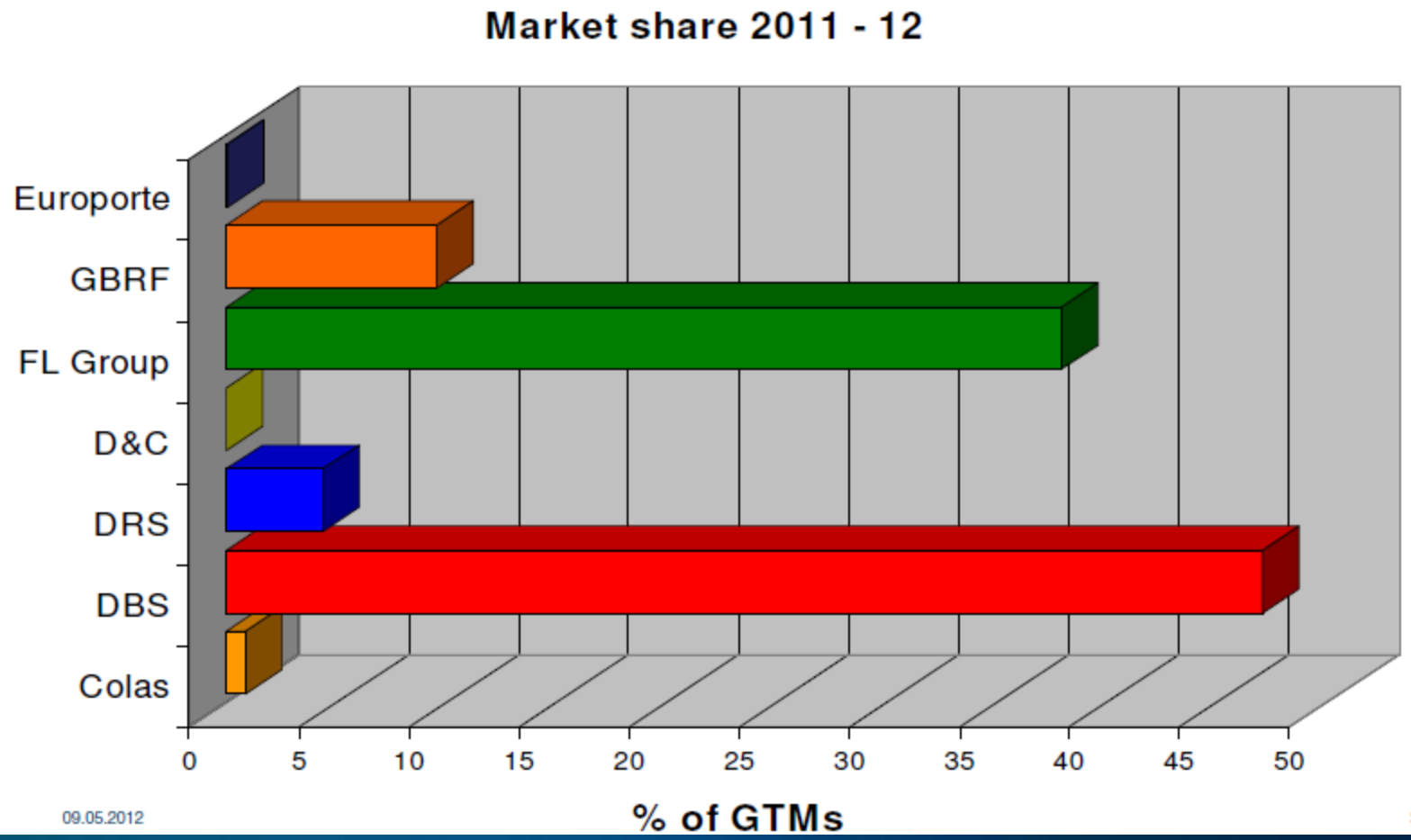
Evolution – pre Privatisation

- Nationalised 1948 – post war rebuilding
- Growing road competition – traffic loss
- 1960's – block trains, containers (Freightliner)
- 1980's – wagonload rundown, business sectors
- 1990's – restructuring & focus on bulk freight
- Highly efficient & very profitable
- Trainload Freight (TLF) - 20% ROS
- Channel Tunnel – link to Europe

Evolution – post Privatisation

- 1994 – restructured for sale:3 TLF's +Freightliner
- TLF's Geographical rather than Commodity
- Introduce competition –assumed decline
- 1996 Sale – all 3 TLF to Wisconsin Central
- English Welsh & Scottish Railway – now DB
- 1997 – Freightliner venture capital MBO
- 2000's – new entrants: GBRf, DRS, Colas etc
- Highly competitive market – 2 Big, 2 Medium +
- Major investment & sustained growth – 60%
- 2010's – infrastructure investment & growth ++

Market share



Modal Competition

- Road – easy, efficient, flexible, cut throat
- Pipeline, coastal shipping, canals/rivers
- Rail v pipeline & waterway at margin
- Rail v road in 99% of cases
- Rail + road in 50% of cases – multimodal
- On rail competition improves efficiency
- Rail more competitive with road

Rail Freight Strengths

- High volume point to point transport
- Once set up, low management input
- Unobtrusive, reliable, secure, ‘invisible’
- Fuel efficient – low carbon, very green
- National coverage – cf coastal & canals
- More flexible than shipping & pipelines
- Free from congestion & driver shortages

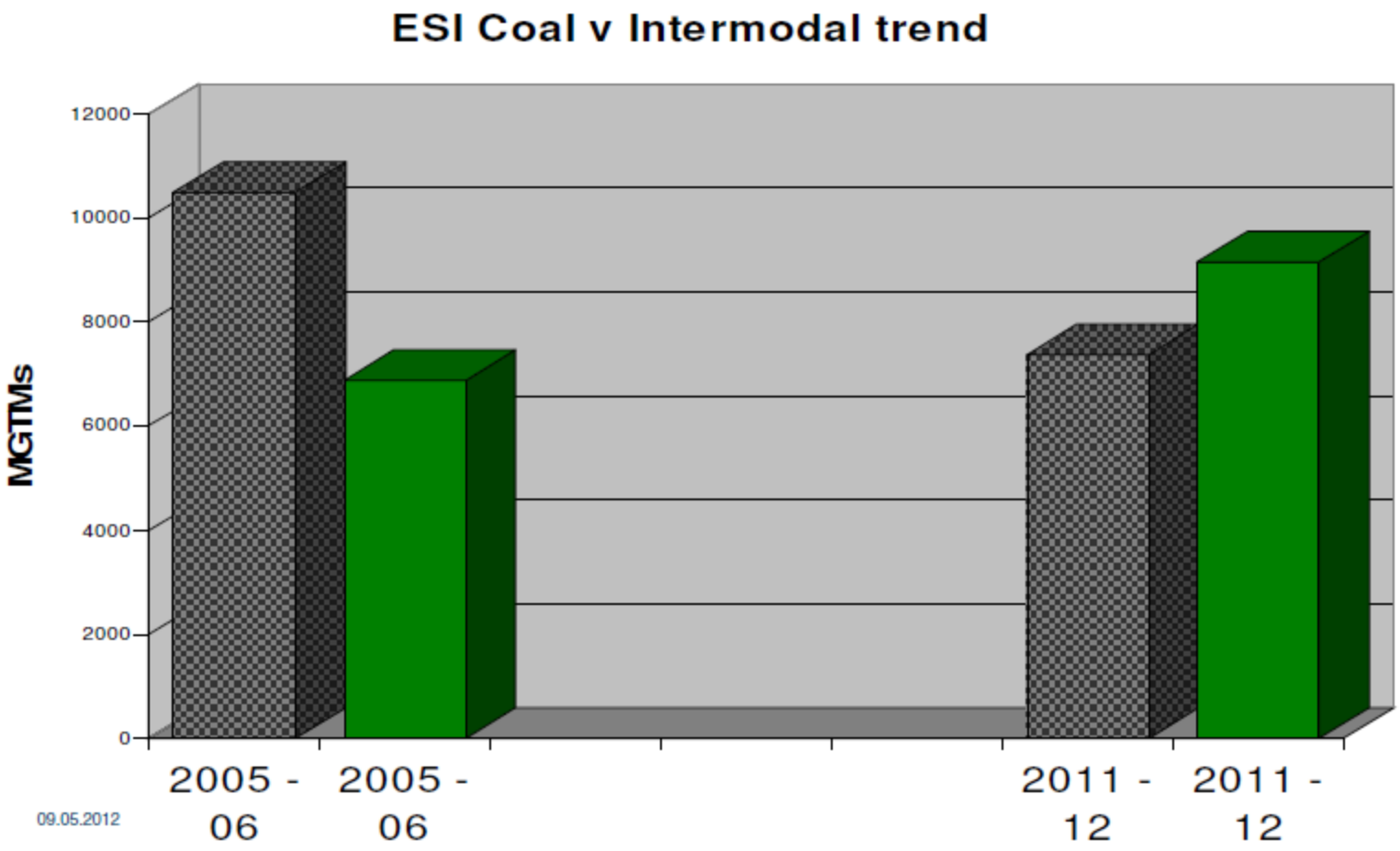
Rail Freight Weaknesses

- Inflexible compared with road haulage
- Can’t go everywhere (unless intermodal)
- Specialist vehicles – backloads rare: cf road
- Needs trainload to be viable: aggregation
- Can be difficult/expensive to initiate
- Needs terminals in right place
- Lack of customer knowledge in non-bulk

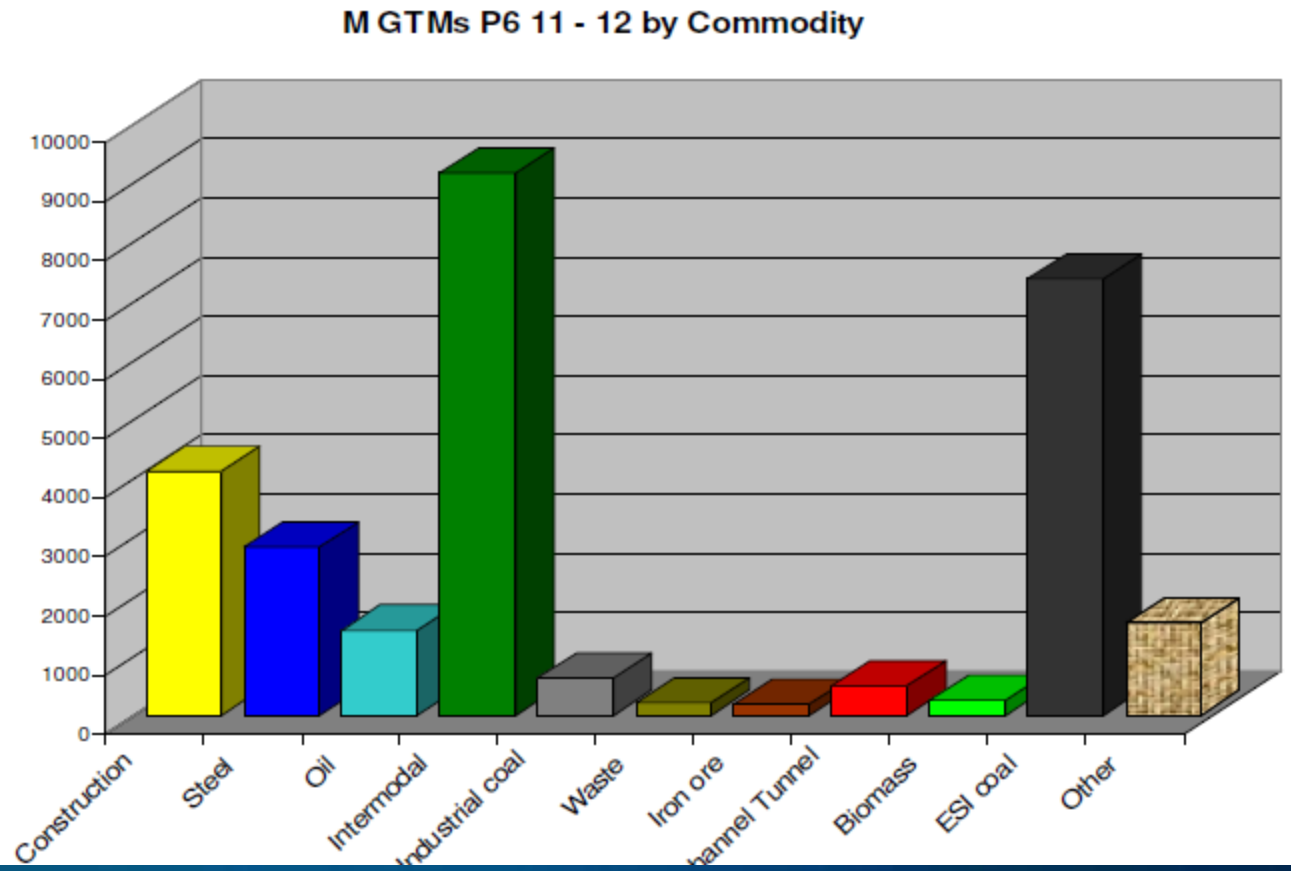
Rail Freight: The Realities

- **Bulk commodities are the bedrock**
- Considerable modal advantages
- Big tonnage direct to user, high bulk density
- Stable or declining markets in most cases
- **Non-bulk commodities offer the growth**
- More diverse flows, lighter products
- Huge potential market compared with bulk
- Big volumes over medium & long distances
- Intermodal & containerised imports are key

Intermodal overtakes coal



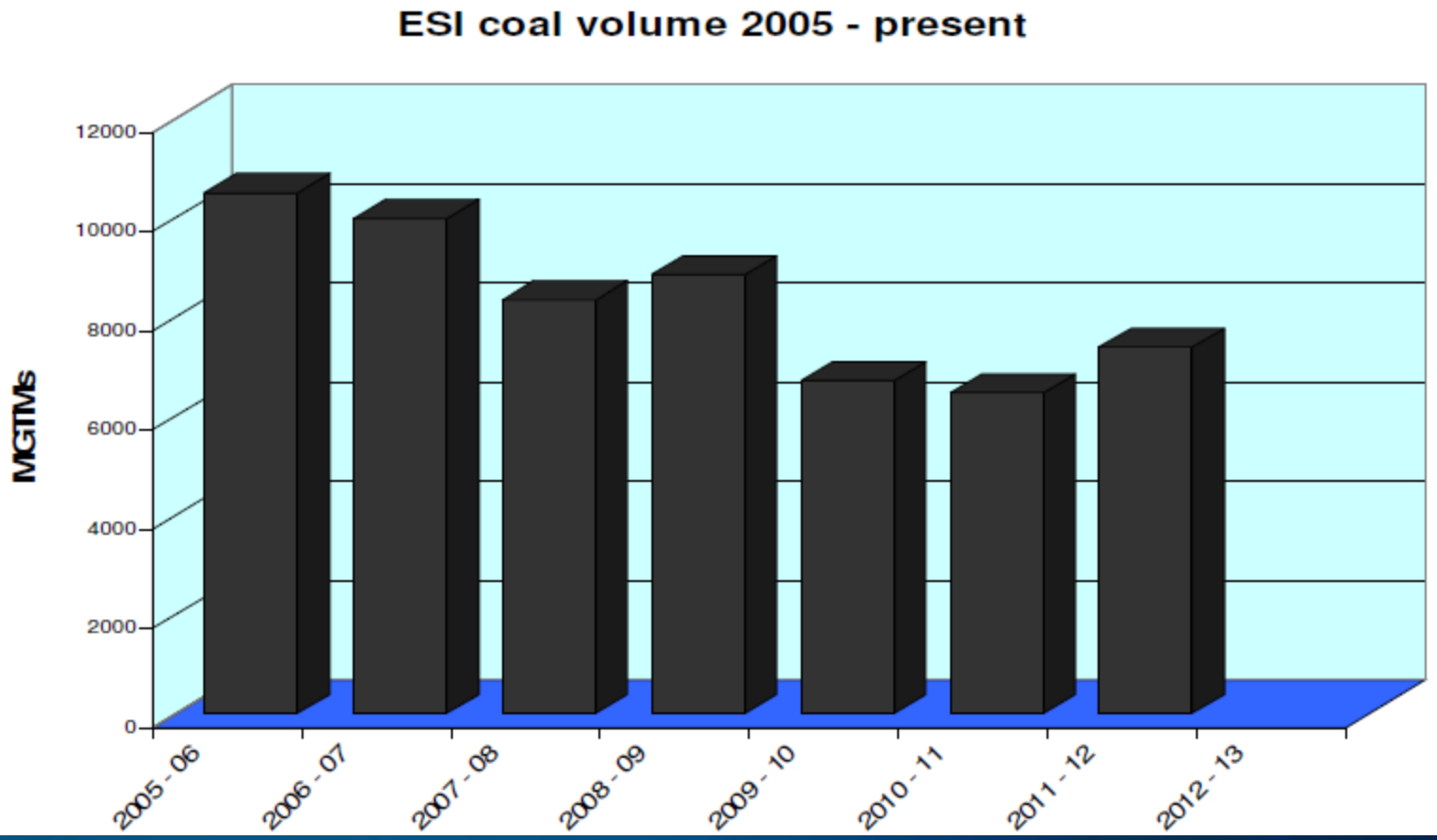
Rail freight by commodity 2011 - 12



Coal

- Electricity Supply Industry dominant
- Rail dominant haulier but fuel mix dependent
- ‘Dirty’ fuel – FGD plus Carbon Capture Storage
- Slow decline but gas scarce & nuclear problems
- Biomass – Drax only, one third energy of coal
- UK coal industry much reduced post 1986
- 200 deep mines to 5 plus opencast
- Imported coal dominates
- Local trips replaced by long hauls
- Major resource and pathing implications

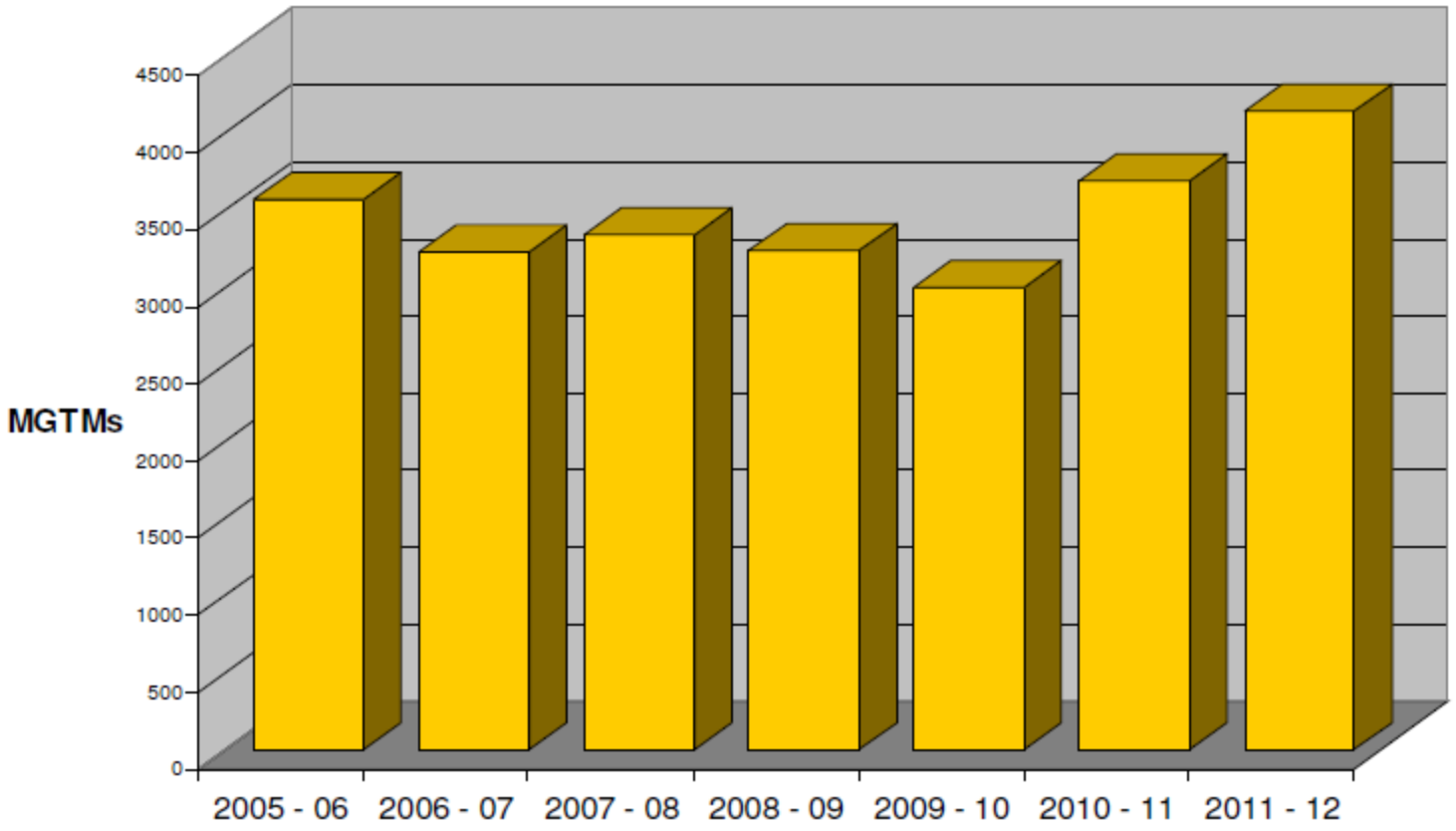
ESI Coal since 2005



Construction - Aggregates

- Aggregates, cement, industrial minerals, waste
- New market for rail – local gravel exhausted
- London & SE, Birmingham, Manchester
- S.West & N.West limestone, E.Midlands granite
- Mostly under 150 km, some only 50km
- Classic heavy haul – 2000t+, megatrains 4000t+
- Needs capacity into urban areas
- Major growth potential: existing & new areas
- Cement, blocks, waste

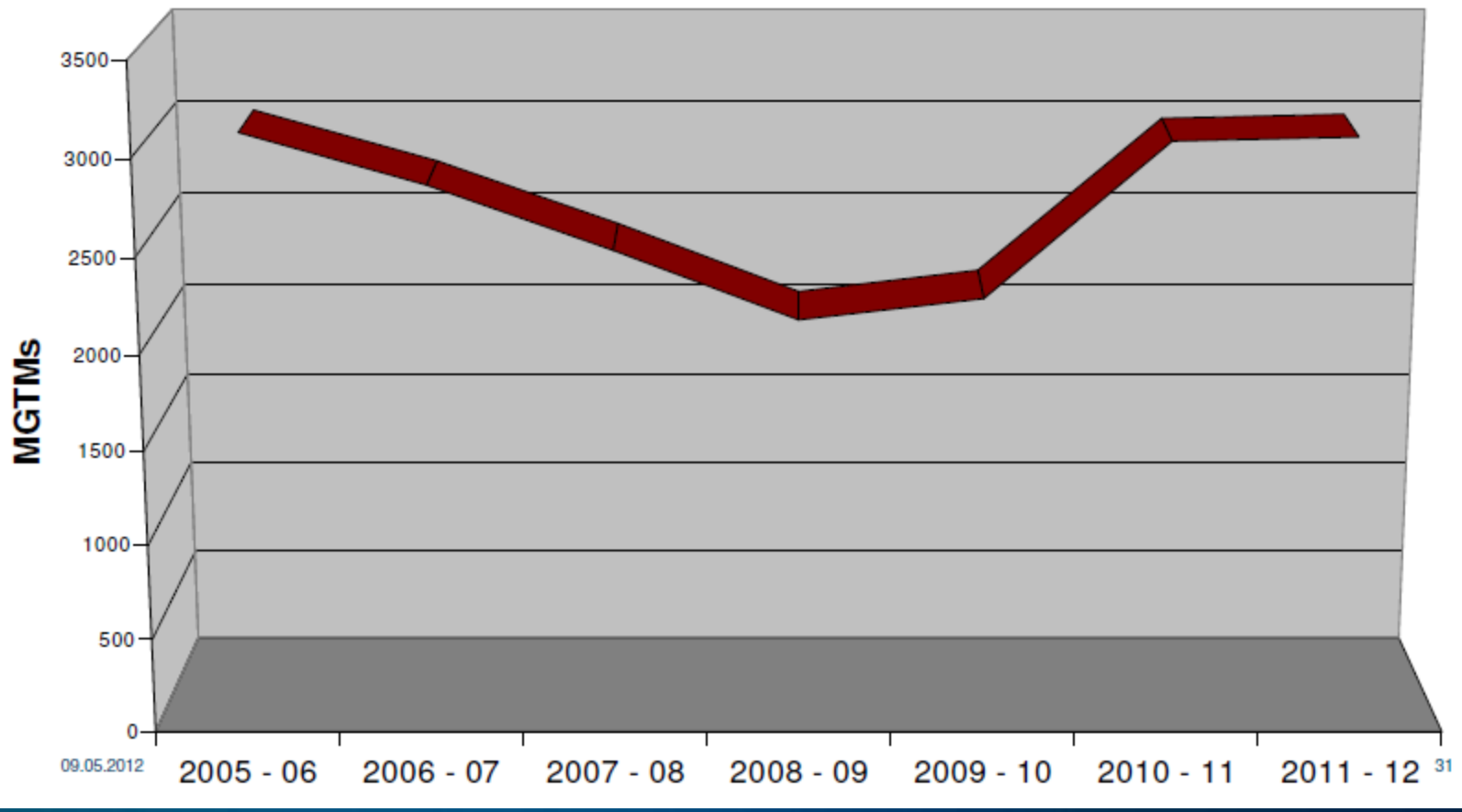
Construction materials since 2005



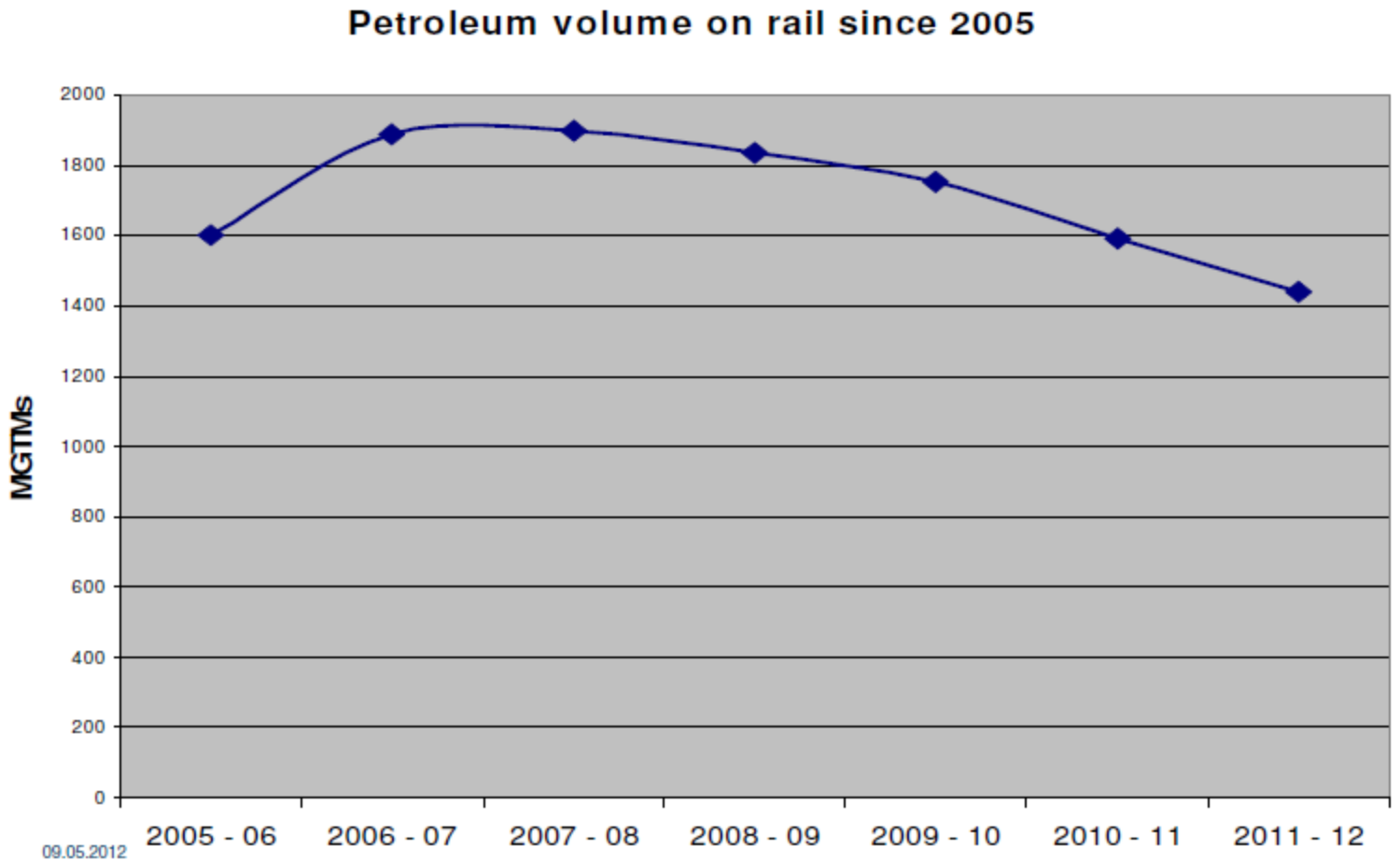
Metals

- Mostly steel, small amount of aluminium
- Continual rationalization – fewer plants
- Traditional rail-orientated plants
- Major rail advantage moving hot steel
- Need rail but UK steel industry struggling
- High market share with iron ore and semis
- Lower market share with finished product
- Scope for growth with finished prods & scrap

Metals volume on rail since 2005



Petroleum trend



Other Trainload

- Automotive – cars and components
- Imports: Ford fromThames (& Avonmouth)
- Exports: BMW/Jaguar Purfleet & Southampton
- Much scope for growth – Import & Export
- Toyota – no rail; Honda & Nissan occasional
- Channel Tunnel could again become important

- Timber - considerable scope for growth
- Forests reaching maturity, far from market

Non Bulk Revival - background

- Bulk market mature / deindustrialisation
- Asian Tiger manufactured imports
- Channel Tunnel terminals
- Road congestion / cost of derv
- Carbon footprint – 'Less CO2'
- EU/Central Government/Local Authorities
- Mode Shift Grant – revenue + some capital
- Lorry miles saved + limited to money needed

Intermodal growth since 2005

Intermodal - current situation

- Deep Sea Imports booming
- Rail market share growing
- Domestic intermodal logistics market created
- Channel Tunnel reawakening – HS1 freight
- Infrastructure investment – bigger boxes
- Capacity & structure gauge enhancements
- New locos, wagons and terminals

International – Deep Sea

- Clearing boxes in volume (FXS 11,500 wk)
- Highly price-sensitive, low margin business
- Needs long trains: 40+ boxes per train
- Felixstowe & Southampton – major ports
- Midlands & Northern England/Scotland/S.Wales
- New terminals – e.g. Bristol for wine
- London Gateway - 2014

: **FEA-A** TOPS number: **630029** Built by: **Marcroft Engineering, Stoke-on-Trent, 2003** **Wagons on the Web *www.wagonsontheweb.org.uk***

Gareth Bayer Location: **Westerleigh** Design code: **FE 003A** Date: **March 22nd, 2006.**

code: **FAA** TOPS number: **609030** Built by: **Thrall Europa, York, 1999**
by: **Gareth Bayer** Location: **Doncaster** Design code: **FA001E** Date: **19 May 2004**

Wagons on the Web
wagonsontheweb.org.uk

Code: **FLA-O** TOPS number: **606004** Built by: **Powell Duffryn, Cardiff, 1991**

by: **Gareth Bayer** Location: **Oxford** Design code: **FL 003A** Date: **August 18th, 2010**

Wagons on the Web *www.wagonsontheweb.org*

Capacity & capability

- Rail Freight geography is changing
- Focus on North-South routes from ports
- Additional capacity on WCML – TV4
- Grade seperation at Reading,Stafford,Nuneaton
- New chord at Ipswich and loops at Ely
- High gauge from Southampton & Felixstowe
- ECML and NE-SW line cleared by 2014
- Great Western ML electrification in 2017

European – Channel Tunnel

- Good start, disastrous follow-up
- Service quality problems- SNCF strikes
- Now much improved – Open Access in France
- Reputational issues to be overcome
- Tunnel too costly for major growth at present
- Substantial potential if cost reduced
- High gauge capability of HS1 crucial
- Strategic attraction for Pan European logistics
- Premium market for high speed mail/airfreight

Domestic Supply Chain

- Highly quality sensitive: efficient road option
- Price sensitive but also very carbon-aware
- Lorry-size consignments need aggregation
- Trunking alternative + remote store deliveries
- Pariah – curiosity – mainstream option
- Rail service quality good – matching road
- ‘Me too’ factor following Tesco/Stobart
- Primarily long distance – Anglo Scottish
- Medium distance developing

Current Supply Chain operations

- Six trains-a-day Midlands to Scotland: 500km
- 500 lorry journeys a day off M6/M74
- Central – North Scotland: 300km
- Tesco/Asda/Marks & Spencer/Sainsbury
- Tesco 1m sqft Midlands Rail Distribution Centre
- Midlands- London/South Wales: 100-150km
- Marks & Spencer Rail Distribution Centre
- Rail 3PL's – road hauliers using rail

Equipment

- Swap bodies
- Ambient – box/curtain sided
- Reefer – chilled/frozen
- Double decker: 10’6” high on Super Lowliner
- Conventional wagons – higher capacity
- More efficient if Siding-to-siding
- Too soon yet: 5-10 years full circle

ode: **IKA** TOPS number: **33 68 4909 403-0** Built by: **Arbel Fauvet, France, 1998-99** **Wagons on the Web *www.wagonsontheweb.org***

y: **Gareth Bayer** Location: **Barby Nortoft** Design code: **IKE887** Date: **April 27th, 2010**


msc
AERSK
P&O Nedlloyd

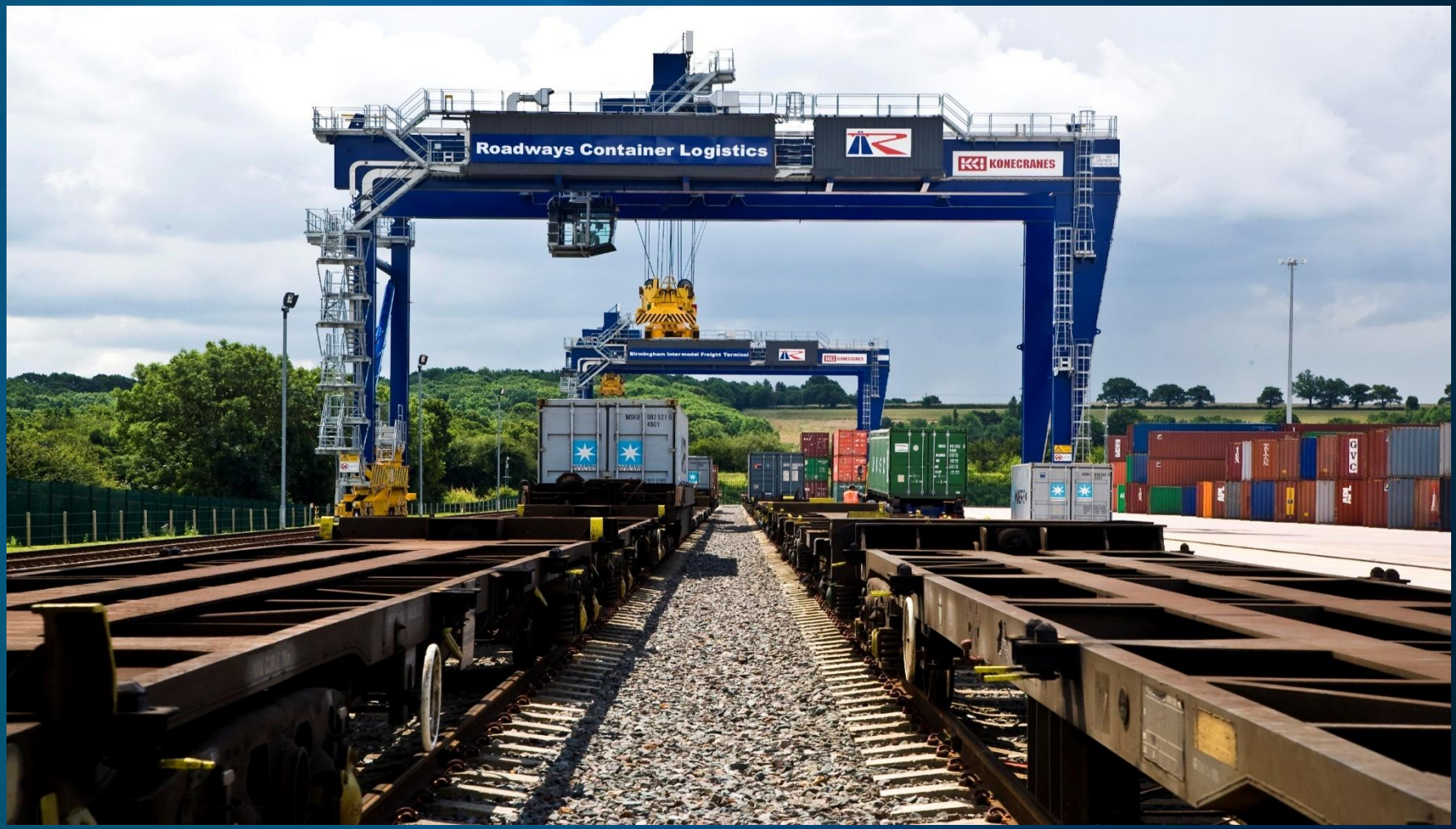
TOPS code: IFA TOPS number: 31 70 4938 2xx
Location: Georgemas Jn. Photo by: Adrian Walby Date: 28 May 2000

TOPS code: IFA TOPS number: 31 70 4938 209-4
Location: Georgemas Jn. Photo by: Adrian Walby Date: 28 May 2000

TOPS code: **IWB-B** TOPS number: **33 80 4741 073-6** Built by: **Waggon Union, Germany, 1987-88**
Photo by: **Gareth Bayer** Location: **Kensington Olympia** Design code: **IWE690** Date: **24 March 2005**

Rail Terminals

- Key element in rail-based supply chain
- Simple cross docking facility or major hub
- Location is main factor
- Intermodal prime mode – conventional add-on
- Site layout critical – sheds/lift area/sidings
- Main line connection – Network Rail
- Planning Authorities – environmental issues


Roadways Container Logistics
KONECRANES
Birmingham Intermodal Freight Terminal


APL
APL
API
UNIG
EVER

Conclusion

- Bulk commodities - bedrock but little growth
- Logistics/supply chain – huge potential
- High quality service required
- Customers value low carbon, no traffic jams
- Investment in rolling stock & terminals
- Profitable - less than bulk trainload
- Big trains – maximum efficiency
- It can be done – it must be done!

Need any help?

For further information

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Thank you for listening