

Why the rail freight industry needs forecasts

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Mike Garratt has a first degree in Economics and a masters degree in Transport Design. He worked initially as a local government transport planner, and subsequently as a researcher and then lecturer at the Universities of Leicester and Liverpool.

He then founded the transport consultancy MDS Transmodal, which has now been trading since 1983. He specialises in short sea shipping, ports and railfreight. Mike has conducted numerous studies for government, local authorities and the private sector. In the UK, he is a board member of both the Rail Freight Group and the water freight industry forum Sea & Water. Mike has been and continues to be involved with freight forecasting for amongst others: Department for Transport, Railtrack, the SRA and Network Rail. Mike Garratt is regarded as one of the most informed observers of the rail, shipping and ports industries in the UK and is regularly called upon to speak at conferences and private seminars.

Mike's private clients range across shipping lines, major ports, rail operators, property developers and financial institutions and he has been involved in many 'high-profile' studies including for the Department for Transport (National Port Traffic Forecasts; Economic impact of transshipment). Mike is also heavily involved in helping the rail freight industry to produce forecasts to inform government.

The closure of the SRA and the Government's abandonment of the '80%' growth rate for rail freight has, at last, positioned rail freight just where it should be; just another mode of transport which relevant businesses, power generators, quarry owners, shipping lines and so forth, can choose if that makes them more cost effective. This is the natural consequence of the gradual liberalisation of rail freight across Europe over the last 15 years, a process at which Britain has been at the forefront. The emergence of new entrants has forced traction suppliers to become more competitive and rail market share has expanded. The Office of Rail Regulation provides the market with protection from abuse of monopoly power by the network manager. The Government, quite understandably, felt it inappropriate to have a target when, by definition, the industry was entirely in the private sector and not under its control.

Why then does the industry require forecasts and, perhaps more important, a modelling procedure which can synthesise the impact of different measures?

The answer is relatively straightforward.

Firstly, the Government is effectively buying a passenger railway; franchising train services on a network which is all but in the public sector. If rail freight is not to be swamped by passenger growth (passengers vote, freight does not) then 'freight' must establish how much capacity it requires. The Secretary of State recognised this in June 2005 when he said:

"In order for rail freight companies and their companies to invest, they need certainty about where and

when they can run trains on the network. The Government will work with the industry to develop robust demand forecasting and modelling tools and to ensure that it understands the needs of the freight industry when developing its High Level Output Specification and other key policies".

In fact, that modelling technique was already in place in the form of the GB Freight Model, which the DfT has had separately audited and which fulfils key criteria for rail forecasting; it deals simultaneously with road freight and it is able to reproduce base year mode split by the main commodity groups. It now forms an element in the National Transport Model and has been used within a separate port forecasting exercise for the DfT being published in early 2006.

By adding an assignment module to the model, MDST was able to satisfy the joint requirements of the Rail Freight Group and the Freight Transport Association in being able to produce forecasts of the number of freight trains required on each link of the network, using precise Network Rail data on the current routing and cargo weight hauled off every train presently running.

Secondly, if that forecast freight capacity is to be justified, and the case for network enhancement made, then the same modelling procedure needs to be able to facilitate appraisal, and be able to estimate the changes in user and non user costs involved. While user costs will drive behaviour, non user costs measure the wider impact of measures on the transport network (on the road network through Sensitive Lorry Miles and potentially on other rail traffic). GBFM allows the value of each path (or an upgrade to create more capacity or

reduce operating costs) to be evaluated in a way that allows rail freight, rail passenger and road traffic to be evaluated in an even handed manner.

The forecasting exercise conducted in 2005 (results have now been formally submitted to the DfT, NR and the ORR and are available on www.rfg.org.uk) was based on both the model and an extensive consultation exercise with a wide range of rail freight users and their trade associations to ensure there was 'buy in' to the results. The forecasts were also compared on a tonnage and commodity basis with an exercise conducted by the train operators. However, it must be emphasised that the exercise was informed by the demand to move cargo by rail and not by the present supply conditions of rail freight services.

Given the evident shortage of rail capacity, recognised by passenger and freight interests alike, it is self evident that rail freight's case for a share in that capacity must be endorsed by as wide and powerful an interest group as possible (freight users), who by their patronisation of rail in competition with other modes demonstrate its cost effectiveness. This provides the most persuasive evidence to both Government and the Office of Rail Regulation. It is also most important to recognise that it is 'users' who have specific geographical vulnerability (a port, quarry or inland terminal cannot be moved!) to specific shortfalls in network capacity and in need of greatest protection while the business of traction suppliers is to operate mobile assets which can, in the medium term, be switched to different flows.

The recent report by Network Rail on the severe shortage of capacity on the East Coast Main Line and its specific impact on key freight generators illustrates how important it is for users to take an interest in the relationship between supply and demand for network capacity. While the protection of existing paths some operators enjoy through 'grandfather rights' can also be of

benefit to freight users, this cannot protect interested parties whose traffic is growing (e.g. intermodal) or where routes change because sources change (e.g. where seaports have replaced pits as sources of power station coal).

The overall forecast made in Autumn 2005 for the RFG and FTA was that rail freight would grow by 28% in tonnage terms from 2003 to 2014 and by 35% by tonne kilometres. The main growth would be in intermodal traffic, from the ports, domestically and through the Channel Tunnel. These forecasts have now been adjusted to be compatible with forecasts being made for the DfT for all port traffic (around half of all rail freight is port related), the specific announcements made concerning which port container terminals are receiving planning consent, the changing choice of ports for coal imports and which coal fired power stations are likely to remain open.

At the DfT's request, longer-term forecasts have also been made for 2030, also in line with port forecasts. These reflect substantial changes; some reduction in coal traffic (reflecting Government energy policies), but a continuing growth in intermodal freight.

In order to convert the demand for rail train movements into required paths, detailed Network Rail data

has been used to determine how often each path is generally used (reflecting the lower dependability of bulk traffics as compared with container trains etc.). Overall results for GB as a whole are shown in the illustrations for the base year (2005), 2014 and 2030, together with paths allocated for freight in 2005. In each case, results show the mean and maximum trains (or paths) per weekday (based upon the different levels of regularity for each origin to destination flow as reflected in Network Rail data). Network Rail is kindly supplying data on a regular basis which will allow forecasts to be regularly updated.

This data will constitute the required paths demanded by freight users to inform the current Freight Utilisation Study which, in turn, will inform Route Utilisation Studies. The forecasting process will probably face its first practical exercise in the forthcoming debate over the Crossrail proposals, which threaten (at best!) to freeze rail freight capacity through London to existing volumes (arguably protected by 'rights') and to not recognise the massive expansion in rail freight potential triggered by growth in international container traffic through Felixstowe, Harwich, Thamesport and London Gateway and the increasing use of rail to haul aggregates into the capital.



