

ORR System Operation Consultation - August 2015

Introduction

This response is submitted by Malcolm Pheasey, managing director of Nash Pheasey consulting Limited. Malcolm has had a long and varied career in the rail industry. Highlights relevant to this consultation are:

- London Underground - Operations, service planning and investment management
- British Rail - Service and resource planning and investment management (included sponsorship of BR's West Coast upgrade project)
- Railtrack Investment management, Train Planning and Track Access account management
- National Express - Franchise Bid Director and Rail Policy director– in this latter role was a participant in the cross-industry steering group for Periodic Review '08.

Overview

This consultation comprises a consultation document and an associated report from Credo Business Consulting that reviews experience of making efficient use of capacity. As this latter only reflects one element of system operation, these two documents are considered separately.

Consultation document

This consultation appears to be a missed opportunity.

There are currently studies underway to consider how Network Rail could be separated into a series of regional operations & maintenance/renewal bodies and a central body that retains certain national functions such as safety, train planning and access agreements (the 'System Authority' role referred to by McNulty). It would have been very timely and helpful if this consultation had sought views from the industry as to what such a system authority could comprise and its roles. However this consultation is based purely on the status quo. This may reflect the close involvement of Network Rail in its development (and their joint participation in the workshop on 2 October).

The consultation document is a review of what Network Rail does currently (under the heading 'System operation'), where limitations or trade-offs have to be made and how NR's performance in these areas may be measured. What it does not appear to do is to seek views on how such trade-offs could be better made.

In Section 2 (What is System Operation?) various long, medium and short term activities are identified in Figure 4. There is little to argue with here. However 'Infrastructure management' (deliver changes to the network; maintain capability and condition of the network) is regarded as separate from system operations. I would suggest that both of these, if not done competently, can impact upon the available capacity of the network. Their potential impact upon this, through possessions and the need for 'performance allowances', means they should be seen as a component of system operation.

Figure 5 demonstrates the range of parties that influence the various identified System Operation activities. Under 'allocate capacity' there is no mention of freight or open access operators. It

appears from the graphic that only the DfT/TS determines what services are to operate and that only franchised services should be considered. **This is a major gap.**

Perhaps the biggest gap however is that there is no mention of customer demand for services (freight or passenger). Growth or fall in demand can have a significant impact upon the demand for access and all the consequences that follow. **This appears to be a major weakness in the analysis.**

Network Capacity (Figure 6). This is perhaps the area of most concern in the document. There has long been a desire to 'measure' capacity. This document does not make any progress in developing a methodology. What it does do is separate out various levels of use (notional, plannable, capacity-in-use, and throughput). While all of these represent gradual reductions from maximum capacity it avoids the question of how to measure any of the capacities. After a lengthy career considering such matters (see Introduction) I have come to the conclusion that, except where there is a self-contained railway (eg the Victoria line in London), there is no suitable metric that can be used. This is due to a number of reasons

- a) Even if a theoretical x trains per hour could be accommodated, the line may not have that many timetabled because there is insufficient demand for this number of services. This should not be taken as a failure of the System Operator to make full 'efficient' use of the line, even though 'Capacity in Use' would be less than 'Plannable Capacity'.
- b) The minimum extent of the network that can be considered for a capacity review is a length of plain track between locations where one train can overtake another (or take a different route). However, the useable capacity of such a line is entirely dependent upon the capacities of the sections of line before or after the one being considered. A good example of not recognising this was in the exercise carried out at the ORR's request in the late 1990s when he was considering the Virgin Trains application for West Coast track access (the PUG2 agreement). The exercise requested was to have Railtrack demonstrate there were a given number of freight paths available between Wembley and Rugby and between Rugby and Crewe alongside the proposed additional Virgin paths. Railtrack was able to do so and the access application was granted. However it was subsequently discovered that the paths on the two sections of route, which would all be used by the same trains, did not connect up, those north of Rugby departing a few minutes before the arrival time from the south of the corresponding path. This problem was only resolved by the construction of many miles of four track railway between Rugby and Colwich at a cost of many millions of pounds. This is a perfect illustration of the difficulty and risk of using capacity metrics for individual parts of the network.
- c) Even if the capacity could be measured, its use is very dependent upon the type of trains using it. Maximum train speed, acceleration characteristics, stopping pattern, station dwell times, length of train, can all affect the time a train can take to travel from one end of a section of line to another as also can the mix of such different trains. In addition, a desire for regularity in train times, which has advantages for capacity at nodal points, will also result in some theoretical capacity not being utilised.

My conclusion would be that a more workable approach would be to change the question from 'How much capacity is being used?' to 'Can an additional, desired, train be accommodated on the full length of its proposed journey?'

This would mean recognising there is a ‘horses for courses’ answer to every circumstance. Most significantly, the exercise would only need to be carried out if there was a train operator customer who wished to operate such a journey. This means the exercise would be market led, rather than a theoretical exercise.

It is noteworthy that the introduction of the London Midland 110 services adopted precisely this approach with the need for investment (in this case in higher speed capability of the trains), plus some ‘flexing’ of paths, being identified through the development process.

In terms of Regulation, the regulatory test would move from one of ‘how much capacity has Network Rail used?’ to the question ‘How has Network rail *and the industry* responded to the request – have all ‘reasonable endeavours’ been used?’

Long term planning – para 42. I am concerned at the implicit assumption here that priorities should be managed centrally. This is in contrast to the moves to increase devolution of spending decisions to regional authorities. I fully endorse the need for such projects to be coordinated such that one scheme for a ‘local’ benefit does not damage the operability of ‘national’ services. However, it is a consequence of the regionalisation of funding decisions that a local body may choose to progress a project which might not score so highly in a national comparison. This was the case with the re-opening of the Borders Railway, which was a priority for Scotland but would have featured low down a prioritised list of UK schemes. It would be inappropriate for any national body to prevent this happening, which is implied by this paragraph. Limited resources should be allocated by ‘market’ mechanisms rather than by central planning restrictions. Any resource limitations are only a limitation in time, never absolute, and can be addressed by either growing the resource or queueing for their availability. It should not be a case of a central body saying resources will ‘never’ be provided, effectively killing the project.

Section 4 – Issues and opportunities

A number of issues around System Operation are highlighted in Figure 9. This appears to be based upon a philosophy that Network Rail is not doing as well as it might. While this may be so, I do not believe the ORR has demonstrated this. A particular issue that is missing from the analysis is the role that existing access contracts have in constraining NR’s ability to flex existing operators to make room for a new applicant’s service. I believe this is a major constraint upon Network Rail and was one of the reasons why the East Coast access applications were so protracted. Similarly, when the Virgin Pendolino timetable was introduced on West Coast, Northern had to be forced to accept worsened consequences (need for additional units as the timings between Manchester and Stoke had to be adjusted which broke turnround times at Stoke) which could only be agreed at the direction of the DfT (who also had to adjust the franchise agreement).

I suggest that the required approach in considering access applications for additional services should be:

- i. Endeavour to fit the trains amongst existing users (the applicant will usually have tried this himself before submission)
- ii. Endeavour to fit the trains amongst existing users by flexing the timings of those users (again the applicant will probably have tried this)

- iii. Endeavour to fit the trains amongst existing users with adjustments to the detail of existing user's access rights
- iv. Consider how the applicant's proposal could be amended to 'fit'
- v. Identify what infrastructure changes would be needed to accommodate the proposal

Note that this was the process used in the late 1990s for the development of the Virgin Cross Country 'Operation Princess' timetable, that involved widespread moves to clock-face timings, which negotiations between Virgin and other operators (who needed to move their own clockface timings) enabled.

I would propose that any regulation of Network Rail's activity in relation to increasing the use of existing capacity should be based around how well it performs the above process. Note that this does not readily lend itself to a metric based assessment as each instance has to be considered on its merits.

Credo Report

This report sets out to identify means for achieving successful capacity management. It does this through consideration of a number of case studies and derives a range of factors (Push, Pull and Social/environmental). However, when drawing lessons for GB rail it is less helpful. It identifies competition as a motivating factor but then points out the limitation given the industry structural arrangements (role of DfT in franchise specifications); it highlights the benefits of TfL's ability to integrate horizontally – but again this isn't available to GB Rail because of the different structure.

The report identifies a lack of a measure of 'theoretical capacity' as a data constraint that limits good capacity management but **most alarmingly** advocates the use of some simplifying assumptions to start to address this. As indicated very clearly above, this is of no use to the detailed examination required to identify how to maximise capacity in the rigorous analysis required. In many cases retrospective application of such a quick-and-dirty approach would lead to the conclusion that many existing successful services weren't able to operate.

What is not recognised or acknowledged is that the industry practitioners (train operators) are very skilled in developing proposals for greater use of capacity, understanding all the conflicting constraints. They are best placed to understand what is possible and how changes can be made. The London Midland 110 project is a classic example of this approach working and working well.

Under the heading 'Collective focus' the report suggests making 'capacity management' a focus for PR18. However it also acknowledges that this may be in conflict with the current focus on performance and suggests these are prioritised - but without any suggestion as to how. I would also suggest that 'capacity management' is a meaningless term without an indication of what the outcomes are to be. The report draws comparison with previous foci on safety and performance, but in both of these cases clear metrics were identified by the Government that the industry set out to deliver. These metrics reflected what the Government perceived to be the social benefit of the improvements. In the case of 'capacity management' there is no such obvious measure. Enabling more trains to operate on the existing network would not be an appropriate metric unless there was actually a demand for that to be satisfied. And the last periodic review did include capacity delivery metrics as Government objectives, which the industry and Government jointly set out to address.

It seems to me that there are only two key parties involved in 'capacity management' in planning terms: - one party (the Promoter) and Network Rail (the Enabler).

The promoter is incentivised to provide more capacity by the profit motive (increasing passenger or freight revenue exceeding the delivery cost) – which can be by running more trains or longer trains - or by statutory requirement (franchise obligations – including mid-franchise enhancements that have worked widely and successfully). It does not appear necessary to provide any further incentive to promote the seeking of worthwhile additional capacity.

The enabler (Network Rail) has sometimes been seen as 'reluctant' to be as creative as it might be in accommodating additional services. Given above are my thoughts on how the process of consideration could be developed. Incentivisation of this could be either economic (increasing the share of the earnings of the services via additional variable access charges) or regulatory (review of performance against these stages with regulatory enforcement).

In the case of the former approach (financial) a key concern is that increasing variable access charges would be likely to make the promoter's proposal less viable, leading to fewer proposals. These would however have been rejected through a purely administratively levied charge (ie there is no economic reason for the higher access charges). In addition, the current structure of the industry would actually mean this additional money to Network Rail would actually be passed, in due course, to the DfT and it is questionable whether that would actually incentivise Network Rail.

The latter approach (regulation) is favoured although it assumes that regulatory enforcement action is effective.

Malcolm Pheasey
24 September 2015