MICHAEL SCHABAS, partner at FCP Rail Consultants, suggested some possible changes to the industry model in a discussion with the Railway Study Association.

I
came to the British rail industry as a bit of an outsider. I was born in Toronto, and spent my early career building metros in Vancouver and Honolulu. I moved to London in 1988 to help the Canary Wharf developers secure the Jubilee Line Extension (JLE), and for the Docklands Light Railway (DLR).

I then stayed on as a consultant, working for the London Borough of Hackney and others to promote the East London Line extensions, which eventually became part of the London Overground. I also developed the idea of using St Pancras as the terminus for High Speed 1 for the London Borough of Newham and the King's Cross residents. British Rail, which was being planning a low level station at King's Cross, brought me into the team and eventually adopted the idea.

1992 ELECTION
In the 1992 General Election, John Major was elected with a commitment to privatise the railways. I had seen the benefits of airline deregulation in the US. As a consultant I was thrilled at the prospect of dozens of new clients. But I still had little understanding of how the British railway system really worked.

My first encounter with the new industry structure was the 1994 West Coast main line study. A few years earlier, I had put together a team to upgrade the DLR. That work was coming to an end and I persuaded Railtrack that the same skills and technology, including moving block signalling, were the best hope of rebuilding a dilapidated, but intensively used railway.

But Railtrack had little idea what it wanted.

The project director, Gil Howarth, had built nuclear...
NEW TECHNOLOGY

European Train Control System (ETCS) wasn't available in 1995, but digital mobile phones were, just, and a committee in Brussels was working on the principles of GSM-R (Global System for Mobile Communications – Railway). GPS had been used in the first Gulf War, so the pieces seemed to be there.

We suggested that Railtrack should carry out competitive development, awarding at least two contracts for the control system. This would increase the chances that someone would actually make it work.

Alas, Railtrack skipped this and awarded a single contract. This was abandoned a few months later, switching to conventional technology, but with no clear idea how this could be implemented. But that is another story.

VERTICAL INTEGRATION?

Before starting the West Coast study, Gil Howarth had asked how Railtrack could know what the new train companies would want. My response was that we would 'think like operators', but in truth we didn't have a clue.

Indeed, the whole idea of a multi-user, vertically separated railway was entirely alien to someone like me whose experience was in metro systems, where there is usually only a single type of train. The track and technology were inter-dependent, and any line upgrade would need an integrated solution. How could this be shared between multiple companies?

Early on, I attended a meeting with a Department for Transport (DfT) official, whom we attempted to persuade to allow a degree of vertical integration. He reiterated that vertical separation was the Holy Grail to the Treasury. It had worked in electricity privatisation, so why not in rail?

It only needed smart economists, accountants and lawyers to structure the contracts and performance regimes. Only this radical break up would bring new capital, new people and new ideas into the industry.

The official curtly pointed out that I had wasted a valuable half hour of his time. But Gil Howarth's question about operators had got me thinking. While looking for new clients, I found bus companies and airlines reluctant to enter the train business. When the US airlines were deregulated, new operators had entered the field. Maybe I could start my own train company?

FRANCHISING

Still with little idea how privatisation would work, I teamed up with Max Steinkopf and Jeremy Long, who knew about running companies, and formed GB Railways. Jim Morgan, who actually knows how to run trains, joined a bit later.

I wrote a letter to the Franchising Director saying that we were interested, and a few weeks later a van pulled up at my home with a load of documents for the first three franchise bids.

Initially, things went very well indeed. Bidders like Prum Rail, National Express, Virgin, M40 Trains and my own GB Railways won franchises with ambitions to introduce new rolling stock and to greatly increase service frequencies. The bids assumed rapid ridership growth, which in most cases was actually exceeded.

I would challenge the myth that privatisation was 'booched' because the structure assumed a declining industry. Certainly, decline was not a view that winning franchise bidders held.

MARKET CHOICE

During the West Coast study, we needed to define a specification for the upgrade. How fast should the trains run, how frequently, should they tilt etc? We couldn't find an objective way to do this. It was impossible to forecast traffic and revenue with great confidence. Train builders would not give firm prices unless you were really going to place an order, and Liverpool was bound to complain if it got fewer or slower trains than Manchester.

Together with Chris Stokes at the Office of Passenger Rail Franchising (OPRAF), we came up with the idea of letting the market decide. Railtrack would offer a range of price upgrade options, and the franchise bidders could choose. Thus was conceived Passenger Upgrade 1 (PUG1).

Railtrack agreed, blindly taking on the risk of delivering a complex, multi-billion pound project for a fixed price.

A few months later, I was awestruck when Virgin won the West Coast franchise with a commitment to pursue not just all of PUG1, but further enhancements too with PUG2.

The money-losing franchise would switch into profit, paying large premiums to the Government.

PROBLEMS ARISE

Then things started to go wrong. Railtrack sold too many paths on the network, not realising the reliability problems that would emerge. The Labour Transport Secretary John Prescott seemed to enjoy complaining about the rail industry, although he had no solution of his own to offer other than to expand OPRAF into a bloated bureaucracy, the Strategic Rail Authority.
This filled a void that Railtrack could have occupied, had it been more pro-active. Railtrack did not respond well to meddling by the SRA. And it gradually realised it could not deliver the West Coast upgrade for anything like the expected price. Mr Prescott had forgotten the aphorism ‘be careful for what you wish’.

Railtrack went bankrupt. Labour winced at the thought of actually being responsible for the railway and, after months of turmoil, created Network Rail as a way to avoid taking billions of pounds of debt back onto the Government’s books. Network Rail gradually rebuilt the engineering skills to maintain the network, but costs skyrocketed.

**BRITAIN’S RAILWAYS IN 2015**

After 20 years of partial privatisation, the British railway industry is in very good shape. It has achieved by far the highest growth in traffic of any railway in Western Europe. It is also one of the safest.

Customer satisfaction is high, although expectations keep rising. There are still strikes, but in general staff now work more efficiently and are better rewarded. Railways in southern England are now run largely from passenger fares, not taxes, although it is a different story in the regions. The Government now seems happy to provide capital funding for Crossrail, big electrification schemes, the Inter-city Express Programme and High Speed 2, with serious talk of Crossrail 2 and East West Rail.

**FARES**

Historical comparisons are difficult: because the industry has changed so much. Figures 1–4 show operating and financial data (at 2013 prices) for the nine Train Operating Companies (TOCs) whose franchise boundaries have not changed since privatisation. Figures for 1994 are from the original franchise sale documents, adjusted for inflation; 2013 figures are from the Office of Rail and Road (ORR). Note that the 1994 figures for Great Western include Thames Trains.

As Figure 1 shows, passenger income has, roundly, doubled. Figure 2 indicates that fares per passenger km have overall remained constant, but there is variation between the train operating companies (TOCs). The largest increase is on Virgin Trains (West Coast), about 10%; while the service has obviously improved much more than that, with faster, more frequent trains.

The range of fares is also much wider, with higher peak and first class fares, but also many more cheap tickets. I recently did work for the World Bank, trying to persuade China Railways to adopt British-style pricing. Officials were incredulous when I explained that the lowest fares per kilometre on Britain’s fast trains are actually well below the cheapest fares on Chinese high speed trains.

**OPERATING COSTS**

Figure 3 shows that, overall, operating costs per train kilometre have hardly changed. This puzzles some economists, who expect costs to fall in a privatised industry, especially where traffic is growing and there are economies of scale. I have been critical before of the McNulty review, which claimed that costs were 40% higher in Britain than in Western Europe (p64, May 2012 issue).

McNulty’s claim was made on the basis of dubious data and analysis, but missed a more important point. The cost of providing a train service depends partly on operator efficiency, but also on the service level that is offered. The price of coffee has gone up in central London over the last decade, but the quality also seems to have improved. Rising unit costs may be perfectly reasonable if customers are demanding, and getting, better quality.

Figure 3 shows that some TOCs costs per train km have gone up, while on others they have gone down. Efficiencies have been offset by some pretty big improvements in quality, in several dimensions. Somehow, c2c,
there is no way of knowing whether Network Rail could do better, because there is nothing with which to compare it. And it cannot be easy to innovate within a large monopoly enterprise.

I believe that Network Rail should be broken up into smaller pieces to enable diversity and innovation and also peer comparisons. It would not be too difficult to break off some pieces. Probably 90% of train services in East Anglia do not operate beyond the region; the third rail network south of London and the network in Scotland are similar. Each of these regions would be comparable in size with Belgium or the Netherlands, which seem to be large enough to sustain their own Network Rail type organisations.

Of course, there would still be some central coordinating functions, such as timetable management. But the vast bulk of activities and expenditure, including maintenance and operations, would be controlled locally.

These 'baby Network Rails' could be offered as concessions, or even sold outright. The ORR should be able to regulate them better. Besides being smaller, there would be the ability to make comparisons, and there would perhaps be more innovation as ideas moved between the different regional companies. Indeed, sectorisation of British Rail in the late 1980s had much the same objective.

AVERAGE FARE REGULATION

McNulty correctly identified problems with regulation, especially the 'false peaks' created by savers (now called off-peak, flexible) tickets.

The principle of regulating by the saver fare is elegant. I describe this to foreign visitors as the fare that you pay if you need to visit your mum in hospital. It is available at the last minute and it is flexible, so you can stay for as long as she wants. But you can't go first thing in the morning and you might need to stay for tea.

On most other railways, the highest fare is regulated. Although simpler to explain, this usually means the highest fare is that much lower, raising less money for the railways, and making less room for cheap discount fares.

**FIGURE 2: AVERAGE FARE PER PASSENGER KM (£, AT 2013 PRICES)**

![Figure 2: Average Fare per Passenger KM](image)

**FIGURE 3: TOC OPERATING COSTS PER TRAIN KM (£, AT 2013 PRICES)**

![Figure 3: TOC Operating Costs per Train KM](image)
Unfortunately, there has been no real review of the level of regulated fares since privatisation. So we have anomalies; for example London – Manchester, where the off-peak return is £51.60, while the comparable fare to Leeds is £103.

The journeys are similar in length and time, with similar market size and competition. It seems that in 1995, when the railways were privatised, East Coast fares had been increased to reflect the recent service improvements and electrification.

But when the West Coast was upgraded, nobody thought to raise the regulated fares. Either the Leeds fare is too high or the Manchester fare too low.

With the rise in real incomes over the last 20 years, the optimum price should have gone up. The Government should review off-peak fares and adjust them to a level that maximises net social benefit. Most likely, this would mean raising a lot of fares and possibly lowering a few.

On commuter lines, the season ticket fare is regulated because this is where the railways have market power. But commuting patterns and fare collection technology have evolved.

Oyster capping shows how different pricing strategies can increase both ridership and revenues, but regulated train operators have little freedom to experiment.

I wonder if it might be better to regulate both inter-city and commuter fares by the average fare per passenger kilometre. Essentially, the operators can charge as much or as little as they want, but if they charge more to some customers, they would need to work harder to sell more cheap tickets to others.

This could encourage operators to maximise ridership as well as revenues.

**HOW TO TRANSFER TRAFFIC RISK**

Transferring traffic risk has been a recurring challenge for the Government. The most optimistic forecast tends to win the franchise. While operators have capital at risk, it is never politically attractive for the Government to terminate a franchise.

How many times have critics claimed that the East Coast franchise ‘failed’, when for the travelling public and Government it has performed better and better?

For the Thameslink franchise, the Department for Transport (DfT) decided not to try to transfer traffic risk at all. The operator will certainly have its hands full managing the commissioning of new trains and infrastructure, but the same model seems to have worked on London Overground.

But the Overground is marketed by Transport for London as part of a larger network. DfT will be paying Govia Thameslink Railway to market its services. How creative will it be? Marketing involves risks, but who will take them?

For the recent East Coast franchise, DfT transferred traffic risk, but with a mechanism to reflect expected changes in Gross Domestic Product (GDP). The mechanism can’t be perfect, because the relationship isn’t perfectly understood. The risk is moderated, perhaps, but remains. I wonder if this is really the best way.

Investors in most other industries take GDP risk. Why is it so important to unbundle it from rail franchises? The problem is that, in the short term, GDP risk can wipe out all the profits of a limited term franchise. In a seven year or even a 15 year franchise, the performance bond can never be large enough to stop an operator from walking away from an overly ambitious revenue projection.

I suggest a different deal structure. Why not set an annual rent, well below the annual premium that is anticipated? The franchise could then be sold to the bidder offering to pay the largest up-front lump sum. I understand this is how many office leases are ‘sold’. Bidders would take a view of the profits they expect to make, and discount them back to a single initial payment. Operators might team up with infrastructure funds to raise the money.

So that’s it. Not a new model, but three changes within the existing structure. — John Glover

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**FIGURE 4: TOC OPERATING COSTS PER PASSENGER KM (£ AT 2013 PRICES)**

<table>
<thead>
<tr>
<th>Company</th>
<th>1994</th>
<th>2013</th>
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<tr>
<td>C2c Rail</td>
<td>0.00</td>
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<tr>
<td>Chiltern</td>
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<td>0.00</td>
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<tr>
<td>East Coast</td>
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<tr>
<td>Virgin Trains</td>
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<td>0.00</td>
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<tr>
<td>FGW</td>
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<td>0.00</td>
</tr>
<tr>
<td>Southeastern</td>
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<td>0.00</td>
</tr>
<tr>
<td>Southern</td>
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<td>SWT</td>
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</tr>
<tr>
<td>Merseyrail</td>
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</tr>
</tbody>
</table>

Includes rolling stock leases but excludes Network Rail charges

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**RSA**

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