

There's another up-beat lead story in the latest column, following on from last month's report on the Great British Railway Transition Team's development of a 'Whole Industry P&L'. Less cheerful is my analysis of the Department for Transport's so-called rolling stock pipeline.

WCML - to tilt or not to tilt?

New trains - wanted or needed?

Captain Deltic's Notebook

In the December Informed Sources I considered the implication for the rolling stock contractors of the cancellation of Phase 2 of High Speed 2, together with future journey times. This included the claim by the Department for Transport, that HS2 trains joining the West Coast Main Line at Handsacre Junction would still cut 30 minutes off the current Euston-Manchester timing.

I calculated time saving at 23 minutes. Under the current line speed regime on the WCML, the HS2 sets would be limited to 110mile/h, compared with the 125 mile/h of today's Pendolino. So even that 23 min could be optimistic.

But, in this month's column I report on work by Avanti to up-date the long standing arbitrary policy which has applied the 110 mile/h maximum Permissible Speed (PS) to all trains on the WCML. Of course, those fitted with tilt can run at the Enhanced Permissible Speed (EPS) of 125 mile/h.

Avanti's successful bid for the Intercity West Coast franchise included the replacement of the Class 221 tilting 'Super Voyagers'. But, with Alstom no longer able to supply tilting trains for the UK market, the Voyager fleet replacement is a combination of Hitachi Class 805 bi-modes, for continuing services beyond the wires, such as Holyhead, plus Hitachi Class 807 electric multiple units for duties where, up to now, diesel Voyagers have been running on the electrified network throughout.

How will the journey times for a non-tilting Class 807 EMU compare with a Class 390 on Liverpool services? In the column I describe the work by Avanti to exploit the performance of the Class 807 EMUs combined with the introduction of a new 125 mile/h MU Permissible Speed for the trains between Euston and Weaver Junction.

I quote some examples of the new MU PS. For example, leaving Euston, from mile post (mp)19 to mp40, the potential conventional line speed will be between 115 and 120 mile/h rising to the full 125 mile/h from mp32.

Meanwhile, what will be the impact on journey times of the Class 807's better acceleration and the new line speeds? Modelling shows that on London-Liverpool, the EMU will be about 5 min slower than the current Pendolino timing. I look forward to the first test runs.

As for what this means for the controversial issue of Anglo-Scottish journey times for the HS2 Classic Compatible trains, this is still a work in progress. Avanti has first to complete a similar non-tilt line speed analysis for the WCML north of Weaver Junction.

Also a work in progress is the performance of the new HS2 rolling stock. The Bombardier Designed ETR1000 for Italian State Railways is assumed to be the template for the HS2 trains.

Note that its maximum acceleration is lower than the Class 807 and, geared for 400km/h, the train is unlikely to burst out of the starting blocks. So savings will mainly have to come from MU line speeds north of Preston.

One final thought. A Class 390 running at 140 mile/h non-stop on HS2 to Handsacre Junction would save nearly 15 minutes compared with the WCML. Now wouldn't that be a fun test run?

Do we need new trains?

When franchise replacement picked up after the 2012 Intercity West Coast procurement fiasco, and with Pacer replacement becoming a political issue, how to bring new trains into franchise bidding without the associated increased rental and operating charges adversely affecting the bids, had to be addressed. The solution was to introduce a quality factor to franchise bid evaluation.

New trains obviously improved the quality of service and the quality factor put a value on this improvement. This value was added to the premium or subtracted from the subsidy.

In one bound, replacement franchise bidders had an incentive to acquire new trains. And the Pacers were soon on their way to the scrap yard.

However, bidders for other replacement franchises soon saw this development as rewarding a more aggressive bidding

strategy. Abellio was first to realise that if new trains were now the key to franchise-winning bids, then the more new trains, the better the chance of winning.

Thus, the Greater Anglia replacement franchise saw the first 'mass extinction' based bid, with all the existing fleets replaced. True, the Greater Anglia stud was a bit of a menagerie, built up since British Rail days, but the policy saw trains with years, or even decades, of life remaining going for scrap or storage. The Class 379 fleet, delivered in 2011, is still, expensively, in store awaiting a new operator.

Competing for the South Western franchise, the First Group/MTR joint venture saw replacing the expensively re-tractioned Class 455 suburban fleet as a potential quality factor. Its winning bid included replacing not only the Class 455s, but also the almost new Class 707s, which have now found a new home with Southeastern.

Primary beneficiary of this new train Trolley Dash was Bombardier, as was, at Derby. Two production lines, each capable of out-shipping five vehicle a week, would become six. And even then deliveries lagged.

All this activity has left train operators with the expectation that new trains are theirs by right. This optimism continues, despite post-pandemic ridership levels and with operators under ferocious pressure from Government to cut costs.

In the column, I analyse the prospects for the current published requirements. And this is supplemented by DfT's own view of potential future orders.

In the February Modern Railways (p9) we carried a brief report on DfT's own rolling stock commercial pipeline. In the column I have converted it to a Table, with the usual Informed Sources interpolations – such as expected costs per vehicle.

And just as the March column was going to press, Rail Minister Huw Merriman wrote to the key players in the industry with an 'Overview of current and expected GB rolling stock opportunities'. At the end of the usual ministerial platitudes the letter included a table of 'Current live competitions'. This provided some additional information, not in the original DfT Pipeline, which I was able to include.

Meanwhile, DfT seems to be expecting some heroic tender evaluation and contract award timescales. Here we are in March 2024, with not a single invitation to tender issued, yet DfT is expecting Train Operators to have placed contracts for 1,750 vehicles, worth approaching £6 billion, in 18 months' time.

Good luck with that.

Captain Deltic's Notebook

In the Notebook, I provide an update on progress with the Welsh Government's new Global Centre for Rail Excellence (GCRE), including a comparison of its proposed facilities with those of existing test centres in Europe and the UK.

Projected cost of GCRE is £400 million, with seed funding already provided by the Welsh (£50m) and UK (£20m) Governments. The remainder is to be raised from the private sector.

My reason for the update was reports that raising the extra funding was proving hard work. So I checked with GCRE on the current situation.

Their spokesperson told me: 'Over the last year GCRE Limited has been in discussion with potential private investors to secure the capital it needs for construction of the development. Despite the challenges of the current investment climate, including high inflation and interest rates, discussions with investors are still on-going and we remain confident. At the appropriate time we will provide a public update on our investment plans and next steps for the project'.

However, the spokesperson also confirmed that the delay in obtaining the funding has meant that that opening of the Centre had slipped back from 2025 to 2027. Now you might think that £70m would be enough to get the smaller of the two test loops operational. But apparently, the initial funding will allow GCRE to install the storage sidings and accommodation plus the new UK Rail Research & Innovation Network (UKRRIN) facility.

Roger's Blog

January was pretty quiet, as I was concentrating on the two big items for this month's column.

Ride comfort at higher curving speeds took me back to 1982. British Rail was looking to run faster on both the West Coast and Midland main lines: I was reporting the associated trials as one of the guinea pigs on-board the test trains.

Next, the DfT Rolling Stock Pipeline was a typical DfT spread sheet which had to be sense-checked against the real world. It then had to be double-checked at the last minute against the Table in Huw Merriman's letter, which didn't correlate with some of the entries in the original pipeline.

While Traction & Rolling Stock was a staple of this column from the start, what used to be called Signals & Telecoms (S&T), and is now Command Control & Communications, has become another 'speciality of the house'. With the cost of signalling an on-going cause of concern, I am looking forward to the latest Webinar from Network Rail's 'Target 190' team at the end of the month. The '190' refers to a cost per Signalling Equivalent Unit (SEU) of £190,000.

I've already got signalling down on my list of topics to be covered for April, so the Webinar should ensure that my report is

as up-to-date as can be.

Last year, you may recall that I had a stab at producing a 'Whole Industry P&L', using the published financial data for 2021-22. Now that the financial results for 2022-23 are available, I'm repeating the exercise. Have the railway's fortunes got better or worse?

That's the fun, at least for me, of spread-sheeting. You don't know what to expect until you have finished!

You should be able to find out next month!

Roger

[EZezine Company Terms of Service Privacy Policy](#)