Review of Train Performance Strategies
Route summary – NW&C/Northern

May 2022

Route summary – North West/Northern

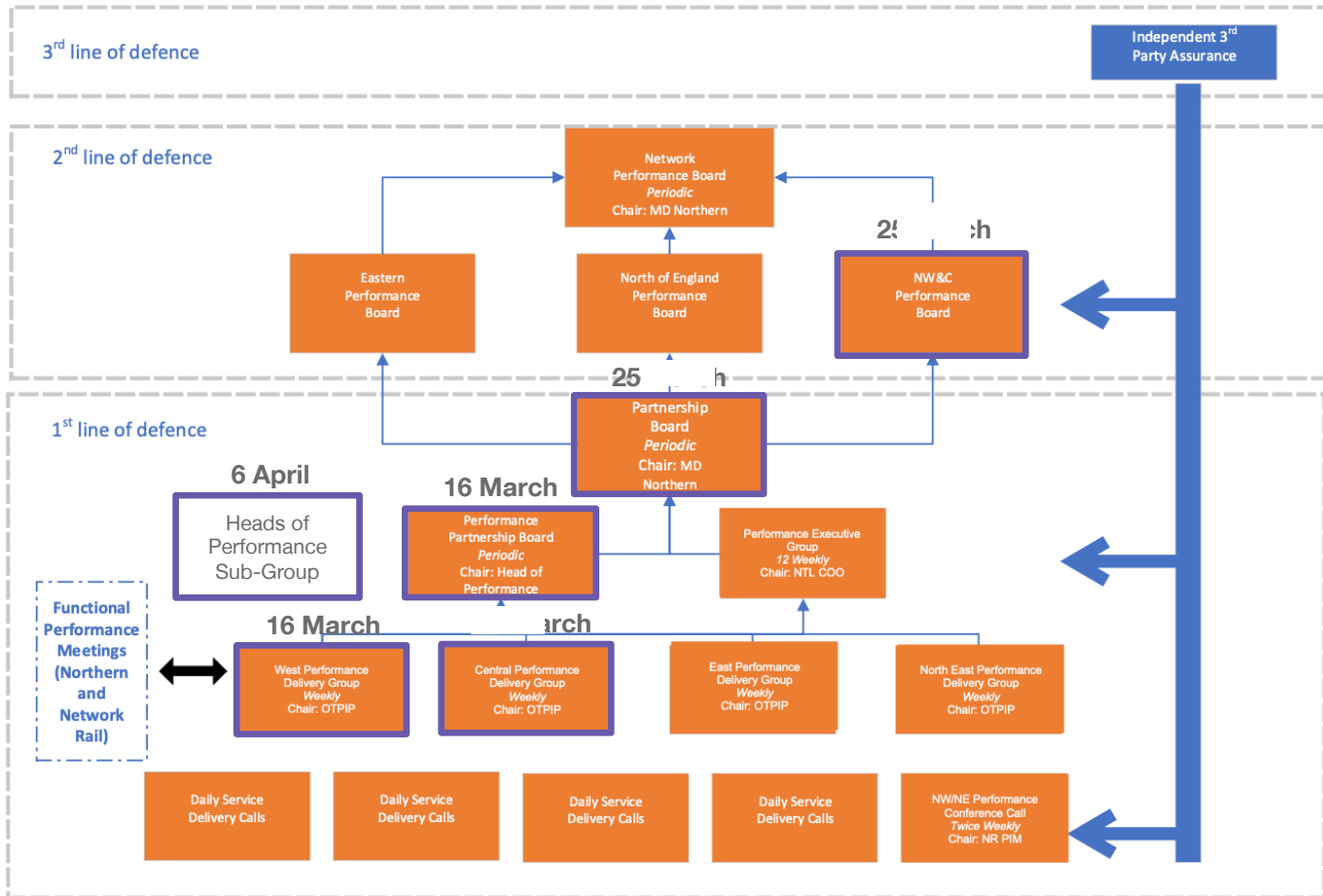| Remit question	RAG	Comment
Q1a. Is there a clear 'line of sight' from JPSs to delivery of PIPs and performance schemes?	🟡	Strengths/working well: • There is good evidence of a strong joint endeavour approach in regard to the development of the JPS Areas to improve: • There would be value of having a greater level of detail in the JPS on the specific performance initiatives, in order to provide better line of sight • The JPS contains significant sections on the processes for delivering performance benefits (e.g. PIMS, RM3P). It could be rationalised to focus more on the problem statement and the details of the improvement measures, with a separate supporting plan that describes 'how' the strategy will be delivered • The JPS could make more reference to key business as usual maintenance activities as important contributors to performance • There needs to be greater transparency on how estimated benefits feed into the target setting processes and the strategy • The regularity of updating the plan supporting the JPS could be improved
Q1b. How well have plans been delivered over 2020/21 and 2021/22?	🟢	• Good progress on the sample of 10 projects – see slide 8 • More difficult to assess progress of the entire year's portfolio, as MI does not give a summary of overall delivery of the portfolio of initiatives against baseline plan

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Remit question	RAG	Comment
Q1c. Are governance processes being followed, as outlined in the JPS, are these effective in enabling leadership to monitor and intervene	🟩	• Good evidence of governance processes being followed, strong leadership, very effective joint and collaborative whole system ethos at both senior and working levels, with examples of constructive challenge and innovation
Q1d. Are processes in place to monitor effectiveness of the JPS in meeting targets and amend when appropriate?	🟨	• Processes should be strengthened to enable deeper dives of the progress of specific plans, as well as providing to senior forums improved summaries of progress (including highlighting key issues and risks that threaten their delivery which require senior management attention)
Q2. How do routes and TOCs measure business benefit of performance improvement works, and assess whether delivery of plans is effective in meeting objectives?	🟨	• Estimates for some schemes produced (primarily intermediate measures). However, much more work needed to follow-up on benefits realisation once schemes are complete
Q3. How effective are the reporting and liaison processes in providing information for stakeholders?	🟩	• Good evidence of joint engagement with ORR and other stakeholders (from interviews, possible need for greater dialogue with TfN on line of sight)

Governance arrangements:

Meetings attended in review Stage 2

Route summary – North West/Northern

Sample Project	Commentary
1. Bishop Auckland Line Speed Improvements	SRT reliability benefit on key single track corridor, to be realised via Dec-22 timetable, wider learning applicable to challenge line-speeds in renewal works
2. Additional plunger at Moss Side	Small 'quick-win' project based on common-sense need, less clear on contribution to overall system-wide performance improvement
3. Removal of Crewe Conditional Double Reds	Strong example of good performance benefits at modest costs, with good check on benefits realisation, wider application across route and beyond
4. Manchester Airport Trip-wire	Clear problem statement, though unable to fully quantify performance benefit due to complexities of train services across Manchester
5. GPS fitment and analysis	'Enabler' to understand and address timetable problems, with benefits that, by their nature, are harder to isolate and quantify – see slide 6 on Stage 3
6. West 'Start of Day Project'	Strong example of tackling a portfolio of small problems that add up; such benefits by their nature are harder to isolate and quantify – see slide 6 on Stage 3
7. Water Trak / Cryogenics	Innovative operator-led study and trials of two solutions to address autumn performance issues, with potential learning across industry. Further definition of benefits needed
8. Fencing at Dinting Station	Small 'quick-win' project based on common-sense safety need
9. Southport CIS	Good example of scheme developed directly by local operator input. Less clear on benefits realisation due to wider operational complexities on route, though evidence of tracking intermediate benefit via 'Bugle' pot – see slide 6 on Stage 3
10. Quartz system roll-out	Strong example of tackling a portfolio of small and sub-threshold delay problems that add up; such benefits by their nature are harder to isolate and quantify – see slide 6 on Stage 3

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Stage 3

Project/Theme	Commentary
5. GPS fitment and analysis	• Project supports/informs and helps enable timetable adjustments to improve performance, linked to the Manchester Recovery Task Force (MRTF) and planned Dec-22 timetable change • Provides 'to the second' data on a large number of sub-threshold and larger attributed delays where the current timetable is effectively 'set up to fail' due to regulation, SRTs, dwells, paths, etc; and thus provides evidence to challenge timetable plans • Benefits realised from 2023. Discussion and clear view expressed that it is hard to isolate and quantify benefits now, as distinct from evaluating after implementation; notably as myriad of small changes and as other whole system factors play in (fleet changes, unit/traction, train length) • As a result, the benefit to future target-setting (notably NRC) is not quantified bottom-up • Notwithstanding the difficulty, benefits estimating would require significant analyst resources • GPS data can also be used to evaluate the benefits of other performance projects, e.g. Bishop Auckland Line Speed Improvements (sample project No. 1)
6. West 'Start of Day Project'	• Strong example of 'Pareto Rule' focus on important performance issues, even if estimating and/or evaluating projected benefits is challenging • Examples provided of how previously shared analysis is being followed-through into clear, numerate 'before vs. after' positive trend data, as evidence of benefits and hence good intermediate measures of benefits that demonstrate tangible performance improvements • Noted value of being able to evidence and share success and hence motivate teams
8. Fencing at Dinting Station	• Greater clarity on performance impact needed. While low frequency service, is nevertheless key to performance as single-train working/reversing on route 'triangle' with reactionary impact through Manchester Piccadilly • Benefits not calculated as project was a 'quick win' based on issues escalated (4 incidents flagged to Control early 2020) from front-line, with benefits to both Network Rail and Northern (with no incidents reported since the scheme was complete)

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Stage 3

Project/Theme	Commentary
9. Southport CIS	• Combination of boarding, loading, dwell related delays; plus passenger comms benefit
	• Only two incidents in 8-9 months since project delivery (DM: 4mins and 8mins) as evidence of benefits compared to regular weekly occurrence before, of up to 40mins/incident
	• Specific 'Bugle' pot established to monitor incidents, although cannot compare before vs. after as this was established after delivery.
	• Challenge to measure benefits more accurately as interdependent with new (bi-mode) fleet reliability, resultant unit/traction perturbation, timetable issues, etc; a good example of 'whole system' complexity and hence need to focus on interim measures
10. Quartz system roll-out	• Whereas GPS provides data to the second on 'what' delay occurs, Quartz provides data for delays over 20 seconds at stations on 'why' they take place (previously unexplained), and ability to consolidate and RAG-score to identify the 'Preto Rule' most important changes to make
	• System in place at Network Rail managed stations (and Neville Hill depot), extending to Northern stations and also in use starting by Avanti
	• Changes will be to planning rules and regulation, headway, dwells, late inbounds where even small delays trigger larger reactionary impacts
	• As per GPS, hard to isolate and quantify benefits of myriad of small future timetable changes
Benefits	• Route has good knowledge on what to do to address performance, however: estimating future benefits of initiatives is complex and also; ability to drive it, manage it, secure buy-in and funding is constrained by resource capacity within the performance team
	• Noted challenge (including on benefits of initiatives) due to the 'new normal', e.g. change to am peak patterns via WFH, commuter vs. leisure demand, challenge to capacity and dwell for the latter, rising antisocial behaviour impacts

Route summary – North West/Northern

How well have plans been delivered in 2020/21 and 2021/22?

Line of enquiry per project 1 to 10	1	2	3	4	5	6	7	8	9	10
Defined problem statement and objective	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩
Defined benefits and metrics	🟩	🟨	🟩	🟨	🟨	🟩	🟨	🟨	🟨	🟨
Clear scope	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩	🟩
Scope delivered	Dec 22	🟩	🟩	🟩	🟩	On-going	Next stage	🟩	🟩	On-going
Benefits realised and validated	Dec 22	🟨	🟩	🟨	Dec 22	🟩	Next stage	🟨	🟨	🟨
Governance, collaboration and challenge	🟩	🟨	🟩	🟨	🟩	🟩	🟩	🟩	🟨	🟩

🟩 Good definition and/or delivery progress, and no issues and/or risks identified in our review

🟨 Sufficient definition and/or progress, and only minor issues and/or risks identified in our review

🟥 Poor definition and/or delivery progress, and significant issues and/or risks identified in our review

"Next stage" refers to activity that is not possible until the project has moved into the next stage of its lifecycle

Route summary – North West/Northern

Good practice – performance projects

- Crewe Double-Red. Strong evidence of scheme that is modest in cost but has high performance returns and that has been developed with local-level operator input.

- Emphasis on assessing root causes and tackling sub-threshold delays using a variety of tools, e.g. Quartz and GPS.

- 'Start of Day' project analysis demonstrates clear evidence of train punctuality improvement, and relevant evidence of benefits to share with all routes.

- Examples of schemes with wider application across the route, and to other Network Rail routes, e.g. Water Trak, Cryogenics.

Good practice – performance management process

- Strong joint endeavour and collaborative working with Northern and other operators; i.e. Avanti WC, TPE and Merseyrail (the main TOCs North West interact with) as well as with Chiltern, WM and XC). Sample projects presented by both teams.

- Good evidence of challenge, based on whole system approach, with evidence of trade-offs assessed.

- Evidence of data on intermediate measures and indicators that can be used to assess 'before and after' impacts in lieu of precisely estimated/attributed DM outputs that are hard to isolate for whole system projects, e.g. 'start of day' delay count, Quartz attribution count, new Bugle pots as used for Southport CIS project, dwell non-compliance.