1. Summary

This document has been developed by fleet engineers for fleet engineers to help improve rolling stock performance. This issue has been updated to improve guidance on Common Reliability Data (Section 2) and New Train Procurement (Section 13). Guidance on On-depot Fault Finding (Section 9) has also been added. The document has been reformatted to tidy up the sections.

This issue contains:

- **Common Reliability Data** (Section 2) – Miles per 3 Minute Delay, Miles per Trust Incident (MTIN) and Delays per Incident (DPI).
- **Management for Improvement** (Section 3) – principles, methods and examples to motivate sustained improvement, including Day-to-day; Monitoring and Feedback; and Change Management; Risk Evaluation.
- **Seasonal Management** (Section 4) - To maximise the level and consistency of fleet performance during seasonal variances both operations and engineering need to work together to produce robust and effective management plans. This section is intended to promote a structured approach to seasonal planning and operations.
- **Train Preparation** (Section 5) – This section emphasis on Plan, Do, review process to ensure fleets safety, reliability and presentation.
- **Delivering the Service** (Section 6) – engineering, operations and planning need to understand each other and pull together: depot planning and train planning (e.g. Rules of the Depot); faults and failures (e.g. 2-way communications); measures of fleet performance. Working together on Seasonal Preparedness is vital.
- **The Depot** (Section 7) - the key frontline resources of fleet maintainers: depots (design, capacity and capability), their management and staffing, including motivation, training, skills development and competence assessment; the High Performing Depot Specification.
- **The Vehicles** (Section 8) – the core activities of fleet maintainers: collecting and using data (Failure Mode Analysis, condition monitoring, analysing trends); managing repeat defects, deferred work and configuration control; developing the maintenance regime; understanding availability
- **On-Depot Fault Finding** (Section 9) – This section explores good practice for on-depot fault finding especially around No Fault Found, also the best procedure in establishing robust fault finder with an organisation.
- **The Infrastructure** (Section 10) – how to manage the engineering interfaces between vehicles and infrastructure (relationships, preventing problems before they start).
- **Managing Fleet Incidents** (Section 11) - Incidents which occur on the railway will impact on the whole system; this impact is usually measured in train delay minutes. This section includes guidance on how Fleet Incident Management is best implemented.
- **Spares and Suppliers** (Section 12) – having the right parts when and where you need them (spares holding, floats, measures, link to risk, change control, obsolescence, forecasting), and improving the quality of the parts through effective closed-loop relationships (Unipart Rail, ARTTT, RISAS).
• New Train Procurement (Section 13) – how to buy a new train fleet to get the best “out-of-the-box” service performance, risks associated with whole fleet behaviour following introduction.

• ROSCOs (Section 15) – how ROSCOs can facilitate reliability improvement throughout vehicle lives, including Fleet Management Plans; User Groups; common bits and common issues; optimising for Duty Cycles.

• Overhaul Management (Section 16) – there is a recognised risk that vehicle re-entering service post overhaul suffers from a reduction in reliability; this section aims to address the issues which cause fleets reliability decline.

• Outsourced Maintenance (Section 17) – best practice in TOCs managing outsourced maintenance, connection to training and development of “in-house” skills and competences (principles are also relevant to TOCs which do most of their work in-house).

• Business Continuity Management (Section 18) – how any business can prepare and implement the strategic and tactical capability of the organisation to plan for and respond to incidents and business disruptions in order to continue business operations at an acceptable pre-defined level.