

## Appendix E – Examples of Best Practice Supply Chain Management

**Example: Timely Supply of Material – Spares Holding**

The best approaches to spares holding involve hard thinking (about how the parts are used by people) and analysis (about what the vehicles need when), in order to produce the right mix of location and accessibility for different items. It also involves trust (if you keep all the parts under lock and key, it will be at best less efficient for staff to access them). Best practice is to create trolleys of materials, tools and instructions for each type of routine activity (e.g. each B Exam). Trolleys include shadow boards for location of items. Parts used can be automatically booked to the vehicles.

Typical options for different types of parts for work arising / repairs integrate with depot facilities and include:

- Lineside vending machines for low value items with shelf life (e.g. Loctite) – machine dials the supplier when refill required
- Bins in the shed for low value bulky stuff e.g. white overalls
- Lineside supplies of frequently used items e.g. wiper arms
- Designated place(s) in the shed for bulky but expensive parts (and their paperwork) e.g. autocouplers, air-conditioning units

**Example: Timely Supply of Material – Float Status**

Southeastern monitors floats of critical items e.g. compressors and each wheelset type, broken down into:

- At depot, serviceable
- At supplier, serviceable
- At supplier, under repair
- Not serviceable

FirstGroup Rail are accredited to BS 11000 collaborative business relationships. This has assisted in building collaborative working and improve customer/supplier communication. This standard has also assisted in defining roles and responsibilities and supports collaborative decision-making leading to more valuable business partnerships.

**Example: Management of ‘rogue’ components (repeat offenders) – Providing consistent defect information to suppliers & defect investigations on components**

Unipart Rail undertook a 6 sigma project on carbon brush pigtails coming out in service and causing delays. Working with the TOC and the supplier, a problem was identified with the sample test methodology. Analysis of the supplier’s data using 6 sigma principles enabled new test limits to be recommended, solving the problem. Northern have monthly meetings with Unipart, plotting failure rates of key components and reviewing actions to improve them. First Group has identified performance data for Unipart to pass down their supply chain to facilitate improvement on key components. London Midland has seen material issues resolved when TOC, Unipart, supplier and relevant ROSCO all get engaged.

Unipart Rail has a very simple high level performance measure which shows what welcome progress has been made. Component reliability, in total defects per million components (DPMC), based on warranty claims made (whether rejected or accepted)

Contd...

YEAR	1998	2002	2003	2004	2006	2007	2008	DPMC
------	------	------	------	------	------	------	------	------

Target	N/A	N/A	N/A	2,500	3,900	3,400	3,100
Actual	20,000	3,900	3,400	3,700*	4,500^	3,100	

\* down to 2100 if lighting inverters are excluded (these were 30% of total warranty claims and arose from Unipart)

Being forced to re-source away from the OEM because it no longer wanted the business - the new supplier actually worked to the drawing, which was subsequently found to be inadequate).

^ Lighting inverters still a high volume issue – latest versions not actually failing, but protection operating – if the power is removed and reconnected they work again. Another big issue in June and July which affected the year’s figures were fasteners – they hadn’t actually failed, but were of substandard quality in some cases.

Example: ScotRail asked a Unipart facilitator to help Haymarket depot management team implement a communications cell. They worked from deciding what to measure and how to measure in order to help achieve delay reduction commitments. Boards displaying Key Performance Indicators for people and vehicle maintenance processes compared to plans and targets were implemented to share information and improve problem solving focus. Delays were significantly reduced and staff morale rose.

In addition, Unipart Rail has undertaken initiatives such as Policy Deployment with their suppliers ...

Example: Unipart Rail was concerned that the culture inherited from the pre-privatisation era was leading to sub-optimal relationships with its main suppliers. They wanted to replace buyer/ seller relationships based on price with partner relationships based on mutual interest. One day exercises with each of their 4 main suppliers helped them draw up a shared Policy Deployment Matrix, and derive 3 joint projects from it. Feedback was positive, with clearly defined common goals and specific actions for achieving them. The mutual trust developed has led to further joint projects and more collaborative relationships at all levels.

Example: Eversholt’s high level supplier management strategy has been developed with the input of people from within its business, its key suppliers and with several TOCs to ensure that it is more reflective of TOC requirements, including current and generic requirements such as ACOP1003 and RISAS. The objective is to develop the market place to meet Eversholt’s and its customers’ current and future needs.

Five key management tools are deployed, comprising:

- \* A structured communications strategy
- \* Implementations of account plans
- \* Supplier evaluation
- \* Segmentation
- \* Market analysis

Contd:

These business-level tools are underpinned by project-specific management regimes that provide Eversholt’s supplier community with visibility of TOC performance requirements and key performance drivers, ensuring alignment of stakeholder objectives. Supplier senior management commitment to fleet reliability improvement is fostered through Steering Groups, with clear terms of reference and which give a perspective to performance trends and any emerging issues. Recent

successful examples are the 3-way groups with Bombardier, Eversholt and NXEA (for Class 315 C6X) and GTR (for Class 365).