Agenda Item 5

Transport for London

Surface Transport Panel

Subject: Developing an Integrated Asset Management Plan

Date: 22 October 2013

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1 Purpose

1.1 This paper provides an update on asset management improvement and integration activities in Surface Transport and more widely between Surface Transport and Rail and Underground.

1.2 The Panel is asked to note the paper.

2 Background

2.1 PAS 55 and the draft ISO 55000 (to be published in November 2013) are the international standards for Asset Management (AM). They set out the high level AM requirements that asset intensive organisations should adhere to. The standards have been adopted widely in the UK and internationally. They have been adopted across TfL, both in Surface Transport and Rail and Underground.

2.2 Basing AM decisions on PAS 55 and ISO 55000 principles enables organisations to maximise return on investment in assets by translating strategic objectives into asset-related decisions and actions. This includes a lifecycle approach that seeks to optimise cost, risk and performance.

2.3 A Surface Transport AM maturity assessment was undertaken in 2012. The four departments reviewed (Bus Infrastructure, Cycle Hire, Roads and Traffic Infrastructure) received separate reports commenting on practices and AM maturity compared with industry norms. Maturity was scored on a 0 to 3 scale, the former representing Innocence and the latter Compliance with the above standards. The findings showed a range in maturity across the four business areas, from 1 on some activities to 3 on others. The results are summarised in Appendix 1.

2.4 The new Surface Transport Asset Management Directorate was formed on 30 September 2013. This brings together bus, traffic and road assets.

3 Asset Management Action Plans

3.1 Based on the AM maturity reports, each department identified key areas for improvement and developed action plans. Appendix 2 summarises key actions being progressed.

4 Integrated Asset Management in Surface Transport

4.1 The AM maturity review identified a number of potential areas for integration across Surface Transport where practices are currently not aligned, including; investment planning, whole life cost/value analysis, asset strategies and plan, value management and Asset Management Information Systems (AMIS). These inconsistencies mean Surface Transport has not been best placed to:

(a) robustly identify and compare asset investment needs and priorities across the whole business;

(b) readily share AM practices and innovations; and

(c) achieve efficiencies through aligned/combined working, for example, on Asset Management Information Systems.

4.2 To realise these benefits, an integrated plan for aligning and improving AM in Surface Transport is required. Initial progress has been made, as discussed in section 5, but more significantly, the new Surface Transport Asset Management Directorate brings together the road, traffic and bus assets. Aligning these assets under one directorate will facilitate quicker integration and alignment of asset management practices.

4.3 It is acknowledged that realising the benefits from aligned AM practices and a collaborative 'business as usual' (BAU) approach will take time. For example, it took the Roads Directorate two years to align Investment Planning and Value Management practices across carriageways, footways, bridges, tunnels, lighting and drainage; this has significantly improved the effectiveness of the capital renewal programmes, some by over 30 per cent, delivering better outcomes for less investment.

5 Collaboration with Rail and Underground

5.1 Since 2010, the Roads Directorate has been actively engaged with London Underground on a range of AM activities, to both share knowledge and align practices where appropriate. Recently the Roads and London Underground have been working on:

(a) developing a common set of TfL AM training courses; and

(b) procuring a TfL wide contract for AM maturity assessment and PAS 55/ISO 55000 certification.

5.2 Relevant to all TfL asset owners, a pan-TfL Asset Management Group has recently been established. The first meeting was held in July 2013 and attended by AM representatives from Surface and Rail and Underground directorates. Objectives agreed were:

(a) to provide direction on PAS 55/ISO 55000 AM activities;

(b) 1here appropriate, to promote consistency of approach; and

(c) to be a forum for collaboration and sharing good practice.

5.3 The next meeting for the pan TfL Asset Management Group is scheduled for October 2013. Agenda items include agreeing the Terms of Reference, and each part of the business giving an overview of its current AM practices. The purpose of the presentations is to identify areas of commonality where the group should focus to deliver benefits to the business. Initial thoughts are:

(a) draft a pan-TfL AM Policy as required by PAS 55/ISO 55000. This will be subject to Board review and approval;

(b) develop a common set of internal AM training courses;

(c) develop common templates and guidance for AM Strategies;

(d) develop common templates and guidance for AM Plans;

(e) align whole life cost/value assessment tools and techniques; and

(f) align prioritisation/value management practices.

5.4 Key benefits of aligning AM practices include removing duplication of effort, more scope for sharing practices and expertise across the business, and rapidly improving areas of lower maturity by learning from mature practices.

6 Widening asset management practices across London

6.1 A strategic and collaborative approach to the management of road-over-rail bridges across London is now emerging, for example, including those owned by TfL, Network Rail and the boroughs. Network Rail is not required to meet modern highway loading requirements for its road-over-rail bridges. However, long-term planning that co-ordinates work (maintenance and strengthening) between organisations and across London, will provide benefits by removing restrictions and optimising interventions, which will in turn reduce disruption and deliver better value for money.

6.2 In addition to TfL owned assets, TfL provides LIP investment for borough owner assets, for example around £20m per annum on carriageway resurfacing and £8m per annum on bridge strengthening. An integrated approach to all TfL funded asset investment on London's roads would maximise value, for example:

(a) **Asset Investment Planning** – TfL has well established asset investment practices for carriageways that have already been applied to the Borough Principal Road Network (BPRN) to demonstrate and justify investment. As TfL enhances its approach for investment planning on bridges this can also be applied to borough bridges. This will be essential for understanding the long-term capital renewal needs of BPRN bridges as the bridge strengthening programme ramps down over the next five to 10 years; and

(b) **Value Management (VM)** – a consistent VM approach for identifying and prioritising works will ensure the maximum benefits (and risk reduction) are achieved for TfL asset investment. The approach needs to be consistent across TfL surface assets and LIP funded assets, thereby providing a fair and objective basis for allocating funding

between organisations and asset types. The approaches used by TfL and the boroughs for carriageways are well aligned and there are similarities in the approaches used for bridges.

(c) **Co-ordinated programmes and plans** – all TfL funded asset investment programmes (Traffic, Buses, Roads, Cycle Hire and Boroughs Roads and Bridges) can deliver benefits and cost efficiencies through better corridor and/or site co-ordination. Co-ordination of forward programmes (one to three years) will be appropriate to align and deliver benefits from most BAU works, but longer term plans (three to ten years) will be required to maximise benefits and co-ordination around larger works.

7 Summary

7.1 The Panel is asked to note this paper and the positive steps that Surface Transport, along with colleagues from Rail and Underground and external bodies, is actively taking to develop an integrated approach to asset management.

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Appendix 1: Summary of asset management maturity assessment

Table 1 lists the PAS 55/ISO 55000 clauses that asset management maturity was assess against and Table 2 shows the maturity scale. Figure 1 summarises the maturity scores for the four directorates.

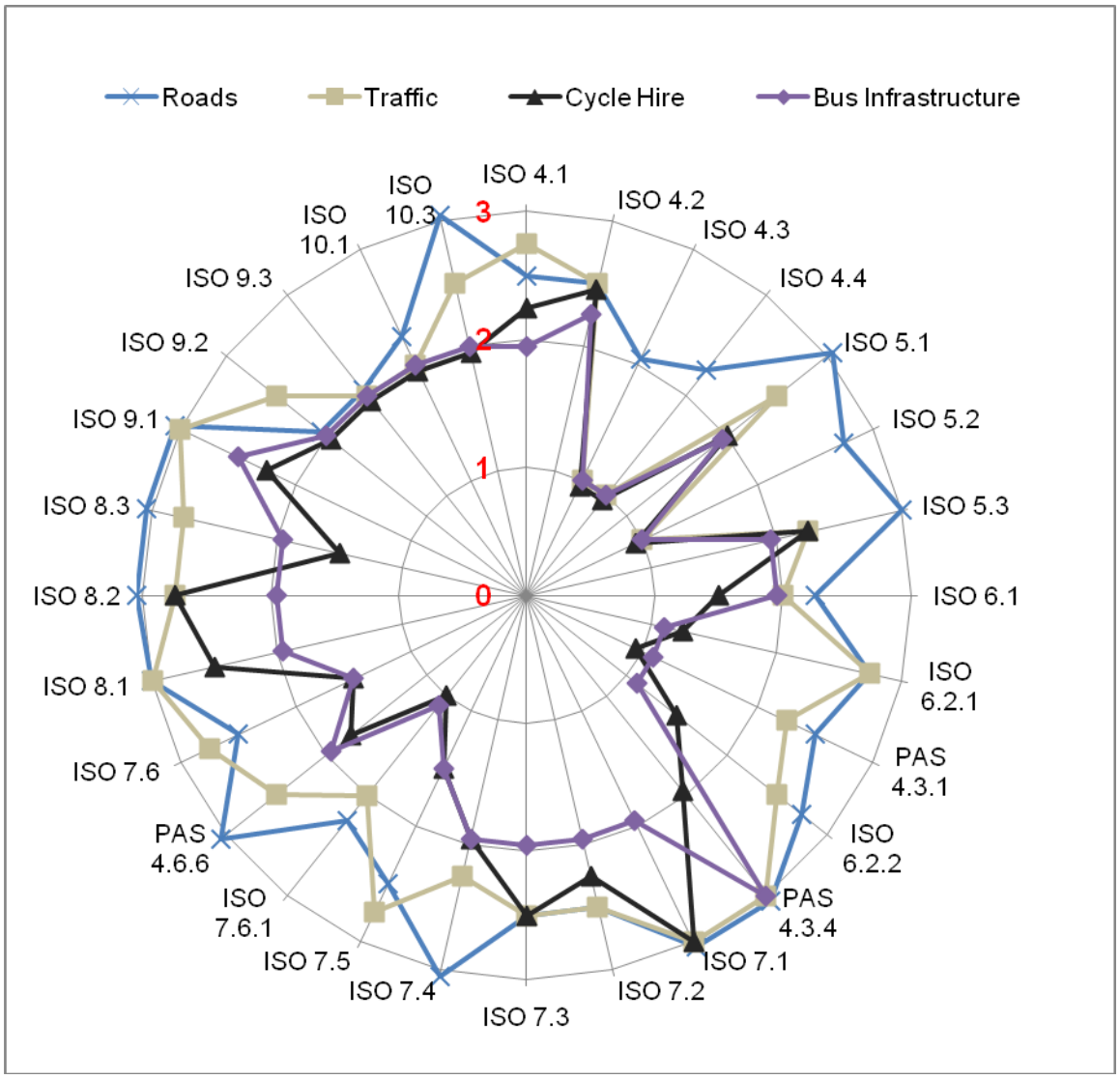
Table 1: Maturity areas assessed

ISO 4.1: Understanding the organization and its context
ISO 4.2: Understanding the needs and expectations of stakeholders
ISO 4.3: Determining the scope of the asset management system
ISO 4.4: Establishing the Asset Management System
ISO 5.1: Leadership and Commitment
ISO 5.2: Asset Management Policy
ISO 5.3: Organizational roles, responsibilities and authorities
ISO 6.1: Actions to address risks and opportunities
ISO 6.2.1: Asset Management Objectives
PAS 4.3.1: Asset Management Strategy
ISO 6.2.2: Asset Management Planning
PAS 55 Clause 4.3.4: Contingency Planning
ISO 7.1: Resources
ISO 7.2: Competence
ISO 7.3: Awareness
ISO 7.4: Communication
ISO 7.5: Information requirements
ISO 7.6.1: Asset Management System Documentation
PAS 55 Clause 4.6.6: Records
ISO 7.6: Information management
ISO 8.1: Operational Planning & Control
ISO 8.2: Management of Change
ISO 8.3: Outsourcing of asset management activities
ISO 9.1: Monitoring, measurement, analysis & evaluation
ISO 9.2: Internal Audit
ISO 9.3: Management Review
ISO 10.1 &10.2: Nonconformity, corrective and preventive action
ISO 10.3: Continual Improvement

Table 2: Maturity scale

Scale	Attribute	Description
0	Innocent	The organization is starting to **learn** about the importance of asset management activities
1	Aware	The organization is **aware** of the importance of asset management activities and has started to **apply** this knowledge
2	Developing	The organization is **developing** its asset management activities and **embedding** them
3	Competent and Compliant	The organization's asset management activities are **developed**, **embedded** and are becoming **effective**. This represents the maturity level required for **certification** to PAS 55 and ISO 55000

Figure 1: Surface Transport asset management maturity scores



Appendix 2: Summary of Key AM Maturity Actions

ID	Finding	Action	Progress/Status
Bus Infrastructure			
B1	A more structured Asset Management Information System (AMIS) for bus stations should be developed	Identify the business requirements for AMIS, assess options and implement an appropriate solution	Work is progressing on the identification of the business requirements and the supporting business processes (also see **S1** below)
B2	A robust IT system is in place for bus stops & shelters; data for bus stations is partial and the current IT system used to manage maintenance is not considered suitable for more systematic management of such data	A suitable IT system to manage bus station data will be investigated as part of the development of an AMIS	See above and **S1** below.
Cycle Hire			
C1	No Asset Management Information System (AMIS) in place	Develop and establish an Asset Register and expand to a wider AMIS	BCH Asset Register has been established and actively managed. AMIS to be addressed as part of the Transition (Re-Let) process (also see **S1** below)
C2	Long-term investment planning required	Develop long-term investment planning techniques and the investment plan	Being considered as part of the Transition (Re-Let) process
Roads			
R1	The majority of the asset management processes and enablers are in place and these are being documented and fully accessible as the Roads (Asset) Management System	Continue development of the Roads Management System on the internal intranet (LiveLink)	The Roads Management System was launched in May on LiveLink. The existing Management System documents (SQAs and guidance) were used to populate the site. Roads are now working with the TfL Management System team to review the documents and develop a programme for transferring them to the new TfL Management System templates.
R2	IT systems are very well developed, but formal processes for the management of all information should be developed	Develop a Information Strategy for Roads that covers all data and information and the enabling systems	Work has started on the strategy, including: • Engagement with IM • Developing requirements for a formal Document/Records Management System • Promoting the new Roads website for document sharing • Aligning Information Systems, e.g. NAMS and BridgeStation • Replacing the programme/portfolio database (TPD) with a commercial PPM solution (MS Server) • Also see **S1** below

R3	Long-term investment planning is very well established for some assets but further work is required on structures and tunnels	Enhance the investment planning methodologies and models for structures and tunnels	The methodologies and models for structures and tunnels have been enhanced while adhering to the overarching principles that apply to all Road assets. Progress made includes: • Lifecycle models for asset condition, risk and cost • Establishing lifecycle rule sets for interventions, service lives and asset deterioration • Analysing 'what-if' scenarios to inform the next business planning round
Traffic			
T1	Need to gain evidence of return on investment for capital spend. In terms of both revenue costs and performance.	New contract (TCMS2) currently out to market will relate performance and revenue costs to capital investment	ITT pricing model related to age of asset given to bidders. Competitive dialogue will commence in Nov 2013.
T2	IT systems are very well developed for the current processes. IT Systems will need to be developed to capture investment and asset age against performance.	Formal programme set-up for development of system in line with contract start date.	IM audited the strategy for developing systems to meet TCMS requirements (also see **S1** below). Approved Customer requirement specification has been developed. Resources are being mobilised to deliver requirements.
T3	Asset management processes and enablers are in place although poorly documented. New processes will be adopted under TCMS2.	Document processes fully through the development of TCMS2	Systems and processes being documented as part of the TCMS2 project and business as usual.
Pan-Surface			
S1	Surface Transport operates a number of bespoke and commercial Asset Management Information Systems (AMIS). There are benefits and efficiencies to be gained from aligning and rationalising these.	Review existing AMIS across Surface and prepare a plan for closer collaboration, alignment and rationalisation	The following activities are in progress: • IM have secured funding to undertake a TfL wide review of AMIS requirements (As-Is and To-Be). IM will facilitate and work with business units to determine requirements. • Working with IM and R&U to scope the project • Joint paper with IM for Surface Board to seek approval for the proposed approach and plan of work