Audit and Assurance Committee

TRANSPORT FOR LONDON
EVERY JOURNEY MATTERS

Date: 8 October 2015

Item: Strategic Risk Management Update - Quarter 1 2015

This paper will be considered in public

1   Summary

1.1   The purpose of this paper is to update the Committee on the status of TfL's Non Project Strategic Risks and proposed mitigations at the end of Quarter 1, through discussion of the Strategic Risk Register.

1.2   A further paper will be considered in Part 2 of the agenda considering TfL's Quantified Strategic Risk Schedule.

1.3   As outlined at previous meetings, the Strategic Risk Management Panel (SMRP) has been set up to develop and implement a pan TfL strategic risk framework for the management of risks and better support decision-making. The Managing Director of Finance and Business Area Directors have agreed an approach to ensure continuous improvement of current strategic risk reporting.

2   Recommendation

2.1   **The Committee is asked to note this paper and the paper containing supplemental information on Part 2 of the agenda .**

3   Background

3.1   TfL currently captures strategic risk through the Strategic Risk Register (SRR) and the Quantified Strategic Risk Schedule (QSRS).

   (a)   The objective of the SRR is to capture the key risks that could impact the delivery of TfL's strategic objectives through the thematic aggregation of the strategic Business Area level risks.

   (b)   The TfL QSRS is a schedule that quantifies, where possible, the risks included in the SRR. It also captures project contingency and any opportunities that could materialise.

4   Developments Since Last Quarter

4.1   The current Strategic Risks have been mapped to the TfL Pillars of Customer, People, Delivery and Value. This can be seen in Figure 1.
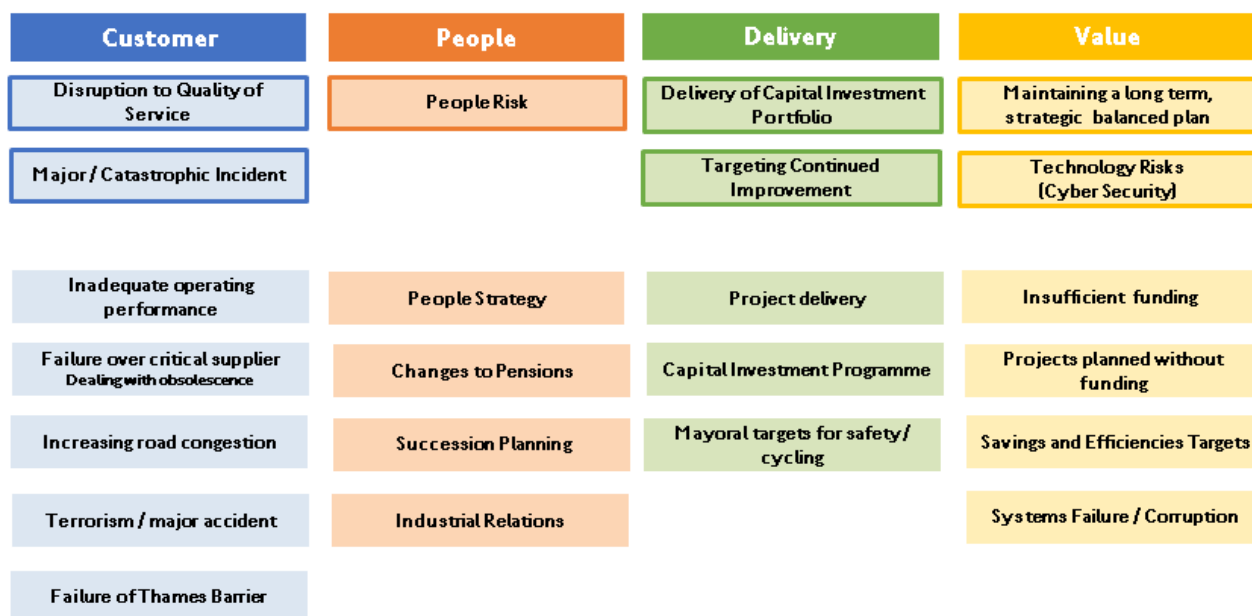
Figure 1: Strategic Risks relationship to the Pillars

4.2 The risks shown in outlined boxes in Figure 1 above represent TfL's 7 Strategic Risks. The non-boxed risks represent individual risks reported across the business units that feed into the above strategic risk respectively.

5 Q1 Strategic Risk Register (SRR) Update

5.1 The SRR consists of seven key risks that are, in turn, made up of 26 risks from across the business areas. There have been no changes to the individual risks that feed into the SRR as part of the Business Areas quarterly forecast reviews however, when these individual risks are consolidated, it is those risks with the highest status for each key risk that is now reported. As a result, although the underlying risks have not changed, the status of two strategic risks has increased.

Risk	Description	Q4	Q1	Target
TFL 01	Maintaining a long term strategic, balanced plan	H	H	H
TFL 02	People Risk	M	H	M
TFL 03	Delivery of Capital Investment Portfolio	H	H	M
TFL 04	Technology Risk	M	VH	M
TFL 05	Disruption to Quality of Service	H	H	M
TFL 06	Targeting Continued Improvement	M	M	L
TFL 07	Major / Catastrophic Incident	M	M	M

Figure 2: Consolidated Strategic Risk Summary

5.2 The biggest movements in risk categorisation have been across TFL02: People Risk and TFL04: Technology Risk, these are discussed in sections 3.10 and 3.16 respectively.

5.3 A summary of the progress of the strategic risks is detailed in the following pages.

TFL01: Maintaining a Long Term Strategic, Balanced Plan

5.4   TFL01 has been high throughout 2014/15 and remains high for 2015/16 Q1 due to the unknown issues around changes in government funding, volatility in capital markets, shortfall in secondary revenue. The following controls are in place to mitigate against this risk:

(a)   Ongoing dialogue with Department for Transport, HM Treasury and Mayor's Office to continue favourable funding position and identify activities to mitigate shortfalls following the 2015 Spending Review;

(b)   Ongoing monitoring of TfL's investment strategy, continued monitoring of interest rate risk and material allocation of investments into safe areas such as UK Government securities; and

(c)   Use of specialist skills in Property Development, ensuring the Business Plan is not jeopardised in the short term.

5.5   Ongoing contingency planning, developing scenarios and alternatives to generate feasible solutions by Group Finance in the event of funding position changes has been taken as an action.

5.6   Of high concern is the risk of not achieving the savings and efficiency targets and the planning of projects without allocated funding. The following controls have been put in place to mitigate against this risk:

(a)   Regular review and risk assessments of savings and efficiencies with business areas along with review and challenge through the BMR process and management of the Savings and Efficiencies (S&E) database; and

(b)   Incorporation of the NSP (New Savings Programme) monitoring and review regime into existing review panels and financial processes.

5.7   The following actions have been completed or are in train to help mitigate against this risk:

(a)   Implementation of a single version of the S&E database, including improved process for risk assessment complete by the end of 2015/16;

(b)   Implementing the recommendations of the PwC S&E review and action plan;

(c)   Additional resource focus to review and challenge TfL's savings programme; and

(d)   Further utilising benchmarking to inform the efficiency process.

TFL02: People Risk (including Pensions and Industrial Relations)

5.8   People Risk for 2014/15 was rated as Medium, however as components of the risk are High, such as delivering on the People Strategy including the risk of industrial action, TFL02 is now rated as High overall. The failure to deliver the People Strategy has now been split into the following 5 controls;

(a) RECRUIT – Implementation of workforce planning, skills and employment strategy;

(b) DEVELOP – Programme of developing managers in people management skills;

(c) REWARD – Annual pay review process with TfL leadership team to develop high performance workforce with performance management and competitive reward strategies;

(d) MANAGE – Fit for purpose employment policies with targeted reviews; and

(e) ENGAGE – Review staff engagement across TfL via an annual viewpoint survey and continual engagement with trade unions via consultation.

5.9   The following actions have been put in place to help mitigate against failure to deliver the TfL People Strategy and are due to be completed by the end of 2015:

(a) Development of a strategic resourcing strategy to enable TfL to have a framework to plan future resourcing requirements and make provision to acquire these resources proactively;

(b) Delivery of resource via the graduate programme to help meet resource needs; and

(c) Employee relations strategy, with a three to five year implementation plan to be developed.

5.10   There is further risk to the People Strategy through the impact of new regulations to the Pension Fund. The pension scheme continues to adopt a well diversified strategy, monitored on a regular basis and taking advice from the Actuary and Investment Advisor. The following control is further in place to monitor the ongoing funding position:

(a) Financial Management Plan (FPM) is in place to enable Trustees to monitor on-going funding via various committees. This is monitored and reviewed on a quarterly basis. The FPM uses traffic light warning triggers, allowing timely discussion and action to be taken by the Trustees.

5.11   Furthermore, the following actions are ongoing to help mitigate regulation changes;

(a) Responding to consultation and representations on EU Directives; and

(b) Lobbying of EU, regulator and other pension industry or Government bodies.

TFL03: Delivery of Capital Investment Portfolio

5.12   Due to the challenges of projects and programmes not being delivered on time, budget or delivering expected benefits, the overall risk remains high. The below controls are ongoing to help mitigate against this risk:

(a) Ongoing oversight of the investment programme by the Programme Management Office (PMO), peer review, stage gate reviews and Programme Boards;

(b) Quarterly financial forecasting and assessment of likely underspends/overspends on the investment programme. The robustness of financial forecasting is further being developed through the Building a Better Finance programme;

(c) Operational Board approvals of all milestone slippages; and

(d) Implementation of Supply Chain Intelligence.

5.13   To help mitigate against the risk of not delivering the Capital Investment Programme, the following actions are due to be complete by the end of 2015:

(a) Actions following a pilot of workforce planning are now been taken to embed the process;

(b) Delivery of phase I of Pathway refresh, updating the approach to project, programme and portfolio management principles used across the capital investment programmes;

(c) Obtain complete visibility of Capital Programme Directorate portfolio to enable early identification of deliverability risks for projects; and

(d) Development of integrated and live forecasting with focus on financials and milestones to better anticipate risks and opportunities.

TFL04: Technology Risk

5.14   Technology risk represents the significant loss of information and key IM services including the ticketing and signalling systems that support the business or conduct network operations. As the risk of a cyber security incident has been rated as Very High, TFL04 has been upgraded to reflect this Very High status.

5.15   The following controls are ongoing to ensure the reliability and business continuity of technology services:

(a) Ensuring that any base data change delivered to the TfL ticketing system is tested and assured by TfL representatives before approval for implementation;

(b) A dedicated Test Assurance team is in place to manage testing of all changes to the live system including go-live testing;

(c) Security patches on contactless system undertaken regularly;

(d) Maintain and monitor regular backups and restores, carrying out restore tests; and

(e) Twice annually review and update of service continuity plans where they have been defined and are in place.

5.16 A cyber security risk assessment team has now been set up and the following actions are due to be completed by 2015/16 Q2 Strategic Risk Update:

(a) Set up a taskforce to look at security pan-TfL and identify who owns cyber security across TfL;

(b) Create a pan-TfL Security Competency; and

(c) Undertake analysis of IM services to assess critically and calculate the (?)financial impact of cyber security risk.

TFL05: Disruption to quality of services

5.17 TFL05 represents the risk of disruption to TfL's network (across all modes of transport) impacting overall reliability and customer satisfaction. This risk is rated as High. This status is driven by the high potential impact on cost with a medium probability of the risk materialising. To mitigate against this risk the controls set out below are in place:

(a) Deployment of asset integration controls, within a whole life asset management approach to ensure the new assets do not impact detrimentally upon operational performance;

(b) Development of a one month rolling resource scheduling plan for Chief Operating Officer for the next 24 months;

(c) The Keeping London Moving investment portfolio, with the objective to minimise the deterioration of Journey Time Reliability through permanent changes to the road network and traffic control equipment; and

(d) Bus priority and bus route reliability measures, continual review of routes to tailor network to passenger demand and inter-connectivity.

5.18 In addition to the above controls the following two actions have been completed to help mitigate this risk:

(a) Steering Group established to determine operations and maintenance resource requirements to meet future demand in Rail and Underground; and

(b) Strategic review of future requirements to enhance the capabilities of command, control, coordination and communications across Rail and Underground, improving day to day management of incidents and growing our capability to predict and prevent service disruption undertake.

5.19 The following four actions are due to be completed by the Q2 Strategic Risk update:

(a) Complete Journey Time Reliability action plan by September 2015, evaluating the 10 worst performance journey time links each period;

(b) Implement Active Traffic Management to manage the impact of construction in central London, including implementation of a new operational management tool to monitor traffic flow to inform decisions;

(c) Complete investigation into how a new coordination and communications function across Rail and Underground will work; and

(d) A £200 million bus priority programme to be completed by 2022/23. This programme comprises bus reliability schemes to ease key bus pinch points including Road Modernisation Plan bus reliability schemes; and bus growth schemes to assist unlocking growth areas.

TFL06: Targeting Continued Improvement

5.20 This risk describes the risk of targets set by external stakeholders not being met. Failure to reach targets may result in loss of reputation and/or fines. This risk is assessed as Medium, due to the risk of not achieving targets for safer cycling and improved air quality.

5.21 The following controls are ongoing to help mitigate against this risk:

(a) Enhanced enforcement activity to improve cyclist safety through the expansion of the Cycle Task Force, the creation of the Industrial HGV Task Force and Operation Safeway;

(b) The new 'central London cycling metric' will be used to help identify seasonal trends as well as growth;

(c) Establish an external and internal governance framework to ensure the road safety portfolio is on track, balanced and delivered with the support of key partners; and

(d) Continued implementation of the Mayor's Air Quality Plan. The first year of the programme has been completed, with three schemes delivered, 31 further schemes to be completed in 2015/16, as well as publication of new guidance for 2016/17.

5.22 An action to introduce a new Cycle Hire mobile application for smartphones was completed in May 2015, allowing customers to get bike release codes direct to their mobile phones. Furthermore the four actions set out below are due to be completed in time for the Q2 Strategic update:

(a) Further implementation of key infrastructure across TfL and London Boroughs, including: Cycle Superhighways, Better Junctions, Central London Cycle Grid, Mini Hollands and Quiet Ways;

(b) Implementation of Road Safety Plan programme;

(c) Retrofitting Programme across Euro 3 Buses. 1300 vehicles have already been upgraded, with a further 550 due to be retrofitted by the end of 2015. Any remaining buses in the fleet will be replaced, cutting NOx emission from 2016 by 20 per cent compared to 2012 levels; and

(d) Surface Transport will trial range-extended hybrid buses and rapid induction charging, which can operate for longer in zero-emission all-electric mode.

TFL07: Major/Catastrophic Incident

5.23 This is the risk around a major incident that may result in fatalities or multiple serious injuries to the travelling public, those working on infrastructure or widespread disruption. This risk has been classified as Medium due to the high potential cost but low probability of the risk materialising.

5.24 The below controls are in place and ongoing to help mitigate against this risk:

(a) Ensure business controls, strategies and contingency plans are in place to oversee affective asset management;

(b) Ensuring safety is integrated into all business processes so staff remain vigilant. Upskilling managers in risk assessment training and routinely risk assess operational assets;

(c) Use Health, Safety and Environment (HSE) accident and incident risk models to identify further improvements and monitoring of precursors; and

(d) Intelligence and liaison with police, security services and department for transport to determine security risk assessments. Additionally, developing operational plans for police and TfL's on-street enforcement officers including response deployment plans for major unplanned incidents.

5.25 The action to deliver an extreme weather report in Rail and Underground, highlighting potential affects on service delivery, was completed in the last quarter to help mitigate against the impacts of a major catastrophe. In addition the below actions are all due to be completed by the end of 2015:

(a) Implementation of actions and improvements identified as part of the January 2015 Assurance review of the Asset Capital Programme;

(b) Creation of an HSE management system for the business that more effective, lighter of touch and makes best use of available technology;

(c) Delivery of two single day Bronze Incidents and Events Manager courses each month by the Resilience Planning Team;

(d) Business Continuity Managers to establish an annual work plan that specifies training, exercising, technical tests, plan review targets and milestones;

(e) Strategic review of capacity on the Bus Network, including refining processes for managing an unplanned loss of asset availability; and

(f) Implement a security check improvement plan.

List of appendices to this report:

Appendix 1 – Q1 TfL Strategic Risk Register

Background papers:

A paper containing exempt supplemental information is included in Part 2 of this agenda.

None

Contact Officer: Ian Nunn, Managing Director, Finance
Number: 020 3054 8941
Email: iannunn@tfl.gov.uk

Transport for London - Strategic Risk Registers Q1 2015-16

TFL 01: Maintaining a long term strategic, balanced plan | **Owner:** Steve Allen

Key based on ARM scoring

V High	High
Medium	Low
V Low	

Assessed | Quarter 1

Strategic objective: To deliver clear value for fare and tax payers, helping to secure funding for major improvements to our transport infrastructure.

Description: Lower funding sources or higher than planned costs can create cash flow problems resulting in an unbalanced Business Plan. This may be due to Government Grant reduction, shortfall in Commercial Development and other secondary income sources or a shortfall in the savings and efficiency target.

Trend → Steady

Current Risk Status
High Score due to government funding, capital markets, non-delivery of the savings programme and insufficent funding for the businesses

Target Risk Status
Risk status remains high due to unknowns related to government funding and capital markets

Key Mitigations / Actions	Owner	Review Frequency / Due Date	Key Actions	Owner	Due Date
Influence and negotiate with DfT and Mayor's Office to continue favourable funding position and identify activities to mitigate any possible shortfalls, as TfL needs to ensure on an on-going basis it retains favourable funding through the plan years and beyond.	Steve Allen Richard de Cani Gareth Powell Ben Plowden	As required	On-going contingency planning to develop scenarios and alternatives to generate feasible solutions.	Steve Allen	On-going
Ensure the incorporation of the NSP monitoring and review regime into existing review panels (Value Group) and financial processes.	Steve Allen	Quarterly	Identify additional resource to review and challenge TfL's savings programme.	Steve Allen	Sep 2015
On-going monitoring of investment strategy. Continued monitoring of interest rate risk, complemented with forward fixing of interest rates or use of derivatives to mitigate interest rate risk and material allocation of investments into safe areas such as UK Government securities to reduce risk.	Steve Allen	On-going			
Regular review and risk assessments of savings and efficiencies with business areas. Review and challenge savings and efficiencies via the BMR process and management of the S & E database.	Steve Allen Andrew Pollins	Periodic	Implement the recommendations of the PWC review of savings and efficiencies and action plan Implementation of new database for savings and efficiencies. This will include an improved process for risk assessments.[1] Utilise benchmarking to further inform efficiency process[2]	Steve Allen Andrew Pollins	Sep 2015 / Complete[1] / Mar 2016[2]
Regular reporting and review of commercial development opportunities at Commercial Development Programme Board (CDPB)	Andrew Pollins	Periodic			
TfL Business Planning Process	Steve Allen Andrew Pollins Patrick Doig	Annual			
Use of specialist skills in Property Development. A resource strategy to recruit property development experts in progress. Job description creation and demand planning of further roles identified is underway. This activity is to ensure business plan delivery is not jeopardised in the short term.	Graeme Craig	On-going	Establish the resource, specialist support, contracting arrangements, funding and governance required to deliver the revised Business Plan. Recruitment of essential resources to ensure project management skills required are available.	Graeme Craig	Jul 2015
Application of risk principles to large projects. P3M system is being used to capture project risks. All projects are subject to a progress review and status update each period.	Graeme Craig	Periodic			
Quarterly forecasting led by a dedicated Head of Finance for Commercial Development.	Graeme Craig	Quarterly			
Forward planning through the regular update and review of the Property Development Strategy and oversight by the Property Development Panel and specialist support. Ensure that all funding streams have been implemented. Any that perform poorly will be kept under review and action taken where possible.	Steve Allen	Quarterly			
Ensure TfL has some flexibility with regards to sites offered on the market, thereby optimising the Over Station development returns in the future.	Steve Allen	On-going			

Commentary: A full review of the risks assocaited with the savings and efficiency plan will be conducted in Q2.

Transport for London – Strategic Risk Registers Q1 2015-16

TFL02 : People Risk (inc. Pensions and Industrial Relations)

Owner: Tricia Riley

Assessed | Quarter 1

Strategic objective: To ensure TfL meets in targets in relation to its People Strategy.

Description: Failure to deliver TfL People Strategy (knowledge retention, timely access to scarce resources, staff development and retention) and/ or increased number of strikes resulting in unsuccessful delivery of projects, operational and change programmes, poor service, loss of revenue and loss of reputation. Failure to deliver New Savings Programme targets (through pay and pension savings) and risk of future TfL Pension Fund deficit from market conditions resulting in higher than planned costs.

Trend | ↑ Increasing

Current Risk Status
High score due to ongoing industrial relations concerns and the impact of new regulations to the Pension fund.

Target Risk Status

Key Controls	Owner	Review Frequency	Key Actions	Owner	Due Date
RECRUIT - Implementation of workforce planning and skills and employment strategy, which includes Schools Initiative and promotion of STEM subjects.	Tricia Riley	Periodic	Development of Strategic Resourcing strategy to enable TfL to have a framework to plan which resources it will need in the future and make provision to acquire these resources proactively. Deliver graduates/apprentices to meet resourcing needs	Tricia Riley	Sep 2015
DEVELOP - Developing managers in people management	Tricia Riley	Ongoing	Embed new Performance Management System to help managers manage the performance of their staff[1] Roll out and implementation of the Managing Essentials programme (Core and More)[2] TfL senior management programme development & roll out[3] Define improvement plans for people management advisory services[4]	Tricia Riley	Apr 2016[1] Apr 2017[2] Nov 2016[3] Nov 2015[4]
REWARD - Annual pay review process with TfL leadership team to develop high performance workforce with appropriate performance management and competitive reward strategy	Tricia Riley	Annual			
MANAGE/ENGAGE - Manage against fit for purpose employment policies with targeted reviews	Tricia Riley	Periodic	Outline plan for programme to develop and implement new and revised people policies	Tricia Riley	Oct 2015
ENGAGE - Annual Viewpoint survey to review total engagement across TfL	Tricia Riley	Annual	Implement action plans based on Viewpoint results	Tricia Riley	Dec 2015
MANAGE/ENGAGE - Machinery of Negotiation and Consultation with trade unions	Tricia Riley	Ongoing	Employee Relations strategy 3-5 year implementation plan to be developed.	Tricia Riley	Sep 2015
The Trustees have adopted a well diversified strategy which is set after taking advice from the Actuary and Investment Adviser and reviewed following each triennial valuation	Stephen Field	Every third year	Ensure that TfL Pension Fund has a well diversified investment strategy across all portfolios to minimise risk.	Stephen Field	Sep 2015
There is a fully diversified portfolio of return seeking assets, including alternate asset classes which is actively monitored and reviewed on a regular basis	Stephen Field	Quarterly	Trustees agree a prudent funding target with the Principal Employer (known as technical provisions) following receipt of advice from the Actuary.	Stephen Field	Mar 2020
The Investment Adviser assists Trustees in monitoring investment markets and changes vs. liabilities using Liability Watch or other appropriate funding monitoring reports together with the quarterly Investment Report	Stephen Field	Quarterly	Responding to consultation and representations on EU Directives.	Stephen Field	On-going
Financial Management Plan (FMP), which has been reviewed by the Principal Employer is in place to enable the Trustee via its various committees to monitor the on-going funding position. This is monitored and reviewed quarterly but can also be reviewed at other times. The FMP uses traffic light triggers and should any be breached a discussion takes place prior to any action being taken by the Trustee.	Stephen Field	Quarterly	Lobbying of EU, regulator and other pension industry or Government bodies.	Stephen Field	On-going
Compliance with TfL employment policies	Tricia Riley	Weekly	Development of 3-5 year implementation plan for the Employee Relations Strategy.	Tricia Riley	Dec 2015
Meet with recognised Trade Unions at the Company Councils and Consultations Group forums to provide relevant information and to discuss and resolve matters of mutual interest	Tricia Riley	Periodic	Collation and review of all Trade Union agreements	Tricia Riley	Complete
Maintain links with external organisations to monitor relevant industry trends and developments impacting industrial relations	Tricia Riley	Ongoing	Development of reporting processes to detail non compliance with employment policies related to discipline, grievance and bullying and harassment and identifying trends in order to establish lessons learnt to put in place effective on going actions.	Tricia Riley	Complete
Review of Employee Relations Strategy.	Tricia Riley	Quarterly			

Transport for London – Strategic Risk Registers Q1 2015-16

Key based on ARM scoring

V High	High	Medium	Low	V Low

TFL03: Delivery of Capital Investment Portfolio

Owner: Nick Fairholme / David Waboso

Assessed — Quarter 1

Strategic objective: To ensure the TfL Capital Investment programme is delivered according to plan

Description: Projects and programmes may not be delivered on time, budget or deliver expected benefits. This could lead to acceleration costs, target benefits being delayed and risking on going capital funding for DfT milestones.

Trend ➡ Steady

Current Risk Status
High for both Rail & Underground and Surface Transport, due to chance of lack of capable resources, poor construction and manufacture. Risk status is based upon the potential delay to achievement of key milestones

Target Risk Status
Need to confirm

Key Controls	Owner	Review Frequency	Key Actions	Owner	Due Date
Deployment of competent engineering, assurance, project and programme staff.	David Waboso Nick Fairholme	Ongoing	Delivery Capability Improvement Programme, assess staff capability and establish competency and resource needs. Develop and implement improvement programme. Roll out new assessment tool (Success Factors) in January 2015. Develop training plans and implement over following year.[1] Develop a robust Resource Plan to highlight resource requirements across the Directorate looking at least 18 months ahead, based on the availability of workload, and use this information to plan the recruitment and deployment of all staff (including supply chain resource) to areas of specific need.[2] Deliver the Sponsorship Capability Improvement Programme to strengthen the TfL sponsorship capability and implement a framework against which on going competences can be identified and implemented.[3] A pilot of workforce planning has been completed and actions are now been taken to embed this process[4]	David Waboso[1] Tricia Riley[2] Gareth Powell[3] Patrick Doig[4]	Mar 2016[1] Jul 2017[2] 2015/16[3] Sep 2015[4]
Oversight of the investment programme by the PMO, peer review, stage gate reviews, Director Reviews and Programme Boards	David Waboso Nick Fairholme	Ongoing	Delivery of phase 1 of Pathway refresh Delivery of the Access Transformation Programme to make the engineering window more efficient	David Waboso	Dec 2015[1] 2015/16[2]
ATC retender, enhanced governance and support through the establishment of a steering group with senior involvement.	David Waboso	Weekly	Intensive and senior level reviews and engagement with Thales for solution	David Waboso	Jul 2017
Supply chain intelligence - early warning of supplier failure, insolvency or change in ownership, monitoring critical supplier financial health, capacity and payment performance.	Andrew Quincey	Periodic	Obtain complete visibility of CPD portfolio to enable early identification of deliverability risks for projects	Andrew Quincey	Aug 2015
Quarterly financial forecasting process and assessment of likely underspend on investment programme.	Andrew Pollins Patrick Doig	Periodic	In 2015/16 a move towards integrated and live forecasting with focus on financials and milestones to better anticipate risks and opportunities to our financial position on a periodic basis.	Patrick Doig	Sep 2015
Surface Board approval of all slippage in milestones	Leon Daniels	Periodic			

Commentary:

Key based on ARM scoring

V High	High	Medium	Low	V Low

TFL04: Technology Risk

Owner: Shashi Verma / Steve Allen

Assessed | Quarter 1

Strategic objective: Ensure reliability and business continuity of technology services

Description: Significant loss of information and key IM services including the ticketing and signalling systems that support the business or conduct network operations. If the collection system (including contactless cards) fails temporarily, this may result in reputational damage to TfL and the loss of confidence in the integrity of the fare collection system. A failure of the signalling system will lead to widespread disruption.

Trend | ↑ Increasing

Current Risk Status
Very High due to the potential impact of a cyber security incident.   Loss of key information and impact to signalling is very high impact with probabilty currently being assessed.

Target Risk Status
Controls in place and being reviewed

Key Controls	Owner	Review Frequency	Key Actions	Owner	Due Date
Maintain and monitor regular backups and restores; carry out restore tests	Steve Townsend	Quarterly	Undertake analysis of IM services to assess criticality/financial impact of cyber security risk	Steve Townsend	Oct 2015
SAP and UTC DR plan is tested	Steve Townsend	Annually	Set up a taskforce to look at security pan-TfL and identify who owns cyber security across TfL	Steve Townsend	Jun 2015
Ensure availability of technical infrastructure - dual data centres and EP resilience	Steve Townsend	Quarterly	Create a pan-TfL Security Competency	Steve Townsend	Sep 2015
Maintain business continuity plans	Steve Townsend	Annually	Desktop Futures Project - Supportability of the legacy platform.	Steve Townsend	Jul 2015
Review and update of service continuity plans where they have been defined and are in place	Steve Townsend	Twice Yearly	Set up a cyber security risk assessment team	Steve Townsend	Complete
Maintain internal security controls within IM as on on-going concern	Steve Townsend	Quarterly			
Ensure that all contractor equipment does not use live keys so that changes made do not inadvertently transfer to the live system.	Shashi Verma	Periodic			
Ensure that any base data change delivered to the TfL ticketing system is tested and assured by TfL representatives before approval for implementation.	Shashi Verma	Ongoing			
A dedicated Test Assurance team is in place to manage integration testing of all changes to the live system including go-live testing.	Shashi Verma	Ongoing			
Robust change management procedures to mitigate risk of uncontrolled change.	Shashi Verma	Ongoing			
Ensure that all bulk hot list changes have release plans to be assured and approved by TfL. Delivery of changes are reported on.	Shashi Verma	Ongoing			
Carry out assurance on the performance of TfL ticketing systems through availability and reliability reviews with contractor.	Shashi Verma	Quarterly			
Contract Service Level Agreement in place with Cubic for updated card status list (deny) to be received by readers within an hour. This ensures that invalid cards cannot be used for more than one journey.	Shashi Verma	Ongoing			
Contactless cards users' data protected by single sign-on	Shashi Verma	Ongoing			
Security patches on contactless system undertaken regularly	Shashi Verma	Quarterly			

Commentary:

Transport for London – Strategic Risk Registers Q1 2015-16

Key based on ARM scoring

V High	High	Medium	Low	V Low

TFL05: Disruption to Quality of Service

Owner: Alan Bristow / Mike Weston / Steve Griffiths / Sarah Atkins

Assessed | Quarter 1

Strategic objective: To deliver safe, reliable, clean, sustainable and accessible transport.

Description: Inadequate operating performance, increased congestion and reliance on suppliers causing disruption to the service, across all modes of transport.

Trend ➡ Steady

Current Risk Status
High score driven by LU operating model flexibility, inappropriate standards and processes, unmanaged asset degradation and poor delivery of asset renewals / upgrades together with significant business change. The risk status is driven by the high potential impact on cost with a medium probability.

Target Risk Status
Risk driver: Delivery of HSE & Security Improvement Programmes

Key Controls	Owner	Review Frequency	Key Actions	Owner	Due Date
Development of a 24 month 1 month rolling resource scheduling plan for COO	Steve Griffiths	Ongoing	Steering group established to determine operations and maintenance resource requirements to meet future demand[1] Develop workforce planning tool to support the new station staffing model, increasing staff availability and visibility.[2]	Steve Griffiths	Complete[1] 2016/17[2]
Deployment of asset integration controls, within a whole life asset management approach, to ensure the new assets do not impact detrimentally upon operational performance	Steve Griffiths	Agreed schedule	Deliver feasibility of Asset Management Information System (AMIS) project to standardise processes and asset management information systems, enabling more effective and optimised asset management investment decisions on a whole life, whole system basis	Steve Griffiths	Mar 2016
LUCC operates 24/7 ensuring a response is available for all incidents on the R&U network	Steve Griffiths	Periodic	Strategic review of future requirements to enhance the capabilities of command, control, coordination and communications (C4) across R&U including LUCC, improving day to day management of incidents and growing our capability to predict and prevent service disruption undertaken and presented to RULM.[1] Complete investigation, alongside the new COO, into how the new C4 function will work and present to RULM[2]	Steve Griffiths	Complete[1] Oct 2015[2]
Effective performance reporting allowing analysis of current performance and predicting future performance	Andrew Pollins	Periodic	Development of a single source of truth for operational reporting	Andrew Pollins	Mar 2016
The Keeping London Moving (KLM) investment portfolio includes SCOOT, Signal Timing Review, Corridor Improvement, Operational Modelling and Digital Technology Infrastructure Programmes, which all have the objective to minimise the deterioration of JTR through permanent changes to the road network and traffic control equipment	Alan Bristow	Periodic	JTR Action Plan: Evaluate the 10 worst performing journey time links each period. Q1-10 links operationally reviewed each period. Small scale mitigations implemented with immediate effect, where possible. Implement "Active Traffic Management" (ATM) to manage the impact of construction in central London. Q1-ATM fully implemented as a tactical strategy, with support staff embedded in LSTCC 0630-1900 each weekday. Implement a new operational management tool to monitor real time traffic flow and inform decisions on ATM implementation. Q1- System currently in data validation stage, being used by a limited number of operational staff.	Alan Bristow	Sep 2015
Bus priority and bus route reliability measures. Continual review of routes to tailor network to passenger demand and inter-connectivity. LSTCC signal changes to ease congestion. Increased the number of service reliability schemes.	Mike Weston	Periodic	£200 million bus priority programme for up until 2022/23. Programme includes (i) Bus reliability schemes (easing of key bus pinch points). This includes Road Modernisation Plan bus reliability schemes (ii) Bus growth schemes (assisting unlocking growth areas). Over 300 schemes identified across ten routes associated with Road Modernisation Plan.	Mike Weston	Sep 2015
Supplier selection processes in place to support procurement agents in assessing the market, identifying the approach to market, selecting / evaluating suppliers.	Sarah Atkins Andrew Quincey	Periodic			
Supply chain intelligence - early warning of supplier failure, insolvency or change in ownership, monitoring critical supplier financial health, capacity and payment performance.	Sarah Atkins Andrew Quincey	Periodic			

Management of key obsolescence and OEM		Sarah Atkins	Ongoing	Undertake obsolescence study in collaboration with Comet to identify best practice[1] Obsolescence forum to be developed to address key obsolescence and OEM risks (Phase 1 is identififcation of key issues, best practice and next steps).[2] Establish Commercial Technology Forum to enable cross-team working to review, and assess how technology is defined, bought and managed across TfL[3] Initiate workstream to develop CPD-wide approach for the procurement of operational and information technology (IT and OT), ensuring that issues of obsolescence, IPR, technology refresh, upgradability, maintenance, parts availability, etc are robustly planned for at the time of specification, market engagement and procurement[4]	Andrew Pollins[1] Sarah Atkins[2] Andrew Quincey[3,4]	Mar 2016[1] Jul 2015[2] Complete[3] Nov 2015[4]

Commentary:

Key based on ARM scoring

| V High | High | Medium | Low | V Low |

TFL06: Targeting Continued Improvement

Owner: Ben Plowden

Assessed **Quarter 1**

Strategic objective: To create an improved environment, more & safer cycling, reduced casualties

Description: To ensure targets, set by external stakeholders, are met. Failure to reach targets may result in loss of reputation and/or fines. Targets include: Mayor's target for "more and safer cycling" and reduced casualties as well as EU air quality targets.

Trend ➡ Steady

Current Risk Status
Medium status due to risk of not achieving targets for safer cycling and improved air quality. Medium score due to potential impact

Target Risk Status
Addressing target through Central London cycle grid, Quiet ways, Road Safety Action Plan and delivery of more efficient buses, the risk is considered Low.

Key Controls	Owner	Review Frequency	Key Actions	Owner	Due Date
Enhanced enforcement activity to improve cyclist safety through the expansion of the Cycle Task Force, the creation of the Industrial HGV Task Force and Operation Safeway.	Steve Burton	Ongoing	Implementation of key infrastructures. TfL Infrastructure: Cycle Superhighways and Better Junctions. Borough Infrastructure: Central London Grid, Mini Holland and Quiet ways. Approval granted to deliver first two Pilots.	Ben Plowden	Sep 2015
The new `central London cycling metric` will be used to help identify seasonal trends as well as growth. Annual review of cycling portfolio.	Ben Plowden	Quarterly	In May 2015, Cycle Hire introduced a new mobile application for Smartphones. The App allows (amongst other things) customers to get bike release codes straight to their mobile phones. Cycle Hire Scheme to launch Business Accounts to further increase scheme usage	Peter Blake	Complete
Construction Logistics and Cycle Safety and Work related Road Risk (WRRR) projects.	Ben Plowden	Periodic	Implement Road Safety Plan programme through Surface Planning, Delivery teams and liaison with the boroughs.	Ben Plowden	Sep 2015
Established an external and internal governance framework to ensure the road safety portfolio is on-track, balanced, and delivered with the support of key partners.	Ben Plowden	Periodic	Currently conducting the following study/research: Young Driver Fatal and serious injury study. Serious Cyclist and Pedestrian injuries research. Road Safety Technology trial (Bus optical /radar). Road Safety Technology trial (Bus optical /radar).	Ben Plowden	Oct 2015
Mayor's Air Quality Plan - First year of programme complete, with three schemes finished. 31 further schemes to complete in 2015/16, as well as publication of new guidance for 2016/17.	Ben Plowden	Ongoing	Retrofitting Program - The DfT has awarded a £500k contribution to TfL to increase the number of Euro 3 buses retrofitted with SCR from 1,400 to 1,800 by 2015. More than 1,300 vehicles have been upgraded. A further 550 will be fitted by the end of 2015. Remaining un-retrofitted Euro 3 engine buses in the fleet will be replaced with new vehicles with the Euro 6 engine by end of 2015.This will cut fleet NOx emissions from 2016 by 20% compared to 2012 levels. Hybrid Bus rollout Programme - The bus fleet has1,250 hybrids in line with target for March. Target for 2016 is 1,700 hybrids (including a revised target for 800 NRMs) introduced. The bus fleet currently has around than 500 of the latest ultra-low emission Euro 6 engine vehicles, many of which are hybrids. Surface Transport will trial range-extended hybrids and rapid induction charging - which can operate for longer in zero-emission all-electric mode from autumn 2015.	Mike Weston	Sep 2015

Commentary:

Transport for London – Strategic Risk Registers Q1 2015-16

V High	High	Medium	Low	V Low

TFL07: Major / Catastrophic Incident

Owner: Dana Skelley / Mike Weston / Jill Collis

Assessed — Quarter 1

Strategic objective: To minimise the impact of a major catastrophe

Description: A major incident that may result in fatalities or multiple serious injuries to the travelling public, those working on our infrastructure or widespread disruption (including asset damage).

Trend ➡ Steady

Current Risk Status	Target Risk Status
Moderate risk due to high potential cost but low probability. Health, Safety and Environment incident due asset failure, failure of control systems or an external event e.g. terrorism.	Risk driver: Delivery of HSE & Security Improvement Programmes

Key Controls	Owner	Review Frequency	Key Actions	Owner	Due Date
Ensure business controls, strategies and contingency plans are in place to oversee affective asset management and mitigate 'surprises'.	Dana Skelley	Periodic	Asset management maturity assessment by Lloyds Register. The Lloyds Register report will form the basis of the Asset Management Improvement Plan (AMIP) which is to be produced by July 2015. Actions and improvements identified as part of the January 2015 Assurance Review of the Asset Capital Programme are in progress.	Dana Skelley	Sep 2015
Ensure safety is integrated into all business processes so staff remain vigilant. Upskill managers in risk assessment training and routinely risk assess operational assets. Health & Safety Standards - Robust health safety procedures have been implemented to mitigate this risk.	Mike Weston	Periodic	Strategic review of capacity on the bus network. This will include refining processes for managing an unplanned loss of asset availability. The scheduled completion date is end of December 2015.	Mike Weston	Dec 2015
Use HSE accident and incident risk models to identify further improvements and monitoring of precursors	Steve Griffiths David Waboso Gareth Powell	Agreed Schedule	Review of HSE accident precursors to determine key actions to reduce risk levels.	Jill Collis	Jan 2016
Security controls reviewing compliance with rule book and staff competence with regular station checks	Steve Giffiths	Periodic	Implement security check improvement plan	Steve Giffiths	Dec 2015
Intelligence and liaison with police, security services and department for transport to determine security risk assessment	Steve Giffiths	Periodic	Development of security risk management process to clearly understand key risk and controls	Steve Giffiths	Mar 2016
Audit of HSE performance controls & safety management system	Clive Walker	Agreed Schedule	Delivery of extreme weather report and analysis highlighting potential affects on service delivery[1] Enable better decision making through better and targeted information on HSE performance presented in a compelling way to the right audience at the right time[2] Creating a HSE management system for the business that is more effective, lighter of touch and makes best use of available technology where appropriate (plan complete)[3]	Jill Collis	Complete[1] Mar 2016[2] Sep 2015[3]
Operational plans for police and TfL's on-street enforcement officers include response deployment plans for major unplanned incidents. Plans are kept under review.	Steve Burton	Ongoing	The Resilience Planning Team are: Delivering two single day Bronze Incident & Events Manager courses each month with courses currently fully booked into September 2015.	Garrett Emmerson	Sep 2015
Contingency plans in place for a range of anticipated incident scenarios as part of business as usual planning for disruption. Annual and regular review and exercising of plans, and prioritisation of resources.	Garrett Emmerson	Periodic	Business Continuity Managers have established an annual work plan that specifies training, exercising, technical tests, plan review targets and milestones.	Garrett Emmerson	Sep 2015

Commentary: