Independent Investment Programme Advisory Group – Annual Report 2015 - 2016 – TfL Management Response

TfL Response: 3.1

Approach: IIPAG's input to the Integrated Assurance Reviews is central to the assurance process. The new Three Lines of Assurance framework was approved by the Committee in January 2015 and is now established and understood by the sponsor and delivery teams. Over 60 projects and programmes are now under Continuous Assurance, with the Project Assurance team attending Project and Programme Boards, holding regular updates with sponsors and scrutinising project dashboards.

The Continuous Assurance provides a more dynamic understanding than can be gained from a single point-in-time review, which can often be more than a year apart. From October 2016, the Continuous Assurance outputs will be consolidated into a periodic report for the Chief Finance Officer and IIPAG.

Further developments are planned for 2016/17, particularly to monitor the progress made against the recommendations from the Integrated Assurance Reviews, including those from IIPAG.

TfL Response:

Gateway Reviews (Project Close-Out): It is recognised that improvement is needed to achieve more consistency in reviewing projects at the closure stage. Although the number of Project Close reviews including IIPAG has not significantly improved, the Project Assurance Team has conducted eight close reviews in 2015/16.

The issues identified by IIPAG – particularly the capture of the benefits and lessons learnt – are understood. The number of Integrated Assurance Reviews carried out at the Second Line of Assurance should not be confused with the Pathway closure gate at the First Line of Assurance, normally approved by the sponsor or project board. The Continuous Assurance activity will also enable greater visibility of projects passing through Pathway Stage gates Five (Delivery) and Six (Completion). As a result, Integrated Assurance Reviews at project closure are likely to become more routine.

Network Rail: IIPAG has repeated its recommendation that interfaces with external parties, particularly Network Rail, should be improved. In addition to major projects where rail lines are owned by Network Rail, many structures projects also include interventions on Network Rail assets. Many of the interfaces are well managed at the asset level, with knowledge of Network Rail processes now more widely shared across asset management teams.

IIPAG's acknowledgement of best practice in a number of projects is noted.

TfL Response:

IIPAG has recognised the recruitment of a specialist resource to develop the dashboard reports. The Integrated Controls Project will be progressed to provide a single planning and reporting tool that will improve the accuracy and consistency of reporting, including the project dashboards.

TfL Response: 3.2

IIPAG has continued to play a close and supportive role since the signature of the ATC contract and the programme team has always adopted their recommendations where they can be implemented. The Programme Director leading 4LM champions the importance of collaborative relationships; not just with the key suppliers, Thales and Bombardier, but also with a myriad of other sub contractors.

Since signing the Thales contract, the LU team has co-located with Thales at West Ferry Circus into “One team” areas grouped by delivery areas. LU has also established a Collaborative Leadership Hub, where LU, Thales and Bombardier meet on a four-weekly basis to discuss issues and drive collaboration. Changing the culture of the former SUP team into a collaborative team; fully understanding that their supplier is at the heart of their success; has been a significant change programme in itself and one that won the International Employee Engagement Award for 2016.

IIPAG’s observations on Thales’ subcontracting arrangements are accepted. The programme team has extended its collaborative efforts to ensure that LU’s deep experience of the railway environment has been fed into the Thales sub-contract arrangements. This effort has been essential to ensuring an effective fit with the main contract. It also ensures that LU and Thales are fully aligned in contract management to avoid unnecessary levels of disallowed costs or potential disputes.

With hindsight, more could have been done with Thales to ensure the best fit between the main contract and the subcontractors at the pre contract phase – this crucial lesson will be embedded in the New Tube for London signalling procurement.

The programme team agrees that the fitting of ATC equipment onto the new fleet of Bombardier trains is a vital element of the 4LM ATC programme. Significant effort is being made to develop a collaborative relationship that maximises the engineering and leadership skills within Bombardier and Thales. A significant milestone achieved was the “V1” prototype test train running at full speed at the test track in Melton. More recently, an intensive design period has enabled the first “V2 production train” commence the factory fit by the end the July 2016, by which time a fully binding contract will be in force.

TfL Response: 3.3

The TfL team has regularly briefed IIPAG on the recent developments and notes that the project remains of high concern to the group. Further briefings will be provided as appropriate.

TfL Response: 3.4

The programme team has engaged regularly with IIPAG during the preparations for issuing the rolling stock invitation to tender and the development of the signalling pre-qualification questionnaire.

IIPAG makes reference to the alignment of the rolling stock and signalling procurements and resulting design. The programme team has aligned the dependant activities, including the introduction of “hold” points to ensure that the key design and interface activities between the rolling stock and signalling allow for efficient integration. This alignment approach and timing of the signalling procurement has been approved by the Finance and Policy Committee.

IIPAG has stated that TfL should not commit to the same signalling supplier and technology for all the lines. The planned procurements do not commit TfL to a single supplier – or a single technology – for all the remaining LU lines. The proposed approach would result in a firm commitment to a single supplier and technology for the Piccadilly Line only, with options for the other lines to be exercised in the future. This approach safe-guards LU against significant changes or improvements in technology.

IIPAG has highlighted the very limited pool of signalling suppliers. The programme team has developed the packaging strategy for the signalling procurement, which is designed to maximise market appetite and competition. The strategy identifies a number of options which can be removed from the core signalling contract scope and delivered separately if it is more advantageous from a cost, risk and delivery perspective. These separate procurement options include the fixed communications network referred to by IIPAG.

TfL Response: 3.5

IIPAG has rightly identified a number of significant challenges associated with the Silvertown scheme, which will construct a very large (12.5m diameter) twin bore tunnel close to the river bed in challenging ground conditions. The land sites also include significant issues, including contaminated land due to previous industrial uses and unknown ordnance that could include unexploded bombs.

Delivering the project through a PPP mechanism enables TfL to transfer the risk associated with the tunnelling activity to the private sector. In addition,

the PPP company will be responsible for the availability of the tunnel over the life of the concession period, ensuring that the design and delivery follows a whole-life approach. Furthermore, the PPP company will only begin to make a return on its investment once the tunnel is available for use, providing a strong incentive to deliver to time and to budget.

For these reasons, TfL considers that the Silvertown Tunnel is better delivered through a PPP arrangement rather than through a traditional procurement method.

The use of a PPP also provides the most viable finance option. It would not be possible to finance the Silvertown Tunnel within the current business plan without deferring or cancelling other significant projects. It should be noted that TfL will retain responsibility for the user charging element of the scheme (covering both the Silvertown and Blackwall tunnels).

TfL Response: 3.6

The Integrated Assurance Review (IAR) for the river crossings east of Silvertown was not pursued at the end of 2015 when it became clear that candidates in the forthcoming Mayoral election were proposing alternatives from those pursued by the former Mayor.

Since his election in May, the Mayor has confirmed that he will review his river crossings priorities with a particular focus on air quality, new housing and affordability. The review will consider which options best meet the new priorities. An IAR (with IIPAG) will be arranged once the new priorities are confirmed.

TfL Response: 3.7

The high level governance structure for Crossrail 2 has been agreed for the development stage, with the Joint Sponsor Board now in place. Discussions have also been held on the assurance requirements of each sponsor to ensure that the review interventions are coordinated and do not overlap. A joint assurance framework will be proposed to the Joint Sponsor Board as soon as possible.

TfL Response: 3.8

IIPAG correctly stated that the three Cycle Superhighways were still in construction during the period covered by the report. Since then, the three routes were opened in April and May 2016, just three years from their inception in the Mayor's Cycling Vision in 2013.

The monitoring strategy and plan for the cycling vision is now well established. Baseline counts for the Superhighway and Quietway routes have been completed. Early counts on the three new superhighways (East-West,

North-South and CS5 Inner) show that cycling trips have increased by an average of 60 per cent over the pre-construction levels. Counts in May 2016 found that cycles accounted for 52% of all traffic on Victoria Embankment (E-W) and 70% of all traffic on Blackfriars Bridge (N-S), during the morning peak hour (8am-9am).

The monitoring programme is also designed to measure the wider benefits of the cycling portfolio, including the impact on modal shift, public health and road safety. The Cycling Outcome Board will review the monitoring results and benefits as they mature.

In relation to the borough programmes in the Cycling Vision, IIPAG is correct in stating that the overall progress has been slower that originally planned but the progress in some boroughs has been very good – the programme-level picture masks some of the borough level successes.

The scale of delivery in the initial years has been challenging, given the nature of the projects, the necessity of building political and public support, and significant prior cuts in borough capacity. In many cases the programme was being delivered almost from a standing start.

Drawing on the lessons from the initial two years, the Cycling Vision Team is taking a number of steps to strengthen the programme management. The 2016/17 budget setting with the boroughs has been more detailed, including more rigorous assessments of borough cost estimates, using actual cost data from the early schemes and commercial resources from other delivery teams across Surface Transport.

Design Reviews for major borough schemes will be carried out to challenge the costs and encourage value engineering, again drawing expert resources from other Surface Transport departments.

TfL has also begun liaising with the boroughs to promote a more value for money ethos, to enhance transparency and to provide a clearer line on the removal of funding where the quality or progress is not sufficient.

TfL Response: 4.2

IIPAG recognises the further improvements in TfL's sponsorship capability. IIPAG commends the expertise of the Transport Planning and Strategy Department in obtaining legislative powers for major schemes but recommends that the engineering and planning resources in Surface Transport and London Underground could be engaged earlier in the project development. The creation of a Major Projects Department in 2016 will clarify the roles, responsibilities and interfaces across departments, ensuring that the TfL expert resources are optimised for major projects.

The Sponsorship Capability Improvement Programme has generated a number of specific work streams in Surface Transport. A Surface Sponsorship Steering Group has been established to ensure consistent

practices across the department. Mandatory training is provided to address capability or knowledge gaps. Sponsorship champions are also in place to provide ongoing support and advice.

The Pathway Project Management framework has been revised to include a dedicated section for Surface Transport that clearly defines the roles and the tasks performed by the sponsor and deliverer throughout the project lifecycle. The Pathway framework has also been strengthened to include a more detailed section on the Initiation stages of projects, where the sponsor's role is the most critical.

The high level network requirements have been developed with input from all the Surface planning teams, including Buses, Road Space Management and Asset Management, which will be captured in a strategic business case. The handover process from the Surface Strategy and Planning Group to the sponsor teams has also been clarified.

TfL Response: 4.3

TfL welcomes IIPAG's endorsement of the PMO Strategy (April 2016) and the progress made in re-defining the role of the Programme Management Office. The implementation began in May 2016.

IIPAG's assessment of the PMO being a relatively large organisation pre-dates the structural review, which assessed the capability, activities and resources required to engage and guide the first line assurance in the programmes. The new structure is leaner, with significant reductions in Non-Permanent Labour (NPL) and a total staff cost saving of 22% against the 2016/17 budget.

The Business Change Project Services Team comprises over half (54%) of the total PMO headcount (excluding apprentices). The team provides project management resources to operational projects, including Fit for the Future Stations and other major change programmes, with all the costs recharged to the projects.

IIPAG recommends that assurance is applied more consistently across the whole of TfL including TfL Corporate and delivery departments. The PMO Strategy includes corporate departments in its objectives to strengthen partnerships with Sponsors, Operations, Corporate Planning, Business Planning, HR, Commercial and Finance. These relationships are being defined in more detail through the lifecycle improvement work.

IIPAG reiterates that the accountability for the delivery of an assured product remains with the sponsor and delivery teams; and that the TfL Directorates should not view the PMO as the first line of assurance. The PMO Strategy is completely aligned to that view, emphasising that the majority of first line assurance should take place within the delivery environment but that the PMO will ensure a consistent approach and provide support. It will also ensure that trends and themes emerging from the second and third line assurance are

effectively addressed across TfL.

Assurance: IIPAG has provided significant input and support to the development of the new assurance framework, based on the industry standard Three Lines of Defence. The TfL Project Assurance team has almost doubled in size since 2015, to 15 staff, in order to deliver the New Assurance Service at the Second Line of Assurance. In particular, the Continuous Assurance is now in place, covering over 60 projects and programmes. Project Assurance staff now attend programme boards, not only to monitor the progress of the projects themselves, but also to oversee the effectiveness of the First Line of Assurance to the boards.

As the Continuous Assurance develops, the risk-based approach to Integrated Assurance Reviews will become better informed, enabling more effective and efficient review interventions. As a result, the cost of External Expert resources is likely to be reduced by up to one third in 2016/17.

The Head of TfL Project Assurance reports directly to the Chief Finance Officer, providing a clear mandate for compliance and assurance across the delivery directorates.

TfL Response: 4.4

IIPAG has observed that project and programme boards may not be consistency effective across the delivery directorates. The programme board governance structure is more mature in London Underground but significant recent progress has been made in Surface Transport. Consistent Terms of Reference have been agreed for all project related boards across all the Surface directorates. Four portfolio boards have been established, covering assets, service operations, major highways enhancements and network performance and safety.

The programme scope and resources are included in the standard terms of reference for programme boards but it is recognised that more emphasis is required to ensure that the resources are stable in some cases. TfL Project Assurance will attend the boards in order to oversee the First Line of Assurance activities and to advise on the Boards' effectiveness. The new governance structures will be in place by September 2016.

TfL Response: 4.5

IIPAG recognises that overall progress has been made in strengthening the procurement and commercial functions, with an increased commercial focus within the project teams.

IIPAG also recognises the use of Early Contractor Involvement (ECI) and Conflict Avoidance Panels (CAP), as used on major project including the Tottenham Court Road and Bank Station upgrades. Although relatively new to TfL, the CAP process has been used by other agencies, including the

Olympic Delivery Authority and Network Rail. TfL will work with IIPAG to review the effectiveness of the CAP and ECI mechanisms when the relevant projects have been completed.

TfL welcomes IIPAG's recognition of the progress made in understanding base costs and developing estimating capability. Significant work is underway in both London Underground and Surface Transport to develop standard rates for "repeatable work items" and other estimating tools.

TfL will continue to work with IIPAG on the causes of cost increases in projects. It is accepted that cost savings and enhanced value could be better secured by directing more focus on the requirements in advance of the contract award. However, it is not always possible to undertake intrusive surveys pre-contract or to identify inaccurate asset location information provided by third parties. Furthermore, some non-value adding change cannot be foreseen – over 10% of the non-value adding changes for the three major station upgrades (Tottenham Court Road, Bank, Bond Street) related to the extended embargo on works during the Olympics.

IIPAG has expressed concern at the number of revisions (known as Z clauses) to the standard NEC contract, which is the default construction contract form in TfL. The existing NEC clauses have around 150 Z clauses, with a further review nearing completion. TfL accepts that one form of contract is not universally appropriate. A bespoke contract for the New Tube signalling contract is being developed, which should be a useful precedent for projects that include major applications of technology.

TfL will work with IIPAG to review the use of the NEC contracts, accepting that there is no single off-the-shelf form of contract for all construction works. The focus should be on setting clear requirements, achieving consistency in the terms used by TfL (to avoid confusing the supply chain) and setting appropriate Z clauses rather than focusing on the relative merits of various industry forms of contract.

TfL Response: 4.6

An Innovation Team was established within the Engineering Directorate in Rail and Underground in 2015. The London Underground Innovation Council was also created as a strategic board-level body. Ideas are submitted through the Innovation Portal. Each month, "Innovation Times" is published, providing an update of the basic statistics and news of the latest innovation developments. A simple evaluation model is used to select proposals for initial development, without the need for a detailed business case or full project structure. Significant ideas include laser scanning of tunnels, asset inspections using drones and energy storage using recycled car batteries.

Similarly, a Surface Innovation Fund was established in January 2016 and has provided seed-funding for a number of initiatives, including USB smartphone chargers on the Cycle Hire bikes.

A pan-TfL Innovation Hub has been created to encourage and coordinate innovation, both across TfL and externally.

External engagements have resulted in a number of grants totalling over £1m, from Innovate UK and the DfT. A notable success has been a concept trial of "Wayfindr" – a system that enables visually impaired people to navigate the underground. National media coverage was followed by a multi-million dollar donation from Google. Other avenues of development include energy storage modelling and using aerospace materials on trains to reduce weight and energy consumption,

A number of collaborations have also been established, including in-kind effort from McLaren Applied Technologies and the Open Data Institute.

The Innovation team now coordinates the effort across TfL and enjoys visible support from the Managing Directors. TfL would be happy to provide further briefings to IIPAG on the work to date and the possibilities for the future.

TfL Response: 4.7

Noted.

TfL Response: 4.8

A great deal of work has been undertaken to construct a viable approach to the sub-optimum and fragmented nature of TfL data networks. The TfL Technology and Data Group was established under the leadership of the Managing Director, Customers, Communication and Technology. IIPAG now has full representation on the Group and will play a crucial role in the development of the pan-TfL Telecommunications Strategy.

TfL Response: 4.9

IIPAG notes that a single standard for London Underground rolling stock has now been completed. The standard is long, as IIPAG states, but for the first time, all the components are in one place, enabling project specifications to be drawn up from a single source, eliminating unnecessary requirements.

TfL Response: 4.10

Overheads are now more comprehensively captured, with most project staff, including sponsors, using timesheets to record their costs as part of the project. A review of overheads – including central costs – will be carried out in the current year. Briefings on the benchmarking methodology and results will be provided to IIPAG as the work progresses.

TfL Response: 4.11

The endorsement of the Infrastructure Carbon Review commitments by the Rail and Underground Board in January 2016 is a significant step in mainstreaming carbon reduction. TfL welcomes IIPAG's support and looks forward to strong collaboration in the coming year.

TfL Response: 4.12

Over the last 18 months, TfL has been developing a Strategic Workforce Planning capability that provides an evidence-based and repeatable method for creating workforce resource plans. The impact of changes to the business plan can also be modelled.

By reviewing TfL's workload on a segmental basis (for example engineering across the business rather than in a single area), the skills and resources needed to deliver that workload over a 3-5 year period can be mapped. For the first time, the Strategic Workforce Planning tool provides a central view of acute workforce issues and future skills requirements, informing the strategic resourcing plans for future skills and competence.

The introduction of Workforce Planning allows the business to make informed decisions, both in the short and long-term, on the most appropriate resourcing response to deliver the business need.

Where the business takes a view that Non-Permanent Labour is the most appropriate resourcing response, the new multi-vendor Engineering Recruitment Framework provides a cost-effective way of securing high quality non-permanent Engineering staff. With no minimum level of hiring built into the contract, the framework provides the flexibility to make the right decisions based on the insights from workforce planning to deliver cost-efficient resourcing solutions.

TfL Response: 5.1

Through IIPAG's guidance, TfL has made considerable strides in developing the maturity of its benchmarking such that it is fully embedded across London Underground (LU) Operations and Capital Programmes, Buses, and Surface Asset Management. It is also becoming progressively embedded across the entirety of Surface Transport. TfL is pleased to note IIPAG's recognition of the progress made against the majority of its previous recommendations.

TfL Response: 5.3

Although LU reduced administration and other overheads unit costs by 11% in 2014/15, TfL accepts that these costs need to reduce further and actions are in place to achieve this reduction. For 2016/17, specialist services budgets

have been held at 2015/16 levels and strict headcount controls have been introduced that require all recruitment to be approved by a sub-group of the TfL Executive.

Reliance on expensive agency staff will also be reduced and IT projects delivering limited benefit will be stopped. The Business and Finance Review is assessing all areas of the business to identify where costs may be reduced or income increased.

TfL Response:

The 2016/17 plans (incorporating learnings from 2015/16) focus on absence and sickness management, service disruption breaks and reviewing end-to-end trauma management to further improve staff return-to-work. The first two are a main focus on the Circle &Hammersmith (C&H) where the impact has been greatest. Actions include, Line Reliability Plans with a focus on 'staff errors', staff errors meetings to share best practice (especially from C&H experience), on-going monitoring of operator performance (Competence Management) and quicker intervention after 'staff errors', health campaigns to reduce absence, and training to ensure the priorities for ensuring high standards of service are fully understood by both train and station staff.

In addition, the modernisation of signalling through the 4LM programme will reduce delays caused by staff through the elimination of over 200 signals passed at danger per year.

TfL Response:

Track maintenance costs continue to be reduced. A Working Group of senior Asset Managers and engineers is focussing on Track Maintenance Optimisation. Key actions are; accelerating use of risk-based inspection frequencies and passenger train borne remote track monitoring on the Sub-Surface, Bakerloo and Victoria Lines) to reduce on-foot inspection; the latest ultrasonic testing methodology, enabling office-based analysis before committing corrective activities; targeting and accelerating specific renewals and corrective maintenance interventions to reduce inspection frequencies and repeat corrective maintenance; unit rate comparisons to identify best methodologies and drive implementation across all lines; S Stock wheel-rail interface strategy (rail grinding, wheel turning and train-based lubrication) to enhance life-cycle costs and safety; site specific geometry design for plain line tamping; and optimisation of access use to improve delivery efficiency and support Night Tube.

TfL Response:

TfL has made significant effort to better understand overhead costs in the last year. The 2016/17 benchmarking programme includes a specific

benchmarking study on project overheads.

TfL Response:

Progress against the Surface benchmarking work plan will be reported regularly to the Surface Board, including achievement of the intended benchmarking impacts as set out in the approved plan, which also identified support required from the B&V team in the form of joint studies with other modes, facilitation of studies through their links with external benchmarking groups and in assisting with setting up the international urban road benchmarking community.

TfL Response:

The RWIs for station works will be reviewed in the context of external comparators and the external comparators refreshed. The opportunity will be taken to see where the comparators could be extended and steps will be taken to obtain external comparator information.