

TRANSPORT FOR LONDON

BOARD

SUBJECT: METRONET INTEGRATION AND BUDGET ALIGNMENT

DATE: 24 JUNE 2009

1 PURPOSE AND DECISIONS REQUIRED

- 1.1 This paper sets out the issues that have been addressed by London Underground (LU) and Transport for London (TfL) following the Administration of Metronet.
- 1.2 It also describes the organisational arrangements now being established to ensure the efficient and effective delivery of maintenance and renewal work within LU.
- 1.3 Further information on performance of the Nominee Companies will be provided in the annual PPP Report for 2008/09 which will be published shortly. In addition, LU will be publishing a monthly periodic performance report from July 2009.
- 1.4 All costs are in outturn prices for 9 years (09/10-17/18), unless stated otherwise.
- 1.5 An earlier version of this report was considered at the meeting of the Finance Committee on 2 June 2009.
- 1.6 The Board is asked to note this paper.

2 EXECUTIVE SUMMARY

- 2.1 In the period from Administration through to the current budget, an estimated amount of c£2.5bn of costs have been removed from the overall Metronet cost base for the plan period through a combination of the renegotiation of a number of Metronet's contracts on trains, track and signalling (which did not offer best value for money), revising the upgrade programme, improved procurement and operational efficiencies.
- 2.2 The transition from entering into Administration through to full integration has taken place in a number of specific stages, each with its own complexities and challenges, both during and after Administration. These can be described as follows:
 - (a) From March 2007 to September 2007 – contingency planning, distress management of operational imperatives and bidding preparation. The Administration took place from July 2007 and Trans4M (T4M – the

shareholder consortium behind the delivery of stations and civils works) gave notice on its contract in August 2007. During this period access was not available to underlying cost and programme information.

- (b) From October 2007 to May 2008 – negotiation of terms with the Administrator, Banks and Suppliers in preparation for the transfer to TfL.
- (c) From May 2008 to November 2008 – management of Metronet as a separate entity with an obligation to retain separability.
- (d) December 2008 to date – implementation of the integration programme.

2.3 Throughout these different phases of the transition, and with increasing access to underlying information (from a low base), LU has focussed on improving the quality of programme and scope information for key programmes. Since Transfer in May 2008, LU have also set about detailed programme and cost reviews for each of the key programmes in priority order. A large number of governance and financial controls issues have also been addressed. However, it is only with the full integration of Metronet and the implementation of the more robust systems and processes now in hand, that efficiencies will be delivered.

2.4 Despite the distraction of the transition through Administration and Transfer into LU, the maintenance activities have significantly improved performance and backlogs have been addressed.

2.5 The detail below sets out a summary of the transition and key issues arising. It describes key elements of background in section 3, gives a brief overview of performance in section 4, describes the Organisational Change in section 5, focuses on key programme issues in section 6 and explains the various measures taken in the development of an affordable plan in section 7.

3 BACKGROUND

3.1 Metronet entered administration on 18 July 2007, and the businesses were acquired by TfL in May 2008. The Administration order was made following a request by the Metronet Directors following a period of significant cost escalation, and an adverse finding in respect of the first stage of the Extraordinary Review which they had called in an attempt to obtain increased funding from TfL. This was a direct result of significant failures in their planning and delivery of the programmes of work required under the PPP contracts for both BCV and SSL.

3.2 In the period from July 2007 to May 2008, LU worked closely with the Administrators to recommend improvements with respect to operations, and was able to agree a level of short term stabilisation measures, particularly in respect of the Stations programme.

3.3 As part of the exit (by Asset transfer), TfL was able to review and restructure specific contracts, but only within certain restrictions: i) it needed to be able to

demonstrate that doing so did not prevent the ongoing operations of the PPP obligations, and ii) there had not been a post-Administration commitment made by the Administrators. This enabled LU to work with the Administrators to revise a number of key contracts with previous shareholders and reduce future costs through savings of c£0.5bn.

- 3.4 However, it was only from the point of transfer in May 2008, that LU and TfL were able to have full access to assess the true state of affairs. Immediately on transfer, LU identified key areas and seconded a number of LU project managers, finance team and legal staff into those areas where gaps had been identified, in order to start the detailed work of obtaining rigour in process and programmes and to establish accurate cost information. The key priorities were i) Line Upgrades (both VLU and SSL), ii) The Stations Programme, iii) The Track Renewals Programme, iv) Improving the productivity and reducing the cost of the maintenance activities, and v) Developing an Affordable Plan. These key priorities and actions taken to address them are set out in sections 6 and 7 of this paper.
- 3.5 There were also a significant number of other operational, governance and financial controls complexities that stemmed from both the history of Shareholder influence, and also, the subsequent Administration regime. These were dealt with in parallel with the key priority issues above. However, it became apparent that the level of change that was required could only be achieved through full integration. LU and TfL therefore worked with Government through the Joint Steering Committee (JSC) to develop a value for money, affordable and acceptable solution that would facilitate cost savings along with significant improvements in the financial and operational controls of activities of the Nominees (the two dedicated TfL subsidiaries established to take on the businesses of Metronet). A high level summary of these activities is set out in section 5 of this paper.
- 3.6 The first step towards full integration was made in December 2008 when all of the Metronet employees were TUPE transferred from the Nominees into LU under a single executive team. A subsequent integration is currently being undertaken across both LU and former Metronet staff in all areas of the business (with the exception of front line operations). This will lead to a reduction in headcount of approximately 1,000 out of 5,000 staff in scope, many of whom are agency or consultancy staff, across the programme support and central services teams, with the exception of front line operations and maintenance, saving an estimated £0.6bn across the combined LU budgets during the plan period to 2017/18.

4 PERFORMANCE SINCE TRANSFER

- 4.1 While such a period of turmoil may have reasonably given occasion to a drop in performance, a key aspect of this integration has been the genuine performance improvement trends that have been seen. This highlights the importance of the development of close working between the operations and maintenance teams, starting, albeit with some constraints, during the period of Administration and moving forward significantly during the last year within TfL.

- 4.2 The table below sets out the comparable contract measures from the pre and post administration periods. It can be seen that for both BCV and SSL the key performance measures of Availability, Fault Rectification and Facilities Service points have all improved significantly, even when the first two years of the PPP (assumed to be the time when Metronet was in its initial learning curve) are excluded from the average calculations. The only area where performance dipped slightly across both areas of the network was ambience, which relates to the general appearance of the Underground and the change (derived from survey data) is not statistically significant.
- 4.3 Key asset performance is better with significant improvements in the Mean Distance Between Failures (MDBF) and a decrease in track failures by a significant proportion. In the case of SSL, Train control failures (an input measure that is not part of the PPP core measures, but useful from an operational perspective), have risen by three incidents. This is not statistically significant but it is nevertheless, a focus for improvement.

	Units	Years 1 - 5	Years 3 - 5	Year 6	% Variance (Year 6 vs Years 1-5)	% Variance (Year 6 vs Years 3-5)
BCV						
Availability	<i>Ave. LCH / Period</i>	435,668	443,055	294,143	32%	34%
Ambience	<i>Ave. MSS Score</i>	69.26	68.99	68.05	-2%	-1%
Fault Rectification Service Points	<i>Ave SPs / Period</i>	12,359	10,766	6,784	45%	37%
Facilities Service Points	<i>Ave SPs / Period</i>	5,195	4,742	3,425	34%	28%
Rolling Stock MDBF	<i>Ave. KMs</i>	5,535	6,380	7,067	22%	10%
Train Control Failures	<i>Ave. Failures / Period</i>	70	69	55	21%	20%
Track Failures	<i>Ave. Failures / Period</i>	15	16	10	35%	39%
Lifts MTBF	<i>Ave. Days</i>	8.0	8.6	9.2	13%	7%
Escalators MTBF	<i>Ave. Days</i>	41.4	40.5	49.4	16%	18%

	Units	Years 1 - 5	Years 3 - 5	Year 6	% Variance (Year 6 vs Years 1-5)	% Variance (Year 6 vs Years 3-5)
SSL						
Availability	<i>Ave. LCH / Period</i>	416,346	428,601	313,069	25%	27%
Ambience	<i>Ave. MSS Score</i>	71.00	71.38	70.69	0%	-1%
Fault Rectification Service Points	<i>Ave SPs / Period</i>	18,588	19,890	7,858	58%	60%
Facilities Service Points	<i>Ave SPs / Period</i>	4,690	4,430	3,665	22%	17%
Rolling Stock MDBF	<i>Ave. KMs</i>	7,829	9,292	10,385	25%	11%
Train Control Failures	<i>Ave. Failures / Period</i>	77	77	80	-4%	-4%
Track Failures	<i>Ave. Failures / Period</i>	50	65	18	64%	72%
Lifts MTBF	<i>Ave. Days</i>	11.6	11.4	21.8	47%	48%
Escalators MTBF	<i>Ave. Days</i>	54.6	56.2	66.5	18%	15%

5 METRONET TRANSITION

- 5.1 In the initial period post Transfer, the focus was on developing options for the Long Term structure, developing an understanding of the plans, and costs of the programmes, as well as continuing with a number of operational and maintenance improvements. It was also a period during which discussions with Government through the JSC were taking place to determine a recommendation for the Mayor and the Secretary of State on the long term structure for the Metronet businesses. These discussions, backed by extensive analysis and research, led to a number of key principles being established for the new (interim) organisation:

- (a) Core safety, maintenance and operational activities should not be destabilised.
- (b) Project and programme priority should be given to the delivery of the Line Upgrades which bring significant benefit and which renew life-

expired key assets. The JSC also recommended that it may be appropriate to bring in a delivery partner for the SSL Line Upgrade.

- (c) The new integrated structure should have a clear segregation of duties between i) the client (often referred to as the sponsor – the person setting the business benefits and scope requirements, and who is accountable for ensuring the delivery of customer and operational benefits), and ii) the deliverer (the person responsible for programme managing the delivery of the project or programme of work). Independent of both of these roles should be the oversight functions provided by key support teams such as finance, legal and safety.
- (d) The delivery of value for money should be reinforced through the development of a commercially focussed procurement function (supported by financial and legal acumen) that has influence across the entire portfolio, to drive a more commercial approach to contracting.
- (e) The structure should be implemented in a way that would enable improved effectiveness and the realisation of significant cost savings.

In October 2008, it was agreed that the integration could start in advance of any formal recommendation being issued by the JSC as it would not prejudice any future decision in respect to the long term structure for the Metronet businesses.

- 5.2 The new organisational structure was designed to enable the key principles described above to be achieved. The implementation of this structure is currently in progress, and the savings of £0.6bn that are expected from this process will start to be realised over a period from July through to the end of the financial year as system changes are made. Budgets have been reallocated to reflect the delivery of these efficiencies and each of the new directorates have a clear set of financial objectives.
- 5.3 Safety, maintenance and operational changes were restricted to minimal impact areas (for example the merging of the engineering and safety assurance functions was found to provide good value without creating any safety risk). A focus was given to ensuring that the maintenance and operations teams developed closer working relationships. Her Majesty's Rail Inspectorate (HMRI) has been consulted throughout the process.
- 5.4 The Line Upgrades delivery team was separated from other project delivery in order to ensure the clear accountability of one directorate for the delivery of the Line Upgrades, focussing on some of the key engineering aspects of the Line Upgrade such as systems integration, which had largely been obfuscated by the previous Metronet regime. It is also key to the success of any Line Upgrade that an operational readiness team, sitting in the heart of the Operations team, should be closely integrated with the programme delivery to ensure improved management of the operational training, mobilisation and readiness plan needed to implement successfully the upgrades. Compared with Tube Lines Upgrades, where LU is subject to the whim of the deliverer in terms of programme changes, the close integration of these teams will enable

considerable savings in the mobilisation and training of the core operational staff concerned.

- 5.5 The approach that is proposed for delivery partnering is to create integrated teams to deliver the upgrades on the legacy assets, often with contracts that are already let e.g. trains. The integrated teams comprised LU (including ex Metronet) engineers and project managers, and specific delivery expertise sourced from a number of key delivery partners who are focussed on driving the systems integration, and providing robust challenge in respect of suppliers' plans and programme. These are the key areas in which skills and/or resource gaps have been identified and for which a partnering approach is appropriate.
- 5.6 Given the scale of the renewals programme, it was also important to ensure that other projects would be delivered and a separate Projects delivery directorate was therefore retained to focus on these programmes.
- 5.7 Clear delineation between the client, the delivery and the oversight functions has been implemented. Each project and programme has a clearly identified client owner of the business benefits to ensure that the project delivers the most customer benefits possible, within the affordability constraints that are identified by the Finance function. The deliverer (Programme/Project Manager) is responsible for ensuring that the programme is robust and delivered on time, to scope and on budget as specified by the Sponsor. Any variations or risk draw downs need to be agreed by each of the accountable parties and then subsequent authorisation is requested through the TfL approval process as appropriate. Each asset class has a named Professional Head (reporting to the independent Head of Engineering) who has accountability for ensuring independent peer review is carried out for new systems (using a risk-based approach), and owning the relevant standards.
- 5.8 A commercial transformation programme has been established as one of the core deliverables of the LU strategic plan and to realise the full benefits of the integration there are a number of other critical enabling programmes also in progress:
 - (a) To take advantage of the TfL shared services organisations in HR, Finance and Procurement, SAP is being implemented for these areas in respect of the Nominees by December 2009. This will enable improvements to the processes in all of these areas.
 - (b) An accommodation strategy has been developed with TfL Group Property and Facilities to enable the release of rental savings arising as a result of integration.
 - (c) A full systems harmonisation programme is underway.
- 5.9 A number of significant other issues were identified and addressed during this period:
 - (a) The R2P (Requisition to Pay) project to ensure improved supplier payment with significant improvements achieved.

- (b) More reliable reporting and forecasting capability.
- (c) Improvements to the assurance regime with significant savings derived from a unified risk-based approach.
- (d) Alignment of governance and processes to bring key decision making into line with TfL governance. All decision making has been consolidated into the LU Executive management process directly, TfL financial accounting policies adopted and HR policies and procedures aligned where appropriate.

6 KEY PROGRAMMES

6.1 Across the key programmes, the first step was to develop a clear baseline with robust and clear scopes, appropriate costing (validated by independent quantity surveyors), and clear programmes with any omissions and errors in the original plans identified and rectified. Value engineering was applied and costs were contained. The status of each of the main programmes is described below.

Line Upgrades

- 6.2 The Line Upgrade Programmes include the delivery of trains, signalling, some of the power improvements and other enabling works. At the point of transfer, the Line Upgrade teams had been impacted by the loss of key staff, and the complicated divide between the various teams (LU, Metronet and suppliers through different levels of the supply chain).
- 6.3 For each of the Line Upgrades, an integrated “One Team” approach was implemented. One programme manager across LU and Metronet teams was appointed and closer working directly with the suppliers enabled a more integrated programme to be developed.
- 6.4 At the point of Transfer, the focus was to contain any cost escalations, to ensure that a robust programme was in place, and to identify any omissions from scope and budget.

Victoria Line Upgrade (VLU)

6.5 The VLU is a key line upgrade which is mid-delivery. New trains are being tested on the line in engineering hours and all of the signalling has been installed on the line. Significant work has been undertaken to validate the programme, remedy deficiencies in the plans and apply a value engineering approach to the programme to contain costs to within programme. Working relationships and transparency with Bombardier (delivering trains), and Westinghouse (their subcontractor delivering signalling), have improved dramatically with good progress being made at this critical phase of the project where commissioning of the signalling system and integration with the new trains still represent significant risks. The VLU is meeting programme milestones which are well within the original PPP contract end dates. The

budget remains on track within the TfL plan.

Sub-Surface Line Upgrade Programme (SUP)

- 6.6 The SUP was at an earlier stage of implementation than the VLU at the time of transfer, and major issues had been identified and contracts were revised as part of the exit from Administration. The key issues addressed through this contract change revolved around the scope of the existing trains and signalling contract. Significant operational issues had been identified with the proposed plan, in particular, a plethora of additional signals at great cost, the lack of interoperability with other line signalling systems (that were being installed by Tube Lines) and the level of system maturity. LU will re-tender the signalling element and, through this process, will be able to ensure these risks are reduced and a more complete and integrated solution developed. A secondary effect will be the delivery of future asset maintenance savings in terms of whole-life cost (increase component commonality) as well as simplified training and co-ordination.
- 6.7 In achieving the improvements required in this area, the management challenge was:
- (a) To remove duplication by combining the LU and Metronet programme and contract management arrangements.
 - (b) To change the basis of some commercial relationships, notably with Bombardier as it ceased to be a shareholder.
 - (c) To review the overall scope of the programme to increase confidence in the:
 - (i) Level of overall system integration;
 - (ii) Migration strategy from the current service to the upgraded assets;
 - (iii) Cost and schedule estimates.
 - (d) To re-tender the new signalling system, while maintaining delivery of “immunisation” works of the existing signalling system.
- 6.8 The rebaselining exercise that was undertaken immediately following transfer to LU and which completed in December 2008 revealed a large number of issues. Of the 36 projects which made up the programme at that time, 21 were inadequately scoped and were extremely likely to either fail and/or cause cost escalation. Therefore, a significant focus on developing detailed scope in parallel with cost containment has been undertaken and is still ongoing for the SUP. As with VLU, the development of an integrated team has led to closer working with suppliers and an improved visibility and focus on programme.
- 6.9 This review resulted in the revision of both programme and cost estimates. These were reviewed by reputable third party Quantity Surveyors in order to validate assumptions and estimates.

- 6.10 Benchmarking and value engineering techniques are being increasingly applied and have so far been developed for Cable Route Management systems, Electrical Trackside Equipment, Low Voltage Alternating Current (LVAC) distribution, and Signalling Equipment Rooms (SERs). One result of this has been to reduce the required number of SERs from 98 to 59. Standards requirements are increasingly being tested to deliver the optimal balance between time, cost, and safe, fit-for purpose assets.

The Stations Programme

- 6.11 LU has implemented significant changes to the stations programme since the demise of T4M. The result is a focused and efficient organisation resulting in improvements in programme control, delivery performance and client relationship.
- 6.12 The scale of the difficulties within the stations programme was documented in the Extraordinary Review submission just before Administration. The forecast cost escalation for stations expenditure for the first 7.5 years of the PPP contract was over £1bn. On the delivery side, the original bid had planned to have completed 55 stations; the results were that only one had been handed back to maintenance and 28 had achieved DIS (Delivery into Service) at the time of Administration.
- 6.13 Following the Administration, T4M ceased to operate on 28 August 2007 and the entire senior team left within weeks. A new Metronet Vice President was appointed by the Administrators in agreement with LU on 3 September 2007 to lead the programme and he assembled and organised a new management team.
- 6.14 Five objectives were established by the new stations programme team:
- (a) Right size organisation for the reduced works programme.
 - (b) Establish robust costs to complete stations on site and put in place controls to meet budget.
 - (c) Prioritise stations in design and review scope, budget and programme for each.
 - (d) Develop and implement procurement strategy for remaining works.
 - (e) Develop master programme including governance steps and reviews.

A joint LU/Metronet Programme Board, chaired by LU, was established to review and monitor the progress of the Stations team.

- 6.15 Reputable independent industry quantity surveyors were commissioned to conduct a review of a number of stations to establish independently the cost-to-go and Estimated Final Cost (EFC). This was completed during the Administration period. Contracts between T4M and the affiliate companies were unavailable or did not exist. Similarly, applications for payment were incomplete and inconsistent. The estimates for Cost of Work Done, costs-to-

go and the resulting EFC were also found to be inaccurate. The new estimates did, however, provide an increasingly reliable baseline.

- 6.16 Towards the end of the period of Administration, a large reduction in staff numbers, both planned and unplanned (including the withdrawal of secondees by some of the former shareholders), led to a significant slow down in the programme and a need to focus on the stabilisation of the programme. This was achieved through a rebalancing of the programme team and deliverables, a further reduction in the proposed scope of delivery resulting from the Affordability review to meet TfL funding constraints, and a significant management focus on creating a capable team. Construction management firms were brought in to drive programme delivery at key stations and a consolidation of procurement activities for materials and supplies was developed.
- 6.17 Following Transfer, all investments were re-baselined and tied to procurement plans that incorporated revised governance. As the programme matured, an increasingly robust set of standard milestones and programme timings was established and enforced for all stations. New procurement approaches are being implemented and an ongoing programme of improvement is being implemented to further drive down costs.

The Track Renewals Programme

- 6.18 The issues inherited from the previous management included a lack of consistent condition and work management information which, coupled with incorrectly applied assumptions of the requirements of the PPP condition benchmarks, had led to a sub-optimal work scopes being defined. This situation was exacerbated by a tied supply chain delivery contractor arrangement that did not provide incentives to meet the long term obligations of the PPP. This in turn had led to a culture of short term focus, delivering the most accessible and commercially rewarding works. In some extreme cases, this had resulted in considerable residual asset value being prematurely removed from the network, while other areas were left to degrade well beyond their economic life.
- 6.19 A further flaw in the investment and delivery strategy under the PPP contract was the separation of engineering consideration of track drainage from track renewals. This has led on a number of occasions to less than optimal worksopes and illogical sequencing of works.
- 6.20 Since Administration, a detailed condition and whole life cost model has been developed to predict accurately the required works across the network as a whole using the established condition data. In order to enable the Line Upgrades and reduce ongoing maintenance requirements, the conversion of jointed bullhead track to the continuous flatbottom variety is being undertaken. The latter is used extensively all over the world and therefore considered as the best practice trackform for heavily utilised railways.
- 6.21 The outputs of the condition model have been used to establish a detailed fully prioritised work bank which has in turn been validated by independent (to the delivery contractor) engineers through a process of detailed analysis of

performance, maintenance and safety metrics for each site followed up with on site investigation. Significant improvements were also made in long-term strategic planning, particularly with aligning access with Network Rail.

- 6.22 Prior to exit from Administration, the original track contract arrangements were varied by means of the Track Alliance Agreements. Under this Alliance Agreement the risks are shared between the contractors and LU based on the party best able to manage the risk. This alliancing approach enables delivery utilising in house LU expertise in project management, signalling, signalling design, power and protection services. The Track Alliance Agreement also enables LU to review costs to be incurred by both LU and the contractors on a fully open book basis, thus minimising costs should changes in scope occur.
- 6.23 At the end of the first agreement period of the Alliance, a review was undertaken, including independent performance reviews by two separate and independent third party assessors. As a result of these reviews, it was established that the Alliance was broadly delivering value for money although there was some room for negotiation of minor improvements to the agreement, including a reduction of the overhead levels being applied. It was therefore agreed that it should be extended for a further two years during which a full procurement exercise will be undertaken to tender competitively for a replacement to this Alliance contract for subsequent years.

Maintenance

- 6.24 The maintenance operation in Metronet was no longer in the same state of disarray as during earlier years, and was in a less precarious state than the programmes side of the business prior to Administration. A comprehensive review of maintenance processes had already been undertaken the previous year, and since mid 2006 there had been an improvement programme in place. This, however, involved a proposal to increase costs and staffing levels.
- 6.25 At the point of Administration, the expectation of poorer performance such as that seen during the collapse of Railtrack and the formation of Network Rail, was not realised because of the particular focus given to continued maintenance rigour and performance management. Performance is monitored through visualisation centres where daily updates to key metrics and specific fault information has clearly defined ownership and is assessed daily.
- 6.26 Reliability Growth Plans (RGPs) were developed to improve asset reliability identifying the current performance issues and the fixes or workarounds required to be delivered in order to improve performance. A notable success for the RGP process is the improvement in Victoria Line availability from 2007/08 to 2008/09, a 43 per cent improvement.
- 6.27 Since transfer the closer working between the Maintenance and Operations teams has also enabled a number of key efficiencies, and service improvements to be realised including:
- (a) Quicker time to site for the Maintenance teams through relocation and improved deployment of response teams.

- (b) Information sharing between key control centres to enable a more streamlined identification and resolution of issues.
- (c) Trials in the future deployment of Connect radio for Maintenance response teams, which will enable both improved location monitoring and more effective deployment between sites.

The focus for the Maintenance team since transfer has been to develop plans to enable both improved productivity and to reach an ambitious savings headline target while maintaining performance at current levels.

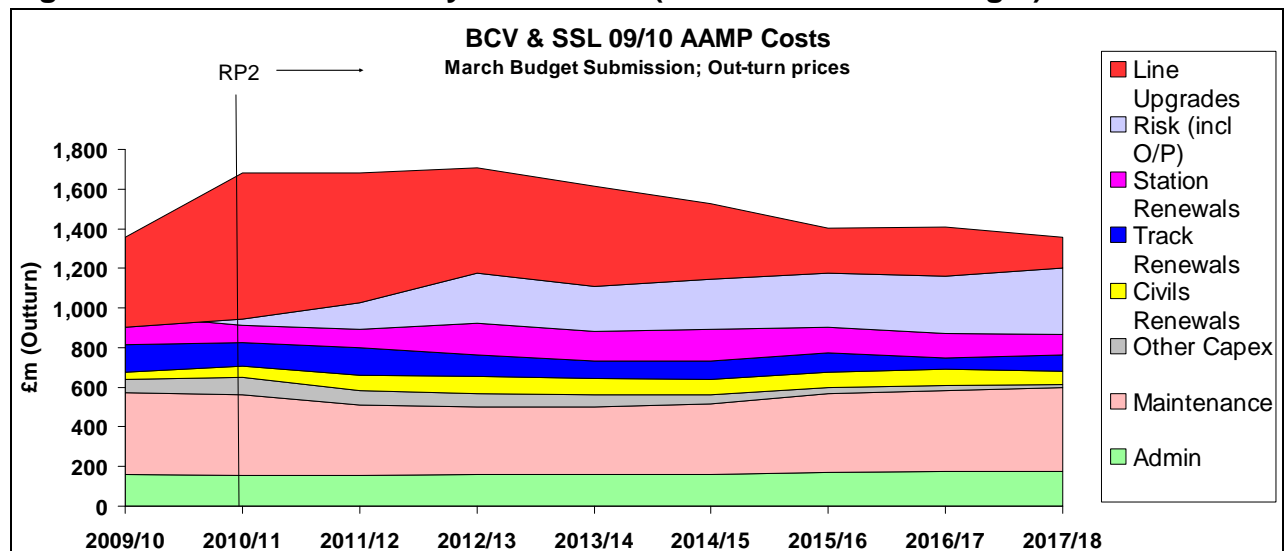
7 DEVELOPING AN AFFORDABLE PLAN

- 7.1 LU started working with Metronet to bridge the gap between Metronet's estimated costs and TfL's affordability constraint while Metronet was still in Administration. However, as described above, the ability to scrutinise the basis for the costing provided by Metronet during this period was limited.
- 7.2 Under the PPP contract, the Infracos are required to produce an AAMP (Annual Asset Management Plan) setting out their detailed plans for maintenance and investment in each asset area. As part of this process, they also need to provide the anticipated cost of those activities for the nine years ahead (the AAMP cost tables). The AAMPs and their associated cost tables are also subjected to Arbiter scrutiny. The process employed by Metronet in the production of these AAMPs was therefore driven by contractual deadlines and took place between September and March each year when a Final AAMP would be agreed by the Metronet Board. This AAMP went through a consult and confer process with LU input to the engineering approaches proposed by Metronet during a period from January to March. Following the formal submission of the AAMP in March, LU would be asked to approve those plans. Historically, the cost implications were only produced at the end of this cycle of review, and the Metronet team explicitly focussed only on costing the First Review Period (RP1), leaving the second review period figures at bid level. This meant that there was a significant element of the Metronet costs that had never been properly costed and the implications of delays had never been worked through in the later years of the plan. It also meant that historically, LU had never approved the AAMPs submitted by Metronet.
- 7.3 While the failure to cost any items past RP1 meant that Metronet did not produce any reliable estimate of the costs of the Second Review Period (RP2), financial analysis has enabled the development of a baseline assessment of what Metronet costs would have been without any constraint through the intervention of TfL. It is from this base of £16.2bn that the impacts of the descoping and deferrals during Administration have been estimated.
- 7.4 There have been successive iterations of the Metronet business plan as it developed over the period from Administration through to the most recent AAMP submitted to the Arbiter and reflected in the budget submission in March 2009 which aligns to the TfL investment programme total of £13.7bn. There have been significant overall cost decreases achieved (£2.5bn) as the total cost of activity during this plan period has been reduced from £16.2bn to

£13.7bn through a combination of re-programming, focussed cost reductions and efficiencies.

- 7.5 An overview of the Metronet cost base is set out in figure 1 below based on the 2009/10 AAMP. The phasing of costs over time is substantively driven by the line upgrades programme, with the investment required to deliver the Victoria and Sub-surface line upgrades happening at the front of the plan, and only the Bakerloo line upgrade at the end. Other than Risk, which includes differential inflation risk and hence compounds over time, all other activity areas remain largely flat over the plan period with the exception of incremental maintenance requirements in the latter part of the plan resulting from the increased volume of assets delivered through the line upgrades.

Figure 1: BCV & SSL costs by asset class (2009/10 AAMP & Budget)



- 7.6 The £2.5bn cost decrease was achieved through the following key actions which incorporate the latest and more robust cost estimates, the impact of revised programmes, and significant efficiencies realised through the actions described in sections 5 and 6 above.

Supply Chain Contracts

- 7.7 As previously noted, LU revised a number of contracts as the opportunity arose during the course of the Metronet Administration. LU made the decision to replace the supply chain contracts (previously let with the Metronet Shareholders directly) through revising and re-tendering, where available, in order to gain the greatest benefit, in particular the contracts with Balfour Beatty for Track, via the Trans4M alliance for stations, civils, and the Bombardier signalling contract. Particular impediments resulting from the tied supply chain to shareholders meant that value for money from the initial contracts was difficult to achieve. The combined effect of these adjustments was an estimated saving of £0.5bn from previous plans.

Development of more robust estimates and subsequent cost containment exercise

- 7.8 The position inherited by LU when Metronet transferred out of Administration was that the 2008/9 AAMP second period costs were based on the original bid model costs and the volume of stations work beyond 2010 had not been adequately adjusted to incorporate the value of the work that had been deferred during Administration. There was also pressure resulting from the application of more realistic estimates of pricing and, in particular, the work required to finish stations on site, risk and differential inflation estimates.
- 7.9 A fundamental review of the SUP plans LU inherited from Metronet was undertaken. Cost pressures were identified, as well as an acceleration of expenditure needed to deliver the enhanced capability within the timescale identified for the line upgrade. The main source of these pressures came through the remodelling of Hammersmith to deal with the new trains, additional power costs and the right sizing of system integration and immunisation works. These pressures are expected to be contained through value engineering approaches applied within this programme.
- 7.10 Other asset areas also saw initial estimates for cost increases, which were contained back to the level of the original plans.
- 7.11 The removal of man marking, right sizing of programmes and teams, and elimination of duplication between LU and Metronet programme and assurance teams that were inherent in the PPP structure, enabled a number of programme costs to be saved.
- 7.12 Other changes to specific asset plans arose from detailed reviews and there were also subsequent reductions to a number of small unapproved projects such as IM improvements and the reduction of grey asset assessments.
- 7.13 The net impact of these cost increases and subsequent containment exercises was an estimated saving of £0.2bn.

Efficiencies and Productivity

- 7.14 The current organisational change which focuses on the full integration of back office activities across LU and Metronet has enabled significant cost reductions. This integration process is underway and the full integration of back office activities will be complete by the end of the current financial year following the ERP systems implementation.
- 7.15 Procurement efficiencies have also been identified and are being implemented. These include the re-procurement of maintenance outsourcing, in areas such as track and stations cleaning, in more aligned and consolidated packages of work.
- 7.16 A target for optimal asset performance productivity has been set out and the Maintenance team is working with its employees and trade unions to develop clear productivity solutions to enable an annual target of £60m per annum to be met.

- 7.17 The total efficiencies for the LU Nominees developed through these initiatives amount to £1bn.

Programme changes

- 7.18 During Administration, and following the collapse of T4M, it became evident that Metronet's station programme was in such a poor state, that it would not be capable of delivering the enhancement to every station as required by the PPP contract. In October 2007 a "without prejudice" document was sent to Metronet which set out a revised stations plan to which the current programme is now aligned. This has enabled a sustainable programme to be set up on a more affordable schedule.
- 7.19 The Bakerloo Upgrade programme was rescheduled to focus on the delivery of rolling stock in time to meet Disability Discrimination Act compliance deadlines, with some of the signalling improvements being made afterwards.
- 7.20 The total reductions in the current investment programme that have been made through this rescheduling is £0.8bn.

8 CONCLUSION

- 8.1 The legacy left by Metronet's former shareholders was one of poor programme management and system integration, ineffective cost control, a lack of forward planning and inefficient fiscal management. LU worked initially with the Administrator, and then with the former Metronet staff to develop and drive an improved programme within the budgetary confines of TfL affordability. Significant levels of efficiency have been identified and incorporated into the Metronet plans.
- 8.2 In the context of the current Periodic Review process with Tube Lines, it is worth remembering that Tube Lines has a different structure and does not rely on tied supply chain contracts for the delivery of its programmes. The Arbiter has not indicated concerns about Tube Lines in respect to its inefficiency, although its delivery of the Line Upgrades is still an area of concern. The level of burden seen from the Metronet experience should therefore not be expected to be repeated in respect of Tube Lines.
- 8.3 A number of key improvements to LU's own processes have been developed through the integration with Metronet. These have been included in the Tube Lines Restated Terms, with the intention of providing the opportunity to Tube Lines to benefit from efficiencies in areas such as the more innovative use of access, streamlining of the assurance regime and changes in station refurbishment cycles.

9 RECOMMENDATION

- 9.1 The Board is asked to NOTE this paper.

10 CONTACT

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