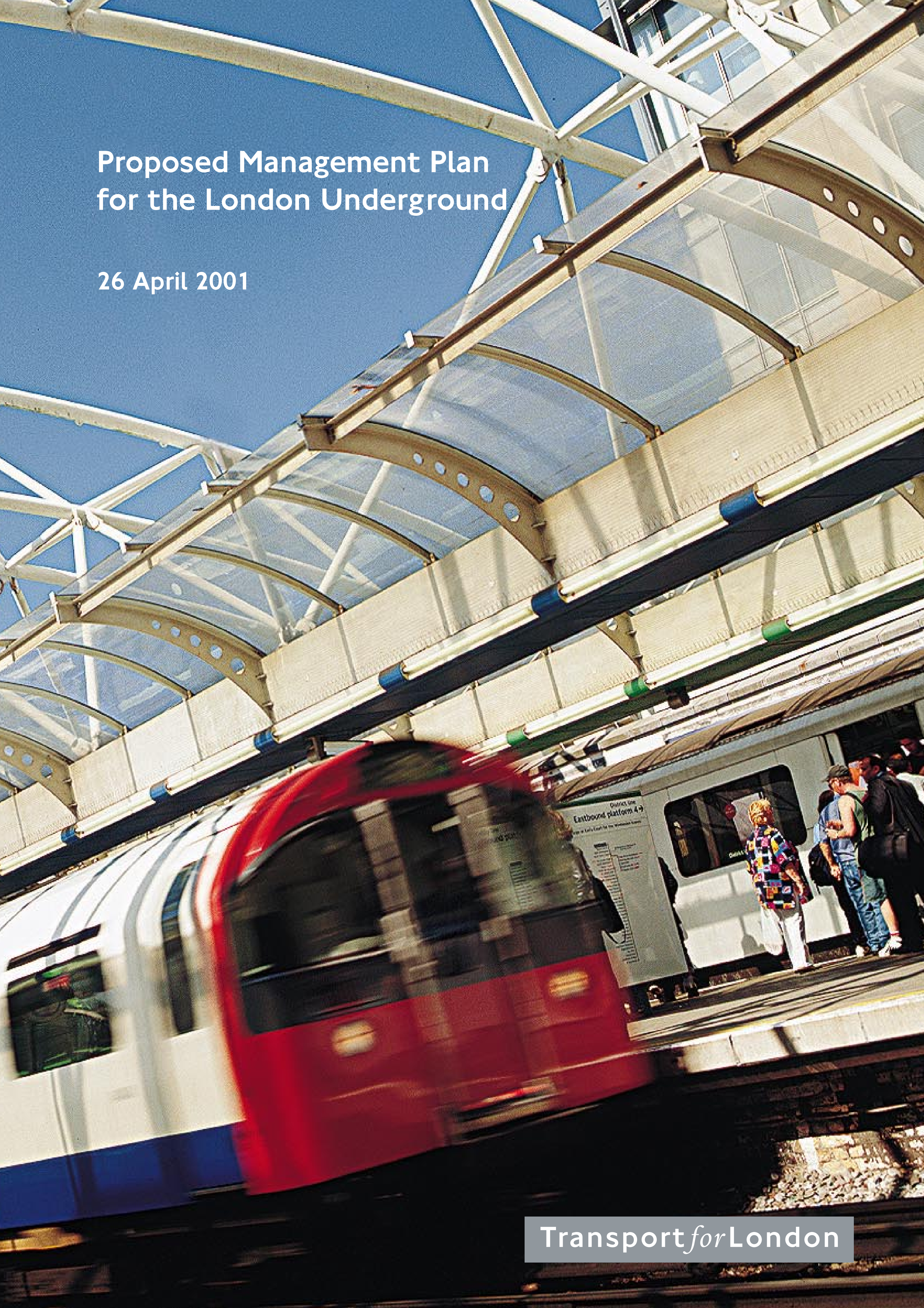


Proposed Management Plan for the London Underground

26 April 2001

Transport for London

Introduction

This paper outlines a management plan for the London Underground Ltd. ("LUL"). This plan expands upon previous proposals for the management of the Underground, as addressed in papers submitted by Transport for London ("T*f* L") to the Mayor, and in response to questions on the first of these papers, submitted to DETR on 29 December, 2000. Transport for London has formed the plan around six core principles, with the plan itself encompassing a detailed management system and a separate financing programme. In contrast to the complex and legalistic system of the Government's PPP, T*f* L's proposed management system is, by intent and definition, comprehensive through its simplicity. The management of T*f* L believes that the plan's transparency and simplicity are the source of its robustness. This approach has been an important factor in the revival of the ageing transport systems in Boston, New York, Washington D.C., Philadelphia, and Toronto.

Background

On December 13 2000, Transport for London submitted to the Mayor its "Outline of a Programme for the Rehabilitation and Management of the Underground." That plan set forth realistic and proven strategies, which, in our best professional judgement, should serve as the cornerstones of a credible managerial and financial approach for the rebuilding and revitalisation of the London Underground. In summary, TfL's December proposal called for:

- a multi-year funding commitment by the Government so that long term capital investments could be planned and executed in an orderly way;
- an efficient form of finance through TfL's issuance of long-term debt (backed by LUL revenues and without reliance on Government support or guarantees);
- unified management control of operations, maintenance, programme administration and investment; and
- significant delegation to the private sector for the implementation of capital projects through proven contracting methodologies.

These proposals were subsequently incorporated in the Mayor's Transport Strategy (January 2001 Draft for public consultation). The specific approaches set out by TfL marked a path different from that of the Government's proposed PPP, which TfL studied and concluded was "fatally flawed" for reasons that were articulated in a separate paper that was prepared and submitted to the Mayor at the same time.

While TfL's criticisms of the PPP received wide public attention, its positive managerial and financial plan to address the significant problems of the Underground were not as widely discussed. We know, however, that the plan was reviewed in detail by the Department of Environment, Transport and Regions (DETR). On December 15 2000, DETR submitted to TfL fifteen questions concerning specific issues raised in TfL's report. DETR's questions reflected a diligent and thoughtful review of TfL's proposals, which TfL took as an important signal that the Government might seriously consider alternative approaches to the PPP. TfL responded to DETR's questions in a supplementary twenty-seven-page report submitted on 29 December 2000. After that comprehensive response, no further comments were received, nor were questions raised by DETR or any other group within Government. Regrettably, the Government has showed no further interest in seriously exploring TfL's management or finance strategies.

On February 23 2001, TfL submitted a revised report to the Mayor which reconfirmed and elaborated on its initial findings concerning the PPP. This more detailed critique of the PPP was informed by TfL's review of the PPP tender and transaction documents and meetings with the bidding consortia, all of which took place subsequent to the December report. The Government has neither challenged any aspect of TfL's two reports on the PPP, nor has it responded in any way to the specific detailed criticisms of the PPP lodged by TfL. It has not attempted to rebut TfL's conclusions that the PPP fails the value for money test, that it represents a radical and totally untested model for privatisation of an essential public responsibility, or that it fractures management responsibility so fundamentally that accountability for safe and reliable service cannot be assured. Instead, the Government has simply retorted that TfL has no plan, that its alternative approach is insufficiently developed (that is, "only a few bullet points"), and that PPP represents the only viable way to replace the management team at the London Underground so thoroughly discredited by the Government (yet, ironically, the same team which the Government selected and charged with negotiating the PPP contracts).

The Government's decision to ignore the alternative plan designed by the transport professionals at TfL - one that only four months ago was under its active review and consideration (by DETR and presumably elsewhere) - does not undermine its value and viability. TfL's plan takes few pages to articulate. The PPP requires literally ten volumes of interweaving legal provisions to attempt to cover all operating contingencies for the next thirty years. But the reality is that a plan that requires ten volumes to describe is not a plan that can be implemented in the real world; it is no more than an academic (and financially rewarding) exercise for lawyers and consultants.

So that the public debate is fully informed, this paper restates and updates TfL's alternative, straightforward and comprehensible programme for the management and financing of the Underground.

TfL's Principles

TfL's December proposal was based on core principles that we continue to believe are reasonable and uncontroversial. These principles bear restatement and amplification in the context of an alternative management plan:

I. *The Tube has suffered from a long period of under-investment in its infrastructure.* The precise amount of work and funding required to restore the entire system to what transport professionals understand as a "state of good repair" is not currently known with an adequate degree of certainty. TfL continues to believe that it is essential that a thorough inventory of assets and their condition be completed before irrevocable commitments are made to initiate capital projects, which may or may not reflect an appropriate prioritisation of necessary work.

II. *A sound public transport system is one of London's most essential infrastructure assets*. In managing this asset, the sole objective should be to deliver a safe, efficient and reliable service at the lowest possible cost to fare paying passengers and taxpayers. This objective should never be held subordinate to the financial interests of those who are working for, and are investing in, the system.

III. *The Government should provide the Underground with a predictable and stable level of annual grants*. Stability of funding is essential to plan and to execute long-term projects. It will also result in reduced costs due to greater efficiencies in planning and procurement. The Government acknowledges this principle because it fully understands that the private Infracos require both predictability and stability of funding in order to execute public works, which take many years to plan and build. Yet it is has been previously unwilling to make the same commitment to LUL management, which it then blames for its lack of ability to plan and build required System improvements.

IV. *The private sector must play a significant role in the rebuilding of the System. However, TfL must retain effective authority and control over all private sector contractors working in the System, so as to assure operational reliability and safety*. Significant construction projects and technology upgrades should be executed by experienced private contractors under contracts in which they assume responsibility for system integration. However, TfL must be in a position to assure competition in the award of contracts, to supervise effectively the performance of the private contractors and to impose financial penalties or to grant incentive compensation based on demonstrated results. Supervising performance includes the power to direct actions and the power to refrain from taking actions, the power to change work when necessary to respond to changing circumstances, and an effective power in the most extreme circumstances to terminate for inadequate performance.

V. *The securitisation of LUL's revenues into debt obligations (i.e. bonds) is a readily feasible means of financing which should be employed to obtain a lower cost of funds than is available through the PPP structure*. Revenue securitisation is widely accepted in other sectors in the UK and in the public transport sector internationally. LUL could do this without a Government guarantee or an explicit pledge of support to the debt, however, Government assent is required for its implementation by LUL. As we have learned since December, the PPP itself requires a multi-year assurance by the Government that sufficient funds will be made available to fund the payments that LUL will be required to make to the Infracos. This commitment is essential to the Infracos ability to raise private finance. If an equivalent commitment were made to TfL and if consent were provided for TfL to incur debt, private finance could be obtained at lower cost, increasing the scope and pace of the rebuilding programme.

VI. *It is ultimately the public sector's responsibility to keep the trains running.* Attempts to shift the financial risk to the private sector through contractual arrangements cannot change this reality. "Risk transfer" to the private sector must be realistic in light of this accountability, and the actual risk transfer must be evaluated and measured against both the price premium that is required to be paid to obtain it and the potential consequences for the loss of public control that it entails.

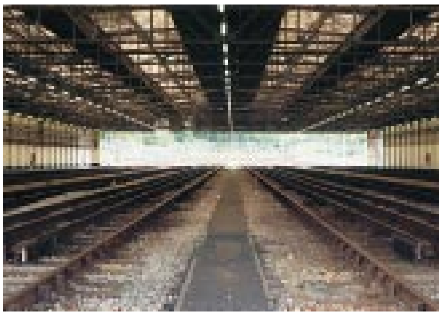
The Programme – Plan of Finance

Transport for London's proposed financing plan is a sound, conservatively structured scheme that will provide the stable, predictable funding necessary to restore LU to a state of good repair and to provide for normal replacement and service enhancements both in quality and capacity. It is an efficient means of financing LUL's capital requirement at a significantly lower cost than under the PPP and, unlike the PPP, our financing approach has been proven to work in other public transport systems around the world. This plan can be accomplished without exposing the passengers to unwarranted increases in fares or reductions in service, whilst at the same time protecting the Government and the GLA from unanticipated calls for emergency financial aid.

Financing for the plan consists of three distinct elements: 1. proceeds from the securitisation of a portion of TfL's revenues as long-term debt, 2. Private Finance Initiative (PFI) arrangements and 3. TfL revenues and Government grants ("pay-as-you-go" or "PAYGO" funding) in excess of operating costs.

1. Long-Term Debt

Unlike most public sector organisations, LU has historically collected ticket and other operating revenues in excess of its operating costs. As a result, TfL has the capability to access the long-term capital markets through efficient, proven and widely accepted financing structures. Under our plan, a portion of LU's revenues would be used to support long-term debt, e.g. bonds or other securities with payment streams matching the lives of the assets being financed, over a period of up to 30 years. Such an approach to financing capital improvements to the Underground is thoroughly consistent with sound and conservative financial management and principles of fundamental fairness. In fact, it will reduce the overall cost of financing, and its burden on the Treasury will be less than that under the proposed PPP.



We recognise that the Treasury has historically objected to such financing by local governmental units, apparently on the theory of "reputational externalities", which argues it would raise interest costs for all UK Government borrowing in the capital markets. Even if such a theory might have had some validity in the smaller and less sophisticated debt markets of twenty or thirty years ago (and even then it had no support from respected experts), it certainly is completely meaningless in today's large, sophisticated international debt market. It has little credence in London's financial community. Indeed, particularly with Government running large surpluses, the market's problem is not a surfeit of high-quality public debt, but a shortage. Issuance of LUL or T*f* L debt would be welcomed at attractive rates by the market and impose no other burden on other Government financing efforts.

Only a portion of the projected LU revenues would be committed to this form of financing. Our programme limits the amount available to support the debt in any year to an amount no greater than 50% of the projected available surplus in that year. This conservative approach will, of course, limit the amount of funds that can be raised, but it will also help to ensure a higher credit quality for the debt that is issued. Furthermore, this affords a significant protective cushion against a decline in revenues such as what might occur in a severe and unprecedented economic downturn.

T*f* L would not require a guarantee from the Government for the debt issued to support the Underground. What would be required of the Government is the same expression of continued financial support, and at a lower level, that it is prepared to provide the winning consortia under the proposed PPP.

TfL Credit Rating

In June 2000, Standard & Poor reviewed the credit quality of T*f* L in connection with T*f* L's assumption of responsibility for non-Underground transport in London. Whilst acknowledging the absence of debt issuance, the report nonetheless concluded that T*f* L was a very high quality AA rating with a stable outlook. Whilst the credit of T*f* L will not be directly related to the ratings received on the debt of the Underground, the high credit rating of T*f* L will be a positive consideration for debt issued by T*f* L, and secured by the revenues of the Underground, to the rating agencies and investors.

We have been advised by Bear, Stearns International Limited, a major international investment bank, that such obligations should achieve high credit ratings and would be readily marketable to institutional investors in amounts well in excess of those required by the financing programme.

2. Private Finance Initiative Arrangements

LUL has utilised the PFI structure to finance, maintain and operate select major projects, including the Northern Line rolling stock, and power generation and communication projects. We intend to continue this approach where appropriate. T*f* L's approach would utilise PFIs to achieve measurable performance improvements relating to discrete assets or pools of assets. One difference between a PFI under our plan and those previously undertaken, is that while the contractor would continue to provide the equity, T*f* L would provide the debt financing by its own borrowing and make a mirror loan to the PFI contractor. This reduces the cost of the PFI to LUL while transferring appropriate risk to the contractor. Specific and measurable performance standards would constitute a cornerstone of a PFI, so that private contractors will be responsible to the extent of their control for service availability, reliability, and quality.

In addition to reducing financing costs, this approach brings key advantages for the management of the programme. Certain investments may benefit from an integrated capital refurbishment and maintenance contract. In these cases the ability to allocate risk as desired between the financing and the performance regime would allow LUL to hold contractors accountable for their work, yet not bind it into 30-year monopoly service provider contracts. For example, new rolling stock could be delivered by a contractor, who would be held responsible for the delivery timing and the capability improvements of its equipment. This performance guarantee could be achieved either through an equity investment by the contractor, or it could be achieved through terms similar to those agreed between the Government and Bechtel, under its contract for the completion of the second phase of the Channel Tunnel Rail Link. Additionally, the contractor (or another competing service provider) could be held liable for rolling stock performance under a multi-year maintenance contract.

This approach of separating debt financing from equity components and, as appropriate, placing contractors at risk via payments for liquidated damages, will properly incentivise efficiencies to LUL's private-sector partners, while providing LUL with the tools to provide continuing competition and unified management control of operations and capital investment. The overall scope of this approach appears in T*f* L's illustrative cash flows, which is further discussed later in this paper.

3. Pay-as-You-Go Financing

The LU operating revenue historically has provided substantial funding for capital investment. Under our programme, the operating revenue will be reduced by the amounts necessary to support the debt; but it will still provide significant PAYGO funding. Our financing model, described below, generates over £8.10 billion of PAYGO funding over the 15-year programme.

Pro-Forma Plan of Financing

We have constructed a pro-forma model to help determine the amount and timing of a sustainable capital investment programme for LUL using long-term debt[1]. The model tests the capacity of the Underground system's revenues, including ticket receipts and Government grants by calculating the amount required to support the debt, whilst still maintaining an operating surplus in reserve. We assume that these reserves are committed each year to PAYGO capital spending. On the following pages we present a reasonable scenario for the financing of T*f* L's capital programme, based upon the following assumptions:

- Approximately £850 million of capital expenditure per year[2]
- Operating revenue growth at the level projected by PricewaterhouseCoopers in their PPP analysis (increasing passenger levels only)
- Operating expense growth at the same real rate as operating revenues
- No fare increases in real terms
- A fixed annual Government grant of £623 million
- £150 million of PFI arrangements in each year, bringing in private sector risk, and with direct equity contributions of £225 million over fifteen years

Our current estimates are that the Underground may require up to £13 billion of capital investment, beyond maintenance and renewals, over a fifteen-year period in order to reach a state of good repair on the existing infrastructure and replace other assets at the end of their useful lives. This is higher than our previous estimate, resulting from information learned through conversations with LUL. Based upon these assumptions the model meets our required investment as follows: £8.16 billion from PAYGO funding, £4.37 billion from the proceeds of debt,

[1] T*f* L has not been permitted to undertake a full due-diligence of the existing liabilities and risks of the London Underground's current operations. Payments related to these risks, which will be incurred by T*f* L under this proposed plan or the PPP as proposed, may reduce certain investment and spending assumptions in the projections presented herein.

[2] This amount encompasses the "bricks and mortar" investments, representing asset replacement, upgrade, and large-scale refurbishment beyond normal maintenance.

and £225 million from the equity component of PFI arrangements. The reliance on debt financing in this model is conservative; no more than 50% of projected available surplus is committed to debt service over the life of the programme.

Capital Cost Estimates

Through T*f* L's review of LUL Whole Life Asset Surveys and discussions with each of the consortia, we believe that there is a solid understanding of the nature and cost of the capital expenditures required over the first two years of the PPP. Thereafter however, the priorities are not as well defined and the estimates become less precise. These uncertainties are reflected in inflated cost estimates, resistance to committing to firm plans and work schedules, and ultimately to higher bids from the bidding consortia.

Instead of entering into fixed-rate contracts for the initial seven-and-a-half years, which understandably reflect significant contingency allowances over most of the term, a less expensive approach would be for T*f* L to complete its own capital assessment, building on the due diligence of the bidding consortia, and then to let major contracts when the costs are clearly known. Thus, any delay attributable to switching from the PPP as currently contemplated to T*f* L's approach need not delay the clearly defined capital projects ready for implementation, as long as the Government provides its anticipated funding in the interim.

The financing programme presented here is carefully tailored to minimize the cost of the Government's funding commitment, reducing financing costs by more than £600 million over the fifteen-year period. This will eliminate, as a practical matter, any downside exposure for the Government, and thereby the taxpayers, to the ongoing capital needs of LUL. We do assume a long-term commitment comparable to the Government's annual commitment contemplated for the PPP, so that we can implement our long-term improvement scheme. Were T*f* L permitted to control and oversee the capital programme in a proper and professional manner, the financial and potential exposure of the Government would be minimal.

Summary of Financial Plan

T*f* L has formulated a sound programme for bringing the Underground up to a state of good repair, and maintaining it in that condition. Our goal is to combine the best features of the public sector control, management and finance with the competitive drive of the private sector to rebuild and refurbish the Tube over 15 years.

Using conservative projections, and employing only (i) our projected operating revenues, and (ii) a steady £623 million annual Government grant, the London Underground can generate over £12.75 billion for its own improvement during the next 15 years. To raise this capital, the Underground will securitise a portion of its revenues to support £4.37 billion of long-term debt. Proceeds of £2.03 billion of this debt, along with £225 million of private at risk equity investment (with additional amounts at risk through performance guarantees), will fund £2.25 billion of PFIs, enabling T*f* L to achieve the benefits of private-sector efficiencies and low-cost public financing (the summary schedule of the financing plan appears in Appendix A). Partnerships with the private sector have an important place and our programme uses them in a manner that is focused and rigorous in practice.

The Underground is essential to the economy and daily life of London. Our programme is designed to carry out this fundamental obligation, without recourse to the operator of last resort: the taxpayer. Using sound financing and management techniques, and focusing on safety, reliability and cost effectiveness, T*f* L will do the job of managing the modernisation of the Underground in the public's interest. That is the strength of the programme.

The Programme – Management

Background

At the core of T*f* L's proposed management approach is the unified control over all functions necessary to provide the safe and efficient operations of the system. This differs fundamentally from the approach anticipated by the PPP, in which LUL directly manages only the assignment of drivers, the operation of the trains, and the direction of station employees who interface with customers. All other management responsibilities are, under the PPP, delegated for a period of thirty years to three separate, privately owned Infracos. These contracts provide for extraordinary limitations on LUL's right to influence Infraco behavior and decisions. As a practical matter this means that LUL and its customers—the people who live, work and visit in London—are left to stand on the sidelines while the Infracos validate or disprove the speculative, if not reckless, theories which underlie the PPP and which have been emphatically rejected by the business and academic community as well as by the public at large.

Transport for London believes that the separation of operations from maintenance and investment results in an inherently unworkable structure, which inevitably leads to flawed interface and integration, erosion of service reliability, and it increases the potential for safety risk. One needs to look no further than the national railroad network for current proof of this proposition. More significantly, however, by asserting this critique of the PPP, T*f* L does not propose to continue business as usual at the Tube. We do not defend the track record of Tube management in recent years, though we note that many LUL objectives and initiatives have certainly been compromised by the Government's failure to provide a long-term stable source of funding.

Our alternative approach relies on planning methods, management structures and private sector contracting arrangements that have been demonstrated to work in restoring physical health to aging transit systems in New York, Philadelphia, Boston, Toronto and elsewhere. Obviously, the systems we intend to employ also require management personnel - both from within the Underground and newly recruited from the outside - who are committed to the organisational and cultural changes that we intend to implement. We are fully confident that LUL, when properly funded and under new leadership, will be able to attract and retain the requisite skills and experience necessary to successfully institute the modern transport business practices that have so far bypassed London. We do not accept the proposition that LUL management is uniformly or inherently unsuited to this task. Moreover, we do not believe that sustaining the organisational and managerial changes required will depend on any single individual or individuals. That has not been the case elsewhere, and need not be the case in LUL.

At the same time, we are equally convinced that quality transport professionals - including persons who have successfully employed similar financing and management systems as those proposed in this plan - will not want to work for LUL were it placed under the constraints of the PPP.

Operations and Operating Maintenance are Integrated

In general, we believe in a fundamentally different division of responsibility than that provided in the PPP. Defining investment priorities on an annual and multi-year basis must remain as a core public responsibility and cannot be delegated to private contractors. Operations and day-to-day maintenance of system elements that are physically proximate to train operations must be controlled through a single management chain of command and not through outside contracting arrangements, which divide these responsibilities and rely on contractual dispute resolution mechanisms to resolve conflicts that must be addressed in minutes, not months or years.

Figure 1

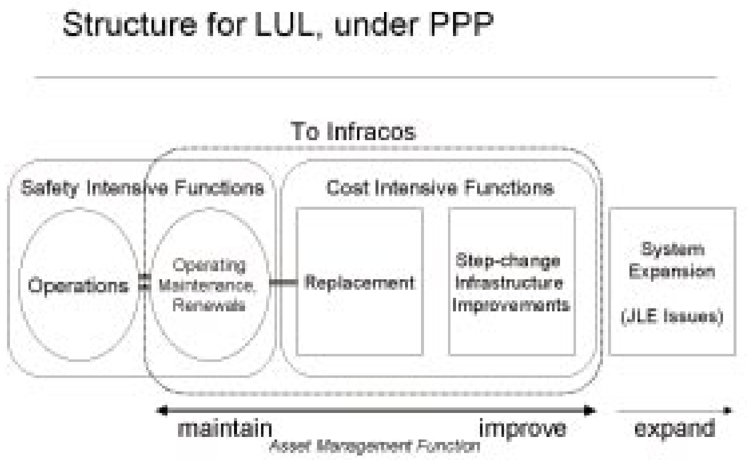


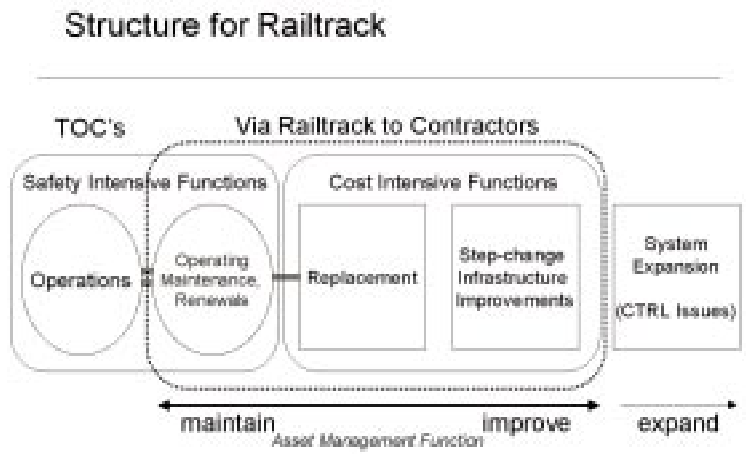
Figure 1 shows the allocation of responsibilities between LUL and the Infracos as contemplated under the current draft of the PPP. Note that the ongoing functions of the Underground as an enterprise may be divided between those that are "safety-intensive" and those that are "cost-intensive" in nature. Note also that operating maintenance and renewals and, to a lesser degree, replacements of assets, tie most directly into daily system performance (as noted by the double connecting bars). And finally note that, contrary to a favourite supporting argument for the PPP, the function that would encompass both the scope and the failures of the Jubilee Line extension falls outside Infraco responsibilities (even though it is the function that is most cost-intensive)[2]. This is because the PPP pointedly does not include system expansions within the scope of its contracts. Despite the Government's attempt at distinctions, the reality as shown in Figure 2, is that this general allocation of responsibilities is also similar to the allocation that was used in Railtrack. The separation of maintenance from daily operations has been cited as one of the structural weaknesses that allowed safety to fail, with disastrous consequences in the recent Hatfield tragedy, within what appeared to be a rigorous contractual framework for safety.

[3] Whenever this straightforward approach is discussed in relation to the PPP, one response is to point to the Jubilee Line Extension as a symbol of all that is wrong with public sector capital-project management. Putting aside that the PPP does not provide for any system expansion and thus does not contemplate a "solution " to the Jubilee "problem", an evaluation of the real causes for the Jubilee delays and overruns are perhaps instructive in determining what needs to be fixed elsewhere.

According to the report by Ove Arup Partnership Ltd., presented to the Department of the Environment, Transport and the Regions, dated July 2000, the Jubilee Line Extension was mismanaged by both LUL and the Government. It was mismanaged by LUL among other reasons, by attempting to assume certain integration risks which could have been better managed by the private sector. The programme was broken into too many packages that were ultimately interrelated, and LUL chose to bear risks for which it lacked skills and experience to properly manage. The report additionally states that poor accountability within LUL's own structures undermined its work: "JLEP [the in-house project manager] did not have the power and authority to manage and coordinate the delivery of the Railway. There was thus a vacuum in LUL's management arrangements and when the time came to deliver the Railway…there was undefined leadership for this important stage of development of the Railway that led, in our opinion, to confusion and vexation, which could and should have been avoided."

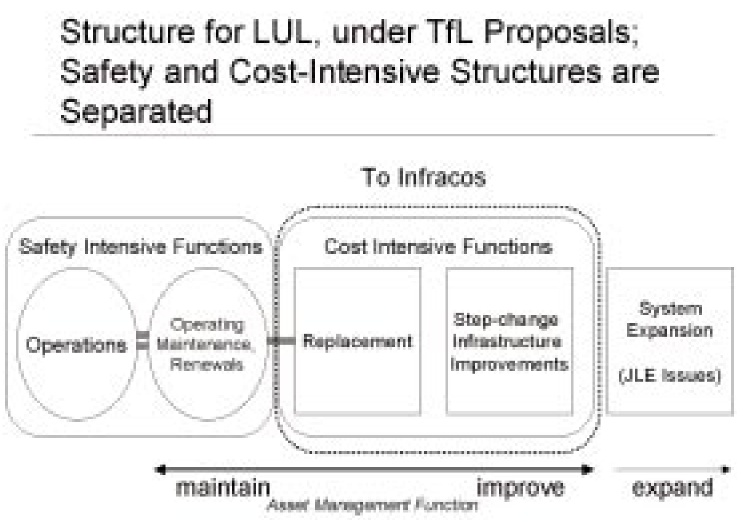
Government mismanaged the programme through its insistence on unrealistic budget assumptions and schedule requirements, such that both LUL management and contractors could not be held accountable for goals and objectives that were driven primarily by political considerations. The Government is absolutely correct when it suggests that the Jubilee experience demands a different approach; the logic, however, does not lead to the experimental PPP but rather to private-sector contracting arrangements which have proven to be successful in realizing complex public infrastructure projects in an urban environment.

Figure 2



Transport for London is proposing a rationalised allocation of responsibilities, which will more clearly separate safety-intensive functions from the cost-intensive functions which the Government wishes to transfer away via the PPP (see Figure 3). T*f* L believe that this allocation of risk is within the general frameworks that the Government has employed with other PPP's, such as NATS, which specifically keeps infrastructure maintenance with operations. Any initial savings that might be achieved through contracted maintenance pales in comparison to the true costs of neglected maintenance activity. The aftermath of the Hatfield accident serves as a poignant reminder of this fact as the government has had to provide £1.5 billion of additional financial support to the private-sector, risk-taking companies that it created in the above-ground rail sector.

Figure 3



Capital Works Managed by the Private Sector

The execution of large capital works, including the integration of the separable elements contained within a large project, should - to the fullest extent possible - be contracted to the private sector, using performance criteria and incentive-based contracting arrangements designed to control costs and schedule. Risk transfer to the private sector cannot be effectively managed system-wide, as contemplated by the PPP; it is calibrated better on a project-specific basis. Maintenance responsibility for system elements that are physically separate from the right of way, or that can be maintained outside of the operating environment, should be determined on a case-by-case basis as part of major asset replacements, based on value-for-money criteria. We believe that the application of this standard under a consistent methodology will likely lead to a greater private-sector participation in maintenance of new technologies rather than in aging system assets.

An Active Dynamic Management System for Transport

The management system T*f*L proposes is highly structured and tightly disciplined. Its philosophy and structures are simple and pervade all levels of the organisation, in contrast to the complicated regimes of contractual interfaces needed for the PPP. As noted in our recent supplementary report to the Mayor on the PPP, the system we would adopt involves the following essential elements:

Leadership

- Dedicated, management-oriented leadership at the Board level
- Management team made up of transportation specialists, not generalists or management consultants
- Management establishes and articulates goals, relating to service, maintenance and capital projects

Financing

- Long-term Government commitments to fund the capital investment programme
- Capital funds are segregated from operations so that they no longer serve as a reserve for revenue shortfalls or operating cost overruns
- Annual operating plans are prepared within multi-year (5 to 10-year) capital plans and budgets

Clear Structure of Accountability

- A detailed organisation chart creates not only a chain of command, but also a chain of personal responsibilities for achieving goals and objectives. Nothing is left to committees or other forums outside of the direct management structure
- The various functional units have responsibility for developing their workplans and budgets in co-ordination with senior management, creating a sense of ownership
- Outside contractors manage large-scale, resource-intensive projects. They are held to task by a tightly disciplined management, which maintains its core capacities and responsibilities for directing the overall transportation system

Public Monitoring

- Each management level faces regular public scrutiny
- Performance against goals and budgets is monitored monthly
- Managers who deliver against the agreed plan are rewarded and those who fail without cause are replaced

Management skills, including certain project management skills, are retained in house and used to manage and work with consultants as partners, rather than leaving them to run delegated, independent operations.

Detail of New-LUL Management Techniques

The following explanation of LUL management techniques will contrast with the complexity and theoretical structures of the PPP. While both approaches attempt to provide discipline and accountability, their approaches differ markedly. The reader will note three important characteristics of T*f* L's proven model. The first is that it is easy to understand; so we have no reservations about agreeing with comments by the Government that our approach is "Management 101". It is, notably unlike the PPP, clear and simple. Distinguishing itself from bizarre contractual regimes like the PPP, it is both active and dynamic. For convenience we will therefore refer to it as "Active Dynamic Management" or "ADM".

The second characteristic is that its success depends on clear accountability for managers to define, to take ownership of, and to execute tasks. This is not a common characteristic of either the public sector or rail transport systems in general, but we will vigorously enforce it at LUL.

Finally, and most relevant to the current condition of the Underground, is that it has proven to be both effective and enduring in turning around transport systems with ageing infrastructure, and in equally challenging management and political environments. We will go through these points in order.

Integration of Structure with Function is Simple and Robust

The most powerful feature of the ADM management plan is that functions, and the allocation of resources to meet those functions, clearly follow the organisational reporting chain. Their interrelationships are traceable throughout all of its plans and reporting documents. This allows management and outside monitors to determine what is being done, who is responsible, and how the work is progressing, all with a minimum of effort. There is a clear attempt to avoid any potential for confusion on these points. Organisation charts therefore match to specific goals, workplans, budgets, performance targets, and monthly progress reports in a comprehensive package that produces unified management control. To sharpen the sense of accountability throughout the organisation and to its individual managers, the entire package of chain of command, its long and short-term plans, and the specific performance outputs of the organisation and its functioning departments are placed under public review - including any requests for scrutiny by the unions and the press - every month.

This is in contrast to the current state of management on the Underground, where certain responsibilities have become diffuse, with a number of core projects whose responsibilities are split up or which stray across, rather than follow, the lines of authority within the organisation charts. Whatever the merits of the current LUL structure, this has made simple, even fundamental questions, difficult to answer. For example, during negotiations regarding the PPP it was revealed that not only was the Underground's track divvied up amongst the Infracos, but there was also an attempt to split off track responsibilities within these groups between what are called the "asset maintain" and "asset improve" divisions. However, the "asset-improve" group uses "asset-maintain" staff for certain key functions. Therefore it is quite obviously impossible to answer the question, "who is in charge of the condition of track?" Under ADM, such confusion and the potential for dangerous buck passing that it naturally creates, simply would not occur.

Example of ADM at work: Track Maintenance and Replacement

Indeed, staying with track, let us examine an illustrative case study: the development and the management of the Track and Structures Program within the Toronto Transit Commission, the latest transport authority to adopt the ADM style of management[4].

The chart below (Figure 4.) shows the direct chain of command, with full-time equivalent (FTE) staffing levels from the General Manager through to "Track and Structures" which will serve as the focus for our discussion. The full organisation charts appear in Appendix B.

The reader will also note throughout that all management processes flow directly through this structure. There are no standalone, separate groups that operate outside of a clear chain of command. Figure 5 makes clear the consistent lines of accountability and function of the core management function.

Figure 4

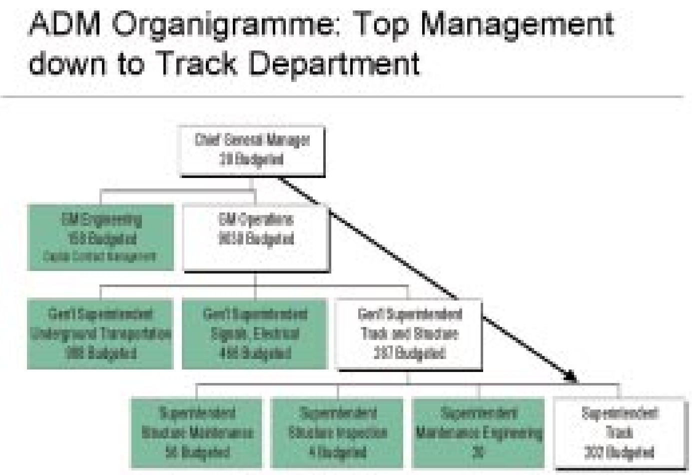
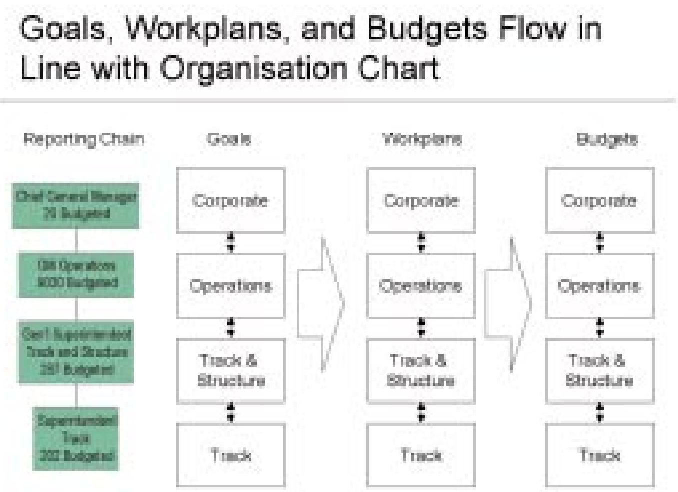


Figure 5



[4] Workplans, Budgets and Reports of the Toronto Transit Commission, Fiscal Year 2001; monthly reports are from November 2000.

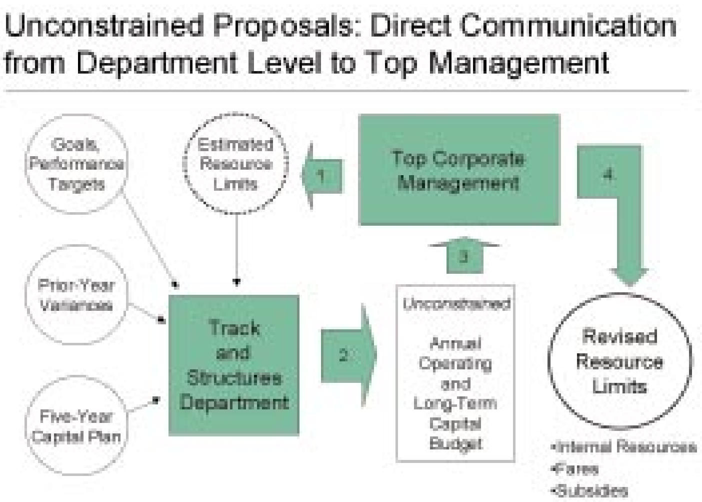
Senior Management Responsibilities: Set Long Term Direction and Steer the Monitoring Process

While the levels of management seem little different than what might appear in other transport organisations, the barriers to communication between them are few. This lets management and the organisation address sudden issues more quickly, freeing time to supervise daily operational issues and to execute longer-term policies. Daily management meetings at the top corporate level are limited to high-level focused planning. Senior management is charged with the execution of the management plan at the field level. The total level of management and administrative employees is relatively small, at less than 10% of the total employees of the underground division. Unlike a pure "top-down" or "bottom-up" approach, the programme is interactive, in that top management and the departments are in frequent communications regarding operations and building programmes. Top management spends a substantial portion of each day on the system and at worksites, and the "open-door" policy of top executives is often taken advantage of by supervisors and workers. The monthly and annual reviews, discussed further on, provide additional interaction through the chain of command.

Top-Down to Bottom-Up: Development of the Programme

At the end of each fiscal year, each department under the ADM system produces new budgets and work plans for the next. At the corporate level, top management sets targets for meeting customer needs, overall organisational resources, and notes those departments that, either through good or bad performance, merit particular attention in their plans for the new year. In the following section we will observe how the Track and Structures Department, carries out this process.

Figure 6



Step 1: Annual Review and Proposal: Department Level, Unconstrained Budget

Toward the end of its fiscal year, the Department reviews its prior-year goals, including those forecast for the following year. It initially produces a workplan that is unconstrained by budget. The unconstrained bid is to provide senior management with a clear and professional assessment of the current and long-term needs of the system. When the initial assessment persuades management of the need for expanding the workplan - and therefore headcount, contractors, and materials - corporate management can then reprioritise as necessary.

Step 2: Proposed Plans against Constrained Budget

After the initial assessment is completed and considered, corporate management informs the departments of the general guidelines for their workplans and budgets for the next five years. The accountable managers within the Track and Structures department note and explain variances in the past year to the prior-year's commitment on headcounts, budgets, project landmarks, and relevant performance criteria to the department head. Goals are then restated within operating and capital plans (Figures 7 and 8).

Figure 7

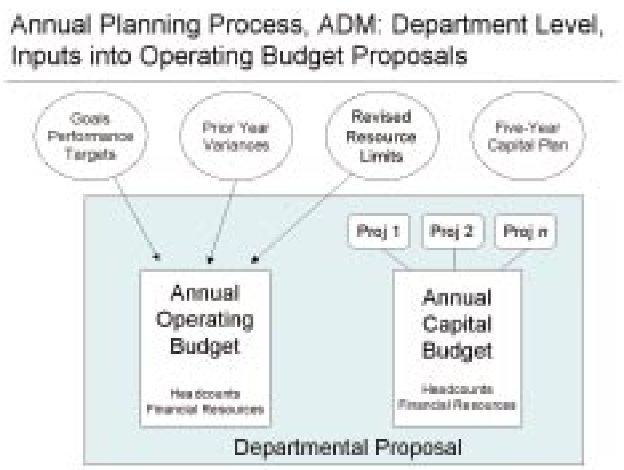
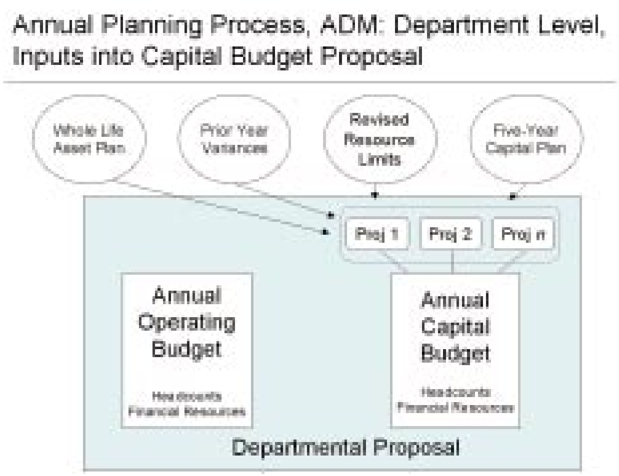


Figure 8



These new goals then shape any revisions to asset management plans and to the group's work practices for the following year. The plans are finalised into a group proposal, which contains the following elements:

Goals

- Set annual targets for service availability, such as reductions in lost passenger time due to track failures or speed restrictions
- Set specific inputs, such as an annual target of rail tie replacements and schedule for preventative maintenance on mainline and yard switches; and work practices, including personnel standards on absenteeism and training, to meet service goals
- Set milestones for the current-year on ongoing and new capital projects

See Appendix C. for sample departmental goals.

Workplans

- Revise as needed the background and the scope of a relevant whole-life asset plan for 30-year assets
- Note industry standards being applied to various track components and technology changes that permit new practices or revisions to the asset plan
- Set out the specific track work anticipated to be done over the next five years, set by location and by type of work, whether track replacement (including ballast and ties) or full-scale rail replacement
- Present relevant graphics, including maps and photographs of work type and location
- Define performance criteria, as relevant to the department's responsibilities

See Appendix D. for sample departmental workplan

Budget requirements

- Organisation charts, with accountability and headcounts by task group, are placed directly within the annual budget submission
- Expenses are broken out by labour and non-labour, with a full detail of non-labour components with attaching schedules, as relevant for line-items such as materials and supplies
- Variances are explained by line-items from the previous year (again, with the accountable party's name heading the page)
- Headcounts are clearly stated by function and task group, with variances from the previous year, and the reasons for the approval of these proposed variances in the budget

See Appendix E. for sample departmental budget

Capital budget projections

- The purpose, scope, and project details, including justification for the projects
- Capital and maintenance workforce requirements for the period
- Landmarks and spending projections over the next five years
- Current and long-term annual cost projection for full project delivery, and impacts on the operating budget
- Comparison to previous year projections and reasons for any changes
- Impacts of project deferral
- Performance measurement strategy for specific project tasks

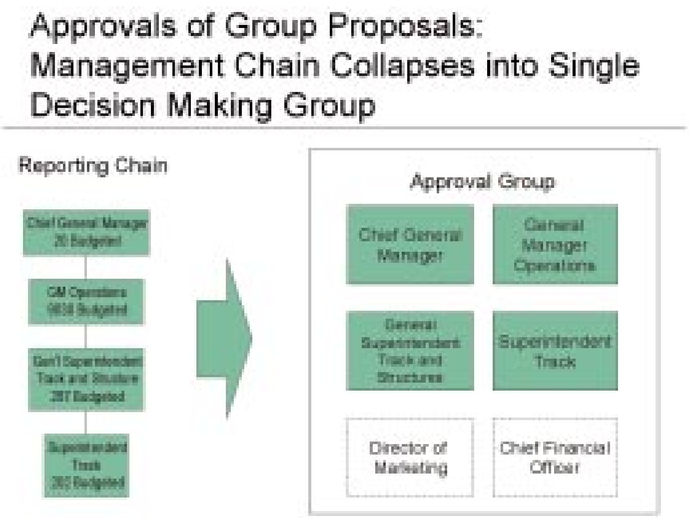
See Appendix F. for sample departmental capital budget.

Step 3: Approval Chain for Long-Term and Annual Plans

While there may be three or more levels of management between the CEO and the project planning groups, the presentation, discussion, and final approval of group plans occur within tightly compressed framework. This plan as formulated is proposed by the Project Director and his or her Superintendent directly to the top management group, including the CEO, the General Managers for Operations, the CFO and the Director of Marketing (Figure 9).

This group, since it comprises all of the relevant management levels of the chain of command, has full executive authority to approve the project and its budgets. And since the number of executives is never more than eight (and since the CEO exercises final say in all matters within the consultation), the process of formulation and approval is brought into a single executive body. Decisions are not deferred to committees, panels, or other deliberative groups, and accountability remains clear at this and all points in the process.

Figure 9



This system requires intensive upper management participation in the design, operation, and investment plans for the transport system. But it is no more time consuming than any other annual review process. The period of annual review and budget for all departments should take approximately one month for the top management team. At the department levels, the work is similarly concentrated at the management level. Since it works from and builds upon an ongoing departmental plan within a transparent and clearly defined management system, the annual plans and budgets take relatively little time for the departmental managers to produce. The reporting requirements are no more stringent than what is needed to control the project, they do not interfere with directing line functions, and they produce the following benefits:

- Reducing administrative staffing and time normally allocated to these functions
- Integrating top management into the core functions of the transport system
- Reinforcing communication between top and lower levels of management
- Stressing accountability for programme delivery
- Removing obstacles to initiative throughout the organisation
- Lending confidence to governmental funding partners and to press observers

The ADM system has one special requirement for which there can be no substitute - the requirement of top management to have extensive working knowledge and experience in rail operations and asset management. This condition would go without saying in the management of a privately run corporation, and it is no less necessary in the proper stewardship of assets managed in the public interest.

Step 4: Program Monitoring

A key strength of ADM, is that once goals, workplans, budgets, and performance criteria are set, the plan harnesses the discipline of public monitoring to force manager accountability in progressing tasks and providing service through the fiscal year. We understand that public accountability of managers is substantially different from the approach the Underground has taken in the past[5]. While the strength of this discipline will be tested in the UK, its success elsewhere makes us confident that it will work here.

Background

There is a strong tendency in large organisations, both public and private, to shun open and public oversight. This may be for commercial reasons, so as to withhold trade secrets that would be of value to real or would-be competitors. Confidentiality can also serve to provide flexibility in development of plans to address sensitive public issues or labour negotiations. But

[5] The move toward outsourcing core functions through PFIs has further diminished public accountability over key parts of the Underground. The terms, and often the performance of the contractors themselves, may be withheld from public scrutiny as commercial confidential information.

with public interest monopolies, which face no threat of competition to their franchises, this tendency toward secrecy often abets a co-dependence of silence between the organisation, its contractors and its key stakeholders. For example, the "whole life asset plans", often referred to by the Underground as the core of their investment plans would seem to be important pieces of public information regarding the needs and the plans for the core transport system to London. Yet the reports are listed as "Company Confidential", and it is likely that few in Government, much less transport professionals have ever seen them. What is not shared with the public cannot be criticised, such that transport authority, government sponsor, and contractors alike are sheltered from unfavorable publicity.

What this approach secures in enhanced organisational flexibility, it more than gives away by cancelling out the powerful discipline of public commitments and disclosure to meet its obligations. ADM harnesses this discipline and employs it in a way that is analogous to the profit motive of the private sector. In fact, for combined public and private entities, such as that contemplated under any form of the PPP, public disclosure is a supplementary discipline to that brought on by the bottom-line focus of private-sector partners.

By going through the sample reports for the Track and Structures Department, all of which are publicly available, we can see how the components work together in a dynamic management system. The departmental reports are the point where the interlocking frameworks of goals, workplans, and budgets come together to channel the monthly progression of tasks and provision of services.

Monthly Control Reports: Operations

Department managers submit signed monthly control reports following standardised features (see Figure 10). Expenses and headcounts (both for operating and capital employees and consultants) are compared to budget for the month, year-to-date, and for year-end projections; and variances are explained by causal factor, instead of an antiseptic listing by cost-item. Within every submission is an "Areas of Concern" commentary, which is addressed by the accountable manager, followed by a statement of "Corrective Action to Be Taken". Such statements, of course do not assure the inexorable identification and correction of any real or potential problems. Nevertheless, they provide an inescapable focus for both the manager and overseeing bodies on anything that might be going astray (see Appendix G. for full sample report.)

Following the financial performance review, the department updates its performance measures against operational landmarks and customer service. As the example shows, these focus on those elements of the workplan over which the department has the greatest sole influence.

Figure 10

Departmental Progress Report

Department: Track and Structures **Department Head:** ____________

FINANCIAL STATUS	Current Period			Year to Date			Year End Projection		
Expenses	Actual	Budget	Variance	Actual	Budget	Variance	Actual	Budget	Variance
Labour:									
Regular									
Overtime									
Other									
Sub-Total									
Non-Labour									
Total									

Variance Explanations:	Period	To Date	Year End	Workforce
Labour Change in work mix (capital and operating maintenance) Extraordinary events Arbitration settlements				
Subtotal				
Non-Labour Material volume increase/(decrease) Materials cost increases				
Subtotal				
Other Net Increases/ (decreases)				
Subtotal				
Total				

WORKFORCE STATUS

	End of Period		
	Actual	Budget	Variance
Operating			
Capital			
Total			

	Projected by Year-End		
	Actual	Budget	Variance
Operating			
Capital			
Total			

AREAS OF CONCERN (Relating to Achievement of Budget Goals and Objectives)

Lists areas where problems have had impact on the budget, and cost estimates related to past and ongoing practices

Monthly Control Reports: Capital

The signed monthly reports for capital are similar to the operating reports, except that they have a larger "bricks and mortar" component to their information content (see Figure 11, and Appendix H. for full report). Both cost and schedule progress and variances are reported for individual project components. Variances within each component are also noted, with reasons provided. Any changes to anticipated total programme costs are highlighted for readers. Lastly, the cover page notes areas of concern and actions to be taken. In the example, these are blank, due to the completeness of the variance explanations preceding them.

Figure 11

PROJECT STATUS REPORT

Project Number and Name:	1.1 Track ties	Report Date:	*(current)*
		Reference numbers to annual capital plan	
PROJECT MANAGER:	*(name)*	DEPARTMENT HEAD	*(signature)*
DESCRIPTION	*Brief description of project goals, rationale, timing and relevant history*		

CASHFLOW STATUS	SCHEDULE STATUS		
CURRENT YEAR	CURRENT YEAR	PLANNED	FORECAST
Capital Budget *Probable Expenditures* *Variance*	*Landmarks* 1 2 3 etc.	*completion dates*	*completion dates*
FULL PROJECT	FULL PROJECT		
Capital Budget *Probable Expenditures* *Variance*	*Landmarks* 1 2 3 etc.		

PROJECT HIGHLIGHTS	
PROGRESS THIS PERIOD	PLANNED FOR THE NEXT THREE MONTHS
Replacement projects	Replacement projects
projects 1 2 3 etc.	*projects* 1 2 3 etc.
Major maintenance projects	Major maintenance projects
projects 1 2 3 etc.	*projects* 1 2 3 etc.

COST AND SCHEDULE ANALYSIS		
VARIANCE EXPLANATIONS		
projects	1	*Explanation of variances in project cost and schedule*
	2	"
	3	"
	etc.	"

AREAS OF CONCERN AND ACTION TO BE TAKEN		
projects	1	*Explanation of project trends and prescribed actions, including plan changes and board approvals*
	2	"

Shared Projects and Capital Intensive Projects

Any projects shared between departments will have leaders from both groups; but overall responsibility will be assigned to a single department and fall to a single responsible manager within the organisational structure. In this way, ADM avoids the dilution of initiative and responsibility that can occur within committees.

ADM does not have an inherent philosophical or structural bias between work done by outside contractors or in-house employees. It does demand however, that for any project, single-point responsibility be maintained within the organisation. When projects are of the scale, or of the complexity that requires specialised skills from outside of the organisation, it is assumed that private contractors will provide the work. In such cases, transport managers do not assume a passive role, but retain unlimited monitoring and ultimate control over the work of his or her architects and builders. Project sheets, monitoring the progress of the defined work against landmarks, budgets, and upon delivery performance goals. In this way they are brought within the dynamic planning, reporting, and control structure.

Summary of ADM

ADM is not rocket science. It is knowing what should be done, and having a clear chain of command and responsibility for completing the tasks. It sees no value in making management appear or be more complicated. While one could comment that many of the components of this proposed management system have been attempted by the Underground in the past, it is clear that the combination of stable long-term financing, clear organisational structure, and full public disclosure has not been brought together into a cohesive, long-term management policy within recent memory. This approach has succeeded with systems in far worse shape that the Underground and in equally politicised environments, such as New York City, Philadelphia, and Washington, D.C. Its robustness is reflected in the continuing improvements of the rapid transit systems it has served, even after changes in management personnel, changes in political party and transportation policy, and the levels of funding commitments by stakeholders. Its endurance is not based on a certain political, national, or cultural philosophy. Rather it is a testament to its value as a powerful and flexible tool. Its strength is not in the actions extraordinary managers, but in the management system itself.

Conclusion

In assessing any management system for the London Underground, one should be able to answer the following questions:

- Is management properly accountable, through all of its levels, for the system it is responsible to operate?
- Does the organisational scheme produce the best inherent structure for safety?
- Does the plan make the best use of the resources of the fare and tax payers?

T*f* L believes that these basic questions lead to a basic and fundamental truth: the PPP fails to meet any of these fundamental criteria.

A complex, safety critical operation like the London Underground depends on its management structure for its success. No mountain of legal documents can replace the organisational integrity of unified management control, no matter how elegantly crafted or comprehensive it may appear to be. Under any management system, the public owner of the Underground will be accountable for the success or failure of the organisation.

The management approach articulated in this plan would deliver value for the Underground by establishing the tools that bring unified management control to life. Private-sector contractors will be engaged to do what they do best - deliver large, complex infrastructure investments, and will bear responsibility for the successful completion and operation of the discrete assets for which they are retained. But keeping ownership of the system in the public sector requires a plan that gives management the full range of capabilities that it needs to perform its role as the steward of such a pre-eminently important public good. T*f* L's plan will deliver the safety and the value that has been proven throughout the transport systems of world-class cities, and which London deserves.

Appendix A.

Summary financial plan for the infrastructure investment in the London Underground

Appendix B.

Organisation charts showing the direct chain of command between the Chief General Manager and the Track Superintendent

Appendix C.

Goals and objectives of the Track and Structure department

Appendix D.

Description of the Subway Track Replacement Programme and Workplan showing planned works for 2001 - 2005

Appendix E.

Track and Structure 2001 operating budget

Appendix F.

Samples of project plans and summary sign-off sheets

Appendix G.

Monitoring the operating budget: sample departmental progress report

Appendix H.

Monitoring the capital programme: sample project status report