Improving competition and cutting costs

Terry Walker of the LRTA’s External Relations Group argues how significant cost savings can be achieved and efficiency improved for light rail development through the use of revised procurement strategies.

Providing viable, reliable transport infrastructure is an essential element of any modern nation and is a fundamental requirement if countries are to grow and meet current and future financial challenges. The efficient movement of people to and from their places of work and their leisure activities is critical to the provision of a mobile, flexible and happy workforce.

Currently, it appears that tram and light rail-based transport systems in the UK are failing to reach their full potential in delivering against these objectives. In the last few years several schemes have been promoted, but all of the new-build projects in England have failed to come to fruition. This is because of a combination of factors, but it is felt to be mainly due to costs and the failure to meet current and future financial challenges. The efficient provision of a transport system, providing viable, reliable transport infrastructure is an essential element of any modern nation and is a fundamental requirement if countries are to grow and meet current and future financial challenges.

As indicated previously, it is felt that competitive procurement provides for a cost-effective process, and quickly through revised methodologies and contracting processes. Terry Walker argues, "Manchester Metrolink is benefiting from a de facto tram procurement strategy that is helping to enable Metrolink to expand. Work on the line to Oldham is well advanced, as this image from the Featherstall Road bridge shows. Mike Haddin used to build another medium-scale system rather than spent on actions that do not enhance our transport systems or actually reduce costs."

The December 2010 paper A Response to the Minister’s Question produced by UKtram suggested a number of areas that can lead to increased costs for tram and light rail systems. Amongst the cost drivers identified is the current procurement strategy; I would contend that significant cost reductions can be achieved if a single large-scale strategy is used instead of small-scale individual projects.

**Current procurement strategy**

The current methodology is based on the assumption that competition stimulates good industrial practice and is key to obtaining low costs. The procurement of tram systems recognises this and is based on the governing rules that all contracts must be:

- Procured as a result of a competitive process.
- Prepared and submitted by the relevant local authority.
- It is assumed that these two basic rules provide the basis for cost-effective solutions and local control/responsibility/accountability. But are these assumptions correct?

**An alternative competitive strategy**

As indicated previously, it is felt that competitive procurement provides for a cost-effective process, provided the scale of the competition is such that the costs of procurement are worthwhile and viable to all parties. However, the implementation of small tram system packages can lead to recurring costs and the loss of benefits associated with the economies of scale.

Purchasing success can result if consolidation of projects is undertaken to give significant repeat orders for the same or similar equipment. Such an action will lead to start-up and procurement costs amortised over a larger number of units and prevent the repeat procurement activities being undertaken when smaller packages are purchased.

A better strategy could be to consolidate projects, thus maximising on the returns of experience and the benefits of volume production and supply. In other words, to base the UK procurement strategy on the issue of a term contract for eight to ten systems with 80-plus vehicles. This would allow significant benefits to be accrued.

**Reduced sponsor bidding cost**

In any project, the following parties incur costs in developing a tram system for approval and purchase:

- Local government bodies (promoters)
- Approval bodies
- The Department for Transport
- Industry (the supply chain)
- Legal support teams
- Consultant groups
- Potential operators

A single term contract based on a standard solution will significantly reduce the expensive activities of these bodies once the first system of a term contract has been supplied. In the current supply strategy, many of the above bodies repeat work, so no evidential benefit is achieved in risk reduction or from possible savings. Typically, specifications will be rewritten, contracts modified and many forecasting activities repeated for each project.

As an illustration, significant costs can be incurred in defining the system and procurement documentation. These activities often require the employment of expensive resources to produce data for use in the bidding process. In general, given a promoter’s lack of experience (as systems are procured so infrequently), the agreement of a specification tends to be an iterative process throughout project development, with each iteration incurring further costs. A cynic could suggest these costs only benefit those undertaking the work, to whom it represents a significant revenue stream.

So, a single large-scale procurement using standardised vehicle and infrastructure solutions will provide significant cost reduction by elimination of repetitive actions. As an example, individual project specifications could be limited to those elements unique to the system being proposed. Project actions that reflect only the individual aspects of such a system would reduce the sponsor’s workload, and increase overall productivity, consequently achieving cost savings.
Procurement strategies

Furthermore, applying standardised solutions for common items will reduce the time and effort required for project approval, in turn further reducing costs for both the sponsor and supply base.

Supply base bidding costs
The costs associated with responding to a Request for Qualifications (RFQ) are extensive and expensive in today’s procurement environment. This is due to the tendency to have multiple stages and activities with multiple bodies during the bidding, evaluation and approval stages.

The resources required to develop bids, and the associated costs, are approaching such magnitude that many organisations now have to seriously consider whether it is worth bidding for low-value contracts. Experience shows that the costs of bidding for a small project are similar to those for a large-scale one – yet the potential rewards are fewer. Any savings made for smaller contracts are therefore negated as companies recover their bid costs through overheads.

This fact can see major companies leaving the low-volume market. Such an action would be detrimental to the ability of light rail schemes to contribute to integrated transport networks.

Savings of 10–15% of the costs associated with individual schemes are available if such contracts are considered. As previously stated, having a term contract could lead to increased competitive effort as all major suppliers will wish to be involved. It will also prevent major suppliers shifting away from the market, which could happen if only small projects are let.

The winning companies may fail at some time in the future. Long-term commitments will encourage companies to stay in the market. In addition, arrangements already exist in other term contracts to deal with early termination; these can be transferred.

Term contracts do not work. Other countries use such contracts, as illustrated in the French market where a single contract was placed for the development and supply of a family of tram-trains for the Pays de la Loire and Rhône-Alpes regions, with a total volume of 200 units.

A single term contract will not allow individual sponsors to influence the solution for their project. In reality, they will enable individual sponsors to focus on the unique aspects of their scheme without concerns over whether the base technical solution will work. In addition, they will still be able to display their branding, provided the key elements of the contract allow a degree of flexibility in key areas such as tram nose cones etc.

Mitigation
Learning from experience is key to a project’s success. The current procurement strategy does not encourage, stimulate or reward the benefits that can be achieved for maximising on the feedback from projects. A large-scale contract covering several projects can achieve:

- Reduced risk by using proven, successful, solutions.
- Reducing project start-up costs.
- Retention of the design and supply teams for an extended period, enabling the maximum use to be made on the experience gained in project supply.

Reducing the cost of ownership
The business model for a project is significantly impacted by the envisaged through-life costs associated with operating and maintaining the proposed system.

It has been stated, again by industry insiders, that the current approach does not encourage the driving out of through-life costs or enhancing the performance of systems. The present purchasing model does not enable operators and maintainers to take advantage of economies of scale on common items or reap the benefits of large-scale operations.

A single order covering several systems will reduce through-life costs by enabling operators to:

- Develop common driver and maintenance procedures.
- Shared maintainer and spares pools and facilities to cover major overhauls.
- Acquire common operating processes and procedures.
- Design and share safety cases for common actions.
- Share rolling stock to enable spare vehicles to be hired for short periods to cover accident repair, major overhauls, or periods catering for special events.
- Develop common approaches to obsolescence.

Such actions drive out costs and improve the return on investment by reducing capital expenditure.

Finance costs
In any scheme, the provision of finance contributes significant costs. Finance houses look at the returns, the risk and the total value of the project amongst other considerations.

A single large-scale, long-term project should lead to a reduction in finance costs as the risks are reduced through a common supply base; the potential rewards should also be enhanced from a single contract.

The above factors will increase the attractiveness in the finance market for train and light rail projects, and could result in increasing the contract for long-term, high-value term contracts as they are let.

Debunking a few myths
The cost-cutting benefits of using single term contracts could lead to significant long-term risks and increased costs associated with relying on fossil fuels – this will lead to further consideration of mass transit systems. As previously stated, having a term contract could lead to savings of 10–15% of the costs associated with individual projects. This potential saving could help to enhance the business case of light rail systems and justify the use of a term contract.

Manchester Metrolink’s purchase of new trams also proves the benefits achieved by using a de facto large-scale procurement.