

A career in modelling

HAROLD WORRALL looks at the US public toll company model

The shortfall in public infrastructure funding is not just a US phenomenon.

The European Union White Paper on Transport highlights a significant gap in transportation funding in order to be globally competitive. The new Eastern European member states are scrambling to ensure that sufficient transportation infrastructure is available to support the heightened levels of economic activity that have resulted from the admission into the EU. India, China and other fast growing economies have recognized the need to invest in transportation to support their economic growth.

In the United States numerous transportation conferences, trade

publications and the mass media have repeatedly documented the shortfall in transportation investment. It is now estimated that the current transportation funding gap in the US exceeds US\$2 trillion. Costs have skyrocketed as competition for basic road building commodities has increased globally and urban land has become a premium.

It has become clear that to even begin to satisfy this gap in transportation investment will require the traditional sources of taxation revenue, tax exempt borrowing and the combination of private debt and equity funds. Taxation revenue will likely be modified to better reflect the relationship of cost and benefit and the highly efficient tax exempt

debt process will continue. However, to attract private debt or equity investment will require that transportation delivery organizations function as private concerns with a keen eye to profitability and efficiency.

Concessions

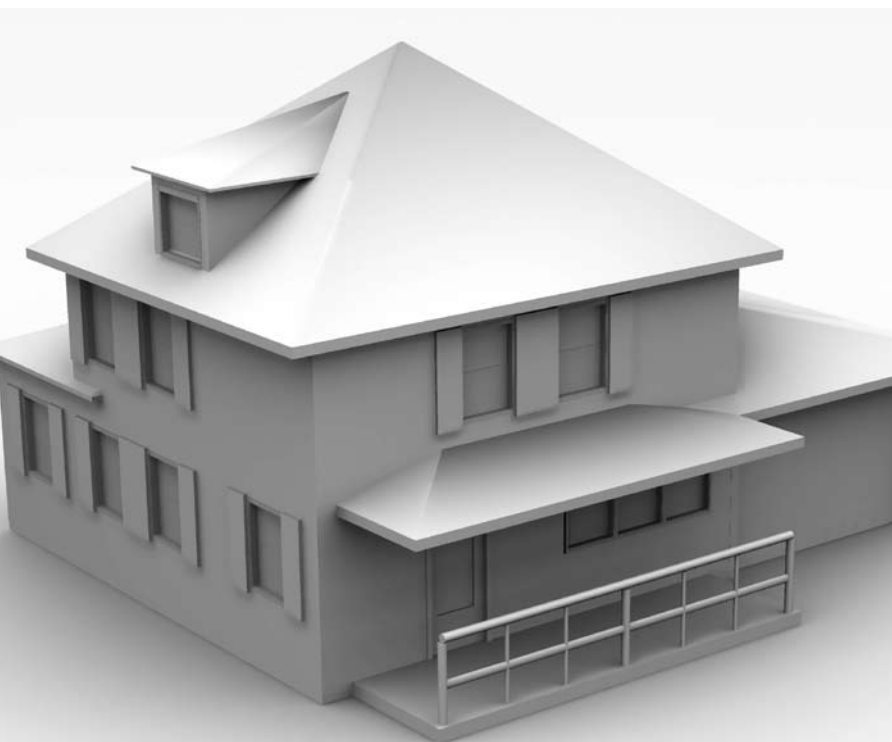
This is not a new problem in much of the rest of the world and the mechanism used to attract private investment is the concession. Since the Second World War, Europe has assessed relatively high taxation rates as evidenced by the tax amount on a liter of fuel, much higher than the rates found in the US.

They have also attracted private capital to transportation through concessions. In Asia, South America, Australia and most parts of the world, concessions have been a mainstay of financing transportation facilities.

In contrast the US has focused for half a century on developing the Interstate system and in the process has perpetuated the myth of the free highway, even terming some sections freeways. Now the US must maintain the 44,000 mile Interstate Highway system and other roadways developed in the first half of the twentieth century while developing new urban expressways and servicing other modes of transportation. These growing transportation funding needs have exceeded



Dr Harold Worrall is president of Transportation Innovations and is past chair of ITS Florida, ITS America and the International Bridge, Tunnel and Turnpike Association (IBTTA). From 1992 until 2004 he was executive director of the Orlando-Orange County Expressway Authority



the revenue available through the gas tax. Politicians are unwilling to entertain gas tax increases, taxation is not indexed to price and more fuel efficient vehicles are entering the fleet and construction costs have skyrocketed.

This combination of events has left transportation taxation policy inadequate to the task. Clearly gas tax alone is not a long term solution political or otherwise.

Capital letters

Concessions have begun to be awarded in the US over the last few years and have attracted large capital investments. The first were Brownfield investments in which existing public facilities were leased in exchange for large upfront payments to the government. More slowly Greenfield projects have begun to be developed.

Recently, some resistance to concessions has begun to occur. To some extent xenophobia or concern for public facility "ownership" outside the control of the US has generated concern. Concern has also been expressed that there are no caps on profitability and no publicly available records on profits being excised from toll projects where the public is paying ever increasing tolls. The cultural expectation that transportation facilities should be public in nature has also contributed to the resistance to concessions.

Golden brown

Meanwhile public tolling agencies have quietly observed and continued to finance toll facilities with tax exempt debt at rates much lower than can be obtained by concessions.

As more political leaders began to consider Brownfield options for funding transportation shortfalls, political resistance mounted

and some public toll agencies were thrust into a competition with concessionaires. Two such examples are the North Texas Tollway Authority (NTTA) and the Pennsylvania Turnpike Commission (PTC).

The NTTA was the result of a competition for development rights for a project in the Dallas area. Without consideration of the politics of the process or attempting to determine what is in the best interest of the public, a direct competition between these quite different organizations did occur.

A bid was first submitted by the concessionaire and the agency was later asked to submit a bid. Based on a higher upfront payment proposed by the agency, the project was awarded to the agency.

Regardless of whether one agrees with or even understands the motivation of the participants, the fact is that a direct competition between the public and the private sector occurred and it may be indicative of further competition to come.

Pennsylvania was somewhat different. The Governor of Pennsylvania began the process of accepting bids for a long term lease of the Turnpike to offset the huge gap in transportation funding in the state. If awarded, the Pennsylvania Turnpike would have ceased to exist and the operations of the Turnpike would have been taken up by the successful concessionaire. The Turnpike Commission therefore decided to submit a proposal of its own.

Texas instruments

As was the case in Texas political maneuvering began with the result that the Turnpike has recently signed an agreement with the Pennsylvania DOT to take over Interstate 80 and place a toll on the roadway. In exchange the

DOT will be relieved of approximately US\$100m per year in maintenance cost and would be given about US\$1 billion annually by the turnpike commission from revenues collected on the Interstate roadway.

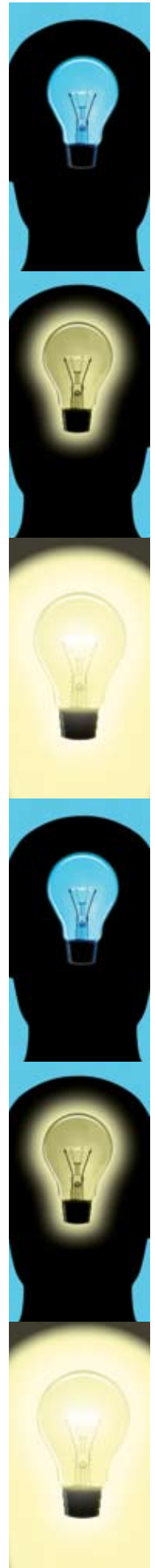
Perhaps this new competition between the public agencies private concessionaires will spawn the emergence of a new transportation delivery organization. This new organization would have the ability to fund projects through tax exempt debt issuance, through the private placement of debt with pension funds and/or through partnership with concessionaires.

It might be more likely to outsource operations in entirety to the private sector. This new public toll company may be a competitive factor in the process of providing transportation funding and efficient operations.

Public toll company

Finance is a prominent driver. Public agencies strive to attain high ratings in order to obtain the lowest net cost of tax exempt debt while concessionaires minimize equity investment by structuring with low investment grade debt, the usual mix of debt and equity being 25 per cent equity and 75 per cent debt. Once the public agency has placed the debt, attention turns to constructing and operating the facility in an open public manner.

The private sector never stops considering the ability to restructure financing to yield a higher rate of return on investment. The public toll company must operate like the concessionaire, always striving to attain returns on equity investment similar to concessions and outsourcing entire operations for better efficiency. Rather than funding new projects with exclusively





tax exempt debt and waiting for the revenues to cover debt service, they must think in terms of attracting equity investors. Further, the public toll company must continually improve efficiency to reduce the amount of equity in a project and thereby increase the rate of return.

Efficiency in operations must not take a back seat to other policy agenda. Toll rates must be maintained to optimize equity returns and management practices and compensation must be driven by profit and loss. Rather than accounting for the expenditures of a governmental entity, the public toll company must maintain accounting records more indicative of a performance based organization.

The governing boards of public toll companies might be established to represent the equity investor and the debt community not just the political jurisdiction in which the project resides. This mix of

interests would serve to balance the interests of the public and the private investors that made the project possible. Management and key staff leadership would possess the skill sets necessary to operate a large scale business.

Public, private

These are but a few of the changes that will occur if the public toll company is to compete with concessions. Though such a major change will be difficult, it can be done in phases as new projects are developed and operations are contracted with the private sector and as financial arrangements are modified on new projects, the public agency can begin to change the nature of its decision making.

Hopefully, the Public Toll Company will better serve constituents and provide a higher level of efficiency while protecting the public interest.

Lester Thurow, an economist and public administration academic authored an article entitled "Public and Private: Alike in all the unimportant ways." The article highlights the basic differences between the public and the private sectors.

Public infrastructure delivery is clearly at this boundary, requiring the efficiency of the private sector and the stewardship of the public sector. Public agencies may remake themselves into public toll companies that can compete with the private sector or they may not.

The competition will stimulate a better product for the public and the user of the facility and will ensure the public interests are kept in focus. It may be that after all the machinations that the US will replicate the European concession model with the concession being owned by both the public and private sector. **TH**

Introducing the Fourth-Generation Radar Sensor from EIS **G4**[™]

Powered by new RTMS[™]

Less Install Effort

- Reintroducing 12-lane detection
- Industry's shortest setback distance
- Backward-compatible with previous RTMS

Integrated Radar & CCTV Camera

- High resolution for even higher accuracy
- Improved detection around barriers
- Enhanced per-vehicle data
- Wireless & IP-based



50% Less Power Consumption

- Multiple communications ports
- Multiple built-in communications options
- NTCIP 1209 option
- Fully Compatible with all EIS Solutions

All-in-One Concept

- Plug & play installation
- Cabinet-free, hassle-free
- Customized built-in package
- Protected by multiple patents



TRAFFIC SOLUTIONS
ELECTRONIC INTEGRATED SYSTEMS INC
Tel: 1.800.785.9248 www.eistraffic.com