

FUNDING AND DELIVERING ROAD SERVICES WITH PRIVATE SECTOR PARTICIPATION

28 September 2011 (am)

TECHNICAL COMMITTEE A.2 FINANCING, MANAGING AND CONTRACTING ROAD SYSTEM INVESTMENT

INTRODUCTORY REPORT

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EXECUTIVE SUMMARY

In the 21st century, all countries need an efficient transport system with roads forming a core element to sustain quality of life, economic competitiveness and environmentally sustainable development. Private financing of road infrastructure and services has been increasing in many countries and is a theme for a Special Session at this Mexico Congress.

Whether financing is public or private, adequate funding is a key issue to maintain existing roads and to build new infrastructure to increase network capacity and improve efficiency. Traditional sources of hypothecated or dedicated funding, such as motor fuel taxes, have been abolished in most countries. As a result, countries around the world face a more difficult challenge to secure adequate road funding, leading to more complex road funding strategies.

In examining any funding strategies, it is sensible to start with road users. Road users make a range of payments relating to acquisition, ownership and usage of their vehicles. These user payments can be larger than the size of the road expenditure and are increasingly becoming another form of taxation as more of the revenue collected from these areas are being used to cover other government funding needs.

There is a growing trend to implement tolling and introduce new and/or modified user charges. The revenue raised from these funding mechanisms have tended to be used for roads but in a number of countries they are used to partially fund other transport modes.

Donor funding is available for developing countries and some developed countries, particularly in the European Union. Some countries, typically the more developed ones, also have introduced new funding methods, such as urban community charges and land development payments.

With funding becoming harder to obtain, the role of the private sector in the delivery of road services has significantly increased. Traditional private sector roles in road design and construction are now being expanded to include road maintenance and operations in many countries. In some countries the private sector role has extend to virtual ownership of portions of the road network.

Road authorities are using a range of contractual arrangements to engage the private sector in the delivery of road maintenance and operations services. Seven broad contractual arrangements have been established. These range from simple Schedule of Rates contracts, which could be for non complex tasks with short contract durations to complex Public-Private Partnership contracts which require the private sector to become virtual owner and to assume latent asset risk with contract duration lasting 25-35 years or more.

With the increase in the complexity of the contractual arrangements, the number and variety of procurement methods to engage the private sector to deliver these services has also increased. Traditionally, road authorities have used two procurement methods to hire private sector services, i.e. without and with pre-qualification of bidders. The former is sometimes referred to as Open and the latter as Restricted procurement procedures. These procurement methods have served road authorities well for contracts where the technical specifications and expected costs are not difficult to establish in advance.

More recent contractual arrangements, such as integrated services and Public-Private Partnership (PPP) contracts, are new to many in the industry. These contracts are used where road authorities are seeking new, innovative approaches to road design, construction and maintenance but may not be able to specify the exact technical standards and conditions that may be faced during the contract duration. It is recognised that an involvement with the contracting parties during the procurement phase to discuss these matters is helpful in achieving greater certainty and hence value for money.

COMMITTEE MEMBERS WHO CONTRIBUTED TO THE REPORT

Henri Chua, United Kingdom
Mike Goodale, Canada
Brian Noble, Australia

1. STRATEGIC ISSUES

1.1. Introduction

In this age of trade globalisation, increasing economic competition and climate change, an efficient transport system is more crucial than ever for all countries. Road transport is typically the primary transport mode for the movement of people and goods, and the road system forms the backbone to a sustainable, high quality of life.

Until quite recently (perhaps to mid 1980s) road infrastructure was provided through public financing with, for some less developed countries, donor and multi-lateral financial institutional financing. Increasingly, the private sector is involved in the financing of road infrastructure and services as demonstrated by the numerous public-private partnerships being implemented from Australia to Mexico. The Global Financial Crisis (GFC) has had a significant impact on this important private financing option and is the subject of a separate Special Session at this Mexico Congress.

Whether the financing is public or private, the key issue is adequate funding for the road system. Even before the GFC, countries were facing difficulties in securing and allocating their financial resources among competing priorities of critically needed maintenance to preserve existing roads and the desire to secure new infrastructure to increase network capacity. Concurrently, business and communities are placing increasing expectations on the providers of road infrastructure to deliver a safe, reliable, state-of-the-art system. Traditional sources of hypothecated or dedicated funding, such as motor fuel taxes, have mostly been abolished. These sources have also been threatened by growing adoption of alternative fuel sources, better fuel economy and the increasing cost of fuel as an input to production.

All road authorities have to do more with less (funds) and more than ever are engaging the private sector, particularly in maintenance and operation, to increase productivity. There are many challenges in trying to develop a framework to view the delivery of road services by private sector from a multi-country perspective. One approach is to take stock of growing private sector roles, confirm funding strategies and review the contractual arrangements for private sector services. Within this context, one can analyse the types of organisations existing in various countries that own and manage the road networks, the funding mechanisms to support these activities and consider the salient features, including advantages and disadvantages, of alternative contracts for private sector maintenance and operation.

1.2. Roles of Private Sector

Almost all countries involve the private sector in the delivery of road services. The amount and types of private sector involvement in the road system vary considerably from country to country and upon the types of road, and the types and volumes of traffic using those roads. An understanding of road system ownership helps the appreciation of private sector roles in the current road systems.

The work undertaken by Technical Committee (TC) A.2 has confirmed that the amount and types of private sector involvement in road infrastructure and services have been increasing through time. In almost every country, functions which had previously been exclusively delivered by the public sector are being delivered by the private sector. While data have not been collected to support this view, TC A.2's observation is that the rate of this transfer is increasing in most countries.

1.2.1. Ownership of the road system

Data from the PIARC member countries that are represented on TC A.2 suggest that almost all of the road system is ultimately owned by the various tiers of government within those countries. Private ownership of portions of the road systems, although common in most countries, is not a large proportion of the total road system.

Hence, although private roads exist, they are usually associated with specific functions, e.g. a mine access road, internal roads within an industrial area etc, and usually have a number of restrictions placed upon them which don't apply to the majority of publicly owned roads.

The majority of countries, with a few exceptions, e.g. those countries with a very small land size, have a number of tiers of government that perform similar functions across the countries surveyed. These various tiers of government have ownership of those portions of the road system that relate to the overall responsibility of that tier of government.

Depending upon the manner in which the various tiers of government are structured in the countries, the ownership of the various classes of road system can be classified into five broad categories as follows:

Ownership of Road Type

Road Classification (1)	Responsible (Owner) Agency
High standard roads carrying significant amounts of freight and through traffic across the country. Commonly referred to as National Expressways, National Motorways and National Highways	Federal / Republic / National Government
High standard roads carrying significant amounts of freight and traffic across states or Provinces or Counties. Of a lower standard than expressways / motorways. Commonly referred to as State, Provincial or County Highways.	State, Provincial or County Governments.
Moderate to high standard roads carrying freight and traffic within a State / Province / County. Commonly referred to as State / Provincial or County feeder roads.	State, Provincial or County Governments.
Local roads carrying predominately local freight and traffic within a community or localised area. Commonly called local or distributor roads.	Local / Municipal Governments
Private Roads typically providing access to mines, industrial installations, road constructed and operated by private organisation for public use, usually with a toll etc (2).	Private companies.

Notes:

1. there are a number of sub-categories of roads within the above. These sub-categories relate not to ownership but to type of road and/or manner in which these roads are managed.
2. Although there are private roads in many countries, these generally are associated with specific use or industry and the management of these roads is usually undertaken by the private owner and relates very closely with the reason for the road.

1.2.2. Private sector involvement in roads

The private sector has delivered design, construction and rehabilitation services on the road system for many years. Traditionally, the public sector would obtain these services to supplement or enhance its ability to operate and maintain the road system.

However, there has been a growing trend for an increasing involvement of the private sector in the operations and maintenance of significant portions of the road system in many countries. This trend of increased private sector involvement does not show any signs of decreasing. Indeed, some countries are involving the private sector in many of the highway authority's traditional administrative and regulatory duties, e.g. processing application to connect to the road network and speed enforcement notices, which were historically the preserve of civil servants.

The range of services that the private sector is providing vary significantly, not only from country to country but also across various road types within a number of countries. As a general observation, the Federal or State Government agencies tend to engage the private sector in a particular function before the Local or Municipal Government Agencies.

There are many different variations to this range of private sector involvement and most countries commence with the least complex arrangements. Over time, as the private sector and the road agencies become familiar and accustomed to different arrangements, the methods used for involving the private sector become more complex.

The least complex involvement of the private sector is in delivering simple, easily specified tasks on sections of road e.g. surface patching, snow removal, etc. where the tasks are readily documented, payments are relatively simple to calculate and the private sector does not necessarily require sophisticated systems and knowledge. Increasing in complexity is the delivery of design, construction, maintenance and operation services. The most complex are arrangements under which the private sector become virtual “owners” of portions of the road system, where it makes decisions on the type and nature of the road system plus all of the management decisions required for this portion of the road system to not only deliver the desired outcomes to the road users but to also provide a positive outcome to the public sector.

Technical Committee A.2 member country data indicate that the private sector roles undertaken for top-tier national and second-tier state, provincial or county roads include design, construction, maintenance, operation and financing of the road system.

1.3. Funding Strategies

Private sector involvement in the delivery of road services may bring greater efficiencies in the delivery of the road system. However, the public sector is still required to allocate the funds necessary to deliver these services. Unless adequate funding is forthcoming critical road maintenance requirements will grow and necessary capacity enhancement will be delayed.

An examination of funding strategies should start from payments made by road users, that are related to road use. In many countries today, road user payments, e.g. motor vehicle import and fuel taxes have become another form of general taxation. These road system related revenues are often larger than the total road expenditure and are not directed to road systems but are used by the Treasury to cover other government expenditures.

It is necessary to understand the existing user payments and how those funds are used as this can determine the scope and sustainability of private sector involvement. How funds flow to national and lower tier road authorities also affects how decisions are made on the allocation of these funds to various components of their road programmes and the involvement of the private sector in these programmes

1.3.1. User payments

The many payments made by road users can be categorised under: 1) acquisition, 2) ownership, and 3) usage of vehicles. Within each of these three categories, various fund raising instruments are applied according to a PIARC TC A.2 survey. These three user payment streams have different occurrence/temporal characteristics.

Acquisition

The survey data indicate all road users are subject to vehicle acquisition payments when purchasing a new vehicle. New vehicle acquisition funding instruments adopted include:

- New vehicle excise duty/tax;
- Import duty/tax;
- New vehicle registration tax; and
- Sales or goods and service or value added tax.

The replacement cycle of motor vehicles, i.e. cars and trucks, is about 10-18 years. Hence road users only occasionally incurred vehicle acquisition costs and these payments are usually one time only. However, at least one country requires its car owners to “re-acquire” any pre-owned vehicles kept for more than a fixed number of years.

European Union (EU) Member States only impose import duty/tax on new vehicles which did not originate from within the EU. Some countries also levy additional forms of acquisition costs, including stamp duty, air condition tax, tyre tax, environmental impact tax and vehicle registration entitlement tax. The latter is believed to be unique to Singapore and is employed as a vehicle ownership (not funding) management tool.

Ownership

Unlike vehicle acquisition charges, the ownership costs for vehicle owners are more complex.

Most countries have annual vehicle registration fees. Different formulae are used to calculate the amount payable. For example, the car’s carbon dioxide emission levels, and fuel type and engine size. Many countries register trucks according to size (in terms of tonnage and/or number of axles).

Most countries also have periodic road worthiness inspections and not necessary only on older vehicles. In some countries these vehicle worthiness inspections are carried out by government-approved centres which are privately owned and operated.

Majority of countries have taxation on vehicle insurance costs. Whereas in only 40% of countries drivers have to periodically pay to maintain driving licences.

Interestingly, one country reported an example of charging city vehicle owners an extra levy over that paid by their non-city owners. The Congress host country applies an environmental impact tax on vehicles.

Usage

Road users make a variety of usage payments. Survey data indicate the principal ones being: 1) fuel tax, 2) tolls, 3) user charges, 4) tax on vehicle maintenance.

Nearly all countries reported that petroleum fuels are subject to excise duty and sales/goods and service/value added tax. In several of these countries, principally western ones, even in this era of high fuel prices the duty and sales/good and service/value added tax form a large portion of the pump price, i.e. duty and tax can be 2 times or more the resource cost of fuel. Some countries apply tax exemption to diesel fuel used by trucks or

public transport vehicles for economic and/or social reasons. In countries where taxation on diesel fuel is lower than that for petrol, privately registered cars powered by a diesel engine may pay higher annual vehicle registration tax.

Vehicle maintenance costs are usually subject to sales/goods and service/value added tax.

Less than one quarter of responding countries questioned by TC A.2 do not have any toll roads or structures. Many toll roads are still owned and operated by the public sector. However, the private sector is active in 50% of the countries with road tolling facilities. The public sector still dominates in the regulation of toll prices. Although data were not collected, it is known that the prevailing toll rates are not always a reflection of road service provision cost, congestion or ability to pay.

Increasingly road users are subject to road user charges by area, time and road type. Singapore is the pre-eminent country with its, initially paper-based and now electronic congestion charging system that has been in operation since the mid 1970s. Some European cities have also introduced area congestion charging systems. In some EU Member States, instead of paying tolls, usage of motorways and some main roads requires a euro vignette – a form of user charges.

A particularly noteworthy consideration is that countries, which use tolls and/or user charges, have not reduced the level of taxation on fuel. In the pipeline being considered are further usage payments related to emission/environmental damage levels.

1.3.2. Flow of user payments

As hinted earlier, excluding tolls and user charges, the amount of funds collected from road users is large and can be higher than the total road expenditure in some countries. In the past, a significant amount of the funds raised by road user payments went directly to the road authority to covers its costs in building, maintaining and operating its road network. However today this is increasingly not the case. Excluding tolls and user charges, few countries earmark the acquisition, ownership and usage payments by road users to road network construction, maintenance and operation. Instead most of the large amounts of funds collected goes to the Treasury and are used to fund a range of government priorities. Some exceptions to this practice can be found in some African countries, New Zealand and USA which still have major dedicated funding streams.

Road tolls collected tend to be retained by the road service provider, particularly if the road is privately financed. In the case of privately financed roads the tolls are used for operation and maintenance, to service the debt and to provide a return to the equity investors. For public sector toll roads, the toll funds are also typically retained by the toll road operating authority.

It is worth noting that although some road authorities may yearn for the “good” old days, of dedicated funding, this approach does not guarantee adequate funding. For example, the USA has increasingly allocated general taxation funds to top up its Highway Trust Fund with its dedicated tax on petroleum fuel which since 1993 has not been increased to keep up with inflation. Another example from Germany suggests that the lorry user charging system introduced in 2005 has not closed the road sector funding gap but instead has been used to further reduce the state budget allocation to the transport sector. Such

restrictions on funding have longer term consequences to asset life and sustainability of road services.

1.3.3. Sources of road funding

The sources of road funding can be summarised as:

- general taxes, including payments by road users (state budget);
- special earmarked taxes from payments by road users (e.g. fuel tax);
- contributions from other levels of government;
- tolls, which may be based on frequency of use, distance, time, place or vehicle type;
- user charges, including vignettes;
- revenues from associated services (restaurants, gas stations);
- special levies on city based vehicle ownership, tyres, air conditioners, etc;
- donor aids; and
- private parties, e.g. land value and land development charges;

1.4. Procuring Private Sector Operation and Maintenance Services

The private sector has been assisting road authorities with design, construction and rehabilitation of roads for a quite long time. More recently, its involvement has been extended to operation and maintenance and in some countries the private sector has been financing roads and has become “virtual” owners of public roads.

For operation and maintenance services, road authorities have engaged the private sector using various contractual arrangements. Different road authorities have also employed different procurement methods to secure the services of the private sector. The key contractual arrangements and procurement methods are outlined below.

1.4.1. Contractual arrangements

PIARC TC A.2 research shows the contractual arrangements for the private sector to deliver operations and maintenance services can be grouped as follows:

- Traditional Schedule of Rates
- Performance Specified Maintenance and Operations
- Design, Construct and Maintain
- Managing Agent
- Relationship Maintenance and Operations
- Integrated Services
- Design, Build, Finance, Operate and Maintain

Traditional Schedule of Rates

At the simplest level of private sector involvement, private companies are engaged to provide plant, equipment and labour to undertake selected maintenance tasks. These services may be as basic as to deliver single non complex activities such as pavement patching, snow clearing etc. Historically the private contractor was paid an agreed amount to undertake a specified task. The payment for these services may be calculated on the measured amount of works delivered, length of time the services are required or on the actual costs incurred by the contractor plus an agreed margin.

Often these arrangements require the service provider to meet designs and specifications that have been prepared by others. Under these arrangements, the public sector retains the decision making ability on the levels of services that are to be provided and when and how they are delivered. The private sector assumes few risks beyond workmanship quality.

Performance Specified Maintenance and Operations

During the 1990's a number of road authorities introduced Performance Specified Maintenance and/or Operations contracts. Under these arrangements, the road authority specified the performance criteria for the services sought and the private sector received an agreed payment to provide the specified services. These arrangements were usually longer than the previous type of contracts and contract periods of 3 to 5 years are typical but some have lasted up to 10 years.

In this arrangement, the road authority identifies the tasks required to be undertaken and their outcome specifications, e.g. roughness attribute, to be achieved and the private sector partners delivers those ordered services and receives payment under an agreed schedule or rate. A key difference to the Traditional Schedule of Rates is that private sector contractor has discretion on the manner used to achieve those required outcomes. In other words the private sector partner is responsible to deliver the ordered services to the specified standards.

Design, Construct and Maintain

There has been an increasing trend for road authorities to use Design and Construct contracts to deliver significant road and bridge construction projects. Under these contracts, the road authority specifies the outcomes required such as capacity, at grade or grade separated intersections, etc. and the private sector supplier carries the responsibility and risk of designing and constructing the specified infrastructure.

These arrangements are now being used in an increasing number to also include the operation and maintenance of the infrastructure for specified periods of time. It is now common for these arrangements to have operation and maintenance periods of ten years or more.

The details of the required maintenance and operations covered under this type of contract vary but usually follow the performance specified maintenance and operations processes outlined in this paper.

Managing Agent Contract

More recently performance specified arrangements have evolved into arrangements where the private sector partner is engaged to undertake the asset management as well as the delivery functions for a section of the road network. These arrangements are usually of a longer duration of 5 years or more.

In these arrangements, the road authority specified the network condition and the private sector partner operates as if it were the owner of the road system to undertake the monitoring, deciding on treatments and applying the treatments to achieve the specified conditions. The payment mechanisms for these arrangements are usually lump sum for

the routine tasks, including winter maintenance, with agreed target cost for planned works that may be identified and delivered by the private sector contractor.

Relationship Maintenance and Operations

A recent innovation is the introduction of relationship arrangements, sometimes called Maintenance Alliances.

In these arrangements, a combined team from the road authority and the private sector partner collectively undertake the asset management and delivery functions required to address the desired outcomes of the road agency. The contracts could last up to 10 years. Payments to the private sector partner are based on direct costs plus an agreed margin. The agreed margin covers the contractor's corporate overheads and profit and on some Alliance Contracts, this margin is exposed to an outcome performance arrangement. Under the outcome performance system, the margin is increased if the services deliver more benefits than agreed and reduces if the services deliver smaller benefits.

Integrated Services

A new contractual method to obtain road system maintenance and operational services is being developed in Western Australia and this method will deliver these services using an integrated team of private sector and road authority personnel.

This "in sourcing" as opposed to "outsourcing" approach extends the Alliance approach a step further by having the combined team integrated within the Road Authority and not as a specific functional group as with an Alliance arrangement.

Under these arrangements, the private sector will receive payment for its services on a direct costs plus agreed margin (overheads plus profit) arrangement and the road agency retains or regains significant influence on the asset management and operational decisions.

The procurement process is similar to that used in Alliance Contracting with more weighting of the assessment of potential industry partners given to the ability of the integrated team being able to operate as a single entity over a long period of time in a manner which does not separate the maintenance and operational functions from the rest of the road authority functions.

Design, Build, Finance, Operate and Maintain

This type of contract was first developed in the 1990's and has gained widespread use in a number of countries since 2000, notably in the Australia, Canada, France, Mexico, Portugal, Spain, and United Kingdom. It is also called a Public-Private Partnership (PPP or P3).

PPP contracts are usually used for large "Greenfield" or significant road infrastructure rebuilding and improvement projects. Under a typical PPP arrangement, the road authority determines that a significant amount of road infrastructure needs to be built or significantly improved. It carries out sufficient preliminary design work to determine the required right-of-way and to define its highway characteristic needs (road capacity, number of lanes, junction locations and types, etc). The road authority also typically obtains environmental

and other permits, makes an estimate of the project's construction costs and acquires any land which is needed for the project.

After a competitive bidding process, a single contract is signed by the road authority and the private sector partner (often called the Concessionaire). The Concessionaire has the responsibility to design and build the project according to the agreement as well as operating and maintaining the road and associated structures, including major maintenance, for a long period, usually 25 to 35 years. The Concessionaire must maintain the road to meet the specified hand-back requirements at the end of the concession period. In return for its service, the Concessionaire receives payments from the road authority or road users in the case of toll roads. These payments are usually conditional on the availability and condition of the road. Although some payments can be made during the construction period, most of the road's capital costs and all of its operating costs are recovered during the operating period. The payment tariffs are determined during the bidding process and fixed in the PPP contract, which may include an agreed adjustment for inflation over time.

Under the PPP approach, significant risks are transferred from the road authority to the Concessionaire. Typical risks transferred to the Concessionaire include;

- Design and/or construction errors;
- Construction cost over runs;
- Construction delays;
- Higher than expected operating and/or maintenance costs;
- Latent defect risks;
- Life cycle costs;
- Financing risks; and
- Revenue risks.

1.4.2. Procurement methods

The tendering processes chosen by road authorities to engage private sector services are heavily influenced by the types of contractual arrangement and local customs (which are typically embodied into procurement laws). As the required services and their specifications, the payment mechanism and contract duration etc have evolved in complexity the tendering processes also have become more complex.

Traditionally for straightforward services requiring limited complex skills, organisation and financial capacity, such as simple routine and winter maintenance, it was common for authorities to "open" the opportunities to all comers. As requirements and terms and conditions become more complex and road authorities (as well as potential private sector contractors) try to gain better procurement economics, pre-qualification of potential bidders becomes part of the tendering process. The former procurement method can be classified as *Open Procedure* whereas the latter as *Restricted Procedure*. In both of these procurement methods the road authority clearly specifies all its needs and terms and conditions

In recent years with the advent of complex contractual arrangements lasting many years, such as Alliance and PPP, the tendering processes have included extra components involving discussions/negotiations between the road authorities and the bidders to finalise the required service specifications and the terms and conditions. In many cases the discussions/negotiations take place in the later stages of the tendering process (after

bidders' "initial" offers have been received). To avoid untoward post-tender negotiations some road authorities enter into a dialogue with potential bidders on the contractual and technical specifications for the required services in advance of key tender documents being issued. In the European Union the former tendering method is known as *Negotiated Procedure* and the latter as *Competitive Dialogue*.

Open Procedure

Under this procurement method, the road authority knows its required service details. Tender documents containing the conditions of the contract, the services and the specifications are prepared by the road authority and tender submissions are invited. Any private company can reply to an invitation to tender and the information supplied within that tender submission will be sufficient to enable the road authority to select the service provider.

This method requires a very good understanding by the road authority of the levels of service required, the work required to achieve those levels of service plus the specification required for those works. The method is well established in most countries with industry plus road authorities generally having a good understanding of this type of procurement. There are usually standard general conditions of contract available in all countries and there is a good body of contract law available to assist in the management of this type of procurement method.

This procurement method is best employed for less complex services and contracts of shorter duration. For example, Schedule of Rates routine maintenance. However, some countries employ the Open procedure to procure very complex PPP contracts with long duration of 25-35 years due to historic procurement misdeeds.

Restricted Procedure

A modification to the Open procedure is to require interested suppliers to become pre-qualified to the road authority for the delivery of services. This approach requires interested providers to provide sufficient technical capability, human resource and financial information to enable the road authority to assess the capability and suitability for delivering the services. The pre-qualification process may result in potential service providers being pre-qualified for a class of services for a specified time or there may be a specific pre-qualification process for a specific project.

This approach restricts bidding to the potential bidders who have pre-qualified. As potential bidders' skills and financial capabilities are known, the amount of information required to be submitted in a tender and the effort to evaluate the tenders by the road authority are generally less than those for Open procedure. It also gives the road authority increased confidence that the service providers being considered are able to undertake the works. Some practitioners believe there is also less costs to industry as pre-qualified tenderers also can submit tenders more economically and companies that are not able to demonstrate the required pre-qualified skills do not waste money submitting losing tenders. On the other hand new service providers, typically from outside the country of the road authority, can be excluded from tendering if the adopted pre-qualification criteria are too restrictive, e.g. only capability in the country of the authority is acceptable.

Pre-qualification of bidders for complex contractual arrangements, such as Performance Specified Maintenance and Managing Agent Contract, have been used as part of the

procurement of those contracts. However, some countries have used this approach as part of their procurement method to procure very complex PPP projects.

Negotiated Procedure

Unlike routine maintenance or construction of a section of road, which is relatively easy to specify and the required efforts quantified upfront by the road authority, complex integrated services arrangements and PPP contracts are new to many road authorities and potential suppliers. Furthermore, the multi-disciplinary, multi-functional, multi-year and multi-stakeholder nature of these contracts may result in different suppliers offering different value-for-money solutions or levels of services on different terms and conditions to the road authority. Hence it is usually difficult, if not impractical, for the road authority to pre-define the eventual specifications and terms and conditions for the contract. In these contracts, a negotiation stage is added to the Restricted procurement method above. In the EU, the procurement process, where negotiations take place after the submission of the initial tender submissions is known as *Negotiated Procedure*.

In the Negotiated procedure, after receiving the tenders the road authority negotiates with tenderers to adapt the potential suppliers' "initial" offers to the road authority's requirements within the parameters set out in the contract notice and tender documentations. Tenderers are usually then asked to refine their offers to the finessed service requirements and this process may be iterated a number of times until an eventual "best-and-final offer" is obtained, after which the road authority announces a provisional Preferred Bidder and a provisional Reserve Bidder. The provisional Reserve Bidder only takes part in the following process if the road authority fails to successfully conclude a contract arrangement with the provisional Preferred Bidder.

This procurement method is more time consuming and human resource intensive than other methods above and a procurement period of 12-18 months is not atypical. With skilled personnel tied up for such a long procurement period this type of procurement exercise is expensive and may shrink the pool of potential bidders to very large economic operators with consequential potential loss of price competition and innovation. Also contracts procured using this approach are only suitable for projects with a very high value to offset the high procurement cost against potential project efficiencies. Further, it would be helpful to have a pipeline of similar projects to encourage sufficient private sector interest.

Competitive Dialogue

The Negotiated procedure involves post-tender submission negotiations. Some countries are not comfortable with that approach. To overcome concerns, such as risk of disclosure of confidential information among bidders and possible discriminatory effects if further negotiations after a preferred bidder has been identified, an alternative restricted procurement method incorporating negotiations is employed by some countries and is known as *Competitive Dialogue* in the EU.

In essence the negotiations are conducted immediately after the pre-qualification stage but prior to the tender submission stage (i.e. dialogue phase). The road authority is constrained to post-tender submission clarifications prior to selecting the private sector contractor.

During the dialogue the road authority engages with the bidders on a bilateral basis on any issues that may arise on the contract before the bidders are required to submit their bids. The dialogue may follow an iterative procedure to reduce the number of solutions and ends when the road authority has the solution(s) which meet its needs.

Bidders submit tenders based on the solution(s) resulting from the dialogue. Given that more than one solution may be possible, the evaluation criteria have to be capable of scoring in a fair manner across a range of bids.

Unless the dialogue process is tightly managed the procurement period can become very long and increase the costs for all participants. Fears have been expressed that the dialogue allows the road authority to cherry-pick competing ideas. Given that no one supplier is likely to have all the best solutions there is great pressure on the road authority to ensure the need for non-disclosure of confidential information on the one hand and the objective for the road authority to find the best solution on the other.

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DRAFT CONCLUSIONS

Several conclusions can be drawn from the analyses undertaken by TC A.2:

- A road system offering sustainable and dependable service is a must for all countries and without a strong road network, the opportunity to achieve the economic sustainability sought by countries will be difficult.
- Centralisation and decentralisation of road network ownership and management are closely aligned to the structure of government and continue to evolve according to a country's objectives.
- Funding strategies used by different countries are heavily dependent upon a country's objectives in road transport and the system that it is trying to support.
- There is increasing use of tolls and user charges but some road authorities are still facing major resistance to their adoption.
- Earmarking of traditional revenues, e.g. fuel tax, continues to decline.
- There continue to be significant gaps in funding versus country needs.
- The private sector's roles continue to expand, in some countries to become virtual owners, to help mitigate the funding gaps.
- There are signs of "out-sourcing" fatigue as road authorities become "procurement authorities" with significant depletion of core skills and hollowing out of human resources.
- Contractual arrangements for private sector involvement in road maintenance and operations have evolved to cater for the expanded roles.
- Some newer, very complex arrangements, such as PPP, which can yield significant financial savings, require large economic operators to partner with the road authority and hence could reduce the number of SME suppliers in the medium to longer term with negative consequences.
- Similarly procurement methods have expanded to cater for contractual complexity and to achieve value for money but some countries are still using more traditional "tried and tested" procedures due to historic experience and limitation of procurement laws.

Funding the road system will continue to be important for all countries. The recent GFC has made the challenge even greater for many countries. Funding strategies involving increasing direct-user payments, e.g. tolls and user charges, which are often resisted but accepted in some countries, warrant further study. Further examination and knowledge sharing of complex contractual arrangements involving the private sector, such as integrated services and PPP, would also be beneficial. The GFC significantly reduced (hopefully temporarily) the capacity to pursue PPPs with major project financing requirement. Project elements, such as risk transfer and payment mechanism, which affect value for money, affordability and "bankability" need revisiting.