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This presentation covers the use of contracting to provide public transport service. Many cities in developed and developing countries have found that contracting is an effective and efficient alternative to directly operating transport services with public employees.

This presentation addresses the following key issues that should be considered when a decision has been made to investigate or pursue contracting:

- Prerequisites for contracting related to the legal and political environments
- Contracting approaches, each of which offers different levels of risk assumed by the government and by the contractor
- Specific contract conditions that ensure that good transport service is provided and that a competitive contracting environment is maintained
- Key elements of effective tendering processes

This presentation does not cover the policy issues regarding whether the government should pursue contracting in lieu of direct operation by a public sector entity. These issues are discussed in the modules related to policy issues.
Worldwide experience has shown that contracting is an effective way for providing urban public transport. The purpose of this exercise is to get you thinking about how you might structure a service contract for a new service in your city.

You work in a city with a population of 5 million residents.

A new BRT service is being constructed in a high-density travel corridor that serves the central city. The length of the corridor is 15 km.

The Mayor would like to issue a contract for the new BRT service. There are currently 15 private operators who provide public transport service in the city. Collectively they operate over 2,500 buses. There is no public operator of service in the city.

It is estimated that the peak bus requirement will be 50 articulated buses. The Mayor wants the selected contractor to provide the new BRT buses as part of the contract.

You have been asked to develop the tendering documents and service contract.

How would you design the contract? Consider issues such as:
• Number of contractors,
• Treatment of fare revenues,
• Contract length,
• Other issues?

Please take about 5 minutes to answer this exercise.
Why do many cities contract for public transport services? There are three important reasons. First, contracting improves cost efficiency (cost per service hour). In a competitive situation, each operator strives to keep costs low. This is not always true when public agencies operate the service. Also, there is often less political interference in employee hiring and management when contracting is used.

Second, contracting can also increase operator responsiveness to market demand because operators can directly benefit from increased ridership and passenger revenues.

Finally, contracting can be used to organize the private sector. Lagos, Nigeria, and Bogota, Colombia, are examples where contracting has been used in organizing small operators to provide high-capacity service.

However, contracting is not a panacea for urban transport problems. It does not work without significant public sector oversight and management.
Contracting can be used to provide most operational and financial functions. Vehicle operations, maintenance, fare collection, and user information are activities that are commonly contracted. In many instances, the contractors also provide capital assets, such as vehicles, maintenance facilities, communications, and ITS.

However, there are some government functions that should not be contracted because they involve the setting and execution of public policy. These activities include activities such as:

- Metropolitan transport strategic planning;
- Decision-making on major public investments and programs;
- Strategic investment policies
- Service, operating, and fare policies; and
- Public transport industry regulation.

The bottom line is that public agencies can contract most transport functions, but they still need skilled staff to set and execute public policies.
Proper support in three areas is needed to make contracting work.

The first area is technical capability. Both an explicit legal and regulatory framework and a skilled staff in the government (public authority) are needed. In addition, there must be a reliable way to make payments to the contractor.

Second, there must be the will to enforce the contracts, both among political leaders and among the public sector staff. Technical capability alone is not sufficient without the will to enforce the contract provisions.

Finally, provisions for damage control are essential. Problems can be expected, such as service disruption, users’ discontent, and resistance of incumbent operators. It is important to engage stakeholders, including the riding public, existing operators, and local government authorities. The successful efforts in Bogota and Lagos are largely due to the extensive consultation with the stakeholders when the contracting approach was being developed.
Now we will look at how the contracts should be structured.

It is important to recognize that contracting involves the estimation of future costs and revenues. Contractors (operators) must estimate the values of three items for the period or length of a proposed contract:

- Costs,
- Revenues, and
- Payments from the contracting agency.

However, these estimates could go wrong when the contractor gets the contract. Fuel prices could increase more than expected and therefore the contractor’s estimates of operating and maintenance costs are too low. There is a downturn in the local economy and less people are working and riding buses. Therefore, the actual passenger revenues are lower than then the contractor’s estimates. The contractor assumes that the public agency will make prompt payments. Unfortunately, the payments are always two months late and the contractor must borrow money to pay his operating expenses.

If any of these events occur, the contractor will lose money on the contract. Therefore, when thinking about future costs and revenues, a good contractor will take the risks of these future events happening into consideration in his estimates.
If the contractor thinks that future has high risk and costs and revenues are very uncertain, the contractor will use high estimates of costs and low estimates of revenues in his tender offer. This may mean that the public authority pays more to the contractor than the contractor needs to make a reasonable profit on the contract.

If the contractor thinks that future is very certain and has low risk, then contractor will use more moderate estimates of costs and revenues in his tender offer. This may mean that the public authority pays closer to amount that the contractor needs to make a reasonable profit on the contract.

The contractor’s view of future cost and revenue risks is important because it affects the contract (tender) costs that the contractor bids. When there is high risk, the contractor bids high costs. When there is low risk, the contractor bids low costs.
There are three common types of service provider contracts. The contract types differ in how risk is allocated between the contractor and the government. We will discusses how these contract types differ in the next three slides.
A cost-plus contract involves the most risk to the public authority. The contractor is paid for the actual operating costs that are incurred plus a management fee. The government assumes the risk of higher-than-anticipated expenses and lower-than-anticipated passenger revenues.

The main advantage compared to the other contract approaches is that the government retains decision-making authority related to passengers and revenues, including fares and service levels.

However, there are several disadvantages. The operator has little incentive to control costs or increase revenues. This often means that cost-plus contracts are the most costly contracting option for the public authority.

Also, this contract approach requires significant oversight. The public authority must audit the legitimacy of the operator’s costs and monitor the proper collection of fares.
A gross-cost contract involves a shift of the cost risk to the operator. The contractor agrees to be paid a fixed cost rate, such as $50 per hour or $2 per km of bus operation. The government continues to assume the risk of lower-than-anticipated passenger revenues.

The main advantage of this contract approach compared to the others is that the operator has an incentive to control costs. This often means that a gross-cost contract is a less-costly contracting option for the public authority compared to the cost-plus approach.

However, there are several disadvantages. This contract approach requires significant oversight. The public authority must audit and monitor the proper collection of fares.
The last contract approach, net-cost contracts, involves a shift of risks to the contractor. The contractor agrees to either make a fixed payment to, or receive a fixed payment from, the public authority, depending on whether or not the service is profitable. The contractor assumes the risk of higher-than-anticipated expenses and lower-than-anticipated passenger revenues.

The main advantage of this contract approach is that the operator has incentives to control costs and increase passenger revenues. Increasing fare revenues, however, does not mean necessarily increasing ridership. This raises a potential key disadvantage — the operator may be given the authority to make policy decisions about important issues, such as fares and service levels. Unconstrained, the operator may unreasonably raise fares and reduce service levels.

Another advantage is that the public authority does not have to audit or monitor revenues and costs as is required in the other contract approaches. However, a potential disadvantage is that strong public oversight of service quality is needed. Since operators assume the risks from high costs, they may be tempted to “cut corners” and reduce costs by providing low-quality service.

Another disadvantage is there is limited flexibility to make service and fare changes. This disadvantage can be minimized by including provisions in the contract for these changes. However, it is likely that some negotiation will be needed to make these changes and that some disputes may arise after the changes are made.
This chart summarizes how risks are allocated in the three options and the likely financial cost to the government.

The cost-plus contract approach is likely the most-costly alternative and requires the government to assume all risks.

The gross-cost contract approach involves a sharing of the risks and can be lower cost that the cost-plus contract approach.

Finally, the net-cost contract approach requires the contractor to assume all risks, but often gives control of fares and service levels to the contractor.
There is no one best contract approach. The choice depends on local conditions.

The legal and regulatory framework governs how much control can be exercised. It also dictates the rights of existing operators as to what types of services can be contracted.

Public resources are important. They set the limits of contract oversight and service management. The net-cost contract may be the best contract approach when the government has limited resources for oversight and service management. However, strong public oversight of service quality will still be needed. When government resources for oversight and service management are more substantial, the other two contract approaches become more viable.

The availability of fiscal resources also dictates how much risk the government can assume. When fiscal resources are limited, the net-contract provides predictable government costs for services.

Similarly, contractor resources are important. The government must be assured that the transport services can be provided efficiently and without interruption. When contractors have limited resources and financing, the government may have
to take actions to assist them such as providing publicly-owned operating depots, group maintenance services, or low-cost financing. These measures are not needed when contractors have significant resources and operating capabilities.

The maturity of the public urban transport services also is important. When the services are mature and relatively unchanging, revenues and operating costs are more predictable. In this situation, the net-cost contract approach may be preferable. However, when the services are constantly changing and, perhaps, increasing, the gross-cost and cost-plus contract approaches may be more preferred because the government assumes more of the service risk and because new service can be added more easily.

Finally, the level of competition from the unregulated, informal sector is important. Contract operators will be unwilling to accept any passenger or revenue risks when this competition is fierce.
Service contracting is an ongoing process. It involves the obvious tasks of solicitation and selection of contractors. After contractor selection, performance monitoring and contract enforcement must be implemented. There are many points at which this process can go astray. Good contract design can help address these potential problems.

We are now going to cover the key issues that should be addressed in a service contract.
The first issue we will cover is how service should be organized and contracted.

There are two ways to organize service. One method is for the contractor to operate all services within a geographic area. This encourages service coordination because the operator will be responsible for all types of services (e.g. feeder, local, and arterial). This can reduce costs because the bus operating base can be located close to most routes.

The second method is to organize by route or corridor. This encourages operators to specialize. For instance, feeder services could use small buses and arterial services could use large buses. This approach may encourage more participation because operators do not have to offer a wide range of services and vehicles.

One concern is the number of operators to be contracted. Operationally, it is easier for a single contractor to provide coordinated service. However, a multiple-operator approach may be used when: 1) no single operator has the capability to provide the service, or 2) efforts must be made to address the needs of a large number of incumbent operators. The multiple-operator approach also will help insures that one operator does not gain a monopoly “for the market” and charge uncompetitive and high costs for the services provided.
The contract size (e.g., numbers of buses, km of service) largely will be based on the chosen service-provision strategy as discussed in the previous slide. The size of each contract will be smaller if a multiple-operator approach is used instead of a single-operator approach. The size of each contract also will be smaller if a route/corridor approach is used instead of an area approach.

However, the size of the contract may be modified by other factors.

One factor is preferential treatment. Service contracting often can dramatically change the revenues and financial viability of incumbent or existing operators. Often, governments choose to contract the operation of new services such as BRT lines in major corridors. These new services may attract riders that before rode services provided by existing operators. This change hurts the revenues of existing operators and opens the government up to charges that its new services are “running the existing operators out of business.” These charges can be a major political concern. In anticipation of these charges, some governments have required that existing operators be given preferences in receiving the new service contracts.

Likewise, the balance between local and international contractors is often a political issue. When government funding is being used, often preferences are given to
local firms because local residents, not outsiders, receive the employment and profit benefits of the contracts.

Depot availability is also important because there are limited options for leasing or constructing depot facilities in many cities.

Finally, operational efficiencies or “economies of scale” are important. For example, operating large, 18-meter buses often requires a different scale of operations than operating small buses or vans. The larger buses often require investment in specialized equipment such as vehicle hoists and diagnostic equipment. This specialized equipment needs to be used by a reasonable number of buses to justify their purchase. On the other hand, small buses and vans do not require this specialized equipment or can be maintained in facilities that also are used by automobiles.

While it is hard to generalize, the minimum size of many service contracts ranges between 50 and 100 buses, which is the common size-standard for a depot.
The key factor for contract duration is who is providing the vehicles and, therefore, is purchasing the vehicles. The vehicle purchase requires the outlay of capital funds before the service is started. These capital funds can only be recovered (or earned) by the contractor during the contract period.

The service contracts that include vehicles should be long enough to recover the full vehicle purchase cost. These contracts typically range from 5-8 years, which is sufficient time to recover the purchase cost. Contractors often argue for longer contracts.

When the government provides the vehicles, the contracts are shorter (3-5 years). Time is needed so that lessons learned in the early months can be applied in the remaining contract years.

Maintaining a competitive environment is important. Losing bidders need frequent opportunities to compete for new awards or they will leave the market. Staggering the contracts can maintain the competitive environment. This means making sure that all contracts issued by the government do not start and end at the same time. For example, if the government is awarding five contracts, each with duration of ten years, it should issue one contract every two years as opposed to five contracts every tenth year.
“Lifetime” contracts should be avoided. Extensions for excellent performance can be used if they are limited and do not become “lifetime extensions.”
The scope of the contract helps bidders estimate their costs. The scope should have flexibility to allow bidders to propose different ways to deliver good service and to respond to future service changes.

Examples of scope items include:

- Route description that details all streets operated from terminal to terminal.
- Required vehicle capacity that specifies seating and standing capacities.
- Service schedule by time-of-day and day-of-week.
- Services provided to the contractor, such as dispatching and fare revenue collection.
A good service contract should include provisions governing quality of service. Quality should be assessed using quantifiable performance measures. Why quantifiable? So that there is no room for disagreement about actual performance. Typical measures address service reliability (e.g., percent trips operated, percent operated trips on-time) and vehicle condition (e.g., maximum vehicle age). The measures should be clear and verifiable.

It is important that standards are reasonable. If they are too high, smart contractors will choose not to meet the standards, but instead add the imposed penalty cost to their bids.

**Quality of Service**

- **Specify performance measures**
  - Measures should be quantifiable
    - e.g., % scheduled trips operated, % of trips on-time, vehicle maximum age
- **Set reasonable standards**
  - Unreasonably high standards increase costs!
    - Examples of unreasonable standards
      - 99.9% trips operated
      - 99.8% on-time
      - Vehicles < 3 years old
Incentives and penalties also should be included to encourage good service delivery and contractor cooperation. Examples of penalties include $50 for every missed scheduled trip and $10 for every trip that is more than 10 minutes late. While penalties may reduce overall contract, the objective is to improve or maintain service delivery.

Penalties and incentives should only be applied to areas over which the contractor has some control. The contractor has direct control over the condition of the revenue fleet — buses, cars, vans — and the performance of drivers and conductors. The contractor has some, but not complete, control over bus speeds, schedule reliability, and passenger usage.

Many people think only of imposing penalties. However, good incentives often work better and cost less in the long run than penalties. For example, providing an incentive of $350 per day for each day in which no trips are missed may be more effective imposing a penalty of $50 for every missed scheduled trip.

Finally, incentives and penalties should be applied progressively. Small infractions should receive small penalties. For example, 90% may be set as the minimum standard for the percent of monthly trips that should be operated on-time (0 to 5 minutes late of arrival time). The penalties for failing to meet this standard might set
at $100 for every percentage point less than 90%. Thus the penalty for 89% would be $100, but $500 for 85%. This progressive penalty is better than one penalty of $500 for falling below 90%.
Quality service depends on monitoring and enforcement.

As we discussed, clear and verifiable measures are needed. The measures must be supported by a comprehensive and regular data-collection program. The program costs can be shared between the public authority and the contractor as long as adequate budgets can be provided for the public authority.

Enforcement is essential and must be credible — contractors must expect penalties for poor performance. Many contracts fail because of poor enforcement.

While incentives typically involve bonus payments, careful thought should be given to penalties and how they are structured. A progressive penalty structure can be effective. Initially, fines are imposed for infractions. If performance does not improve, then portions of payments are deducted. Continued poor performance results in denial of service extensions or renewal options.
The contract also should outline the fare system and how it will involve the contractor. Key items include:

- Media used, such as cash, tickets, passes, and an integrated circuit (IC) cards.
- Required collection/validation equipment such as fareboxes, turnstyles, and touch pads (for IC cards). The contract should indicate whether the public authority or the contractor is responsible for providing the equipment.
- Handling of daily revenue, either by deposit into a public authority account or retention by the contractor.
- Reporting of fare revenues collected.

When a net-cost contract is being used, fare revenues are important compensation to the contractor. The contractor’s role in fare setting, if any, should be defined, as well as the compensation that is provided for offering special fare discounts.
Many contracts contain evolution mechanisms to handle changes in service levels and to address the cost impacts of external forces not under full control of the contractor. Generally, service level changes are addressed by specifying a unit cost rate (e.g., $20 per hour) for added service. Often, a maximum is set for the amount of service (e.g., 10,000 hours) that can be added or deleted at this cost rate.

External concerns can be treated in two ways. Some concerns can be addressed explicitly. For instance, oil price increases are often shared with the contractor, with the contractor assuming the risk for a moderate price increase (e.g. 5%), and the government assuming the increased costs beyond that price increase.

The approach for other changes is to reopen the contract for negotiation because it is impossible to anticipate the impacts when the contract is awarded.
Let us turn to the tendering process and guidelines about how it can be structured.

- First and most obvious, tendering is a legal process that is governed by local and sometimes national laws and regulations. Most of the laws and regulation prescribe specific administrative procedures that must be followed.

Some require that special considerations be given to selected groups such as:

- Existing owners or operators
- Disadvantaged groups, such as small business owners or particular ethnic groups
- Local or national owners or operators
The administrative procedures for tendering can be very complex and involved. There are two key elements of the process that must be given careful thought.

The qualification criteria are used to determine which bidders or potential contractors are capable of performing. This step is done when the service tenders are submitted.

The selection criteria are used to determine the most suitable contractor from among the contractors who met the qualification criteria.

Let us look at both criteria in more detail.
The purpose of qualification criteria is to ensure that the prospective contractors have the operational and financial capability to perform the contract.

Operational capacity can be demonstrated by past experience. It is important to check references, particularly for unfamiliar national and international firms.

Financial capacity can be demonstrated by the provision of financial statements for the past several years. Often, bid bonds are required to ensure that the bidder will execute an awarded contract.

Sometimes, the criteria can only be met by a certain number of operators and public efforts should be made to foster competition. Let’s look at some examples of how this has been done.
One concern is that small incumbent operators are not large enough to participate. In Bogota and Sao Paulo, efforts were made to encourage incorporation of small operators as stockholders of bidding companies. In Cape Town, a similar approach was used.

Another way to increase participation is to lower the entry-market barriers by providing public assistance. This has been done in several ways such as providing support for vehicle acquisition (e.g., public funding in Dakar, leasing in Jakarta, partial state ownership in Mexico). The public provision of maintenance facilities (e.g., five operating depots in Cali), and the public provision of operating support services like centralized control (e.g., dispatching services in Indore, India).
Selection criteria are second key tendering area. It is important to decide if the decision is based solely on the lowest price, or based on a broader assessment of the economically most advantageous tender (EMAT). When service contracts are very simple and straightforward, lowest price is often used. As operational complexity increases, EMAT becomes the preferred approach.

A related issue is the number of selection criteria. Should cost be the only factor, or should the level and quantity of service also be considered? When several factors are being considered besides cost, difficult trade-offs among the factors must be made. Bid evaluators must decide if the added quantity (and/or quality) of service being proposed by one bidder at a higher cost is a better choice than lower quantity (quality) of service being offered at a lower price by a second bidder.

Some agencies are uncomfortable and are not confident in making these trade-offs. They structure their service tenders so that cost is the only selection criterion. The service request that a fixed level and quality of service are provided by the winning bidder so that a single price criterion can be used.

Finally, preferential treatment, if desired, must be carefully considered. Sometimes, local political considerations require that special groups such as existing transport operators or local transport operators be given special consideration in the selection
process. This can be done by requiring a certain level (percentage) of participation in each bidder’s offer. It also can be done by giving extra evaluation points to bidders who include these special groups (e.g., 10 bonus points when 100 point is the maximum score that can be achieved by any bidder.

Preferential treatment must be carefully designed. It should be transparent and controlled for abuse.
Transparency and good documentation are needed to support a good selection approach. The selection criteria and weighting should be clearly identified in the tendering documents. This gives each bidder the same opportunity to address how they meet the criteria.

When contract bids are evaluated, all bids should be scored against all evaluation criteria. This encourages fairness in bid evaluation.

Finally, scoring sheets should be maintained in permanent record files. This provides transparency and allows any interested person the opportunity to assess the fairness of the selection process.
Summary

- Contracting is an effective, efficient alternative to directly operating transport services
- Specific contract provisions and good tendering process are needed
  - Contract with most suitable contractor
  - Maintain competitive environment