

**R**EVUE OF FRENCH EXPERIENCE IN PRIVATE FINANCING  
OF PUBLIC URBAN TRANSPORT-(PUBLIC/PRIVATE PARTNERSHIP)



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- CONCESSION OF THE TOULOUSE AUTOMATIC LIGHT TRANSPORT
- CONCESSION OF THE LRT LINE 3 IN MANILA (THE PHILIPPINES)
- CONCESSION OF THE THESSALONIKI METRO (GREECE)

# *FRENCH EXPERIENCE IN PRIVATE FINANCING OF PUBLIC TRANSPORT*

## **1. Purpose of the report and main findings**

This report is intended to review the French experience in respect to public / private partnership in the field of public urban transportation. It appraises the transfer of that experience to developing countries and defines the conditions in which the French experience can be exported to other countries.

The findings regarding the two questions - the French experience and the conditions of its transfer - are based on an assessment of the key points at the root of the French experience, and on monographies on concession (of the type BOT, Build, Operate, Transfer) cases. <sup>(1)</sup>

### ***Abstract of the findings***

❶ The French model is based on:

- public authorities with substantial financial resources, both centrally and at decentralised levels, and "strong" local authorities,
- competent local expertise,
- organised and powerful operators, in the context of regulated competition.

In France, public transportation networks are mainly operated under delegate management agreements under which the risks shouldered by the operator vary depending on the agreements. The most recent agreements increasingly tend to have the industrial risks (the costs) and part of the commercial risks (revenues) shouldered by the operating companies. Infrastructure and rolling stock investments are financed by local authorities, which also finance part of network operation, often on a fixed basis. In cases of concessions (of the type BOT) for the construction and operation of mass transit systems (tramway, LRT, metro), there is a technical and financial commitment by the public authority alongside the private sector.

However, the development of public transportation could only happen because all urban actors became aware of the limitations to the unbridled use of automobiles in dense urban areas and of the vital need in major towns for the urban economy and its environment to make public transportation more attractive and accessible to all town dwellers.

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(1) Case of Caen and Toulouse in France; Saloniki and Manilla abroad

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This backing was consistent over the last 25 years and helped ensure the durability of the systems thus created. It could be said that the cost of the French public transportation system is high, but that is in effect the price the community is willing to pay to limit the use of the automobile in towns and to preserve the quality of life in towns.

The French model was exported far and wide, although this is more true of the principles governing the model (balance between public control and the role of the private sector, sharing of the risks and financing, etc.) than of its implementation, which bears the mark of the French tradition. For example, the delegate management method for the operation of urban transport networks has become a reference. Nowadays, that mode of relations between a public community -which in particular defines the missions and the scope of the services and sets the amount of the financial compensations- and the transport operator which operates the network, has become the leading mode world-wide. The contracting terms are evolving and include, as is the case in France, a tendency to increase the operators' awareness of their responsibilities via risk taking in regard to the costs and revenues of the operation of the networks.

The difficulties confronting developing countries, particularly in Africa, but also in Central America, Latin America and a number of Far East countries, are mostly generated by the vast number of small operators, making contracting difficult. An other difficulty is the lack of weight of the local authority to sign and supervise the contracts, the deregulation and unfair competition between operators, so many issues unknown in the French model, and which limit its transferability. The French experiment in the Seventies in West Africa, which was based on government owned urban transport companies with a monopoly and extensive financial backing, collapsed because it failed to adapt to increasingly stringent local imperatives.

There are few examples of concession agreements (of the BOT type) in urban transport in developing countries and not enough time has passed to take stock of the situation. When there are any, they could be described as "light" concessions, with risk- and financing sharing between the conceding authority and the concessionaire consortium, as in recent French examples. In the cases we reviewed, the concession agreement includes a financial and technical commitment of the public authority at all stages in the life of the contract and guaranties on revenue during the operating phase. Recourse to private financing is limited by the specific characteristics of urban transport, where projects are highly important for the community, but are not profitable as a rule.

The export of the French know-how for major urban transport projects was encouraged by French financial backing. France has played a leading role in the design, the construction and the supply of equipment of major metro systems world-wide (Mexico City, Santiago, Cairo), which remain references in this respect.

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② The findings arising from the French experience both in France and abroad are as follows:

- Recourse to delegate management agreements for the operation of urban public transport services is increasingly frequent. There are a few examples of concession agreements (of the BOT types) for the construction and operation of mass transit systems.
- In the cases of successful concessions (of the BOT type), the introduction of a degree of flexibility in the contracts should be noted, making it possible to adapt them throughout the long life of the agreement (25 to 30 years).
- A "cultural" appraisal of the country - local law and institutional context – plays a vital role and is taken into account.
- The feasibility and traffic studies, analyses of the viability of the project, are an essential prerequisite to project implementation.
- All the examples point out a strong political will and the existence of a public local and / or national authority, capable of mustering substantial financial resources and with extensive technical competences.
- In addition, they require a well organised industry. To be successful, the transfer of responsibility to the private sector implies the involvement of “mature” partners. The greatest risk with concession arrangements is linked to the operation, which covers the longest periods, hence is the importance of the terms and conditions relating to commercial income.
- In developing countries, the key stone in a concession arrangement (of the BOT type) is the financing. This aspect is the major parameter. Completed projects or those under study demonstrate that 100% private sector financing does not exist. The share between public and private financing varies with each case. As a rule, infrastructure investments are mainly financed by public funds, rolling stock and the associated equipment are financed to a varying degree by private establishments. In many cases, there exists guaranties on revenues and level of traffic.

These findings are derived from the analysis developed in the following pages.

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## **2. Organisation of the public urban transport in France:**

France developed an organisation scheme for urban public transport which is derived both from its long tradition in public service delegation in regard to the management of urban services, from its institutional history and the manner in which it has integrated the particular characteristics of the urban transport sector.

### ***2.1 Specificities of the public urban transport sector***

Public urban transportation participates to the world-wide trend towards the liberalisation of urban services and the recourse to the private sector. Urban transportation does however have particular characteristics when compared to other urban utilities (water, sewerage, etc.). This affects the relations between authorities responsible for public transport and the operators :

- The organisation of transport is an essential factor of urban development and, given its interrelation with urban development policies and its impact on the environment, it is one of the main competences of the priorities in charge of managing the cities.
- Public transport is one of the elements in overall town mobility and is linked to decisions pertaining to roads and traffic. It does compete with the other modes of transport.
- The urban transport sector plays a major economic and social role and, in this respect, its tariffs can be affected by political decisions.

These aspects do not come under the responsibility of a private managing body. They require complementary financial resources to the traffic revenue to guarantee the economic balance of the activity and imply that the public authority is involved to correct the market rules.

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## **2.2 Characteristics of the organisation of public urban transport in France**

France developed its own answer to these particular characteristics, as a consequence of its history and of the importance it grants to public transport for the urban environment.

The existing system, which applies in all towns in France except in the Paris Region, was set up in the mid-Seventies. In order to put an end to the crisis in public transport experienced in most French towns since the Sixties, as a consequence of the development of the automobile and of the expansion of urban areas, public authorities adopted a number of voluntarist measures in favour of public urban transport. The conditions of the traditional partnership with the private sector were redefined. These measures resulted the revival of public urban transport.

The institutional system is characterised as follows:

- ❑ A Specific financing: the "versement-transport". This is a specific urban tax, the revenue of which is allocated to public urban transport. This tax is based on the salaries paid by employers with nine or more salaried employees, established in urban areas with more than 20,000 inhabitants. It amounts to nearly 40% of the total cost of public urban transport.
- ❑ The Clarification of the relations between partners: in 1982, the "LOTI" (Loi d'Orientation sur les Transports Intérieurs), the French domestic Transport Act, made a distinction between the organisation of services by a Regulating Authority, which is a public authority, and the performance of services, by one or several operators.
- ❑ Contracting: the Transport Act defined the conditions of operation of public urban transport networks (statutory, but flexible contracting).
- ❑ A strong regulation and controlled competition.
- ❑ The political and financial backing by the State for investments in public urban transports.
- ❑ "Transparency" : the competition rules are defined and measures are provided to fight against "corruption" (the "Sapin" Act).
- ❑ The Integration of the environment: the Act on Air (1997) explicitly provides for the improvement of the public transport. The " Plans de Déplacements Urbains" (urban transport plans) are intended to improve the balance in the utilisation of the various modes of urban transport in favor of the less polluting modes.

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Other parameters are specific to France. With the exception of two state-owned companies, RATP (main public transport operator in the Paris region) and SNCF (the state-owned railway company), the vast majority of transport operators have links with three leading private or semi-private groups. These groups are active in all urban services: water supply, sewerage, urban waste transport, passenger transport, making them key partners in local management.

- The regulation and organisation of competition. Another specific characteristic in France is the regulation of the activity and the organisation of competition between operators. With the highly specific exception of the Paris region, the French system is based on a combination of the elements below:
  - creation of an urban transport regulating authority, whenever the local authorities express a will to exercise that competence jointly. The territory covered by these local communities defines the urban transport perimeter (PTU).
  - within the PTU, one single operator is responsible for the whole of the public transport network, irrespective of its components: bus, tramway, metro even.
  - an agreement spells out the rights and obligations of the partners.
  - the contract is awarded following a competitive procedure. The competition is effective at the time when the contract is awarded or renewed, via a tender procedure. The limited number of potential candidates means that competition is both tough and relative. The competition is likely to get tougher with the arrival of European operators on the domestic market.
  
- The organisation of urban transport sector regulating authorities have created a technical and political association, GART, “Groupement des Autorités Responsables des Transports”, which is the official mouthpiece of the local authorities. On the other hand, the unions of public transport operators generate organised lobbies at the national level with UTP, Union des Transports Publics, and at the international level, with UITP, Union Internationale des Transports Publics. Despite the fact that regional or national federations exist, public transport users do not yet form as powerful a lobby as that generated by automobile users.

The French system is noticeable for its highly structured institutional organisation, with an important intervention by the public institutions, both at local and national levels, and a powerful organisation of the industry. This structure guaranties a balanced dialogue between partners with no risk of one or the other partner getting the upper hand.

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## **2.3 Public service delegation in urban transportation**

The majority of French public urban transportation networks are operated under a public service delegation within an agreement with local authorities. The Paris region<sup>(2)</sup> (Paris and the Ile-de-France region) is an exception, similar to that of many capital cities in Europe and elsewhere given their size. The Paris network is under the responsibilities of a Syndicate formed by the State and local authorities. This exception translates in a high level of involvement by the State in the Paris area.

In itself, the public service delegation (« Délégation de Service Public » or DSP) is not specific to the urban transport sector: it is a French tradition applied to the whole of urban services. For a public community, DSP involves entrusting the management of a public service, construction and management in the case of a concession, of the BOT type, to a private entity.

These agreements have a specific characteristic given the nature of the service, which is a “public service” and, ultimately, the community is responsible for the general interest and for preserving equality of access for users to the service.

Delegate management makes room for an involvement by the private sector (or by autonomous state-owned companies) in exchange for commitments by the community. It affords greater flexibility, increased reactivity and more efficiency in the management of community services than is the case with direct management by the community, given the growing complexity of the running of urban services. This model is different from the so-called "Anglo-Saxon" model, which is based on privatisation and the relinquishment by the public authority of the ownership of the property.

Delegate management contracts fall into two main categories:

### **2.3.1 Public service delegation for the operation of part (or all) of a public transport network.**

There are several types of delegate management contracts with different levels of involvement by the operators depending on whether it is possible to create services fully, partly, or very partly governed by a market logic. The difference between these types of contracts lies mainly in the financial responsibility in regard to investment and operation.

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(2) Outside of the Ile-de-Franceregion, the local communities have authority on the public urban transport networks. In Paris an throughout Ile-de-France region, the public transport network is under the authority of STP (Syndicat des Transports Parisiens) which is presided over by the State.

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- ⇒ In the cases of "régie intéressée" and of "gérance", the public authority collects the sums paid by the users and the operator is paid by the public authority on the basis of the quality of its management : the commercial and industrial risk is shouldered by the public authority. In France, this type of contract involving very little risk for the operator accounts for 30% or so of all public urban transport management contracts, outside of the Ile-de-France region.
  
- ⇒ The other two forms of delegate management contracts for the operation of public urban transport networks are cost contracts and subsidy contracts. In cost contracts (37% of contracts in France), the operator shoulders the industrial risks (on service production) and the public authority pays the operator the forecast cost of the service provided and shoulders the commercial risks on traffic income (lower than the expenditure of the activity). In the subsidy contract (32% of contracts), the operator is paid a fixed sum and shoulders the industrial risks as well as part of the commercial risks, while the public authority shoulders the remainder of the commercial risk.  

In most cases, irrespective of the contract, premium and penalty clauses tied to network ridership and the quality of the service provided give the operator a share in the results of its management.
  
- ⇒ In the case of risk concessions, the concessionaire takes all the risks and pays itself on user income, which implies the freedom to fix tariffs. At the term of the contract, the investments made by the concessionaire return to the conceding authority (which is different from a privatisation).

Thus, in all cases, the public urban transport activity is paid a financial contribution by the public authority to take into account the fact that the sector is structurally in deficit, in a context where the main competitor, the automobile, does not shoulder all the costs it generates for the community.

As a rule, in the agreements signed by the major networks, the rolling stocks and equipment needed to operate them are handed over free of charge to the operators by the public authorities. The latter draw up the terms and conditions and supervise them, which implies that they must have adequate auditing competences internally.

On the other hand, operators are extensive autonomy of action within the terms and conditions of the agreement. In addition, the tendency for fixed financial contributions is an incentive for the operators to improve their efficiency.

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## **2.3.2 Concession (of the BOT type) and lease contracts**

In the case of the construction of a new public transport line or mass transit systems, such as reserved site bus or guided public transport (tramway, LRT, metro, etc.), the future operator may be made responsible for constructing the line and financing it.

This two fold responsibility for creating and managing a public service project, together with the responsibility for designing and financing the investment, is the main characteristic of so-called concession contracts and their variants (in the BOT type in the Anglo Saxon sphere).

Since an urban transport operator is not competent to construct infrastructures, the **concession** is signed between the conceding authority and a concessionaire, consortium pooling within one single entity companies capable of meeting jointly and severally all contractual requirements. In the case of a mass transit project, they include civil engineering contractors, rolling stock and equipment suppliers, engineering companies, operator, etc.

Recourse to concession is a centuries old practice in France. Nowadays, it has become standard practice in the field of transport for the construction and operation of motorways, bridges, car parks and coach stations.

Concession has experience renewed popularity these last fifteen years for the construction and operation of mass transit systems. However, in the case of mass transit project concessions, concessionaire remuneration differs from that under conventional concessions, where it is financed by the revenues derived from the direct users. Indeed, the particular characteristics of the public urban transport sector mean that the tariffs applied to customers are de facto set by the public authority at a level below the full cost price of the service and the public authority compensates the shortfall in the concessionaire's commercial income by subsidies defined in the contract agreement. However, the Courts see to it that the operator's remuneration does rest for "a substantial fraction" on commercial income.

Lease agreements are a variant of concession agreements: **leasing** involves making available to the future operator, by the community, from the start of the contract, structures and installations it already owns. It follows that no new infrastructures are constructed although the beneficiary of the contract, the "lessee" may be made responsible for developing, rehabilitating or extending the line or network entrusted to it. With this exception, the lease formula is identical to that of the concession.

It may happen (as is the case for the mass transit project in Caen) that the concession contract is split in two, that is, two invitations to bid are issued simultaneously, one for the construction of the mass transit project and the other for its operation. This formula means that the public authority has a larger choice of suppliers, but the agreements signed between the public authority and the constructor consortium and the future operator are completed - so as to make up an indissociable whole - by an agreement binding the constructor consortium and the future operator.

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## **3. Lessons to be learnt from the concession cases (of the BOT type) in France**

In France, outside of the Paris region, the first modern mass transit projects, post World War II, were initiated in the early Seventies and placed into operation from 1977 onwards. To begin with, the ownership of these projects was vested in public bodies, with financial backing by the State. In the late Eighties, the financing method based on public funding reached its limits as a consequence of a less propitious economic context, of the limitation of subsidy ratios by the State and of the high level of town debt.

There followed a period during which concession as a method for the setting up of projects and for the financing of infrastructures came into fashion. Six concession projects came into effect, in Paris for Val d'Orly (Orlyval contract), in Grenoble for the second tramway line (line B), in Toulouse for a first line of light automatic vehicle "VAL" line (line A), in Rouen for the first tramway line (Metrobus), in Strasbourg for the tramway network and in Caen for the first line of a guided intermediary transport type (TVR).

The "Orlyval" project ended with the bankruptcy of the concessionaire and was taken over by the Syndicat des Transports Parisiens (STP, the organising Authority in Paris), which entrusted its operation to RATP. Two other concessions were bought back by the public authority, in Grenoble and Toulouse. Caen and Strasbourg are considering concession agreements for the extension of their networks, whereas Rouen is reverting to public ownership.

A number of lessons can be learnt from the French experience:

- Concession agreements are complex and long to implement.
- The selection of the concessionaire takes place after an invitation to bid. **The concession bears on the design and construction of a new line and on the operation of the whole network** (and not limited to the new line) **reorganised around the new line from the time when it is placed into operation.**
- The period of the concession is in the region of 30 years.
- In all cases of successful public urban transport concession projects, the risks shouldered by the concessionaire are more limited than in concessions in other sectors of activity.  
During the mass transit design and concession phase, the concessionaire is responsible for constructing the project and for financing it, and the conceding community undertakes to pay each year an equipment subsidy to finance the investment.

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During the operation phase, the concessionaire makes a commitment, as a minimum, on operating costs (industrial risk) as well as on part of the commercial risk in many cases. On the other hand, the conceding body retains control over supply and tariffs and shoulders the consequences : it bears the financial weight of the modifications to supply it initiated, and makes up the concessionaire's income shortfalls by undertaking to pay an inclusive contribution which can vary as a function of a number of criteria.

- Termination of the agreement : early termination is possible and not solely in the event of the failure of the concessionaire. The agreement states that the conceding authority may unilaterally terminate the agreement (repurchase) "in the general interest". At the end of the agreement, all the concession revenue and the first establishment goods revert to the conceding authority, which buys back the stocks at their accounting value.
- Repurchase of the concession, see, for example, the case of the Toulouse VAL (line A): the concession agreement was signed in July 1988, the selection of the concession method was the result of the decision to transfer the risks from the community to the concessionaire both as regards investments (construction costs) and operation (income and expenditures). The commercial success of the concession, from the very opening of the new line, following an exemplary construction phase, led the public authority to buy it back after three years of operation in 1997. Indeed, a clause in the concession agreement gave the conceding authority the right to buy back at any time.
- Concession has now come of age in France. It offers a viable alternative for the construction of mass transit projects, but should not necessarily be given preference over direct ownership by the public authority, the latter being the most popular solution these days.

## **4. Transferability of the French experience**

The French experience in the organisation of urban public transport should be placed in the overall context of its public interest for public transportation. The method of organisation of the sector, which has been tested and tried in France, has been used elsewhere as a reference for the operation of transport networks under delegate management.

The difficulty in transferring the French style concession agreements (of the BOT type), especially in developing countries, lies both in the intrinsic complexity of concessionary agreements and in the strong characteristics of public transportation compared to other urban services.

In many cases, the recourse to the concession technique is based on the mistaken belief that the private sector and its funds will remedy the shortcomings of public funding and that it is possible to transfer the full responsibility of a mass transit project to the private sector. Such premises are a cause of failure.

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The few recent urban transport concession agreements abroad are based on roughly similar principles and procedures to those adopted for concessions in France.

## **4.1 Project preparation**

The complexity of the arrangements demands a lengthy and costly preparation phase for the files, which includes the feasibility studies, traffic forecasts, etc. to assess the economic feasibility of the project. Financial engineering plays a decisive role to define the level of equity of the concessionaire company, the loans and the part of international institutions, assess break-even rates, etc.. The consortia set up for the purpose are complex and must rest on a federating leader. In concessions, the partners are led to operate outside of their "traditional" trade and take risks they are not used to taking, hence relies the strategic role played by the engineering designer to manage interfaces.

The specific case of railway line concessions makes it imperative for the concessionaire to possess strong technical competence for reasons of rail safety and of quality of service offered to the passenger; this is especially relevant in regard to the infrastructure - equipment - operation interface.

## **4.2 Sharing out of the financing**

No "pure" concession can work successfully in urban transportation as was demonstrated by the failure of the "Orlyval" project in France, based on a complete private financing. The concessionaire cannot solely shoulder the totality of the financing of the project. A concession agreement can only be successful if the conceding authority shoulders a substantial share of the financing of investments (as a rule, between 70 and nearly 100% of the infrastructures in the case of a first mass transit line), with investments including compulsory purchase, both structural and finishing civil engineering, alignment, power supply, signalling and various installations. On the other hand, the concessionaire company can more easily take responsibility for all or part of the rolling stock and part of the aids to operation (signalling, etc.). The equity of the concessionaire company is minimal (a few percents of the overall investment cost as a rule) as it requires a return on investment averaging 15%, which increases the cost of the concession.

The sharing out of the financing between conceding authority and concessionaire always is closely dependent on the local context and on the nature of the investments (tunnel, underground sections, ground based system, etc.). It can nevertheless be said that, in order to be viable and lasting, a concession in urban transportation requests - in the case of a new system in the urban area in question - a majority interest by the public authority (or international funding organisations) to finance investment costs. Furthermore, the guaranty frequently granted by the public authority on the loans contracted by the concessionaire helps lower the borrowing rates, which in turn improves the viability of the concession.

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Finally, within the concessionaire consortium, the structure of equity can vary as a function of the stage in the project life, and be increased by the operator after the construction phase for the operation phase.

## **4.3 Risk sharing**

The main risks are:

- Construction risks with cost and schedule variations (owing to geological or weather contingencies),
- Commercial risks (tariff / traffic and operation revenue pair)
- Financial risks (variations in interest or exchange rates)
- Legal, fiscal and political risks.
- Institutional / organisational requirements

**The risk on the construction** of the system can be appraised by relevant studies and can as a rule be shouldered by the concessionaire.

**The commercial risk:** concessions have a long life (between 25 and 30 years). Traffic forecasts are especially important for the future concessionaire. They are made at different stages in the preparation of the tenders. The initial forecasts, which are prepared prior to the projects, should be taken charge of by the conceding authority. Only in exceptional circumstances does the concessionaire accept to solely take charge of such preliminary studies which increase the cost of the tenders. The traffic studies integrate studies on passenger sensitivity to tariffs. The analysis of past failures (Orlyval in France) has highlighted the most frequent and prime cause of imbalance in contracts, that is, the lasting shortfall in revenue compared to the forecasts, which is insufficient to pay back loans and to remunerate equity sufficiently rapidly. In a balanced project, the risks on traffic forecasts should be shouldered partly by the conceding authority and partly by the concessionaire. As a minimum, the candidate concessionaire should validate the traffic forecasts. That is one of the major roles of engineering in the concessionaire consortium. The banks make their own risk calculations. The riskier the arrangement (that is, the more risks are shouldered by the concessionaire company), the higher the borrowing rates, and the more delicate the financial viability of the project.

**Institutional and organisational requirements:** In the context of a concession for a heavy transportation system, public authorities have to play a major role, whether this involves:

- planning and scheduling (a network logic is indispensable to optimise the system)
- regulating (competition between operators is "lethal" for the heavy system)
- supervising (operation supervision)
- financial, legal, regulatory and political facilitation.

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## **5. Conclusions.**

The recourse to a concession (of the BOT type) for project arrangement is one technique among others. Although it often is substantially more costly than direct ownership, it often helps speed up the preparation of a development project which, in the case of urban transportation, is beneficial for the general public. The aim in preparing the agreement is reach the right balance of risks to be attractive to the private sector, to limit the costs resulting from the involvement of the private sector and to make the financial commitments by the public authority acceptable.

The main characteristic of the public urban transport sector is the vast amount of capital it requires and its low financial profitability. It follows that the partnership between the public and private sectors is only possible if the public authorities accept that the private partners limit their equity input and can achieve profitability in that activity on a maximum turnover (for example, by allocating to the concessionaire, under contractual terms, a monopoly on the public transport services offered in the corridor served by the new line, possibly on a larger network). The narrow margin produced by public service delegations (operation) and, all the more so, by concessions (construction and operation) can only be offset if the conceding authority takes responsibility for most of the investments in infrastructures and for part of the traffic and tariff risks.

Local communities play an essential role in the organisation of urban services. This implies "strong" local authorities.

Generally speaking, it is the central government's responsibility to create an overall environment that is favourable to private investors.

# *APPENDICES*

# *CONCESSION OF THE CAEN TVR*



# *CONCESSION OF THE CAEN TVR*

Caen is an urban area with 200 000 inhabitants in Normandie, in North-Western France.

Since November 1976, the urban transport organising authority is the Syndicat Mixte des Transports en Commun de l'Agglomération Caennaise (SMTCAC). It is formed by 19 communes in the Caen urban area (75 %) and by the Département of Calvados which finances 25 % of the Syndicat expenditures.

The SMTCAC is responsible for organising and operating public transport within the urban transport territory (Périmètre des Transports Urbains - PTU) as well as for financing the necessary new infrastructures in conformity with the French law on domestic transport (Loi d'Orientation des Transports Intérieurs - LOTI) of 30/12/82 which governs public passenger transport.

The bus network (180 vehicles, 25 lines) was operated by TCAC from the VIA group (Groupe SNCF) under a conventional operating agreement up to 1997.

In 1983, SMTCAC drew up an urban transit plan (Plan de Déplacements Urbains) and put forward the idea of constructing a tramway line. The preliminary design was approved in 1988.

In 1991, the studies led to the preparation of an assessment file (Dossier de Prise en Considération - DPC) for a project of guided transport on reserved lane (Transport guidé sur voie réservée - TVR). This file was completed in October 1992 and reviewed in March 1995.

The organisation of a referendum in 1996, when the population voted against the project, followed in 1998 by the negative recommendation of the public inquiry committee delayed the launching of the project.

Work is to begin by the end of 2000, and the TVR is schedule to be placed into operation during the first half of 2002.

SMTCAC did not wish to act as the owner of the TVR: it decided to entrust the design, construction, prefinancing and management of the project to a third party which was selected after an invitation to bid. The concessionaire was selected in 1994.

# CONCESSION OF THE CAEN TVR

## 1. Scope of the concession: The TVR project

The TVR project involves developing to the north and to the south of the Caen urban area a public transport line on tyres and on reserved site.

**15 km**

**34 stations**

**24 TVR trainsets**

This facility involves building on the territory of the communes of Hérouville, Caen, Cormelles-le-Royal and Ifs, for the running of electric public transport vehicles, a two-lane roadway mostly situated on public territory, with the relevant power supply and guiding installations, as well as supplying the vehicles due to run on the said roadway.

The transport system selected in Caen – TVR – is a tyre mounted vehicle guided by a rail, with electric traction, but capable of running without the guiding devices or the power supply. The new stock was approved in late 1996.

The concession covers both:

- the design and construction of line 1 of the TVR,
- the operation of the bus + TVR urban network.

## 2. Principles for the concession arrangement

Life of the concession

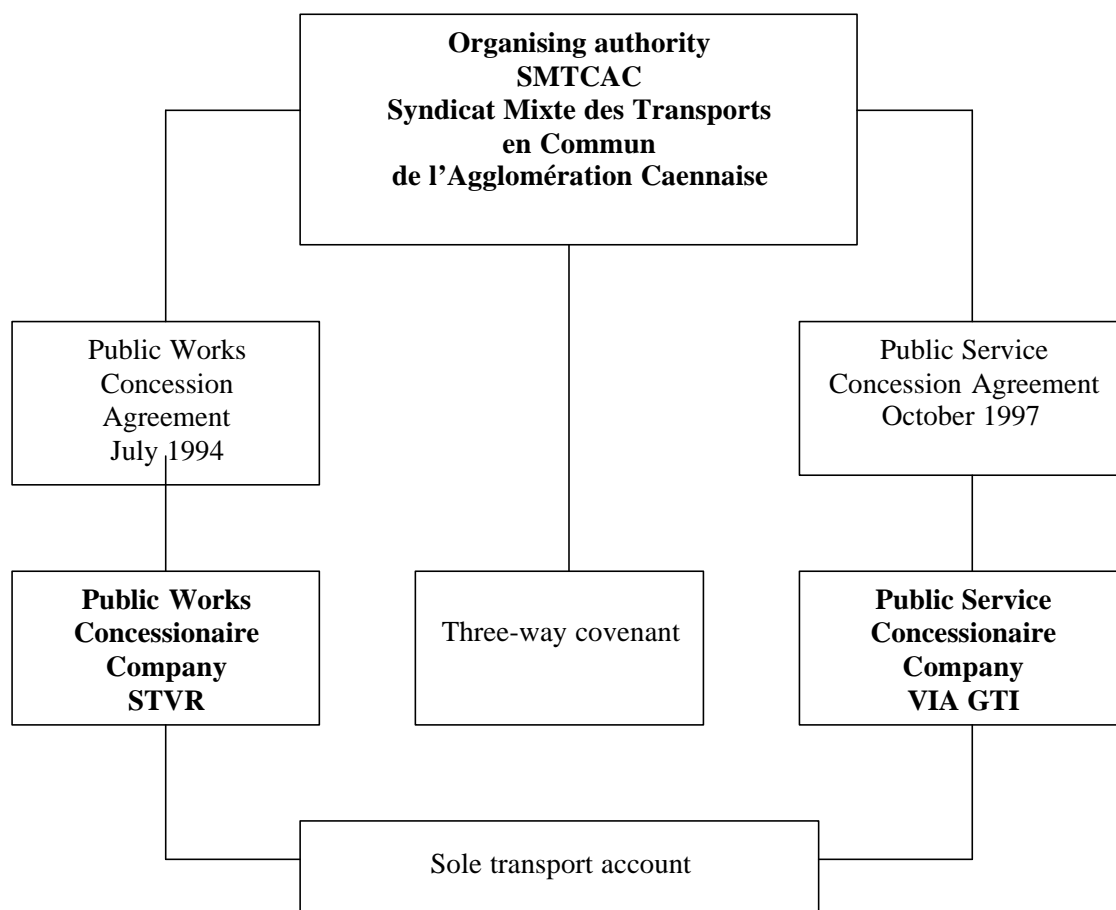
The legal arrangements agreed by SMTCAC on 25 February 1993, for the new transport system is a "public works" and a "public service" concession with a life of 30 years involving two co-concessionaires also bound mutually by an agreement.

Concessionaire companies

The public works concessionaire is STVR (July 1994), a fully private limited company owned by two companies: SPIE Batignolles (68 %) and Bombardier-ANF (32 %). There is no plan for the consortium to evolve in future.

The public service concessionaire is VIA-GTI (October 1997).

## CONCESSION OF THE CAEN TVR



**Thus, the three-way arrangement in Caen associates a public works concession and a public service concession for the construction and the management of the public passenger transport structures and service.**

# CONCESSION OF THE CAEN TVR

The various agreements

This arrangement does not involve one single concession agreement. It effectively consists in three main agreements:

- the public works concession agreement the purpose of which is the construction and technical operation (heavy maintenance and renewal) of the TVR. This agreement was signed on 22 July 1994 between the Syndicat mixte and STVR. The concessionaire is a consortium formed by SPIE Batignolles / Bombardier / ANF Industries,
- the public service concession agreement the purpose of which is the operation of the bus + TVR network (technical and commercial operation, bus maintenance, light maintenance of the TVR).  
This agreement was signed by SMTCAC with VIA GTI.
- A three-way covenant between the Syndicat mixte, STVR and VIA GTI the purpose of which is to define the allocation of missions and responsibilities between both concessionaires, coordinate their missions, define the financial relations between them and with the Syndicat mixte, and provide for the settlement of disputes.

Legal validity of this co-concession

The question arose to decide whether the arrangement including two agreements and one covenant was conform to the law on concessions. Indeed, such a contract, which is relatively frequent in the case of concessions in regard to other activities than transport (i.e. urban heating system) is infrequent in this particular sector.

The French Transport Ministry, and the French Council of State, which were interviewed on the issue, decided that the Caen Contrat was indeed a concession.

## 3. Sharing of responsibilities and risks

In theory, all the risks are shouldered by the concessionaire. However, in practice, the granting authority does control the supply and takes the consequences.

During the construction phase

The public works concessionaire is responsible for financing the construction of the TVR. The public works concessionaire is responsible for preparing the structure, installation and stock projects. As regards the rolling stock, which is a new type of equipment, the

# *CONCESSION OF THE CAEN TVR*

tests and development of the rolling stock as well as its approval, for which the concessionaire takes the "technical, financial and schedule risks" are taken into account.

In addition, the concessionaire is responsible for heavy maintenance.

The Granting Community undertakes to pay a yearly equipment subsidy to finance the investment (57 M FRF).

It supervises and checks the procedures and projects. To that effect, it sets up a design steering committee. It approves preliminary designs, receives all the files associated with the procedures, administrative inquiries and authorisations, prepared by the concessionaire; it approves the pilot production design files and the model for the pilot vehicle.

The granting authority checks the works. It is allowed full scope to make all necessary inspections on site and on documents, without the concessionaire being relieved of its obligations and responsibilities as a consequence.

Similarly, the granting authority checks that the performances are conform.

Thus, the Syndicat mixte is in a position to check the process at all significant stages.

During the operation phase

The public service concessionaire is committed on operation costs.

The commitment of the granting community bears on the payment of a fixed operation contribution (90 M FRF per year over XX years). This may evolve as a function of the results in regard to the commercial speed of the system.

The community fixes the fares after consulting the concessionaires in the conditions defined in the agreement.

It bears the financial consequences of any modification to the supply it may initiate.

## **4. Financing of the TVR investment**

The investment for the construction of the TVR amounts to **1,200 M FRF**. This will be distributed as follows between the financing parties:

# CONCESSION OF THE CAEN TVR

- Concessionaire (equity and loans)	40 %
- State (subsidies to the TCSP)	22.5 %
- Organising authority	35 %
- Other community (Region)	2.5 %

The concessionaire finances the investments on its own equity, the loans it contracts and the equipment subsidies paid by the Organising Authority.

## 5. Buying out of the concession contract

*"At the term of the contract, for whatever reason, all the products of the concession and the first establishment goods shall revert to the granting authority which shall buy out the stock at their accounting value".*

The contract can be terminated early in the event of the default of the concessionaire.

The contract also provides that the granting authority can declare a unilateral termination:

- during the design and development phase, for reasons of public interest associated with the withdrawal of the project or the need to adopt different conditions, or if expenses are deemed excessive, if outside events make the TVR project irrelevant.

In such circumstances, the concessionaire is paid an indemnification corresponding to the cost of the design, bank and development charges, and the interest on the invested capital (7 %). The loss of profits is not included, but the concessionaire keeps the subsidies paid.

- during the construction or operation phase, "the granting authority may at any time, terminate the concession contract for reasons of general interest". In such an event, the concessionaire is entitled to be paid an indemnification covering the whole of the loss sustained, including the loss of profits.

Ultimately, the appreciation of what the general interest means rests with the courts.

# *CONCESSION OF THE TOULOUSE AUTOMATIC LIGHT TRANSPORT*



# *CONCESSION OF THE TOULOUSE AUTOMATIC LIGHT TRANSPORT*

Toulouse is an urban area of circa 630,000 inhabitants in south-western France.

The local organising authority for urban transport is an association (SMTC) created in 1972 and formed by three communities: the City of Toulouse (55 %), the Council for the Département (Conseil Général) of Haute-Garonne (38 %) and an intercommunal association capping 52 communes in the outskirts of the urban area (7 %).

The operator of the urban bus network (circa 500 vehicles) is a semi-public company called SEMVAT.

SMTC decided to create a network of three lines of public transport on reserved site (TCSP) in 1980. The mode of transport - automatic light transport (ALT) - and the layout was decided upon in 1985.

Technical studies were carried out in 1986 and 1987. A public information is in regard to the project for line A was issued in October 1987.

The decision in favour of a concession arrangement was made in late 1987 and concession agreement was signed in July 1988. That decision expressed the intention to transfer the risks from the community to the concessionaire both as regards investments (cost and construction) and operation (revenue and expenses).

Work began in January 1989. Civil engineering work was completed in 1990 and 1991, the Automatic Light Train (ALT) installations were put into place in 1991 and 1992, the tests were completed in 1992. Commissioning took place on 26 June 1993, i.e. four and a half years after the beginning of works, in conformity with the contractual schedule.

The concession was bought back by SMTC after less than three year's operation, in late 1997 (see sub-section 2.3.5)

Two extensions to the network are currently being built under public ownership delegated to a semi-public company (1): SMAT (Société du métro de l'Agglomération Toulousaine), responsible for design engineering and for the construction of the extension of Line A (October 2004) and a second one on line B (August 2007). Work should begin in 2001.

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(1) a SEM is a private company, where 51 to 80 % of the equity is held by local communities and the remainder, as a rule, by private companies..

# *CONCESSION OF THE TOULOUSE AUTOMATIC LIGHT TRANSPORT*

## **1. Scope of the concession**

The concession covered both:

- design engineering and the construction of line A of the metro (Mirail - Centre of town - Jolimont

**10 km**  
**15 stations**  
**29 ALT trainsets**

- the operation of the network for the urban area (ALT and bus), with the organisation of connections with SNCF and the creation of park and ride car parks.

Indeed, SMTc considered that, in order to successfully implement the project for the development and reorganisation of public transport in the Toulouse urban area the backbone of which was the construction of the metro, the concessionaire had to be made responsible for the whole of the public transport system in the urban area, which is, as a rule, the case for urban public transport concessions in France.

## **2. Principles for the concession arrangement**

Life of the concession

Planned over 35 years, the concession included:

- 5 years for the construction of the metro,
- 30 years for the operation of the network as a whole.

Concessionaire company

The concessionaire company, MTD, short for Métropole Transport Développement, was a private limited liability company with 30 million French franc equity distributed between:

- Caisse des Dépôts et Consignation: 25 %
- Crédit Local de France: 21 %,
- Transcet (Engineering company belonging to Groupe Caisse des Dépôts): 5 %,
- Matra-Transfinex (builder of the ALT): 19 %,

# *CONCESSION OF THE TOULOUSE AUTOMATIC LIGHT TRANSPORT*

- the local company operating the existing network SEMVAT: 25 %,
- sundry local investors: 5 %.

The concession agreement had been agreed privately before the SAPIN Act made it compulsory to issue an invitation to bid.

Bus operation was entrusted to SEMVAT by the concessionaire from 1 January 1990 in order to encourage the complementarity between the metro and bus networks and to encourage a synergy between both modes of transport. SEMVAT has been managing the operation of the metro and bus networks from 1993 onwards.

### **3. Sharing of responsibilities and risks**

The concessionaire shouldered the following risks:

- commercial (supply and traffic within given limits)
- technical (work performance, structure construction, lead time, etc.)
- financial (deviation from the investment and operation costs defined in the agreement)

The granting authority shouldered the following risks:

- resulting from the very existence of the structures and layout (possibly, indemnification of residents along the lines),
- resulting from the evolution of tariffs and the supply,
- associated with the interest rates.

On the other hand, it did not guarantee the loans.

The granting authority

Once the concession agreement signed, SMTC only retained minimal responsibility with regards to ownership.

Thus, during the construction period, its responsibility was limited to approving possible modifications to the project and to a right to control work progress.

## *CONCESSION OF THE TOULOUSE AUTOMATIC LIGHT TRANSPORT*

The community was committed to paying an investment contribution and a fixed contribution to operation.

During the operating period, SMTC retained the responsibility of defining the level and quality of the service offered, and the rate fixing policy.

It was committed to paying an operation subsidy to SEMVAT.

The concessionaire

During the design and construction phase, MTD was responsible for identifying the financing sources for the investment and for carrying out the studies and performing the works.

Thus, the concessionaire was committed on:

- the maximum cost of investment, excluding those costs outside of its control, for example, the cost of land purchase.
- the performance time, leading to the placing into operation of the metro on 1 July 1993 at the latest.

The concessionaire shouldered all the technical risks associated with the construction of the structures with the exception of exceptional or unforeseeable circumstances.

Any overrunning of schedule for which the concessionaire company could be blamed resulted in the payment of penalties. Those delays outside of its control, such as archaeological excavations, etc. were excluded.

During the operation phase, the concessionaire guaranteed a minimum level of traffic corresponding to an initial 20% at the time of placing into operation and to five-yearly target traffic increase figures.

Thus, the concessionaire company shouldered all operating costs: direct operating costs, financial borrowing expenses, depreciation, etc. and was committed on a yearly amount in regard to operating costs.

It was responsible for target figures in regard to revenue within + or – 7 million FRF: beyond this figure, the parties were to agree on specific conditions.

A participation in the profits was also included, as a function of the drop in the fare evasion levels and of the increase in customer satisfaction.

# CONCESSION OF THE TOULOUSE AUTOMATIC LIGHT TRANSPORT

In compensation for the above, the concessionaire had at its disposal:

- the commercial receipts collected from the users,
- a fixed contribution to operation paid by SMTC.

The contract was a combination between fixed price management and guaranteed minimum revenue for the organising authority.

## 4. Financing of the investment

The construction of line A cost 3.4 billion FRF in the economic conditions of ... The operation was financed by the concessionaire company, using its own equity, State subsidies, the SMTC contribution and loans.

In order to provide its financial participation, the Community increased the rate of the "Versement Transport (VT)" as early as 1986, i.e. 7 years before the ALT was placed into service.

State subsidies	576 M FRF	17 %
Self-financing (SMTC contribution including VT)	407 M FRF	12 %
Loans	2,407 M FRF	71 %
<b>Total</b>	<b>3,390 M FRF</b>	<b>100 %</b>

***The financial compensation paid by the Organising Authority to the concessionaire is global: it amounted to 1,500 M FRF in 1997 for investment and operation.***

## 5. Withdrawal from the concession contract

The concession agreement gave SMTC the possibility of buying out the concession at any time. That was the case in 1997.

## *CONCESSION OF THE TOULOUSE AUTOMATIC LIGHT TRANSPORT*

*«Notwithstanding the concessionaire company's right to damages, SMTC reserves the right to terminate the concession with the express reservation that it must notify its decision to the concessionaire two years beforehand... »*

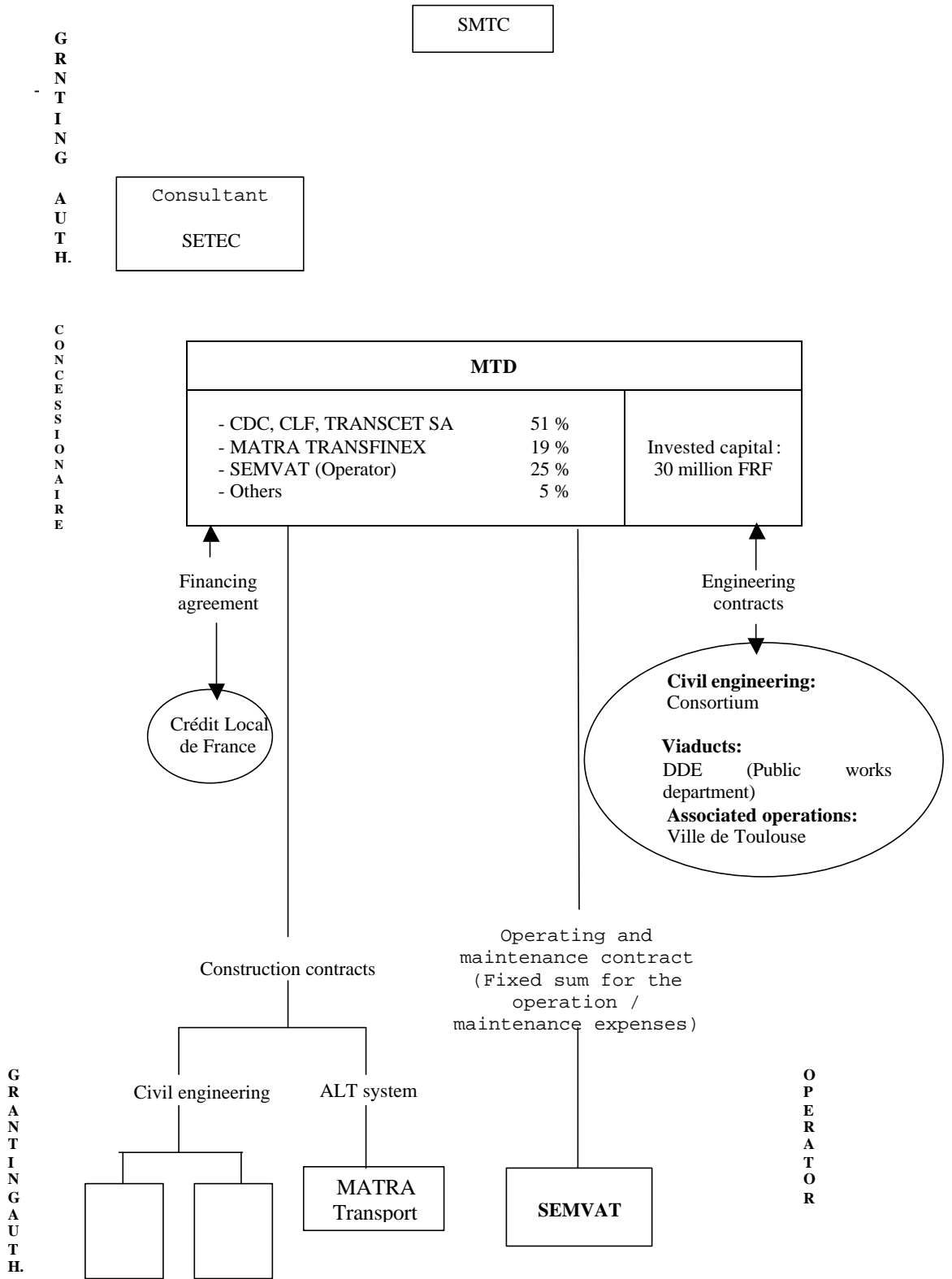
Thus, SMTC reconsidered its decision in favour of a concession back in 1995.

Despite the trouble free construction of line A and its commercial success from the time when it was placed into operation, the concession arrangement had become a political issue in the urban area.

The main reason for the decision was the commercial success of the line which generated profits which the SMTC wanted to plough back for the community.

SMTC employed all of MTD's workforce in a semi-public company (SMAT) thereby endowing itself with its own technical personnel thirty or so strong. SMAT is now acting as delegate owner in regard to the design and construction of the metro.

# CONCESSION OF THE TOULOUSE AUTOMATIC LIGHT TRANSPORT



*THE CONCESSION OF THE LRT LINE 3 IN MANILA  
(THE PHILIPPINES)*



# *THE CONCESSION OF THE LRT LINE 3 IN MANILA (THE PHILIPPINES)*

## **1. Presentation**

Manila, the capital of the Philippines, is built on the island of LUZON to the north of the archipelago. The population of the urban area averages 12 million inhabitants.

The organising authority for transport is the Ministry of Transport and Communications (DOTC).

The Manila urban area traditionally is at the core of the country's economic and industrial activity. Its rapid urbanisation has generated a very substantial increase in transit, resulting in the saturation of existing roads and dramatically high pollution levels.

The capital's lack of equipment in transport infrastructures was especially acute when the project for line 3 of the metro was launched in the early Nineties.

Indeed, only line 1, 23 km long and entirely built as a viaduct, was in operation since 1975 in the north - south direction, following a Belgian donation. Line 1 was said to be of the LRT type although its ridership averages 300,000 passengers per day.

Epifanio De Los Santos Avenue (EDSA) is the backbone of the capital's road transport with a traffic which is said to be one of the heaviest world-wide. EDSA stretches in a semicircle from the north (municipality of CALOOCAN) to the south (municipality of PASAY) of the capital. It is intersected by numerous radial thoroughfares giving access to the business districts among others.

EDSA extends over 24 km, varies between 5 or 6 lanes in each direction, and provides a direct link between the main centres of commercial and urban activity, viz. Balintawak, North Avenue, Cubao, Ortigas, Shaw, Guadalupe, Makati and Baclaran. In each direction, the two lanes to the right are reserved for the 11,000 buses which use EDSA daily, 300,000 cars carry circa 1 million passengers per day.

The "Urban Transport Development Program" (UTDT) instigated by DOTC found that only a mass transport rail system could both relieve the congestion on EDSA and reduce pollution.

# *THE CONCESSION OF THE LRT LINE 3 IN MANILA (THE PHILIPPINES)*

Given the Government's inability to finance the infrastructures needed by the country on its own budget, the private sector took the initiative in the form of a concession.

It should be noted that under President Fidel RAMOS' administration, the Philippines had rapidly succeeded in meeting the needs in electric energy which were previously in deficit via the implementation of concession agreements between private companies and the Government.

Thus, in 1994, DOTC signed with Metro Rail Transit Corporation (MRTC) a BLT-type (Build, Lease, Transfer) concession agreement in conformity with the Act on BOT (Build, Operate, Transfer) of the Republic of the Philippines.

The project for line 3 is implemented in two stages:

**a) PHASE 1 (which was placed in operation on 20 July 2000)**

16.9 km; 13 stations; 1 depot; 73 tramway-type double articulation units to be operated in sets of three units in a first stage.

**b) PHASE 2 (currently being launched)**

5.6 km; 3 stations; additional rolling stock yet to be specified.

**The MRTC concessionaire is responsible for:**

identifying the financing of the project,  
carrying out the preliminary and detailed basic design,  
constructing and supplying the transport system,  
maintenance for the duration of the concession,  
developing commercial premises at the level of the stations and depot.

**DOTC, which grants the concession, is responsible for:**

making available to MRTC the territory needed for the construction,  
rerouting the systems (water, drainage, telephone, power, traffic lights, etc.)  
rerouting the road traffic and implementing the traffic restrictions needed for the construction,  
operating the line once it has been placed into service.

# *THE CONCESSION OF THE LRT LINE 3 IN MANILA (THE PHILIPPINES)*

## **2. Organising principles of the concession**

### **2.1. Life of the Concession: 25 years.**

MRTC is a company mainly created by Philippine property developers:

Fil Estate Mgt. Inc. (Leader)  
Ramcar Inc.  
Ayala Land Inc.  
Ayala Phil. Oil & Mining Corp.  
Greenfield Dev. Corp.  
DBH Corp.  
Allante Realty  
Elie Levin.

KAISER E., a US engineering company manages the project for the account of the concessionaire.

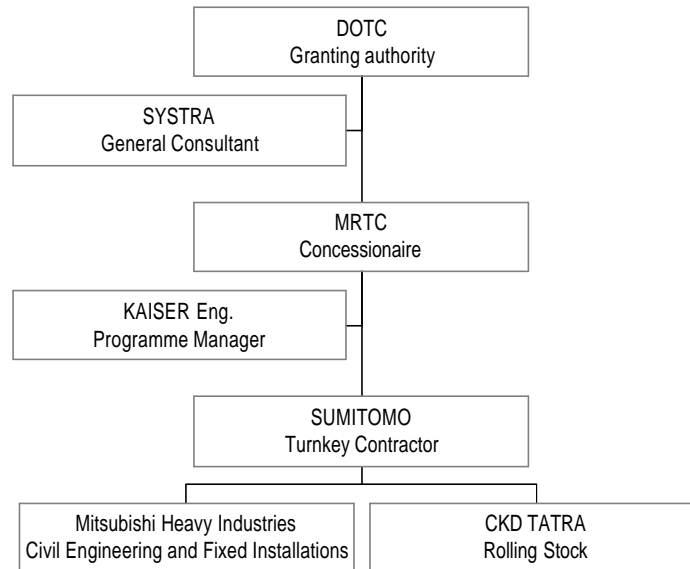
A Turnkey Contract for the design, supply and construction was signed between MRTC and SUMITOMO Corporation, a Japanese company, which used two main contractors:

MITSUBISHI HEAVY INDUSTRIES, a Japanese company, for the civil engineering, track and electromechanical systems,

CKD DOPRAVNI, a Czech company, for the supply, testing and placing into service of the rolling stock.

# THE CONCESSION OF THE LRT LINE 3 IN MANILA (THE PHILIPPINES)

## 2.2 Organisation of the concession.



## 2.3. Financing

The project, amounting to US\$ 655 Million, is financed in the following manner:

- US\$ 190 M of own equity provided by MRTC,
- US\$ 465 M of loans backed by the Philippine government, of which:
  - US\$ 290 M from Jexim/Miti (Japan),
  - US\$ 88 M from Czech bodies (Czech ECA & Czech Financial),
  - US\$ 87 M from local banks (Foreign Currency Deposit Units).

## 2.4. Payments.

From the time of making over the territory to the operator, DOTC, the granting authority, pays MRTC, the concessionaire, for the duration of the concession (25 years) a rent which will repay the investments and remunerate the initial equity over 25 years. In addition, it pays MRTC dues for the maintenance of the transport system.

For its own part, MRTC pays DOTC for 50 years, a rent for the use of the commercial premises it is authorised to develop at the level of the stations and the depot.

DOTC collects the revenue from passenger traffic.

# *THE CONCESSION OF THE LRT LINE 3 IN MANILA (THE PHILIPPINES)*

## **2.5. Responsibilities and risks**

### **During the construction phase**

**Should the concessionaire prove unable to complete the project**, the granting authority is in its rights, but not obliged to buy out the project at its residual value (Residual Value Buyout), with the exception of the commercial rights. The granting authority can complete the project for its own account from that point.

**Should the concessionaire prove unable to complete the project due to force majeure lasting more than 365 days**, it may request the granting authority to pay the sum it invested (Equity Value Buyout Price), plus interests and any expenditure supported by evidence. The concessionaire has the obligation to insure itself to protect the granting authority's interests in the event of Force Majeure and to cover all additional costs.

**Should the concessionaire prove unable to complete the project within the agreed schedule for reasons which cannot be blamed on the granting authority:**

it shall pay the granting authority a penalty of:

US\$ 100,000 per day of delay up to a maximum amount of US\$ 25 million,

US\$ 7,500 per day and US\$ USD 350,000 in all for additional expenditures resulting from the delay, it will repay the loan and initial equity instead of the granting authority for the duration of the delay.

The concessionaire is duty bound to secure and maintain during the whole construction period a Performance Bond issued by a financial institution amounts to US\$ 15 Million.

### **b) During the operation phase**

The risk are mainly shouldered by the DOTC, granting authority, which bears the expenses listed in sub-section 2.5 for the whole life of the concession irrespective of the effective ridership on the line and, as a consequence, of the revenue paid to it. The fare is set by DOTC.

On completion of the project (Completion Date), the concessionaire is responsible for insuring the transport system against losses, damage and 12 months of interruption in the operation to cover the repayments to the granting authority for that duration.

# *THE CONCESSION OF THE LRT LINE 3 IN MANILA (THE PHILIPPINES)*

The contract provides for the appraisal of the availability of the rolling stock and fixed installations during peak hours in the morning and in the evening. A system of premiums and penalties is based on the availability ratio. They are limited to US\$ 15 million.

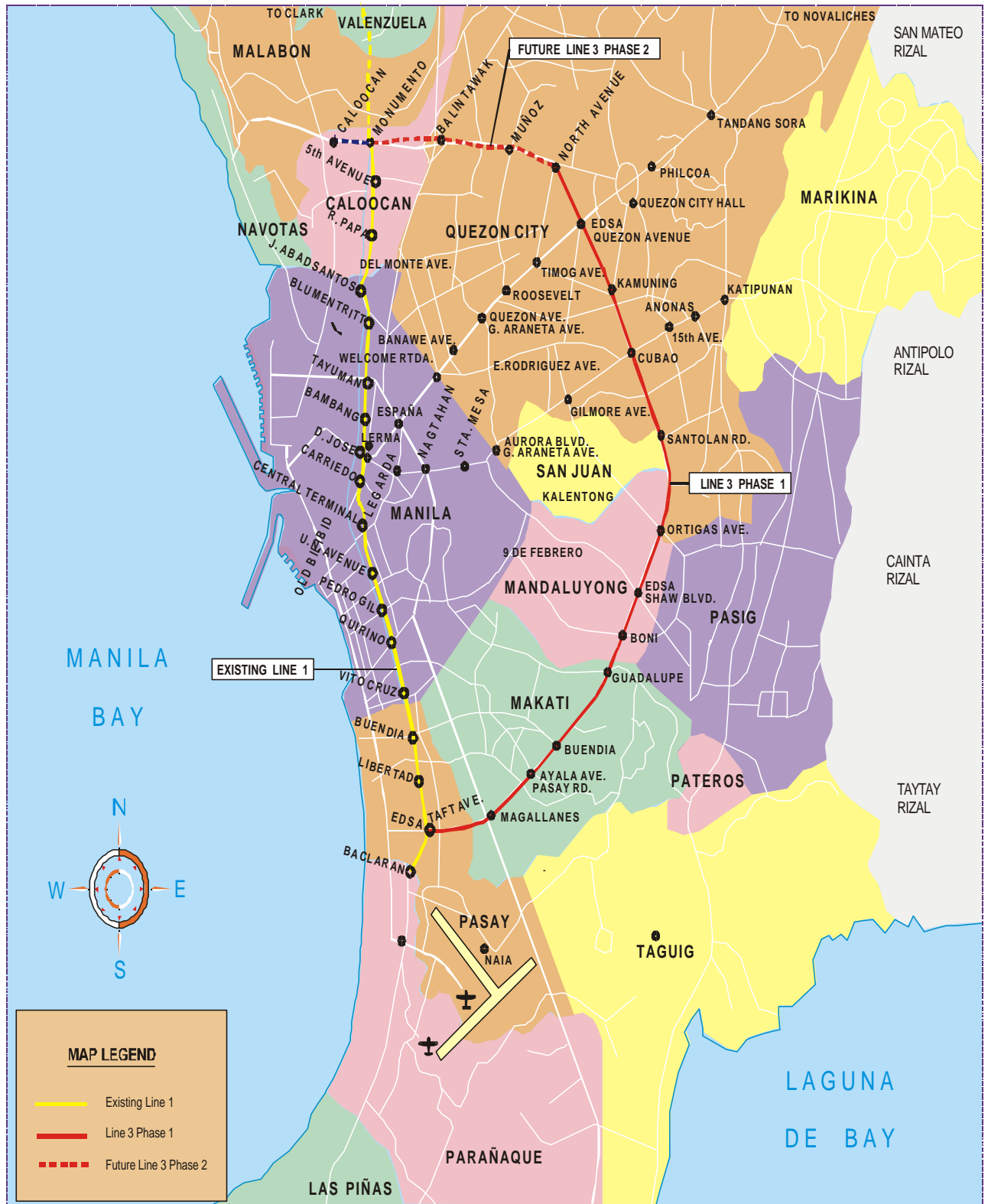
## **2.6 *Buying out of the concession contract***

There are provisions for a withdrawal during the construction phase, see sub-section 2.5. At the term of the concession period, if the granting authority has made all the payments defined in the concession agreement, it can buy the project from the concessionaire for US\$ 1.

In such an eventuality, there is no commercial risk for the concessionaire.

# THE CONCESSION OF THE LRT LINE 3 IN MANILA (THE PHILIPPINES)

## 2.8. Map



# CONCESSION OF THE THESSALONIKI METRO



# **CONCESSION OF THE THESSALONIKI METRO**

***Thessaloniki is an urban area with 1.5 millions inhabitants, in Northern Greece along the Aegean coast. The centre of town possesses many archaeological remains.***

The consultation for the concession of the first metro line was initiated in 1993. The contract was awarded in 1999.

The Granting Authority is the Greek State, represented by the Minister for the Environment, Planning and Public Works.

## **1. Scope of the concession**

The Concession covers the design, construction, financing, operation and maintenance of a metro line. The main technical characteristics of which are listed below:

- Line 9.5 km in length, built underground over its whole length,
- 14 stations,
- Fully automated system,
- Initial capacity of 18,000 passengers per hour and in each direction over the central section,
- Fleet of 18 trains,
- Iron wheels,
- Third rail supply.

The investment over the period between 1999 and 2005 is estimated at US\$ 775 million (GRD 230 billion).

## **2. Principles for the concession arrangement**

### ***2.1. Life of the concession***

The contractual life of the concession is 25 years. This corresponds to 5 years for the construction and 20 years for the operation.

### ***2.2. Concessionaire company***

The concessionaire is a company named "Thessaloniki Metro SA", which is formed by BOUYGUES, BOMBARDIER, SYSTRA and VIA G.T.I.

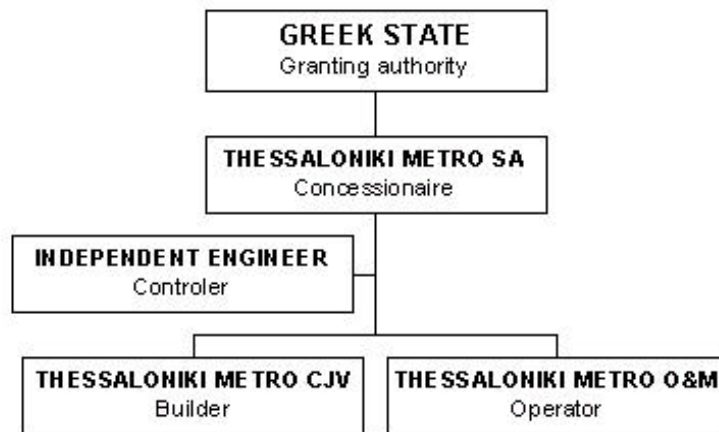
The concessionaire is bound by an agreement with:

# CONCESSION OF THE THESSALONIKI METRO

- "Thessaloniki Metro Construction Joint Venture", a company responsible for the design, construction, and for supplying the installations. This is formed by BOUYGUES, BOMBARDIER, SYSTRA and SNC-LAVALLIN,
- "Thessaloniki Metro O&M" responsible for operating and maintaining the line.

## 2.3. Various contracts

The contracts between the various parties are described below:



- Contract between the Granting authority and the Concessionaire,
- Contract between the Concessionaire and the Builder,
- Contract between the Concessionaire and the Operator,
- Contract between the Concessionaire and the Controler.

## 3. Sharing of responsibilities and risks

The risks are shared between the Granting Authority and the Concessionaire.

# **CONCESSION OF THE THESSALONIKI METRO**

## ***3.1. During the construction***

The Builder is responsible for preparing the studies, constructing the structures, supplying and setting up the installations and equipment.

The Greek State finances its share of the investment over the construction period.

The archaeological risks, and those associated with buried systems are mostly shouldered by the Greek State.

## ***3.2. During the operation phase***

The operator is committed both on the level of service (quality, availability) and on the level of maintenance.

The Greek state guarantees a minimum volume of traffic per year.

The Greek state pays a yearly subsidy to the Concessionaire, which is calculated on the basis of the guaranteed passenger traffic.

## **4. Financing of the investment**

The distribution is as follows:

- Concessionaire (capital and loans): 78%
- Subsidies by the Greek State: 22%, i.e.

Capital of the concessionaire company: 2.5%, Subordinated loans: 10.5%,  
Subsidies from the Greek State: 22%, BEI loan: 40%, EDC loan: 25%.

## **5. Buying out of the concession contract**

At the end of the concession time, the concessionaire hands over the system to the Greek State, as well as the spares stock, and transfers its rights on the metro to the Greek State.

# **CONCESSION OF THE THESSALONIKI METRO**

The system is handed over in correct working order, and guaranteed by the concessionaire over a three year period..

The early termination of the contract is possible in the event of a failure by the concessionaire to meet its commitments in terms of availability or of safety.