Challenges to Public Private Partnerships
The Example of the London Underground PPPs

Claudia Reim[1]

clau.reim@gmail.com

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[1] Ms Claudia Reim has obtained a diploma degree (equivalent > than Masters degree in Germany) in Administrative Science (Dipl.-Verwaltungswissenschaftlerin). At present – Winter 2010/11 – she is working for a Ph. D. thesis at the Faculty of Economics and Social Science, University of Potsdam/Germany, under the supervision of Prof. Dr. Jochen Franzke. Her Ph. D. subject is (working title) "The European Coordinators of German Cities" (in German language).

Table of contents

1 Introduction

Public private partnerships (PPPs) are much talked about and almost always with a positive connotation. Partnerships between public sector bodies and private entities or non-profit organizations seem to be the solution for all problems of the public sector. PPPs became the buzzword of the 21st century "with positive appeal across many interest groups, numerous jurisdictions and around the world and over some time as well" (Greve/Hodge 2005b: 335). However, not everyone has the same understanding of what a PPP really is due to the lack of a unified definition. Instead, there are various partnership forms that can be classified as a PPP. Concrete experiences with PPPs are made, among others, in the policy fields of education, transportation, energy policy, health care and criminal justice. Especially since the turn of the millennium, PPP projects have gradually increased in the industrialized west as well as the developing world. But the academic literature cautions against seeing partnerships as a panacea for enhancing public value. As experience shows not every PPP delivers a better service quality or safes costs and in fact, some projects even turn out to be the worst of all possible alternatives. Consequently, this paper focuses on the conditions for PPP projects to deliver added value. In other words: what are the challenges facing partnership projects and what are the success factors?

In order to answer this question, the paper will first analyze the appropriate academic literature before examining the case of the London Underground PPPs. The second section of this paper will look at the role of PPPs in infrastructure provision, addressing the history of PPPs, their central characteristics as well as key drivers, advantages and challenges of PPPs. After an introduction to the background of the London Tube PPPs and their structure, this paper will analyze the challenges that the PPPs encountered. Finally, section four will summarize the conditions for successful partnerships.

2 Public Private Partnerships in Infrastructure Provision

During 1992 and 2007, "more than one thousand PPP contracts have been signed in the EU, representing a capital value of almost 200 billion euro" (Blanc-Brude/Goldsmith/Välilä 2007: 7). However, even before then PPPs were used as a form of providing public goods and services. The following chapter gives an overview of the origin of PPPs and their development. It also addresses the questions of what constitutes a PPP and why the public and the private sector engage in a partnership. After looking into the organization of a PPP, this paper will concentrate on the challenges facing partnerships between the public and the private sector.

2.1 Delivery of public services, the emergence of PPPs and recent developments

According to Max Weber and his ideal type principles of a bureaucracy an administration should aim at encompassing accountability, compliance, stability, documentation and predictability, professionalism, transparency as well as impartiality (Weber 1980: 124-130). However, service delivery through this model of 'old administration' was marked by inefficiency and ineffectiveness and in many cases cost and time estimates could not be met. As a consequence, the public sector was criticized for its centralized, rigid and hierarchical organizational structures, its strict focus on the rule of law and the absence of management techniques.

In the mid 1990s, a change occurred from the Active State to the Enabling State with the provision of public services not being restricted to state actors anymore. According to the new paradigm, the state concentrates "on organizing resources, often belonging to others, to produce public value". (Goldsmith/Eggers 2004: 8) Instead of producing public goods and services, it is the state's responsibility to promote, activate and coordinate societies' capacities. In this context, partnerships between the public and the private sector play a central role.

The involvement of the private sector in the provision of infrastructure is no new phenomenon. Instead, roads, railways and water projects provide some of the earliest examples of private infrastructure provision. Grimsey and Lewis point out the establishment of turnpikes, which are a form of toll roads, in Britain as early as 1664 and in Pennsylvania around 1792 (Grimsey/Lewis 2007b: 43-45). There are numerous historic examples of private engagement in the delivery of public services. More recently, during the Carter Administration (1977-1981), PPPs were used to stimulate private investment in cities in the United States (Linder 2000: 19). After the period of the expanding welfare state, the interest in private initiatives grew, especially in the 1970s and early 1980s when the public sector was increasingly criticized for its inefficiency.

In the 1990s, PPPs experienced a renaissance due to the public sector fiscal crisis, management reforms and the changing role of government. The new idea was to combine the best of the private sector *and* the public sector. In Europe, most PPP activity is located in the United Kingdom, Spain and Portugal, while traditional procurement prevails in the rest of Europe (Blanc-Brude/Goldsmith/Välilä 2007: 2). Figure 1 (Appendix, p. 17) gives an overview of PPPs by country and sector. According to PricewaterhouseCoopers, most experiences were made in the fields of road infrastructure, water and wastewater. The newer member states of the European Union are largely still at the very beginning of discussing

potential PPP projects (PricewaterhouseCoopers 2005: 36). However, there is a tendency towards using PPPs as an instrument more often, which can partly be attributed to more political commitment and the improvement of legal aspects (Blanc-Brude/Goldsmith/Välilä 2007: 5).

2.2 Central characteristics of PPPs

There is no unified definition of what a PPP really is. Generally, a PPP project is characterized by a contract based partnership between the public and the private or volunteer sector, which aims at delivering a public service superior to alternative approaches. Grimsey and Lewis argue that a partnership is not just another form of public service provision, but rather "about attempting to achieve a social outcome that may not be obtained by government or private sector forces acting separately" (Grimsey/Lewis 2007b: 58). Klijn and Teisman define PPPs as "a form of co-production, of cooperation, in which the parties realize products, services or policy outcomes jointly" (Klijn/Teisman 2005: 95-96). Their emphasis lies on the idea of a joint provision of products and services, which leads to what they call "surplus value".

Despite the diversity of PPP arrangements and the absence of a uniform concept there are some common elements. A partnership is formed by at least one private and one public actor in order to provide a public good or service. Resources of all partners are bundled in order to create synergies. The relationship is process oriented and of a continuing nature since partnerships are generally entered into for a period of 20 to 30 years. Because PPPs are developed in an environment of uncertainty, the contract cannot specify all the components and therefore remains incomplete. Another element is the sharing of responsibility for outcomes and the long-term risk sharing, given that PPPs are about a mutual interest and vision (Grimsey/Lewis 2007b: 13).

These common characteristics permit a basic understanding of what a PPP is but there is still much room for interpretation. Greve and Hodge point out that "a number of governments have tried to avoid using the term 'privatization' or 'contracting-out' in favor of speaking of 'PPPs'" (Greve/Hodge 2005a: 7) reducing the concept of PPPs to a mere language game. Linder criticizes this misuse of the PPP concept in concealing intentions of privatizing public tasks (Linder 2000: 33). To Rosenau and Linder such governments do not grasp the essence of a partnership, which is about sharing responsibility and financial risk thus differentiating itself from privatization (Linder/Rosenau 2000: 6). PPP projects also distinguish themselves from traditional public procurement since "the acquisition of

infrastructure assets and associated services is accomplished with one long-term contract, under which the initial capital outlay is financed by the private sector" (Grimsey/Lewis 2007b: 92).

2.3 Motives for partnering

But why do public and private actors engage in partnerships? Overall, the goal of a PPP is to create additional returns or synergies, which implies that the outcome (the whole) is greater than the sum of the resources provided by each partner. PPP projects are not just about attracting financing as this constitutes only one element (Grimsey/Lewis 2007b: 6). Among the main incentives for both the public and the private sector are the sharing of risk and the creation of innovation (Greve/Hodge 2005a: 4). Sometimes, partnerships might be formed only because they are "required by some higher authority" (Pollitt 2003: 59), sometimes because they are seen as a good in themselves.

A PPP offers private actors an occasion for new investments and the opportunity of entering and developing new markets, while at the same time the project risk is shared. Furthermore, PPP arrangements allow the private partner to build up a relationship with the public sector and to legitimize themselves by assuming responsibility. PPPs might also be seen as the first step to complete privatization of public tasks by private actors who favor the downsizing of the public sector (Pollitt 2003: 58). The public partners benefit from the partnership by circumventing budgetary restraints and attracting funds in times of financial stringency (Budäus 2006: 3). Projects that would have been hard to finance can be pursued and the risks are shifted to the private investors. A public agency might also wish to become more efficient and cost-effective in the provision of public goods and services. In addition, PPPs help to acquire managerial knowledge and modernize the way a government operates (Pollitt 2003: 58).

However, the public organization might have difficulties finding the right partner. First of all, the potential partner needs to be capable of co-producing a public good or service. Secondly, the private partner should not only provide financial stability but also experience in the project matter. Trust and the willingness to work together play a key role in making the partnership successful.

2.4 Organization of PPPs

Usually a special purpose vehicle (SPV) is created as a separate legal entity specifically for the PPP project. The SPV, in general a company, brings together the public

partner, the sponsors, financiers, subcontractors and other actors such as advisers (Grimsey/Lewis 2007b: 108-109). There are two basic forms of cooperating: one is called a contract-PPP and the other one an organizational-PPP (Klijn/Teisman 2005: 98-99). The former is characterized by a specific task, modest cooperation prior to the tendering process and thus by great efficiency and low coordination costs. A contract-PPP or concessional-PPP is similar to contracting out with the only difference being the sharing of responsibility. The most frequently used structure is the design-build-finance-operate (DBFO) model, in which concessions are awarded to the private partner.

An organizational-PPP or institutional-PPP on the other hand, is designed as a cooperative project, which involves intensive interaction and coordination. The concept of partnering implies an alteration of organizational structures overcoming a hierarchical relationship. In order, to achieve real cooperation, public organizations need to show an effort, which most likely will entail a struggle (Grimsey/Lewis 2007b: 67). But only then can added value be realized. The authors Klijn and Teisman do not consider the contract form a real PPP as it is only "a revamped form of tendering in which there is still a sharp risk division" (Klijn/Teisman 2005: 103).

2.5 Challenges facing PPPs

Are partnerships really providing the best of the public and private sector as advertised? Economic limitations are posed to PPPs by transaction costs as well as costs of regulation and monitoring. In addition, conflicts of interest as well as democratic and structural issues may prevent the project from achieving value for money. Consequently, a PPP could turn out less cost-efficient than alternative forms of public service delivery. This section deals with the major issues and challenges encountered in PPP projects.

Management of the PPP

A partnership can fail because the management of the project is not well operated resulting in delivery delays and cost overruns. A PPP is a time-consuming process, which is characterized by high complexity. The challenges lie in sharing information, coordinating and acting jointly (Balloch/Taylor 2001: 122). Thus, the effective management of a project depends on the establishment of well functioning corporate governance structures. If the composition and the structure of the board are flawed, an optimal decision making process will unlikely be reached. In this context, access to all relevant information, external reviews and close communication play a key role.

Conflicts of interest

The public and the private sector set completely different priorities stemming from their different value systems. While a private company aims at making the highest possible profit, public organizations carry a certain responsibility when providing services of general interest (Rosenau 2000: 229-330). These professional issues can pose a threat to the positive outcome of a partnership by delaying action and thus adding higher costs to the project. Conflicts of interest are particularly problematic in cases of special public interest as for example safety concerns in the transport sector. In order to maximize profits, the private partners might reduce the number of technical check-ups below the necessary level thus jeopardizing public safety. If the public and the private interests cannot be aligned, minimal commitment will undermine the project's performance. Despite the conflicting interests of the public and private sector it should be the overall goal of a PPP to deliver public value.

Accountability

The United Nations Economic Commission for Europe defines accountability as "the extent to which political actors are responsible to society for what they say and do" (UNECE 2008: 14). According to this principle of democratic theory, elected representatives and the government can be held accountable for their actions. In a partnership, democratic issues may arise concerning the reduction of public influence in the decision making process as well as public control over service provision. In addition, the long-term character of a PPP lessens the public influence on the direction of the project (Mohr 2004: 241). The Commission on Public Private Partnerships adopts a broader definition, in which "all public service providers – regardless of their legal status – should be subject to the same standards of accountability" (Commission on PPPs 2001: 242). According to them, accountability follows the principles of transparency, responsibility, and responsiveness meaning the availability of information, clarity of organizational structures and roles, and the ability to adapt to the needs of the public (Commission on PPPs 2001: 232). In order to secure accountability in a PPP project, these three principles need to be followed.

Risk management

The optimal transfer and management of risk on the basis of a contract allow a PPP to deliver added value. A risk is defined as "any factor, event or influence that threatens the successful completion of a project in terms of time, cost or quality" (European Commission 2003: 50). There are various risk categories like design risk, choice of private sector partner,

construction risk, financial risk, regulatory/ contractual risk, operational risk, residual risk as well as external risks like political/ legislative risk and environmental/ force majeure risk (Evans/Bowman 2005: 67). A PPP is about allocating the respective risk to the party best suited to managing it. In order to do that, the potential outcome needs to be quantified "in terms of its magnitude, timing, and probability of occurrence" (Välilä 2005: 105), which then allows pricing the risk. The challenge lies in that PPPs "are set up to provide services, which are often hard to measure and monitor, and […] have long contract periods, which makes them susceptible to a great deal of uncertainty" (Välilä 2005: 102). As a consequence, partners might try to avoid risk and by doing so endanger the necessary level of cooperation to reach synergies.

Transaction costs

Partnerships are tied to a variety of costs, which are seldom considered. Transaction costs refer to all costs that are related to a market transaction. In the case of PPPs, they are "the costs of establishing and maintaining a partnership; more specifically, they encompass legal, financial, and technical advisory costs incurred by both public and private sectors in the procurement and operational phases of a project" (Dudkin/Välilä 2005: 3). This includes the costs of gathering information, the costs of negotiating between the parties and setting up the contract as well as the costs for overseeing the procedure and if necessary adapting the contract. Low transaction costs can be used as a general efficiency criterion. According to Välilä, high transaction costs result from "the long-term character, ownership and financing structures, and risk-sharing features" (Välilä 2005: 109) and can amount to more than 10 percent of the project's capital value (Dudkin/Välilä 2005: 25). As a side effect of high transaction costs, potential private partners might not enter the bidding process if they do not see a realistic chance. Especially high bidding costs lead to less competition *for* the market, which in turn would affect the choice of the partner and thus impact the outcome of the project (Välilä 2005: 109).

Costs of regulation

In addition to transaction costs, a PPP project might be related to additional costs of regulation and monitoring. In the case of an in-house provision of a public service, "the public sector could always ensure the desired service quality, while private ownership can jeopardize service quality due to excessive investment in productive efficiency" (Dudkin/Välilä 2005: 5). With more public services delivered by private actors, regulation might be necessary to

prevent that efficiency gains are realized only at the cost of setting social goals aside (Rosenau 200: 225). However, extensive monitoring and regulation would firstly increase the costs of the project and secondly defeat the purpose of a partnership.

3 The London Underground and PPPs

In the United Kingdom, most PPPs can be found in the railway sector. From 1987 to 2004, 51 percent of the total value of PPP signed contracts was related to railways of which 37 percent was accounted for by the three London Underground PPPs (Riess 2005: 29). In 1997 first steps were taken to modernize the London Underground when estimates by the Department of Transfer revealed that an enormous investment was necessary. Although privatization was not an option, the engagement of the private sector was considered hoping to "benefit from private sector disciplines and, in particular, the expertise of the private sector in managing large infrastructure projects so as to ensure they are delivered to time and budget" (HM Treasury 2000: 21). The idea of a PPP was favored by the government because it appeared to "deliver a better tube infrastructure and hence a better service for Londoners than would be provided by the public sector alone" (HM Treasury 2000: 21).

3.1 Designing the PPPs

A working group consisting of the Department for Transport, the Treasury and London Regional Transport was responsible for developing the PPP structure. Upon the advice of their financial advisor PricewaterhouseCooper, the working group decided for a horizontally split business model (see Figure 2, Appendix, p. 18). In 1998, the government announced the creation of the publicly owned operating company London Underground Limited and three new privately owned infrastructure companies (Infracos) (NAO 2009: 11). While the private party was responsible for modernizing and maintaining the underground infrastructure, the public sector continued to "operate the trains, signals and stations, so ensuring a unified service to the public" (HM Treasury 2000: 37).

After a competitive bidding procedure for the three Infraco concessions, the Tube Lines consortium took over Infraco JNP (lines: Jubilee, Northern, Piccadilly) in December 2002. The other two, Infraco BCV (lines: Bakerloo, Central, Victoria, Waterloo & City) and Infraco SSL (sub-surface lines: Circle, District, East London, Hammersmith & City, Metropolitan) were taken over by the Metronet consortium in April 2003 (Kellaway/Shanks 2007: 6). The contracts were designed to last for 30 years with four 7½ year intervals and gave Tube Lines and Metronet legal ownership of the London Underground infrastructure for

this time period (Kellaway/Shanks 2007: 6). The length of the partnership was to ensure investment recovery and stability but at the same time added further uncertainty. The London Underground PPPs adopted the project financing model of the Private Finance Initiative[2], which was refined to include an output based contract and a periodic review mechanism (Bolt 2004: 3). The project type was similar to a DBFO (Design, Build, Finance and Operate) PPP except for clearly defined 'build' and 'operate' phases as the asset already existed and the Tube was operated by the public partner (Bolt 2004: 4).

The Infracos were paid an Infrastructure Service Charge (ISC) measured on the basis of meeting the contractual performance targets of availability, capability, ambience and improvements in asset health. A failure to meet benchmarks would lead to the reduction of the payment (PricewaterhouseCoopers 2005: 24). The ISC paid by London Underground Limited amounted to GBP 1 billion per annum and is divided into some GBP 400 million for Tube Lines and GBP 600 million for Metronet (NAO 2009: 12). The sum was financed by an infrastructure grant provided by the Department of Transport to Transport for London (TfL). TfL is a local government body, which was created in 2000 on the basis of the Greater London Authority Act of 1999. It took over responsibilities from London Regional Transport and assumed control of London Underground Limited in July 2003. The Greater London Authority Act also created the role of the PPP Arbiter as an independent third party who only gets involved on request. His responsibility is to help facilitate the periodic reviews, to give direction on the ISC and to provide guidance when necessary (Bolt 2004: 8).

3.2 Results of the partnership

Contrary to the intentions of the PPP, Metronet failed to modernize the tube infrastructure on time. In addition, cost overruns were frequent and funding problems arose. Especially Metronet's station refurbishment program missed its targets since "the average cost of a station project stood at £7.5m – set against a projection of just £2m a station" (London Assembly 2007: 14). Figure 3 (Appendix, p. 19) gives an overview of the station refurbishment progress of the two consortia. While Tube Line finished renovating all 30 stations on time, Metronet was behind schedule. As a consequence of time delays and cost-overruns, Metronet went bankrupt and entered administration on 18 July 2007 (Kellaway/Shanks 2007: 8). A special insolvency regime was introduced to keep the service running. On 27 May 2008, when no private buyer could be found, the two Metronet companies were transformed to wholly owned subsidiaries of TfL (NAO 2009: 26). As a

[2] The Private Finance Initiative (PFI) was founded by the British Government in 1992 in order to modernize public infrastructure with the help of private funding.

result of the Metronet collapse, there has been "a direct loss to the taxpayer of between £170 million and £410 million" (NAO 2009: 8).

3.3 Lessons from the London Underground PPPs

The case of the London Underground PPPs provides an excellent example of the challenges that surround a complex infrastructure PPP project. The contract's length of 2800 pages exemplifies the considerable amount of complexity. The following section will explore and analyze the issues that led to the collapse of Metronet on the basis of several reports by the UK National Audit Office, the UK National Statistics Office, the London Assembly Transport Committee, Transport for London and the PPP Arbiter. Taking all of the information provided by these reports into consideration would go beyond the scope of this paper. Instead, the focus lies on the mismanagement of the PPP, inherent conflicts of involved actors and unclear lines of accountability, insufficient risk management as well as high transaction and bidding costs.

Management of the PPP

Metronet's collapse is a direct result of internal governance problems and the poor leadership of the executive management. Set up as a joint venture between Balfour Beatty plc, Bombardier Inc., WS Atkins plc, EDF SA and Thames Water plc., Metronet was jointly owned and thus most decisions had to be made collectively by five shareholders (NAO 2009: 14). In addition, Metronet pursued a tight supply chain strategy, which means that it sub-contracted mainly with its shareholder companies aiming at securing price and supply stability (London Assembly 2007: 14). This shareholder-dominated supplier structure is not unusual "but it requires the management of the consortium to be able to act independently and robustly" (Transport for London 2008: 24). As a result of the tight supply chain strategy, it became difficult to clearly follow what payments were received for which concrete service. For example, Balfour Beatty, one of the shareholders was sub-contracted for track refurbishments. Although failing to meet quality standards, Balfour Beatty was fully paid for inferior work. The fact that the chief executive of Balfour Beatty was a member of the board emphasizes the need for clear lines of responsibility (London Assembly 2007: 4).

To complicate matters further, the senior management changed too often as "Metronet had three chief executives in four years" (NAO 2009: 22). Information provided to the board was mostly incomplete and inconsistent, which inhibited cost-effective monitoring (NAO

2009: 6). Decision-making became a lucky guess due to suboptimal communication resulting in a management incapable of acting effectively.

Conflicts of interest

A main contributor to the failure of the Metronet PPP was the lack of commitment and the pursuit of different interests. There was disagreement among the different public sector partners to whether the preferred PPP was the best solution. The conflict was intensified by the exclusion of TfL staff from the procurement process although overall responsibility for the Tube was to be handed over to TfL after the PPP contracts were signed (NAO 2000: 12). TfL and the Mayor of London, Ken Livingstone, to whom it is answerable, openly objected to the London Underground PPPs cautioning against a decrease in quality and safety, non-transparent lines of accountability and zero value for money (Mohr 2004: 236). The Commissioner of TfL, Robert Kiley, issued two reports in 2000 providing London's Mayor with an analysis of the planning and implementation of the London Underground PPPs as well as an alternative suggestion. On the basis of his research he comes to the conclusion, "that the basic structure of the PPP is fatally flawed, that it is not an effective way to restore the London Underground to a state of good repair, and that it will not promote an improvement in the service being offered to Londoners" (Kiley 2000: 3). The London Mayor and TfL were not in principle against a partnership between the public and the private sector but rather criticized the design and the circumstances of the London Underground PPPs. Their opposition required numerous consultation rounds and led to a time delay and increased costs.

Accountability

Overall, there was a well-defined assignment of responsibility but in about 1.5 per cent of the cases fault could not be attributed clearly (NAO 2004a: 33). In April 2003, for example, fire detectors were set off by smoke coming from the Central line after trains ran over a mixture of poster paper, poster glue and dust. The line had to be closed down for more than two hours, "for which contractual penalties of up to £9 per passenger hour may apply" (Mohr 2004: 238). Fault attribution was not easy since four different parties were indirectly involved in the incident: The posters were put up by Viacom, a private contractor to London Underground Limited and the dust was a residue of an overnight clean of the station carried out by Infraco JNP. Infraco BCV (still under public control at the time) was responsible for the inspection of the tracks and London Underground Limited as operating company was in charge of tracks and stations. There was much disagreement over who was responsible, but

after negotiations it was decided that London Underground Limited (and Viacom) was to be held accountable for 60 percent and Infraco BCV for 40 percent (NAO 2004a: 33).

Risk management

Problematic in every PPP is the uncertainty about the future. The National Audit Office provides a summary of the risk and efficiency categories used for the London Underground PPPs (NAO 2000: 5):

- uncertainty surrounding the impact of inflation (relative price effect)
- uncertainty surrounding the estimates of unit costs (unit cost uncertainty),
- uncertainty over the scope of investment projects (investment cost uncertainty),
- uncertainty over the scope of maintenance projects (maintenance uncertainty),
- uncertainty of performance improvements (performance uncertainty)
- uncertainty of efficiency gains and cost reduction (efficiency uncertainty)

There was an especially high uncertainty about the condition of the infrastructure since information on assets was hard to gather. However, a later extension of the project's scope would result in a large increase in costs. As a result, "the public sector comparator forecast a wide range of risk adjusted net present costs, between £12,600 million and £17,200 million" (NAO 2004b: 14). Details on the size of the project and the pricing could only be predicted for the time until the first periodic review (Grout 2005: 48). After this first interval of 7½ years, when more information would be available, the public sector might have to adjust the project's scope and adapt the ISC. The bidders feared this mechanism for its potential impact and their pressure led to London Underground Limited "accepting more risk sharing than it had originally hoped to negotiate" (NAO 2004b: 22). Figure 4 (Appendix, p. 19) illustrates how the amount of risk transferred shifted during the tendering procedure. In the end, London Underground Limited agreed to guarantee for 95 percent of the Infracos' debt obligation. However, this step made lenders feel safe thus paralyzing their scrutiny. In addition, incentives for Metronet to exert functioning risk monitoring were marginal since the shareholding companies in the consortium each managed to limit their liability to their respective equity investment of GBP 70 million (NAO 2009: 22). As a result of the contracts and the failed risk management of the involved actors, the Department of Transport was exposed to a tremendous amount of risk after Metronet's insolvency and had "to pay £1.7 billion of grant […] to help TfL purchase Metronet's debt obligations" (NAO 2009: 6).

Transaction costs

Due to the length of the tendering procedure, transaction costs turned out very high. With an overall procurement time of 6o months (NAO 2004b: 21) this phase exceeded by far the average procurement time in the United Kingdom, which is around 22 months (Grimsey/Lewis 2007a: 182). The total transaction spending of the three PPPs until the closing of the contract amounted to "GBP 455 million, including restructuring costs, internal costs, external costs and bidders' costs" (NAO 2004b: 32). As a reaction to the extent of the expenditure, which could only be estimated when final bids were submitted, the Department of Transport authorized a review aiming at decreasing the program's costs. However, "the review and the subsequent re-bidding added some five months to the process therefore increasing costs" (NAO 2004b: 5). It is the taxpayers and the passengers who have to compensate for this immense expenditure. Grout argues that "government borrowing of similar funds would have cost GBP 450 million less" (Grout 2005: 49).

Bidding costs

In the case of the London Underground PPPs, a competitive bidding process was supposed to identify the most efficient partners for the projects. However, it did not reach optimum as some major bidders stepped back, safety concerns arose after a tube accident and government commitment was doubted (NAO 2004b: 18). When competition for the PPP diminished quickly because bidders anticipated high bidding costs London Underground Limited agreed to reimburse those up to GBP 57 million. Due to ongoing negotiations, bidding costs and fees increased by another GBP 218 million adding up to a total of GBP 275 million (NAO 2004b: 5). This decision did not only hinder the search of the most suitable partner for the PPP but also caused enormous expenses that had to be borne by the public sector.

3.4 Preliminary conclusion

The London Underground Metronet PPP provides a good example for the challenges of a partnership in infrastructure provision. Governments' hopes of a better, on time and on budget service delivery through private sector discipline and expertise were utterly disappointed. Furthermore, government had to step in to prevent the worst. It was not just one but rather a mixture of various factors that led to cost-overruns and time delays of the Metronet PPPs. Complications occurred from the outset, when it became clear that the status quo of the infrastructure was difficult to quantify. Of course there is always a certain amount

of uncertainty in PPP projects but in the case of the London Underground the extent of uncertainty resulted in an insufficient risk transfer to the private sector. To further complicate matters, the public sector did not have efficient levers of controlling the project; in fact it did not have a choice in many aspects because the service of the underground needed to continue seamlessly. There are many lessons to be learned from this case example: the complexity of the PPP arrangements, the pursuit of heterogeneous interests of public sector bodies, a flawed bidding procedure and the malfunctioning executive management of the Metronet consortium all contributed to the failure of the London Underground PPPs.

4 Conditions for successful partnerships

Even though partnering is often considered a good in itself, not every PPP project will automatically be successful. It is important to keep in mind that there is no universal solution that fits all problems. The lessons from the London Underground PPP show that the parties involved in a PPP need to master several challenges. Although the Metronet PPP failed to meet its targets, some empirical conclusions can be drawn from this case. The primary objective is to deliver a better service than either the public or the private sector could do alone. A PPP tends to be more successful when realistic goals are set and the project allows for enough time. Time is an important factor and being under time pressure might negatively impact the decision-making. In this context, communication, project management and rules for procedures should all aim at ensuring an optimal decision-making process. If conflicts among and within the different parties are not resolved through communication or if available information is not communicated to the executive, how can any decision be based on solid grounds? That is why clear governance structures, clear lines of responsibility and accountability and well functioning communication structures need to be in place. Methods like monitoring and evaluating help to optimize future decisions. Furthermore, as the example of the London Underground shows, it is important to assure a real competition for the market and to choose the project partner carefully. Only when all parties are committed and the risk is transferred in the best possible way, can added value be realized. Thus among the key elements of a successful partnership are political legitimacy, incentives, commitment, a clear organizational structure and a detailed plan. Similar analyses of the prerequisites of successful partnering are provided by Balloch and Taylor (2001: 122), Klijn and Teisman (2005: 101), Grimsey and Lewis (2007b: 159-161), Rosenau (2000: 232) and the European Commission (2003).

Another factor that has not been addressed so far due to the structural limitation of this paper is the impact of the legal environment on the outcome of the PPP. Each project in the European Union is subject to a legal hierarchy of community law, national legislation, municipal and regional regulation and statutes as well as contractual specifications (European Commission 2003: 37). Relevant provisions include laws on procurement and taxation, commercial laws, environmental laws, property laws and so forth. According to the European Commission the "early development of conducive and consistent national legislative and regulatory structures greatly facilitates the identification, development and implementation of PPPs" (European Commission 2003: 39).

When talking about the success factors of PPPs it should be kept in mind that a partnership is not always the best solution. Thus, before initiating such a complex project, the public sector needs to be certain that a PPP is the best approach for a specific situation. The danger lies in a half-hearted assessment of the alternatives leading to an overuse of partnerships between the public and the private sector. PPPs are not appropriate when normative social goals are at stake, particularly vulnerable groups are affected or no added value, be it better quality or less costs, can be achieved. When deciding whether to opt for a PPP or not, all costs relating to such a project need to be taken into consideration. These also include transaction costs, costs of regulation, and possible accruing externalities (Rosenau 2000: 220-221).

5 Conclusion

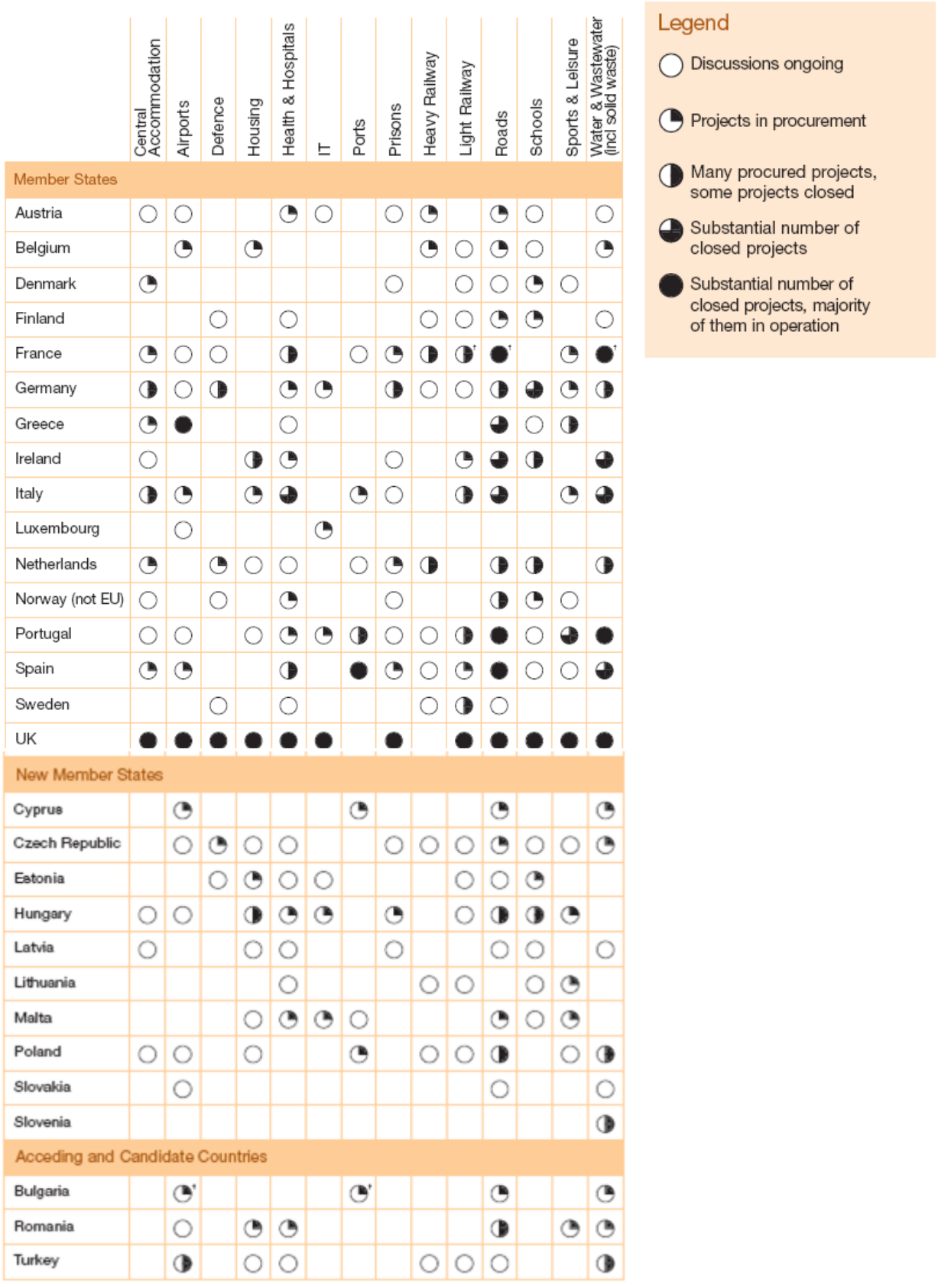
The recent developments in the PPP market show an increasing interest in partnerships between the public and the private sector. While experience has proven that PPPs can enhance public value, some examples illustrate that a partnership does not automatically turn out to be successful. When deciding on a PPP project, the public sector should keep in mind the challenges that come with it. Though there is a wide range of motives for engaging in a PPP, the key drivers for the public sector usually are attracting funds and mobilizing managerial expertise. The government's motivation for the London Underground PPPs was based on the surmise that the private sector works more efficiently. However, the case of Metronet exemplifies the potential difficulties of managing large infrastructure projects. The scope and the length of the partnership required an effective management that Metronet, who implemented a tight supply chain strategy, was unable to provide. Maybe Metronet wasn't the best choice from the very beginning, but due to a long suboptimal procurement process and high bidding costs there were not many other options. The public party even accepted to take

on more risk than was originally planned. In addition, there was disagreement among the involved public sector bodies to whether the PPP arrangements were properly drafted. Several consultations and extra reviews added to the already high transaction costs. In the end, the partnership resulted in Metronet's collapse and high costs to the public sector.

But what could have been done differently or in other words, what are the conditions for PPP projects to deliver added value? Though there is no single success formula, experience with PPPs shows that clear governance structures, a comprehensive business plan, effective incentives and commitment favor real cooperation. But before that, the public sector body needs to carefully assess whether a PPP is the right approach. Furthermore, the importance of the PPP design and the choice of the private partner should not be underestimated by the public party. Since partnerships are entered into for a period of about 30 years, comprehensive evaluation and analyses of concrete PPP realizations are still to come.

6 Appendix

Figure 1) Summary of PPPs by country and sector (PricewaterhouseCoopers 2005: 36)



	Central Accommodation	Airports	Defence	Housing	Health & Hospitals	IT	Ports	Prisons	Heavy Railway	Light Railway	Roads	Schools	Sports & Leisure	Water & Wastewater (incl solid waste)
Member States														
Austria	○	○			◔	○		○	◔		◔	○		○
Belgium		◔		◔					◔	○	◔	○		◔
Denmark	◔							○		○	○	◔	○	
Finland			○		○				○	○	◔	◔		○
France	◔	○	○		◑		○	◔	◑	◑*	●*		◔	●*
Germany	◑	○	◑		◔	◔		◑	○	○	◑	◕	◔	◑
Greece	◔	●			○						◕	○	◑	
Ireland	○			◑	◔			○		◔	◕	◑		◕
Italy	◑	◔		◔	◕		◔	○		◑	◕		◔	◕
Luxembourg		○				◔								
Netherlands	◔		◔	○	○		○	◔	◑		◑	◑		◑
Norway (not EU)	○		○		◔			○			◑	◔	○	
Portugal	○	○		○	◔	◔	◑	○	○	◑	●	○	◕	●
Spain	◔	◔			◑		●	◔	○	◔	●	○	○	◕
Sweden			○		○				○	◑	○			
UK	●	●	●	●	●	●		●		●	●	●	●	●
New Member States														
Cyprus		◔					◔				◔			◔
Czech Republic		○	◔	○	○			○	○	○	◔	○	○	◔
Estonia			○	◔	○	○				○	○	◔		
Hungary	○	○		◑	◔	◔		◔		○	◑	◑	◔	
Latvia	○			○	○			○			○	○		○
Lithuania					○				○	○		○	◔	
Malta				○	◔	◔	○				◔	○	◔	
Poland	○	○		○			◔		○	○	◑		○	◑
Slovakia		○									○			○
Slovenia														◑
Acceding and Candidate Countries														
Bulgaria		◔*					◔*				◔			◔
Romania		○		◔	◔						◑		◔	◔
Turkey		◑		○	○				○	○	○			◑

Figure 2) The London Underground PPPs (NAO 2004a: 7)

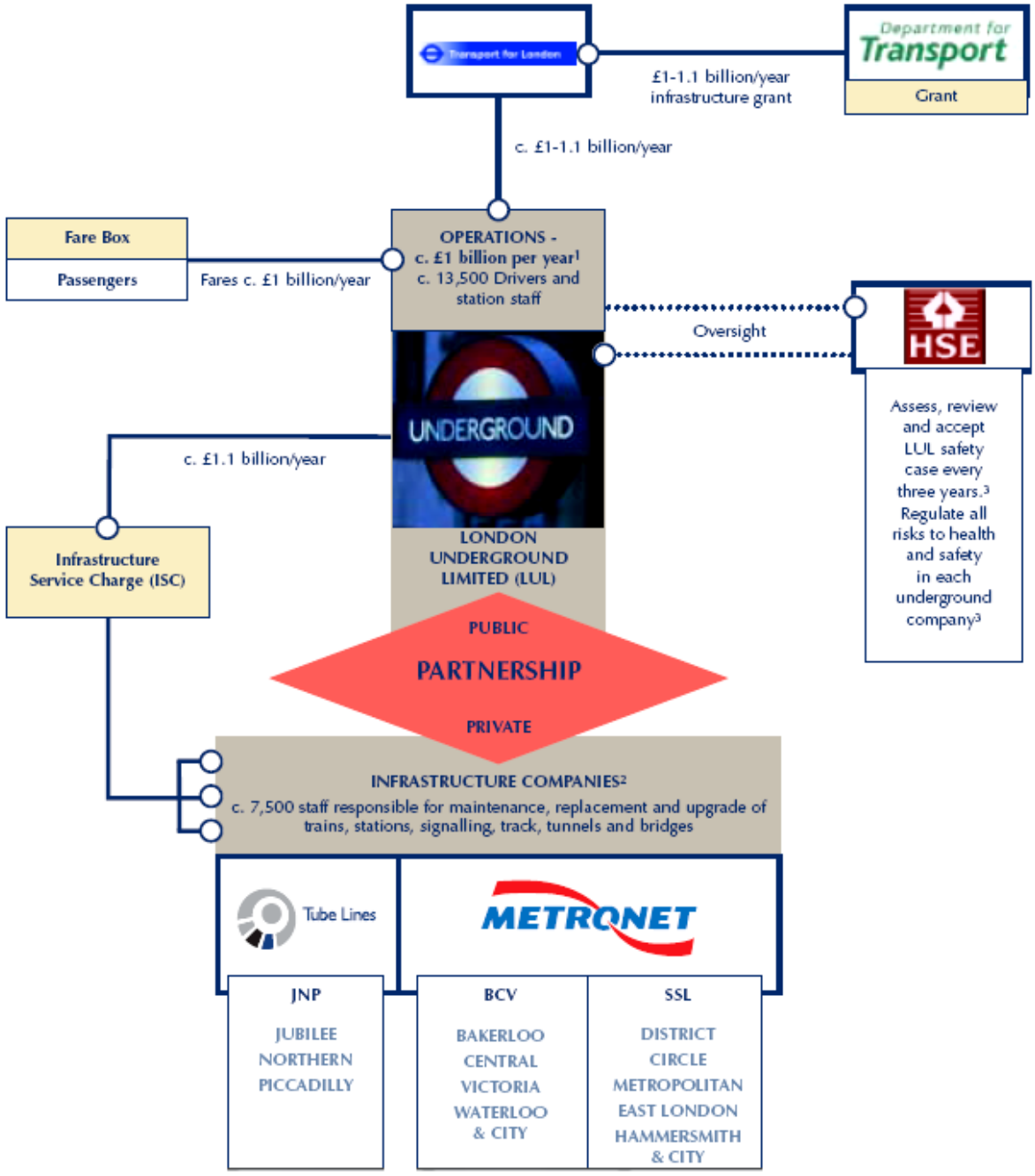
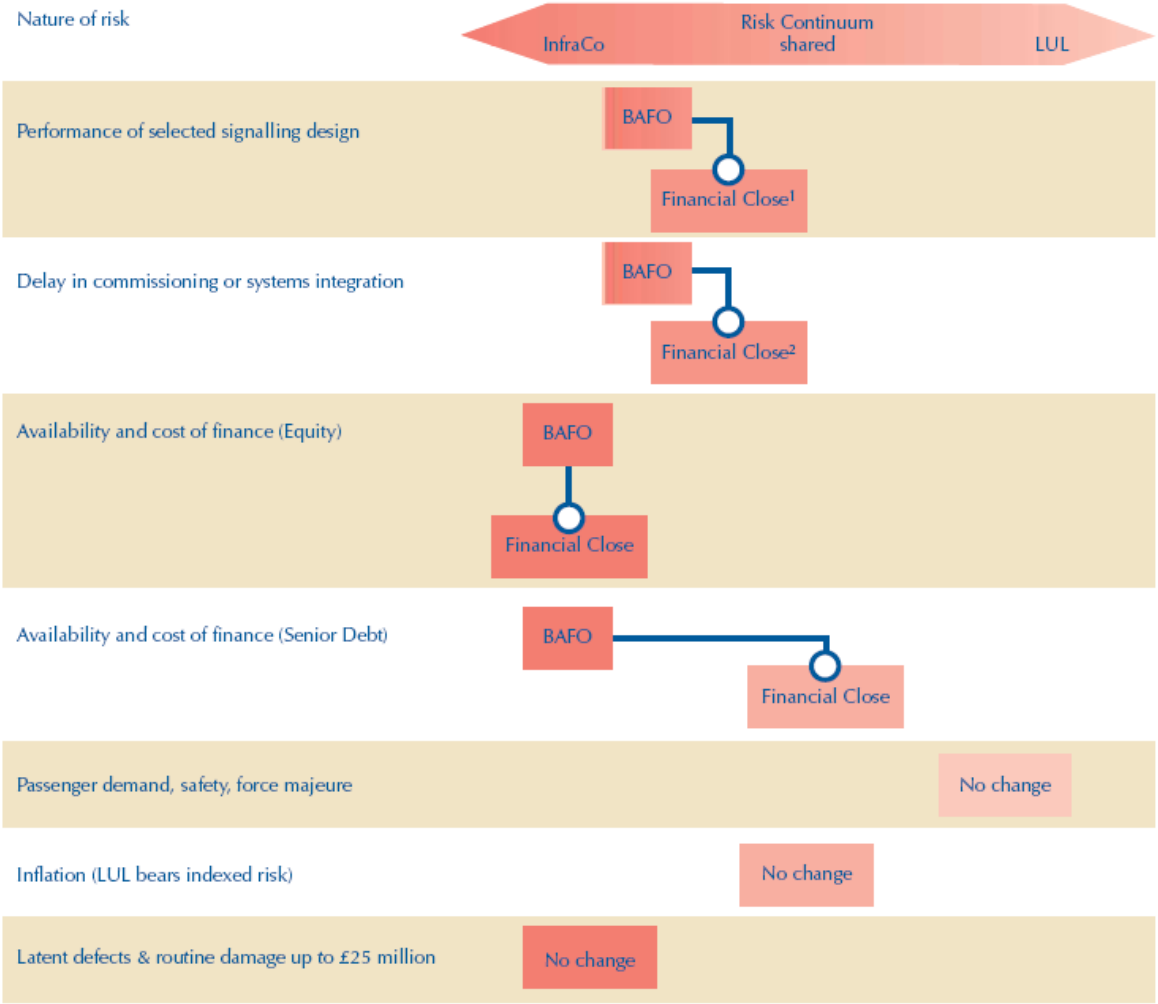


Figure 3) Refurbished stations by end of financial year 2006/07 (London Assembly 2007: 12)

Infraco	Expected	Contract
BCV	16	24
SSL	17	32
Total Metronet	33	56
JNP (Tube Lines)	30	30
Total	63	86

Figure 4) Risk clarification examples (illustrative only) (NAO 2004b: 22)



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