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Public Private Partnerships for Schools: Experience from Seine-Saint-Denis, France






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The working paper is printed in this form to communicate the result of an analytical work with the objective of generating further discussions on the issue.

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Executive summary

In the past three decades, public and private partnerships (PPPs) have sprung up in Europe to build infrastructure and provide various services to communities at national and local levels. PPPs often present a number of advantages for public authorities, including faster infrastructure delivery, more predictable long-term cost management, and risk-sharing between public and private partners. However, experience in different European countries suggests that, far from being a one-size-fits-all solution, PPPs can only succeed when specific legal, economic and institutional aspects are brought together for each investment project.

The Council of Europe Development Bank (CEB) has provided financing for the construction and rehabilitation of lower secondary schools (*collèges*) in the French Department of Seine-Saint-Denis. The Department made a decision to sign a number of PPP contracts – among the largest signed to date by a French local authority – for the construction, renovation and maintenance of its school infrastructure. This technical brief presents the Department's experience while designing, negotiating and implementing these contracts, for the benefit of other public or private organisations that might be considering a PPP for the purpose of building and running education infrastructure in Europe.

The main conclusions drawn from the Seine-Saint-Denis experience with PPPs are as follows:

- Sound preparation and negotiation of PPPs is an essential prerequisite to guaranteeing successful future cooperation with PPP operators. In this respect, Seine-Saint-Denis invested significant time and effort in facilitating the initial design, negotiation and contract award phases in the PPP process, which proved to be the basis for successful and balanced cooperation with the private partners involved.
- Schools were built respecting time, budget and quality constraints. The Department's estimates suggest that the construction time for schools using the PPP formula was, on average, 12 months shorter than for those built through traditional public contracting procedures.
- Economic and social costs of maintenance arrangements should be carefully considered. Outsourcing of long-term and high-quality maintenance may be expensive and may entail workforce transformation and redundancies. Unforeseen developments during the implementation and operational phases can be costly. PPP contracts often lack flexibility, which makes initial preparation and risk assessment even more important.
- Strong and adaptable institutions are necessary to plan and manage contracts. In this regard, the Department demonstrated a strong capacity to explore and implement new procedures, integrate evolving job descriptions and adapt its organisational structure.
- Cooperation and knowledge transfer between public and private parties may be challenging. Public authorities can play an important role in encouraging information exchanges and transparency.

International financial institutions such as the CEB, which have experience in financing PPP projects in different sectors and contexts, have an important role to play in facilitating better design and implementation of such contractual arrangements. Supporting the exchange of know-how, best practices and difficulties encountered may help public authorities decide whether to undertake a particular project as a PPP, according to their own objectives and needs.

1. Introduction

Public and private partnerships (PPPs) have been extensively used in different sectors all across Europe in the past three decades as a viable solution to fill the gaps for the effective delivery of public services. PPPs often present a number of advantages for public authorities, including shorter delivery deadlines, more predictable cost management over the long term, and risk-sharing between public and private partners. In addition, they enable public authorities to leverage the experience, capacity and know-how of large private operators to implement very large and complex investments.

However, in recent years, a number of landmark cases of PPP failures across Europe have prompted a social and political backlash against this form of contract. Indeed, experience has shown that, far from being a one-size-fits-all solution, PPPs can only succeed when specific legal, economic and institutional conditions are brought together to meet the challenges associated with each investment project.

As a social development bank, the CEB has been approached by different clients to support, either directly or via financial intermediaries, various public social infrastructure investments designed as PPPs. In an effort to evaluate their effectiveness, this technical brief draws on the ten years' experience of the French Department of Seine-Saint-Denis with PPP models aimed at building, renovating and operating a number of lower secondary schools (*collèges*). This assessment and attendant lessons learnt could be useful to other local authorities in France and elsewhere in Europe.

Box 1: The CEB's experience with PPPs in France

The CEB has co-financed different social investments in France which have involved PPP arrangements between public and private parties. For example, in 2007, the CEB provided €100 million in financing to part-finance the construction or rehabilitation of police and fire stations, retirement homes and health infrastructure with PPP models across France. The CEB's financing was channeled through a financial intermediary, which was an instrumental partner for project success.

After successful implementation of this first project, the CEB approved another €150 million multi-project intermediated loan in 2013 to partially finance investments undertaken by French regions and municipalities in the fields of education, health and the environment. The public authorities involved identified a number of benefits of implementing their investments through PPP arrangements. Among others, these included a shorter construction period, efficient cost management, access to the specific technical expertise of private partners and long-term financial sustainability.

In 2013 and 2014, the CEB approved two loans of over €100 million and €200 million respectively to support investments in the fields of education, sports and family services. The latter loan was provided directly to the Department of Seine-Saint-Denis. These investments included the construction and rehabilitation of a number of lower secondary schools through PPP arrangements, which are presented in this technical brief.

2. Public Private Partnerships for schools

2.1 Different types of partnerships

Public Private Partnerships are defined as "long-term contractual arrangements between a public body and a private partner whereby the latter delivers and funds public services using a capital asset, sharing the associated risks" (OECD 2012). PPPs are seen as a third way between state provision and the market whereby the state delegates public service provision to private actors within a well-defined policy framework. Partnerships must include significant risk sharing between the two partners, a high level of trust and strong relational contracts, so that the transaction costs related to such complex contracts (in particular design and monitoring) are minimised (Robertson et al., 2012).

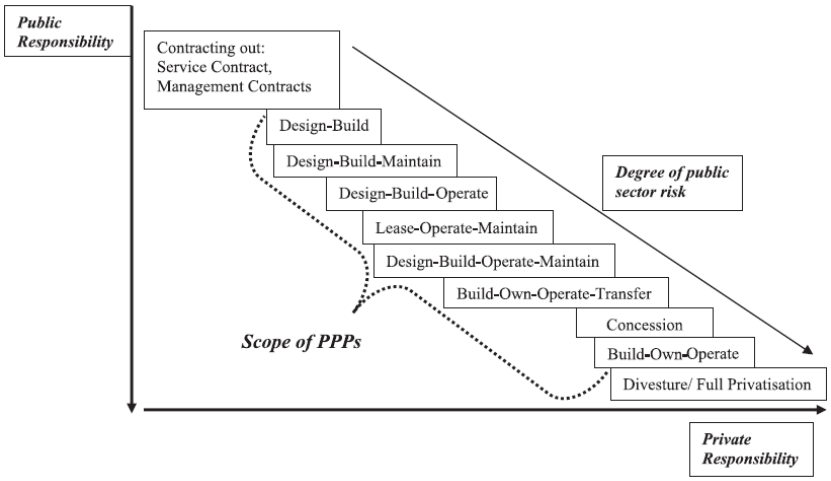
PPPs sprang up in the 1990s and 2000s across countries and in sectors such as health, water, electricity and mining. Between 1990 and 2016, the aggregate value of the 1749 PPP transactions that reached financial close in the EU market was €336 billion (European Court of Auditors, 2018). Most PPP projects were in the transport sector, which in 2016 accounted for one-third of the entire year's investment, followed by the healthcare and education sectors. As a general trend, PPPs grew significantly in many countries until the late 2000s, but were strongly affected by the financial crisis, which made it very difficult for private companies to borrow money (Hall, 2015). In addition, stricter interpretation by Eurostat of the EU accounting rules since the financial crisis of 2008 has pushed governments to take some large PPP projects back onto their balance sheets, limiting the incentives to use this mode of investment.

The European PPP market is mostly concentrated in the United Kingdom, France, Spain, Portugal and Germany, where projects implemented represented 90% of the entire market over the period 1990-2016 (European Court of Auditors, 2018). With the existing stock of 700 contracts and £56 billion (€63 billion equivalent) in private sector capital investment, the UK is a clear leader in terms of European PPP contracts and volumes (Gov.uk, 2019). However, in recent years, UK policy makers have been retracting from PPPs in the midst of the ongoing political and societal backlash triggered by a number of unsuccessful PPP experiences (see example in Box 2). In 2018, a UK parliamentary report concluded that after "more than 25 years, the Treasury still has no data on benefits to show whether the PFI[1] model provides value for money. Some private investors have made large annual returns from PFI deals (sometimes over 30%), suggesting that ministerial departments are overpaying for transferring the risks of projects to the private sector."

This technical brief focuses on PPPs in the education sector, which can take many different forms ranging from full public provision to full privatisation (see Figure 1). In developing countries across the world (in particular, in Sub-Saharan Africa, Latin America, and South Asia), PPPs are often designed to maximise private sector involvement (Concession or Build-Own-Operate models) in order to increase access to education and improve overall quality through the use of competition and incentives (Robertson et al., 2012). In such cases, the state (or other public body) focuses on funding (through vouchers or subsidies) and on regulation and evaluation activities.

[1] PPPs are referred to as Private Finance Initiatives (PFIs) in the UK

Figure 1. Scale and scope of private and public responsibility



Source: Roehrich et al. (2014)

The complex and heterogeneous adoption of PPPs across European countries has led to the development of a considerable number of variants of this type of contractual arrangement. In the EU, PPPs in the education sector are mostly signed for the design, construction and, sometimes, maintenance of school buildings. Running the schools in terms of administration and educational activities remains under the responsibility of public authorities. Among these variants, the "build and maintain" model is increasingly common in PPP contracts because it creates incentives for better coherence between public and private goals. In particular, since the private partner must ensure that a school remains in good operating conditions for years, or even decades, it forces the private partner to take a long-term view right from the outset of the project. However, achieving good outcomes from such a model depends on the ability of public and private partners "to successfully operate within a rigid and complicated contractual regime that is focused on performance, and involves significant and complex performance schemes and penalties" (Karasavidis, 2018).

Box 2: UK experience with education PPPs

In general, UK PPPs in the education sector seem to work better than in other sectors. New partnerships are being signed despite the negative social attitudes towards this type of contract. According to a recent report published by the UK National Audit Office (2018), some assets are simply technically less complex to build; among these, schools "are considered as having the lowest construction risk." The same report notes that "the financing route has little or no effect on the construction costs of schools being built." The extensive UK experience therefore suggests that school infrastructure overall is a good candidate for public and private cooperation.

However, school PPPs may also lead to spectacular failures if they are not well designed and implemented. One such example is Parklands High School in Liverpool. Liverpool City Council signed a PPP contract for the construction of the school, which was delivered in 2004. However, in 2014, just 10 years after it opened, Parklands had to close down due to the decline in the student population. Since then, the Council has been paying around £4 million every year in PPP fees and is contracted to pay a further £47 million until 2028 in interest, debt and facilities management payments. Only then will the City Council be able to dispose of the asset, which cost £24m to build in the first place (The Telegraph, 2016).

2.2 PPPs in France

France is the second largest PPP market in Europe, even though the value of PPP contracts in France remains several times lower than in the UK (European Court of Auditors, 2018). Concession contracts between state and private actors have a long history in France, having been exported worldwide early on. Already in the XVII century, Colbert, the Comptroller-General of Finances under King Louis XIV, created road construction and decennial maintenance contracts with private companies. In the second half of the XIX century, different concession contracts were widely used for railroad and water infrastructure, and for the urban reconstruction of Paris undertaken by Baron Haussmann (Bergère and Bezançon, 2014). The Suez Canal was also designed and built in the 1860s on the model of a French concession. After WWII, state contracts with private partners were abandoned as French policy moved towards direct public provision and nationalisation.

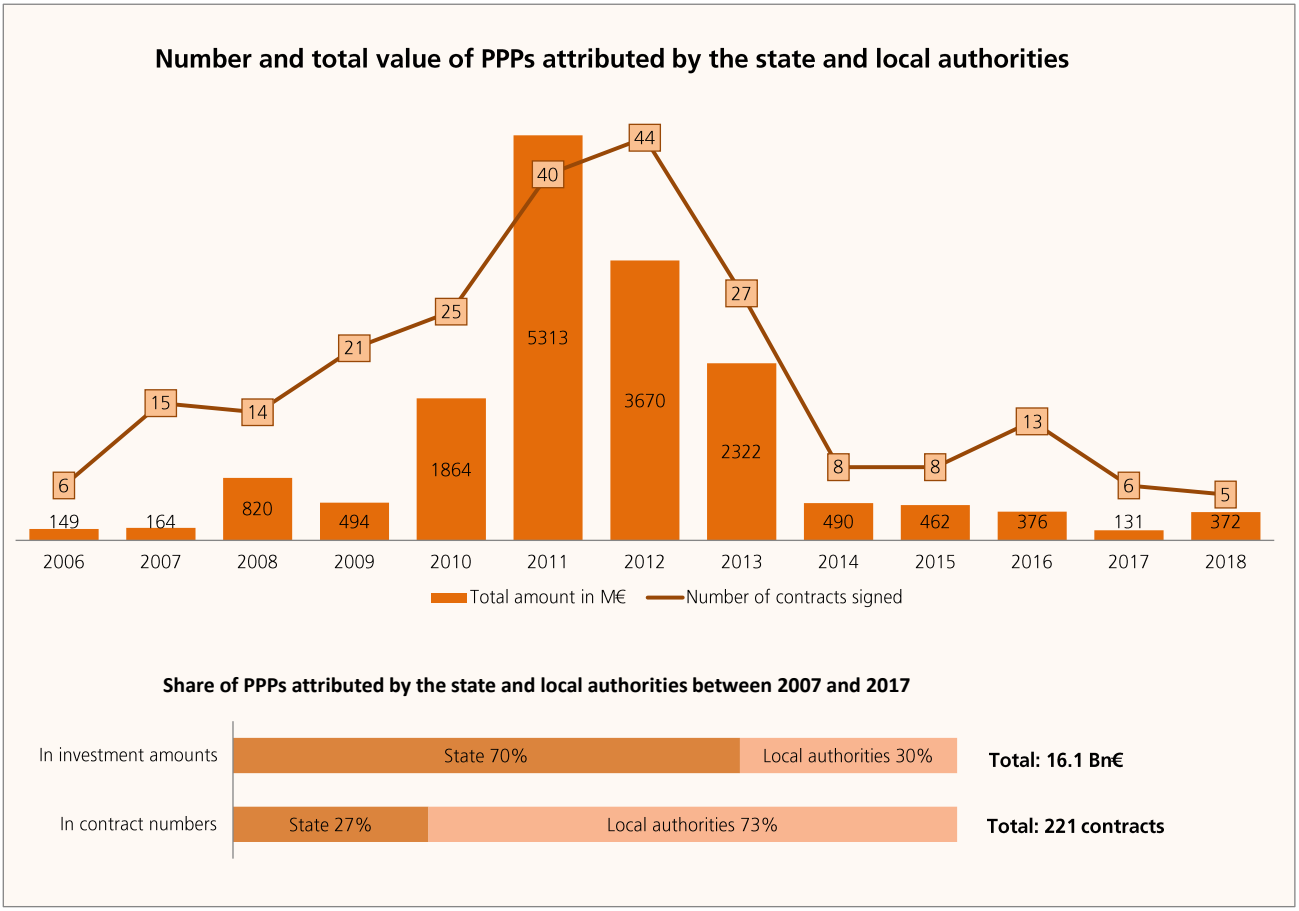
In 2004, partnership contracts were introduced and legally framed, allowing a public authority to delegate the totality of public service provision, including design, construction, maintenance and financing. Up until then, the design and building phases had to be attributed separately in all public procurement contracts in France. All PPP projects in France have to go through prior evaluation that includes a comparison between different contractual options in terms of the risks and costs related to the project concerned. Opting for a PPP solution can be justified only on the grounds of public interest while also taking into account technical, functional or economic complexities, or urgent needs.

A special PPP taskforce within the Ministry of Economy (*Mission d'appui aux partenariats public-privé*) was created in 2016 to assess each PPP contract in France based on this prior evaluation and to issue an opinion to the contracting authority and to the Ministry of Economy (Bergère 2015). In addition, a new competitive dialogue procedure was introduced for the awarding of complex public contracts in general and PPP contracts in particular. Whereas the standard public contracting procedure is based on a competitive selection of the best candidate based on the applications received, the competitive dialogue allows public authorities to hold discussions with preselected candidates on the different aspects of the contract before making a final decision.

Over 200 PPPs were developed in France between 2006 and 2018, equating to an aggregate investment of over €16 billion (Figure 2). PPP contracts were quickly picked up, not just at central government level for big-ticket projects, but also by local governments for much smaller investments. Despite a satisfactory overall early performance record (in over 90% of the cases, facilities were delivered on time and on budget, Bergère and Bezançon, 2014), PPPs have since run into public and political resistance, aggravated by several landmark PPP failures. One such failure was the faulty construction of the Biarritz sea museum, which resulted in major cost overruns, a lengthy legal battle between the local authorities and the private partner and, finally, cancellation of the contract. This, combined with the emergence of alternative more flexible global public contracts based on performance[2] in 2015, contributed to significant PPP decline since 2014.

[2] Introduced in 2011 and reformed in 2015, global public procurement contracts based on performance, or "*marchés publics globaux de performance*," represent an alternative contractual form for public procurement. In these contracts, contrary to the PPP, project management responsibilities remain with the public authorities, but several other phases, such as design, building, operating and maintenance are transferred to the private actors. The private companies are remunerated based on predefined performance targets (related to service quality, energy efficiency, or the level of activity). These contracts are better adapted for smaller investment projects and tend to be more flexible for both private and public parties than PPPs.

Figure 2. Number of PPP contracts signed per year, 2005-2017



Source: adapted from Cayrey, R. and d'Auzon, S. (2019)

2.3 French PPPs for schools

In the early 1980s, the decision to decentralise some public services transferred, most notably, ownership and management of education facilities to French local authorities: primary schools (*écoles*) to 34 968 communes, lower secondary schools (*collèges*) to 101 departments and higher secondary schools (*lycées*) to 18 regions. Many of the school buildings were in a very poor condition, built using hazardous materials such as asbestos, and with low levels of energy performance (Bergère and Bezançon, 2014). Facing complex and urgent investment needs, local authorities started to experiment first with long-term public-private contracts for works (*Marché d'entreprise de travaux publics*) and then with PPPs.

Lower and higher secondary school buildings were among the first social infrastructure projects realised through PPP contracts by French local authorities. As early as 2006, the first €13 million PPP contract was awarded by the Department of Loiret to build a lower secondary school (see Box 3 for examples). The main advantages of PPPs in these cases included the possibility to launch several construction projects simultaneously (typically, local authorities did not have sufficient capacity to internally manage more than two construction or heavy renovation projects at a time, in addition to their day-to-day tasks of minor renovations and maintenance of all schools); better budgetary planning in the long run since there are fewer fluctuations in terms of estimated and actual costs; and the ability to better align construction deadlines and the school calendar (Bergère and Bezançon, 2014).

Box 3: PPPs in education in France

Loiret is the Department with the most PPP experience in education, having launched a €600 million investment plan for the period 1998-2013 to modernise school infrastructure. The CEB funds were also used to co-finance some of the investments through a loan extended to a financial intermediary. The first contract for building one lower secondary school was signed in May 2006 and the construction works were finished by September 2007. Encouraged by this positive experience, eight other PPP contracts were signed.

In 2008, the Department of Moselle launched its Plan Colleges 2009-2013 of €200 million to build four lower secondary schools. The local authorities estimated that PPP contracts allowed them to deliver the schools within two years, while this would have taken four and a half years under traditional procedures. According to the Department, in the long term, the PPP schools did not cost more than the schools built using the usual public contracting procedure because PPP contracts delivered significant savings in the construction and maintenance phases (Bergère and Bezançon, 2014).

In 2017, the municipal authorities in Marseille made the decision to (re)build around 30 primary schools for €1 billion using PPP contracts. However, an opposing alliance consisting of teacher and civil servant trade unions, smaller construction companies, architects and civic organisations took the matter to court. After deliberations, the Administrative Court of Marseille cancelled the city's decision to use PPP arrangements, arguing that the total cost of PPP contracts would be higher than using traditional public contracting procedures. In addition, the tribunal stated that PPP usage should be the exception with specific justification in terms of project urgency and complexity, which was not sufficiently convincing for such a big investment programme.

3. The Exceptional Investment Plan and Education PPPs in Seine-Saint-Denis

Located in the North East of Paris, Seine-Saint-Denis is one of the smallest and one of the most populated French departments. The Department's population is very young, diverse and faces significant socioeconomic challenges and opportunities. On the one hand, high unemployment and poverty rates (with over a quarter of population living under the poverty line versus 14% for France in 2016) threaten social mobility and cohesion. On the other hand, the Department is among the fastest growing in France, with an expected population growth of 19.5% (representing 300 000 new inhabitants) from 2013 to 2050. Population growth is due to foreign immigration (around one third of the population of Seine-Saint-Denis is of foreign origin) and internal immigration from Paris, with young families looking for cheaper accommodation.

After the local elections in 2008, the new administration defined education investment as the main priority area to meet the needs of a growing population and deteriorated education infrastructure. At that time, the Department owned and ran 120 lower secondary schools, which in most cases suffered from structural underinvestment. In 2010, the Departmental Council adopted an Exceptional Investment Plan (PEI) including €530 million for (re)constructions, €145 million for major renovations in existing schools and €28 million for school digitalisation.

Twelve schools, including five constructions and seven full reconstructions, were identified as an absolute priority and had to be delivered within four years to meet the demand. Prior to the PEI, under public project contracting (*maîtrise d'ouvrage publique*, or MOP), it would have taken the Department five to seven years to complete one school (re)construction, which was not fast enough according to population growth forecasts. In addition, the Department did not have sufficient internal capacity to implement so many big construction projects simultaneously. Given the existing PPP legislation and

initial positive experience elsewhere (Box 3), the Departmental Council decided to carry out the most urgent works under PPP contracts.

Since Seine-Saint-Denis had never used PPP contracts before, there was a lot of debate, and resistance, within the Departmental Council regarding the "privatisation" of education in terms of contracting big commercial companies for the construction works, borrowing money from private banks and potentially outsourcing some of the maintenance services previously carried out by public employees. The decision was made to keep some services, such as the reception desk, food preparation at the canteens and cleaning internally. This was partly done to ensure the same standards of service in all departmental schools, but mostly to keep the public sector jobs. Most of the technical maintenance services, which were typically outsourced to smaller private companies, were transferred to the PPP partners to ensure their long-term commitment.

After long discussions and some political resistance, the Departmental Council agreed that it was impossible to build so many schools in such a short timeframe using the usual procedures and made the decision to move forward with three initial PPP contracts each involving four schools (CP1, CP2 and CP3). The contracts were mostly financed by public funds: 60% financed by the Department (by taking out direct public loans), 20% by Caisse des Dépôts, the main French public sector financial institution, which provided funding to the designated private partners on favourable conditions, and the remaining 20% from the PPP partners themselves (which may have borrowed from banks). The contracts included (re)construction of school buildings and their maintenance for 20 years following delivery. There were also a number of special conditions attached to each contract, such as the designation of a different architect for each school or the requirement that 30% of the construction costs be outsourced to local small and medium enterprises. In 2016, encouraged by the success of these contracts, the Departmental Council took the unanimous decision to create two additional contracts (CP4 and CP5) each involving three school (re)constructions. To date, the Seine-Saint-Denis contracts remain among the largest infrastructure PPPs signed by local authorities in France.

At the same time, in a parallel process, an additional eight schools were built using the traditional MOP procedure as the Department also wanted to diversify the contracts and leverage its MOP expertise within the investment plan. The prior evaluation of PPP contracts had clearly indicated that PPP schools were more costly to build and operate if the socio-economic cost related to urgency was excluded from the simulations (Rapport d'Évaluation Préalable à la Passation d'un Contrat de Partenariat, 2015). Therefore, the less urgent (in terms of demographics and health and safety) cases went into the MOP portfolio to manage the total costs and enable small to medium size companies to have access to the Department's procurement offer. Politically, it was also easier to reach a decision within the Council by proposing two types of contracts within the investment plan.

4. Implementing education PPPs in Seine-Saint-Denis: main lessons learnt

4.1 Investing in PPP preparation and negotiation is key for successful future cooperation

Seine-Saint-Denis invested significant time and effort in facilitating the initial design, negotiation and contract award phases in the PPP process. In 2010, in preparation for the Exceptional Investment Plan, the Department services extensively updated their school building programme ("Plan-type"), containing all the specifications that should be respected in each school building in Seine-Saint Denis. The document provides a harmonised school plan model that guarantees equality and equal quality in all school buildings. This procedure took over half a year and involved a considerable concerted effort by the Ministry of Education, which is responsible for school curricula and employs the teachers, parent and student representatives and the professional unions. As a result, all the relevant parties agreed on the main requirements and shared this information with the private partners.

Given the Department's lack of experience in PPP contracts, consultants with legal, financial and technical expertise were hired to help with the evaluations, contract design and terms of reference required under the PPP model. The Department estimates that approximately €100,000 was needed in

external fees for consulting services (legal, financial and technical) for each PPP contract. The Department services also prepared prior evaluation reports as required by the PPP legislation in force, which served as a basis for the decision by the Departmental Council and the favourable opinion issued by the PPP taskforce within the Ministry of Economy.

The Department experienced significant savings in terms of time and administrative procedures with the PPP selection, award and negotiation procedures. Since there were only few construction companies with the capacity to form consortia and compete for large PPP contracts, the Department received between two and four applications for each contract competition. For comparison, in the typical MOP tendering procedure, for one school construction project, the Department would receive between 50 and 100 (and sometimes up to 200) applications for the design consortium (architect and engineering). Following their appointment, it would then negotiate with several different construction and service providers to build and equip each school.

All the contracts went through the competitive dialogue procedure. Each candidate consortium had to submit an application outlining the technical, financial and contractual aspects. Even though the Department had developed a model contract ("*contrat-type*"), with limited opportunities for adjustments and mark-ups, and the aforementioned school building programme ("*Plan-type*"), the first three contracts that were signed did contain a few modifications negotiated by the private partners during the competitive dialogue procedure. As the Department accumulated more experience, many of the initially flexible clauses became non-negotiable in the subsequent two contracts, strengthening the effectiveness of their arrangements.

4.2 Schools were built respecting time, budget and quality constraints

Seine-Saint-Denis' experience has confirmed the time savings in delivering schools on time, which are partly related to the high penalties for delays. The Department's estimates suggest that PPP schools are on average delivered at least 12 months earlier than MOP schools. In general, the PPP partners were able to handle the risks and uncertainties related to construction very efficiently. For example, one of the PPP consortiums was affected by the bankruptcy of its smaller partner in the midst of the construction phase, but the larger companies were able to ensure continuation of the works using their own internal capacities. In the typical MOP process, such a situation would lead to unavoidable delays related to the long administrative procedures and time needed for a new company to understand the project. The construction phase is also more efficient because for each contract the Department would typically deal with a single designated contact team representing well-structured large private companies instead of many different smaller contractors, as in the case of the MOP procedure (even though in some cases the Department had to hold bilateral exchanges with different PPP partners at key stages in the design and construction phases).

Of course, it is not always possible to compare PPP and MOP school construction duration because the MOP procedure is often used for more complex or riskier cases in order to avoid the penalties related to PPP contracts. For example, the Department would choose the MOP process if the land for the school building needs to be acquired from other public or private actors, implying significant delays. In addition, some schools are more complex to build as they include additional facilities (such as central kitchens or gymnasiums), are planned on a difficult terrain, or must accommodate temporary school buildings during the construction process. For these reasons, the reported time saving of 24 months in Figure 3 has been adjusted down to 12 months by the Department's experts.

In addition to the time savings, the PPP schools were built at comparable construction costs to MOP schools, both in terms of total unit cost and cost per square metre (Figure 3). The perceived quality of the new school buildings, constructed via either a PPP or a MOP, is high and comparable in terms of construction materials, infrastructure (ventilation, lighting, ICT equipment) and acoustics (Duthilleul et al., 2019).

Figure 3. Data on construction costs for PPP and MOP schools

	Total average surface area (m²)	Average construction cost (€)	Construction cost (€ per m²)	Construction time (years)
PPP (12 schools)	7 867	27 413 333	3 604	3.43
MOP (8 schools)	7 461	26 467 320	3 592	5.43

In addition, the Department has a very elaborate environmental programme in general and high environmental standards for all its schools in particular. The Department's experience shows that, in the case of an MOP, the green features (such as suspended gardens, green roofs, natural light, biodiversity initiatives or circular water treatment) have often been downgraded. Even though they are always included in the initial architectural project, the non-essential features tend to be cut out during the design and construction phases because of technical and budgetary restrictions. The PPP partners are engaged contractually and therefore deviate much less from the initial agreements.

4.3 Financial and social costs of maintenance need to be considered

Historically, in Seine-Saint-Denis as elsewhere in France, most of the maintenance and renovation works are carried out by technicians directly employed by the Department. Each school has a full-time resident technician, who typically lives on the premises. In addition, for more specialised tasks, the Department manages mobile technical teams that cater to all schools depending on their needs. During the dialogue phase, before signing the first PPP contracts, it was decided that resident technicians would be kept on in all new schools to safeguard their jobs. It was therefore necessary to define the scope of maintenance tasks shared between the PPP maintenance partners and the resident technicians.

The first wave of three contracts (noted as "contrat de partenariat" CP1, CP2 and CP3 in Figure 4) delegated virtually all the maintenance to the private partners with two main objectives: prevention and intervention. All technical services, such as electricity, heating and ventilation, were included in the contract as well as maintenance of the facades, green or standard roofs and carpentry. The PPP partners also had to ensure all material investments and big renovations during the 20 years of contract duration (such as changing ventilation systems, boilers and rolling shutters every ten years). The tasks that were excluded from the contract and left to the resident technicians were related to maintenance of the suspended ceilings, floors and interior walls, representing around 10 to 15% of all maintenance work in a given school.

The three initial PPP contracts included very comprehensive terms of reference for maintenance, which were prepared by a consultant hired by the Department. The consultant based the terms of reference on the experience of hospital PPP contracts and prepared a list of 20 performance indicators with associated penalties. For example, the PPP contracts include a €50,000 euro per day penalty in case of a major technical issue, which prevents classes from being held. In total, penalties can reach up to 30% of the total annual maintenance fees and result in contract annulment if the penalty ceiling is at its maximum for a fixed number of years (2 to 4 depending on the contract). Such detailed and strict requirements implied more risks for the private partners and were reflected in higher annual maintenance fees ranging between €260,000 and €360,000 per school for 20 years.

Figure 4. Average annual maintenance fees per school in CP1, CP2 and CP3 (for 2018)

Annual fees per school (average)	CP1	CP2	CP3
Maintenance	175 851	194 839	158 028
Big renovations	146 495	160 963	104 147
Total	**322 346**	**355 802**	**262 175**

Before signing the fourth and fifth PPP contracts (CP4 and CP5), the Department carried out an internal audit to analyse the workload of resident technicians and look for efficiency gains. Even though the hindsight was still limited, three main lessons emerged. First of all, the Department's internal audit showed that the departmental agents were losing their skills and technical capacities in the new PPP schools as they no longer carried out technical tasks, but were mostly moving furniture between classrooms, tidying and cleaning, working at the reception desk, and performing administrative tasks.

Secondly, the Department quickly realised that they were not in a position to thoroughly monitor the 20 performance indicators defined in the PPP contracts. Establishing the relevant data for indicators and calculating the related penalties required technical expertise and was time consuming. In addition, these indicators were often too elaborate for schools that are much less sensitive than hospitals to various minor technical failures.

Thirdly, the maintenance fees fixed for the next two decades were too high and had to be reduced in the subsequent contracts. The Department estimated that PPP school maintenance was approximately twice as expensive. However, it was difficult to compare the maintenance costs between PPP and MOP schools because the maintenance quality standards were not the same. Even when some maintenance services in the MOP schools were outsourced to private companies, the associated contracts were less strict in terms of indicators and penalties. The PPP partners were also required to carry out a lot of preventive action instead of concentrating on repairs as per usual practice.

In order to reduce costs in the CP4 and CP5 contracts, the Department took back some of the maintenance activities, where the private partner's value added was lower. In addition, the Department realised that it is cheaper to outsource certain tasks that are carried out in over 120 public schools to a separate private company and take advantage of bigger economies of scale. In CP4, the contract excluded some of the exploitation tasks such as window cleaning, rat and insect extermination or video-surveillance, all of which were taken back by the Department. The performance targets and penalties were also simplified and limited to three indicators: intervention time (which was also prolonged in comparison to the previous contracts); availability of premises; and exploitation/documentation. In this way, the CP4 maintenance rent was 25% less expensive than for the previous CP1 to CP3 contracts.

In the CP5 contract, the scope of maintenance was reduced even further. During the first two years after construction delivery, the maintenance scope remained the same as in CP4 to ensure that all facilities were fully operational. From the third year on, half of the maintenance works were taken back by the Department, including the upkeep of the external spaces. This contract halved the annual maintenance costs compared to those for the first three contracts. However, the implications of such contractual arrangements are still unclear as, on the one hand, the private partners have less incentive to ensure the good functioning of the facilities in the long term and, on the other hand, responsibilities may not always be clearly divided between private partners and resident technicians.

The 18 PPP schools built so far by the Department represent 30% of the maintenance budget of all 130 public schools that Seine-Saint-Denis currently runs. Overall, these schools are in a privileged position today in terms of being new (therefore not as much maintenance work needs to be done to start with) and having performance-based, highly professional maintenance services available in addition to a residential technician. Their maintenance spending is also more protected as any potential budgetary cuts would likely fall on other schools with less strict contractual arrangements. This situation may create political tensions in the future.

4.4 Unexpected developments during implementation can be costly

Seine-Saint-Denis' experience has confirmed that PPP contracts lack the flexibility to adjust to changes in implementation and to changes in the project while it is running. They can also be very costly as the PPP partner does not need to go through a competitive procedure and can apply high prices. For example, one of the PPP contracts had foreseen the building of a temporary school for half of the pupils and the dispatching of the remaining pupils to other surrounding schools until the construction works were over for cost efficiency reasons. However, the school community, including teachers, pupils

and parents, were against this separation and protested with demands for a single temporary school. The Department agreed to the demands, but had to renegotiate with the PPP partners with a significant financial impact.

Another example where flexibility proved necessary was related to school equipment. In CP1-CP3, all digital equipment and furniture was outsourced to the PPP partners. These tasks were taken back by the Department in the subsequent contracts, because it became obvious that in a couple of years between the design phase and the school opening, the digital specifications or the needs in terms of innovative furniture might change significantly.

Finally, establishing reliable long-term population and urbanisation projections and needs assessments before launching a PPP is essential for the contract's success. As illustrated by the Liverpool example (Box 2), several years after school completion, the urban landscape can change for various reasons. However, even though the school population decreases significantly, the annual fees remain the same for decades to come.

4.5 Strong and adaptable institutions are necessary to plan and manage the contracts

The success of the PPP also depends on the local administration's capacity to evaluate the needs, design the contracts and ensure that they are carried out as agreed from the design phase to the decades of maintenance. In the case of Seine-Saint-Denis, PPP contracts were completely new, but the administration already had a lot of experience in building schools through the MOP procedure and ensuring their functioning via internal or outsourced services. The internal services were also well equipped to carry out prior feasibility studies and subsequent evaluations and audits.

In the first stages of PPP contracts the Department was able to define the objectives, carry out feasibility studies and prepare the contracts based on its extensive MOP experience with each PPP project more strictly defined to avoid contract changes at a later stage. In addition, the Department hired consultants to assist with the contracts, even if it soon realised that developing internal expertise was key to having an equal footing and a "healthy" relationship with PPP partners. Indeed, consultants may not necessarily defend the public interest and tend to base their work on previous experience that may not be specific enough for local needs.

The phase of competitive dialogue was also new for the administration and required the mobilisation of different teams within the Department in a very short period of time. During the design and construction phases, the internal engineers had less technical work to do as the PPP partners took care of many coordination tasks that would have been done by the internal technical teams under the MOP process. However, the nature of the Department teams' work changed progressively from design to ensuring quality and safety control (working under tight deadlines), especially because many of the PPP partners were not specialised in school buildings.

The biggest changes within the Department teams were related to ensuring the exploitation and maintenance of PPP schools. The Department did not have any prior experience of managing performance contracts and this expertise took a certain time to develop. The first years were difficult in terms of reorganisation within the administration and learning to do new types of job. The Department was no longer responsible for the direct provision of services, but had to assume the functions of control and surveillance instead. The job nature of the mobile departmental agents, responsible for monitoring the daily functioning of all 130 schools based on geographical division, changed from collaborating with school administrations on daily issues to supervising the performance targets of private partners. In addition, within the Department, four well-qualified engineers were recruited from outside to work in a newly established special unit (*Maintenance et Énergie*) mainly dedicated to PPP contracts. The organisational changes are still ongoing as the Department feels that it has to remain agile to respond to different situations that could occur in the coming decades.

4.6 Cooperation and knowledge transfer may be challenging

The Department found that it can be a real challenge to follow a significant number of different contracts with different companies at several stages. The main difficulty is to ensure a smooth transition between the construction company at school delivery and the maintenance company that only then starts its work. Whereas the Department and the construction companies were already used to working together on other projects before and knew each other's culture, the maintenance companies were new to the process and had to learn everything on the go. The Department teams had to dedicate a lot of time to negotiating and building relationships, which was made more difficult due to frequent staff rotation in private companies (experience so far indicates that the contact maintenance teams change every three years on average).

In terms of cooperation, the Department's experience also shows that, in order to make a PPP contract work, genuine cooperation between the construction and maintenance companies is needed very early on. Notably, the maintenance company needs to be present at the design stage to make sure that it can access all the locations and equipment to be able to easily repair and replace broken parts for years after the school building is completed. In one of the first PPP contracts, during the initial stages, the maintenance company was represented by a sales team, which overlooked many technical aspects in order to win the contract. The company was not ready to carry out a contract based on performance targets, which subsequently created long-lasting challenges for the Department. As a result, the Department now requires that the maintenance company be present at the monthly meetings during all the design stages and that they formally submit their technical remarks after each meeting.

Finally, there was hope that cooperation between residential technicians and private maintenance companies would result in real knowledge transfer and professionalisation. In all new schools, the maintenance control systems were centralised and now require technical competencies which could have been acquired by the residential technicians from the PPP maintenance agents. However, experience to date shows that the two parties tend to work in silos and residential technicians have been losing their skills instead of learning new ones.

5 Conclusions

PPP contracts for schools can provide real advantages for large social infrastructure investments, especially when they need to be delivered fast. The Department of Seine-Saint-Denis has signed some of the largest PPP contracts at local level in France, making full use of the experience gained over the years through the implementation of the initial contracts. The lessons learnt and experiences accumulated in the last decade by Seine-Saint-Denis can provide interesting learnings for other public authorities both in France and further afield.

The education investment experience in Seine-Saint-Denis shows that schools, which might have taken several years to complete using the traditional procurement procedures, can be built much faster, while respecting the works schedule, construction budget and quality standards.

However, national context plays an important role in the success of PPPs. The Department relied on a well-defined legal framework and procedures for awarding the contracts to evaluate, define and negotiate the best solutions. In addition, a solid pool of large, experienced construction companies in France ensured an adequate level of competition for the PPP contracts. The Department's existing internal capacity to carry out all the required steps, including prior evaluations and the drawing-up of contracts, was also key to establishing balanced partnerships with the private actors.

Many jobs within the Department were directly or indirectly affected by the PPP contracts. While carrying out their usual tasks related to traditional public contracting, the in-house technical staff had to learn new skills specifically related to the PPP contracts. In particular, the Department's teams had to integrate the shift in their work from the design and organisation of service provision to supervision and quality control. Services underwent some restructuring with the recruitment of new highly qualified

staff members and the creation of a specialised unit. Strong organisational capacity to evolve and adapt is an essential condition to create a well-balanced relationship between a public authority and its private counterparts.

Despite the positive outcomes of efficient school delivery, the Department encountered a number of challenges related to long-term school maintenance. Even though the level of maintenance services was, in most cases, more than satisfactory, the PPP contracts nevertheless proved to be very expensive in the long run. Furthermore, in order to safeguard jobs, the Department kept its own maintenance agents on in the new PPP schools; however, the reduced scope of their intervention perimeter resulted in a significant loss of skills, memory and experience. For these reasons, the Department has been limiting the scope of PPP maintenance services when negotiating new PPP contracts. This however reduces the incentives of PPP partners to take a long-term view and complicates the task and risk sharing on a daily basis.

Another lesson from Seine-Saint-Denis is that public authorities must clearly define the infrastructure project and have reliable forecasts regarding its future utilisation over the next decades, as any modification of the PPP contract will be costly. Even though the Department of Seine-Saint-Denis invested a lot of time, effort and financial resources in the preparatory stages, it still encountered several unforeseen situations that resulted in additional costs. This risk of cost overruns should be integrated in the ex-ante analysis of each PPP contract.

The Seine-Saint-Denis experience also shows that cooperation at various levels of each organisation and between different partners can sometimes be complicated. Different parties must be brought to the table from the very onset of each PPP contract negotiation. Public authorities may use their leverage to ensure better information flows and more involvement by the different partners.

International financial institutions such as the CEB, which have experience in financing PPP projects in different sectors and settings, can also have an important role to play in facilitating better design and implementation of such contracts. Supporting the exchange of knowhow and experience, in order to establish best practices and difficulties encountered, may help public authorities better understand whether such a contracting modality is best adapted to their specific needs and objectives. Knowledge products such as this technical brief, developed in close cooperation with local stakeholders, can also contribute to a better understanding of the risks and opportunities associated with PPP contracts.

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Notes



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