INNOVATIVE PUBLIC-PRIVATE PARTNERSHIPS IN ROAD MAINTENANCE AND MANAGEMENT: A CONTRACTOR'S PERSPECTIVE

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ABSTRACT

Partnerships between public authorities and private enterprises aiming at building and operating public works are not a new phenomenon. However, they have gained renewed attention since tensions appeared in the 90s in the public budgets of industrialized countries, which even contributed to the emergence of new partnership forms.

In the road sector, innovative contracts have been promoted beyond sheer road construction, with a view to maintaining and managing urban and peri-urban road networks.

In all cases, these contracts aim at an improved level of service for road users and at better value for money, by combining the competences of the private sector and of the public authorities. Indeed, for road users as well as for taxpayers, only the results count, in terms of mobility and safety, no matter what procurement method is used.

These contracts are generally based on performance requirements rather than recipe-based prescriptions. They differ in their financial structures as well as in country-specific legal frameworks. They show however similarities in performance measurement.

This paper presents the viewpoint of a contractor based on examples from our ten-year experience with maintenance of urban and peri-urban road networks in various countries :

- In England, Managing Agent Contracts (MAC) with the « Highways Agency », as well as an urban PFI (Private Finance Initiative) contract;
- In Canada, a rehabilitation and maintenance contract at Saint-Louis de France (Quebec), as well as CMA (Contract Maintenance Area) contracts in Alberta;
- In Denmark, pavement maintenance contracts with municipalities.

In all cases, these partnerships have reached the following objectives:

- Fostering innovation by adopting a lifetime perspective;
- Better risk management through better risk identification and sharing;
- Improved efficiency through combination of competences between public and private sector and a « win/win » approach rather than the traditional « client / supplier » approach;
- and finally, improved level of service, as attested by satisfaction inquiries of residents and road users, while achieving better value for money.

1. DESCRIPTION OF THE CONTRACTS

In this section, we will give the main characteristics of the contracts in various countries where companies of the Colas Group have been involved in innovative road maintenance and management contracts.

1.1. United Kingdom

1.1.1. MAC Contracts

In the early 1990s, the government created the Highways Agency (HA) to oversee procurement and control of delivery of network management and maintenance services on the highway and secondary road network across England.

The country was initially split into 22 geographical areas, each having separate contracts for network maintenance and management (i.e. a total of 44 contracts).

The HA reduced the number of areas to 13 and created today's MAC contract, which combines the roles of network management and maintenance together with construction project management into one single integrated contract. For more information, see reference [1].

On the contractor's side, this type of organization requires a combination of engineering and design expertise as well as contracting skills. Therefore, Colas Ltd teamed up with :

- Halcrow Consultants to create A-one, a joint-venture that successfully bid in 2003 for the Area 14 MAC contract in Northeast England;
- and then with Halcrow Consultants and Costain to create A-one +, which won Area 10 MAC contract in 2007, followed by Area 7 and Area 12 at the end of 2008.

The main characteristics of the MAC contracts are as follows:

- duration of 5 years, with an option to extend for a further 2 years based on performance;
- a maximum threshold (33%) of the national network that can be operated by a single service provider; the Colas Group's joint-ventures have reached 32%;
- bid evaluation criteria are 70% quality and 30% price. This is important, since it allowed A-one + to secure contracts without being the lowest bidder;
- routine maintenance operations such as inspections, winter maintenance, grass cutting, sign cleaning and litter picking are carried out as lump sum activities, where the full risk of delivery rests with the contractor;
- the design and technical studies are carried out by the contractor's designers and are paid on a cost plus fee basis. Construction work is performed as a target price activity : a price is proposed by the JV on a cost plus margin basis. The HA compares the cost to the price schedule included in the bid and the contractor has to justify any gaps, for example difficulties encountered that may affect yield, bitumen price increases, wage increases. After the price is agreed with the HA, the work is performed. The HA then pays all actual construction costs plus a margin. If the final cost is less than the target, any savings gain is shared 50% with the client; conversely, if there is an overspend, the client bills the JV 50% of the pain;
- the risk of raw material price increase is protected to a large extent by price adjustment mechanisms;

- the performance of the contractor is measured every month against a set of 15 performance indicators. Every 6 months, the contractor is subjected to a 5 day service audit. Both of these processes are scored to enable the performance of each of the 13 MAC contracts throughout the country to be ranked alongside each other.

From a contractor's perspective, the key to success is the ability to work collaboratively with organizations and partners that provide different skills and experiences, and the ability to work hand in hand with the client, who has very clear objectives: safety, congestion reduction, information of travellers and respect of the environment.

MACs require indeed a very strong partnership between the HA and the contractor, which is illustrated by the fact that they share the same offices.

Here are some examples of how it works :

- hhighway defects are identified by anyone who travels the network. If they are of a *safety critical* nature, they must be attended to immediately by the contractor's incident support crews. Incident Support Units (ISU) can respond to any incident on the motorway, by assisting the police service and the traffic officer service in clearing up the motorway and getting it open quickly with the least amount of stoppage of the traffic. A secondary function of the ISU is to carry out maintenance duties. But these duties will be ended immediately upon a call from the Regional Response Center, as the contractor will have to attend the incident within the required response time;
- if there is no emergency, the defects become work projects to perform, they are developed by the contractor's designers and carried out with his teams or by his supply chain;
- any damage to the network caused as a result of an incident by a user is repaired by the contractor's teams. Where the repairs are less than 6 000€, he is reimbursed by the liable party's insurance. It is therefore very important for the contractor to identify as many liable parties as he can. The contractor works closely with the HA's traffic officers in his response to incidents. The Traffic Officers have taken over some of the powers of the police in dealing with traffic incidents, and the contractor obtains much of the information required to deal with the insurance companies from them;
- because the key objectives for the HA are to minimize congestion on the network, improve journey time reliability and improve the safety of the network, a lot of work is carried out at night. The contractor had to devise procedures and systems allowing to work safely. It is not uncommon to have 50 teams working at night on Area 10.

The MAC contracts require a high level of first year investment in new plant and equipment, as well as in IT and business systems. But perhaps the most important investment lies in training and human resources management. Because the successful contracting organization is obliged to take the staff from the former provider, the contractor has to place a strong emphasis on dealing with this staff, in order not to lose their experience and skills. Today, the afore-mentioned four MAC contracts represent an annual turnover in excess of 200 M£, with more than 2 000 people employed.

Finally, these contracts are a huge opportunity for the contractor to provide innovative products and processes, as long as they allow to do the required work quicker and cheaper.

1.1.2. Portsmouth PFI Contract

In July 2004, Portsmouth City Council signed a 25-year contract with Ensign Highways Ltd (a joint 50%-50% subsidiary held by Colas SA and Colas Ltd) for the rehabilitation and maintenance of the City's road system, i.e. a total of 480 km of roads and streets.

This contract encompasses the system's ancillary structures such as bridges (84 structures), sidewalks, streetlights (19 000 lighting units) and parking lots, in a holistic "fence to fence" approach. Over the first five years, the focus lies on rehabilitating all pavements and refurbishing streetlights in the aim of achieving a required level of service; the remaining 20 years of the contract term will be devoted to maintaining this level of service. The contractor's role also comprises cleaning, winter maintenance and, more generally, administrative and operational management functions for the whole system. More detailed information is available on a dedicated website [2].

Ensign's remuneration consists of a fixed monthly fee paid throughout the contract period, combined with a penalty/disincentive for not meeting stipulated performance specifications.

This contract, denoted "PFI" for Private Finance Initiative, was the first to be adopted in the United Kingdom for an urban setting. Because of its size (£500 million), duration (25 years), financing structure and scope, it involved for the contractor numerous preliminary studies, legal and financial advice, negotiations and consultation with the City Council as well as with the government during three years prior to contract award. For the same reasons, it is beyond the scope of this paper to provide the details of this complex contract. It may however be considered as a reference for other contracts.

We will only focus on some specific features that have allowed this contract to be successful :

- a pragmatic approach during the bidding phase to adapt technical specifications and contractual provisions in order to make risk allocation compatible with budgetary constraints, while still embracing the concept of whole-life asset management. Such an adaptation was all the more necessary since preliminary studies made it clear that existing Portsmouth City Council resources alone would not be sufficient to restore road condition to an acceptable level after the initial 5-year period, and therefore extra grants should be sought from the government ("PFI credit");
- citizen-oriented approach : initial public consultations demonstrated heavy concerns about sidewalk and road condition, street lighting and public safety; the public has constantly been informed about the progress and the scope of the contract, a help desk has been opened to receive any complaint so it is not exaggerated to say that in this city of 190 000 inhabitants, there are as many contract supervisors;
- service-oriented approach : the concept of service (rather than works) prevails in this contract. Investigations prior to the contract suggested indeed that improvements in the public perception of street quality would be better achieved by a holistic, service-oriented approach rather than by the traditional specialized work-oriented approach.

After the contract was signed, there was a 6-month period of mobilisation, and service commencement took place on 31 January 2005. The 5-year rehabilitation period is now over and the maintenance period has now begun, to the satisfaction of the City Council.

Photo 1 – Portsmouth; Experimenting with new cleaning methods

1.2. Canada

1.2.1. Province of Alberta

Alberta Transportation is in charge of 31 000 kilometers of primary and secondary highways and approximately 3 700 associated bridges.

Reinventing of Government was initiated by the 1993-elected Premier, Ralph Klein, with the objectives of "getting out of the business of being in business", and "doing a lot more steering and a lot less rowing".

At that time, almost all highway maintenance of primary highways was being done by provincial employees and secondary highways were looked after by the Municipalities. Only some minor road maintenance activities had been contracted out since the mid 80s. After a large consultation was carried out in 1996 with numerous stakeholders (contracting industry, bonding and insurance industries, etc), design, construction and maintenance of highways and bridges were completely outsourced.

At the time maintenance was outsourced, it was clear that no sector of private industry in Alberta had the equipment, expertise or experience to take on all the aspects of the maintenance work. The first tenders for contract maintenance were given out in 1995, and the bidders were given the possibility, without obligation, to hire back the department's maintenance staff affected by the outsourcing as well as taking over its equipment and workshops.

Alberta Transportation then assumed the responsibility of the secondary highways and some of the key primary highways through the cities starting in the summer of 2000. The maintenance of these highways was incorporated in the existing extended contracts or in the contracts that had expired and were retendered.

The main characteristics of the contracts are :

- the duration of the contracts was initially 5 years, with possible extensions of 1 to 3 years; however, Alberta Transportation now contemplates extending this duration to 10 years in the next retendering round;
- the contracts are comprehensive and cover all maintenance activities : road surface and roadside maintenance, vegetation control, signs, posts and guardrails maintenance and replacement, bridges and culverts. Winter maintenance (snow ploughing, sanding and ice control) is given a special emphasis;
- the payments are mainly unit price based, with very few lump sum prices to cover routine maintenance work and fixed costs of the contractor. A minimum annual and five year average revenue is guaranteed to the contractor;
- while the first 5-year contracts were very prescriptive and recipe-based, contracts have progressively evolved to accept more "end-products", which means that contractors are given a little more leeway to manufacture their own products, subject however to final acceptance by Alberta Transportation; in the future, performance-based specifications could be considered;
- to ensure competition, the province is divided into 30 contract maintenance areas (CMAs). No contractor could be awarded more than four CMAs in the initial tender. In the retendering in 2000, this was raised to seven CMAs, and finally to twelve today. Seven contractors are presently actively bidding on this market, which Alberta Transportation considers as satisfactory;
- there is a little room for innovation, since the contractor can propose alternative technical solutions; if these innovations are accepted, usually on the understanding that they will bring identical performance at lower cost, resulting savings are shared on a 65% (contractor)-35% (department) basis;
- each contractor is evaluated through a "Performance Rating System" : in addition to the necessary respect of technical specifications, the system basically checks the actual completion time against the response time allowed in the contract or work order to do the work. This assessment is used in the future contract awards and contract extensions;
- there is a rather strict system of demerit points, each point involving a financial penalty (between $5,000 and $10,000), with the risk of having the contract terminated after too many offences have occurred.

Colas Group's companies have always succeeded in being active on this market, even though they happened to lose some contracts when they were retendered.

Alberta Transportation has pragmatically achieved its main objective of structuring the private road industry in a much different way from what it looked like only two decades ago.

However, Alberta contracts are different from the other contracts described in this paper, to the extent that they do not provide for performance-based specifications.

1.2.2. Province of Quebec

The Province of Quebec experimented with performance contracts, which would basically consist in a "design and build" contract followed by a 7-year period of guarantee :

- these contracts were used for roads that exhibited specific damages, e.g. on concrete pavement slabs;
- the bidding procedure consisted in a two-envelope system, the first one including the proposed design and the second one the proposed price;
- a number of parameters were monitored during the guarantee period, such as evenness, skid resistance, cracking, potholes, rutting;
- in the first contracts, 100% of the payment was made upon completion of the works prior to the guarantee period; this was changed afterwards with 85% paid upon work completion, 10% after one year and 5% retained during the rest of the guarantee period.

Contractors were obviously free to propose their own alternative design. For instance, Sintra, a Colas Group company, proposed for a damaged concrete pavement a mixed solution involving rubblizing of some sections, evacuation of materials of other sections, followed by laying an asphalt concrete over the whole project.

The Ministry of Transport however has not developed further this type of procurement method, considering that too few contractors had the required design capabilities and the willingness to take the risks associated with this type of contract.

Further references on PPP contracts are available on Quebec Ministry of Transport's website [3].

1.2.3. Municipality of Saint-Louis de France (Province of Quebec)

In the Province of Quebec, on 1st April 1993, 30 000 km of local roads were transferred to municipalities.

In 1999, the municipality of Saint-Louis de France (5 500 inhabitants) embarked on an innovative 15-year contract, consisting in rehabilitating the road network (about 20 km of main roads) for the first five years, followed by a maintenance period during the remaining 10 years of the contract life. This contract was entrusted to Pagé Construction, which joined the Colas Group in 2002.

Performance parameters are checked on a regular basis, such as evenness, cracking, rutting. Winter maintenance is not comprised in the contract. Since the contract does not include too many detailed technical specifications, the contractor had some leeway to propose its own design.

Payment is made in equal installments over the 15-year period, subject to price escalation based on a price index.

In 2002, the municipality of Saint-Louis de France was merged into the municipality of Trois-Rivières. The director of infrastructure remained in the same position with the larger municipality, he is still managing the contract, which is then valid for only a section of the municipality of Trois-Rivières. He has been extremely pleased with the contract, but considers it would probably be difficult to extend it further, in view of some legal

difficulties : a great deal of legal advice was required to set up the contract, because municipalities are usually not allowed to contract beyond a period of time of 5 years. A government authorization was then necessary to embark on the 15-year contract, and a loan had to be secured to cover the whole cost of the contract (even though no drawing was made on this loan).

Photo 2 – Saint-Louis de France – typical road after maintenance work

1.3. Denmark

15-year Municipality Maintenance Contracts

In the beginning of the 2000s, the national road administration in Denmark first experienced with a contract in Southern Jutland comprising rehabilitation of a motorway, followed by a maintenance period of about 12 years.

As early as 2002, some municipalities also embarked on this type of maintenance contracts (however without preliminary rehabilitation works) for durations between 10 and 15 years. This move was somehow accentuated by the fact that the number of municipalities was reduced from 271 to 98 starting January 1st 2007, with simultaneous suppression of the districts, whose road networks were transferred to the newly-born municipalities. The total length of the municipal road network is 69 607 km.

There are presently 34 such contracts in Denmark, totaling roughly 205 million €, for the maintenance of a total length of 7 324 km of roads, with the following characteristics :

- the roads considered are mainly in the countryside; roads inside urban areas are usually dealt with in separate contracts, due to the frequent interference between road maintenance and utilities works;

- only asphalt pavements are concerned ("kerb to kerb");
- usually, the contract also includes the maintenance of road marking, soft shoulders (if any), and the supervision of digging permits;
- some contracts include in addition the maintenance of drainage canals and pipes, footpaths and cycle paths;
- contracts are based upon performance requirements; these requirements are measured based on visual inspections and include such parameters as cracking, loss of aggregates, potholes, base settlements, instability in asphalt layers, rutting, fat spots, amount of crack sealing or patches; damage points are calculated on the basis of these inspections and used to determine whether a given section falls within or outside the specs;
- the contractor is responsible for selecting the appropriate work method, products used and time of execution;
- payment is made on an annual basis (sometimes on a quarterly basis), provided performance requirements are met;
- penalties may be applied if damages are not fixed within the prescribed time limits.

Colas Denmark has secured 9 contracts, representing a total of 2 110 km. Seven contractors are presently competing on this specific market.

2. OBJECTIVES ACHIEVED

2.1. Better risk management

All the contracts mentioned have placed a strong emphasis on risk management. Better risk management has been achieved by following the principle that risks should be transferred to the party best able to manage and/or mitigate the consequences of those risks, should they occur.

In devising their contracting scheme, Alberta Transportation made sure that no excessive risks were transferred to contractors. Alberta kept in mind what had happened in the neighbouring province of British Columbia, where a contractor defaulted because the contract had transferred upon him the responsibility for existing structures, and it just happened that repeated flooding caused the collapse of several structures. This is why, at least in the first phase, Alberta wanted to limit lump sum payments and set a minimum payment to cover the contractor's fixed costs. As a result, no contractor' default has occurred in Alberta with CMA contracts.

Clearly, risk allocation has been given high consideration in the Portsmouth contract. For instance, a negotiated position was achieved regarding risks associated with existing structures. As contractors, we would not absorb full liability for structures that had sometimes been built nearly a century ago. Disorders appearing on a structure during the negotiation phase served to convey this point to the project sponsor as well as to the other stakeholders. Eventually, our client accepted the principle to cap our liability in this domain, via a mechanism analogous to the "deductible" in insurance contracts. Such a mechanism makes sense. It does not keep the contractor free from all liability and therefore incites him to actions (inspection, monitoring and periodic maintenance) that may avoid or delay serious damages, while keeping the risk at an acceptable level.

Better risk management is also achieved through adequate timing of maintenance operations. Because Quebec and Danish municipalities give the contractor much leeway

to plan and program its maintenance operations, he can take advantage of favourable weather conditions and avoid the timing of his interventions to be constrained by administrative procedures. Work carried out at night in MAC contracts also supports this point.

2.2. Improved efficiency

All road authorities concerned have taken advantage in terms of work organization of a decrease in paperwork and administrative tasks associated with numerous yearly tenders. They have enjoyed more time to concentrate on contract management, even though long-term contracts have usually required from them more preparatory work.

Because of the general decrease in staff of all road agencies, and due to the frequent transfer to municipalities of secondary roads that the states cannot afford to maintain any longer, the private sector had to take over many activities previously carried out by public authorities. All the contracts mentioned have contributed to ease this shift from the public to the private sector. This is particularly clear in the case of Alberta, where CMA contracts helped create an industry that did not exist beforehand. More generally, long-term contracts have sustained contractors' development, by providing them with long-term visibility and hence incentives to invest in equipment, workshops and training of their workforce.

The longer the contracts, the more they enable whole-life asset management and value for money. This is made possible by the fact that the contractor is in control.

For contracts that provide for a repair or rehabilitation period in the first place, as in Portsmouth, properly planned maintenance works will take place just in time so that expenses are optimized over the pavement life-cycle, subject to adequate monitoring being carried out on a regular basis. Even for more simple contracts that include only maintenance tasks, as in Denmark, the fact that the contractor is in control allows him to use whatever technique or correcting measure he deems appropriate, subject to his own responsibility, with a view to optimizing works sequences over the whole life of the contract, as long as all performance requirements are met.

Finally, most contracts have allowed the development of a partnership approach as opposed to the often adversarial client-supplier approach; when gains and pains are shared, as in the MAC contracts, collaboration is obviously a must and leads to better efficiency.

2.3. Innovation

Innovation is made possible in these contracts to various degrees, depending on the types of incentives. In the UK, because of the client's focus on road availability, Colas Ltd has developed a new type of vehicle that allows stalled vehicles to be towed away faster. To some extent, this innovative development has been partly financed by the contract.

Companies of the Colas Group can obviously take advantage of techniques that have been developed elsewhere, but may still be considered innovative in their respective countries.

2.4. Improved level of service

The best illustration of the resulting improvement in the level of service is given by quoting Jim Comport, environmental services manager of Portsmouth City Council : "What happened before was that we had people employed telling people why work could not be done. A company was also paid per pothole in the road. It was all the wrong way round and benefited nobody. What will happen now is that Ensign will lose money per pothole discovered and the people who wrote letters saying why we could do nothing have been reassigned because that job should not be necessary." This describes pretty well the philosophy of these contracts and their service-oriented approach.

The same approach has actually been adopted by the World Bank for developing countries in their promotion of "Output- and Performance-Based Road Contracts" (see reference [4]). Contractors carrying out maintenance should not be paid for their "inputs", e.g. for quantities of materials used to fix a pothole, but rather for their "outputs", i.e. for ensuring that there are no potholes.

3. MAIN POINTS TO BE CONSIDERED FOR FURTHER DEVELOPMENTS

In this section, we would like to present the main points to be considered by both road authorities and contractors who should wish to embark on innovative long-term maintenance contracts.

3.1. Legal framework

The legal framework is of paramount importance for this type of contract to be successful. Contractors need legal certainty if they are to commit themselves to long-term contracts. While the above-mentioned examples only refer to industrialized countries, this would clearly be a prerequisite in order to promote similar contracts in the developing world.

It is worth here mentioning the case of France. France has had a long-term experience with a particular kind of long-term road contracts, namely concession contracts for large structures such as bridges or motorways, to the point that these contracts cannot be considered as innovative any longer. They consist in having e.g. a motorway designed, financed, built, operated and maintained over a period of time by a concessionaire, who will then recoup his investment by charging a toll on road users.

Then in the mid 1990s, some French municipalities and counties began to use new types of contracts named METP (in French, "Marchés d'entreprise de travaux publics"). In the road sector, they would typically consist in 15 year contracts, whereby a road or a road network would have to be rehabilitated to a specified level of service during an initial period of time, and then maintained to this level for the rest of the contract life; the contractor would get paid by the public road authority in equal monthly instalments over the duration of the contract, subject to performance specifications being met. Most of these contracts however were successfully challenged in court by the government, based on the fact that delayed payments are not permitted by the French public contract law, which prevented the payment of the initial rehabilitation works to be spread over the whole contract duration. Only a small number of these contracts managed to survive (one has to admit, to the satisfaction of their public clients).

In the mid-2000s, the French government introduced a new type of PPP-contract (in French CPPP "contrat de partenariat public-privé"), that allows a private contractor to

finance, design, build and operate a building or facility, and being paid in equal instalments over the period of the contract. Because these contracts have a mandatory financial component, they are however best suited to large works, and not to maintenance works. In addition, for large road schemes, the French government prefers to use the user-paid concession system rather than the CPPP-system, where the government would eventually bear the final burden of payment. As a result, the CPPP system has hardly been used in the road sector, leaving France with little or no alternative between traditional one year contracts and long-term concession contracts.

As regards contract documentation, from our experience, there is a difference between government (or state or province) contracts, and municipality (or county) contracts. At least in industrialized countries, governments usually have the capacity to legislate in detail about innovative contracts, and to document contracting practices quite comprehensively e.g. by means of detailed guidelines and specifications. Many municipalities do not have the same capability, and lack the skills, time and money to afford long and complex contract documentation. In our previous examples, it is worth noting that both the municipalities of Saint-Louis de France and the Danish municipalities came up with rather simple contracts, not trying to envisage all events that could occur over the lifetime of the contract, but rather to keep a certain degree of flexibility and develop a culture of partnership and trust. Interestingly, in our inquiry, these clients have suggested that this was made easier for them because they were in a civil law country. Obviously, from our experience, common law countries have also managed to achieve good results, albeit perhaps at the expense of more detailed and complex contract forms. Denmark has adopted a very pragmatic approach to the issue of contract documentation : a number of municipalities have first experimented freely with contracts, and have then taken stock of this experience to produce guidelines. They have been drafted by a working group including representatives of the government, municipalities, contractors and consultants, and should be published in year 2011. In both cases of Saint-Louis de France and of Danish municipalities, it is also interesting to consider termination clauses :

- in Saint-Louis de France, because contract documentation was rather "light", the director of infrastructure made sure that he would have a rather robust termination clause;
- in Denmark, both the contractor and the municipality have a right to terminate the contract, in the first case, subject to payment of the work done plus 10% of the remaining contract sum to the contractor, in the second case, subject to payment by the contractor of 10% of the remaining contract sum to the municipality.

As regards insurance issues, we should also mention that long-term contracts are not easily compatible with the "performance-bond system" legally used in North America. The bonding industry (sureties) is not comfortable with the issuance of long-term bonds, and road authorities (e.g. Alberta Transportation) had to accept "rolling bonds" valid only for a limited period of time and renewable to cover the whole duration of the contract. The Surety and Fidelity Association of America has proposed to limit warranty bonds to three years and invited a dialogue with contractors and State DOTs on these issues (See [5] for more details).

As regards staff issues, it clearly helpful to have mechanisms, such as "TUPE" in the United Kingdom, that allow to transfer the people, e.g. after unsuccessful bidding upon retendering. This eases the retendering process and allows a smooth transition between service providers.

3.2. Competition

Making sure that there is a substantial number of capable contractors is certainly a prerequisite for road authorities to embark on innovative maintenance and management contracts. Considering the innovative nature and the rather long duration of the contracts, road authorities need to demonstrate that they get value for money and that the selection process has been competitive. We have also seen that both UK and Alberta have placed a cap on the maximum number of areas in which a contractor is allowed to operate, precisely with a view to maintain competition, and that they raised this maximum number as and when they realized that the market had become competitive.

As a counter-example, we have seen earlier that Quebec Province could no longer develop some type of design-build-maintain contracts due to a perceived limited number of capable contractors, and hence a lack of competition.

However, we are of the view that if and when the process has been successfully initiated, it carries in itself a potential for development of the road contracting industry, as attested in the case of Alberta.

3.3. State of mind and communication

It is an understatement that a new state of mind is required both from the client's and the contractor's side in order to embark on this type of contracts. Preliminary consultation between the road authority, the contracting industry and possibly other stakeholders is recommended. This has been common practice in all the countries involved in our examples.

Communication is paramount. Especially when contracts are performance-based and the contractor is paid in equal instalments, some road authorities have reported their difficulties in explaining to public that a contractor gets paid while apparently doing nothing. Therefore a lot of communication is a prerequisite to make these contracts better understood and less subject to criticism from the public or from politicians. Conversely, when good contacts are established with the public, the road authority can measure their degree of satisfaction. In Portsmouth, the number of spontaneous positive comments received has been multiplied by five.

Internal communication within the road administration is also important, since as and when these contracts develop, they may be administered and supervised by new people less conversant with innovative procurement and/or willing to "make a mark" by specifying too much.

REFERENCES

1. Highways Agency website – Managing Agents Contracts, see for instance : www.highways.gov.uk/business/14156.aspx
2. Portsmouth Project website : www.streets-ahead.uk.com
3. Quebec Ministry of Transport website www.mtq.gouv.qc.ca/portal/page/portal/entreprises_en/zone_fournisseurs/c_affaires/partenariat_public_prive_ppp
4. Sample Bidding Documents; Procurement of Works and Services under Output- and Performance-Based Road Contracts. The World Bank; October 2006. Available on the World Bank's website at www.worldbank.org (Topics>Transport>Roads and Highways>Reports and Documents)
5. Surety and Fidelity Association of America www.surety.org/GovRel/LongTermWarrantyStatement.pdf