

Restructuring Patterns of Municipal Ownership for Technical Infrastructure Networks in Finland

Abstract:

Many municipalities in Finland are experiencing a shortfall in capital to maintain, rehabilitate and build the technical infrastructure networks for roads, water and sewage, and energy during the present economic downturn. Other municipalities simply are seeking to increase efficiency of service delivery. Capital investments are needed for the aging infrastructure, but the available funds may be insufficient. In many municipalities the technical networks are public monopolies and privatization is not considered as an option because this would require liberalization, unbundling, and even parallel networks for creating a competitive market. Since the technical networks are mostly publicly owned and managed consideration of restructuring the ownership is underway, but research and examples are needed of similar cases. The Finnish State has restructured and downsized the entities it owns, but the municipalities are reluctant for reasons of employment and control.

Tekes, “the *Finnish Funding Agency for Technology and Innovation*” recently funded a research project titled “C-Business” to evaluate the advantages and disadvantages of alternative ownership and management models for municipally owned and managed infrastructure. The objective is to determine the various structures and models in use and describe the benefits, challenges, and prerequisites to restructuring.

The research method summarizes the theoretical background literature and uses the interview method as the primary analysis tool. The interviews include the numerous municipal actors, including design consultants and contractors, involved in the technical infrastructure networks. The research project is a cooperative effort between three research institutions and their expertise will add value to the work.

The project is underway. Options have been charted and the majority of the interviews have been conducted, but the final conclusions are not yet drawn, but intermediate results are available and will be presented. The goal is to provide alternatives to traditional ownership models and present the results of the various models for municipal roads, water and sewage, and energy networks, and for one state ownership case. Clearly, the infrastructure ownership and management are being challenged, and needs to respond to change paradigms in service delivery.

The results will be summarized and presented so that municipalities will be able to have practical examples and choices to consider as the best fit for their circumstances. There is no single best model for all circumstances, but there are several enticing models to gain the attention and interest of the municipal network owners.

1 INTRODUCTION

In Finland, a high percentage of the municipal technical networks are owned and operated by the public sector and many are considered public monopolies. The public networks include roads, waterworks, energy generation and distribution, and ports. This paper will concentrate on the road sector, but also provides some waterworks comparisons.

The lack of public capital, an aging infrastructure network, and the recent poor economic performance have exacerbated the situation in managing the infrastructure assets. Some of these networks, like roads, need extensive maintenance, rehabilitation, upgrades and significant capital to meet today's standards and high customer expectations of service and mobility. Some of the municipalities in Finland are in a poor economic predicament and budget reductions have already been introduced with impact on the technical networks. Some municipalities are trying to alleviate the situation by staff reductions, substantially decreasing expenditures, reducing service levels, shutting off street lights, deferring periodic maintenance, and a few (a very small minority) are restructuring the ownership and management. Some municipalities have increased borrowing from the capital markets, while others have increased taxes. It is also important to highlight that a similar situation is occurring at the state level too, as they are attempting to reduce costs and manage budgets.

Recent and past economic theories and practices have seen an increase toward what is generally termed as "*privatization*". The wave of privatization in Finland started in the 1980s when some state owned enterprises and companies were created. The principals of new public management, decentralization (and unbundling), liberalization (competition) and public procurement and contracting out were seen as a broad movement ⁽¹⁾. However, this has not seen much influence in Finland and restructuring amongst the municipalities has seen limited changes.

1.1 Project background

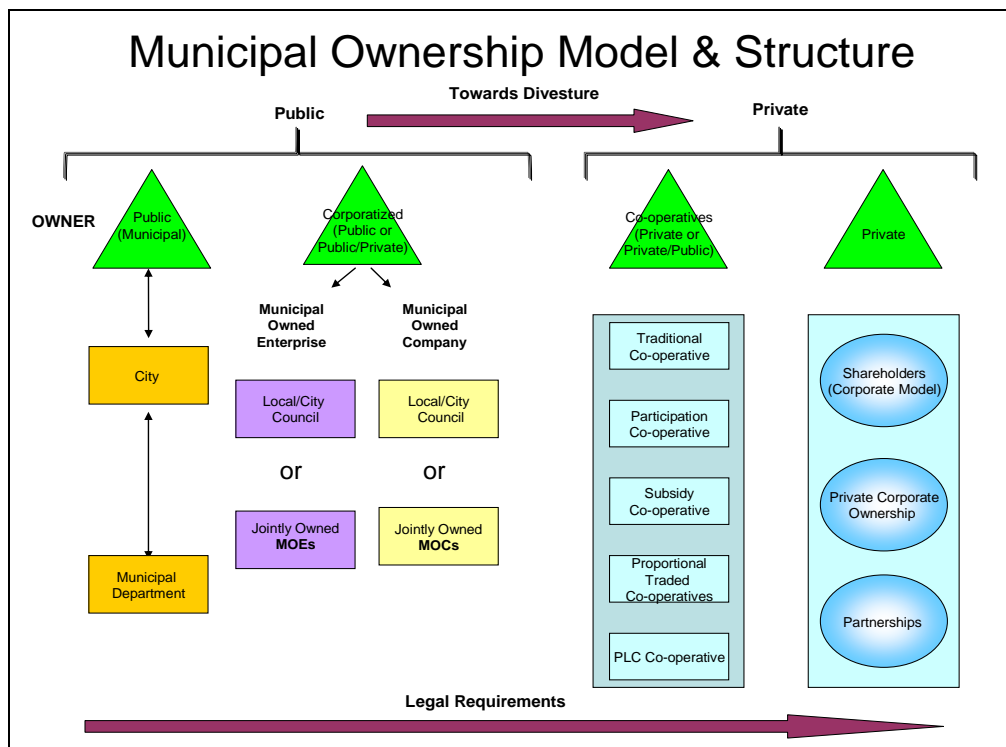
The objective of the research project is to determine the ownership, governance, and management practices of technical networks in Finland. The project emphasizes alternatives to the ownership, governance and management structures. Examples of alternative approaches and the advantages and disadvantages of these methods will be highlighted. Previously, there has not been an extensive or comprehensive study of this volume (none on record of these authors), which compares the various models, structures and benefits for municipalities. This is considered a large and comprehensive study evaluating the municipal technical networks in Finland.

This research project is called C-Business and is funded by the **Finnish Funding Agency for Technology and Innovation** (Tekes) and is a cooperative effort between Oulu University, Aalto University and VTT Technical Research Centre of Finland. The research summarizes the theoretical background literature and uses the interview method as the primary analysis tool. The interviews include numerous municipal actors, including owners, and those involved in operating the technical infrastructure networks. The project is still in progress. Experiences and options have been charted and preliminary conclusions drawn. The interviews are essentially completed and the main

results are collected and summarized in this paper. The final conclusions are drawn when the project ends in December 2010.

2 OWNERSHIP

The municipal technical infrastructure networks have been typically owned, managed and serviced by the public sector as they were seen as critical infrastructure and considered a public service monopoly and a public good. Most countries consider the ownership as either public or private, but in Finland and some other European countries, there are other forms of public and private ownership. Municipal Owned Enterprises (MOE) and Municipal Owned Companies (MOC) have been formed and are considered as a quasi-public form of ownership, with its aim at becoming more efficient and less bureaucratic. The intent of these MOEs and MOCs is to concentrate on their core role and mission, accountability, entrepreneurial practices, and become as efficient as possible as compared to private companies. Figure 1 shows the main types of ownership structures used in Finnish municipalities.



Source: C-Business –Aalto & Oulu Univ. & VTT

Figure 1. Municipal Ownership Structure

Private sector ownership is quite well understood and includes the private sector co-operatives model as well. The co-operative model was frequently used in the past in farming, dairy, banking, grocers, forestry, and even private roads. Finland has an extensive private road network of 350000 kilometers with about 52000 kilometers owned by private road cooperatives, which may receive some state aid. Conceivably roads have been considered a public benefit and public management has been seen as the logical way to manage and administer the transportation network. The debate

continues over public or private ownership, but the extremes of a public or a private monopoly are generally not considered effective or sustainable. Many perceive the private monopoly to be the worse option of the two, as public values and quality can be displaced by monopolistic pricing, profit seeking, and service provision at the lowest possible cost ⁽²⁾.

More recently, with diminished public funding resources and downsizing trends, it is difficult for public authorities to deliver the desired service levels for all the technical networks. In addition, the (recent) harsh winters, breakage of main line water pipes and significant winter damages in the road networks will require additional expenditures to repair the existing assets.

3 GOVERNANCE

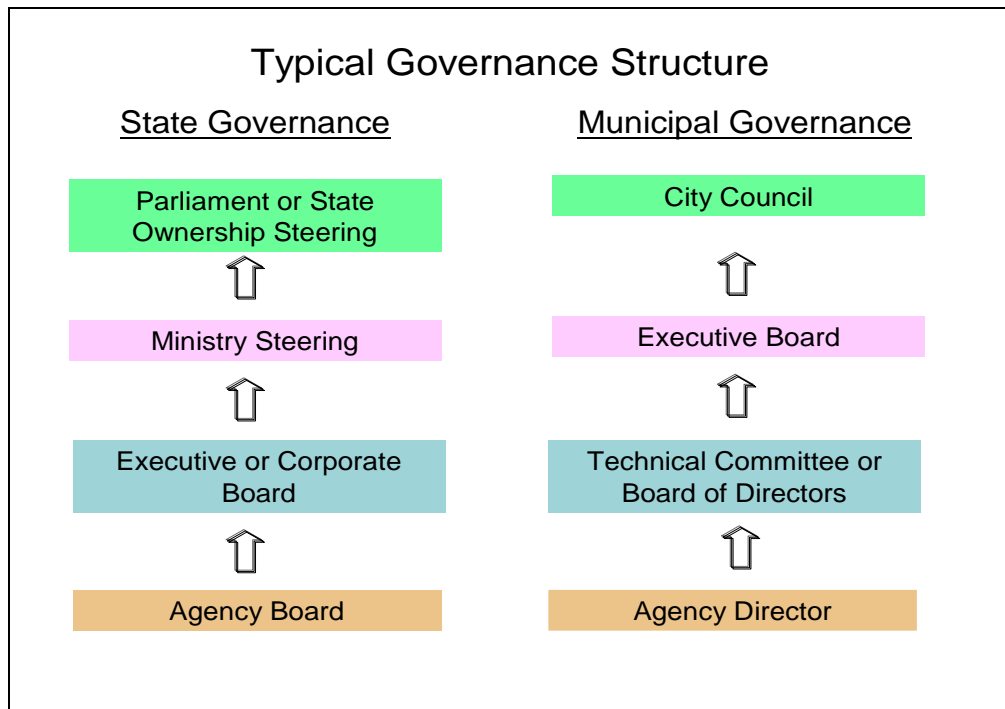
Ownership and governance are related and both carry significant control and decision making authority. Ownership, control, and governance determine a large proportion of performance, efficiency and management structure in the operations and its outcomes. From the governance perspective there are a strong links between management and procurement, commercialization and administration practices, quality of services, and development of customer satisfaction. The state governance focuses heavily on policy, public acceptance, and equity. Governance is typically accomplished through boards, steering groups, and committees depending upon the specific ownership model. As with all ownership models, there is control and there can be, and normally is, interference for purely political reasons. Private ownership has similar focus and control mechanisms, but the objective is more narrowly defined to support the corporate objectives.

Municipal governance relies heavily on internal political control and management decision-making. These are structured around committees, managing boards, executive boards and the city/municipal council. They are entrenched bureaucracies, whose decision making is authoritarian and politically directed. Municipalities have much independence from each other, there is often rivalry between them, and to a large degree they do not integrate for efficiency.

Figure 2 shows the various governance structures in the municipalities as compared to the state. There are numerous quantities of boards, committees and hierarchies in the municipal government and is one area to seek gains in efficiency. In cases where a public entity has been restructured to a business entrepreneurial model (MOC or SOC), there are less governance and fewer boards. Also, in small municipalities there are fewer boards.

4 MANAGEMENT AND ADMINISTRATION

Administration and management are essential operational aspects under the ownership and governance umbrella. Today it is quite well understood that administration and management of the organization need to be flexible, efficient, lean, transparent, and able to deliver results for the governing authority or in case of private sector, the corporate or private owner. Administration and management responsibilities include procurement, accounting, asset management, human resources, customer services, quality verification, support services and many others.



Source: C-Business –Aalto & Oulu Univ. & VTT

Figure 2. Typical Governance Structure

These processes are important, but procurement is perhaps the most demanding because it requires a concurrent change in the concept of administration and management. Will the municipalities, under political control, be able to use innovative contracting methods? It is uncertain if the municipality can implement innovative procurement practices, efficient project management, quality assurance systems, asset management, modern ICT systems, and ensure customer satisfaction. Smaller municipalities do not have the resources to do all these and are able to outsource more readily. Downsizing, work force retrenchment, and lean practices lead to a greater emphasis in project management, service oversight, outsourcing, and true asset management. If the private sector is invited into public services is it possible to gain efficiency and overcome the obstacle of entrenched political control?

5 OBSERVATIONS

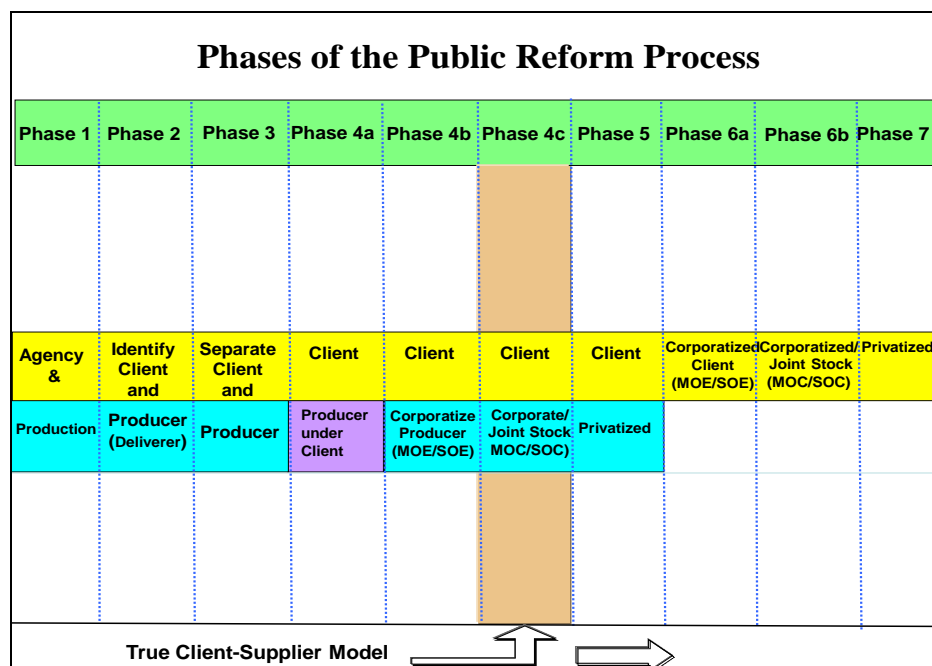
In all interviewed cases, the municipal waterworks and roads are all publicly owned except for the private road and water cooperatives. Waterworks is considered a public monopoly and most roads are owned and operated by the municipalities. Energy networks have seen some selling of the ownership, but they less frequent and most buyouts were to the Finnish State Owned Company (SOC) – Fortum or other international players. There are a few international energy actors in Finland, but energy is considered an important issue national energy security.

The waterworks sector in Finland has had progression towards business entrepreneurial model (MOE or MOC) compared to the road sector. For a good part this is because the users of water pay for the service, and it is relatively easy to determine if revenues exceed expenditures, although considerations for asset condition and depreciation remain a thorny problem. Funds for roads come from the yearly allocated budgets, usually from the municipal taxes.

The road sector has not seen much movement in the ownership restructuring as services are mainly produced by the “in-house labor force”, that is by direct labor. There are about 5-7 Municipal Owned Enterprises (MOE), which are in the larger cities and there are some 342 municipalities in total. Only a few cities have approached the client-supplier model and have no in-house labor forces, such as Askola, Inkoo, Varkaus, and Mikkeli. However, there are several smaller municipalities that have outsourced much of the services, but this study was able to interview only a few of the smaller municipalities. Many municipalities purchase part of the maintenance and capital intensive services when there is a functional market by publicly tendered contracts.

5.1 Prerequisites to Restructuring

Some state agencies and municipalities have begun adopting the client-supplier concept, but many do not understand the intent of the *true* client-supplier model. Some believe the client-supplier model to be only the separation of the client and supplier inside the organization, which is partly true. However, the *true* model is the divesture of own workers from the client organization that have performed the services for maintenance or construction, and in favour of purchasing the services from a competitive market, whether it is the private firm or a MOC. Since there is typically a functional private market for construction and maintenance work, why not take advantage of it? The true client-supplier model is depicted in Figure 3 (identified by tan color) and also shows the phases of restructuring from totally public to a private mode of service provision. It is necessary to understand the ramifications of ownership and what restructuring means. A clear mission or focus is an important beginning.

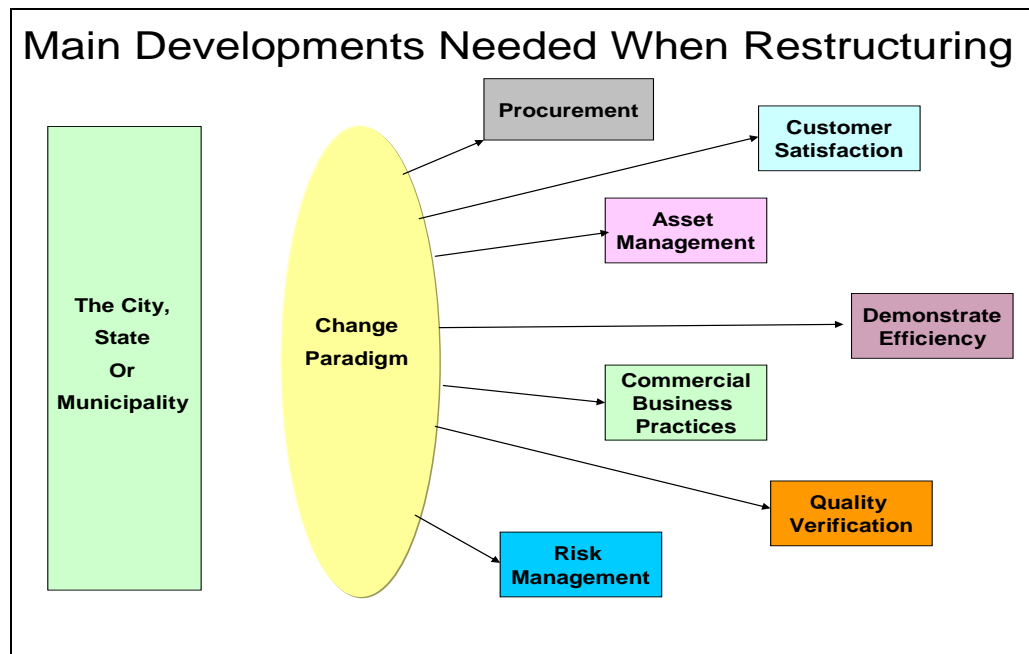


Source: C-Business –Aalto & Oulu Univ. & VTT

Figure 3. Public Restructuring Phases

Transition to the client-supplier model is not easy and there should be a clear process to follow when transitioning from public to private arrangements ⁽³⁾. There are different phases and stages of the client and supplier positions when restructuring from public to corporate entrepreneurial structure. It is very important to understand the implications

when moving from one phase to the next phase, as there are role changes, learning competences and systems that need to be developed. Procurement will be the main essential aspect that needs to be developed, as most (if not all) services will be procured competitively. Innovative procurement practices will take time to develop and require a learning process for both capital investments and maintenance contracts. Therefore, asset management, risk management, consideration of customer satisfactions, and quality verification will also need to be further developed in order to achieve optimum results. Figure 4 shows some of the prerequisites and issues that need to be developed.



Source: C-Business –Aalto & Oulu Univ. & VTT

Figure 4. Main Development Issues In Restructuring

Work force protection and labor union issues are large burdens that need to be addressed and managed, especially in the present economic climate. This is no small issue as they have great influence and consequence toward the forward progression of the client-supplier model and towards efficiency. The present economic situation of the municipalities in Finland is approaching a turning point as decisions toward taking further loans, that produces a long term affect or reducing the public expenses, which means employee layoffs and reduced services. Even reduce services are not enough such as turning off lights and reduced winter maintenance levels. The recent harsh winter, sever frost heave damage, and significant pipe breakages are exasperating the economic consequences.

Another important turn was the complaint to EU filed against Destia Oy, when it was a State Owned Enterprise (SOE), criticizing that Destia Oy could not go bankrupt and did not pay corporate taxes, and thus had an unfair competitive position. As a result of the EU decision, the Finnish State has decided to restructure the State Owned Enterprises (SOE) into State Owned Companies (SOC).

Those contemplating establishing a MOE/SOE or those presently having a MOE/SOE are in the midst of a difficult decision making process. The EU ruling, which ignored

the great importance of an MOE as providing a learning phase, does not allow MOEs to compete with the private companies and must be able to go bankrupt and be accountable for corporate taxes. The question then becomes how can the MOE become a Municipally Owned Company (MOC) if they have not first learned financial management practices, competition against the private sector, and become efficient and effective in order to win contracts? Can the MOEs continue to exist for a time through negotiated contracts or can their own internal workers move directly to a MOC, possibly with safeguards to employment, similar to what an MOE phase would provide for a limited period?

The municipalities have resolved the issue by not competing against the private sector, and only exclude it, and for now it is not seen as a major issue in the municipalities. But it may be because competitive practices are not learned. In any case, it does present an interesting case for those municipalities with MOEs, as they are somewhat stalled in the process. It is difficult to proceed to the next phase in the client-supplier model to a MOC as they would have to compete against the private market and may not be as cost effective and might not possibly win the competition.

The EU ruling and Finnish reaction to the ruling has jeopardized the initial and justified expectations that they could possibly remain as MOEs/SOEs until they are ready to become MOCs/SOCs. Presently there is indecisiveness with the municipal owners as to the future of MOEs.

A functional market is very important to develop in the municipalities for outsourcing road construction and especially maintenance. Outsourcing is perceived to provide savings as the private sector may be more efficient ⁽⁴⁾. It is a significant prerequisite and also for the future to prevent any possible market imperfections, like cartels, monopolies and price fixing schemes. Some municipalities regard or fear that the market is too small. In outsourcing it is important to write good contracts as there have been many examples from the road sector that have seen the consequences of incomplete contracts. Also, having a procurement strategy or plan is important and sends a message to the market of what is to be expected and what preparation is needed from the market players. It is also important to determine what type of contracts work better than others and what is the appropriate contract duration ⁽⁵⁾.

Quality verification is needed and how the quality will be described, what is required of the contractor's quality plans and what systems are in place to monitor the quality promises. This will be an iterative process for most and a learning process on what works and what does not work.

Further in the progression, customer satisfaction will be important to measure and influence. These may be similar to customer satisfaction systems used in the private sector when developing and marketing new products and services.

5.2 Benefits and Challenges to Restructuring

Part of the project includes a SWOT analysis, which describes the strengths, weaknesses, opportunities, and threats to restructuring. The project team was

responsible for developing this for the various ownership models. This part of the research is still in progress and some of the benefits observed (to date) include:

- Clarification of the roles – being a client or a service provider (not both)
- Adoption of business and entrepreneurial practices with good financial management systems
- Efficiency
- Cost savings and knowledge of costs for the works
- More freedom from the traditional municipal bureaucracy and hierarchy
- Becoming an asset manager and using good asset management principles
- Procurement of planning expertise and obtaining stakeholder cooperation
- Understanding risks
- Accountability

There are also challenges to the restructuring of ownership. Change is a difficult phenomenon. Some of the challenges observed (to date) include:

- Approval needed at high political levels - the city council
- Labor Unions
- Loss of direct control for works-planning, design, execution
- Job security and higher cost of “in-house” workers (direct labor)
- Political interference, hierarchy and bureaucracy
- Presence or quick development of a functional private sector market
- Inward looking management with no drivers for change – satisfied with the status quo
- Financial management and tax liabilities
- Potential foreign competitors or ownership of strategic assets if privatized
- Cost accountability and transparency

For comparison, the Finnish State has restructured numerous organizations on a broad basis during the privatization movement. However, Finland has the sensibility to keep the vital technical networks like, airports, energy, roads and rail under public ownership, but allowing the business entrepreneurial model to make them efficient and use modern practices for longevity.

6 RESULTS & CONCLUSION

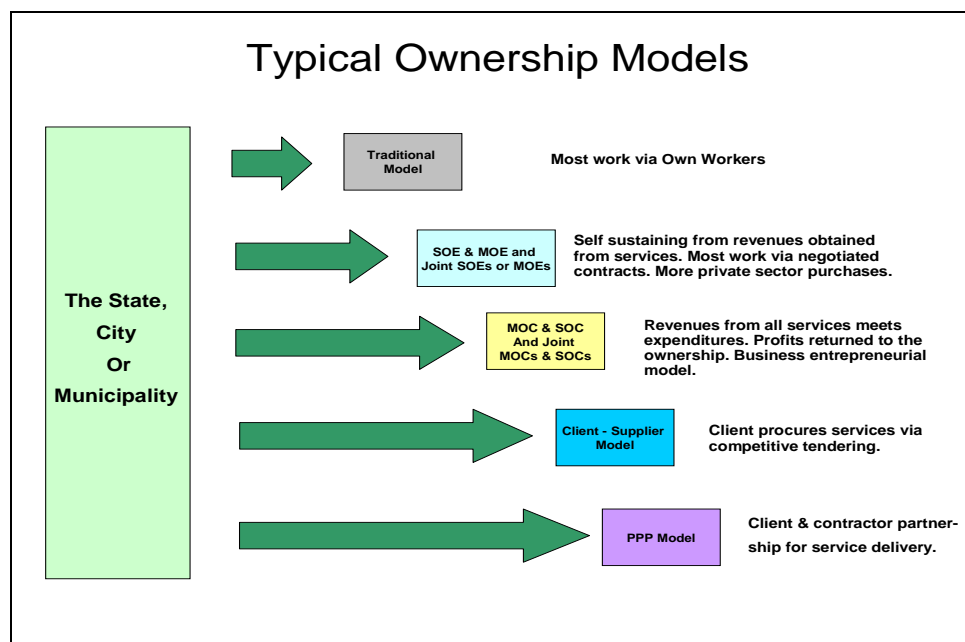
Perhaps municipalities are more difficult to restructure than state owned networks. The municipalities have been able to keep control, governance and decision making about infrastructure networks as part of a strong form of local government. The situation appears to have strong local character as the social and technical services tend to be paid and consumed by the local taxpayers. An interesting perspective is that the municipalities do not collect gasoline, fuel, and other forms of transportation taxes, which are collected at the state level. A possible future is that fuel and real estate taxes will become a source of support for the municipal infrastructure functions.

One overall conclusion is that it was almost unanimous among those interviewed that the public should continue to own the technical networks, for the sake of security, good services, as private ⁽⁶⁾ and possibly international ownership might lead to poor quality.

However, there were comments that it might be possible, perhaps in near future, that private management and operations in some segments will be adopted.

The ownership models are described according to the categorization defined below. These can be seen from two perspectives, one as the client organization, and the other as the supplier organization. The ownership models can be categorized as follows and displayed in Figure 5:

- Traditional model (work is carried out by the direct labor – “in house” forces)
- MOE or SOE model (Municipal/State Owned Enterprise)
 - Client MOE or SOE
 - Supplier MOE or SOE
 - Integrated MOE – Merger of several municipalities
- True Client-supplier model (all services are procured in the market)
- MOC or SOC model (Municipal/State Owned Company)
 - Client MOC and SOC
 - Supplier MOC and SOC
 - Integrated MOC – (Co-ownership and merger of several municipalities)
- PPP model
- Private Cooperatives or Associations
- Fully Private Entities



Source: C-Business –Aalto & Oulu Univ. & VTT

Figure 5. Evolution of Ownership Models

6.1 Waterworks

The results for waterworks indicate a positive trend in restructuring, with movement toward an entrepreneurial model with ownership still remaining in public hands. Waterworks involves a strict health and public safety element so the risks are large for delivery of healthy water to the consumers. Even though waterworks is a public

monopoly, it remains to be seen in the future if one possible shift would include the private sector into the maintenance and management? This has happened in some countries, France, England and USA, but there is a lack of private functioning market in waterworks in Finland and maybe the public sector remains as the appropriate owner. The Finnish way has been to use a deliberate gradual process of restructuring the ownership into municipal owned enterprises and companies, with the ownership remaining in the public hands. Table 1 shows the ownership models for those interviewed in the project.

6.2 Roads

The municipal roads show a different trend of the waterworks. The municipalities are reluctant to divest their own work force for reasons of employment and control. There are only a few municipalities that have progressed or restructured their road sector ownership as most roads are publicly owned and open for public use, without any direct payments to maintain the road assets. Conceivably roads have been considered a public benefit and the public management is the logical way to take care of the transportation network.

However, there has been an increase in the new public management philosophy and several countries at the state level, have divested their own forces for doing the maintenance works. Even so it is not considered as an extensive trend, even in the USA road maintenance is provided by direct labor. Municipalities are even more conservative in letting go of their own work forces.

As seen in Table 1 there are not many municipalities restructured as MOEs or in the client-supplier phases. It is estimated that over 200 (out of 342) municipalities are using the traditional model. Some interviewees commented that when the market is too small, there are not enough bidders to have effective competition in outsourcing, and hence the need to employ their own direct labor. Also, restructuring to the *true* client-supplier model was more common and easier for smaller municipalities as they have very few own workers and control and management structures.

6.3 Other Results and Findings

Other results and findings for the road and water sector will be reported later. These networks are significantly different from each other and usually require different end game solutions. A summary of the related results and findings are as follows:

- There is no one model that is “best” or even practical for all municipalities.
- The state and municipal ownership is the preferred option.
- There is conspicuously more restructuring in the water networks as many MOCs have been formed and do use corporate practices.
- Smaller municipalities are able to restructure more easily and without difficulty.
- Municipal governance involves power plays in many respects. This occurs at (too) many hierarchy levels.
- Municipal technical committees could delegate more decision-making authority to the technical managers.
- Municipal governance sometimes excessively interferes with operations

- Good and well structured appeals process may convince the decision makers of change

	Water	Roads
Integrated Organization (Traditional)	(> 110)	3 (> 200)
Separate Client & Supplier (In-House)	-	1
MOE/SOE	2 (50)	4 (2)
MOC/SOC	7 (80)	1
True Client – Supplier Model	-	1 (2)
True Client with no publicly owned suppliers	-	1 (3)
Private Co-Operatives	2 (Approx. 950)	(Approx. 15800)

() – Estimates from those not interviewed
Source: C-Business –Aalto & Oulu Univ. & VTT

Table 1 Ownership Models from Interviews

Finland has shown the sensibility to keep the vital technical networks like, airports, electricity production, roads, waterworks, and rail under public ownership, but allowing the business entrepreneurial practices into the public ownership for efficient and modern practices to insure longevity.

It remains to be seen if the research results will motivate municipalities to restructure the road sector and take advantage of efficiencies and lower costs? With the municipal financial crisis and poor economic situation, the city councils need to make hard choices other than layoffs and lowering the service levels.

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