



WP5.1

A European survey of energy renovation delivery methods

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1. Introduction

This report has been created to summarize the different current results of the work done on the Shelter project. This report, deliverable 5.1, is to be used as reference document for the writing of recommendations for Public Authorities, what is the expected output of WP5. The report consists of four parts:

- A short summary of the outputs of WP3, extended information can be obtained from the report “WP3.1 Coordination of Professionals” available on the [Shelter website](#).
- A summary of the data obtained by the questionnaire addressed to European SHOs.
- A summary of the information obtained by the interviews to a selected group of experts on housing from different European countries.
- Conclusions extracted from the three previous points.

2. Results of WP3

Social housing organisations have a privileged position to implement changes on the quality of the housing stock, as they are the owners of a large stock of dwellings. In recent years energy efficiency has become one of the main focuses of their renovation processes. However, the financial capacity of these entities is rather small and limits considerably their opportunities to improve the quality of their housing stock. Moreover, as they offer a public or semi-public service, commonly they have to work with strict regulations.

The current energy renovation processes of social housing organizations from five European countries have been analysed in the framework of the Shelter project: Belgium (Walloon region), Bulgaria, France, Italy and United Kingdom. From this qualitative analysis several problem areas have been identified: strategy, work organization, design decisions, tendering and contracting, knowledge and influence on tenants behaviour. Moreover, possible alternatives have been proposed aiming to increase the energy performance by improving the coordination and cooperation of the different actors involved in the process. The most important recommendations are:

- Involve construction and maintenance companies during the design phase in energy renovation projects.
- Define lists of recommended award criteria for contractors selected for energy renovation projects.
- Make use of performance-based specifications.

More detailed information about the results of the analysis can be found in the report “Coordination of professional” published on the [Shelter website](#).

3. Results of the questionnaire(WP5)

The questionnaire was distributed electronically via national contacts of CECODHAS reaching 8 countries: Belgium, Denmark, England, France, Germany, Italy, Spain and Sweden. In total 36 answers were gathered from different types of organisations. The organisations that answered the questionnaire are listed in Annex 1 and an overview of their geographical localization can be seen in Figure 1.



Figure 1: Geographical situation of the SHOs.

The following results make reference to the analysis of the complete sample of 36 answers. Some results are shown also per country. Take into account that the size of the sample is too small to have results with statistical significance; especially, when the results refer to a specific country (Denmark have been omitted from the partial results as we got only one answer from this country).

The interpretation of the results is written in italic.

1. Is energy saving one of the main elements of your dwelling renovation strategy?

Yes 100%

Currently energy saving is a hot issue for all SHOs. However, it could be too that the SHOs who have replied to our questionnaire are the ones who have an specific interest in this topic, and that is why they have felt like replying.

2. Do you have an energy efficiency evaluation of your building stock in your property register?

Yes 76%

3. Which percentage of your building stock has an energy certificate?

40%

Belgium 30% - France 86% - Germany 75% - Italy 11% - Spain 10% - Sweden 65% - United Kingdom 26%

Most SHOs have an energy efficiency evaluation of their building stock in their register 76% but the percentage of the building stock that has an energy certificate is considerably smaller 40%. Analysing it by countries appears a remarkable difference of implementation among them what we can attribute probably to the different emphasis on the implementation of EBPD done by each country.

4. Which kind of strategy do you use for the renewal of your building stock?

Planned Maintenance 55%

Major Renovations 45%

Belgium 20%/80% - France 42%/58% - Germany 47%/54% - Italy 40%/60% - Spain 70%/30% -

Sweden 60%/40% - United Kingdom 76%/24%

It is remarkable that Major Renovations accounts only by 45% of the renovations carried out by the SHO analysed. That means that in most part of the cases, as planned maintenance is used a renewal strategy, the different solutions implemented are mainly substitution of old elements for new ones.

5. In case you apply planned maintenance as renewal strategy, is there an architect involved?

Yes 48%

However, in the case that planned maintenance is applied in approximately half of the cases an architect is involved.

6. In case you apply renovation as part of your renewal strategy, which types of delivery method do you use and in which percentage?

Contracted Design + Contracted Works (single contract) 8%

Contracted Design + Contracted Works (separate lots) 26%

In house Design + Contracted Works (single contract) 18%

In house Design + Contracted Works (separate lots) 40%

Contracted Design and Works (contract with a single company) 2%

Contracted Design and Works (contract with a construction consortium) 1%

Contracted Design, Works and Maintenance (contract with a single company, eg ESCO) 2%

Contracted Design, Works and Maintenance (contract with a construction consortium) 3%

The use of separate lots for contracting the works it is a majoritarian option among the SHOs analysed: 66%, what facilitates the direct contracting of SMEs. Moreover, it is interesting to highlight that among the SHO analysed 58% are in charge of the design with their own employees.

Integrated contracts, Design-Build or Design-Build-Maintain, are used, among the analysed SHOs, in only 8% of their renovation projects. Seven of the 36 SHO have indicated that they use some of the integrated design contracts, this seven SHOs belong to six different countries: Belgium, Denmark, France, Italy, Sweden and United Kingdom. What it shows that there are innovative SHOs in a variety of countries.

Most part of them make use of this type on contracts in less than 30% of their renovations projects, but In two cases they are used more often:

- Sociale Huisvestingmaatschappij Nieuw Dak from Belgium applies D-B-M contracts in 50% of their renovations projects with single companies.

- *Habitat 76 from France applies D-B-M contracts in 100% of their renovation projects with construction consortiums.*

7. Which type of specifications do you use in renovation projects?

Descriptive 69%
Performance-based 31%

Most part of the analysed SHOs use descriptive specifications. However, 17 of the 36 SHOs analysed use in some cases performance-based specifications: Belgium 1/3, France 3/5, Germany 2/4, Italy 3/8, Sweden 2/3 and United Kingdom 6/9.

6 of the SHOs analysed use performance-based specifications in more than 75% of their renovations projects: France 1/5, Germany 1/4, United Kingdom 4/9.

8. Which type of awarding procedure do you use in your renovation contracts?

Lowest price 40%
Economically Most Advantageous Offer 60%
Belgium 100%/0% - France 42%/58% - Germany 44%/56% - Italy 62%/38% - Spain 2%/98% - Sweden 13%/87%
- United Kingdom 18%/82%

Even though the MEAT method of awarding procedures is the most common among the analysed SHOs, there is still a big a proportion of contracts, 40%, that are awarded to the lowest price. Related to this matter we can see a big difference of results among countries.

9. Do you promote the collaboration between design companies, construction companies and/or maintenance companies working at the same project?

Yes 61%

A majority of the analysed SHOs have answered positively, 61%, about their efforts to promote collaboration among actors working in the same project. Among the positive answers around 60% argue that they organize regular meetings and they organize a good supervision of the works, the other 40% argue that they set up a working team from the beginning of the project.

Among the SHOs analysed who answered 'no' the common reasons are that this is not their duty as a client or that public procurement doesn't allow it.

10. Do the tenants get instructions to use the house efficiently?

Yes 97%

Only one of the analysed SHOs has replied 'no' to this question. All the positive answers argue that they give written instructions to the tenants. Moreover, 30% of them argue that they offer demonstration sessions or face to face advice.

11. Do you monitor the energy consumption of your tenants?

Yes 67%

Two thirds of the analysed SHOs monitor in some way the energy consumptions of their tenants. However, only 20% among these have a complete and individualized energy monitoring system. The rest of the SHOs fall into one of the three following options:

- They started monitoring recently all new and renovated properties, 33% among the positive answers.*
- They run periodical surveys among their tenants, 25% among the positive answers.*
- They only monitor the common heating installations, 20% among the positive answers.*

One other SHO argues that they monitor the dwellings that have ask for advice to reduce their energy bill.

The one third of SHOs who answered 'no' give mainly three different reasons:

- Because the tenants have directly contracted the energy services to external companies.*
- Because they have no resources to set up the monitoring system.*
- Because of privacy matters.*

4. Results of the interviews (WP5)

In order to gather the opinion of diverse professionals related to the renovation of social housing around Europe a series of interviews have been arranged. The interviewees have been proposed by the three partner federations of the Shelter project: ACE, EBC and CECODHAS. In total 14 interviews have been done with people from 10 different European countries. All interviewees have a direct relation with the renovation of social housing and are considered to have a good overview of the current situation. Various types of professionals are present among the interviewees selection: architects, technical advisors, juridical advisors, politicians and builders.

Austria

Eva Bauer, GBV (Austrian Federation of Limited-Profit Housing Associations).

Belgium

Bernard Wallyn, VMSW (Flemish Social Housing Company).

Robert Hoedemakers, Hoedemakers nv. (Construction Company).

Denmark

Peder Vejsig Pedersen, Cenergia (Energy Efficiency Consultancy Company).

France

Mohamed Rkabi, GMT (Masonry company)

Virginie Toussain, Union sociale pour l'habitat (French federation of public housing).

Germany

Peter Ebner, Architect.

Greece

Yorgos Andreadis, Architect.

Italy

Antonio Borghi, Architect.

Spain

Núria Pedrals, Government of Catalonia.

Teresa Taboas, Architect / Galician Government.

Sweden

Petter Jurdell, SABO (Swedish Association of Public Housing Companies).

United Kingdom

Andrew Burke, National Housing Federation.

Chirs Carr, Carr & Carr Ltd, (Construction company).

The interviews were semi-structured. All of them covered a few basic specific questions, however more questions were added during the interview related to the same topics in order to get a more complete answer. The extra questions differed depending on the background and knowledge about the specific topic of the people interviewed. The pre-defined questions were:

About your organization and yourself

1. What your company/organization does?
2. What is your role in your company/organization?
3. What is your geographical area of action?

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?
2. How do you think how the use of performance-based specifications can be promoted?
3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?
4. What do you think about the role of the architect in energy renovation processes?
5. What do you think about the role of SMEs in energy renovation processes?

The following pages present a condensed summary of the answers offered by the different people interviewed. Even though the questions are quite precise requesting for possible improvements, several of the answers give only a description of the problem.

AUSTRIA. Eva Bauer, GBV (Austrian Federation of Limited-Profit Housing Associations)

Eva Bauer is an advisor on housing economics in the Austrian Federation of Limited-Profit Housing Associations, GBV www.gbv.at. GBV represents the interest of their member in front of the public authorities and offers professional advice to its own members. Eva Bauer is involved in studies about housing demand, housing supply and financial aspects of refurbishment in Austria.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

In the case of Austria the promotion of energy efficiency is related to certain subsidies. In order to get the subsidies it is necessary to comply with certain criteria. Therefore, the criteria are included in all renovation projects.

2. How do you think how the use of performance-based specifications can be promoted?

Most SHOs in Austria make use of performance-based specifications. The expected energy performance is based in theoretical calculations and the quality control is based mainly on building site inspections. Only in the case of passive houses there are real test of the air tightness.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

No specific remarks on this point.

4. What do you think about the role of the architect in new energy renovation processes?

In Austria an architect is commonly involved only if there are structural changes. In case that only the façade and roof are renovated usually there is no architect involved.

5. What do you think about the role of SMEs in new energy renovation processes?

SHOs in Austria make commonly contract works in two different ways. Some divide the contracts in lots and some make a single contract with a generalist contractor. In case of making use of a generalist contractor this can be a medium enterprise or a big one. However, there is a trend in Austria for the concentration in construction companies. Therefore, bit by bit there are less construction companies and the remainders become bigger. This is not seen as positive event by SHOs, that consider that the competition is declining.

BELGIUM. Bernard Wallyn, VMSW (Flemish Social Housing Company).

Bernard Wallyn is technical advisor in the Flemish Social Housing Company, VMSW www.vmsw.be. VMSW is the umbrella organization of the Flemish SHO. They are mainly a bank that finance to build and renovate buildings. However, they have too a technical department for advice about construction, energy matters and sustainable social housing.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

In the Flemish region award criteria are not currently used for the tendering of works because with the use of award criteria it is difficult to be 100% objective, and that is needed to fit on public procurement. Currently work contracts are tendered mainly to the lowest price. Award criteria are only used in really specific projects or large projects.

2. How do you think how the use of performance-based specifications can be promoted?

In the Flemish region performance-based specifications are not currently in use. The main barriers for its implementation are: The companies doesn't have the knowledge enough to use this system and for small contracts requires too much extra work and tends to higher development costs.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

In the Flemish region there have been some SHO experimenting with the involvement of the constructors in an early phase of the design. These pilot experiences have had rather positive results. These communication of the results of these pilot projects must be the way to convince other companies to use this type of approach.

4. What do you think about the role of the architect in new energy renovation processes?

In the Flemish region architects have a really important role. Some time ago architects were normally first working alone in the design before to request for the advice of technical consultants and now architects are part of a design team together with structure and installation engineers.

5. What do you think about the role of SMEs in new energy renovation processes?

SMEs have now in major renovations projects a passive role, being involved as subcontracted parties by a generalist construction company. It is possible to involve them more by trying to develop a process that promotes innovation, but this could be dangerous as maybe there is not enough knowledge in the market to offer a good service for this type of innovations.

SMEs are contracted directly in the case that SHO make use of planned maintenance as renovation strategy.

BELGIUM. Robert Hoedemakers, Hoedemakers nv.

Robert Hoedemaker is general manager and owner of Hoedemakers nv, a general construction company, www.hoedemakersnv.be that works in Belgium in the surrounding of Hasselt. Hoedemakers nv has started a new partnering strategy four years ago, setting up a team of companies that cover the complete services of Design and Construct. They work mainly in new and do some renovations, in case of social housing they work only in new construction.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

Contracts are awarded always to the lowest price in Belgium. The system is completely price driven. In my opinion over a 5 million Euro contract another type of awarding procedure could be put in place, taking into account other parameters. But then the whole tendering process will require more work by part of the client (public authority), and maybe the client is not ready for such a work.

2. How do you think how the use of performance-based specifications can be promoted?

The vast majority of the projects use descriptive specifications. As the only parameter is the price the quality can only be assured by specifications as precise as possible. Performance-based specifications is not a topic to discuss about in Belgium.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

In their own case, they have a complete team: architects, general contractor and specialized contractors that can develop a project. In fact they do so when they act as promoters. Using this type of approach they have demonstrated that the costs are reduced by 8%. However, the architects and the general contractor must be different companies, as in Belgium the policy is that the architect can act as a referee between client and contractor.

However, in the case of social housing, first there is an architect assigned and later on the works are tendered as a single contract. The architect is in charge of the supervision of the works. Even though the constructor is responsible for defects during the first exploitation year, the communication with maintenance companies in charge of exploitation is minimal.

Some public projects, like schools have been tendered as DBMFO contracts. In this cases the different actors have needed to work together. However, it doesn't look really good, as in Belgium construction sector that is prize driven people is not used to work with this method. Moreover, the choice for DBMFO has been done not for improving the collaboration, if not to reduce the amount of money in the public budgets. Now they are financial partners (banks) and the final cost of the project is going to be a lot bigger, only spread in several years.

4. What do you think about the role of the architect in new energy renovation processes?

Currently in architect doesn't have a different role, he is in charge of the design and supervision of the works.

5. What do you think about the role of SMEs in new energy renovation processes?

In Belgium all companies are categorized depending on their size. Every category allows the companies to tender until a certain amount. In case of consortiums of companies, the category of the highest one is the one that counts. This system doesn't allow SMEs to go for bigger contracts even if they create a consortium.

Denmark. Peder Vejsig Pedersen, Cenergia.

Peder Vejsig Pedersen is director of Cenergia, www.cenergia.dk, an energy consultant company from Denmark. Most part of the work developed by Cenergia is related to housing, however, they work with other types of public building too. They have been involved in several national and international pilot projects. They have also participated in some IEE projects.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

In Denmark award criteria are commonly in use. When awarding a contract the price represents 40%-50% of the total mark, the architectural quality around 20-30% and other elements around 10-20%. Currently, sustainability and energy efficiency are criteria always present in the tendering procedures. In Denmark they have well-defined energy labels system taking into account heat and electricity, because of this energy labels it is easy to evaluate the award criteria referred to this topic.

2. How do you think how the use of performance-based specifications can be promoted?

It is not easy to forecast which will be the energy use because of the effect of the behaviour of the inhabitants. Therefore, in Denmark performance-based specifications are not commonly used in reference to the energy use, for heating or electricity. However, performance-based specifications are used for other topics for some time with good results, like for example the air tightness, that is easy to evaluate. Thermographic pictures are really more difficult to evaluate. We f.ex try to implement the so called Active House standard here (www.activehouse.info)

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

Currently in Denmark Design-Build contracts are quite common, not all the major renovation projects use this type of contracts but I think around 60% use it. Normally this type of projects are awarded in a design competition. During the design phase the different companies participating in the competition can ask questions, the answers are given to all the participants. There is no negotiation during this phase, therefore there is no dialogue during design phase between the client and the contractor.

Design-Build-Maintain has been used in some cases, but it is not a common solution in public housing. D-B-M contracts are more used in other types of public buildings. A new concept used in some cases is the integrated energy design which aims at involving all stakeholders from the start to reach a good energy design.

4. What do you think about the role of the architect in new energy renovation processes?

Traditionally the architect had the leading role in renovation projects, they were making the design in cooperation with the different advisors and later they were tendering to the lowest price. But now it has changed to design teams, with contractors and other parties. Commonly this new type of teams are lead by the main contractor.

Of course architects like to be in charge, but the experience is that you get cheaper projects when it is a total design product.

I don't know of any investigation that shows differences between one approach and the other. In the old days the architects will do the control at the building site. Now you leave the control of the quality to the contractor. That has been the change. I don't think you can do so much about it. It is a normal development, we are not going to go back. In some cases it could be a problem that there is not too much control. But if you can find easy measurable performance criteria then it is easy to evaluate the results.

5. What do you think about the role of SMEs in new energy renovation processes?

In Denmark there a few big construction companies that are really competitive, however, as SMEs are really specialized they are able to compete in the renovation market.

The renovation looking for energy efficiency is an emerging market, therefore, all kind of companies will apply for this type of tenders.

In the past the municipality had their preferred constructors and preferred architects, but now everything is based completely on EU public procurement rules. In Denmark everybody follow the rules. Thus now the choice for a company comes by the one who offers the best value for money.

France. Mohamed Rkakbi, SARL GMT

Mohamed Rkakbi is the manager of SARL GMT, a masonry SME that works in new construction and renovation in the surroundings of Montpellier.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

In the tendering process I am involved there are always several award criteria that are taken into account. However, the different award criteria are commonly not well defined and the scores given are based in a quite subjective criteria, the feeling is that the process is not transparent. The criteria currently in use do not take into account energy efficiency.

From his regard this can be improved by doing a good definition of the award criteria, and choosing award criteria that are easily evaluable and quantifiable to make it a more objective procedure. For example amount of employees in the company or energy efficiency parameters that could be quantified.

2. How do you think how the use of performance-based specifications can be promoted?

I had participated in a project with performance-based specification. I had a good experience even though I didn't won the tender, I got the second position. The evaluation criteria were a lot better defined and were quantifiable what made the process a lot more transparent. This type of specifications force them to invest a lot of time, but I think it is worthy for big projects.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

They have been involved in one project as design advisors when being part of a Design-Build contract. In this case the experience was just normal. I don't think there was a difference on the results. I think that the biggest difference is the role of the architect. I think that traditionally the architect plaid a role as referee between the constructor and the client. With Design-Build contracts the architect is under the constructor, thus the balance is lost. The project worked well, but it didn't looked logic to me.

4. What do you think about the role of the architect in new energy renovation processes?

As mentioned in the previous question. With Design-Build contracts there is a change on the role of the architect, and I think it is not positive as he loses the referee position and the project gets unbalanced.

5. What do you think about the role of SMEs in new energy renovation processes?

I think that with the new system there are new opportunities. I think SMEs are ready to adapt to it, as they are used to do. I do not see a problem if they need to learn new things or work in teams. Where I see an unfair competition is with the big construction companies because SMEs cannot finance the projects. With the current economic situation public administration requires construction companies to finance the works, to act as banks. And the SME don't have the capacity to do so. Therefore, this factor can have a big negative influence for SMEs working for the public market.

France. Virginie Toussain, Union sociale pour l'habitat.

Virginie Toussain is a legal advisor working at the Brussels office of Union Social pour l'Habitat, www.union-habitat.org, French federation of SHOs, representing around 800 SHOs. She deals with the European laws that have and impact on the French SHO market. She has some task as a lobbyist and other tasks as legal advisor for the member of the federation.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

Currently in France most part of renovation projects take energy efficiency into account among their award criteria because of commitment coming from the law "Grenelle" for the environment. The current problem is not if there are criteria that take the environment into account, the problem is to define criteria that are effective and compatible with public procurement rules . And moreover you need professionals who can define those good criteria in the public procurement procedure.

2. How do you think how the use of performance-based specifications can be promoted?

We have no information about how many SHOs are currently using performance-based specifications. When using descriptive specifications the quality depends on the use of certified materials. That is why from their organization they are working on a guide about certified materials to help their members to make the right choices.

Performance-based specifications goes really good related to the use of several award criteria, however with performance-based it is difficult to evaluate the final results.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

In France there is a specific article in the public procurement law related to Design-Build that has been recently put into place. Several of their members are right now using it in some projects. They use also competitive dialogue to award this type of contracts. The French public procurement is a bit more restrictive than the European, however this option is already in use.

4. What do you think about the role of the architect in new energy renovation processes?

No specific remarks on members on this point.

5. What do you think about the role of SMEs in new energy renovation processes?

Our national law on public procurement propose the use of lots, it is the common procedure. In the social housing framework, the national law on lots is not included in our obligations, but enterprises are using it in most of the cases. The new models, Design-Construct, it cannot be divided into lots, thus SMEs have no chance to get a direct contract. However, one of the problem with SMEs is that in some regions we don't find SMEs with enough knowledge for innovative projects and the call for tenders get no reply.

Germany. Peter Ebner, Architect.

Peter Ebner is an Austrian architect with an academic and a professional career developed in several countries, mainly in Germany and USA.

The academic career: 2003 to 2009 he has been Professor for Housing and Housing Economics at the Technische University in Munich and since 2009 he leads Futurelab in UCLA, Los Angeles. Meanwhile he has been guest professor in several universities.

The professional career: he has an office with several partners. In their practice they do a lot of housing of all kinds, from social housing to luxurious housing. www.ebnerandfriends.com

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

For new construction it is already in the law. You must obey with strict requirements that specify a certain level of energy efficiency. However it is not the case for renovation.

From my research, we have seen that the people awareness of the problem has increased. In the year 2005 hardly nobody cared about the running cost of their dwelling, and in 2007 there was already a 16% who care about it. This was mainly because there was a lot of attention in the newspaper about the topic. However, in the case of renovation people would not like to invest too much to make it more efficient.

Anyway, I think that sustainable is more than energy use. The material use is not a topic yet, and if the quality of the materials is bad there is a need for renovation sooner. The law need to regulate this matter too.

2. How do you think how the use of performance-based specifications can be promoted?

We work all the time with climate engineers. We develop different solutions and then the client decide which fits the better in terms of energy efficiency and other parameters. We always work like this.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

I had experience in a project in USA with Design-Construct. The experience was really bad and I would not like to repeat it. We had an over cost of 30% because the construction company was not able to make the cost estimation good, even though it was a prestigious construction company.

I think it is better not to have contact with the construction company. First we do the concept an latter on we look who can do it for the best price.

4. What do you think about the role of the architect in new energy renovation processes?

Already answered in the previous question.

5. What do you think about the role of SMEs in new energy renovation processes?

You don't care about the size of the companies. It depends about how good they do the work. The only point about the size is if they have an insurance in case of mistakes.

Greece. Yorgos Andreadis, Architect.

Yorgos Andreadis is a Greek architect working at the firm YA&P architects www.adis.gr . Ten years ago they were working mainly in France and a bit in Germany. Later on they had different type of projects in Greece: they had refurbishment of social housing, they had some cultural projects like theatres and dome projection facilities and some urban design. In the last 3 years because of the global general situation in Greece, they work in the Middle East developing some commercial centers. They work on projects of all type scales.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

Selection and award criteria are already in use in Greece. However the award criteria doesn't make reference to the proposals for the design, so no reference to energy efficiency. The situation is difficult to change because the Greek administration is really big and slow, moving mainly by inertia.

2. How do you think how the use of performance-based specifications can be promoted?

Up to today the use of performance-based specifications is new in Greece. I have only make used of them in a project that had European funding, and the funding depended on the performance of the project. I think, however, that this can be used more, especially for public buildings as schools and hospitals.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

During the Olympic Games several Design-Construct contracts were used, but the main reason for this choice was to speed up the process. In fact as the specifications were no clear and there was not a good control a lot of extra money was expend in these projects. Therefore, this type of approach doesn't have a good reputation in Greece.

4. What do you think about the role of the architect in new energy renovation processes?

For all the operations and architect is needed. If do you have a modification in the shell you need and architect. And of course depending on the size of the project you need other consultants in your team.

5. What do you think about the role of SMEs in new energy renovation processes?

SMEs depending on the size of the contracts can be involved directly in the renovations works, however there is not a clear qualification system in Greece. Thus it is difficult to select the SMEs who really have the knowledge for the specified works.

Italy. Antonio Borghi, Architect.

Antonio Borghi is an Italian architect working in a small architect studio in Milan. He has done a study of feasibility for the renovation of a large social housing complex in Milan and he has been involved in renovation projects of large social housing states. Moreover, he has participated as researcher in different European projects. He is also chair of the Architects Council of Europe Workgroup Urban Issues www.welldesignedandbuilt.com

About energy renovations in social housing

1. How do you think can the use of award criteria for tendering procedures related to energy efficiency be promoted?

Usually energy efficiency is among the award criteria, but it is really difficult to know how much it counts. Because you need to deliver at the same time low cost and energy efficient. The evaluation of the different parameters is to a large extent subjective. At the end it is a matter of trust and, especially if you don't use the standard technologies it is very difficult to evaluate the proposal ex-ante. In a design competition it is not possible to have an objective evaluation. The instruments to double check the submission are highly complex, and it is too difficult to evaluate how the different elements for energy savings interplay with each other. Things could work differently if there was more design competitions with performance based award criteria. Then there would be more experience and a broader innovation knowledge base. There is a need for evidence-based knowledge to make informed decisions. There is a lot of field work to be done. There must be more knowledge dissemination, analysis of the results and evaluation of what have been done.

2. How do you think can the use of performance-based specifications be promoted?

In Italy every new building has to have its energy performance certificate. Every project (new build but also existing building undergoing renovation) must provide a calculation of their expected energy performance when it goes to submission. Because it make a difference in the taxes that you pay and because it may allow you to increase the built volume. There are differences from region to region about the performance test of the buildings after construction. In theory there should always be a simulation before and an ex-post assessment after delivered by a certificated professional.

The problem is that to evaluate the performance of building is complicated, meanwhile the assessment is schematic and basically not responding to reality. If the evaluation is negative in theory the building should be demolished or the developer should pay a big fine, but this part of legislation is not practicable.

3. How do you think can contractors and maintenance companies should be involved in the design phase of renovation projects?

Currently there is not always good collaboration between the different parties. Unfortunately the designer, the constructor and the maintenance are not always working together well because the borders between the different fields of competences are not clear, margins are too low and everybody has to struggle to stay in the market. There are only a few examples of companies who are collaborating well with architects and planners, for instance when the developer is also taking care of management and maintenance of the building. Bad relationship between architects, developers and building company is a big thread to high quality buildings. However there is a case of PPP in SHO in Milano which is bringing quite good result thanks to the involvement of the stakeholders from the stage of the building program, through an international design competition with large public resonance (<http://www.fhs.it/>). They selected the projects by design competition obtaining high quality results. . In this case it was for new construction, but I expect that this approach to be used for renovations too.

4. What do you think about the role of the architect in new energy renovation processes?

In Italy you only need an architect if the building is listed as a heritage building, if it has an historical value. Especially for renovations many times you don't have an architect involved, generally it is considered just maintenance work that is done by the construction company and planned by his internal technical staff. That is the problem, when refurbishing a building, people think about changing windows with double or triple glazing, insulating walls, cellars and roof, upgrading bathrooms, and heating installations. few people is thinking about renovation as a chance to improve the overall quality value of the building. This happens more often in countries like Germany, Switzerland, the Netherlands, Austria etc and we should try to bring the whole EU countries at that level

5. What do you think about the role of SMEs in new energy renovation processes?

Italy is the land of small and medium enterprises. There are very few big companies. 95% of the construction companies are SMEs. Some of them are good and some of them are bad. But in general terms they can be more efficient than the big ones. I personally prefer to work with them than with big companies.

Italy have a big asset in SMEs. They need of course to make money, but if they have a regular margin they can make really good work. Today delay in the payment of public works and credit crunch are killing SMEs s, and that is negatively affecting quality of their work. The market seems to be against SMEs instead of supporting them. This is a big mistake.

Spain. Núria Pedrals , Government of Catalonia.

Núria Pedrals is a Spanish architect currently serving at the urbanism department of the Catalan Government. From 2005 to 2011 she was director from “Housing renovation and housing quality” department from the Catalan Government. The “Housing renovation and housing quality” department of the Catalan government has in the last 6 years been working on the promotion of the quality of the housing. Especially about the energy efficiency and the sustainability. They have worked too on the refurbishment of the current housing stock. They had different programs with some subsidies, others with direct participation of ADICSA (entity in charge of the public housing stock of the Catalan government) and others with the collaboration of the Catalan agency for energy savings, ICAEN, related mainly on improving the insulation of the façades.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

Currently the contracts are awarded to the company that scores the best in a series of criteria, being the price the most important among them, around 40%.

I think that one of the biggest constrains for Spanish SHO is that if they invest in renovation of dwellings they reduce the energy bill of their tenants but they don't get rewarded, as the tenants pay their bill directly to the energy companies.

2. How do you think how the use of performance-based specifications can be promoted?

Currently in Catalonia all specifications are descriptive. I think there is room for the introduction of performance-based specifications. Some pilots subsidized by European projects have used this type of approach, however there are until now only pilots.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

Currently the participation of construction companies in the design phase is achieved in an indirect way. The constructors act as consultants of designers during design phase under request. But the participation in the design phase doesn't assure them that they will get the contract when the works are tendered.

Design-Build contracts have been only been used in a couple of pilot projects, they were awarded by the use of design competitions. In both cases maintenance was not included. In Catalonia there are no more experiences about this topic so far.

4. What do you think about the role of the architect in new energy renovation processes?

The role of the architect is really well defined, he is in charge of the design that will be used later on to define specifically which are the works to be done by the constructor. In case of renovations the participation of an architect is mandatory if the structure of the building is modified. All major renovations have commonly an architect involved.

5. What do you think about the role of SMEs in new energy renovation processes?

Until now the renovation market was covered only by SMEs. But right now, because of the economic crisis and the fact that renovation is a growing market, big construction companies are making offers too for this sector. In any case, the vast majority of renovation projects have a single work contract with a generalist company that will subcontract specialized companies. The change is that these generalist companies were until now medium enterprise and now they start to be big companies too.

Spain. Teresa Táboas, Architect.

Teresa Táboas is a Spanish architect working on an architectural office. She has been the responsible for housing of the Galician Government between 2005 and 2009. She is involved too in other organizations related to housing at national and European level.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

Currently there is a series of criteria, however, the price has a big importance among them 60%. Commonly the projects are evaluated first on their technical characteristics and later about the price.

In order to increase the award criteria referred to energy efficiency it is important to define a European directive. In Spain, housing depends on the regional governments, but in case of a European directive all regions will need to adapt to it.

2. How do you think how the use of performance-based specifications can be promoted?

In Galicia some norms about energy efficiency have been implemented but they are still in a really early phase, in general terms in Spain there is not yet a consciousness that this need to be done.

There are a few pilots with really good results applying this type of approach, but they are only a few cases. A European directive will help to have it implemented.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

Nowadays, first there is a tender for the design and later on for the works. In only a few cases Design-Build is applied but only for new buildings. Design-Build approaches are possible, but at the moment there is not a will of the authorities for promoting it.

4. What do you think about the role of the architect in new energy renovation processes?

I think that the education of the architects need to change. Stop creating architects with aim to become an architect of big projects to start to create architects ready to work on renovation and recycling.

The architects who are already working for some time need to become conscious that a change of focus from new buildings to renovation need to be made.

5. What do you think about the role of SMEs in new energy renovation processes?

Before the crisis, for renovation projects only medium generalist construction companies were contracted and these ones subcontracted small specialized companies. However, because of the crisis and the need of survival big companies are competing with the medium size companies.

Sweden. Petter Jurdell, SABO (Swedish Association of Public Housing Companies)

Petter Jurdell is a real state manager consultant at SABO, Swedish Association of Public Housing Companies www.sabo.se. SABO is the Swedish Association of Public Housing Companies. In Sweden there is no social housing, they have public housing, the difference is that there is no limitation by income of the possible users of this type of housing. 300 SHO are members of SABO with around 330.000 dwellings, 20% of the total. They represent their members and they assist them with consultancy services.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

Currently in Sweden a list of award criteria is commonly used when tendering. The lowest price is only used for the replacement of elements.

Renovations projects to improve energy efficiency are only carried out when it is calculated that there will be a return in investment. If not they are not considered. In Sweden, SHOs offer a renting price with energy included. Therefore, if after renovation they are some saving the benefits are for the SHOs.

2. How do you think how the use of performance-based specifications can be promoted?

In Sweden it is rather common to use performance-based specifications for major renovations. The performance-based parameters are not only related to energy efficiency, they are related to time or relation with the tenants too. Commonly the SHO defines a certain budget and request what can be done with it.

In case of replacement of elements, then descriptive specifications are used.

If you have good companies working with you the use of performance-based parameters allow to get really good solutions. In order to select good companies the previous experience is really important. There is no public database about what they have done, but this information can be always requested during the tendering procedure.

The current problem with the use of performance-based specifications related to energy is that the tenants behaviour is not taken into account and can make differ the results. Currently SABO is working on developing a type of contract that can take this into account.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

As an owner you have a general plan. For example I have a group between 200 and 2000 homes to be renovated in the next four years. First do you renovate a group of 50, and you evaluate the experience, you make some modifications and you renovate other 50, and when the solution proposed is tested and the collaboration with your contractors work you renovate all the rest. This is a methodology already used in UK.

For this kind of approach the construction company is involved in the design phase from the beginning and the architect, in case the architect is needed, is part of the construction company team. Maybe a third of the current retrofitting actions is using this type of approach.

DBM contracts have taken place, but are not really common because most part of SHO already have their own maintenance services.

4. What do you think about the role of the architect in new energy renovation processes?

In Sweden maybe 50% of the renovation projects where an architect is involved the architect is part of the construction company. This situation is not seen as conflictive because in Sweden there is a tradition of big construction companies.

There is of course some complaints from the federations of architects about the leading role of the construction companies and about that all the houses look the same. However, the architect acts as a consultant. 100% of the responsibility is for the general contractor.

5. What do you think about the role of SMEs in new energy renovation processes?

In general renovation projects are contracted in a single contract with a generalist construction company and this company later on subcontract the different specialized construction companies. However, in the renovation sector generalist companies are commonly medium sized companies.

Big construction companies are only interested in renovation if the tenants are not living in the dwellings to be renovated.

United Kingdom. Andrew Burke, National Housing Federation.

Andrew Burke is a policy officer at the National Housing Federation, NHF, www.housing.org.uk. The NHF represents the housing associations from England, and offers consultancy services to them. Andrew Burke is involved in the improvement of design and construction processes for new construction and renovation with a particular expertise on sustainability and energy efficiency. He is a registered architect by profession.

About energy renovations in social housing

1. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

Currently most part of the contracts will be awarded using award criteria, being the price the most important among them. The value of the other criteria differ depending on the characteristics of the project.

Recently the national renovation program, Decent Home Standard, was finished. This program was directed to improve the standards of the dwellings of SHOs and local authorities, a total of 4 million dwellings. The main elements for the decent homes program was to modernize facilities as kitchens and bathrooms, and to improve the provision of central heating. In the last stages the SHOs were doing improvements in energy efficiency but applied only simple measures as increase of insulation of walls and roofs.

The new government is proposing now the Green Deal. This program is applicable to all the existing housing. They are 20 million privately owned homes in England. The Green Deal is a market mechanism to provide finance, that later on is repaid on peoples energy bill. The charge is attached to the property and could be extended up to 25 years. This mechanism intends to get the finance from the private sector, as energy companies, but it could include banks or big retailers. This programs is not yet in operation, it is planned to be introduced at the end of this year.

2. How do you think how the use of performance-based specifications can be promoted?

I'm supportive of performance-based specifications being used. Trying to avoid prescriptive specifications, allowing to define a certain level that needs to be achieved. As we have different types of housing we need certain flexibility about the type of solutions used.

For example high levels of insulation, reduction of 80% of CO2 emissions, have been achieved in some pilots. I think people need to be sharing information. We need to develop some common good practice across the sector. However, I think that the level achieved is in part determined by the policies. The majority of people does the minimum to get the subsidies. They don't look to the complete picture.

3. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

Design and Build is in use but mainly in new construction, not so much in renovation. In renovation in some cases contractors are involved in early stage, but the use of Design-Build is limited. In the cases it that has been done, the experiences are really positive. Design-Build including maintenance is not used in housing, but it is commonly used in other types of public buildings like schools or hospitals. They use DBMFO type of contracts.

4. What do you think about the role of the architect in new energy renovation processes?

The participation of architects is limited. I think architects are increasingly used as part of the renovation team. We do have architects who have a good understanding of what is possible. So they could be really helpful. They can also help to advice the client, between what is possible and what is affordable, and the better ones will try to avoid a prescriptive approach, standard solutions. There is a possibility to involve them more.

5. What do you think about the role of SMEs in new energy renovation processes?

SHOs are contracting SMEs for social purpose too, so they will contract SMEs when they can. However, the problem of contracting SME is the size of the contracts. They are more likely to be subcontracted for bigger projects because of EU procurement rules, because large contractors will bit for that.

I'm not aware of the wide spread of SMEs consortiums, but I think it is possible to implement them.

United Kingdom. Chris Carr, Carr & Carr Ltd, (Construction company)

Chris Carr is joint manager director of the construction company Carr & Carr, www.carrbuilders.co.uk, based on Grimsby, on the east coast of England. Carr & Carr is a 5th generation building contractor. Predominantly they do new housing in traditional brick and block. Most of their client are general public. They don't do too much work for local authorities but they represent a consortium of 60-70 companies that work mainly for public authorities.

About energy renovations in social housing

6. How do you think how the use of award criteria for tendering procedures related to energy efficiency can be promoted?

Currently most part of the tenders are based on the lowest price offer for a certain specifications. I think is not really good value for money. The specifications need some input from the construction companies. We hope that we could work as in a partnership, with performance-based parameters with bonus for a certain energy efficiency levels achieved. I think that public authorities would like to work this way, but public procurement limit themselves.

7. How do you think how the use of performance-based specifications can be promoted?

Currently everything is specified, if we have a better solution we cannot apply it, we need to comply with the specifications. The energy measures are defined during the design phase and sometimes are not efficient.

8. How do you think how contractors and maintenance companies can be involved in the design phase of renovation projects?

Currently there is no involvement of the contractors in the design phase. There have been some DBM contracts for new public buildings as schools. However, this approach has not been used for renovations of social housing.

9. What do you think about the role of the architect in new energy renovation processes?

Currently even if they ask for our opinion commonly architects don't listen to the advice of constructors. There is a need for a way to establish cooperation.

10. What do you think about the role of SMEs in new energy renovation processes?

The current situation is that public authorities are contracting larger contractors in order to reduce administrative cost. But the same work can be done with several companies if there is clear plan with clear dates.

To make the change SMEs needs to lobby and defend in front of public authorities the importance of SMEs, because when the contract is given to a big general contractor the will use SME as subcontractors and they will take the benefit far from the area were the project take place. Most part of the project we work in are local projects, but we work for big companies.

The approach of contracting large firms to have less administrative costs it is mainly laziness of the public authorities.

The creation of consortiums could be a solution too, we have one for own real state development projects, with share of wins and pains and is really successful. I think that SMEs will organize in consortiums if there is real possibilities to compete with big companies.

5. Conclusions

The three different research approaches have been used during the Shelter project:

- A deep analysis of the renovation processes of six SHOs active in five different countries.
- A specific questionnaire about energy renovations replied by 36 SHOs from 8 different countries.
- A series of 14 interviews with different experts from 10 different countries.

The three approaches are qualitative. Therefore, no generalisation can be made. However, all the three different approaches offer similar results and we think are indicative of the current situation in the renovation of social housing in the EU countries.

The topic of cooperation among actors involved in energy renovations is complex. In the first place the different concepts related to the topic are often not well defined and in the second place different solutions can be applied to obtain similar results.

5.1. Renovation strategies

When a SHO decides to extend the life span of its dwelling stock it is confronted in the first place with a choice for the type of renovation strategy: to implement different major renovation projects or to implement subsequent minor renovations as part of a planned maintenance plan. The planned maintenance strategy could be compared to major renovation strategy when the actions taken at the end of a planned maintenance plan are the same as if a major renovation was carried out. From the results of our research the choice of a SHO for their renovation strategy is almost equally distributed.

	Advantages	Disadvantages
Major renovation	<ul style="list-style-type: none"> - Allows integrated design. - Allows possibility for extensions, modifications of the properties. 	<ul style="list-style-type: none"> - High investment at once - Difficult to apply to individual properties geographically spread. - Requires high level of coordination
Planned maintenance	<ul style="list-style-type: none"> - Optimize the life span of the different building products and systems. - Investment distributed in several years 	<ul style="list-style-type: none"> - Difficult to benefit from positive interactions. - Difficult to benefit from extensions, modifications of properties. - Less cooperation among professionals working on the same dwelling.

Table 1: Advantages and disadvantages of major renovation and planned maintenance strategies.

From the point of view of cooperation among actors and integration of solutions planned maintenance is not the right choice. In case that planned maintenance is used as renovation strategy, it is advisable to define a complete design as if all the renovations measures would be implemented at the same time to look for possible interactions. Different design models can be defined for the different typologies of dwellings of the stock to be renovated by planned maintenance.

In case that a major renovation is applied as renovation strategy other important choices made on project basis by the SHOs will shape the level of cooperation among actors and the level of solutions integration.

5.2. Project delivery methods

For every major renovation project SHOs must choose for a type of project delivery method to organize the design, construction, maintenance, finance and operation of the dwellings to renovate. Currently there are multiple types of project delivery methods, but in general we can differentiate between two types:

- **Design-Bid-Build**, DBB: The owner develops contract documents with an architect or engineer consisting of detailed specifications. Bids are solicited from contractors based on these documents.
- **Design-Build**-(Maintain-Finance-Operate), DB-(MFO): The owner develops a conceptual plan for a project. Bids are solicited from joint ventures of architects and/or engineers and builders for the design and construction of the project. Eventually, the maintenance, operation and even finance can be included in the solicited bid.

From the results of our research the vast majority of SHOs use Design-Bid-Build as delivery method for their renovation projects. However, in a small proportion and with a widespread among the EU countries Design-Build is being applied in renovation project too. Design and Build is already applied extensively in some EU countries for new public buildings.

Some SHO who use Design-Build in some of their renovations projects are: Habitat 76 from France, Bo-vest from Denmark, Aler Milano from Italy, Sociale Huisvestingmaatschappij Nieuw Dak from Belgium, Skellefteåbostäder from Sweden or MHS homes from UK.

The vast majority of SHOs are public or semi-public organisations. Therefore, the types of contracts and awarding procedures that can be used in the two types of project delivery method are shaped by the EU public procurement law above a certain defined threshold (Works contracts: 5 000 000 EUR, All supplies and services contracts, all design contests: 400 000 EUR).

	Advantages	Disadvantages
Design-Bid-Build	<ul style="list-style-type: none"> - Allows to divide the contracts into lots - Architects and/or engineers can act as referee between client and constructor. 	<ul style="list-style-type: none"> - Forces the use of descriptive specifications. - Facilitates the use of lowest price tendering. - Precludes the communication between architects and/or engineers and constructors during design phase.
Design-Build-(Maintain-Operate-Finance)	<ul style="list-style-type: none"> - Allows the cooperation between all the actors involved during design phase. - Facilitates the use of award criteria for the tendering. - Facilitates the use of performance-based specifications. - Facilitates the implementation of innovations. 	<ul style="list-style-type: none"> - Single large contract. SMEs have less options to bid. - Dual relationship client-contractor, no referee role of architect and/or engineers. - Force actors involved in renovation to change their interaction with other actors.

Table 2: Advantages and disadvantages of D-B and DB-(MFO) for the cooperation among actors and the integration of solutions.

Design-Bid-Build

From the point of view of cooperation among actors and integration among solutions Design-Bid-Build is not the right choice as it precludes the communication between architects and/or engineers and constructors during the design phase, facilitates the use of lowest price on the tendering and forces de the use of descriptive specifications. All these factors difficult to assure that the quality level achieved is the best that could be obtained for the same level of investment and hinders a clear assignment of responsibilities in case of construction errors.

However, DBB offers a couple of advantages compared to DB-(MFO). It allows to divide the contract into lots. Therefore, if the SHO has a technical department can be in charge of the management and get the direct control of it. Moreover, it facilitates the direct participation of SMEs. And it defines an independent role for the designer; the designer can act as advisor of the client or as referee between client and constructor.

“The architect is the referee between the client and the contractor, otherwise, the architect becomes an employee of the contractor” Mohamed Rkakbi, SARL GMT.

In case that this delivery method is used it is advisable to implement some of the following measures in order to increase the cooperation among actors and to assure that the quality achieved is the best that could be obtained for the level of investment done:

- Award the contracts making use of various award criteria.
- Involve the people in charge of the maintenance/operation during the design phase.
- Include some performance-based parameters in the works specifications.
- Meet all companies involved in the works (subcontractors included) at the beginning of the works.
- Set up a procedure to evaluate the performance-based parameters.

Design-Build-(Maintain-Finance-Operate)

Design-Build projects allows the cooperation between architects and/or engineers and constructors during the design phase. Moreover, in case of DBM or DBMO projects the maintenance companies and the operators of the facility can be involved too. This type of delivery method is also an option go get private funding of the works, DBMFO.

This type of project delivery method facilitates the use of performance-based specifications as at the moment that all contractors are involved there is no defined design yet. The use of performance-based specifications promotes the implementation of innovations and a higher degree of commitment of the contractor. At the other hand, the performance-based parameters must be easily measurable and evaluable and an evaluation methodology must be put in place.

Moreover, DB promotes the use of award criteria as the different presented offers could have a different design, therefore, only the price is not a good evaluator to compare them. It is necessary to define the award criteria and their evaluation system clearly to make them useful and transparent.

DB-(MFO) has nevertheless, some disadvantages. In the first place it establishes a dual relationship between the client and the contractor; the architects and/or engineers are part of the same team as the contractor. Secondly when DB-(MFO) is used, all the works (design and construction and in some cases maintenance and operation) are tendered in a single contract. Therefore, the contract is bigger and SMEs face limited possibilities to bid for it. SMEs can be contracted directly if they organize themselves in a construction consortium.

SMEs construction consortiums is not yet a common practice, however, this structure is in use in several EU countries. The momentary grouping of enterprises has, however, different characteristics depending on the EU countries. In Belgium, the results of the largest company being part of the consortium are the ones taken into account in a selection process while in Italy the sum of the results of the different companies being part of the consortium are taken into account in the selection process.

In Italy, where the vast majority of construction companies are SMEs, there are several consortia of enterprises defined as legal entities. These consortia, composed by a large number of members, organize consortiums with a limited number of their members to bid for specific projects. UNIFICA, with head office in Bologna is a clear example of this type of organisation.

5.3. Awarding contracts

EU public procurement rules define the types of awarding procedures that can be used when applying DBB or DB-(MFO).

Design-Bid-Build

In the case of DBB two different contracts are awarded, a design contract and a works contract, in both cases the contracts can be divided into lots. The contracts are sequential, as the output for the design contract are the specifications to award the works contract. The different contracts can be awarded to the lowest price or to the most economically advantageous tender, MEAT.

As indicated previously in case of using DBB, it is recommended to award the contract to the most economically advantageous tender and to make use of a descriptive as well as performance-based specifications. In both cases it is required that the client relies on professionals that are able to define easy evaluable award criteria and performance-based parameters.

“Do you need to have good professionals in you enterprise to be able to insert effective environmental criteria in the tendering” Virginie Toussain, Union sociale pour l'habitat.

The need for effective awarding criteria in regard to energy efficiency has been previously identified by other studies. A good example of what can be done to improve in the use of award criteria can be found in the guide *“Best practices on green or sustainable public procurement and new guidelines”* published by the Open House EU funded project.

DB-(MFO)

The use of DB-(MFO) contracts by SHOs is still rather small, 8% of the contracts among the SHOs who replied to the questionnaire. However, it has a big potential to be used more often:

- The single contractor assumes the majority of risks
- It is easy to set up performance-based parameters that facilitates to obtain what it was planned.
- It is possible to arrange the finance by the contractor

When using DB-(MFO) contracts there are no clear specifications before tendering the contract, thus, commonly there is a need for a negotiation phase. This can only be achieved by the use of competitive dialogue. This procedure was designed especially for big infrastructure projects. It requires negotiation capacities that not all SHOs have. That is why some SHOs award DB-(MFO) contracts without the use of a competitive dialogue.

In the case that a competitive dialogue is not used, the client has no participation in the design phase. It is advisable to request the public authorities to define a type of competitive dialogue adapted to the needs of SHOs in order to optimize the process for this type of projects.

Annex I. List of organisations that replied to the questionnaire.

Belgium

- 1 ABC cvba
- 2 Elk zijn Huis cvba
- 3 Sociale Huisvestingmaatschappij Nieuw Dak cvba

www.abcshm.be
www.elkzijnhuis.be
www.nieuwdak.be

Denmark

- 1 Bo-Vest

www.bo-vest.dk

England

- 1 Northern Ireland Housing Executive
- 2 Spectrum Housing Group
- 3 Circle Housing Group Ltd
- 4 North Star Housing Group
- 5 Cross Keys Homes
- 6 Liverpool Mutual Homes
- 7 Symphony Housing Group
- 8 Genesis Housing Association
- 9 Mhs homes ltd

www.nihe.gov.uk
www.spectrumhousing.co.uk
www.circle.org.uk
www.northstarhg.co.uk
www.crosskeyshomes.co.uk
www.liverpoolmutualhomes.org
www.symphonyhousing.org.uk
www.genesisha.org.uk
www.mhs.org.uk

France

- 1 SIA Habitat
- 2 OPAC38
- 3 Habitat 76
- 4 Aquitanis
- 5 Ciliopee habitat

www.groupe-sia.com
www.opac38.fr
www.habitat76.fr
www.aquitais.fr
www.ciliopee.com

Germany

- 1 Gewoba AG
- 2 Gemeinnützige Baugesellschaft zu Hildesheim AG
- 3 Lüneburger Wohnungsbau GmbH
- 4 Stadt- und Wohnbau GmbH Schweinfurt

www.gewoba.de
www.gbg-hildesheim.de
www.luewobau.de
www.swg-schweinfurt.de

Italy

- 1 Azienda Casa Emilia Romagna provincia di Modena
- 2 Ater di Udine
- 3 Aler di Brescia
- 4 Azienda Casa Emilia Romagna di Parma
- 5 Acer Ferrara (Azienda Casa Emilia Romagna)
- 6 Azienda Territoriale per l'Edilizia Residenziale di Teramo
- 7 Aler Milano
- 8 Acer Bologna

www.aziendacasamo.it
www.ater-udine.it
www.aler.bs.it
www.aziendacasapr.it
www.acerferrara.it
www.aterteramo.it
www.aler.mi.it
www.acerbologna.it

Spain

- 1 Patronat municipal de l'habitatge - Ajuntament de Barcelona
- 2 OAL viviendas municipales de bilbao -Bilbo udal etxebizitzak tea
- 3 Sociedad Municipal Zaragoza Vivienda S.L.U.

www.pmhb.cat
www.bilbao.net/viviendas
www.zaragozavivienda.es

Sweden

- 1 Bostadsbolaget i Mjölby AB
- 2 Bostads AB Mimer
- 3 Skellefteåbostäder

www.mjolbybostad.se
www.mimer.nu
www.skebo.nu