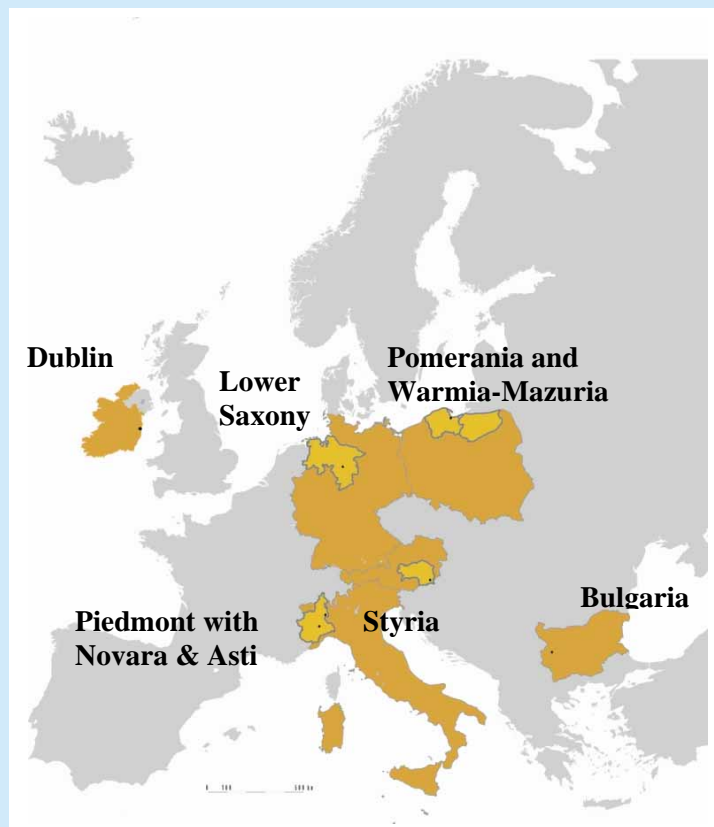


ROSH – Retrofitting of social housing
Evaluation of campaign activities
Summary report



Imprint

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ROSH – Retrofitting of Social Housing – is a European co-operation project for the development and marketing of integrated concepts for energy efficient and sustainable retrofitting of social housing in the partner regions. For the purpose of the project “social housing” comprises multifamily houses or apartment buildings for low-income households.

Further information: www.rosh-project.eu

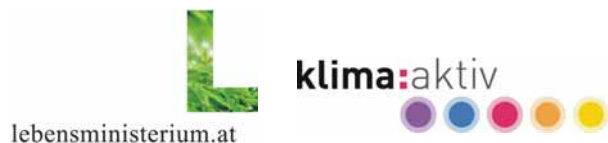
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Further information: http://ec.europa.eu/energy/intelligent/index_en.html

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Abstract

ROSH – Retrofitting of Social Housing – is a European co-operation project for the development and marketing of integrated concepts for energy efficient and sustainable retrofitting of social housing in the partner regions. For the purpose of the project “social housing” comprises multi-family houses or apartment buildings for low-income households.

A monitoring process and evaluation system provides indicators to determine the success of the national campaign instruments and measures. The evaluation scheme for the national campaign activities was developed as a standardised template – a questionnaire, which was afterwards transferred to each **ROSH** partner.

This evaluation based on the studies and consultation processes conducted in the partner regions. Due to the fact that it was not foreseen to conduct consultation packages in Bulgaria (c.f. Annex I – description of activities), it is not possible to obtain convincing data coming out from a questionnaire in Bulgaria.

This information we gained from the common questionnaire should help us in future to show efficient ways for communication and consulting to responsible persons and market actors in the building sector in order to support their decision carrying out more efficient measures of energy savings on existing buildings.

Table of Contents

1.	General	5
1.1	Development of the evaluation process	5
1.2	Description of the multi-part questionnaire	6
2.	General overview of the campaigns	8
2.1	Poland	9
2.2	Ireland	9
2.3	Italy.....	10
2.4	Germany	10
2.5	Austria	11
3.	Detailed evaluation on the campaigns	13
3.1	Establishing contacts	13
3.2	Initial situation	14
3.3	Relevance of public campaigns.....	15
3.4	Motivation for enhanced measures	16
3.5	Process of decision - making.....	17
3.6	Priority of retrofitting measures.....	18
4.	Follow-up campaigns	19
	ROSH Partner Regions & Partner Institutions.....	20

1. General

1.1 Development of the evaluation process

The main objective of the **ROSH** market campaign was the development and implementation of instruments and information activities for investors, housing companies and further target groups (like building owners and tenants).

The focus of these market campaigns has been the implementation of several (min. 30) consultation packages in each partner region aiming at raising awareness and providing information towards the relevant market actors in order to stimulate the market. The geographical scope is focused on the partner regions Lower Saxony, Styria, Warmia-Mazuria and Pomerania, Lombardia and Piemonte as well as Bulgaria.

The campaigns contained three communicative objectives with related communication tools:

- Attention and awareness raising
- Information and services
- Dialogue and advice to initiate energy efficient retrofitting investment

Target groups of the information and advice campaigns had been:

- Housing associations and housing companies
- Local authorities, municipalities, regional government, policy and administration
- Financing institutions
- Multipliers: utilities, chambers of commerce, professional associations

So called "consultation packages" had been the core of the several national campaigns and thus central topic for the evaluation of campaign activities in the partner regions.

The outcomes of the campaigns were defined as a market stimulation of energy efficient retrofitting of social housing, the involvement of key market players and in future prospected an increasing number of buildings retrofitted.

The implemented questionnaire was the basic instrument used to evaluate these results of the national campaigns and contentment of the participants of the national consulting campaigns in the partner regions within the **ROSH** project.

During the development of the evaluation concept it was realised that it would be difficult to make only one single template over all partner regions. In fact every region had its own campaign instruments and the activities varied from region to region (depending on the different national frameworks).

Therefore, the evaluation scheme for the national campaign activities was developed as a multi-part template – a questionnaire, which was afterwards transferred to each **ROSH** partner. Now every partner was able to arrange a specific and target-group oriented questionnaire that is compatible to the regional specialities by using the template as a checklist with national adaptations.

The multi-part template is the result of a discussion about definition of monitoring criteria and evaluation schemes.

The persons involved in the process of evaluation were on one side the regional **ROSH**- partners, who acted as operators, advisors and submitted the consultation packages. The target group for getting feed-back has been identified in housing associations and building owners who profited by the consultation packages.


Each partner reported (except Bulgaria as mentioned before) his poll-rating to the AEE, therefore it was possible to create a general overview on the results and the feedback in the partner regions and to compare the national campaigns.

The questionnaires´ findings we gained should help us in future to show efficient ways for communication and consulting to responsible persons in the building sector.

1.2 Description of the multi-part questionnaire

Differences of the various national campaign activities- as mentioned before – lead to a multi-part template for the questionnaire, which was separated in three sections. This made it possible to adapt the survey on the national characteristics.

The first section of the questionnaire was generally targeted at participants of the consultation campaigns (housing associations, building owners). The form could be filled in by themselves or in collaboration with the operators, in personal interviews. This section was separated in two parts:

 **Part A:** To be submitted to participants – who only claimed a consultation package

 **Part B:** To be submitted to participants – who claimed a consultation package and are furthermore implementing retrofitting measures in reviewed building.

The second section of the questionnaire was generally targeted at the operators, who elaborated the consultations reports or who managed the consultation campaigns. This section was also separated in two parts:

 **Part C:** To be submitted to operators – conducted the consultation process

 **Part D:** To be submitted to operators – conducted the consultation process in case of buildings, which are retrofitted after the consultation

The third part of the questionnaire was generally targeted at the operators and national partners. The part was a summary within the entire campaign activities.

 **Part E:** To be submitted to operators – Summary

A lot of items and questions in the first and in the second section were redundant. Each of the partners had to decide within his national campaign to work only with second section of the questionnaire or to use both first and second one. In the second case redundant items had to be eliminated.

The sections A/B and C/D were arranged to be filled in for each of the projects or consultation case, the summary was arranged as an overview of the whole national consultation campaign.

2. General overview of the campaigns

During the project ROSH it was possible to compile more than 150 consultation reports. A general overview of the campaign implementation is given, while more specific description of campaign activities in the single partner regions follows in the next chapters.

Table 1 and Figure 1 show an overview of the compiled reports in the **ROSH** partner regions.

E1 - E4 Summary of consultation reports

	Number	Austria	Germany	Italia	Irland	Poland
Number of compiled consultation reports	169	30	49	30	30	30
Number of projected implementations after the consultation process	44	13	0	0	1	30
Number of implementations, which had been already carried out / are in construction work at now	21	2	0	0	0	19
Number of supervision or supporting processes on running or carried out implementations	12	1	0	0	0	11

Table 1: Overview of the compiled consultation reports (except Bulgaria) - data

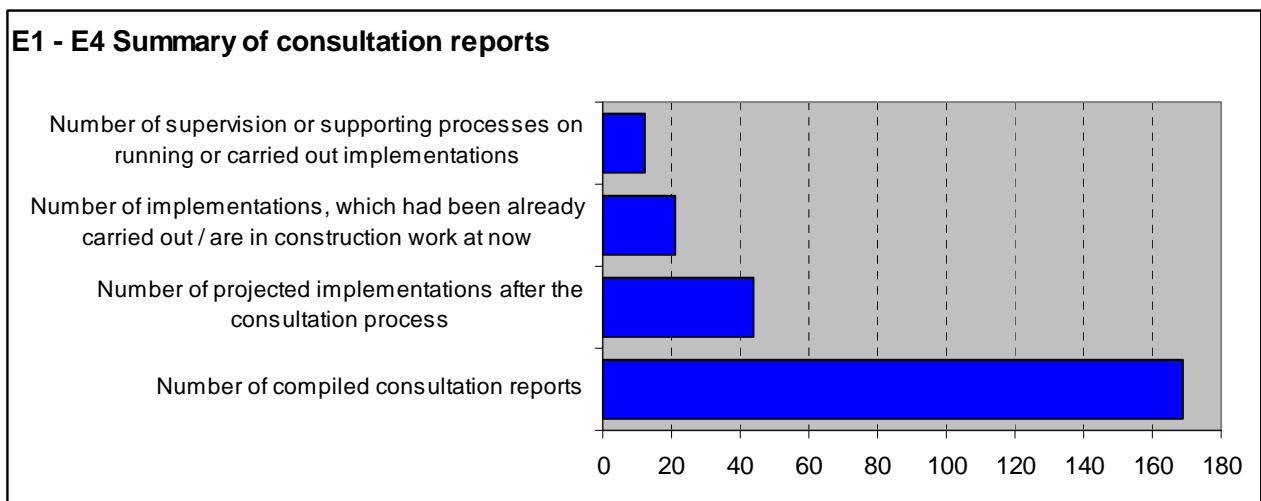


Figure 1: Overview of the compiled consultation reports (except Bulgaria)

It is shown, that the process of carrying out refurbishment measures lasts longer than expected and while there are less finished implementations there are a lot of intentions and at least projected retrofitting measures.

2.1 Poland

The **ROSH** partner *Bape* in Poland was able to compile 30 consultation reports for multifamily houses. The consultations were administered by housing associations or housing co-operatives. Some of them were built in the traditional way – of bricks, while most of them are pre-fabricated. The consultations showed that there is a huge potential for energy savings within the heat demand in those buildings ranging from 19% up to 50%. Most typical works deal with extra insulation of external wall, roofs, exchange of windows and heating- and dhw-installation.

For all consulted projects it is projected to carry out implementations and therefore all projects applied for the thermomodernization credit.

But it was shown that it takes 5-8 months before engineering work can start: banking procedure takes the most of this time, than depending of the situation - permission for construction works is also required.

2.2 Ireland

In Ireland the **ROSH** partner *Codema* conducted 30 consultation packages for the Dublin City Council. This is the largest local authority in Ireland and owns approximately 84% of the social housing building stock in Dublin. The selected flats have great opportunity to demonstrate the benefits of energy efficient refurbishment and for replication among other flats.

The approach in Ireland was to develop one main report focusing on typical local authority schemes with detailed energy checks, assessments for building fabric, heating system and renewable options. A menu of suitable options has been provided in terms of low cost, medium costs and high costs measures. This report also summarized the main findings of 30 audits. Each single consultation package was a four to six page report per scheme, providing information on current state of building, provision building rating, thermo grams, and recommendations. These reports can be stand-alone documents but also will complement (as Appendices) and make reference to the main report.

The current status of the campaign in Ireland is now complete (as part of the **ROSH** project). The report is currently a discussion document with the Dublin City Council and *Codema* will continue the activities in this area by co-operating with the housing department in the Dublin City Council and will extrapolate further data from the analysis in consultation with them. The main output of the campaign is that *Codema* will work with the City Council to develop methodology in addressing the refurbishment of social housing also after **ROSH** completion.

At last there was only one projected implementation, but the further reports are currently under review by the building owners, Dublin City Council and a decision on how to proceed is expected to take some time. The scheme of the object “Bernard Curtis” in Bluebell Road with 120 units has been remarked for refurbishment and further consultation with *Codema* had been requested. Dublin City Council is also considering developing an on-going maintenance plan that will incorporate energy efficient refurbishment.

As the process is currently in progress and the reports are still under review, there had been no refurbishment activity up to now. But there are initial plans to refurbish one scheme, but the concept for this needs to be developed further. There are also initial plans for wide-scale refurbishment incorporating energy –efficient features, but again this needs to be developed further also and does not relate to any specific scheme.

2.3 Italy

The Italian partners (*Ambiente Italia* in close co-operation with *ATC Asti* and *ATC Novara*) compiled 30 reports, 13 consultations were made in Asti, 14 in Novara and 3 had been made for aterAF in Tolmezzo. The temporal extend of the campaign lasted till May 2008. Due to the Italian conditions it is very difficult to show possibilities of financing or obtaining public subsidies and therefore the process of decision – making is still in progress.

2.4 Germany

The German partners, *IFB* and *AKNDS* compiled altogether 49 reports in close co-operation in the region of Hanover.

The building owners of 23 multi-family social-houses – consulted by *target* and *AKNDS* – have been contacted with the project “EnerWert” of the Chamber of

Architects in Lower Saxony. The collection of data and on-site visits were made between November 2007 and January 2008. In February 2008 the building owners received the results of the analyses and the building certificates during a personal consultation. The final consultation packages together with the thermographies were sent to the owners in April 2008. By the end of the **ROSH** project it was not possible to get representative data on planned retrofitting, because of the process of decision is still in progress and it could not be predicted yet. Moreover, the Chamber of Architects of Lower Saxony carried out further 19 consultations; these correspond to the nearly complete housing stock of the WOGÉ Nordstadt eG, a social housing association in Hanover. Finally, IFB compiled additional 7 consultation reports. Thermographies have been provided for 7 buildings, but it was not possible to predict whether this tool will be used for the planning of retrofitting measure, as by the end of the project no decision had been taken yet. The process of decision-making lasts longer than the projected time of **ROSH**.

2.5 Austria

A special approach developed in Styria uses infrared recordings (thermography) of buildings together with quick audits and professional technical and financial advice. The so-called "campaign for thermography and advice service" was developed in the year 2005 and got integrated in the **ROSH** project in the year 2006 to be developed further. Thermographic pictures of buildings are still an excellent instrument to raise awareness and initiate dialogue with housing associations.

Within the "campaign for thermography and advice service" in Styria it was possible to compile 30 **ROSH** consultations and in addition further 15 consultations had been carried out based on the schemes of the **ROSH** campaign. The campaign was carried out by the Graz Energy Agency in co-operation the AEE. In addition to the **ROSH** campaign for multi-family buildings there has also been a very successful campaign focused on single-family-houses.

The activities for **ROSH** were carried out in the beginning of 2006. Due to the success of the **ROSH** campaign further consultations were carried out in the years 2007 - 2008, the campaign for the period of 2009 is already fixed.

Therefore there were a total of 140 compiled consultation reports for multi-family social houses.

The consultation packages supported property managers and housing co-operatives in convenience owners of buildings and flats of comprehensive refurbishment. The packages included:

- On-site visit together with responsible persons of the property management or building owners
- Thermography of the building, analysis and survey
- Short report including energy check, recommendations, technical and financial advice
- Consultation for property managers and housing co-operatives
- Support of property managers and housing co-operatives in owner´s or tenants meeting or with public presentations.

The outcome of every consultation package prepared the decision of the owners of buildings or flats in the next steps: either to stop the process (no refurbishment) or to continue the process in specifying the refurbishment activities.

The tools used in the consultation package were:

- Checklists, describing elements
- Tools providing basic data of the building
- Tools for on-site visits (collection of evaluation of data)
- Simplified tool for energy check
- Template for consultation report (energy check, recommendations, technical and financial advice)
- Template of a presentation for owners´s meetings
- Tool for documentation and analysis of consulting activities

It was a great success that it is possible to announce that from these consultations the refurbishment of three multifamily – social houses has been finished already and the monitoring process is ongoing.

3. Detailed evaluation on the campaigns

Some specific results had been selected to show important outcomes in detail, because it is necessary for arranging further campaigns to benefit from the outcomes of the **ROSH** campaigns.

3.1 Establishing contacts

How was it possible to get in contact with prospective property owners or housing associations? How was it possible to establish contacts to specific target groups? These were the questions to be answered, because it is useful to know how to address target groups in future. Every market –campaign needs the most effective tools for approach.

Therefore it was important to get feedback how the majority of participants established their contact to the ROSH- partners.

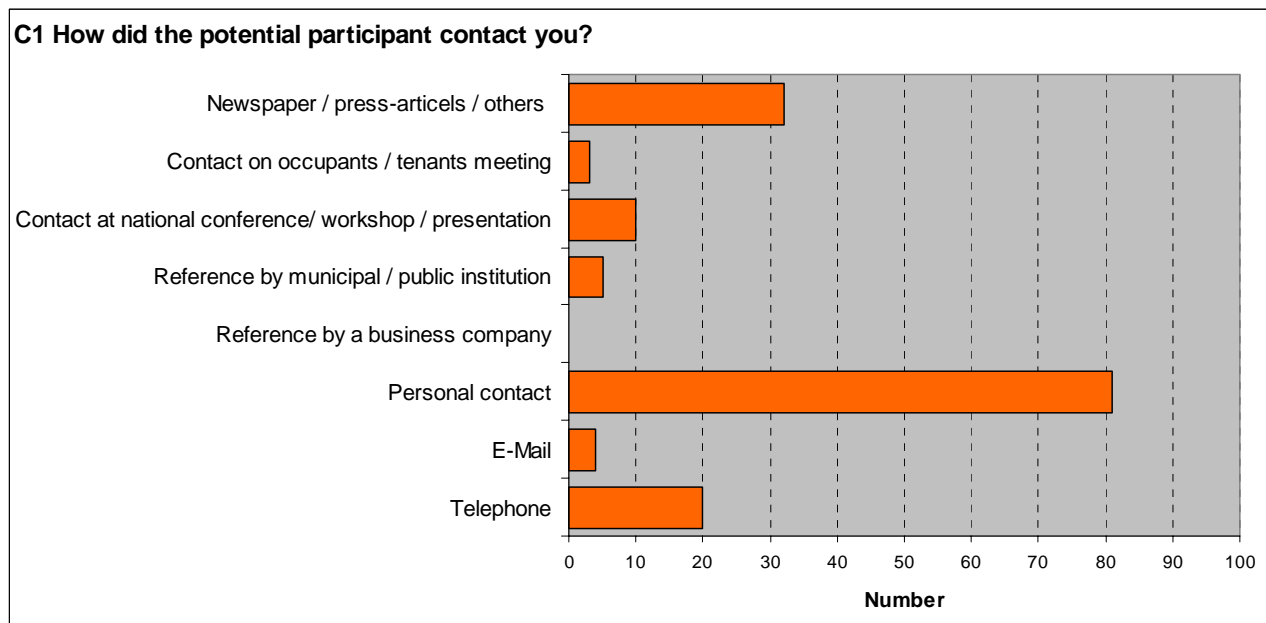


Figure 2: Overview of which way the first contact was established

Figure 2 shows that a majority of prospective property owners got established by personal contact. More or less printed media like newspapers or press-articles are also relevant for getting the first contact. But it is worth to mention, that this section also includes “others” – IFB in Germany contacted building owners in the framework of the projects “ROSH” and “EnerWert”. Any other way of communication has not the

same stimulating effect. It is important, that references by business companies had no effect.

Personal contact associated with reliability and independence of advisors are therefore the most important decision criterion and decisive for further co-operation.

3.2 Initial situation

The best time to get involved and to set energy-efficient inputs is the earliest point in time. But what was the usual point-of-time integrating an energy adviser? Was it useful or necessary to integrate energy advisers into the planning process?

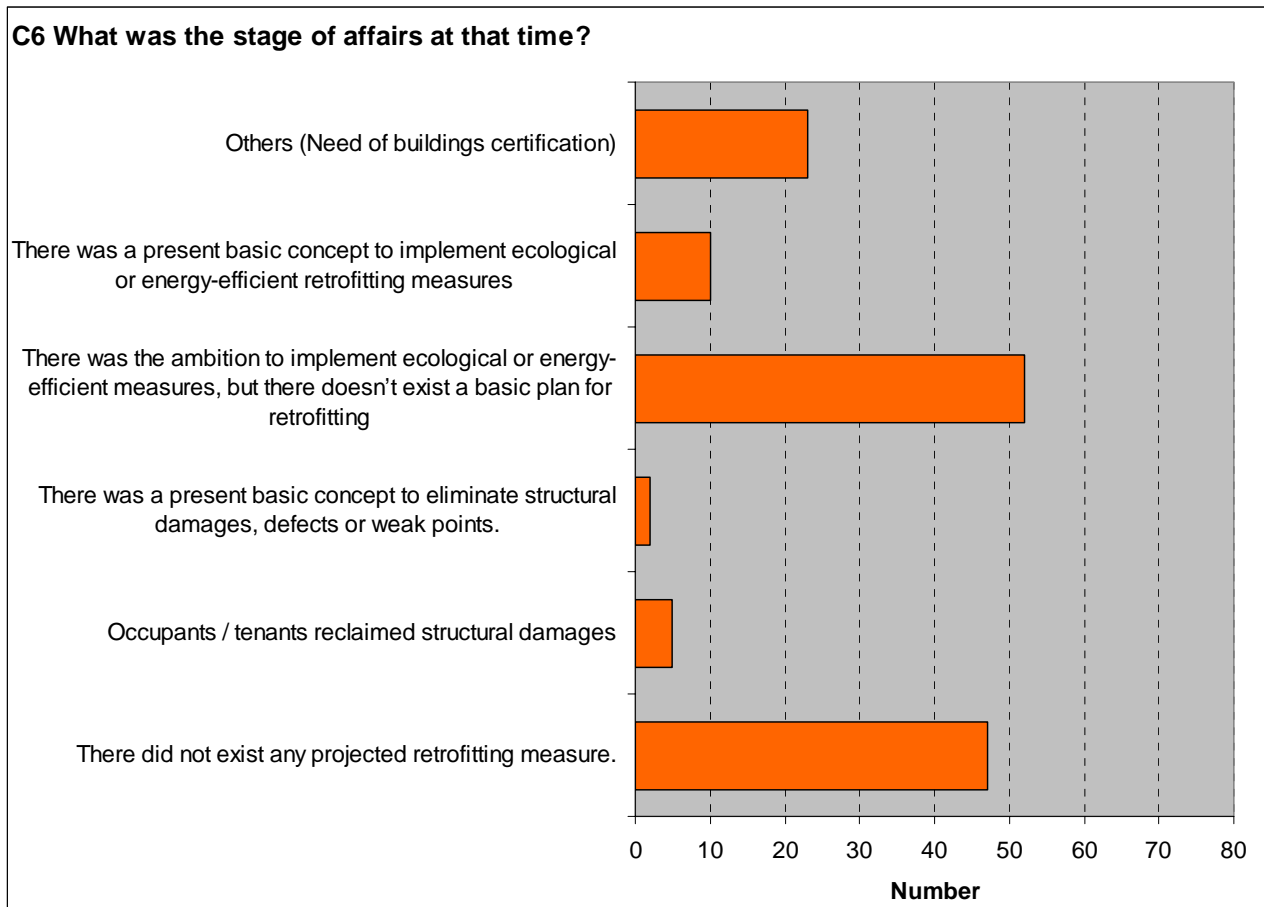


Figure 3: Overview of the stage of affairs after the first contact

It is seen that is very important to integrate consultations into the planning process. The majority of evaluated projects had no specific or basic concept for ecological or energy-efficient refurbishment; there were only ambitions – as it is shown in Figure 3. The attendant consultation and advice process was – apparent in the feedback – important for decision-making of responsible persons.

Therefore it must be enforced in future to establish co-operations with energy consultants in the earliest point of time.

3.3 Relevance of public campaigns

Was it possible to support responsible persons by public presentations and promoting projected measures? Was it useful to enforce awareness raising, was it possible to effect consequences for the success of the retrofitting projects?

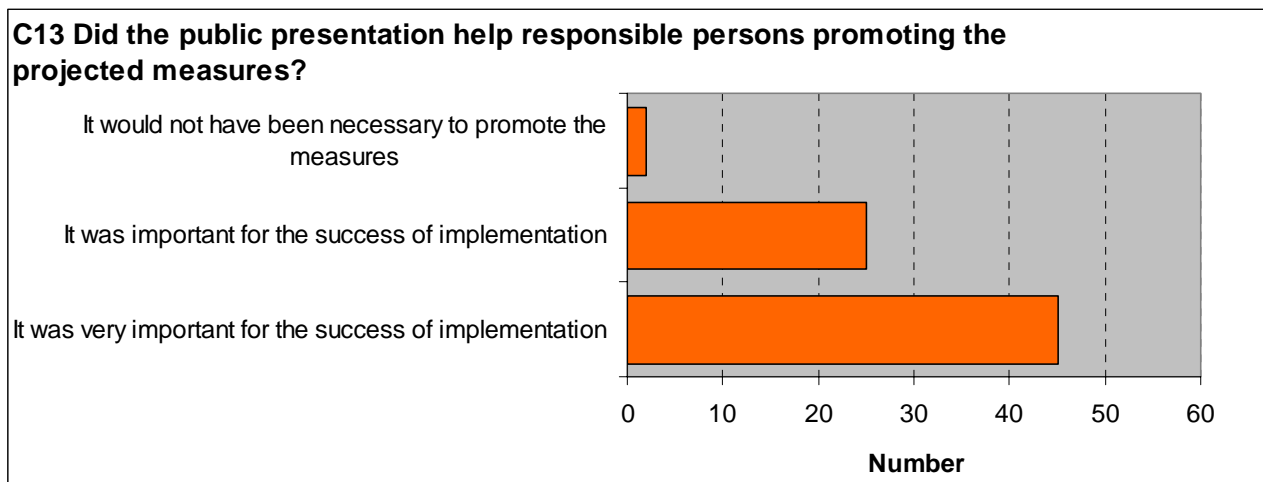


Figure 4: Overview of the importance of public presentations

As Figure 4 shows plenty of the participants gained positive effects by public presentation and promoting projected measures. Noting the feedback comments in the filled questionnaires it was possible to initiate discussions and to show the necessary and advantages of implementing high-quality retrofitting measures. It could be suggested that there is a general knowledge of comprehensive refurbishment, but promoting and public presentations are still important to convince responsible or involved persons and give them detailed information and consultation to confirm their ambitions.

3.4 Motivation for enhanced measures

Was it possible to obtain a higher level of implementation by the consultation process? Did responsible persons believe in the advantages of high-quality retrofitting or was it possible to motivate and to convince involved persons to implement improved or more energy-efficient measures?

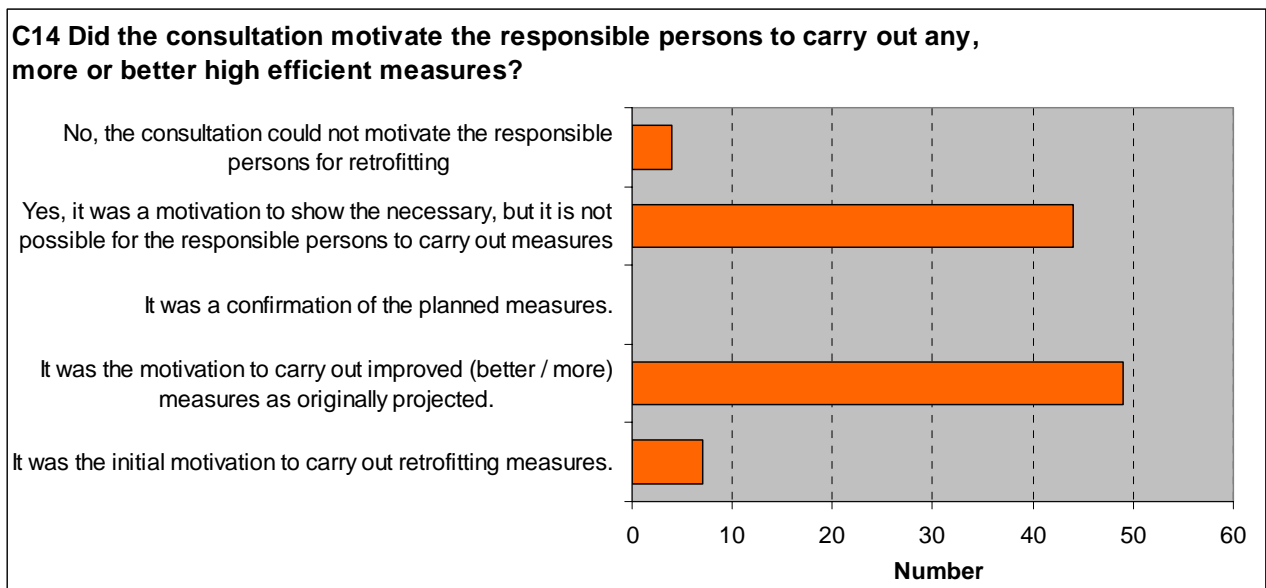


Figure 5: Overview of the motivation for enhanced measures after consultation

Yes, it was possible to obtain motivation for improved (better/ more) measures as originally projected. Figure 5 shows the majority of enhanced motivation. Even if the financial matters were barriers to implement the projected improved measures – it was even more important to gain the awareness for high-quality retrofitting. It is obvious – the next step must be to find ways and means of financing these measures, otherwise they could not be implemented.

But these results show on one side the importance of consultations – the lack of consciousness and the need of clarification is apparent. On the other side it is obvious that the consultations made by the **ROSH** partners were done on a high-quality level. Otherwise it would not have been possible to convince the majority of responsible persons of the advantages of improved retrofitting measures. This way must be followed in future or by follow-up campaigns – to select and define consultants - highly qualified for personal and public advice.

3.5 Process of decision - making

Is it possible to implement necessary retrofitting measures in shorter time? Do highly qualified consultants support the process of decision-making?

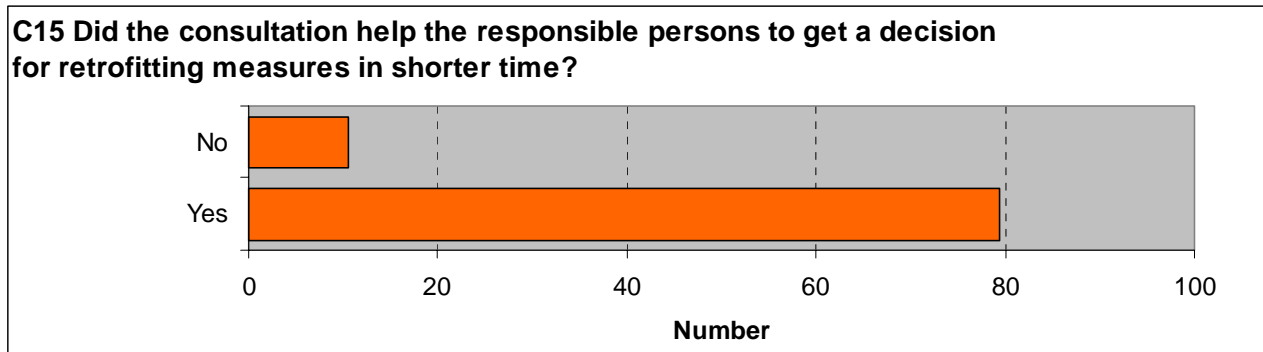


Figure 6: Overview of the duration of the process of decision-making

If responsible persons are convinced of the advantages of high-quality retrofitting it is easier to get fixed targets. Fixed targets facilitate the process of decision-making. As Figure 6 shows the **ROSH** partners made it possible to support decision-processes, even if there are less implemented retrofitting-projects during the projected time for **ROSH**, the decision – process is ongoing in every partner region. The main reasons for delay were in most of the evaluated cases the financial matters. Better or more improved retrofitting measures need an increased investment for building works. Therefore if there it is not possible to get financing plans, the process of decision-making is extended. Like it is seen in Italy, there is simply a lack of money for the improved measures – the responsible persons are motivated, a plan is outlined, but there is no real possibility of financing due to the Italian conditions.

But, without having the motivation gaining from the **ROSH** project the responsible persons would not have started the decision-process at yet. Therefore it is necessary for future to initiate further projects like **ROSH** to keep such processes alive and to find ways and means on national levels to support financing refurbishment measures.

3.6 Priority of retrofitting measures

Due to the fact of less implemented projects finished at this time the following Figure 7 shows the cross-section of finished projects or projects with already defined retrofitting measures. Therefore the regions in Italy and in Ireland could not give any statements on their resulting measures. Poland and Germany were able to define the planned or projected construction works. Refurbishment measures in Austria were defined by the really carried out measures. Figure 7 shows the definitive projected or implemented refurbishment measures of the region in Poland, Germany and Austria.

Nevertheless it can be seen that the main focus concentrates on insulation measures – in many cases hand-in-hand with window-replacement. Measures within the HVAC/R- range are only half of the insulation- section.

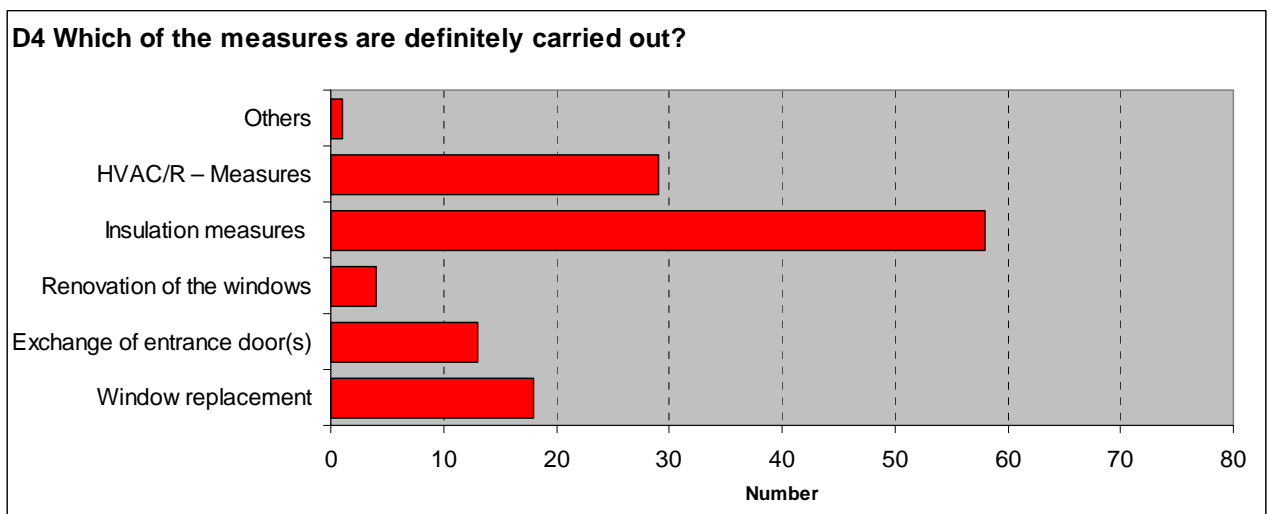


Figure 7: Overview on the implemented retrofitting measures

But it is worth mentioning, that in partner-region of Germany the consideration to carry out hot-water-generation based on integrated solar- thermal components is mentioned. By looking at the HVACR-measures the findings show a main focus on installations for new heating systems. Less there are only few implemented or projected works in the field of air-ventilation. Therefore it must be enforced in future to raise awareness and knowledge for the importance and efficiency of ventilation systems.

4. Follow-up campaigns

The success of the different campaigns can be seen by the declared intention to continue the campaign or to design "follow-up"- campaigns in the various ROSH-partner regions. Some of the consultation processes are still in progress. And, of course, depending on the various frameworks, each projected following work looks different. But it is seen, that every region has the intention to continue the campaigns in any way.

The intention in Poland is to follow-up the campaign by using the materials and tools developed during the ROSH-project as brochures for tenants, presentations, guidebooks on technical and financial matters and templates for consultations reports. The success of the campaign could be seen on the further inquiries for consultation.

In Ireland a follow-up campaign is planned where Codema will offer support and advice to the Dublin City Council and will develop a plan for implementation.

In Italy there are inquiries on further thermographies, but as Ambiente Italia requested, it should be possible to get a larger involvement of the owners and tenants and to define a larger affected territorial.

In Germany target GmbH is in discussion with the Climate protection agency of the region Hannover (Klimaschutzagentur Region Hannover) to implement a follow-up campaign, but it will take some time to get a definitive agreement. Beside these activities the German ROSH- partners claimed the importance of enhanced tenants information for further consultations.

Within the "campaign for thermography and advice service" in Styria the campaign for the period of winter 2008-2009 is already fixed. The involved institutions and administrative bodies are working out the detailed conditions.

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