



# **CONCERTO Premium**

## **CONCERTO Social Monitoring Guide**

Date of preparation: 31/01/2012



CONCERTO is co-funded by the European Union under the Research Framework Programm



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This document has been developed by CONCERTO Premium on the basis of the outcomes of the site visits and project partner meetings in 2011.

The guide is based on the "SE \_matrix\_core\_indicators\_Nov09" (CONCERTO Plus, November 2009).

This guide is accompanied by the spreadsheet "[date]\_Social\_Data\_Master.xls" which ought to be used by CONCERTO-Projects in order to capture and transfer relevant data to CONCERTO Premium.

## 1. About this Guide

As part of every CONCERTO project socio economic monitoring activities are expected by the EC. This guide aims to provide an introduction to such monitoring. It can help project coordinators to obtain a sufficient understanding that allows them to organise and supervise the required activities effectively. Usually, the actual monitoring would be undertaken by a qualified subcontractor or specialist who would bring the necessary expertise to the process. This guide is not intended to substitute this. If monitoring was to be done in-house, further literature would need to be consulted – some further reading is suggested in Appendix 4.

## 2. Types of Social Monitoring in CONCERTO

Social research within the context of a concerto project can take on the following forms:

- 1. Monitoring of demographic and contextual data** for the project in order to illustrate and contextualise technical outcomes: These will be required for the CONCERTO Area as a whole and will be based on existing research or typical local demographics. Typically, CONCERTO coordinators would have some idea of the demographic profile of the community involved. This data is explained further in section 8. A purpose made spreadsheet is available to CONCERTO projects to capture this data, called “[date]\_ Social\_Data\_Master.xls” (sheet “checklist base data”). It’s content is also shown in Appendix 2. Some contextual data needs to be captured on a per- household or per-person level and therefore is treated as part of individual monitoring (see following point).
- 2. Monitoring of individual people connected to the CONCERTO-Project** (occupants and other stakeholders): These address typically a relatively small proportion of occupants, which should ideally be representative for all involved, though the latter is difficult to achieve. This type of monitoring is the main subject of this guide.
- 3. Technical monitoring related to social aspects:** More precisely this relates to comfort and wellbeing. Temperatures, air flows etc. can be recorded and processed using data loggers. As part of post occupancy evaluation, it is relatively common to complement surveys with technical monitoring. However, this has not commonly been done within CONCERTO projects so far and is not covered here.

**This guide concentrates mainly on the second option, i.e. surveys.**

### 3. Objectives of the Social Monitoring Guide

The success and acceptance of energy efficiency measures in buildings and the integration of renewable energy sources at community scale strongly depend on the human factor. This has been pointed out repeatedly by those in charge of CONCERTO projects. Technical measures to reduce energy consumption will only work as intended and reach their full potential, if they are operated as intended and if they are fully accepted by those having to live with them. At a technical level the most important objectives are to ensure that:

- energy costs to occupiers are as expected
- comfort levels have improved as expected
- occupiers understand how to use new equipment to achieve maximum benefits
- occupiers have a general awareness of the importance of saving energy and emissions

Furthermore, if new technologies and large construction processes are implemented, noise, dust and other disruption to occupants are inevitable. These could cause antagonism amongst neighbours and inhabitants, which in turn would cause costs and delays to the project. It is therefore relatively common that larger construction processes are accompanied by some kind of liaison with the inhabitants affected, offering information and options for participation to the occupants from the planning and construction stage through to the operation phase afterwards.

Targeted social monitoring in particular can help detect the attitudes and concerns of the occupiers. Once these concerns and existing problems have been identified, suitable information and assistance can be offered in order to maximise the advantages of the technical measures for the occupants. (Appropriate social measures vary between the various stages in the construction process.)

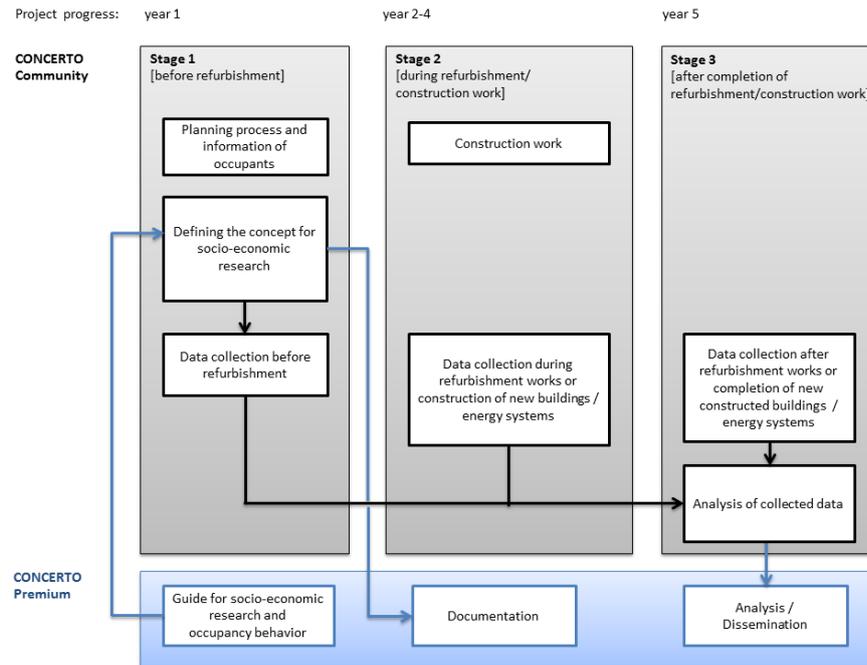
This guide concentrates on monitoring these activities. Typically this monitoring takes the form of surveys. A number of generic indicators to be covered in such surveys has been developed for CONCERTO. These would however need to be tailored to each project.

The intention of this guide is to provide assistance to CONCERTO-projects in the preparation and conducting of social research surveys. The close connection to the inhabitants and their perception and acceptance of the CONCERTO measures should help to ensure good project progress.

## 4. Social Monitoring in Different Project Stages

Figure 1 shows the three stages of social monitoring with their ideal timeframe within the CONCERTO project plan. Ideally, social monitoring should take place in every stage of the project. There are three stages of social monitoring, which may or may not correlate to a certain year in a CONCERTO-project, though typical timing is indicated.

**Figure 1: Three stages of social research**



### 1. Planning phase and Research activities BEFORE the beginning of building works - Project year 1

In this stage the concept for the social research should be defined. Recommendations can be found in this guide – see section 9.1). Furthermore, it is important to prepare information material regarding the intended CONCERTO measures.

For refurbishment projects it is particularly important at this stage, to give the affected occupants the possibility to participate in the planning process in order to create a strong identification with the CONCERTO measures and the refurbishment process.

For a refurbishment project, the first round of data collection should be completed before construction works start in order to get feedback of the occupants regarding their current living and working conditions, in particular energy costs, and their expectations towards the CONCERTO measures.

For new-build projects and infrastructure projects it may make sense to have a similar participatory process involving neighbours of surrounding areas.

## **2. Research activities DURING the construction stage - Project year 2-3**

During this stage the participatory process should continue or at least a point of contact should be provided for people to address concerns to. Monitoring people's attitude at this stage provides the psychological benefit of keeping them involved in the process and valuing their opinions and concerns, at a time when their lives are being affected by construction activities (noise, dust...).

## **3. Research activities AFTER the completion of construction works or after the completion of the new buildings or energy systems - Project year 4-5**

The most important phase of social monitoring is after the completion of the project to obtain information regarding the influence, perception and the acceptance of the CONCERTO measures. It is now very important to monitor the occupant behaviour because of the enormous influence for the project success. This may be in the shape of the established concept of post occupancy evaluation (POE). Ultimately, the aim at this stage is to ascertain whether the aims and objectives of the CONCERTO project have been successfully achieved, or alternatively, to identify the issues why this is not so.

# **5. Concerto Social Indicators**

## **5.1 CONCERTO Plus Indicators and CONCERTO Premium Indicators**

A number of socio-economic core indicators have been developed by CONCERTO Plus in close cooperation with socio-economic experts working in the individual CONCERTO communities. These indicators were structured in three dimensions – social, environmental and economic.

In principle, CONCERTO Premium considers the same indicator categories, but in addition looks at technical issues. CONCERTO Premium decided to concentrate, wherever possible, on indicators that can be calculated from actual consumption or economic data from the projects. This will allow the analysis of a large number of indicators and make comparisons between different projects possible. This calculation based approach is appropriate for those indicators relating to environmental, economic and technical issues as well as the implementation process. The social dimension on the other hand contains indicators that are based on the one-to-one interviews with people living with CONCERTO measures. Therefore, the socio-economic indicator structure of CONCERTO Plus had to be adapted to the CONCERTO Premium approach. While the social indicators have on the

whole been retained, the following changes to the existing CONCERTO Plus indicator structure and definition of the former socio-economic indicators have been made:

- "Internal comfort levels" have been added to social indicators (previously in environmental indicators (as socio-economic indicators), as these are mainly addressed using surveys.
- Economic indicators are now being looked at separately in order to cover them in greater depth – they had previously been looked at in conjunction with social indicators.

## **5.2 Description of the CONCERTO Social Indicators**

It is important to understand that the CONCERTO indicators are generic indicators. They evolved through a bottom-up process of collaborating with social scientists implementing social monitoring within the various projects. As the CONCERTO-projects vary considerably in size and technical and strategic approach, the social monitoring activities varied accordingly.

The CONCERTO Plus indicators evolved from a process of classifying and categorizing these widely diverging indicators. For this reason fairly general indicators have been identified. While the following paragraphs provide a definition of each indicator and thus illustrate the overall intention of the social monitoring, the indicators would need to be interpreted in a way appropriate to the specific project. The survey question given in the boxes are mere examples – projects would need to adapt them to their specific conditions and circumstances.

Nevertheless, we would ask all projects to incorporate a small set of very general question into their survey activities.

Though questions will vary between projects, the type of scale should ideally be the one suggested in Table 1: CONCERTO Indicators, allowing for easier comparison between projects.

**Table 1: CONCERTO Indicators**

CATEGORIES	No.	INDICATOR	UNIT / SCALE OF MEASUREMENT	
	1	Degree of satisfaction / acceptance by inhabitants / tenants / owners	a) % of addressees / inhabitants/ etc. satisfied with the CONCERTO measure	
			b) 5 point Likert scale: degree of acceptance	
	2	Level of information & direct participation	a) % of stakeholders / inhabitants / tenants / etc. who are satisfied with the level of information on the CONCERTO activities	
			b) % of stakeholders / inhabitants / tenants / etc. who feel more informed about energy topics after the CONCERTO measures than before	
			c) 5 point Likert scale: degree of satisfaction with the level of information on the CONCERTO measure	
			d) 5 point Likert scale: perception on involvement in decision-making in the CONCERTO area	
	3	Active/proactive householders behaviour	a) % of householders in the CONCERTO area taking part in a feedback system on their energy consumption or in an energy check	
			b) % of householders who changed their energy consumption behaviour	
			c) 5 point Likert scale: perception on how much the CONCERTO measure changed the behaviour of the householders	
			d) 5 point Likert scale: willingness to invest in energy saving measures or to pay more for RES / EE / green electricity	
			e) % of people who are willing to invest in energy saving measures or to pay more for RES / EE / green electricity	
	New	4	Internal comfort level after the implementation of CONCERTO measures	a) Perception of owner-occupiers, tenants and employees of CONCERTO demonstration buildings on indoor comfort level after CONCERTO measures
				b) Metered indoor comfort level after CONCERTO measures
				c) % of owner-occupiers, tenants and employees of / within CONCERTO demonstration buildings feeling that the internal comfort level (humidity, temperature, natural lighting, noise, etc.) has improved because of the CONCERTO measures

**1 Degree of satisfaction / acceptance by inhabitants, tenants, owners and improvement of level of comfort:**

This indicator covers how satisfied those affected by the CONCERTO Projects are (tenants, owners, citizens of the community, other stakeholders, etc.) with the CONCERTO measures they come in contact with. These may include the refurbishment of their home or office, the installation of a solar heating system, the implementation of district heating, training programmes, energy audits, dissemination measures, etc. It also includes the degree of satisfaction with the CONCERTO district or area as a place to live and work. In case of refurbishment measures taken, this indicator is intended to be monitored twice:

- during the implementation the CONCERTO measures
- after the implementation of the CONCERTO measures

**Examples for Survey questions:**

**Before:**

- How satisfied are you with your current heating system? (*Likert scale*)
- How satisfied are you with the energy-efficiency of your home? (*Likert scale*)

**After:**

- Did the CONCERTO Measures meet your expectations? *y/n*
- How satisfied are you with your new energy efficient windows? Your new heating system? (*Likert scale*)

**2 INFORMATION and Knowledge - Level of information & direct participation:**

This indicator addresses the question whether inhabitants were sufficiently informed before, during and after the CONCERTO measures (information material, campaigns, events, meetings, interviews, etc.). This indicator combines the following items and measures:

- Degree of satisfaction with the level of information on the CONCERTO measures/project from the point of view of the occupants living within the CONCERTO area as well as employees and landlords of/within CONCERTO demonstration buildings.
- Share of interviewees who feel more informed about energy topics due to the CONCERTO project - interviewees are mainly occupants living within the CONCERTO area as well as employees and landlords of/with CONCERTO demonstration buildings.
- Perception on involvement in decision-making in the CONCERTO project from the point of view of occupants living within the CONCERTO area as well as landlords of CONCERTO demonstration buildings. This aspect is particularly relevant in the planning and construction phase.

**Examples for Survey questions:**

- Do you feel you received enough information regarding the project in its planning phase? *y/n*

- Have you been offered/ Have you received personal instruction on how to use your new heating system/ ventilation system? (one-to-one or as a group training session) *y/n*
- Have you received written information regarding your new heating system/ ventilation system?... ? *y/n*
- How well do you feel you understand the control of your heating system/ ventilation system?...? *Likert scale*
- Do you know what to do, if your new ...system fails? *y/n*
- How highly involved in the decision making process have you been? *Likert scale*
- Were you satisfied with the level of involvement in the decision making process offered to you? *y/n*
- Do you feel generally, that you are better informed now on Energy issues than in the past? *y/n*

**Positive Change: Active/ proactive householders' behaviour within the CONCERTO area:**

This indicator provides information on the behaviour of the householders. It addresses householders taking part in any type of feedback-system on their energy consumption (e.g. diaries, regular questionnaires on energy consumption, internet surveys, collecting energy bills, control instruments, etc). Additionally, it also assesses whether householders have changed their energy consumption behaviour (either as a result of the CONCERTO measures or for other reasons). The indicator also refers to the willingness of people to invest in energy efficiency measures (e.g. insulation, energy efficient equipment or energy-saving household appliances, light bulbs, further refurbishment measures, etc.) or spend more on renewable energy and green electricity.

- Share of occupants living within the CONCERTO area as well as employees and landlords of/within CONCERTO demonstration buildings taking part in a feedback system on their energy consumption or in an energy check
- Share of occupants living within the CONCERTO area as well as employees within CONCERTO demonstration buildings who changed their energy consumption behaviour because of CONCERTO information
- Willingness to invest in energy saving measures or to pay more for renewable energy/ energy efficiency measures/ green electricity, from the point of view of occupants in the CONCERTO area as well as landlords.

**Examples for Survey questions:**

- Are you monitoring your energy consumption on a monthly level? *y/n*
- Have you done your own energy check by checking what energy consuming appliances use energy when/
- did someone do and energy check or audit of your home with you? *y/n*
- Have you become more aware of your energy consumption? *y/n*
- Are you using less energy than before? *y/n*
- Are you happy to pay extra for greener energy? *y/n*
- Has CONCERTO made you more aware of your energy consumption / of energy issues? *Likert scale*

**3 Qualitative assessment of Comfort: Improvement of internal comfort level:**

This indicator covers changes in internal comfort level (humidity, temperature, natural lighting, acoustic quality, etc.) as a consequence of the CONCERTO measures.

- Perception of owner-occupiers, tenants and employees of CONCERTO demonstration buildings on indoor comfort level after CONCERTO measures
- Metered indoor temperatures, air flows etc. after CONCERTO measures
- Share of occupants and employees with in CONCERTO demonstration buildings feeling that the indoor comfort level has improved because of the CONCERTO measures

**Examples for Survey questions:**

- What temperature do you heat to in winter? (in deg. C)
- What indoor temperatures do you have in hot summer weather? (in deg. C)
- Are you satisfied with the temperatures in your home? *Likert scale*
- Are temperatures in your home more comfortable than before? *y/n*
- Is your home more/ less draughty than before? *y/n*
- Do you get more/ less condensation than before? *y/n*

## 6. CONCERTO Standard-Questions

For projects that have not started their social monitoring yet, we would ask to please incorporate the following questions into their surveys. Please use them exactly as stated here (translated into your language), so that comparison between projects is possible. The questions are very general for the reasons stated in the previous paragraph. You may wish to supplement them with further, more specific questions.

1.	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
How satisfied are you overall with the CONCERTO project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
How satisfied are you with the information you received on the CONCERTO project overall?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Great improvement	Little improvement	No changes to before	Some deterioration	Great deterioration
Please rate how internal comfort in your home/workplace has changed, compared to before the CONCERTO measures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	I am using much less energy	I am using somewhat less energy	I am using about the same as before	I am using somewhat more energy	I am using a lot more energy
Please rate how your energy <b>consumption</b> has changed, compared to before the CONCERTO measures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I am paying much less	I am paying somewhat less	I pay about the same as before	I am paying somewhat more	I am paying a lot more
Please rate how your energy <b>bills</b> have changed, compared to before the CONCERTO measures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 7. Contextual Data to be Gathered together with Indicator–Related Data

Some contextual data needs to be captured on a per-household or per-person level and therefore is treated as part of one-to-one surveys in the following point.

This is specifically data related to energy consumption, which is important for the technical evaluation of the project.

- Energy consumption for electricity and heating fuels from utility bills, usually on annual basis
- Energy cost for electricity and heating fuels from utility bills, also usually on annual basis

Unless centralized automatic monitoring system or smart metering is in place with ready access to data, the relevant information should be asked as part of the indicator survey as stated in Table 2.

**Table 2: Energy-related data to be captured**

New	5	Energy	Actual energy <b>CONSUMPTION</b> in households surveyed <u>BEFORE</u> project start
			Actual energy <b>CONSUMPTION</b> in households surveyed <u>AFTER</u> implementation of measures
			Actual energy <b>COST</b> in households surveyed <u>BEFORE</u> project start
			Actual energy <b>COST</b> in households surveyed <u>AFTER</u> implementation of measures

## 8. Demographic Data and Housing Data

A list of demographic data and housing characteristics has been compiled here, that should be collected and provided to CONCERTO PREMIUM. It is needed in order to put all other project results into context, in order to help others to assess whether results may be transferable to their own projects or not. The data should refer to the CONCERTO AREA, not just the households surveyed. Please see Appendix 2 and the sheet "Checklist base data" in the current version of the document "[date]\_Social\_Data\_Master.xls" for relevant data capture form.

- **Age** of inhabitants (average and percentage of a number of suitable categories)
- highest level of completed **education** of inhabitants - please give percentage for each education level (levels according to ISCED 1997)

- **Nationality:** percentage of main nationality and percentage of foreigners
- Number of households **without employment** (percentage of total)
- Number of households receiving **housing subsidies** (percentage of total)
- Net monthly **income** of the households in CONCERTO Area (average and percentage of a number of suitable categories)
- **Size of the household** (average and percentage of a number of categories)
- Ownership structure: rental/ ownership (Please give percentages)
- **Building types** in CONCERTO-Area (Please give percentages)
- **Construction year** categories of the residential and non-residential buildings (average age and percentage per Eurostat category)
- **Years of occupancy** in the current home (percentages)
- **Size of the dwelling** in m<sup>2</sup> (average and percentage of a number of categories)

## 9. Social Monitoring Methodologies

### 9.1 Defining Monitoring Objectives

In the run-up to the data collection process for social monitoring, the objectives need to be defined clearly, as the choice of data capture methodology depends on these.

Answering the following questions should help clarify the objectives of these and consequently help to formulate the most appropriate questions:

**What** should be analysed? – This ultimately needs to match the project's technical objectives and provide answers as to how far these have been achieved

**Why** should it be analysed? There ought to be a clear strategy for using results internally – for example for identifying and overcoming barriers and improve the project

**Where** will the monitoring take place and **who** should be monitored in this way?

**What method** should be used for collection? The information in the following sections can only provide a short overview and should ideally be discussed with professionals in this field.

## 9.2 Choosing a Data Collection Method

### 9.2.1 Surveys - General

Surveys can be done in writing, online or face to face. Surveys are often referred to as a simple tool. However, regardless of the mode chosen, they require a good understanding of the target group, questionnaire design, interview techniques, sampling techniques, and the analysis of outcomes. They would therefore normally be guided by professionals with in-depth knowledge on such techniques and interpretation of outcomes. If only a short number of simple questions are asked (have the energy -saving lamps been installed? Are you happy with them?) these could be conducted by a lay person.

A survey can be a one-off activity or can be repeated after a period of time to measure changes. For the repetition, the same sample of addressees can be used (panel survey) or different persons can be surveyed.

### 9.2.2 Questionnaire-Based Surveys

Questionnaires as instrument are designed for self-completion and can be in 'paper-and-pen'-form (delivered by post, handed out in person) or in electronic form (e-mail, dedicated internet platform etc.). They represent a common method in social sciences for collecting information, attitudes, values or demographic data.

#### **Advantages of the questionnaire method are:**

- A possibility to gather and analyse a large number of data
- A comparatively affordable and quick method
- Statistical correlations can be identified
- Elimination of interviewer effects

#### **Disadvantages of the questionnaire method are:**

- The return rate of questionnaires is often low
- No control over whether the intended persons themselves complete questionnaire or indeed someone else
- No control if the questionnaire is completed as intended
- Little flexibility during the course of the survey – the questions are determined beforehand and cannot normally be altered to address concerns participants may have.

Questionnaires are also sometimes used as part of 1-to-1 interviews, where not all of the above points apply.

### **9.2.3 Interview-Based Surveys**

In the context of social monitoring of a construction project, it can be assumed that personal interviews would target a small number of specifically chosen key persons (in contrast to widespread telephone interview campaigns addressing a large and statistically relevant number of people, that are sometimes conducted by market research companies). Participants can be occupants or other stakeholders of the project. Interviews are most suitable for collecting in-depth information on a specific part of the project. The data collected is mainly of qualitative nature; interviews are useful for collecting opinions e.g. on whether the project meets the needs of the occupants, if the results match the expectations, how interventions have been implemented, if there have been changes in behaviour, etc.

Interviews can be fully standardised, semi-structured (e.g. following a guideline of key topics) or unstructured (e.g. the content evolves during the interview). However, the last two options require skilled staff. Interviews can be distinguished in individual and group interviews.

## **9.3 Focus groups**

Focus groups are a special type of interview. These are small group discussions guided by a skilled group leader. The participants are stakeholders with different backgrounds and representative viewpoints on the topic. With this technique it is possible to collect a large amount of qualitative data and opinions in a short time. It is most suitable for complex topics where a lot of different opinions exist. Focus groups are not only a tool to collect data, they are also useful for bringing together stakeholders and involving them into evaluation work, which increases the acceptance of the project results.

## **9.4 Observations**

The activities of management, occupants and other stakeholders are observed. An observation can be done open or secret, and requires specialist staff. The technique is time-consuming and most suitable for situations where little prior knowledge of the subject matter or situation exists. Observation techniques also include involving people in role-plays or game-play situations or let them map their activities themselves e.g. by keeping diaries.

## 9.5 Case Studies

These are small studies that are based on a mix of different data collecting methods and sources. Case studies provide an inside view on a certain case (e.g. a region, company, organisation, group of people, decision-making process, etc.). They can be subdivided into exploratory studies (which give a better understanding of what has happened), descriptive studies (which illustrate good practice) and explanatory studies (which explain why a certain measure has been successful, etc.).

## 9.6 Desk-Top Studies

Desk-top studies have a different objective to the other methods listed previously, as they are more suited for gathering contextual data, rather than to the monitoring of the actual situation of a project. Desk studies rely on secondary data which is collected and evaluated. Possible sources are statistics for the local area, project documents, technical literature, data from monitoring systems, etc. For the CONCERTO projects such a desk study should be undertaken as well in order to collect contextual data. This is introduced in outline in Section 7 and a data collection sheet is provided to all projects ("[date]\_Social\_Data\_Master.xls").

# 10. Designing and Planning the Survey

## 10.1 Longitudinal Or Retrospective Design

Most communities of CONCERTO generation 1 and 2 used questionnaires for social research in order to analyse the impact and acceptance of the implemented energy efficiency measures and the use of renewable energy sources by the occupants.

Depending on the status and specifics of the project two different ways of designing a social survey are common: the longitudinal research design and the retrospective research design.

The longitudinal research design is recommended for surveys in **refurbished/retrofitted** buildings and comprises a set of surveys at different dates throughout the refurbishment process - ideally before, during and after the refurbishment measures. Its aim is to identify changes in satisfaction and acceptance of the occupants and other project stakeholders.

This research design is most applicable for projects, where the occupants are the same before and after the refurbishment or where the occupants even stay in their homes

during the refurbishment. In this case changing levels of satisfaction and changes in perception throughout different phases of the refurbishment process can be captured.

The objective of interviewing before **refurbishment** is to define a baseline with which the results of the following rounds of the survey can be compared. During refurbishment interviews can identify impacts of the construction works on people's everyday lives, their coping strategies or their level of satisfaction. Interviews should ideally take place at the point of maximum stress for the occupants, caused by the construction work. The questionnaire should be short to ensure a high return rate and not cause additional stress to the survey participant. After the completion of the refurbishment interviews will show further changes in the satisfaction levels, which can then be compared to the baseline. Therefore it is important to ask the same questions and for the same indicators as before the beginning of the refurbishment measures.

For surveys among occupants of **new buildings** or buildings where it is not possible to have several rounds of interviews during the refurbishment process, a retrospective interview after the completion of the construction works is recommended. The content of such an interview contains all relevant questions of a longitudinal research design for refurbished buildings but with the disadvantage of a missing baseline.

## **10.2 Data Collection Procedure Using the Questionnaire Method**

If it has been decided that the questionnaire method is appropriate for a given project, the steps outlined below would have to be gone through:

- In order to design the survey, the party tasked with conducting the survey would need to develop an understanding of the project. Therefore project information needs to be collected by them.
- The survey client needs to define a brief, ideally in collaboration with the party conducting the survey. Key points that would indicate the overall success of the project need to be identified, as these would need to be addressed by the survey. Objectives of the survey need to be defined in order to focus and pitch questions appropriately.
- The questionnaire has to be designed by phrasing the relevant questions and designing the layout.
- The questionnaires should be tested on a small number of people outside the social monitoring team in order to ensure that it can be understood readily, that

there are no ambiguities in the text and other weaknesses in layout etc., with improvements being made accordingly.

- The revised questionnaires can be sent out or handed out to the survey participants. They should be given an appropriate time frame for filling in the questionnaires and to respond.
- Follow-ups for not responding participants can increase the return rate.
- The data in the questionnaires can then be assessed and analysed.
- The results of the survey can be presented and a final report on the outcomes can be prepared.

### 10.3 How to Design the Questionnaire

#### Appearance and layout of a questionnaire<sup>1</sup>

Good design is crucial to increasing the response rate. The questionnaire should look visually attractive and be well laid out. Here are some hints that may serve as a checklist for checking and approving questionnaires provided by a third party:

- Make headings and instructions clear
- Use colours in your text, or coloured paper in order to make it look more appealing
- Make sure the method of answering is obvious
- Where codes for later interpretation need to be included these should not interfere with legibility of the layout
- Use space generously, avoid a cramped, untidy appearance. Do not split a question over two pages
- Number all questions
- Take care over the order of question, making sure that questions build on each other, proceeding in a logical manner.
- Generally start with broad, straightforward questions and include more complicated, specific or sensitive ones later.
- Vary the question format to add interest
- End questionnaire with a "Thank you" and give a clear deadline for responses.

Last but not least, a questionnaire should not demotivate the participants by its length: keep as concise as possible.

---

<sup>1</sup> Source: [www.ukmi.nhs.uk/filestore/ukmiar/Datacollection.doc](http://www.ukmi.nhs.uk/filestore/ukmiar/Datacollection.doc)

## Wording of questions<sup>2</sup>

To gather reliable data do **not** use...

- biased words/phrases
- vague words or phrases e.g. especially for items addressing frequencies regarding behaviour
- ambiguous phrases
- double barrelled questions: No **and/or**, use only one thought per question
- double negatives
- abbreviations, jargon or (unexplained) technical terms

## Types of questions

### – **Closed questions**

A questionnaire consisting exclusively of closed questions can be used to quantify known aspects or theories. Most common are dichotomous questions with yes/no-answers, multiple choice questions, checklists, the Likert Scale, rankings and semantic differential scales.

### – **Open-ended questions**

In order to track further aspects or sources of problems a questionnaire also containing open-ended questions which can be answered freely (e.g. What do you think about...?) or semi-open questions is appropriate; however these types of questions require more time for analyses!

### – **Likert Scale**

Likert scales are widely used in social research topics. Respondents are asked to specify their level of agreement or disagreement on a scale for a series of statements. These items are designed to measure attitudes or opinions. The measurement can be translated into odd or even-numbered scales without a neutral midpoint. The range of answer options should not be too wide, e.g. above nine-point-scales, otherwise they might overload the decision making of the respondents. Most common are the five-point-scale and the seven-point scale.

CONCERTO recommends to use a 5-point scale
--

A common example for a Likert Scale is provided below – further examples together with related discussion points are given in Appendix 3.

---

<sup>2</sup> Source: [www.keene.edu/crc/forms/designingsurveysthatcount.pdf](http://www.keene.edu/crc/forms/designingsurveysthatcount.pdf)

### Example 1

*Please rate the following statements based on how strongly you agree.*

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
People should be more aware of their environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### – Rank Order Scaling

This type of rating involves the ranking of a certain set of items based on a particular criteria. Using the same score/ ranking twice may or may not be allowed, as it can lead to problems in the analyses. Very clear instruction for the respondents therefore need to be given.

### Example 2

*Based upon what you have seen, heard, and experienced, please rank the following means of transportation according to their reliability. Place a "1" next to the transportation option that is most reliable, a "2" next to the option that is next most reliable, and so on. Remember, no two transportation systems can have the same ranking.*

\_\_\_ car  
 \_\_\_ ship  
 \_\_\_ train  
 \_\_\_ bus

### Semantic Differential Scale

Semantic differential scale options consist of one but usually several adjective pairs. One adjective is negative, the other positive; each serves as the (-) or (+) end of a scale.

### Example 3

*How do you feel about the building altogether as far as the following aspects are concerned?*

ugly	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	beautiful
crowded	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	spacious
outdated	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	modern



## 11. Analyses and Documentation

### 11.1 Return Rates

The return rates vary strongly with the type of questioning method:

- Postal written questioning: often relatively low to medium
- Personal-oral questioning: medium to very high

The number of missing or incomplete questionnaires is often very high for written questionnaires. Furthermore, the rate of return also depends on the length of the questionnaire and the individual importance of the questionnaire topic. Reminders can increase the return rate.

### 11.2 Interpretation of the Social Data

No detailed instructions are provided here, as again, this should be done by specialists. For the interpretation of the collected data the methodology for analysis is also dependent on the type of questions chosen. Quantitative questions are interpreted by statistical methods; open-ended question formats require a qualitative analysis.

In general terms results need to be compiled by topic or question. This means that for closed questions answers of all participants need to be added up question by question, which could then be presented as a series of graphs. Open-ended answers need to be sorted by question and possibly summarised. The gathered data should then be put in context to sample size and sample composition (was there a good spread of participants?). Generalizations of results are only feasible if the sample is representative of the whole population or local inhabitant. If data from different countries is to be compared, it has to be considered that cultural aspects might affect the results, e.g. in terms of answering strategies.

Ultimately, it is down to the survey client to define what answers to survey should provide and how the data hence needs to be interpreted.

### 11.3 Cooperation and Data Transfer to CONCERTO Premium

CONCERTO Premium aims to undertake an overarching analysis of social monitoring results from all CONCERTO Sites. Even though social monitoring has to be different for each site in order to match project characteristics and objectives, it requires that the results from individual sites are summarized in a way that allows for such an analysis.

The following tools are provided to guide projects in their monitoring efforts.

- In **appendix 1** CONCERTO Premium designed an example questionnaire containing the typical socio-demographic base data and CONCERTO social core indicators. You are invited to use it as a basis for your own survey. However, it is likely that it would have to be adjusted and supplemented by further questions that are tailored to the specifics of the project. N.B. Per-household base data will not be evaluated by CONCERTO Premium (only demographics covering the whole project or CONCERTO-Area).
- **Appendix 2** gives an overview of the statistical socio-demographic data capture sheet – for actual data capture the Excel-version (“[date]\_Social\_Data\_Master.xls”, sheet “checklist base data”), that can be obtained from CONCERTO Premium, should be used.
- **Appendix 3** gives an overview of the socio monitoring data capture sheet – for actual data capture the Excel-version (“[date]\_Social\_Data\_Master.xls” – sheet “checklist social indicators”) should be used.
- **Appendix 4** provides a List of additional questions that may be interesting for some projects.
- Every kind of analysis (graphs, figures, fact sheets, descriptions) will be of interest to CONCERTO Premium in order to understand the social component of the CONCERTO projects.
- The results CONCERTO Premium’s analysis of the projects will be presented on the new CONCERTO Premium website ([www.concerto.eu](http://www.concerto.eu)), which will be a platform for all CONCERTO projects for information and dissemination purposes.

# APPENDIX

## APPENDIX 1 - Example Questionnaire

### QUESTIONNAIRE FOR TENANTS AND OWNER-OCCUPIER OF RESIDENTIAL BUILDINGS AND EMPLOYEES IN BUILDINGS WITHIN THE CONCERTO AREA

Dear inhabitant/employee of/in the CONCERTO area,

Please fill in this questionnaire in order to display your perception and satisfaction with the CONCERTO measures. All your answers will be treated anonymously.

Thank you for your cooperation.

-----

#### 1. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE INTERVIEWEES

It is common to gather socio demographic back-ground information of interviewees and this may be helpful for putting survey outcomes in perspective, as well as for gaining further understanding into a group of building occupants. However, it increases the number of questions substantially and may not offer added value for the project.

***(CONCERTO Premium will NOT capture this information on a per household basis – only aggregated information for the whole concerto site or community).***

<b>When were you born? Please indicate the year of birth:</b>	
<b>Are you male or female? Please indicate your gender:</b>	<input type="checkbox"/> male <input type="checkbox"/> female
<b>What is the highest level of completed education?</b> <i>Please adjust the name and description of the educational level to the terms used in your country.</i>	<input type="checkbox"/> ISCED Level 0-2* <input type="checkbox"/> ISCED Level 3-4* <input type="checkbox"/> ISCED Level 5-6* <input type="checkbox"/> None <input type="checkbox"/> Other: .....
<b>What is your nationality?</b>	

<p><b>How many people live in your household?</b>  <i>A differentiation of adults and children living in the household is also possible.</i></p>	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> more: .....
<p><b>How high is the net monthly income of your household?</b>  <i>(here in particular the options may need to be adjusted to typical local income structure)</i></p>	<input type="checkbox"/> <1,000 € <input type="checkbox"/> 1,001 € - 1,500 € <input type="checkbox"/> 1,501 € - 2,000 € <input type="checkbox"/> 2,001 € - 2,500 € <input type="checkbox"/> 2,501 € - 3,000 € <input type="checkbox"/> 3,001 € - 3,500 € <input type="checkbox"/> 3,501 € - 4,000 € <input type="checkbox"/> > 4,001 €
<p><b>Does your household receive housing subsidies/ financial aid for housing costs?</b></p>	<input type="checkbox"/> yes <input type="checkbox"/> no
<p><b>Thinking of the ownership of your present home – are you a ...</b></p>	<input type="checkbox"/> owner-occupier <input type="checkbox"/> tenant <input type="checkbox"/> none – you are an employee working in a CONCERTO building
<p><b>Who is your landlord, if applicable?</b></p>	
<p><b>For how many years have you been living in your present home?</b></p>	<input type="checkbox"/> <1 year <input type="checkbox"/> 1 - 3 years <input type="checkbox"/> 4 - 6 years <input type="checkbox"/> 7 - 10 years <input type="checkbox"/> 11 - 20 years <input type="checkbox"/> > 21 years

## 2. GENERAL INFORMATION ABOUT THE CURRENT LIVING SITUATION OF THE INTERVIEWEES

The below questions may be relevant for a large areas with diverse building stock. Often building related information is already known by those in charge of a project and does not need to be asked for. However, information on energy cost and energy consumption are crucial and it should always be attempted to obtain this information.(CONCERTO Premium will NOT capture this information on a per household basis – only aggregated information for the whole concerto site or community).

<b>What is the size of your home?</b>	<input type="checkbox"/> < 50 m <sup>2</sup> GFA <input type="checkbox"/> 51-70 m <sup>2</sup> GFA <input type="checkbox"/> 71-90 m <sup>2</sup> GFA <input type="checkbox"/> 91-110 m <sup>2</sup> GFA <input type="checkbox"/> 111-130 m <sup>2</sup> GFA <input type="checkbox"/> > 130 m <sup>2</sup> GFA
<b>What is the building type you are living or working in?</b> <i>RESID 1-G3 and NRESID according to the EUROSTAT classification</i>	<input type="checkbox"/> single-family detached house (RESID1) <input type="checkbox"/> semi-detached house (RESID2) <input type="checkbox"/> 3 - or multi-family house (RESIDG3) <input type="checkbox"/> non-residential building (NRESID)
<b>In which period was the building you are living or working in built?</b> <i>Construction year categories according to the EUROSTAT classification</i>	<input type="checkbox"/> <1919 <input type="checkbox"/> 1919 - 1945 <input type="checkbox"/> 1946 - 1960 <input type="checkbox"/> 1961 - 1970 <input type="checkbox"/> 1971 - 1980 <input type="checkbox"/> 1981 - 1990 <input type="checkbox"/> 1991 - 1995 <input type="checkbox"/> 1996 - today
<b>When was the last renovation of the building you are living or working in?</b>	<input type="checkbox"/> 1961 - 1970 <input type="checkbox"/> 1971 - 1980 <input type="checkbox"/> 1981 - 1990 <input type="checkbox"/> 1991 - 1995 <input type="checkbox"/> 1996 - today
<b>How high is the annual energy consumption in your household?</b>	<b>Electricity:</b> ..... kWh/a <b>Heating and DHW:</b> ..... kWh/a <b>Cooling:</b> ..... kWh/a
<b>How much are the annual energy costs in your household?</b>	<b>Electricity:</b> ..... €/a <b>Heating and DHW:</b> ..... €/a <b>Cooling:</b> ..... €/a

## QUESTIONS CONCERNING THE CONCERTO MEASURES

The following are example questions relating to CONCERTO Social Indicators. Please note that they are worded in very general terms and would need to be rephrased in order to make reference to the specific measures implemented in a project. Section 5.2 and Appendix 2 of this report provides examples for more specific questions.

**1. SATISFACTION WITH THE CONCERTO MEASURES** (CONCERTO Standard questions are marked with \* - see paragraph xxx)

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
*How satisfied are you overall with the CONCERTO project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How satisfied are you with the implementation of the technical CONCERTO measures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you are dissatisfied with the CONCERTO project, please give the reason for the dissatisfaction:

.....  
 .....  
 .....

If you are dissatisfied with the implementation of the technical CONCERTO measures, please give the reason for the dissatisfaction:

.....  
 .....  
 .....

**2. LEVEL OF INFORMATION AND DIRECT PARTICIPATION REGARDING THE CONCERTO PROJECT**

	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
How satisfied are you with the information you received on the technical CONCERTO measures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*How satisfied are you with the information you received on the CONCERTO project overall?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you are dissatisfied with the level of information on the technical CONCERTO measures, please give the reason for the dissatisfaction:

.....  
 .....  
 .....

If you are dissatisfied with the level of information on the CONCERTO project, please give the reason for the dissatisfaction:

.....  
 .....  
 .....

	Yes	No	Not decided
Do you feel more informed about energy topics after and because of the CONCERTO project than before?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Very highly involved	Highly involved	Medium involved	Lowly involved	Not involved at all
How do you perceive your involvement in the decision-making in your CONCERTO project?	<input type="checkbox"/>				

### 3. POSITIVE CHANGE: ACTIVE AND PROACTIVE HOUSEHOLDERS BEHAVIOUR

	Yes	No
Does your household take part in a feedback system on your energy consumption? (This could mean use of smart meters, computerized monitoring of district heating use, manual monthly meter readings that are being reported...)	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
Does or did your household take part in an energy check/ audit in the context of the CONCERTO project?	<input type="checkbox"/>	<input type="checkbox"/>

	Very high willingness	High willingness	Medium willingness	Low willingness	No willingness
How high is your willingness to invest in energy saving measures?	<input type="checkbox"/>				
How high is your willingness to pay more for the use of renewable energy sources?	<input type="checkbox"/>				

#### 4. INTERNAL COMFORT LEVEL AFTER THE IMPLEMENTATION OF CONCERTO MEASURES

	Very high comfort	High comfort	Medium comfort	Low comfort	Very low comfort
How do you perceive the internal comfort level in your home/workplace?	<input type="checkbox"/>				

If you feel that the internal comfort level is low or very low, please give your reasons here:

.....

.....

.....

	Great improvement	Little improvement	No changes to before	Some deterioration	Great deterioration
*Please rate how internal comfort in your home/workplace has changed, compared to before the CONCERTO measures?	<input type="checkbox"/>				

If you feel that the internal comfort level worsened in course of the CONCERTO measures, please give your reasons here:

.....

.....

.....

	Yes	No	No idea
Do you have the impression that the internal comfort level has improved because of the CONCERTO measures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you have the impression that the internal comfort level has not improved in course of the CONCERTO measures, please give your reasons here:

.....

.....

.....

	Less than 18 deg. C:	18 deg. C:	19 deg. C:	20 deg. C:	21 deg. C:	22 deg. C:	23 deg. C:	More than 23 deg. C:
To what temperature do you commonly have in your home?	<input type="checkbox"/>							

\* Level of education according to ISCED 1997:

ISCED Level 0-2	0	Pre-primary education	Initial stage of organized instruction for very young children
	1	Primary education / First stage of basic education	Entry into the nationally designated primary institutions or programmes, start of compulsory education - normally starting between the ages of 5 and 7, designed to give a sound basic education in reading, writing and mathematics along with an elementary understanding of other subjects
	2	Lower secondary / Second stage of basic education	Entry after some 6 years of primary education, end of the cycle after 9 years since the beginning of primary education, end of compulsory education, several teachers conduct classes in their field of specialization
ISCED Level 3-4	3	(Upper) secondary education	More specialized education typically beginning at age 15 or 16 years and/or the end of compulsory education
	4	Post-secondary non tertiary education	Captures programmes that straddle the boundary between upper- and post-secondary education from an international point of view, e.g. pre-university courses or short vocational programmes
ISCED Level 5-6	5	First stage of tertiary education (not leading directly to an advanced research qualification)	Tertiary programmes having an advanced educational content, cross-classified by field
	6	Second stage of tertiary education (leading to an advanced research qualification)	Tertiary programmes preparing graduates for faculty and research posts, leading to the award of an advanced research qualification, e.g. Ph.D., cross-classified by field

**APPENDIX 2 – Sample of Socio-Demographic Data to be Captured** *(Please use .XLS-version for data capture)*

<b>Age of inhabitants of CONCERTO AREA</b>	under 18 years of age (= children) 18-65 years of age (=adults) 65+ (=pensioners) <i>(you can specify additional/ different categories!)</i>	<i>(year)</i>	<i>under 18</i>	<i>18-22</i>	<i>22-30</i>	<i>31-50</i>	<i>over 65</i>	<b>AVERAGE age of inhabitants</b>
		%	<i>specify percentage of inhabitants in this category</i>					
<b>highest level of completed education of inhabitants - <i>please give percentage for each education level</i></b>	Scale according to OECD categories - ISCED 1997**	<i>(year)</i>	<b>ISCED 0-2**</b>	<b>ISCED 3-4**</b>	<b>ISCED 5-6**</b>	<b>NONE</b>	<b>OTHER</b>	<i>(year)</i>
		%	<i>specify percentage of inhabitants in this category</i>	%				
<b>Nationality - <i>(Please give percentages)</i></b>	- local nationality of your country - other nationalities / foreigners	<i>(year)</i>	<i>(local nationality)</i>	<i>other nationalities / foreigners</i>				
		%	<i>specify percentage of inhabitants in this category</i>	<i>specify percentage of inhabitants in this category</i>				
<b>Number of households that are unemployed <i>(Please give percentages)</i></b>		<i>(year)</i>	<b>receiving housing subsidies</b>					
		%	<i>% of households that do receive housing subsidies</i>					
<b>Number of households receiving housing subsidies <i>(Please give percentages)</i></b>		<i>(year)</i>	<b>receiving housing subsidies</b>					
		%	<i>% of households that do receive housing subsidies</i>					

<b>Net monthly income of the households in CONCERTO Area (Please give percentages)</b>	< 1,000 €; 1,001 € - 1,500 €; 1,500 € - 2,000 €; 2,001 € - 2,500 €; 2,501 € - 3,000 €; 3,001 € - 3,500 €; 3,501 € - 4,000 €; > 4,001€ <i>(you can specify your own categories!)</i>	<i>(year)</i>	<i>Income category 1</i>	<i>Income category 2</i>	<i>Income category 3</i>	<i>Income category 4</i>	<i>Income category 5</i>	<i>Income category 6</i>	<i>Income category 7</i>	<i>Income category 8</i>	<b>AVERAGE</b>
		%	<i>specify percentage of inhabitants in this category</i>								

<b>Size of the household in CONCERTO-AREA</b>	Number of persons living in the household: 1, 2, 3, 4, 5, 6 or more	<i>2010</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6 or more</b>	<b>AVERAGE number of persons per households</b>
		%	<i>percentage of 1-person households</i>	<i>percentage of 2-person households</i>	<i>percentage of 3-person households</i>	<i>percentage of 4-person households</i>	<i>percentage of 5-person households</i>	<i>percentage of households with 6 or more persons</i>	

<b>Ownership structure (Please give percentages)</b>	owner-occupier, tenant	<i>(year)</i>	<b>owner-occupier</b>	<b>tenant</b>
		%	<i>% of owner-occupied dwellings</i>	<i>% of rented dwellings</i>

<b>Building types in CONCERTO-Area (Please give percentages)</b>	single family detached house (RESID1) / semi detached house / three- or multi-family house (RESIDG3) / non-residential building (NRESID) according to EUROSTAT classification	<i>(year)</i>	<b>single-family detached house (RESID1)</b>	<b>semi-detached house (RESID2)</b>	<b>three- or multi-family house (RESIDG3)</b>	<b>non-residential building (NRESID)</b>
		%	<i>% of buildings of this building type</i>	<i>% of buildings of this building type</i>	<i>% of buildings of this building type</i>	<i>% of buildings of this building type</i>

Construction categories of the residential and non-residential buildings <i>(Please give percentages)</i>	year of the buildings according to EUROSTAT classification	(year)	<1919	1919 - 1945	1946 - 1960	1961 - 1970	1971 - 1980	1981 - 1990	1991 - 1995	1996 - today	AVERAGE AGE (years)
		%	% of buildings built in this period								

Years of occupancy in the current home of inhabitants in the CONCERTO Area <i>(Please give percentages)</i>	years of occupancy <i>(you can specify your own categories!)</i>	(year)	<1 year	1-3 years	4-6 years	7-10 years	11-20 years	>21 years	AVERAGE
		%	% of dwellings occupied this long						

Size of the flat / the house <i>(Please give percentages)</i>	GFA categories <i>(you can specify your own categories!)</i>	(year)	< 50 m <sup>2</sup> GFA,	51-70 m <sup>2</sup> GFA,	71-90 m <sup>2</sup> GFA,	91-110 m <sup>2</sup> GFA,	111-130 m <sup>2</sup> GFA,	> 130 m <sup>2</sup> GFA	AVERAGE
		%	% of dwelling units of this size						

### APPENDIX 3 - Data Capture Form for Capturing Survey Results *(Please use .XLS-version for data capture)*

Cat. No.	INDICATOR	RELATED ITEMS <i>(examples)</i>	UNIT / SCALE OF MEASUREMENT	indicat or availab le	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
1	Degree of satisfaction with / acceptance of the CONCERTO measures (from the point of view of owner-occupiers, tenants, landlords and employees of / within CONCERTO demonstration buildings)	Satisfaction with the CONCERTO measure	degree of <b>satisfaction</b> with the CONCERTO measure	<input type="checkbox"/>	<a href="#">Question 1 - please overtyp</a>	
			<a href="#">Question 2 - please overtyp</a>			
			<a href="#">Question 3 - please overtyp</a>			
			<a href="#">Question 4 - please overtyp</a>			
		Others	<i>Specify the project specific unit / scale of measurement</i>	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
			<a href="#">Question 1 - please overtyp</a>			
			<a href="#">Question 2 - please overtyp</a>			
			<a href="#">Question 3 - please overtyp</a>			
2	Level of information / direct participation regarding the CONCERTO project	Satisfaction with the level of information on the CONCERTO measures / project (from the point of view of the owner-occupiers and tenants living within the CONCERTO area as well as employees and landlords of/within CONCERTO demonstration buildings)	5 point Likert scale: degree of satisfaction with the level of information on the CONCERTO measure	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
					<a href="#">Question 1 - please overtyp</a>	
					<a href="#">Question 2 - please overtyp</a>	
		Opinion about the quality of information provided	% of interviewees who feel more informed about energy topics after and because of the CONCERTO project than before (interviewees are mainly owner-occupiers and tenants living within the CONCERTO area as well as employees and landlords of/within CONCERTO demonstration buildings)	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
					<a href="#">Question 1 - please overtyp</a>	
					<a href="#">Question 2 - please overtyp</a>	
		Perception on involvement in decision-making in the CONCERTO project (from the point of view of owner-occupiers and tenants living within the CONCERTO area as well as landlords of CONCERTO demonstration buildings)	5 point Likert scale: perception on involvement in decision-making in the CONCERTO area	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
					<a href="#">Question 1 - please overtyp</a>	
					<a href="#">Question 2 - please overtyp</a>	

		Others	<i>Specify the project specific unit / scale of measurement</i>	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
					<a href="#">Question 1 - please overtype</a>	
					<a href="#">Question 2 - please overtype</a>	
					<a href="#">Question 3 - please overtype</a>	
					<a href="#">Question 4 - please overtype</a>	
<b>3</b>	Active/proactive householders behaviour within the CONCERTO area	Owner-occupiers and tenants living within the CONCERTO area as well as employees and landlords of / within CONCERTO demonstration buildings taking part in a feedback system on their energy consumption or in an energy check / survey	% of householders in the CONCERTO area taking part in a feedback system on their energy consumption or in an energy check/ survey	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
					<a href="#">Question 1 - please overtype</a>	
					<a href="#">Question 2 - please overtype</a>	
					<a href="#">Question 3 - please overtype</a>	
					<a href="#">Question 4 - please overtype</a>	
		owner-occupiers and tenants living within the CONCERTO area as well as employees within CONCERTO demonstration buildings who changed their energy consumption behaviour because of CONCERTO information (documented through diaries, energy checks, bills, etc.)	% of householders who changed their energy consumption behaviour	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
		Willingness to invest in energy saving measures or to pay more for renewable energy/energy efficiency/green electricity from the view of owner-occupiers and tenants living within the CONCERTO area as well as landlords of CONCERTO demonstration buildings	5 point Likert scale: willingness to invest in energy saving measures or to pay more for RES / EE / green electricity	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
					<a href="#">Question 1 - please overtype</a>	
					<a href="#">Question 2 - please overtype</a>	
					<a href="#">Question 3 - please overtype</a>	
					<a href="#">Question 4 - please overtype</a>	
		Others	<i>Specify the project specific unit / scale of measurement</i>	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
					<a href="#">Question 1 - please overtype</a>	
					<a href="#">Question 2 - please overtype</a>	
					<a href="#">Question 3 - please overtype</a>	
					<a href="#">Question 4 - please overtype</a>	
<b>4</b>		Perception of owner-occupiers, tenants and employees of CONCERTO demonstration buildings on indoor comfort level after CONCERTO measures	5 point Likert scale: perception of internal comfort level	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
					<a href="#">Question 1 - please overtype</a>	
					<a href="#">Question 2 - please overtype</a>	
					<a href="#">Question 3 - please overtype</a>	
					<a href="#">Question 4 - please overtype</a>	
		Metered indoor comfort level after CONCERTO measures	humidity, temperature, natural lighting, noise, etc.	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY	SUMMARY RESULT
					<a href="#">Question 1 - please overtype</a>	
					<a href="#">Question 2 - please overtype</a>	
					<a href="#">Question 3 - please overtype</a>	
					<a href="#">Question 4 - please overtype</a>	

		Owner-occupiers, tenants and employees of / within CONCERTO demonstration buildings feeling that the internal comfort level has improved because of the CONCERTO measures	% of owner-occupiers, tenants and employees of / within CONCERTO demonstration buildings feeling that the internal comfort level (humidity, temperature, natural lighting, noise, etc.) has improved because of the CONCERTO measures	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY <i>Question 1 - please overtype</i> <i>Question 2 - please overtype</i> <i>Question 3 - please overtype</i> <i>Question 4 - please overtype</i>	SUMMARY RESULT
		Others	<i>Specify the project specific unit / scale of measurement</i>	<input type="checkbox"/>	PLEASE STATE HERE THE EXACT QUESTIONS USED IN YOUR SURVEY <i>Question 1 - please overtype</i> <i>Question 2 - please overtype</i> <i>Question 3 - please overtype</i> <i>Question 4 - please overtype</i>	SUMMARY RESULT
5	Energy	Actual energy <b>CONSUMPTION</b> in households surveyed <u>BEFORE</u> project start	<i>Give either average or range of consumption figures, normalised per m2 or per household</i>	<input type="checkbox"/>	PLEASE STATE BELOW THE EXACT QUESTIONS USED IN YOUR SURVEY <i>Please state exact question used</i>	CONSUMPTION BEFORE - Please state unit also ! <i>e.g. 90 kWh/m2/a</i> <i>OR 900 kWh/ household/ a</i>
		Actual energy <b>CONSUMPTION</b> in households surveyed <u>AFTER</u> implementation of measures	<i>Give either average or range of consumption figures, normalised per m2 or per household</i>	<input type="checkbox"/>	PLEASE STATE BELOW THE EXACT QUESTIONS USED IN YOUR SURVEY <i>Please state exact question used</i>	CONSUMPTION BEFORE - Please state unit also ! <i>e.g. 90 kWh/m2/a</i> <i>OR 900 kWh/ household/ a</i>
		Actual energy <b>COST</b> in households surveyed <u>BEFORE</u> project start	<i>Give either average or range of cost figures, normalised per m2 or per household</i>	<input type="checkbox"/>	PLEASE STATE BELOW THE EXACT QUESTIONS USED IN YOUR SURVEY <i>Please state exact question used</i>	CONSUMPTION BEFORE - Please state unit also ! <i>e.g. 90 kWh/m2/a</i> <i>OR 900 kWh/ household/ a</i>
		Actual energy <b>COST</b> in households surveyed <u>AFTER</u> implementation of measures	<i>Give either average or range of cost figures, normalised per m2 or per household</i>	<input type="checkbox"/>	PLEASE STATE BELOW THE EXACT QUESTIONS USED IN YOUR SURVEY <i>Please state exact question used</i>	CONSUMPTION BEFORE - Please state unit also ! <i>e.g. 90 kWh/m2/a</i> <i>OR 900 kWh/ household/ a</i>



## APPENDIX 4 – List of Additional Questions

### 1. SOCIAL DIMENSION

#### 1.1. DEGREE OF SATISFACTION / ACCEPTANCE BY INHABITANTS / TENANTS / OWNERS

##### 1.1.1. GENERAL ACCEPTANCE AND SATISFACTION WITH THE CONCERTO MEASURES

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMAKS
What do you think about the CONCERTO measures?	'very useful' to 'not useful at all'	B, D, A, R	
What do you think about supporting this CONCERTO project?	'very good' to 'very bad'	B, D, A, R	
How are/were your expectations towards the CONCERTO measures?	,very high' to ,very low'	B, R	In refurbishment projects
What kind of expectations do/did you have towards the results of the CONCERTO measures?	-	B, A, R	Open-ended question
What are your concerns in connection with the CONCERTO measures?	-	B, D, R	Open-ended question in refurbishment projects
How do you rate the result of the completed CONCERTO works?	,very high' to ,very low'	A, R	
If you think about the results of the CONCERTO measures – did the refurbishment works meet your expectations?	'more than expected' to 'less than expected' or 'I did not have any expectations'	A, R	In refurbishment projects
How satisfied are you with your home overall / in comparison to the time before the renovation?	,very satisfied' to ,very unsatisfied'	B, A, R	



<p>How satisfied are you (in retrospective) with the following aspects of the CONCERTO measures?</p> <ul style="list-style-type: none"> <li>- Information about the measures</li> <li>- Organisation and implementation of the measures</li> <li>- Duration of the measures</li> <li>- Support by the responsible stakeholders in arising questions and problems</li> <li>- The technical implementation of the measures</li> </ul>	<p>,very satisfied' to ,very unsatisfied'</p>	<p>A, R</p>	
<p>How satisfied are you with the following aspects of your home in total?</p> <ul style="list-style-type: none"> <li>- Layout of your home</li> <li>- Size of your home</li> <li>- Quality of your home</li> <li>- Living costs (excl. energy, water, etc.)</li> <li>- Total energy costs</li> <li>- Costs for shared expenses</li> <li>- Image of the neighbourhood</li> <li>- Security situation of the neighbourhood</li> <li>- Cleanliness of the neighbourhood</li> <li>- Corporate feeling of the neighbourhood</li> <li>- Public transportation in the neighbourhood</li> <li>- Shopping facilities</li> <li>- Public amenities</li> <li>- Appearance of the building</li> </ul>	<p>,very satisfied' to ,very unsatisfied'</p>	<p>B, A, R</p>	
<p>Please indicate the importance of the objectives connected to the refurbishment for you:</p> <ul style="list-style-type: none"> <li>- Increase in market value of the building</li> <li>- Reduction of CO2 emissions</li> <li>- Improvement in comfort</li> <li>- Energy savings</li> <li>- Improvement in the indoor climate</li> <li>- Lowering of the heating costs</li> </ul>	<p>'very important' to ,not important'</p>	<p>B, A, R</p>	<p>In refurbishment projects</p>

### 1.1.2. SATISFACTION WITH THE FINANCIAL ASPECTS OF THE HOME

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMAKS
Gathering of basic economic data: - Average rent excl. heating & utilities before and after the refurbishment in € - Average heating costs before and after the refurbishment in €	-	B, A	Open-ended question
Change in the satisfaction with the financial aspects of the rented home - Rent exclusive of heating and utilities - Heating costs - Additional costs	,very satisfied' to ,very unsatisfied'	B, A	If home is rented
Do you think the rent increase in consequence of the refurbishment is legitimate?	'Yes, completely' to 'No, not at all' + Please give a short explanation	B, A, R	If home is rented
To what extent are you willing to accept higher costs for the use of renewable energy sources?	,Not at all' to ,remarkable higher'	B, A, R	
Do you think you will pay more, as much as, or less for electricity / heating energy after the renovation project?	'a lot less' to 'a lot more'	B	
If the renovation project were not taking place, would you spend money on your apartment to improve its energy efficiency?	'yes, I already have' to 'no'	B, A, R	
Do you anticipate the value of your apartment rising as a result of the renovation?	'yes, more than 10%' to 'no, it will not rise as a result'	B	

### 1.1.3. SATISFACTION WITH THE REFURBISHMENT PROCESS AND ASSESSMENT OF THE PERSONAL ANNOYANCE

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMAKS
Indicate the intensity of the EXPECTED (B), the ACTUAL (D) annoyance and the annoyance IN RETROSPECT (A, R) caused by the refurbishment works.	'very high' to 'none'	B, D, A, R	In refurbishment projects



How much do / did you feel affected by the following aspects? - Construction noise - Dirt, dust - Presence of craftsmen - Disorder - Limited usability of the rooms	'very much' to 'not at all'	D, R	
If you think back to the time of the renovation: How would you rate the annoyance caused by the surrounding circumstances from a retrospective point of view?	'higher than expected' to 'as low as expected' or 'I did not feel annoyed'	A, R	
How do / did you deal with the special situation during the refurbishment works?	-	D, R	Open-ended question
Would you participate in the refurbishment again?	'Yes, on equal terms', 'Yes, upon other terms'+short explanation, 'No'+short explanation	D, A, R	

### 1.2. LEVEL OF INFORMATION AND DIRECT PARTICIPATION - SATISFACTION WITH THE PROJECT COMMUNICATION AND INFORMATION

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMARKS
Please indicate how you received information about the CONCERTO activities	- informative meetings - information letters / newsletters - interchange of ideas with neighbours - information from press and internet/ the website - project brochure.... - none of these	B, R	
How well-informed do you feel at the moment concerning the following points? - Description of the CONCERTO measure - Start date of the measure - Duration of the measure - Stress caused by noise and dust - Increase of rent after the refurbishment - Heating costs after the refurbishment - Living quality after the refurbishment	'very well-informed' to 'not informed at all'	B, D	In refurbishment projects



Did you make use of the available information service and the contact options?	'Yes, extensively' to 'Not at all'	D, R	
Do you know that this is a CONCERTO project that supports the increase of the use of energy efficiency measures and the share of renewable energy sources?	Yes / No	B, D, R	
Do you think you received enough information about the renovation project?	'far too much' to 'far too little'	B, D, A, R	
Do you think that the information about the renovation is clear?	'very clear' to 'very unclear'	B, D, A, R	
Were you informed about the renovation project on time?	'much too early' to 'much too late'	B, D; R	
Do you need (more) information?	Yes/No		
<p>About which topics would you like to receive / do you need more information?</p> <ul style="list-style-type: none"> <li>- energy consumption and energy costs</li> <li>- use of new technologies / appliances in your flat</li> <li>- maintenance and maintenance costs</li> <li>- indoor climate and comfort</li> <li>- renewable energy provisions</li> <li>- rent increases</li> <li>- rent subsidies</li> <li>- other, namely.....</li> <li>- No extra information is needed</li> </ul>		B, D, R	
Do you think that any complaints you may have will be dealt with adequately?	'certainly' to 'certainly not'	B, D	

### 1.3. ACTIVE / PROACTIVE HOUSEHOLDERS' BEHAVIOUR

#### ENVIRONMENTAL AWARENESS AND ENVIRONMENTAL FRIENDLY BEHAVIOUR

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMARKS
<p>Please indicate your attitude towards environmental issues (according to Preisendörfer (1999)):</p> <ul style="list-style-type: none"> <li>- I am concerned when I think about the environmental conditions that our children and grandchildren probably will face.</li> <li>- Politicians are still doing too little for environmental protection.</li> <li>- The major part of the population is still behaving little environmentally aware.</li> <li>- If we go on acting as until today, we are facing an environmental disaster.</li> <li>- When I read articles or watch television programmes about environmental problems I am often shocked and become angry.</li> <li>- There are limits to growth that the industrialized world already has exceeded or is going to exceed very soon.</li> <li>- The consequences of the environmental problems are exaggerations by environmental protectors.</li> <li>- Environmental protection measures should be implemented even if jobs are lost as a consequence.</li> <li>- In favour for the environment we should all be willing to limit our actual living standard.</li> </ul>	<p>‘I completely agree’ to ‘I completely disagree’</p>	<p>B, A, R</p>	
<p>How environmentally aware do you consider yourself?</p>	<p>‘very environmentally friendly’ to ‘not environmentally friendly’</p>	<p>B, D, A, R</p>	
<p>Please indicate your environmental behaviour acc. to Wortmann (1994)</p> <ul style="list-style-type: none"> <li>- I only use the car if there is no other possibility e.g. for long distances, to get to work, for the transport of goods or persons</li> <li>- For the average cleaning of the household I normally use environmentally friendly cleaner like neutral cleaning agent, vinegar cleaner or potassium soap</li> <li>- I pay attention to an environmentally friendly behaviour in the education of my children</li> <li>- I normally buy organic food (vegetables, fruits etc.)</li> <li>- I normally take used batteries, paint etc. to a collection place for harmful substances</li> <li>- I normally take glass waste to the bottle bank</li> <li>- I separate the organic waste from other wastes</li> </ul>	<p>‘I completely agree’ to ‘I completely disagree’</p>	<p>B, A, R</p>	

<p>To what extent do you agree with the following statements?</p> <ul style="list-style-type: none"> <li>- I think using renewable energy is important</li> <li>- My friends think that using renewable energy is important</li> <li>- I feel obliged for future generations to use renewable energy sources</li> <li>- It is good to be less dependent of the energy companies</li> <li>- When I use renewable energy, I am allowed to use more energy</li> <li>- When I use renewable energy, this will benefit the environment</li> <li>- Saving energy is important because it will benefit the environment</li> <li>- Saving energy is important because it saves money</li> <li>- Protecting the environment is an important reason for saving energy.</li> <li>- Environmentalists strongly exaggerate the significance of environmental problems.</li> <li>- Science and technology will solve a lot of environmental problems without us having to change our lifestyles.</li> </ul>	'Totally disagree' to 'Totally agree'	B, A	
What do you think about the usefulness of an energy supply with the focus on renewable energy sources?	,little useful' to ,very useful'	B, A, R	
To what extent should renewable energy sources be used in the future?	,far less' to ,far more'	B, A, R	

#### 1.4. BEHAVIOUR AND ATTITUDE TOWARDS ENERGY SAVING

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMARKS
What is the more important motivation for energy saving?	,To save money' to 'to preserve environment'	B, A, R	
Did your interest in the topic ,energy saving' change as a consequence of the CONCERTO measures?	,more than before' to ,less than before', ,The topic of energy saving is not of interest to me.'	A, R	
Is it more important to you to have a refurbished home in general or to have a special energy-efficient refurbished home?	'to have a refurbished home in general' to 'to have a special energy-efficient refurbished home'	B, A, R	In refurbishment projects
What are the reasons deterring you from energy saving?	<ul style="list-style-type: none"> <li>- Slothfulness</li> <li>- Lack of information</li> <li>- High investment for new appliances</li> <li>- No reasons to be seen</li> </ul>	B, A, R	
Could you indicate how energy efficient your district as a whole will be,	'Extremely energy efficient' to	B	

compared to a regular newly built district?	'Extremely energy inefficient'		
Do you know your household's energy consumption?	Yes/No	B, A, R	
Are you interested in more detailed information about your energy consumption in the future?	Yes/No	B, A, R	
How important is it for you to save energy?	'Very important' to 'Very unimportant'	B, A, R	
How important is it to you that in saving energy you can also save money?	'Very important' to 'Very unimportant'	B, D, A, R	
How much do the following statements apply to you? <ul style="list-style-type: none"> <li>- I pay attention to the energy efficiency of new appliances that I buy</li> <li>- I leave appliances on stand-by when not in use instead turning them off</li> <li>- I lower the space heating temperature at night</li> <li>- I switch off the lights when no-one is in the room</li> <li>- When ventilating I aim to minimize energy waste, e.g. by turning off heating while opening windows, using short "bursts" of intense ventilation instead of continuously open windows.</li> <li>- I pay attention to the economical use of hot water</li> <li>- I pay attention to the economical use of energy</li> </ul>	'Always' to 'Never'	B, D, A; R	
How likely is it that your neighbours, partner or friends hold that you should save energy?	,very likely' to ,very unlikely'	B, A; R	
How important is it for you that you agree with your partner, neighbours or friends in the question of energy saving?	,very important' to ,not important'	B, A, R	
What do you think the overall level of support of the people living in your building is for the renovation project?	'very strong' to 'very weak'	B, D	
Please indicate the reasons for choosing a or staying in an energy efficient refurbished home: <ul style="list-style-type: none"> <li>- My environmentally friendly attitude</li> <li>- The surroundings, the neighbourhood</li> <li>- Having lived here for a long time</li> <li>- the improvement in comfort</li> <li>- moving away would have been too complicated and expensive</li> <li>- expectation of reduced overall housing costs as a consequence of energy savings</li> </ul>	,very important' to ,unimportant'	B, A, R	



### 1.5. IMPROVEMENT OF INTERNAL COMFORT LEVEL

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMAKS
Are you satisfied with the internal comfort?	,very satisfied' to ,very unsatisfied'	B, A, R	
Do you feel comfortable with the indoor temperature in your home in winter? Do you feel comfortable with the indoor temperature in your home in summer?	'yes, most of the time' to 'no, never'	B, A, R	
Change in satisfaction with aspects of the room air: - Air quality - Freshness of air - Elimination of smells - Indoor climate	,very satisfied' to ,very unsatisfied'	B, A, R	

## 2. FURTHER TOPICS

### 2.1. ENERGY GENERATION: INCREASE IN LOCAL CONTROL OVER ENERGY SUPPLY AND LOCAL ENERGY GENERATION DUE TO CONCERTO MEASURES

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMAKS
How well do you think the increased local control of energy supply is accepted, that has resulted from the CONCERTO project?	'very high acceptance' to 'no acceptance'	A, R	
How do you rate possible benefits deriving from the local production of energy?	'very good' to 'no benefits'	B, A, R	

If you have the impression that there is little or no acceptance of the increased local control of energy supply because of the CONCERTO project, please give your reasons here:

.....  
 .....



## 2.2. STIMULATION OF LOCAL ECONOMY

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMAKS
How well has the local economy been stimulated because of the CONCERTO project?	'very high stimulation' to 'no stimulation'	A, R	
How do you perceive the increase in wealth in the CONCERTO area?	'very high increase' to 'no increase'	A, R	

If you have the impression that the image of the CONCERTO area and the rank of the district did not improve, please give your reasons here:

.....  
 .....

## 2.3. IMPROVEMENT IN THE PERCEPTION OF THE IMAGE AND STANDING OF THE CONCERTO AREA

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMAKS
How connected do you feel to your neighbourhood?	'very connected' to 'no connection at all'	B, A, R	
Do you have plans for moving away from here during the next year?	Yes/No	B, A, R	
How do you think the perception and image of the CONCERTO area have changed due to the CONCERTO measures?	'great improvement' to 'great worsening'	B, A, R	
How do you think that the standing of the area has changed because of the CONCERTO measures?	'great improvement' to 'great worsening'	B, A, R	



#### 2.4. PERCEPTION OF ECONOMIC FIGURES

QUESTIONS IN ADDITION TO THE BASE QUESTIONNAIRE	PROPOSED QUESTION SCALE	TIME OF QUESTIONING	REMARKS
How do you perceive the economic figures of the CONCERTO measures? <i>Please specify the economic figures of interest for your area</i> .....	,highly positive' to ,highly negative'	B, A, R	
How do you perceive the influence of the CONCERTO measures on your <ul style="list-style-type: none"> <li>- electricity bill</li> <li>- heating energy bill</li> <li>- energy bill for domestic hot water</li> <li>- cooling energy bill</li> </ul>	'highly positive influence' to 'highly negative influence'	A, R	

If you have a negative perception of the economic figures of the CONCERTO measure, please give your reasons here:

.....  
 .....

If you have a negative perception of the influence of the CONCERTO measures on your energy bills, please give your reasons here:

.....  
 .....

## APPENDIX 5 - Likert Scales

The first example gives a standard Likert Scale, followed by 3 alternatives.

### Example 1

*Please rate the following statements based on how strongly you agree.*

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
People should be more aware of their environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Alternative 1

*Please rate the following statements based on how strongly you agree.*

	strongly disagree				strongly agree
People should be more aware of their environment.	<input type="checkbox"/>				

In the example above, only the endpoints are defined. However, defining all interim steps of the answer options (see first example) increases the reliability of the results, because the meaning of the single boxes is obvious.

### Alternative 2

*Please rate the following statements based on how strongly you agree.*

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
People should be more aware of their environment.	①	②	③	④	⑤

A combination with numbers is appropriate to ease the process of decoding verbal material, when processing results. Additionally, it supports manual data entry.

### Alternative 3

*Please rate how strongly you agree or disagree with the following statement on a scale of 1 to 5, with 1=very dissatisfied, 2=dissatisfied, 3=neither dissatisfied nor satisfied, 4=satisfied and 5=very satisfied.*

People should be more aware of their environment.	①	②	③	④	⑤
---	---	---	---	---	---

Numbers without additional verbal information require greater effort in decoding and keeping in mind the text above.

Furthermore, Scales can also address the **degree of satisfaction**.

### Example 2

*All in all, how dissatisfied or satisfied are you with the general comfort of your car?*

very dissatisfied
↖







↗
very satisfied

Additional symbols facilitate the cognition of the answer direction (poles). Alternative graphs are e.g. smileys ☹ ☺ for the endpoints or five different, graded smileys above the boxes.

## APPENDIX 6 - Reference List

- Preiser, W., Vischer J (Editors); Assessing Building Performance,
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