

# Technical annex

## for Call: H2020-EE-2015-3-MarketUptake

### Coordination and support actions

Title of Proposal: “Zero Emission Through Residents Action” Network

Acronym: **ZETRA**

List of Participants:

Participant No *	Participant organisation name	Country
1 Coordinator	In. Bio	Italy
2 Partner	CSA – CS Aziendale	Italy
3 Partner	UNIAT - Unione Nazionale Inquilini, Ambiente, Territorio	Italy
4 Partner	AVITEM – Agence Des Villes et Territoires Méditerranéens Durables	France
5 Partner	CNL - Confédération Nationale du Logement	France
6 Partner	CRES – Center for Renewable Energy Sources	Greece
7 Partner	Municipality of Agia Varvara	Greece
8 Partner	NAPE – National Energy Conservation Agency	Poland
9 Partner	ELIPS	Slovakia
10 Partner	The Advisors s.r.o.	Slovakia
11 Partner	CSIC – Spanish National Research Council	Spain
12 Partner	OPIFEX Ltd.	Hungary
13 Partner	ÉMI Ltd.	Hungary

## 1. Objectives

The objective of the ZETRA project is to decrease energy consumption by at least 10% in at least 7.550 families by promoting direct actions in seven countries. Other indirect actions will involve at least 2.600 families' students, and several hundred thousand of citizens through regional/municipal awareness actions. The change of behaviours will be moved by about one hundred "family auditors" which will analyse the electricity and gas bills and the usage of domestic households. This analysis will be studied by the scientific partners who will propose new behaviours to reduce the consumption. Many studies, in fact, have demonstrated that at least 10% of reduction can be obtained but only if the families become more conscious of the use of the energy inside their houses.

Nowadays energy services are conceived in such a way that people pay the electricity after they have already used it, without knowing how much they are spending for each appliance: washing machines, fridge, lights, electric heaters, etc. when they are actually using them. On the other hand the electricity bill, especially for poor people, is a significant part of their salary and they should be able to decide, on the basis of the actual price, what they can or can't effort before they decide to use it. If they knew the price maybe they will decide to use less the washing machines or hot water and buy better food for the family.

The number of the families affected by energy poverty is dramatically increasing in Europe and this phenomenon cannot be neglected any more.

It is also true that many projects have already demonstrated that it is possible to decrease energy consumption just by changing behaviour and without losing any comfort.

On this basis, the ZETRA partners will:

- Identify the existing political, social, technical and economic burden, in each participating countries, to induce citizens to change their behaviour.
- Identify and install, for a limited target, devices which will allow people to know the actual cost of the use of each household facility they have at home.
- Educate citizen to better use energy and gas supplies through audit performed by young people who will provide advice and support to all the families participating to the project.
- Define a "model behaviour" to be promoted among any family and be spread through media.
- Collect/ask families to upload the measurements before and after the change of behaviour in the web, to build up an observatory, to make statistical evaluations, to provide suggestions for better usage of the facilities and to involve more and more people to join the virtual community working for a better environment.
- Suggest policies and incentives for the better use of energy among all the citizens.

ZETRA partners will therefore setup methodologies to change the behaviour of consumers in their everyday life by moving through "AIDA" (Awareness – Interest – Desire – Action) steps in the following way:

- Awareness: the inhabitants of the pilot groups will be informed about the possible reduction of energy bill just by changing behaviour.
- Interest: the inhabitants will be invited to sign an endorsement letter toward the objectives of reducing the cost of electricity and gas (if foreseen). A competition will be launched to award the best virtuous behaviour.
- Desire: the money they can save by changing behaviour will be “compared” with products of a similar value which they could buy instead of misusing electricity and gas. Also an analysis in terms of CO2 reduction will be provided to make them aware of their contribution for a better environment.
- Action: they will have one year time to demonstrate they are active by analysing the actual bill reduction.

To capitalize the results obtained and extend them to as many citizens as possible, two actions will be implemented:

- The national, regional and local administration will be invited to establish policies and/or communication campaign to promote better behaviour and/or introduce smart metering systems in each family so that they will know the price of the electricity while using their appliances.
- Other families outside the target chosen for the project will be involved through a competition launched in secondary schools through their children.

To disseminate the results of the pilot actions, a big screen will be installed at least on one of the wall of the building and/or the schools participating to the competitions. The screen will show both the reduction of electricity and the reduction of CO2 equivalent in real time through internet applications.

During the first year, young people with technical background will follow a training course for becoming “Families’ Auditors”. They will be in charge to analyse the facilities bills and the contribute that each household appliance has in the bills.

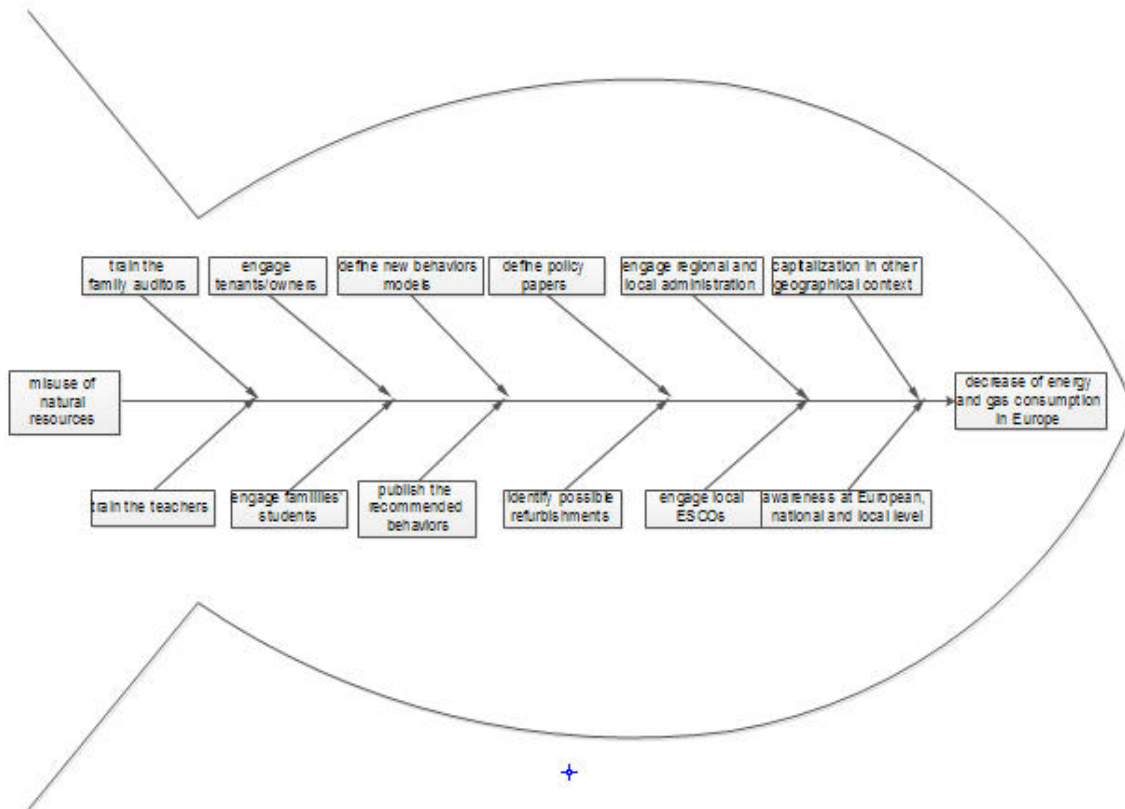
The statistical analysis of the measurements performed in the first year will provide a general model to promote good habit as well as identify the bad habits to avoid. The model will then be applied to the participating families by proposing new behaviour. After the second year, new measurements will be made. From the comparison of the two measurements, before and after the ZETRA methodology has been applied, the electricity, gas and CO2 reduction will be measured. The comparison between families which have been only trained by auditors and the one which have also received a smart metering to analyse their domestic appliances consumes, will be analysed in order to have a clear understanding of the need to have smart metering or not.

New behaviours will therefore be disseminated among all the families. Local, regional, national and European legislators will be called up to promote new consumers policies. The “family auditors”, in the end of the pilot period, with the help of the scientific partners, will also suggest refurbishment to further decrease energy consumption and local ESCO’s will be involved to find financial solutions.

The gender issue is considered especially along all the pilot activities by following three main ideas:

- The house management is usually carried out by women more than men for this reason the “family auditors” will select 50% men and 50% women to explain how to better manage the household appliances.
- The family auditors will be selected among students with technical background where the men are usually higher in number than women. For this reason in the selection rules if a man and woman have the same score the woman will be selected.
- Two questionnaires about the use of household facilities will be distributed in the beginning of the pilot action and in the end. There will be questions related to gender issue in relation to the use of hot water (number of showers/bath) and the use of the household appliances, to provide statistical data related to gender issues.

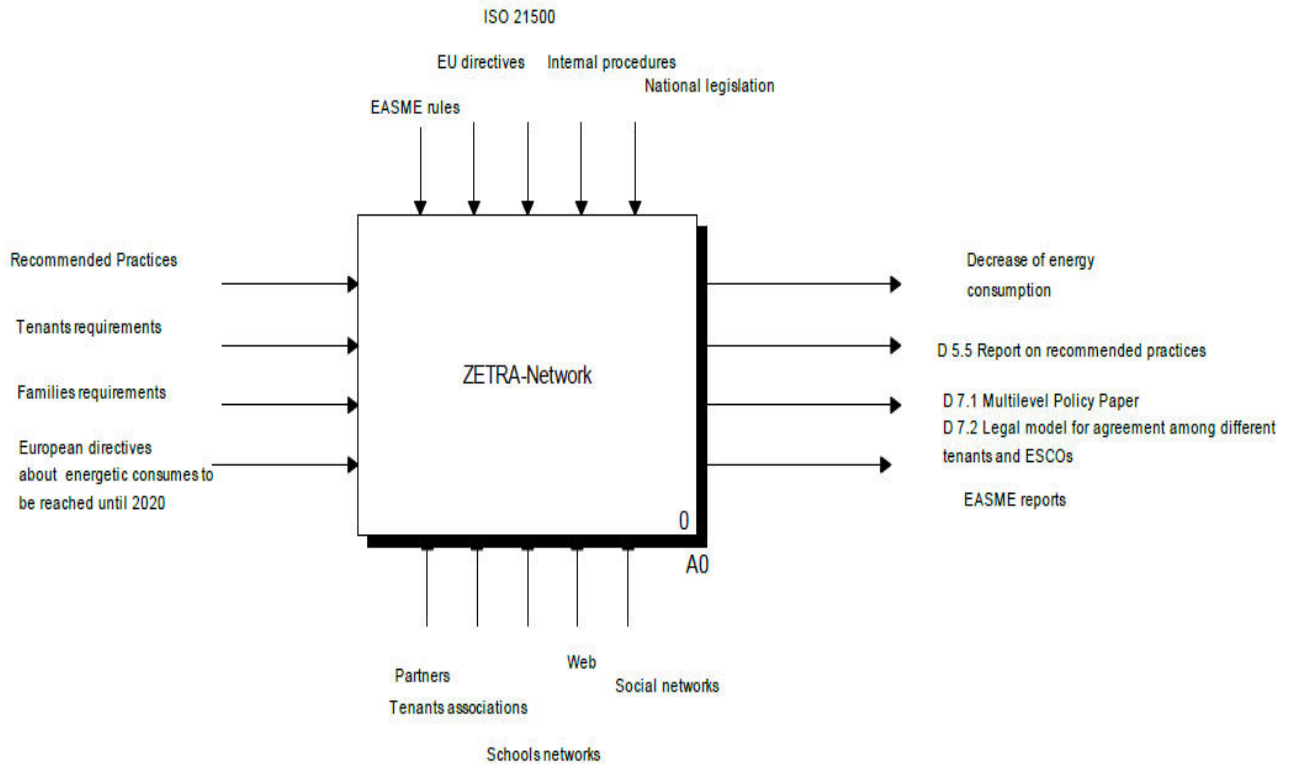
Figure 1. the “ZETRA fish bond approach” also know and the cause-effect diagram.



## 2. Work plan – Work packages, deliverables and milestones

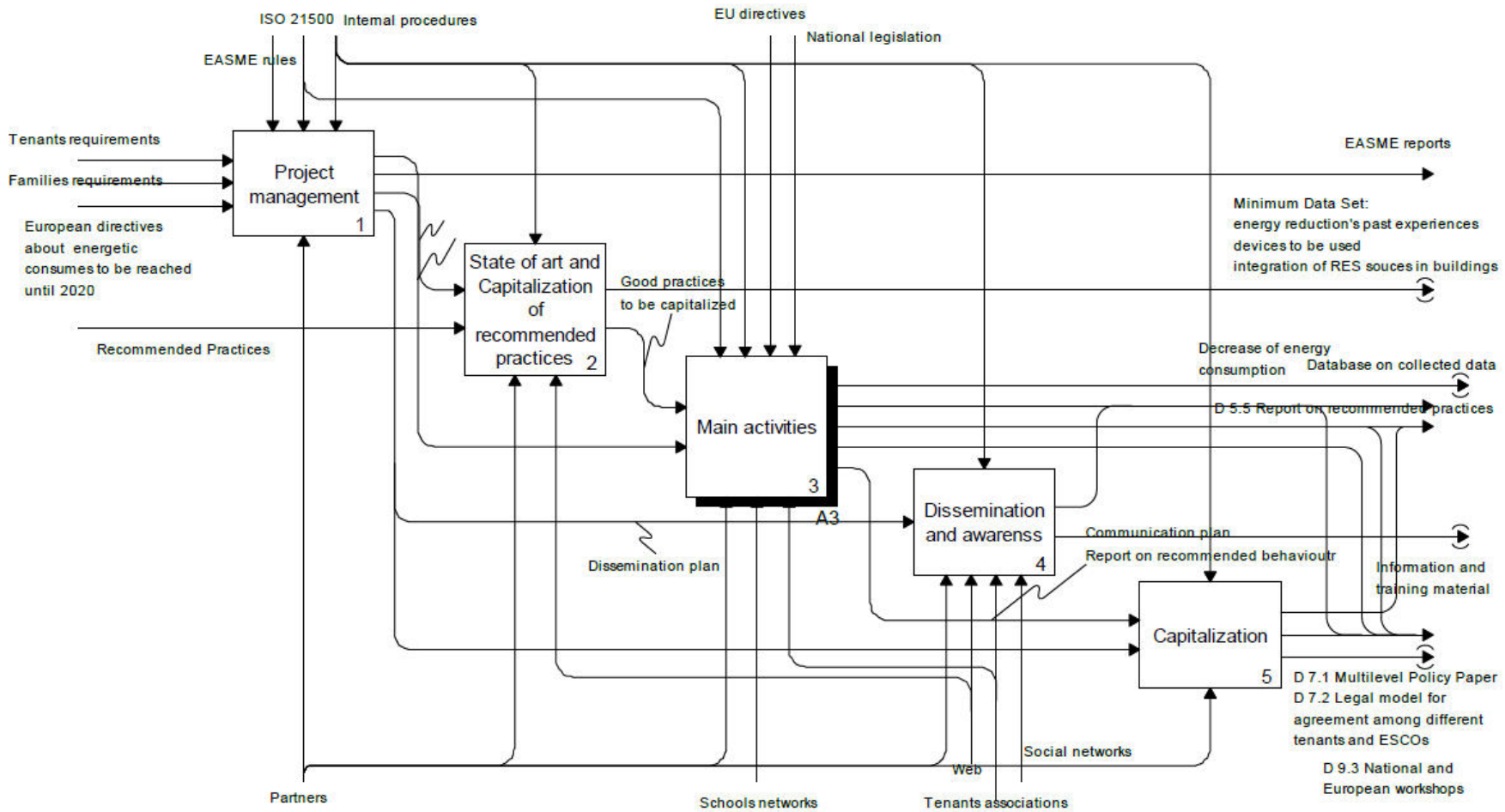
The following schema represents the ZETRA Project’s activities. The international standard “IDEFO activity model” has been used to graphically describe the activities cited above. The model foresees Inputs on the left, Controls (which regulate the activities) on the top, Output on the right and Mechanism from the bottom.

The project’s objective is to decrease European citizens’ energy and gas’s consumes by changing behaviours regarding household appliances; to reach this purpose, nine different Work Packages have been set up. Each of them focuses on a particular activity: management, stakeholders’ endorsement, pilot actions, project’s capitalization and dissemination.





ZETRA main activities



ZETRA Project's implemen

