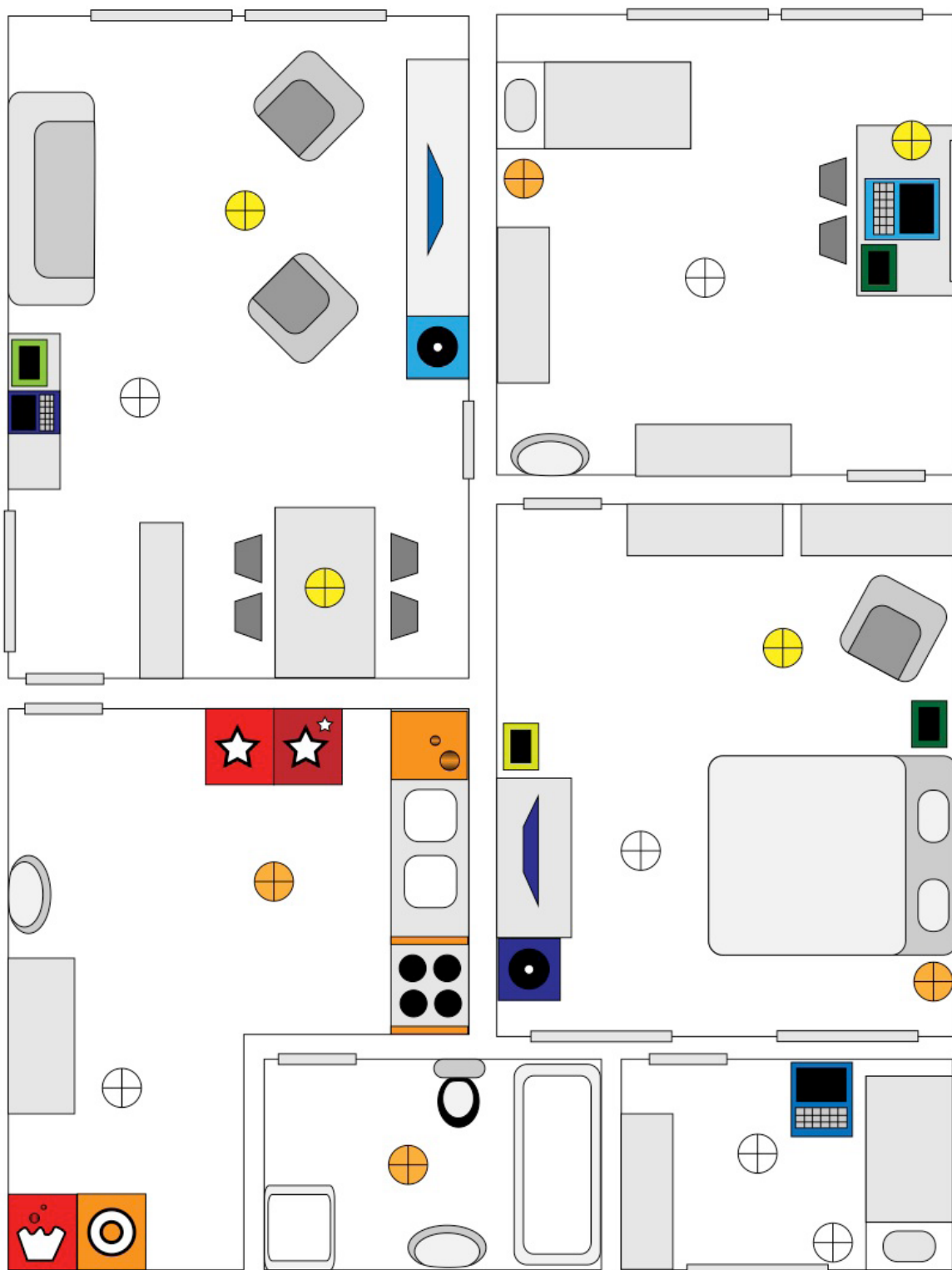




waag society

DecarboNet



*How to use the Utility Toolkit*



*A Decarbonisation Platform for Citizen Empowerment and Translating Collective Awareness into Behavioural Change.*

A lack of collective awareness negatively impacts perceived personal efficacy, which hampers efforts to address societal problems. DecarboNet is a multidisciplinary effort to tackle this problem by identifying determinants of collective awareness, translating awareness into behavioural change, and providing novel methods to analyse and visualise the underlying processes. The project's core innovations are built around a context-specific repository of carbon reduction strategies. This 'decarbonisation methodology' will increase awareness not only of existing problems, but also of best-practice solutions and the impact of individual actions. To continuously refine this repository, the collective awareness platform of DecarboNet will utilise citizen-generated content in a societal feedback loop that enables an adaptive process of social innovation.

To assess engagement strategies, two use cases will contrast the effectiveness of competition-based and cooperative approaches in a grassroots experiment to measure energy

consumption (Energy Quest) and a large-scale awareness campaign (Earth Hour). Analysing the results on the individual and collective level will provide actionable knowledge for a wide range of stakeholders. Associate partners including EEA, NOAA and the World Bank provide a rich stream of input data and amplify the impact by promoting the adoption of project technologies among large user communities.

**The role of Waag Society in this project**

Waag Society's role in this project is to seek how we can involve the public in this process. We used our 'users-as-designers' methodology to engage people. Together with our partners we addressed questions like: How can we activate people to reduce their CO<sub>2</sub> emissions? How to get people committed to this cause? We conducted user research to find the answers.

[waag.org/decarbonet](http://waag.org/decarbonet)  
[www.decarbonet.eu](http://www.decarbonet.eu)

*This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no. 610829.*

# How to use the DecarboNet Utility Toolkit

**This instruction is made for the use of the Utility Toolkit in households or organisations with multiple people (adults and children alike). Most of the materials are downloadable (pdf) or easily accessible in hobby shops.**

## Materials

- Values tree
- Tree leaves
- Mood tokens
- Utility Labels (2x)
- Utility Stickers
- Appliance Legend
  
- A4 or A3 paper (various thickness), sticker paper (A4)
- Scissors
- Markers
- Pens
- Post-its
- Journal(s)

Follow the steps below to execute the 'workshop' to start decarbonising your household.

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## Step 1 - Obtaining the Utility Toolkit

You can download all the parts of the Utility Toolkit at: [waag.org/decarbonet](http://waag.org/decarbonet). These parts will be PDF-files. Printing on A4 or A3 paper will suffice.

The Values tree might be best printed on cardboard or heavier paper for it to be able to stand upright.



## Step 2 - Values tree

Families or other communities start by deciding what their five main values are for a pleasant life. They need to rate these values in order of importance.

The various members of a household, firm or school should decide on these values together. These are values they have regarding their life, work or family - preferably in relation to energy use. Once the values have been confirmed they need to be placed on either a printed version of the Values tree or on a tree made out of cardboard using the downloadable file. The values can be written on the downloadable Tree leaves or on Post-it notes.

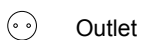
### *Process of value determination*

Key to these values is that they are the communal values for the community residing in the building. So, in order to come to and consensus every member will first decide on five values for themselves (varying from 'comfort' to 'health' to 'play' and 'culture', etc.). Once they have pinpointed these values the members of the community will form twos to come to five values shared by both people. In case of a larger community, all values need to be brought together, step-by-step, until there are five values left on which all community members can agree. These values always need to be kept in check during the course of the use of the toolkit. This process of defining values should take longer than half an hour.



### Step 3 - Mapping the house

The communities now start mapping their own household, firm or school. The goal of this exercise is that the communities will get an insight in which places energy is used and in what way. Each community member starts mapping the room they like best, using paper and markers. After that everybody will bring the rooms together and possibly add the missing rooms to get a full view of their location. During this exercise they try to think of all their appliances and their varying use of energy. To come up with symbols for various appliances the Appliance Legend can be used. Mapping the building might take between half an hour and an hour.



Outlet



Appliance - general



Appliance - fridge / freezer



Appliance - oven / microwave



Appliance - washer / dryer



Appliance - dishwasher



Heating

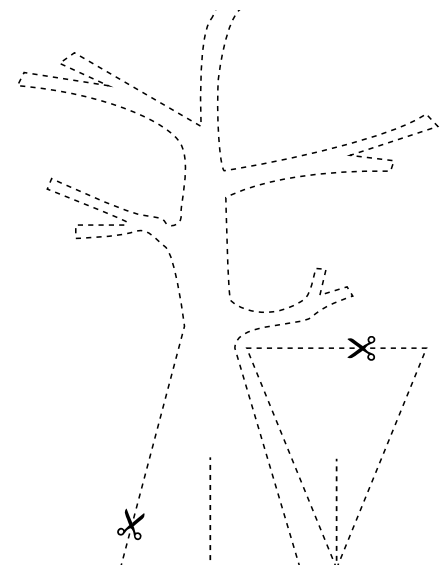
### Step 4 - Energy and emotions

After the mapping exercise the communities will define their energy use by using Mood Tokens. These can be downloaded, printed and cut to use. They represent the emotion a community has about the specific uses of energy in their house. There are five different Mood Tokens and they range from very content to very discontent. There is also a question mark provided in case nobody knows what the use of specific utility is. Being content depends on the level of interference possible in this situation. Is it a spot energy goes to waste, and there is something to be done about it, you should place a 'discontent' token. But if there is little to be done, or you are not willing to sacrifice one of your values in relation to this spot, you might place a 'content' token. Content/discontent is not related to absolute use of energy, but it is rather a subjective feeling about the situation.

The communities 'walk through' all the rooms in their building and decide together where the Mood Tokens need to be placed. This should not be an exercise of blame, but rather of shared responsibility. Once the entire building is mapped and fitted with Mood Tokens a photo captures the state of the building at that moment - from the recollection of the community. This might take between 15 and 30 minutes. Changes can be made in the map during the following week if the recollection of the community proved not to be correct.

### Step 5 - Planning change

Once the 'discomfort' spots are defined the community will make a 'game plan': what are the changes that need to be made, and how are you going to get there, and who will take responsibility? The Journal can be used to write down these goals - and check on them from time to time.





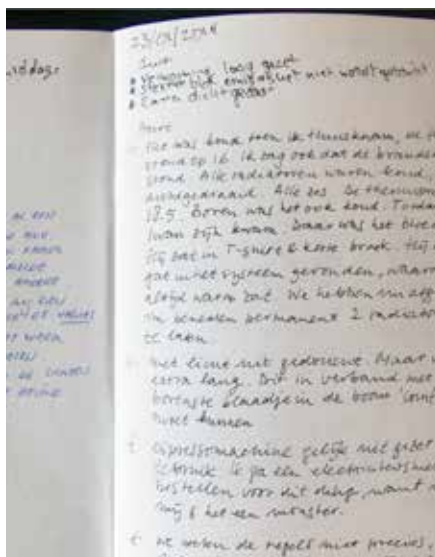


### Step 6 - Take over the building!

Every 'discomfort spot' in the building is outfitted with its own Utility Label (there is one for energy, water, gas and food) that can be downloaded, printed and cut out. A community member gets his or her own Utility Stickers or colour. Each community member can claim responsibility for a specific area of energy use.

For example: one person can be in charge of all the plugs, one can claim warm water, one person is responsible for the waste disposal and one person wants to be in charge of the thermostat.

Individual members of the community can make proposals to improve use of energy in each of the rooms. It might be easy to use 'day-in-the-life'-reports so that they can pinpoint the areas they use most. The community discusses together, during a daily or weekly meeting, which changes have been made and who was responsible for these changes. The responsible person is awarded and allowed to place their sticker or colour on the Utility Label in question.



### Step 7 - Journaling

In the Journal the community members will record all the experiences of the changes made. These can be descriptions of the proposed changes, but also the effect the changes have on the dynamic of the household and in which way the changes affect the community's values.

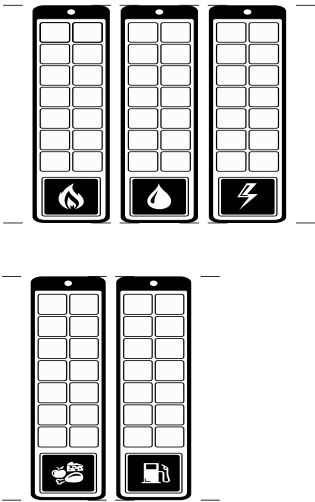


### Step 8 - Energy Champion

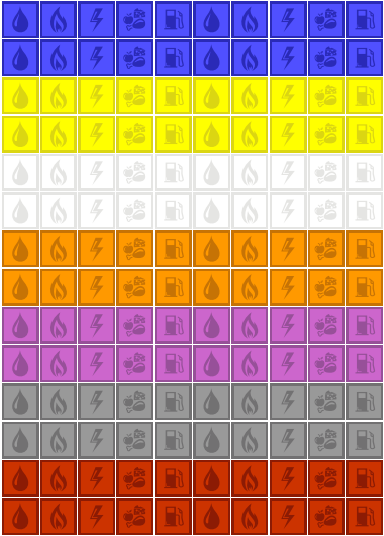
At regular intervals of time, the points, the stickers, gained by each member of the community are added up and the person with the most points will be the 'Energy Champion'. This person will be rewarded. Of course, after some time the whole community will enjoy the benefits of lower energy usage bills.

The families themselves will determine a suitable reward for the 'Energy Champion'.

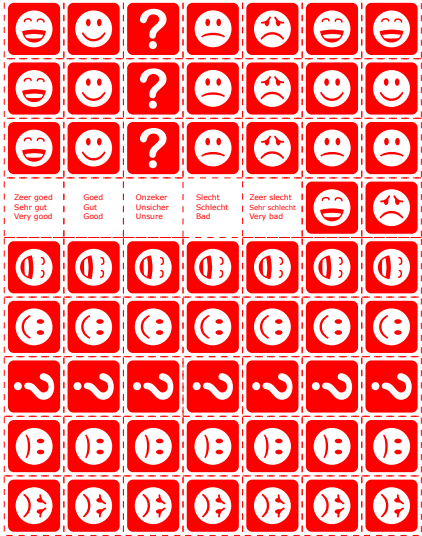
# The pdf files



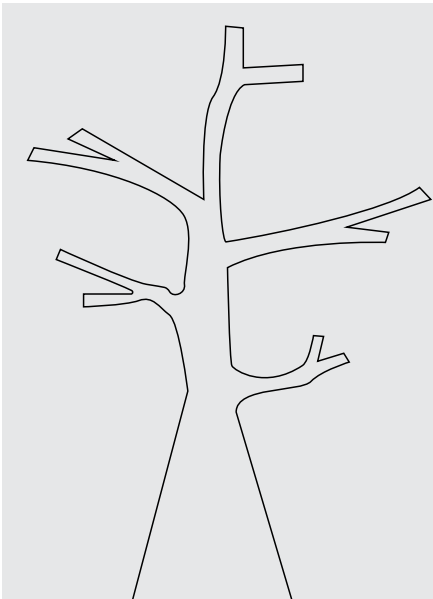
Utility labels (2 sheets)



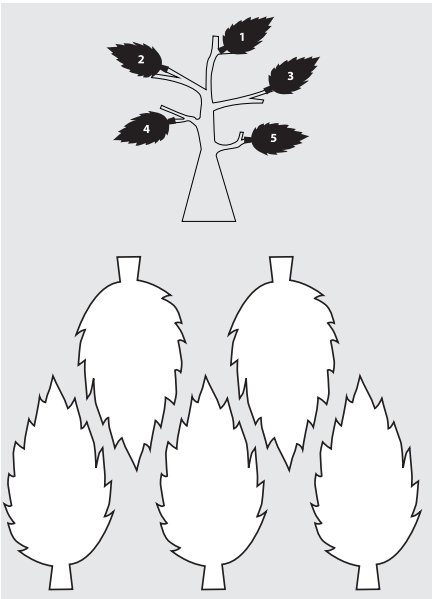
Utility stickers



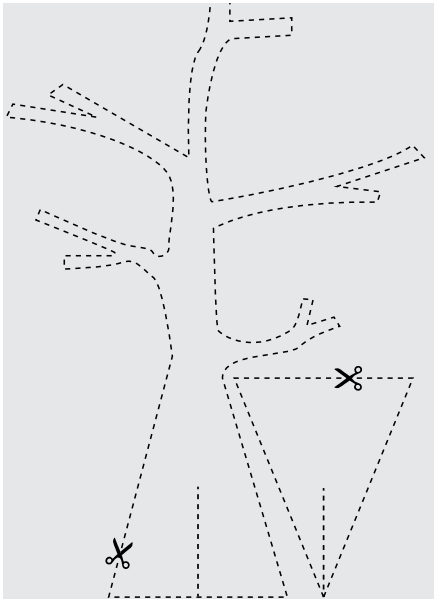
Mood tokens



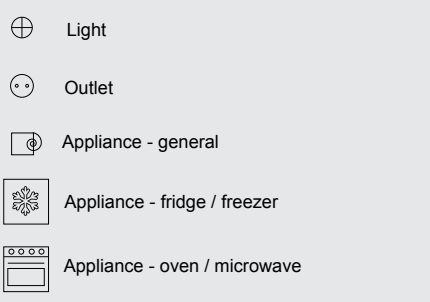
Values tree (print)



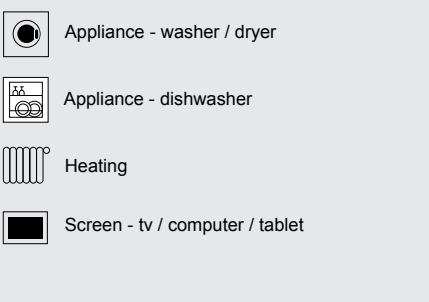
Values tree leaves



Values tree (cut-out)



Appliance legend



## Questions, feedback & experiences

Do you have any questions regarding the use of this Utility Kit, feedback or would you like to share your experiences with us? Or might you be interested in a follow-up process to further refine the kit?

Please contact us at:

**[decarbonet@waag.org](mailto:decarbonet@waag.org)**



### Colofon

This instruction manual for the DecarboNet Utility Toolkit was prepared by Waag Society. Waag Society, *institute for art, science & technology*, develops creative technology for social innovation. The foundation researches, develops concepts, pilots and prototypes and acts as an intermediate between the arts, science and the media. Waag Society cooperates with cultural, public and private parties.

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