‘Euronet 50/50 max - *Roll-out of 50/50 initiative to unclock energy saving in schools and other public buildings.* "

An Intelligent Energy Europe project

www.euronet50-50max.eu

Heraklion 25 October 2018
REBUS Project Staff Exchange in Crete

Region of Crete
Directorate of Environment & Spatial Planning
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Region of Crete

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EURONET 50/50 max

2009-2012, Euronet 50/50-The ancestor

1837 pupils (*174 in Crete*)

78 teachers (*9 in Crete*)

2 primary schools

2 secondary schools

Energy savings

(*>8500 Kwh in Crete)*

CO_2 reduction

(*>12% in Crete*)

Operating cost reduction

(1643 € in 2010 just in one school)

1st Prize in the European Competition for Sustainable Energy 2013

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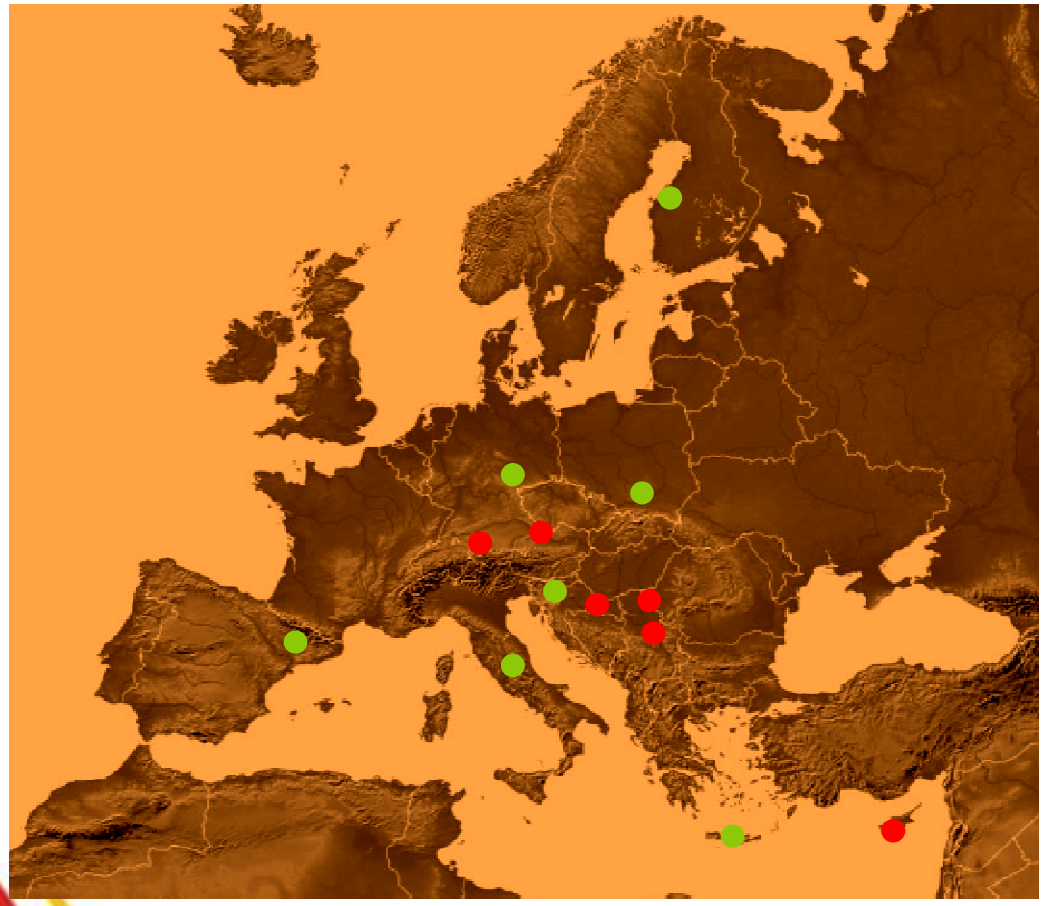
Partners from 13 countries



- Spain
- Poland
- Greece
- Italy
- Finland
- Germany
- Slovenia
- Czech Republic
- Cyprus
- Lithouania
- Latvia
- Austria
- Croatia

Old partnes Euronet 50/50

New Partners Euronet 50/50 max

500 schools, 1.000 teachers, 10.000 pupils
48 public buildings

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The objectives

- Changing students' behavior regarding saving energy through education, and protecting the environment by developing ideas and measures towards this direction.
- The awakening of students' environmental consciousness and the dissemination of the knowledge they have acquired
- Energy saving by small cost-free interventions in schools
- The economic benefit of saving energy

"50/50"

Saving of 1000€ → 500€ → school

Saving of 1000€ → 500€ → Local authority

- ***Money is returned to the school by the local authority paying the bills, that is, the local municipality***

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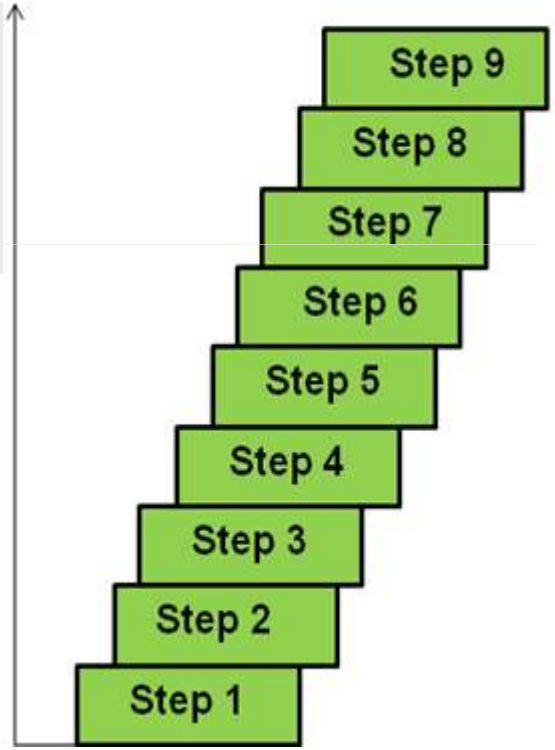
The 9 basic steps of 50-50 methodology

Steps 1-2	Preparatory phase
Steps 3-8	Implementation process in 6d period
Step 9	Dissemination of results
	Use of saved money



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Step 1: Setting up the energy team

School Principal
1 or 2 teachers
1 school class or 1 team of pupils from different classes
School caretaker

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Step 2: Insider Energy tour

Energy group (excluding pupils), representative of the Municipality
Assessment of the condition of the school building (windows, insulation), and the heating system
Identifying the students' field of action to save energy

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Step 3: Raising pupils knowledge and awareness on energy issues

Introduction to issues such as energy, energy sources, greenhouse effect, climate change

Argument for the need to take measures to save energy

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Step 4: The energy tour

The Energy Team evaluates the school building mainly in terms of heating and lighting (use of supplied measuring devices).
All the building's rooms, corridors, stairs, toilets, offices, warehouses are checked.
The results are written down in worksheets and discussed.

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Supplied auxiliary material/devices

E-Pack for primary schools
E-Pack for secondary schools
Measuring devices: Thermometer, luxmeter, energy consumption meter

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Step 5: Gathering of data to complete the energy syrvey

Pupils measure the T at all school locations and create the energy profile of the school on a map of the school building by painting with colors.

eg	warm	red
	regular	green
	cold	blue

Regular Temperature

School classes 20 ^{0}C

Other rooms/Gymn. 15-18 ^{0}C

Stairs/Corridors 14-17 ^{0}C

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Step 6: School Action Plan (Solutions/Suggestions)

The Energy Team identifies solutions to save energy towards a Target Group (school director, teachers, other pupils,body responsible for the technical maintenance of the building).

Examples

✓Disconnection of unused electrical equipment

✓Reminder marking on switches

✓Turn off lighting when not necessary

✓Close the windows when the heating/cooling system is in operation

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Step 7: Information campaign

Pupils (Energy Team) inform the rest of the school community about the results of the survey and the suggested solutions in terms of behavioral change in order to save energy.

Posters
Presentations
Organizing an energy week within the school

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Step 8: Report measures that require small investments

Pupils of the energy team identify low cost interventions to save energy. Such as:

- ✓ Seal the windows and doors with insulating tape.
- ✓ Place silver aluminum sheets behind the heaters.
- ✓ Substitute light bulbs with energy-saving lamps.

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Step 9: Communicating the success and use of saved money

Pupils of the energy team propose ways to use the money that was awarded to school due to implementation of 50-50 concept methodology. They communicate the fact to the other pupils of the school.

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The 9 basic steps of 50-50 methology

9. Communicating the success and using saved money

8. Reporting measures that require small investments

7. Information campaign

6. School´s action plan

5. Gathering data and energy survery

4. The energy tour

3. Raising pupils knowledge and awareness on energy issues

2. Insider energy tour.

1. Setting up the energy team

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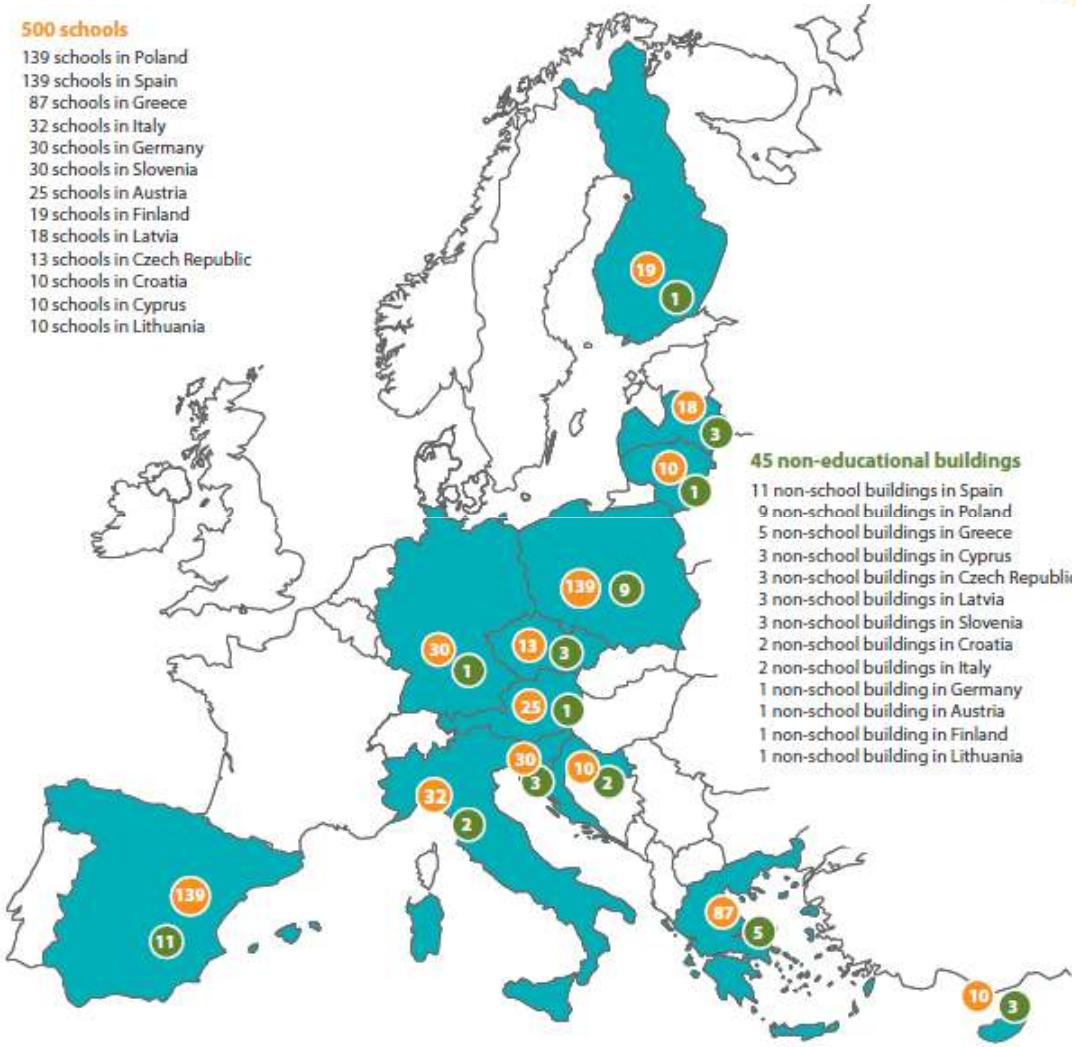
Participation of schools in Euronet 50-50 max

EURONET 50/50 max

500 schools

139 schools in Poland
139 schools in Spain
87 schools in Greece
32 schools in Italy
30 schools in Germany
30 schools in Slovenia
25 schools in Austria
19 schools in Finland
18 schools in Latvia
13 schools in Czech Republic
10 schools in Croatia
10 schools in Cyprus
10 schools in Lithuania



45 non-educational buildings

11 non-school buildings in Spain
9 non-school buildings in Poland
5 non-school buildings in Greece
3 non-school buildings in Cyprus
3 non-school buildings in Czech Republic
3 non-school buildings in Latvia
3 non-school buildings in Slovenia
2 non-school buildings in Croatia
2 non-school buildings in Italy
1 non-school building in Germany
1 non-school building in Austria
1 non-school building in Finland
1 non-school building in Lithuania

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Euronet 50-50 max in Region of Crete

Regional Unity	Municipality	Primary Schools	Secondary Schools
RU Chania	ΧΑΝΙΩΝ	3	2
	ΚΙΣΣΑΜΟΥ	2	0
	ΚΑΝΤΑΝΟΥ-ΣΕΛΙΝΟΥ	1	0
RU Rethymnon	ΡΕΘΥΜΝΟΥ	5	3
	ΜΥΛΟΠΟΤΑΜΟΥ	3	1
RU Heraklion	ΗΡΑΚΛΕΙΟΥ	7	10
	ΜΑΛΕΒΙΖΙΟΥ	0	2
	ΧΕΡΣΟΝΗΣΟΥ	3	0
	ΜΙΝΩΑ ΠΕΔΙΑΔΑΣ	0	2
	ΦΑΙΣΤΟΥ	1	0
RU Lasithi	ΣΗΤΕΙΑΣ	3	3
	ΙΕΡΑΠΕΤΡΑΣ	2	2
	ΑΓΙΟΥ ΝΙΚΟΛΑΟΥ	0	2
Region of Crete	**Total**	**30**	**29**

87 schools in Crete
68% completed

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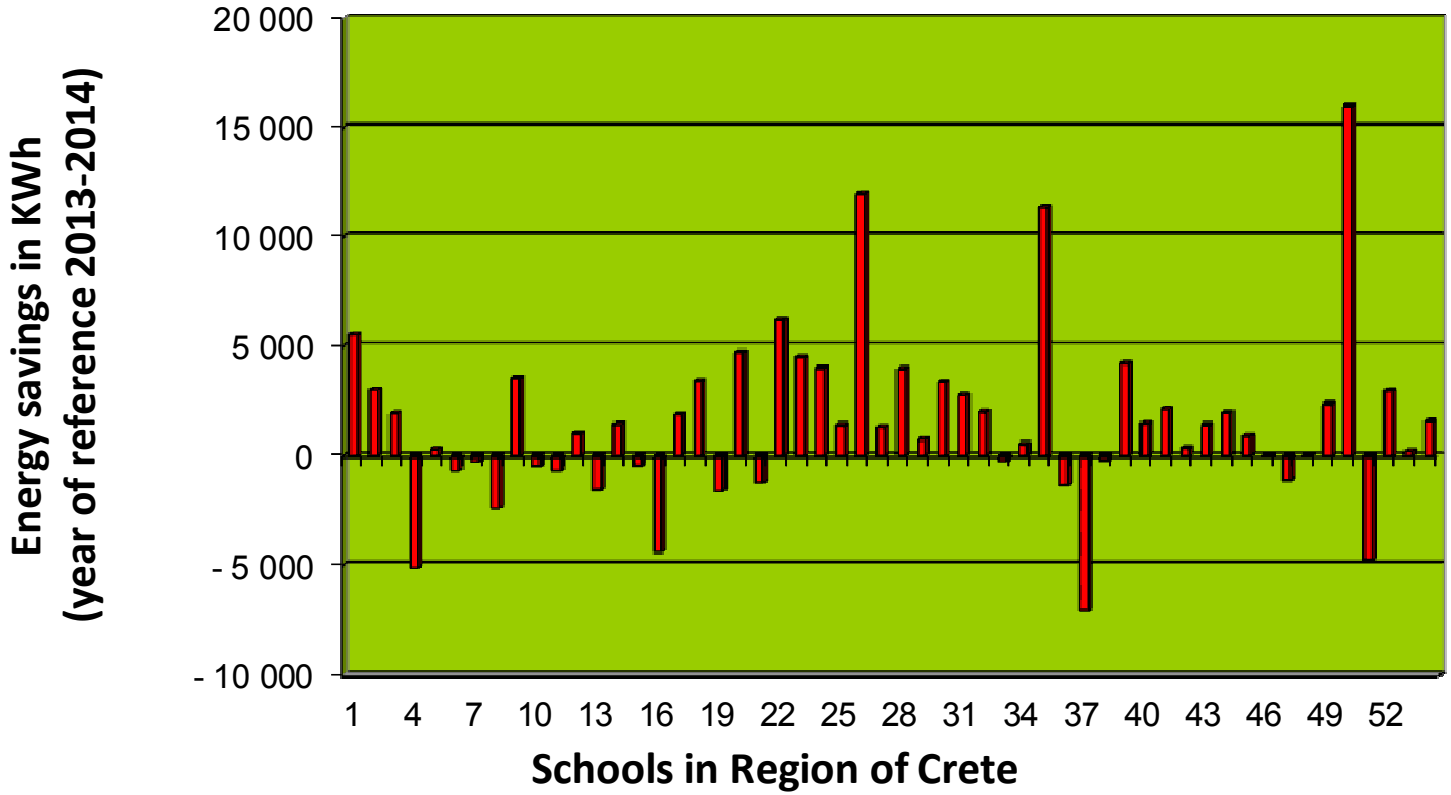
EURONET 50/50 max

Region of Crete: Energy savings in schools during 2015)



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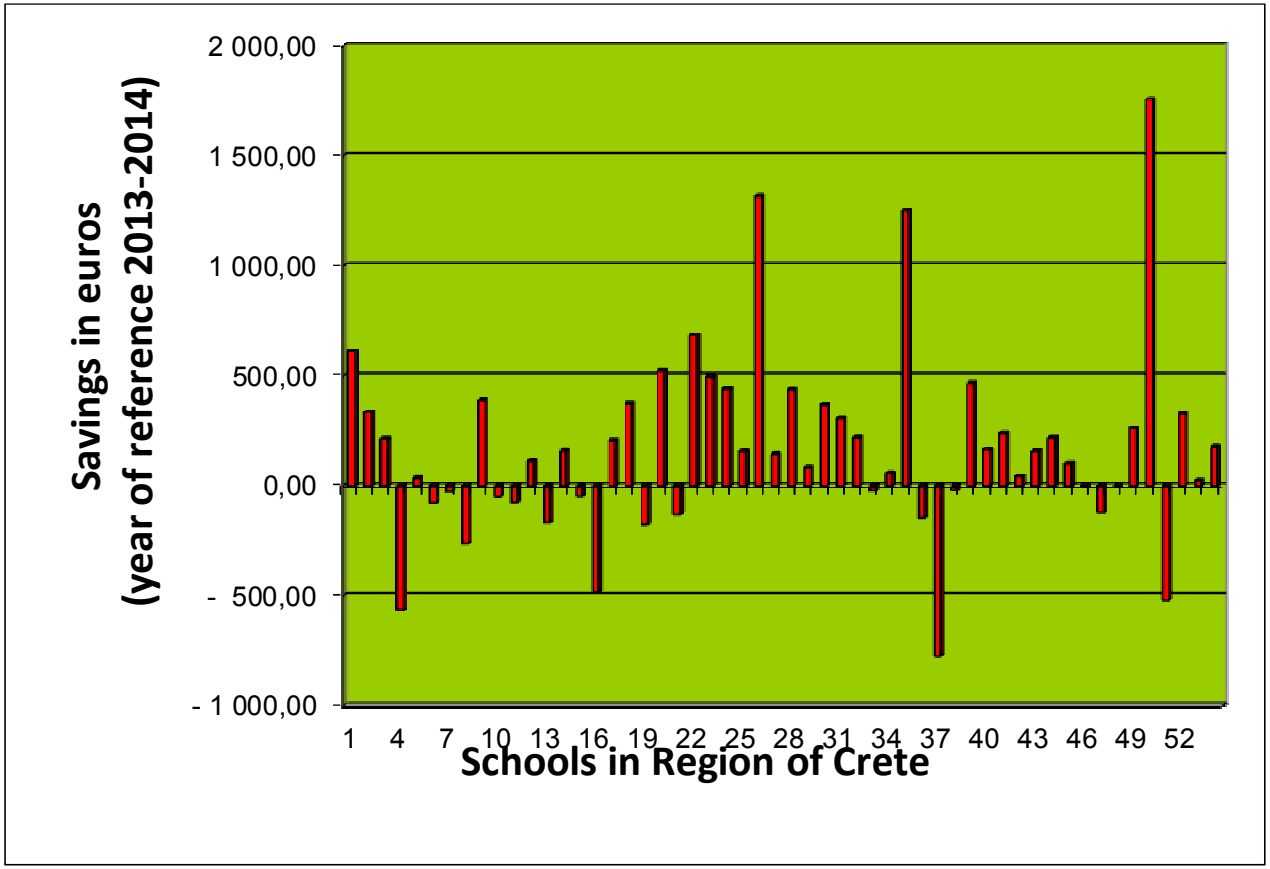
Region of Crete: Savings in euros in schools during 2015



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Region Crete: Our achievements

EURONET 50-50 max	Savings in			
	kWh	%	EUR	t CO2
Average energy savings (total of schools)	1.531	5,74%	168,36	0,70
Total energy savings (total of schools)	87.250		9.596,47	40,13
Average energy savings (total of schools with savings)	3.173	15,34%	348,99	1,42
Total energy savings (total of schools with savings)	120.565		13.261,66	55,47

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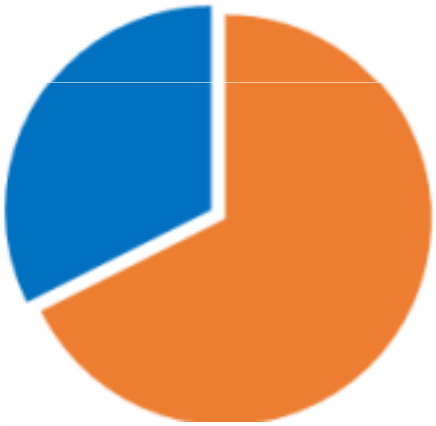
Euronet 50-50 max: Achievements in Europe

The savings in schools

67,63% of the 426 schools obtained savings (67,8 % in 2014, the first year, and 67,4% in 2015, the second year of the project).



Schools with savings
Schools without savings

Total savings in energy	15.348.697 kWh
Total savings in CO2	3.997 tn
Total money savings	1.034.487,10 euros

Focus on 68% of buildings with savings

Each building saved:

11,54% in terms of energy

11,99% in terms of CO2 emissions.

37.959 kWh

2.767 euros

11,99 t CO2

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Best Practices examples from schools

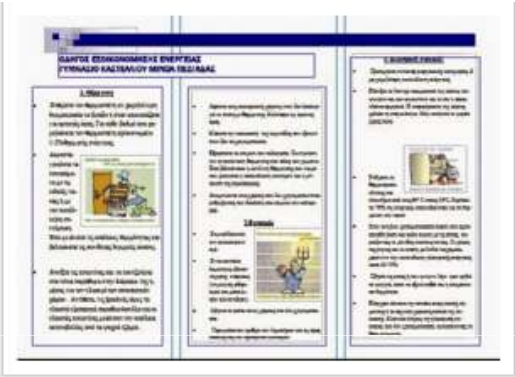
Greece

Primary School of Boroi Poster use and official letters to Principles

The Primary School of Boroi did an amazing job in promoting the building energy saving issue outside the school premises. To specify, the participating pupils created a best practices energy saving poster as well as relevant flyers and several thematic blog entries in the school's blog. They also sent official letters to both the school Principle and the Mayor of Municipality of Faistos, suggesting ways to achieve energy saving and consequently minimizing energy related costs.

Blog: http://blogs.sch.gr/dimvoron/category/εξοικονόμηση-ενέργειας

Best Practices examples from schools



Secondary School of Kastelli: Questionnaire/leaflet use

The participating pupils raised awareness on the energy saving issue and actively tried to reach out to their local community, starting from their family and friends and branching out.
This was mainly achieved by preparing and distributing a specialized questionnaire aiming to make local people realize how they waste energy in their daily lives. The questionnaire was accompanied by a caringly prepared illustrated information leaflet made from recycled paper.

Blog : http://gymkast.blogspot.gr/2014/10/blog-post_12.html

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Presentation of Euronet 50-50 max
Dissemination of 50-50 concept

Dissemination of 50-50 concept through 50-50 events with the participation of schools.

Exchange of experiences
Organization of activiti

ΠΕΡΙΦΕΡΕΙΑ ΚΡΗΤΗΣ

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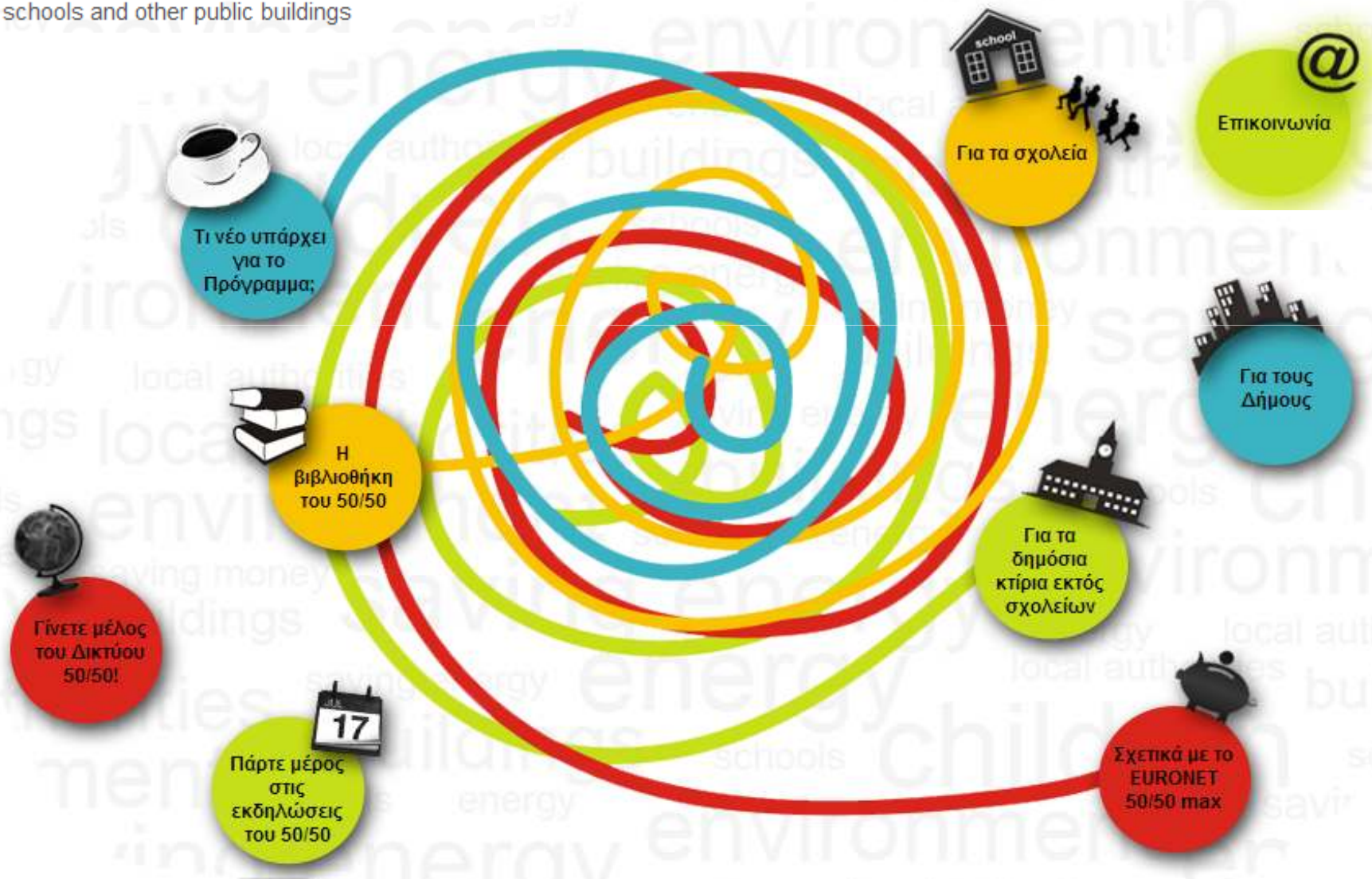
EURONET 50/50 max

Save energy and have fun. Everybody wins!

Roll-out 50/50 initiative to unlock energy saving in schools and other public buildings