

BENEFITS OF APPLYING 50/50 IN PUBLIC BUILDINGS



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**Diputació
Barcelona**

CREDITS

ORIGINAL IDEA AND CONTENTS

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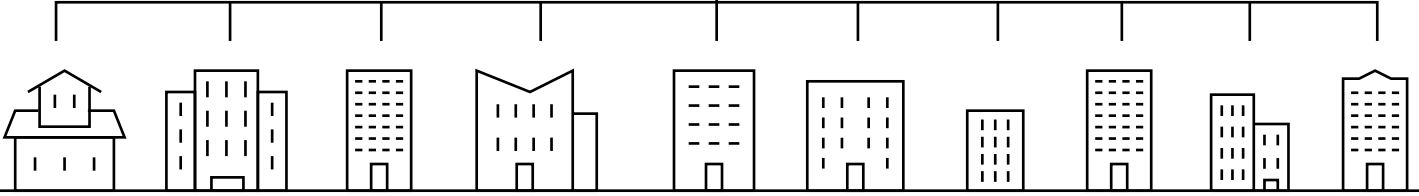
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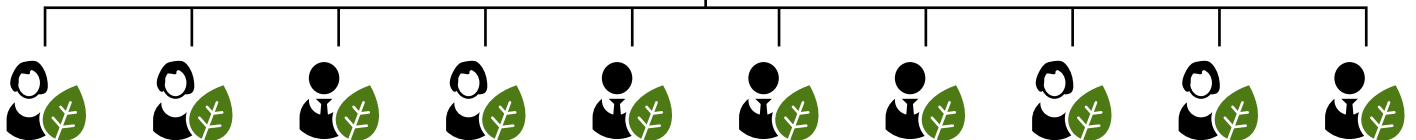
EVERYONE WINS



More efficient public buildings



Save energy and money



Public playing a key role against climate change

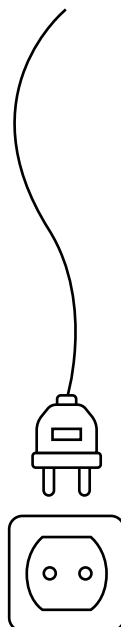



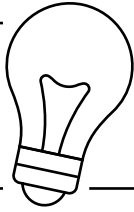


TABLE OF CONTENTS

	— 4 —	50/50 projects, encouraging the sustainable use of energy
	— 6 —	Euronet 50/50max, energy saving in schools and public buildings
	— 7 —	The 50/50 concept: saving energy and money
	— 8 —	Benefits of applying the 50/50 methodology in our public buildings
	— 9 —	Results achieved in schools and public buildings
	— 10 —	How to set up a 50/50 project, what does a local authority need?
	— 11 —	Nine steps to achieve energy savings
	— 14 —	The keys to a successful 50/50 project
	— 16 —	Types of Euronet 50/50max buildings
	— 17 —	Examples of 50/50 actions in public buildings
	— 19 —	Contact
	— 20 —	50/50 project partners





50/50 PROJECTS

encouraging the sustainable use of energy.

50/50 is an agreement between local authorities and users/workers in public buildings to implement energy-saving actions in the day-to-day use and management of their facilities. The savings made are split equally between the town council and the facility in question.

With 50/50, everyone wins: Users of public buildings are encouraged to save energy and to earn money to put towards their own activities or to invest in improving their facilities, public authorities are able to reduce their energy expenses, and the general public win by reducing atmospheric CO₂ emissions.

Euronet 50/50max incorporates a common methodology that has been applied in more than 500 schools and 50 public buildings in 13 European countries, achieving genuinely significant results.

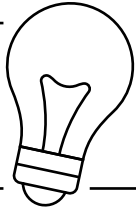
During the first year of project implementation, 71% of participant schools and 60% of the 50 non-educational public buildings managed achieved energy and financial savings: more than 6,000,000 kWh and more than €500,000.

Consequently, a 50/50 project can significantly contribute to achieving local climate and energy targets, and it is well worth incorporating it into municipal policy and sustainable energy strategies.

If you have joined the Covenant of Mayors initiative, you can include the 50/50 project in your Sustainable Energy Action Plan (SEAP) or other local or regional strategies. On next link you could download an example factsheet to introduce some 50/50 measure in your SEAP.

<http://www.diba.cat/documents/471041/0/Euronet+PAES+englsh.pdf/b68aa9b2-2d92-43d9-a4c0-1e69de02c78e>





50/50 PROJECTS

encouraging the sustainable use of energy.

WHY?

Public buildings have significant energy-saving potential, and the 50/50 methodology is a great tool for encouraging all users and workers at public facilities to use energy responsibly.

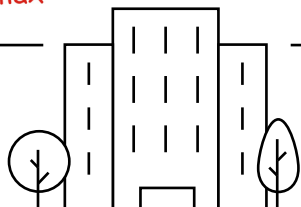
Implementing energy-saving measures in municipal buildings demonstrates governors' commitment to a more sustainable future and inspires the general public and local groups to follow their example and to be more energy efficient.

The 50/50 project allows local authorities to reduce their energy bills and CO₂ emissions while earning additional funds for schools and public buildings to invest in more energy-saving measures or other requirements.

The 50/50 Project is a great opportunity for municipalities that have signed up to the Covenant of Mayors to contribute towards climate protection targets and reducing CO₂ emissions.

It is advantageous to include a 50/50 project in your municipality's Sustainable Energy Action Plan (or any other strategy for promoting energy efficiency) since not only does it directly reduce energy consumption and CO₂ emissions in the public buildings involved, but it also significantly helps to change behaviour among users of public buildings and their families. And simply involving the general public and local stakeholders can help us to achieve the ambitious target we set when signing the Covenant of Mayors.





EURONET 50/50MAX

energy saving in schools and public buildings.

Euronet 50/50max is a European project for energy saving in schools and public buildings financed by the European Union through the Intelligent Energy Europe (IEE) programme, and headed by the Provincial Council of Barcelona (DIBA).

The project is intended to encourage energy saving in 500 schools and 48 public buildings in 13 EU countries through application of the 50/50 methodology.

The project, which was run from 2013 to 2016, has achieved the following:



Consolidating a broad working network formed by schools and public buildings implementing 50/50 in 120 municipalities in 13 European countries.

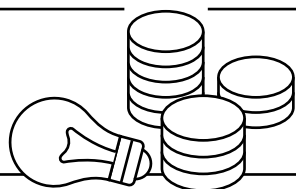


Validating the 50/50 methodology to achieve financial and energy savings without major investment costs.



Improving public awareness of climate change and the need to optimize energy management in public buildings.





THE 50/50 CONCEPT:

saving energy and money.

The 50/50 concept consists of involving users and managers of public buildings in energy-saving activities by creating financial incentives. The public-use building and the town council, as the bill payer, reach an agreement:



50% of the financial saving achieved through the energy-efficiency measures adopted by users of the facility is returned to the public facility by means of a cash payment.



50% of the financial saving achieved is a net saving for the local authority that pays the energy bills.

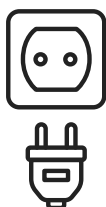




BENEFITS OF APPLYING THE 50/50 METHODOLOGY in our public buildings.



Reducing consumption and energy bills: Applying the 50/50 methodology means achieving financial and energy savings without major economic investments. The key to success is setting up energy teams who are motivated to improve energy management in public buildings.



Improving energy culture in public buildings: 50/50 projects teach users and workers at public buildings how to make better use of the facilities, and provides them with know-how and tools to manage energy use in a responsible and efficient manner.



Demonstrating a commitment to sustainability: Local authorities can demonstrate their commitment to sustainability by promoting and leading projects that are intended to identify actions that waste energy in public buildings.

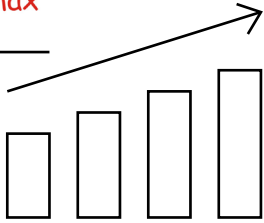


Inspiring the public to take action to promote energy efficiency: Managers of public buildings can use 50/50 to invite the general public to rethink their relationship with shared spaces and inspire them to adopt good habits in relation to energy management.



Joining the fight against climate change: The 50/50 methodology has great potential for increasing the number of people motivated to join the fight against climate change.





RESULTS ACHIEVED in schools and public buildings.

By applying the 50/50 working methodology, the 500 schools and 48 public buildings that have participated in Euronet 50/50max over the years 2013–2016 have achieved very noteworthy results and savings.



They have saved around €500,000,



An average of €2,500 per year in each building,



They have saved 6,000,000 kWh,

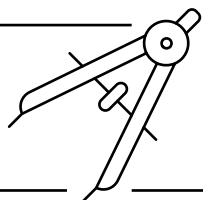


They have reduced energy costs by 12%,



They have reduced CO₂ emissions by 1,744 tons.





HOW TO SET UP A 50/50 PROJECT, what does a town council need?

How to set up a 50/50 action.

The town council plays a fundamental role in ensuring a 50/50 project in a public facility achieves good results.

The technical support and political leadership of the town council are key to encouraging the involvement of users of the public facilities involved in 50/50 projects.

The local authority has to establish itself as the flag bearer for a new energy culture!

To implement a 50/50 project, the town council has to do the following:



Signing an agreement with the school or other public building,



Compiling the energy bills relating to the building,



Making up part of the energy team and doing the tour,



Promoting and facilitating implementation of the 50/50 concept,



Helping to calculate the related energy savings at the end of the year,

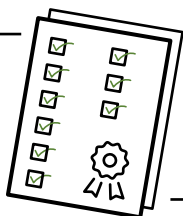


Returning 50% of the savings achieved to the school or public building,



Raising awareness of 50/50 and announcing the results achieved.





NINE STEPS to achieve energy savings.

The 50/50 methodology is based on nine steps focused on achieving financial and energy savings in a building. 50/50 actively involves building users in the energy-management process and shows them how to behave in an environmentally friendly manner through practical actions.



Setting up a good energy team, the key to success.

The 50/50 methodology makes users and managers of public facilities jointly responsible for energy management.

The energy team is tasked with incorporating the 50/50 methodology into the energy management of the facility.

It should be made up of people who are motivated to achieve good savings, and must include representatives of the people who have an impact on the energy costs of the building.



Partnership agreement.

Municipal authorities and users of the equipment work together to save energy and money.

It is important to establish a clear partnership agreement setting out the duties assumed by the local authorities and the people responsible for managing the buildings.

50% of the savings made are returned to the facility, while the other half of the savings benefit the town council.



Monitoring building energy consumption: How much energy are we using?

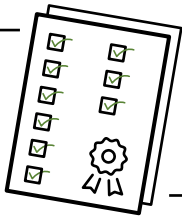
To set up a 50/50 project, it is important to know how much energy the building uses.

The energy consumption of the building needs to be monitored throughout the project, and as such it is advisable to appoint someone at the centre to be in charge of energy monitoring.

The monthly energy bills are monitored throughout the 50/50 project, metering equipment are installed and the meters are read periodically.

Continuous monitoring and analysis of energy consumption provide information that enables us to determine the efficiency of our actions.





NINE STEPS to achieve energy savings.



Energy audit: how we use energy.

The energy audit in a 50/50 project is intended to provide the necessary information on energy consumption at the facility.

It should be used as inspiration for the energy team when prioritizing energy-saving actions.

The main energy-management issues applicable to buildings need to be identified.

The project should focus on actions that require low investment and especially actions related to adopting good habits.



Energy tour of the facility.

The energy tour is intended to familiarize members of the energy team and other users of the facility with the relevant zones of the building, so that they can understand how the facility works in terms of energy use.

The tour should include the electrical connection point, boiler room, a typical room in the facility, shared spaces, etc.

This tour should give members of the energy team an idea of the main strong points and weak points of the facility, enabling them to propose actions for improvement.

The tour can also be used to perform the energy audit, with steps 4 and 5 carried out together.

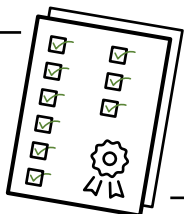


Provide information to building users

Information actions for all other users are then planned on the basis of the results of the audit and the energy tour.

At this point, ideas, comments, opinions, etc. can be collected with a view to generating proposals for the action plan (step 7).





NINE STEPS to achieve energy savings.



Action plan

Once all of the previous steps have been completed, the actions to be carried out are then planned, and the people responsible for carrying them out and the deadlines for doing so are established.

Actions may be defined directly by the energy team, or the process can be opened up to include users of the facility.

Once the actions have been carried out, energy consumption then needs to be tracked using energy bills and by monitoring the facility. This enables the effectiveness of the different measures put in place to be assessed.



Calculating savings

Annual savings should be calculated in kWh, tons and euros.

Energy savings = financial savings.

The monetary value is obtained by applying energy prices to the energy savings achieved, i.e. calculating the number of kWh saved for each utility (electricity and gas) and multiplying this by the current average annual price given in the related bill.

Click on the link below to find out more about the energy saving methodology:

<http://euronet50-50max.eu/ca/energy-savings-calculation-tool>



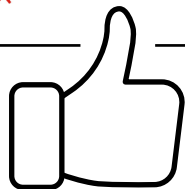
Announcing results

The savings achieved and how they will be invested should be announced.

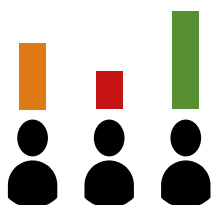
Use municipal communication channels.

Organize a public presentation of the project with the energy team and municipal representatives.





THE KEYS TO A SUCCESSFUL 50/50 project.



Motivation, enthusiasm and drive

Finding enthusiastic people who want to lead the project, and making sure they have the necessary support.

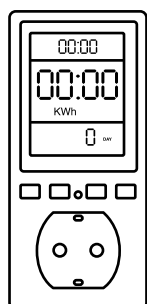
Having the support, commitment and involvement of local politicians is the starting point for any energy-management project.



We focus on people and good habits.

The objective of 50/50 is to implement energy-saving actions and to influence people and habits, not to make major investments in energy saving and efficiency.

Nonetheless, actions that require small investments can be identified and carried out using the savings made.

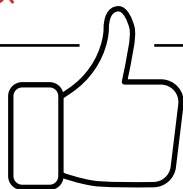


Monitoring energy consumption

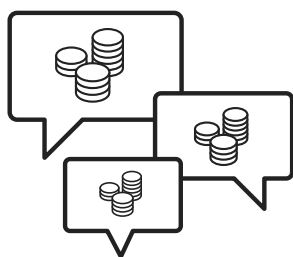
It is highly recommended to install a device for monitoring total consumption at the centre on the general connection board. This enables us to quantify the saving achieved by the changes made, and provides us with visual information that is very useful for showing the results achieved to the entire community.

If you do not have instantaneous metering equipment, there are other, more manual alternatives for monitoring consumption.





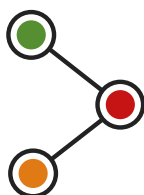
THE KEYS TO A SUCCESSFUL 50/50 project.



Involve users of public buildings when it comes to spending the savings achieved.

Energy management needs people. It is important to value everyone's potential, to give them responsibility and to properly reward them through the success achieved. Making sure that key individuals implement their projects will ensure that they are successful.

Involving building users in the process of investing the savings made is an important way of ensuring their involvement in the 50/50 project.



Sharing

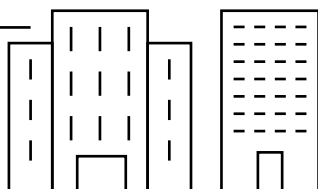
Making the entire community aware of the project, the related instructions applied and the savings achieved is one way of encouraging everyone to make their own contribution to the project. The existing channels of communication at the facility can be used to do this.



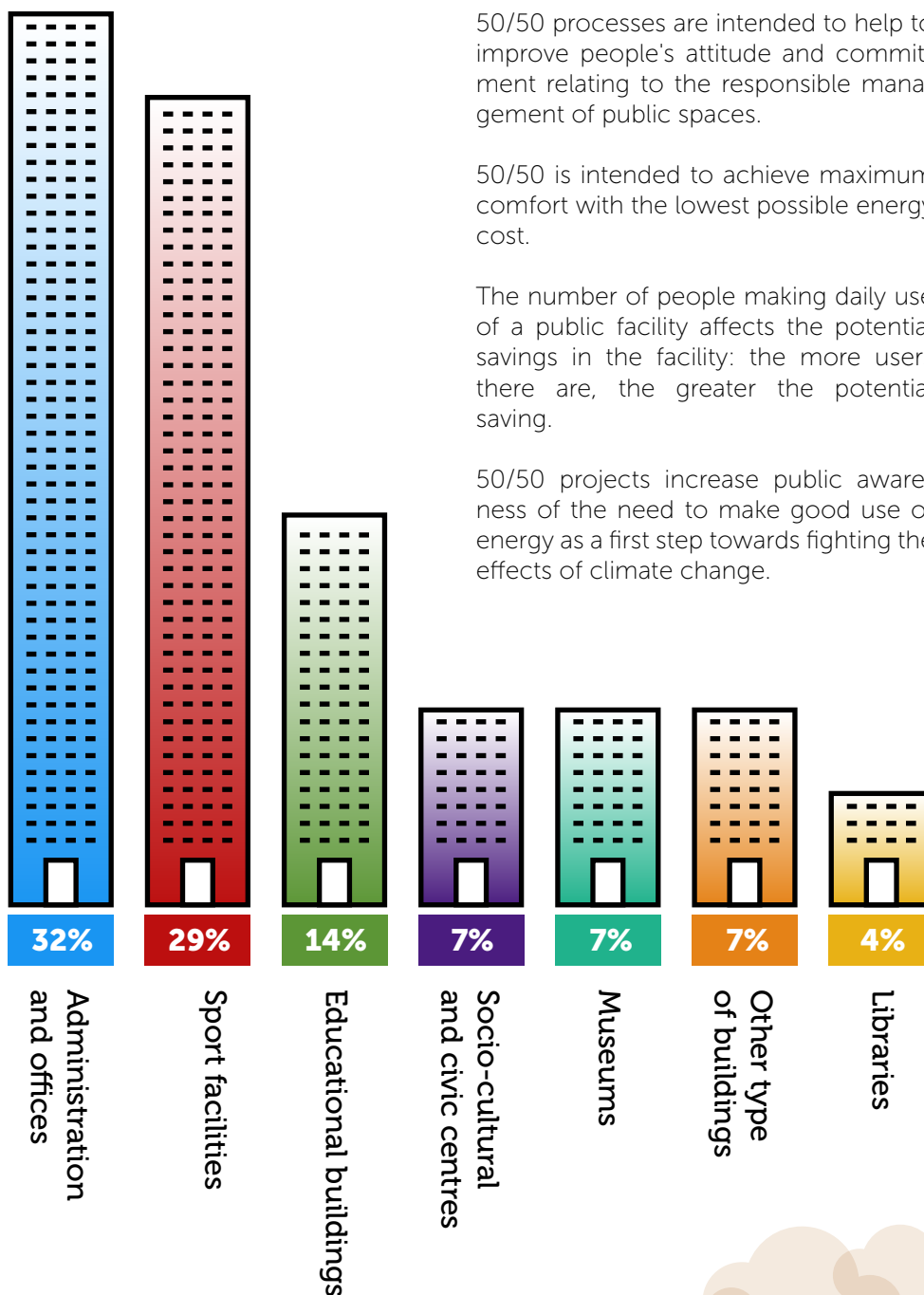
Reinvesting

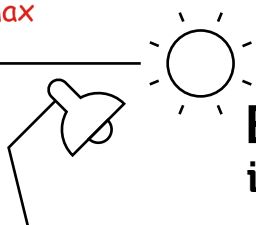
Using the savings made by reducing energy consumption to take energy-efficiency measures allows us to go beyond the savings achieved by managing energy consumption alone.





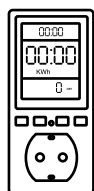
TYPES OF EURONET 50/50MAX buildings.





EXAMPLES OF 50/50 ACTIONS in public buildings.

There is great energy-saving potential in public buildings; in some municipalities, more than 60% of the local authority's emissions come from their facilities and installations. The majority of 50/50 actions are simple actions resulting from an understanding of the energy resources used in public facilities as something that belongs to us and that should not be wasted.

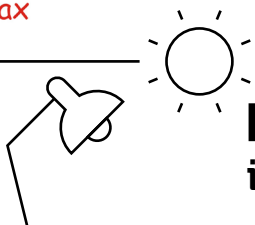


Monitoring energy consumption. One of the most important aspects of an energy-saving project is monitoring the energy consumption of the related buildings. This makes it easy to see the impact of the measures taken and the goals achieved. Moreover, checking consumption figures on a monthly basis helps us to detect potential problems with the building fairly quickly, such as broken equipment or leaks. This makes it easier to react to sudden peaks. Another important benefit is that it is easier to motivate building users to save energy if they can see the results of what they are doing.

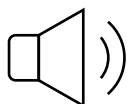


Providing training on energy efficiency for caretakers, cleaners and users of the facility to reinforce 50/50 activities and increase energy awareness. Training may include a theoretical part and a practical part, and it is useful to raise awareness among participants on issues such as energy, energy units, energy sources, energy transformation, the rational use of energy and other resources. It can also be useful for agreeing on guidelines for the usage, maintenance and cleaning of spaces within the facility.

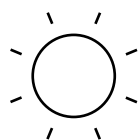




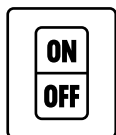
EXAMPLES OF 50/50 ACTIONS in public buildings.



Running periodic awareness campaigns in the building to inform users of the actions being taken, results, recommendations, good habits, etc. Communication is useful for involving everyone at the facility when it comes to taking part in energy-saving actions. Announcing the results obtained and specifying how the savings made will be used encourages participation in 50/50 actions.



Using the light and heat provided by the sun during daylight hours is key to energy saving, and a series of simple habits can be learned to make better use of the energy resources provided and to avoid unnecessary use of lighting and heating. In terms of temperature, it is worth knowing that in wintertime 20°C is warm enough to feel comfortable. In summertime, a temperature of 26°C is also optimum.



Being sensible and responsible when turning lights, computers and all other electrical devices at the facility on and off. The energy audit of the facility provides information on how the energy sources in the building are being used. Applying simple actions—such as turning lights on and off by sector, turning off fluorescent lights that are not in use, and using rules to turn off computers and office equipment when we leave for home—can help us to achieve greater-than-expected energy savings.





CONTACT

50/50 projects are based on a methodology that enables great results to be achieved while increasing awareness of the need to manage energy more efficiently in our public buildings, as a means of helping to reduce the impact of climate change at a local level.

<http://euronet50-50max.eu/en/>

<https://www.facebook.com/EURONETMAX/>

<https://www.youtube.com/user/Euronet5050project>

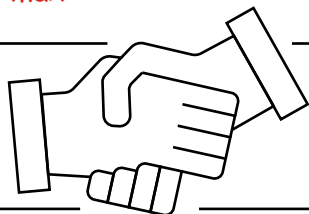
If you want to receive more information on Euronet 50/50max or you want to set up a 50/50 project in your municipality, you can get in touch with the different partners who have implemented the project locally over the period 2013–2016. In Catalonia (Barcelona province) Provincial Council of Barcelona (DIBA)

PROJECT COORDINATOR

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50/50 PROJECT PARTNERS





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