



Demand Side Management Tools



Transnational Building Alliance Concept D.T2.3.3

CE51 TOGETHER



INTERREG CENTRAL EUROPE 2014-2020

TOGETHER

TOwards a Goal of Efficiency THrough Energy
Reduction

Transnational Building Alliance Concept

D.T2.3.2



LP - Province of Treviso



Executive summary

The Building Alliance identifies the common goals of energy reductions, the “profit sharing” approach, incentives etc. decided by the Negotiating Panel. According to the Application form, the Building Alliance has to be approved by the parties. It means that it has to be signed by the representative of the Negotiating Panel. The building Alliance is the result of a co-working approach that has to be adopted by all the project partners since the beginning of the project.



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1. Introduction

The Project TOGETHER offers a transnational capacity building platform, where partners with different levels of knowledge can strengthen their competences together, thus reducing their disparities and promoting actions on both the supply and demand side, in the context of planning EE in public buildings. The main goal of the project is improving energy efficiency and energy saving in public buildings by changing behaviour of building users and promoting energy efficiency measures.

This document provides common guidelines to the partners for drafting their respective pilot project implementation plans and developing the presentation of their Pilot Actions in their pilot buildings clusters with a common framework and visual identity.

This tool is contextualized within the framework of the second objective of the project TOGETHER: if the first project objective “To increase energy efficiency and secure investments thanks to improved multidisciplinary in-house staff skills and thanks to an Alliance system with more engaged and motivated buildings users” calls for the observation and learning of possible tools to be combined together for achieving energy efficiency in public buildings, the second one “To produce and test the most appropriate combinations of technical, financial and Demand Side Management tools for the improvement of the energy performance of public infrastructures” calls for the practical and concrete implementation of the possible identified measures.



1.1. Project TOGETHER

The three main objectives of the project TOGETHER consist in:

1. Increasing public buildings energy efficiency and securing investments, through the improved multidisciplinary in-house staff capacity building of Public Administrations and the establishment of a system of alliances with more engaged and motivated building users;
2. Producing and pilot testing the most appropriate combinations of technical, financial and Demand Side Management tools for the improvement of the energy performance of public infrastructures, currently in the 8 regional Pilot Actions involving a total of 85 buildings;
3. Codifying the project outcomes into a comprehensive policy package for a large-scale implementation, bringing local buildings governance practices to the centre of ambitious energy saving policies.

In its inception, TOGETHER plans the organization of an interdisciplinary “Training of Trainers” course for building owners, managers and public decision makers that integrates the traditional technical inputs on energy management and buildings retrofitting with targeted contributions from behavioural science, economics and psychology, aiming to engage the end users in the building energy performance goals.

The “Training of Trainers” course is completed by the provision of an Integrated Smart Toolkit, including:

1. Guidelines for implementing the innovative EPIC (Energy Performance Integrated Contract) scheme, combining technological devices and behavioural-based components;
2. A set of exemplary models of Energy Management Systems in schools, institutional and other type of buildings;
3. An innovative Building Alliance concept among building owners/managers/users who cooperate within a Negotiating Panel to achieve energy savings to be reinvested through a Reinvestment Action Plan.

Additionally, and by the project’s end, the Partners will jointly elaborate a Transnational Strategy and Mainstreaming Programme, including policy/strategic and operational recommendations for an appropriate follow-up and a sustainable take-up of the project outputs.

1.2. Purposes of the Building Alliance

This deliverable aims at providing a common guide to the project partners when planning their agreement on their energy reduction goals in the pilot buildings.

The ambition of this deliverable/tool is to create a standardized platform that the project partners use to adopt the pilot actions indicating who is responsible for what.

1.3. Use of the Building Alliance

The template that follows can be adapted by the parties in accordance to the legal, administrative and financial rules that regulate the administrative activity of the several local communities (partners and associated partners as well).

In fact, it should not be taken for granted that a public authority turns the energy savings into an amount of money (the calculation is done on the basis of another tool developed that is the Common Protocol for the definition of the system of calculating the savings) to be allocated to the virtuous end users who produced those savings.

Each partner should check what is the most suitable mechanism to achieve this aim, because the rules to manage public administrations budget can be very strict. In some cases, this could be not feasible but the project partners will try to make it happen, preventively discuss it with the financial experts.

2. What is an Alliance?

An alliance can be defined as a credible group of individual brought together to accomplish a specific goal or purpose which will benefit all members of the group in some way. Many alliances are surrounded by some controversy in the beginning, simply because they consolidate two agents of change, power and interest.

According to the “Building Alliance Guidebook” developed by the National Association of Conservation Districts In Cooperation With National Association of State Conservation Agencies USDA Natural Resources Conservation Service, 1994 “People enter into formal alliances for a variety of reasons such as in cases of similar or shared beliefs. People or groups, which share common beliefs or goals, may also form alliances. Although alliances have historically formed in reaction to a threat, increasingly, nations and other organized bodies are using alliances as proactive tools to solve problems”.

According to the quoted Building Alliance Guidebook, alliances bring several advantages as well as disadvantages.

Increases resources: An alliance can overcome shortcomings, inadequacies, or the lack of resources of any single group. Advantages are following:

- Results in more creative solutions: The pooling of ideas, which result from a cooperative effort, generates more creative solutions to problems.
- Allows more risk taking: In some cases, groups may be more likely to take risks because the responsibility for failure does not rest on any one individual.
- Spreads out the workload: Alliances permit a sharing of responsibilities so that no one individual or group has "to do it all."
- Raises community awareness: The formation of an alliance often increases public awareness of the conservation program or project being undertaken.

Disadvantages of Alliances:

- Requires time and skill: The team must include at least one to three members, who have the skill and time to initiate and build the alliance.
- Results are not always readily apparent: The process can appear to be time consuming, especially in the beginning, because often the results of the alliance's efforts will not be apparent until program or project implementation occurs.
- May require special training: The alliance will need at least one individual to be trained in-group dynamics to facilitate compromises and negotiations among alliance team members.
- Motivation and enthusiasm may be difficult to maintain: It may be difficult to keep team members interested if program or project planning takes an excessive amount of time.

Box 2.1 - A possible Alliance in the field of energy efficiency applied to commercial buildings¹

In the URL link

[https://betterbuildingssolutioncenter.energy.gov/search?f\[0\]=field_partner_type%3A200&f\[1\]=field_content_type%3A842](https://betterbuildingssolutioncenter.energy.gov/search?f[0]=field_partner_type%3A200&f[1]=field_content_type%3A842), there is a valid example of a possible Alliance in the field of energy efficiency applied to commercial buildings.

Through the Alliance, building owners, operators, and managers in different market sectors voluntarily work with DOE's network of research and technical experts to develop and deploy innovative, cost-effective, energy-saving solutions that lead to advanced technologies, more profitable businesses, and better buildings. The Alliance advances the Administration's goal to achieve 20% energy savings in U.S. buildings.

There are now more than 200 companies and organizations in the alliance representing more than 10 billion square feet of real estate. These partners have identified and implemented a variety of energy efficiency solutions and achieved substantial energy savings in their buildings. Upon joining, Alliance partners make an important commitment to participate in Alliance activities that support energy savings in commercial buildings. Partners are encouraged to set energy savings goals, develop innovative energy resources, and adopt advanced cost-effective market and technology strategies. DOE's technical experts engage with these partners to advance their energy savings goals through technology and market solutions activities, to facilitate sharing of best practices and proven strategies among industry peers.

2.1. Building Alliance and the TOGETHER project

In the TOGETHER project, the so-called **Building Alliance** tries to tackle the problem of the energy consumption and energy inefficiency in public buildings putting together all the buildings' players into a chain that consist of the building's owners, managers and end-users, which roles are indicated in the tool D.T2.3.1 - Negotiated Panel developed by the partnership.

The main message is that energy efficiency can be "produced" with sacrifice - energy efficiency enables us to do more while using less energy, but it calls for a common shared vision and action sustained by all the buildings players.

The approach of our alliance is basically calling for a "burden sharing" approach, where all the parties and buildings' players can contribute to reach a concrete goal of energy efficiency, with the implementation of pilot actions tailored-made for each of the pilot buildings involved (the process of the pilot actions is specifically described in the D.T2.1.6 - Pilot Concept Design.

The process that leads to the TOGETHER Building Alliance is as well described in the D.T2.1.6 - Pilot Concept Design and is strictly based on the automatic energy monitoring system installed in the involved pilot buildings. Thanks to this energy monitoring system is possible to plan concrete actions that can lead to concrete energy savings and reducing the behavioural effects on the energy consumption level.

The involved parties decide on how to benefit from the energy savings generated though the implementation of an action plan that will be constantly analytically monitored and in case fine-tuned and improved for reaching the joint goal. There will be not a binding methods to share the "profit/non spent money" deriving from the energy savings.

¹ An example from the United States described by the Better Buildings Solution Center:
[https://betterbuildingssolutioncenter.energy.gov/search?f\[0\]=field_partner_type%3A200&f\[1\]=field_content_type%3A842](https://betterbuildingssolutioncenter.energy.gov/search?f[0]=field_partner_type%3A200&f[1]=field_content_type%3A842)

The profit sharing approach has to be decided by each Negotiating panel, up to the point of doing without a reward in favour of the virtuous end users who produced those savings.

3. Together’s Transnational Building Alliance

“Stakeholder Alliance”

Related to the following Building(s)

Name _____ *[add name if existing]* _____ located at _____ *[type full address here, including street number, mailbox, city]* _____ identified in the local Cadastre/Building Registry as follows: _____ *[type full building coordinates if available]* _____;

Name _____ *[add name if existing]* _____ located at _____ *[type full address here, including street number, mailbox, city]* _____ identified in the local Cadastre/Building Registry as follows: _____ *[type full building coordinates if available]* _____;

Name _____ *[add name if existing]* _____ located at _____ *[type full address here, including street number, mailbox, city]* _____ identified in the local Cadastre/Building Registry as follows: _____ *[type full building coordinates if available]* _____;

[if necessary please add more buildings]

Henceforth [collectively] designated: The Building(s)

Between

The following Parties *[feel free to drop or add names to/from the list]*:

TYPE THE ORGANISATION 1 FULL NAME HERE, having its seat in _____ [City],
_____ *[full address, including street number]*,

TYPE THE ORGANISATION 2 FULL NAME HERE, having its seat in _____ [City],
_____ *[full address, including street number]*,

TYPE THE ORGANISATION 3 FULL NAME HERE, having its seat in _____ [City],
_____ *[full address, including street number]*,

TYPE THE ORGANISATION 4 FULL NAME HERE, having its seat in _____ [City],
_____ *[full address, including street number]*,

[if necessary please add more organizations]

Whereas:

- a) The Parties as above nominated are collaborating in the context of the EU funded Interreg CE Project TOGETHER, Contract No. 51 (henceforth: The Project) and with a duration of 36 months starting in June 2016 until May 2019;
- b) The Building(s) identified above as target(s) of this Building Alliance [belong(s) / do(es) not belong] to the set of TOGETHER pilot buildings as of the date of signature of this agreement;
- c) The Project aims to increase energy efficiency and secure investments in public buildings, through appropriate combinations of Technical, Financial and Behavioural DSM (Demand Side Management) Measures for the improvement of the energy performance of existing infrastructures, across 8 regional pilot actions involving a total of 85 buildings;
- d) The Parties as nominated above, wish to undertake, jointly and/or in parallel to one another, several commitments and purposeful actions, within the time frame of the Project, having the intent to share the resulting financial benefits in terms of reduced cost of the Building's energy bills;
- e) This Alliance has the purpose of defining the details of each Party's commitments and actions, as well as introducing a few accepted criteria, rules and procedures for measuring and distributing the financial benefits.

Now, therefore, it is stipulated and mutually agreed as follows:

**1. Article
(Definitions)**

1.1 "Negotiating Panel"

A delegation of all the key stakeholders of the Building(s), composed of the following persons [feel free to drop or add names - these are not necessarily the same persons who signed the Alliance]:

- Name Surname, in representation of the Building Owner, email address: _____;
- Name Surname, in representation of the Building Manager, email address: _____;
- Name Surname, in representation of the Building Occupant, email address: _____;
- Name Surname, in representation of the TOGETHER Partner, email address: _____;
- Name Surname, in representation of _____, email address: _____.

1.2 "Smart Meter"/"Smart Metering System"

Smart Meter is an electronic device that records and displays energy consumption. When two or more are used in combination, the resulting infrastructure is named Smart Metering System.

1.3 "Energy Audit"

A technical assessment of the energy needs and efficiency of a building.

1.4 "Demand Side Management (DSM)"

A set of methods and tools aimed at changing the demand for energy by the occupants of a building.

1.5 "TOGETHER DSM Tools"

A set of tools formally developed by the TOGETHER project, which are presented as examples in the deliverable D.T2.3.3 "DSM Tools".

1.6 "Behavioural DSM Measures"

A set of initiatives for the promotion of changes in a building's users' behaviours, and which are listed in Attachment 2 to this Alliance.

1.7 "Financial DSM Measures"

A set of initiatives for improving the energy efficiency of a building, through the recourse to financial and/or contractual schemes - such as the Energy Performance Contract (EPC).

1.8 "Technical DSM Measures"

A set of initiatives for improving the energy efficiency of a building, through the recourse to additional investments.

1.9 "Energy Management System"

A set of computer aided tools for monitoring the energy efficiency of a building.

1.10 Transnational Protocol for the definition of the system off calculating the savings generated by the pilot actions developed and approved by the partners

1.10 "Action Plan"

A set of integrated measures for The Building(s) energy efficiency - including behavioural DSM combined with financial/technical DSM and other activities in the contractual and energy management fields - better described in Attachment 1 to this Alliance.

1.11 "Viable Approaches"

Alternative sets of action items that can be carried out within The Building(s), including:

- a) The addition to an existing Energy Management System of newly adopted DSM Measures: BASIC APPROACH;
- b) The integration of already adopted measures with new DSM tools for users' involvement and engagement: IMPROVEMENT APPROACH;
- c) The application of (some of) the integrated tools developed in TOGETHER project's WP T2, including an improved Energy Management System, as well as a joint adoption of Financial, Technical, Contractual and DSM Measures: EVOLUTION APPROACH (jn the pilot concept designed is indicated as evolution approach).

Whatever the Viable Approach selected, the Action Plan will introduce Behavioural DSM measures meant as activities focused on educating consumers and encouraging individual participation to achieve energy savings. The level and complexity of these actions is conditioned by the maturity of Public Administration,

the level of risk involved and the will to put traditional concepts at stake, thus paving the way to innovation instead of travelling along familiar paths.

1.12 "Period of Experimentation"

From September 2017 through December 2018.

[anything else - please add]

2. Article (Purpose of the Building Alliance)

2.1 Improvement targets (please add/change/delete)

2.1.1 With reference to The Building(s), the Parties as above identified hereby agree on the following measurable targets of improvement to be achieved within the Period of Experimentation:

- a) The installation of a Smart Metering System [composed of NN Smart Meters] in the following areas of The Building(s): _____ (please expand) _____;
- b) The realization of an Energy Audit of The Building(s) aimed at clarifying the points of major interest for the implementation of DSM Measures;
- c) The execution of the following additional investments: _____ [e.g. installation of a TV set to be used as a display of information in public areas of the building];
- d) The complete realization of the Action Plan attached to this document;
- e) A reduction of _____% in The Building's electricity Consumption (namely from _____ to _____ kw per year), generated by the adoption of Viable Approaches;
- f) A reduction of _____% in The Building's fuel Consumption (namely from _____ to _____ per year), generated by the adoption of Viable Approaches;
- g) The activation of a monitoring and real-time feedback system for measuring and communicating the actual figures of consumption reduction, by the production of periodic [weekly/bimonthly] reports to the Negotiating Panel;
- h) The organization of monthly meetings of the Negotiating Panel to monitor the energy efficiency performance and plan to share it with the whole population of Building users (visitors, people in charge of the cleaning and maintenance services, etc.).
- i) [other].

2.1.2 The specific targets of reduction will be referred to the following benchmarks:

- Average monthly electricity Consumption, adjusted for seasonality, in the 12 months preceding the start of the Period of Experimentation.
- Average monthly fuel Consumption, adjusted for seasonality, in the 12 months preceding the start of the Period of Experimentation.

[feel free to confirm or change these benchmarks]

2.2 Individual commitments (*please add/change/delete*)

2.2.1 To facilitate the achievement of the above targets, each of the Parties accepts the sole responsibility of the activities specified below:

- The execution of the additional investments will be financed by _____.
- The execution of the integrated measures and activities listed in the Action Plan attached to this document will be coordinated by _____.
- The monitoring and real time feedback system will be implemented and managed by _____.
- The organization of monthly meetings of the Negotiating Panel will be under the care of _____.

[*other - please add*] .

2.2.2 The time frame of the above activities will be made compatible with the allowance of at least one full calendar year as Experimentation Period.

2.3 Joint undertakings (*please add/change/delete*)

2.3.1 As a complement to individual commitments, the Parties collectively undertake to perform the following activities:

- Participation in the monthly meetings of the Negotiating Panel.
- Execution of the integrated measures and activities listed in the Action Plan.
- Sharing of the financial benefits resulting from the reduced energy consumption according to the principles and procedures specified in Article 3 below.

3. Article (Benefits Sharing)

3.1 General Principles

3.1.1 The Parties agree to share the financial savings resulting from the implementation of the Building Alliance in the following manner:

- There is any fixed % of profit sharing pre- defined; each negotiating panel should decide on their own. The financial savings achieved through the DSM measures adopted by The Building Occupant shall be returned to it by means of a cash payment and/or other forms of such as prizes, fees reductions, etc. to be agreed the month after the closure of the pilot action.
- The remaining shall be retained by The Building Owner and by The Building Manager in equal proportions.

3.1.2 The exact quantification of the global financial savings to be shared according to the rule shall be the sole competence of _____.

3.1.3 The liquidation of financial savings shall be effected by _____ and will be calculated by the use of the above mentioned 10 Transnational Protocol for the definition of the system off calculating the savings generated by the pilot actions developed and approved by the partners

3.2 Procedures

3.2.1 With the support of the TOGETHER PP[N] (*name of the project partner*), the Parties shall quantify the energy savings and their monetary value based on the information available 3 (three) months after the end of the Period of Experimentation.

3.2.2 The Negotiating Panel shall meet within one month after processing of the information listed in the previous paragraph and approve both the amount of financial savings and their distribution according to the provisions of this Alliance.

3.2.3 The Party in charge of the liquidation of financial savings shall effect the related payments within 2 (two) months after the decision of the Negotiating Panel.

4. Article (Responsibilities of the Parties)

4.1 Liability towards each other Party

4.1.1 Each Party undertakes to take diligent part in the implementation of this Alliance, and to cooperate with the others by performing and fulfilling, promptly and on time, all of its obligations as may be reasonably required and in a manner of good faith.

4.1.2 Each Party undertakes to notify promptly to the Negotiating Panel, any significant information, fact, problem or delay related to its involvement and that are likely to affect the implementation of this Alliance.

4.1.3 Each Party shall promptly provide all contents or materials reasonably required by the other Parties to carry out their own tasks in the implementation of this Alliance.

4.1.4 Each Party shall take reasonable measures to ensure the accuracy of any contents or materials it supplies to the other Parties.

5. Article (Publicity)

5.1 Dissemination

5.1.1 During the Period of Experimentation and for 1 (one) year after the end of it, each Party will be free to disseminate the Pilot results, either individually or jointly with one or more other Parties - including, but not being restricted to, publications and presentations at conferences and seminars - subject to the condition of mentioning the dependence of this Alliance from the EU funded Project TOGETHER.

5.1.2 All the material has to fully respect the publicity rules and project visual identity of the TOGETHER project, according to the rules settled in the CENTRAL EUROPE Programme. It has to be ensured that all internally and externally developed documents will be fully compliant with those rules, which will be introduced and monitored by the TOGETHER PP[N] (*name of the project partner*).

**6. Article
(Miscellaneous)**

6.1 The Building Alliance consists of this core text and the following attachments:

Attachment 1 (Action Plan)

Attachment 2 (DSM actions- behavioural change description)

**7. Article
(Amendments)**

7.1 Amendments and modifications to the text or any of its Attachments require a separate written agreement to be signed between all Parties.

7.2 In the event that any term of this Alliance shall be invalid or unenforceable then the remainder of this Agreement shall be valid and enforceable to the fullest extent.

7.3 The invalid or unenforceable term or provision shall be replaced by a term or provision achieving an equal economic purpose.

**8. Article
(Language)**

8.1 This agreement is drawn up in English [*please change this with your own language*], which shall govern all documents, notices, meetings, proceedings and processes relative thereto.

The Parties as above referenced have caused this Alliance to be duly signed by the undersigned authorised representatives:

ORGANISATION 1 FULL NAME

ORGANISATION 2 FULL NAME

SIGNATURE

SIGNATURE

NAME OF SIGNATORY

NAME OF SIGNATORY

TITLE

TITLE

STAMP

STAMP

PLACE AND DATE:

PLACE AND DATE:

ORGANISATION 3 FULL NAME

ORGANISATION 4 FULL NAME

SIGNATURE

SIGNATURE

NAME OF SIGNATORY

NAME OF SIGNATORY

TITLE

TITLE

STAMP

STAMP

PLACE AND DATE:

PLACE AND DATE:

[If necessary please add more organizations]



4. Conclusion

An alliance can be defined as a credible group of individual brought together to accomplish a specific goal or purpose which will benefit all members of the group in some way. The project TOGETHER believes that the energy efficiency has to be exploited much more than usually done and it has to be one of the first fuel for heating and providing the electricity to the public buildings. That is only possible through a holistic vision of the buildings.

References

Web

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- <https://betterbuildingsinitiative.energy.gov/alliance>
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Pictures of graphical design

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Glossary

EE	-	Energy Efficiency
DSM	-	Demand Side Management
EnMS	-	Energy Management System
EU	-	European Union
EPIC	-	Energy Performance Integrated Contract)
USDA	-	U. S. Department of Agriculture