Integrated Approaches and Tools for Decision-Making

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ENGAGING STAKEHOLDERS THROUGH LOCAL PROJECT COMMITTEES

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Abstract

The EU FP7 project FASUDIR (Friendly and Affordable Urban Districts Retrofitting) was born to develop models and tools to support European building retrofitting market mobilization towards the fulfilment of 2020 and 2050 targets. The key instrument proposed by the project is the Integrated Decision Support Tool (IDST), a software developed to help decision makers to select the best energy retrofitting strategy to increase the sustainability of the whole district. The IDST was conceived to merge a robust modelling and simulation core with a decision making methodology.

However, such a methodology must be validated with the key stakeholders in urban retrofitting, in order to prove effective and respond to the actual needs of the users. Therefore, in order to ensure the development of a usable and effective methodology and tool, the FASUDIR project introduces the concept of Local Project Committees (LPCs), establishing one LPC per partner country (Germany, Hungary, Italy, Spain, UK). The Committees are composed of representatives of different stakeholders (designers, public administration, policy makers, energy providers, researchers, industry, etc) and are convened at each key step of the project to provide their expert advice on advanced draft proposals by the project, before the finalisation of each key output.

This paper will describe the workshop approach and successful experiences carried out during the FASUDIR project, highlighting lessons learnt and best practices to establish efficient research to stakeholder feedback loops, crucial to ensure fruitful dissemination and exploitation of the results beyond the lifetime of the project.

Keywords:

Stakeholders; engagement; workshop; participation

1 INTRODUCTION

The traditional approach to the building energy efficient retrofitting can bring poor results in relation to the urban sustainability, resource efficiency and economic return. Although the district retrofitting approach is frequently proposed as more sustainable and cost-effective, the complexity of decision making grows exponentially when the intervention targets larger scales, even more when considering the fragmentation of the construction sector.

The FASUDIR project (Friendly and Affordable Sustainable Urban Districts Retrofitting) was born to develop an Integrated Decision Support Methodology and Tool, merging a decision making methodology with a robust modelling and simulation software, which shall support such

complex decisions and help urban planners in defining the optimal energy retrofitting scenario to improve the overall sustainability of the refurbished district, through a structured phases approach featuring variant comparison supported by a suite of tools, including KPI-based decision making and advanced energy analysis tools[1].

The decision to create such a tool came from the specific issues and complexities of urban retrofitting: the long lifetime of the process, the multiplicity of decision makers and the variety of involved stakeholders require an overall approach that is structurally different from building retrofitting. However, a methodology that involves such a diverse amount of expertise cannot be designed in a void and be successful: rather, it requires the implementation of feedback loops in all steps of its development.

Therefore, within the project framework, several meetings have been planned to transfer important market inputs into the FASUDIR Project; at the same time, the collected knowledge of the project is transmitted to the local stakeholders that are the potential end users of the main FASUDIR result, the IDST.

To achieve this objective, in each country (Italy, Spain, Germany, Hungary and UK), project partners have established a Local Project Committee (LPC), which consists of experts and members of the building sector both from the public and private side. The LPCs meet to assess and discuss the status of the project FASUDIR and offer advice. The main purpose is to ensure the development of a software (IDST) that really meets the needs of the stakeholders.

2 DATA AND METHODS

2.1 Role of the LPCs

The LPCs have been formed by the different stakeholders representative of the potential end users of the IDST, by introducing either expert knowledge or a market perspective, and are developed to act both as a multiplier and an aggregation system. The LPCs provide the vision, needs and expectations of the community of stakeholders that will be the beneficiaries of the project's results.

The main tasks of LPCs in the FASUDIR project are: to provide advice from the end user's point of view on the IDST; to support the organization of local dissemination events; to act as multiplier and aggregation system for stakeholders; to support the IDST in reach its target market; to secure developments of the IDST beyond the project's lifetime.

2.2 Establishment of the LPCs

In each country, stakeholders have been invited through existing networks and direct contacts, adhoc meetings, and regional conferences. The invited stakeholders cover the whole spectrum of the expertise addressed by FASUDIR, and are the potential end users of the IDST: experts, members of the building sector, and representatives of public organizations.

2.2.1 Stakeholder types

In order to facilitate the invitation process, an initial list of stakeholder types and features was drafted to propose the key expertise set that shall be covered within the LPCs. Such types include:

Central government: Characterized by long term policy objectives to reduce carbon emissions, support new technologies, stimulate the economy through the construction sector, improve social welfare.

Local government and municipalities: In this category are included the Urban Managers that are interested in increasing the sustainability of

the city and consequently identifying the urban areas that could require and benefit from deep renovation and guiding the neighbours in this process. This stakeholder type is crucial, as regional planning objectives take a systematic view and tend to involve many building and district level sustainability Key Performance Indicators (KPIs), which are at the core of the Integrated Decision Support Methodology developed within FASUDIR.

Multilateral funding bodies: These major lending institutions have overall targets to meet in terms of the amount energy efficiency projects and loans to activate. Generally, they act in the field by making funds available to retail banks or special programmes.

Retail banks: In order to guarantee funding for retrofitting, in some cases it is necessary to rely on conventional lending structures. However, banks require sound financial plans showing positive returns, adequate debt coverage ratios and a low risk of default. In general, they tend to be more risk averse than the multilateral funding bodies.

Social housing organizations: A crucial stakeholder type with a marked interest on improving performance on all three pillars of sustainability, and usually an availability of a portfolio of buildings that is optimally placed to be retrofitted through a district-scale approach. In general, reducing energy costs and improving various housing quality indices are among the most relevant objectives.

Public sector facilities and commercial users:

Reducing energy costs, understanding revenue potentials, providing stable and sustainable energy, as well as perhaps a "green" image, tend to be important targets for this type of stakeholder.

Distribution utilities: The implications of changes in consumption and embedded generation have a significant impact on system planning and infrastructural performance, as well as provide potential opportunities to change tariff schemes and billing.

Planners, architects: Another key stakeholder in the process: often local governments and municipalities rely on their technical expertise to manage the overall retrofitting approach in an intervention area. They design and develop the best retrofit actions that concern their constructions/infrastructures. Furthermore, Technical Staff, they are able to propose the best available solutions (materials. technical installations, etc.) on the market.

analysts: Experts with ESCOs. specific knowledge can also be invited to be part of the LPC, focusing on those who hold a deep expertise on urban retrofitting and sustainable building This group includes issues. researchers. academics, members of public building authorities, etc.

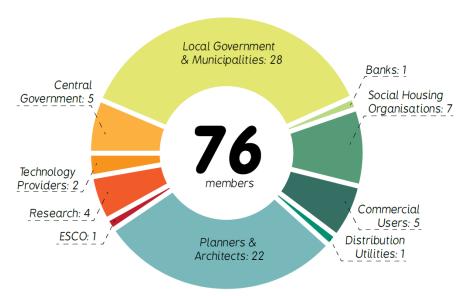


Fig. 1: Stakeholder breakdown by type

2.2.2 Stakeholder breakdown

The stakeholders' recruitment process started early in the FASUDIR project life, and has resulted in an overall involvement of 76 representatives across 10 stakeholder types (Fig. 1).

particular. the two most represented stakeholder types are the Local Governments and Municipalities (36,8%) and the Planners and Architects (28,9%). Furthermore, it is interesting to note that Commercial users and Analysts have both been broken down further to identify two other key stakeholder types, the Technology Providers and the Researchers respectively.

The number of LPC members per country ranges from 6 to 23, ensuring a manageable number of participants during the meetings and fostering a high-engagement atmosphere.

2.3 LPC meetings

2.3.1 Main objectives

Throughout the life of the project, four LPC meetings have been planned, one at each critical stage of the project: one at the beginning, to get feedback on the expectations from the tool; one when the methodology is defined; one meeting once a beta version of the tool is available to evaluate it; one at the end of the project, to show the system running in real scenarios and present the FASUDIR project achievements.

At the time of writing, the first two meetings have been carried out. The first meeting, on setting expectations, took place in early 2014; the second, on the final draft of the methodology, was carried out in January-February 2015. The third meeting, focused on presenting the beta version of the IDST, is scheduled for April-May 2016.

Methodology

The preferred methodology for the organization of an LPC meeting has been a half-day workshop format, divided in two main parts: at the beginning, the LPC organizer presents the main content of the meeting, both using electronic presentations and supporting paper materials as required; after this initial presentation, the meeting takes a more informal structure, with the organizer leading the participants in an open discussion on the presentation, and aiming to answer a few key questions. In some occasions, it has not been possible to convene the whole LPC for an inwith person meeting, substituting conferencing and one-on-one conversations; however, the overall format of presentation and discussion has been maintained in these variants.

Following the meeting, the organizer summarizes the outcomes as minutes according to a common template, in order to record the main results and share them with the other FASUDIR partners.

Support materials

In order to make the most of the meetings and ensure a consistent feedback, all workshops have been supported with content developed by the Dissemination and Exploitation Coordinator in cooperation with the project partner leading the developments presented to the LPCs. Such content has been provided in advance to the organizers, in order to allow translations in the local language, if necessary. Furthermore, all LPC organizers have been provided with an agenda template with suggested times, in order to ensure a similar experience across countries. Finally, to guarantee a certain level of homogeneity in the outcomes, the discussion session was supported by a set of key questions and discussion topics which had to be put forward to the LPC members.

2.4 Other types of LPC involvement

The LPC members have further been involved throughout the life of the project through informal interviews consultations, such as questionnaires [2]. Furthermore, LPC members have been kept appraised of all developments through the project newsletter and targeted invites.

3 RESULTS

The first LPC meeting took place on February 2014 and it has been successful in defining the scope of the IDST, focusing on the type of proposed IDST features and highlighting key critical issues. Different types of inputs have been received reflecting the different stakeholders involved in the LPC. Having groups of mixed stakeholders participating in the LPC meeting and not addressing each kind of stakeholder separately showed to be very positive. Profitable discussions arise more easily, and the different points of view enrich the contributions.

FASUDIR is a complex project because of the scale addressed (urban districts) and for the high number of stakeholders addressed. One key objective of the project is the creation of a collaborative platform that should facilitate the interaction between the different stakeholders during the study and implementation of an urban district retrofit. The first LPC meeting allowed to provide the IDST developers with the necessary information to follow in the development of a tool able to answer the user's' needs. This is the key success factor of all the research projects targeted to develop new products and software: provide something that will be accepted and requested by the market.

The second meeting has been useful in providing final adjustments to the methodology and confirming the overall approach, structure and understanding of retrofitting process. The meeting was of particular importance because the methodology can be considered the core element of the whole project. The explanation of the methodology has been simplified to be more understandable by participants, in particular the ones without a specific technical or scientific background. Inputs were provided by LPCs concerning the transparency of data and information, the business case and financial calculations, the need for IDST contextualization, how to manage historical buildings, how to make effective the stakeholders' involvement, the need for a user friendly graphic interface.

4 DISCUSSION

The main difficulty on LPC setup has been to motivate the stakeholders to participate. The members of an LPC provide voluntary work, they don't receive any financial contribution from the project. In the "recruitment" phase specific benefits have been identified for each kind of stakeholder in the way to raise their interest to be part of the LPC. For instance SMEs and professional can learn about new business possibilities linked to innovative services. Public

administrations can understand the possible support provided by decision making tool in the urban planning activities.

Another problem has been the occasional time availability of stakeholders. This makes it difficult to get repeated engagement, and at times it is necessary to bring new stakeholders on board and thus have different levels of experience with the project within the LPC.

Between the first and the second meeting, the composition of the LPCs has been improved in terms of number of members and type of stakeholders represented. This has facilitated by the possibility to show the first concrete results of the project and consequently FASUDIR's objectives looked understandable. Raising interest has been a quite easier task. Other possibilities to stimulate the participation have been explored like the provision of benefits during the exploitation phase or the visibility in FASUDIR outputs.

It has been more easy to access some categories of stakeholders, in particular professionals, SMEs and municipalities. This is due to their direct and active role in urban scale retrofitting processes. It is easier to access these stakeholders also because of contacts and relationships already existing. Other categories of stakeholders, as investors and developers, have been more difficult to access and to involve in LPCs.

5 CONCLUSIONS

One of the main problems of any innovative research project is how to efficiently involve the end users. This issue is of particular relevance for the projects that intend to launch on the market new products. It's true that usually the projects produce exploitation plans and activities but these usually come at project's midterm, when at least the concept of the new product has been already developed. The solution provided in FASUDIR to answer this need has been to establish local groups of stakeholders representing the main end users and to involve them since the early phases of the project. In this sense during the first LPC meeting the objectives and scope of the project have been illustrated to verify the need to recalibrate them. The main function of the LPC is to provide directions and advices during the whole project's life, also validating the results, in the way to develop products that fits the expectations of the end users.

After two years of FASUDIR project, the LPC approach showed to be successful and it will be replied in future other projects. The lessons learnt from the FASUDIR experience will be used to improve the efficiency of the LPCs. In particular sources of funding for LPCs should be identified, the occasion when LPC members have to be convened should be further detailed in the project

Integrated Approaches and Tools for Decision-Making

drafting, the meeting timing should be considered carefully with respects to project progress in order to optimize the stakeholders' time availability and maximize the impact of their feedback.

The LPC method showed to be a very effective networking tool among the local stakeholders that often don't have the possibility to discuss about the topics addressed by the project. LPCs can play a key role after the conclusion of the project by contributing to ensure the durability and transferability of results. Starting from FASUDIR, local national committees have been implemented for the first time. This will facilitate their activation in future projects.

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