NewTREND
NEW Integrated Methodology and Tools for Retrofit Design Towards a Next Generation of ENergy Efficient and Sustainable Buildings and Districts

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NEW INTEGRATED METHODOLOGY AND TOOLS FOR RETROFIT DESIGN TOWARDS A NEXT GENERATION OF ENERGY EFFICIENT AND SUSTAINABLE BUILDINGS AND DISTRICTS

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This deliverable is a living document reporting on the activities of the Local Advisory Teams established in each of the NewTREND project countries, to ensure constant exchange of information between the project and target users.
Keywords: local; advisory; teams; feedback; working groups

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ABBREVIATIONS AND ACRONYMS

ACRONYM	DEFINITION
CDP	Collaboration and Design Platform
DM	Data Manager
EeB	Energy-efficient buildings
GA	Grant Agreement
GB04	Giulia Barbano, iiSBE Italia R&D (partner No. 04)
IA	Innovation Action
LAT	Local Advisory Team
NewTREND	NEW integrated methodology and Tools for Retrofit design towards a next generation of ENergy efficient and sustainable buildings and Districts
TL	Technology Library
WP	Work Package

EXECUTIVE SUMMARY

The present deliverable documents the activities of the Local Advisory Teams (LATs).

A LAT is established in each NewTREND project country, under WP7 Dissemination and Exploitation activities, to ensure a robust exchange of information between target user groups and the NewTREND project.

The main tasks of a LAT are:

- to provide advice from the end user's point of view regarding the project results
- to support the organization of local dissemination events
- to act as multiplier and aggregation system for stakeholders
- to help the project results to reach the market
- to secure development of the project results beyond the project's lifetime

LATs are informal collective working groups established by leveraging previously existing networks, representative of all key target user groups, such as:

- Technical organizations
- Financial organizations
- Administration and policy makers
- Occupants

LAT meetings are held at key moments of the project life. This report is a living document collecting all information on LATs, such as the participants, the dates of the meetings, and the key outcomes. Meetings have now occurred with LATS in the following countries:

- Finland - 05/10/2016
- Germany - 04/11/2016
- Hungary - 06/10/2016
- Italy - 18/10/2016
- Spain - 20/10/2016 & 04/11/2016

A minimum of two more LAT meetings are expected, in 2017 and 2018 and will be scheduled at crucial moments of the project to obtain new feedback and involvement from the LAT participants, according to the development timeline.

1. INTRODUCTION

According to the NewTREND Dissemination Plan, the dissemination activities are targeted to the exchange of information between the target groups and the NewTREND project. WP7 activities enable the transfer of knowledge and know-how between the Target Groups and the NewTREND work packages.

Through several meetings, important market inputs are transferred into the NewTREND 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 NewTREND results.

To achieve this objective, in each country project partners form a Local Advisory Team (LAT), an informal working group formed by representatives of the target groups both from the public and private side. The LATs meet to assess and discuss the status of the project and offer advice. The intent is to ensure the development of project results that really meets the needs of the target groups by providing actionable feedback to the NewTREND consortium.

1.1. ROLE OF LATS

Project partners MUAS (Germany), ABUD (Hungary), UCC (Ireland), iiSBE Italia R&D (Italy), Sant Cugat (Spain) IES (United Kingdom), GO (Finland) have established LATs involving local target groups. LATs act as the link to the local market of the project partners and aim to provide professional support and monitoring for the project.

The LATs are formed by representatives of the target groups, i.e. the potential end users of the projects results, by introducing either expert knowledge or a market perspective. The combination of the experts, in principle, remains constant over the project period, with stakeholders covering the whole spectrum of the subjects addressed in NewTREND. Each LAT is led and moderated by a representative of the local PP. The local PP can also invite other experts to the meetings, according to the requirements of the current specific issues and questions. LATs are informal, collective working groups.

The target groups have been reached through existing networks and direct contacts within the different LATs, meetings and regional conferences. The LATs are potentially an important multiplier and shall act as aggregation system.

The main tasks of a LAT are:

- to provide advice from the end user's point of view regarding the project results
- to support the organization of local dissemination events
- to act as multiplier and aggregation system for stakeholders
- to help the project results to reach the market
- to secure development of the project results beyond the project's lifetime

1.2. SETTING UP A LAT

In principle, LATs are composed by a minimum of 8 members, two for each target group. The members of LATs have an advisory role only, and do not directly participate as members of the NewTREND Consortium.

The target groups are:

- Technical organizations
- Financial organizations
- Administration and policy makers
- Occupants

1.3. LATS MEETINGS

One LAT meeting shall take place at each critical stage of the project, and focus on a specific aspect as agreed by the NewTREND partners.

The WP7 Leader provides the agenda for the meeting and the necessary material (slides, documents, etc.) to support it, in accordance with other partners involved. A template for the minutes is also provided to guarantee homogeneous reporting.

PPs that organize the meeting (LAT leaders) deliver the minutes at most two weeks after the meeting. The minutes are collected to prepare the present living document, i.e. an overall report of the LATs meeting outcomes.

2. Local Advisory Teams members

The current breakdown of LAT members by profile is shown in the graph below. All members and their organisations are then listed by country in the rest of the present section.

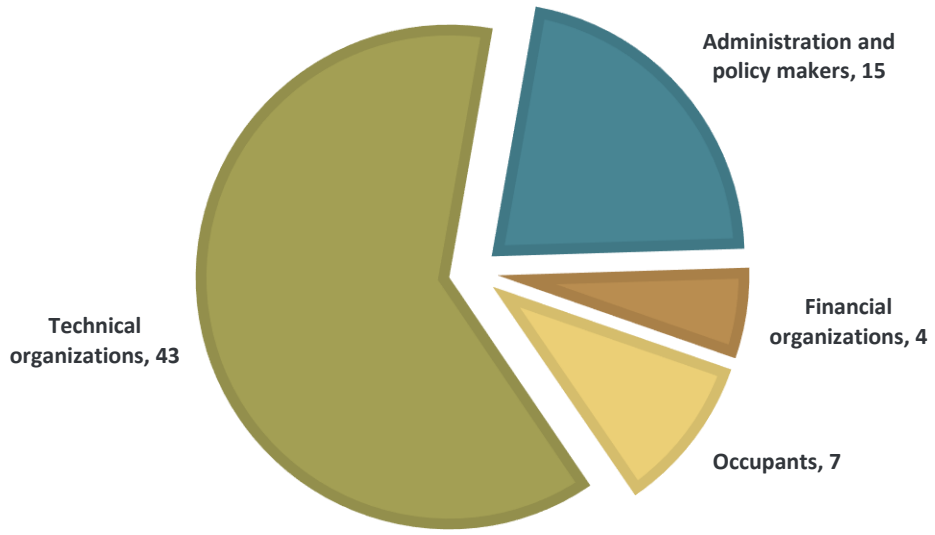

FIGURE 1: CURRENT LAT MEMBERS BREAKDOWN BY PROFILE

2.1. Finland

The Finnish Local Advisory Team is managed by Granlund, and includes participants from the Finnish Demo Site.

Name	Organisation
Maija-Liisa Gröhn	Institute of Adult Education
Virpi Lahti	Institute of Adult Education
Heidi Väliaho	Institute of Adult Education
Marko Korhonen	Dental Clinic Seinäjoki city
Jarmo Anttila	Music college
Paula Pitkäkoski	Music college
Esa Viitala	Music college
Jouni Tiisijärvi	Seinäjoki city
Anssi Puska	Seinäjoki city
Antti Ålander	Granlund Oy

TABLE 1: FINNISH LAT MEMBERS

2.2. GERMANY

The German Local Advisory Team is managed by MUAS.

NAME	ORGANISATION
MARCEL TONNAR	T-Ella
ROLAND GRÄBEL	Bauzentrum München
MONIKA KRÖNER	Perspektivelicht
MANFRED GIGLINGER	Planungsbüro Giglinger VDI
EVA KIEL	City of Wolfratshausen
ALEXANDRA KONZ	City of Munich, Energy Retrofitting Department Public Building Stock
ALEXANDER DAXBERGER	City of Munich, Energy Retrofitting Department Public Building Stock
MANUEL LINDAUER	Technische Universität München
DR. DORIS ZOLLER	GEWOFAG Projektgesellschaft GmbH
SEBASTIAN EBERL	Ing|Se
PATRICK JÄHNICHEN	Klimaschutzbeauftragter Stadt Penzberg
OLIVER ZADOW	City of Munich, department of urban regeneration
MATTHIAS HEINRICH	Technische Universität München

TABLE 2: GERMAN LAT MEMBERS

2.3. HUNGARY

The Hungarian Local Advisory Team is managed by ABUD, and includes participants from the Hungarian Demo Site.

NAME	ORGANISATION
DR. SZABOLCS SZEBÉNYI	Legal and Procurement Department, the Municipality of the 18th district
CSILLA ÉLES VÖRÖSNÉ	Bókay Árpád Primary School
ISTVÁN HUNYADI	Municipality of the 18th district
RÓBERT CSABAFI	Municipality of the 18th district
PÉTER WERNER	Városrehabilitáció18 Zrt./18th district City Rehabilitation Ltd
LÓRÁNT VAJDA	Városrehabilitáció18 Zrt./18th district City Rehabilitation Ltd
TIBOR FARKAS	Városrehabilitáció18 Zrt./18th district City Rehabilitation Ltd
TIBOR JENEI	
DR. ANDRÁS SZÁNTHÓ	
TÓTH LÁSZLÓ	Városgazda XVIII. Kerület Nonprofit Zrt./18th district City Management Non-profit Ltd.

TABLE 3: HUNGARIAN LAT MEMBERS

2.4. ITALY

The Italian Local Advisory Team is managed by iiSBE Italia R&D.

NAME	ORGANISATION
ANDREA PALEARI	"Studio Liveriero" Professional Organisation
MAURIZIO LANCINI	"Studio Valzelli" International Engineering Company
PAOLA ROSSELLI	"Studio Valzelli" International Engineering Company
GUIDO ZANZOTTERA	"AI Engineering" association of professionals
MATTEO TRAVERSO	"R&P Engineering S.R.L." Engineering Company
PAOLO SACCO	"RS Studio ing. Raina e Sacco" Engineering Company

ANDREA BONDI	"Collegio Costruttori Edili- ANCE Torino"
VINCENZO CORRADO	Polytechnic University of Turin
CRISTIANA TARICCO	Secretary-treasurer of the Architects' Association of the Cuneo Province
MAURIZIO MARCHIONNI	"M3PR Studio" Design Studio
GIUSEPPE MENTO	"M3PR Studio" Design Studio
GIOVANNI GINEPRO	"M3PR Studio" Design Studio
ELENA BERATTINO	"SiTI – Istituto Superiore sui Sistemi Territoriali per l'Innovazione", research and training activities
RACHELE MICHINELLI	"Studio Rolla", Architecture and Urban Planning

TABLE 4: ITALIAN LAT MEMBERS

2.5. SPAIN

The Spanish Local Advisory Team is managed by Sant Cugat, and includes participants from the Spanish Demo Site.

NAME	ORGANISATION
CRISTINA PARAIRA	Sant Cugat Municipality
JOAN PUIGDOMENECH	Sant Cugat Municipality
FABIAN REYNOLDS	Promusa
EVA BUFI	IESE ppp/Ardana Consultants
BERNAT COLOME	ArqBag
EDUARD CALDERON	Energea
ALFONSO GODOY	Arqbag
DANIEL BENNASAR	Citelum
ESTHER IZQUIERDO	ARCBCN
DAVID MARTIN	Valoriza
OLGA ROVIRA	ESCO Partners
ALEX MATAS	Rubatec
MARCOS PEREZ	Veolia
ALEJANDRO LOZANO.	Citelum. I+D
EMILI CAMARERO	Citelum. Indoor & Smart
PAU DRAGO	Citelum. Lighting
EVA CRESPO	Eurecat. Technology centre of Catalonia
MARTA ARRUFI	Catalonia's Agency of Housing
VICENÇ PALÀ	Geographic Catalan Institute
NURIA SANGLAS	SMA Iberica
KIM ARCAS	Ciclica/architect School
GUILLEM VALL	Institute Cerda

TABLE 5: SPANISH LAT MEMBERS

2.6. UK / IRELAND

The UK/Ireland Local Advisory Team is managed by IES/UCC. Final definition of participants is under way.

NAME	ORGANISATION
TBD	TBD

TABLE 6: UK/IRISH LAT MEMBERS

3. LAT MEETINGS

3.1. 1ST LAT MEETING

As mentioned previously, LAT meetings are held at critical stages of the project, to obtain useful feedback from key stakeholders. In particular, the 1st LAT meeting was focused on four key aspects:

- Present the NewTREND project and set up the NewTREND LAT as an informal working group
- Discuss the principles of the integrated methodology
- Evaluate and review Data Manager proposed features
- Evaluate and review Technology Library proposed features

The overall presentation was managed by iiSBE IT R&D as LAT coordinator, while IES and STAM provided specific material to present and open questions on the Data Manager and the Technology Library respectively.

A common agenda was developed based on the harmonised presentation, together with a minutes template, to ensure that all feedback was provided following the same structure across countries. The agenda and minutes template of the 1st LAT meeting is provided in **Annex A**.

The 1st LAT meeting was held in autumn 2016, in the dates presented below.

COUNTRY	VENUE	DATE
FINLAND	Seinäjoki	05/10/2016
GERMANY	Dachauerstr. 100a, Munich	04/11/2016
HUNGARY	Kondor Béla Community Centre, Budapest	06/10/2016
ITALY	Environment Park, Torino	18/10/2016
SPAIN		20/10/2016 (part A) 04/11/2016 (part B)
UK/IRELAND		TBD

TABLE 7: 1ST LAT MEETING DATES

The following pages include the public summary of the 1st meeting reports collected so far from the NewTREND LATs.

3.1.1. FINLAND REPORT

The meeting was a joint LAT meeting and community charrette (for task 2.5) and included participants from 6 companies including Granlund Oy, Granlund Consulting Oy, Seinäjoki City, Dental clinic Seinäjoki city, Musical college and Institute of Adult Education.

FIGURE 2: FINNISH CHARRETTE IN PROGRESS

The main focus of the community charrette was to discuss the successes and failures of the building and to discuss the potential for occupant involvement in the upcoming design project. During the course of the meeting the LAT members were asked to provide their individual opinions and experiences with regard to retrofitting and the current performance of the building.

The key objectives were to get occupants to think about the buildings they occupy, and how the buildings could be improved; to understand the building design process in association with building occupants/users' everyday life experience; to explore the existing relationship between the building design team and building occupants/users and how communication can be improved between these two groups; and finally, to help building occupants/users understand the design process and language of design.

Summary of the conclusions from the meeting were following:

Regarding the experiences and issues with the current process, the building users prefer to provide feedback via online tools. They stressed the importance of listening to the building uses before the retrofit, and stated that feedback should be requested from a wide range of stakeholders.

Regarding the data manager tool, it was remarked that it should be able to show level of accuracy of the data, and include sensitivity analysis for data collection support. A question was raised on how will KPI's

from basic mode be presented, as data can be inaccurate. Furthermore, the possibility of linking images to spaces was seen as interesting (especially linking photographs with IR images and spaces).

Regarding the technology library, technologies which could have different financing schemes (e.g. support for installing PV panels) should have information about such schemes. A suggestion was made to allow the possibility to input technologies currently in use, to aid result filtering and propose corresponding replacement technologies.

Interest was raised on the premium mode of NewTREND, however it was not presented in sufficient detail to further comment.

A general comment for the NewTREND ecosystem was that it should guide uses completely through the project: collecting the data, identifying problems, propose the solutions to the problems (for common technology problems and sub-optimal use) and promote long-term perspective (continuous monitoring of performance and giving feedback to users).

3.1.2. GERMANY REPORT

The meeting started with welcoming the participants. Participants introduced themselves, followed by a short presentation about meeting's agenda and the work shop objectives.

The NewTREND project scope and objectives were presented, followed by a presentation of NewTREND modes and the methodological framework, the software tools (data manager and analysis tools), the stakeholder and occupant engagement through the E-collaboration platform (Technical library, before-after comparison, User questionnaire and opinion pool).

FIGURE 3: 1ST GERMAN LAT MEETING

After the presentation and open dissection between the participants took place. The feedback to the presented slides is summarized below.

NEWTREND SCOPE AND OBJECTIVES

The participants highlighted that NewTREND is addressing a relevant topic in the sphere of building retrofitting and that the possibility of sharing building information through a common platform is important and would help accelerate the retrofitting process. However, it is still unclear for the participants what target group is the platform intending to address: whether it is intended to be used by municipalities, real estate companies, faculty managers, project managers or planning offices.

NEWTREND APPROACH AND MODES

The majority of participants found both basic and premium mode most useful. A preference on focusing on the further and more detailed development of the basic mode was expressed by the participants, as

Basic mode would be very useful in the early design stage and in the decision making process. The participants have highlighted a real market need for such a tool that addresses early design phase in energy retrofitting projects. However, some of the experts have casted some doubts about the accuracy and reliability of the basic mode. Due to the face that the basic mode relies to great extent on default values and pre-programmed occupancy schedules for generating the results. They stressed the need of finding the right balance between the accuracy of the results and the effort of collecting and inputting the data. Some of the attending engineers argued that an experienced engineer would be able to give a more accurate assumption of the current state of the building without the use of the software. Therefore, they see the need of developing a plausibility check method for the generated results.

The attendees don't see that added value of using the advanced mode as currently planned in the IDM at the moment, as they believe that the analysis functions the advanced mode is offering can be replaced with existing specialized tools. They instead prefer an extension of the basic mode principle to a little more detail. The attendees also mentioned, that NewTREND Tools cannot cover all simulations and planning processes done with different existing tool sin one tool. Instead, NewTREND should take advantage of already existing external tools by providing high interoperability functions and common interfaces to exchange (export and import) data from the DIM with specialized external desktop tools (e.g. detailed HVAC heat flows simulation, tender and quantity tools, heat network pressure simulations, etc.).

The concept of premium mode was found to be interesting; however, it gave the impression as if it's trying to replace existing facility management applications which also should not be focus of NewTREND.

Therefore, in the opinions of the LAT Members NewTREND should in the later more detailed design and implementation stages of the IDM more act like a central hub to share information. The models in the DIM and the simulation & design hub should be focussed to the early design stages and cover only a lower level of detail (e.g. simplified simulations using more defaults instead of detailed simulation using real pipe length or duct positions in the models). For these detailed purposes NewTREND should provide interfaces in order to connect NewTREND to different needed external tools for these purposes (e.g IFC export and import into IES VE desktop tool). However, the results of the detailed analysis can again be uploaded on the NewTREND CDP as raw data files (e.g. .csv export from external tools).

NEWTREND SOFTWARE TOOL

The participants highly praised the concept of the data manager tool and opined that such data collection tool would be very helpful in accelerating the process of retrofitting and minimizing conflicts between planners. They highlighted the fact that such a tool in combination with DIM Server can serve as a databank or database for real-estate companies that own a large number of building stock. The compatibility and interoperability of data in the platform is essential aspects that need to be covered in order to ensure the success of the tool. Moreover, the level of accuracy must be chosen very carefully and depends of the focus of the tool. User may be swamped if they need to enter and collect very detailed data or huge amounts of information. More useful would be to limit the Data Manager to the main focus inputs which have the highest relevance to the energy simulation results. Less important inputs may be automatically inferred by defaults.

OCCUPANT ENGAGEMENT

The occupant engagement methods and approaches proposed by NewTREND were greeted positively. The participants highlighted the need of educating and training the occupant about how to best use their building and they stressed the importance of developing a clear and simple communication method to ensure that the occupant doesn't lose interest in maintaining the building. However, one of the

challenging aspects that can face the applicability of such tools is that fact that in rented spaces, the occupant of the space is constantly changing and might not have a direct interest in the building performance, thus such tools would be not used by such occupants.

The participants casted some doubts regarding the usefulness of the technical library, as they believe such information are widely available in the internet on dedicated websites that is updated regularly.

GENERAL COMMENTS

The experts stressed on importance of good visual communication and ease of use of the platform, especially in the early design and decision making phase.

The economic efficiency of following such an approach is yet to be proven.

The targeted group/segment needs to be better identified.

3.1.3. HUNGARY REPORT

The LAT meeting agenda was introduced, followed by an explanation of the main NewTREND concept and goals. A summary of the new integrated methodology was given, the main objects of NewTREND were explained so as the participatory design approach and energy related aspects from the early design, the demonstration activities.

The participants introduced themselves and explained their experience in retrofitting projects. Most of them have already been involved in retrofitting projects, mostly within the KEHOP framework. KEHOP (formerly KEOP) is the Environment and Energy Efficiency Operative Program that supports public institutions, churches, NGOs, utility companies to realize higher energy efficiency.

The group summarized what has already been done in the retrofitting process of the NewTREND case study (Bókay school), what is the expected timeline: for the tender construction plans had to be handed in. These plans were prepared during the summer of 2016. The tender has been under 'content review' since the 29th of August. After the results will be revealed (the time is unknown); the grant agreement has to be signed. The expected time for that is December 2016. After the signature the contractor has to realize the retrofitting measures in a five-month time, it means by May. However, it is possible to delay the signature by 60 days, it is more ideal to do the refurbishment during the summer of 2017. From the perspective of NewTREND monitoring, it would be useful as well. The support intensity of KEHOP for this case is 70%, it means 100 million HUF.

The explanation of the integrated design methodology, NewTREND approach and the importance of the communication between the stakeholders was continued. After that basic information about BIM and DIM, neighbourhood scale synergies, the key performance indicators, the simulation and the demonstration activity were presented.

One of the participants questioned the usefulness of NewTREND project in case of Bókay school, as the design and tendering process have already been finished, but others stated that it can be useful in other phases of a retrofitting process: it was agreed that NewTREND platform can be a useful tool to collect monitoring data.

Participants emphasized that NewTREND can be useful in the decision-making phase at neighbourhood scale, to identify which buildings need refurbishment the most. Currently most of the refurbishments are financed from Operative Programs, but the budget of this financing scheme will end soon, therefore they need to be more efficient, and NewTREND can help in that. In general, they found the approach of NewTREND proper, but it depends on the project type and depth how it could be actually used.

Regarding Bókay school it has been revealed that measuring and monitoring activity is great to perform, however the end-users of the school don't have any motivation regarding energy efficiency, as they don't know how much they consume and don't have a financial benefit when they consume less.

Some of them mentioned the importance of comfort issues in retrofitting projects, it was said that it is often neglected, but it is as important as money. The consideration of comfort can be an innovative side of NewTREND.

Participants agreed that the design process of a retrofitting is often not coordinated efficiently and NewTREND can be a useful tool to overcome this problem. It can be also important to inform the citizens about the renovation process and the measures to be taken.

If the consumption is measured before and after the retrofit, they can diagnose whether the retrofitting was successful or not. Therefore, the approach of NewTREND, considering the whole life cycle is needed.

From a technical perspective, it was recommended that the NewTREND project consider and clarify some fundamental attributes of the existing building, before any calculation and simulation etc. Therefore, the highest level and most fundamental categorization of buildings should be: heritage or non-heritage. The next tier should be: free-standing or closed row. These basic features determine important retrofit intervention possibilities, such as: thermal insulation, window replacement as examples. Then, the building function (school, office, storage etc.), potentially even more refined, with further sub-categories within the function, e.g.: residential building: estate type, condominium/ urban rehabilitation, family house.

Further basic building attributes to be given should be: daylighting / building orientation, any whether there is an already existing water-proofing layer. These constraints and aspects should appear in the tool.

A final comment on the proposed NewTREND Collaborative Design Platform is that it can be very useful and help co-ordination of different trades and stakeholders, but it cannot completely replace face-to-face meetings; although it might be viable if they all see the same documentation whilst having an online meeting.

3.1.4. ITALY REPORT

The meeting opened with a broad discussion on integrated design. In particular, participants focused on key principles, and on how to optimise and coordinate team roles that are key elements to ensure a truly integrated process. The LAT members have different backgrounds and roles, and thus were able to offer a wide variety of opinions, experiences and lessons learnt.

FIGURE 4: 1ST ITALIAN LAT MEETING

For several of the participating designers, integrated design has been the usual process for at least a decade, especially for private, non-residential projects of a large size, cost and complexity. In Italy, the requirements of Protocollo ITACA assessment for residential, school, retail, office and tall buildings lead necessarily to the implementation of integrated design principles. In particular, it is often the design team to push for the adoption of integrated processes and the involvement of all key stakeholders from the start, while the clients tend to misunderstand its importance and are put off by the start-up costs and complexity.

In particular, for designers of large retail projects, an emerging practice sees the establishment of a formal project manager role, which subcontracts all other design team members and organises the information flow. These project managers have a strong control via contractual obligations which positively affect compliance to requirements and delivery time. For contractors, such a figure is always present, as part of the construction company's personnel.

However, such an approach is of difficult implementation for smaller projects, and particularly problematic to implement for small design teams, which are typical in the Italian market. Furthermore, the entire integrated principle cannot be applied in public procurement, due to the structure of funding and the rigid design step procedures. The result is particularly negative for contractors, as all delays, redesigns and extra costs accumulate and must be dealt with in the construction phase.

To foster a broader culture of integrated planning, the Polytechnic of Turin has for several years trained its building engineering students in its application. The purpose is to generate a shared mindset among

professionals, which in the future will ensure that all team members will be able to play their role and participate in the broader process.

The conversation then moved on managing the data collection process. The first raised issue was the low rates of BIM use in Italy, with two key causes identified: first and foremost, the low level of compatibility among models developed with different software, which lower the effectiveness of BIM and discourage broader adoption; and secondly, the lack of resources to train personnel adequately, especially for smaller design teams, which are typical of the Italian construction sector.

When discussing the proposed NewTREND Data Manager, participants agreed that in basic mode the user could accept less accurate data, in particular suggesting to provide information on the reliability for transparency; for advanced mode and detailed design, ideally a BIM model should be uploaded already containing all necessary data, and any changes that affect an originally uploaded model should be easily identifiable to avoid confusion in the process. Additional information upload such as appending pictures is seen as a useful tool for technical reporting of the construction phase, and further monitoring; however such a capability would be managed by expert users, with approval processes to allow appending only new and relevant information to rooms.

The proposed NewTREND Technology Library was positively commented, in particular when it presents new and innovative technologies which are not commonplace and on which it is difficult to gather a full informative package. For these technologies, it is especially relevant to document lessons learnt and valuable use cases, to facilitate their applications in other projects.

Concerns were raised on the inclusion of approximate costs, as there is the risk of low data confidence, especially given the high variability of the cost of the same construction technology due to transport, amounts provided, etc. Thus a risk was identified in providing a misleading cost value to the client, which could then lead to broader budgeting issues.

3.1.5. SPAIN REPORT

PART A: OCTOBER 20TH 2016

People attending the meeting were really engaged with the main goal of the NewTREND project, most of them had experience in retrofitting, some of them from the point of view of public administration and others from the user side and design process. All of them agreed on the need that cities have to engage private sector on the retrofitting process in order to achieve the goals expected in terms of energy consumption reduction, moreover all of them agreed on how difficult is to offer feasible solutions.

Data acquisition was widely debated, from their point of view the lack of information is one of the main challenges that project must face: in Spain most of private buildings have only basic information geometry, there might be public buildings or company buildings with more detailed information but it will be difficult to find buildings with BIM model. If there are some buildings with BIM information they likely don't need any kind of retrofitting. It'd be highly appreciated the assessment of how useful NewTREND project will be in those cases with basic information in comparison with those with more detailed info.

The collaborative way proposed from the beginning of the design process was highly accepted as a new way of retrofitting process including aspects not included in the traditional design process. Some of the participants found it difficult to define KPIs as useful in all countries or even in all kind of buildings, in particular to compare buildings or even cities.

The technology library was considered a key point to engage final users, only one issue was discussed: how technical the library is going to be, and whether only engineers and architects are going to understand the meaning of the concepts. A suggestion was raised to include two kind of libraries, one for technical users and another in plain language for final users, to let them test their building and their possibilities without the need of technical support.

PART B: NOVEMBER 4TH 2016

After a short introduction of all the attendants, the organisers explained the general goal of the project and why the meeting had been called, after that all participants explained briefly their experience in retrofitting and what did they expect from the meeting or what could be their contribution in general terms. Participants were made aware of the confidentiality of the information that would be presented. It was noted that there were people coming from different sectors, different experiences and with different approaches of what a retrofitting project ought to be.

The organisers explained the overview of the project, the different approaches and the proposed solutions, and the three pilots in order to make participants aware of the diversity of buildings NewTREND is focussing on.

At this stage of the presentation, all participants agreed with the scope of the project and how the inclusion of energy issues since the beginning to the design process will increase the quality of the project; participatory design was highly appreciated as a valuable contribution to the project. There were different approaches about how to solve the financial issues needed to carry out the retrofitting.

When the methodology and data acquisition was explained, a long discussion took place and participants could hardly agree on what was the best. When it came to talk about the level of detail of the NewTREND project most of them agreed on the huge gap between NewTREND Basic and Advanced. Some even questioned the use of BIM as a input since there's no specific experience, at least in Spain, of using BIM

as a tool in building management. Another issue that arose was that for participants it is considered easier to have building monitoring than BIM modelling of buildings. That led to a suggestion of a new level between basic and advanced including monitoring instead of BIM modelling.

Key performance indicators were highly validated and some questions arose about the possibility of including non energy related indicators to evaluate the feasibility in terms of return on investment.

The data manager tool didn't generate debate in itself, the debate was focused not in the tool but in the data to be included and the way it will be included. When the technical library and the technologies assessment were presented, both had very good acceptance but some suggestions came out to be included if all the partners agree on them. Time was spent diving into the online mock up.

Once all topics were discussed the meeting ended, not without asking the participants' opinion and to keep working with the organisers in this project.

4. UPCOMING ACTIVITIES

4.1. NEXT MEETINGS

At the moment of writing, one more 1st LAT meetings will be held in Germany, and the UK/IE 1st LAT meeting is under planning.

A minimum of two more LAT meetings are expected, in 2017 and 2018 respectively. These meetings will be scheduled at crucial moments of the project to obtain new feedback and involvement from the LAT participants, according to the development timeline.

4.2. POSSIBLE TOPICS

Some topics have already been identified for future meetings and for LAT feedback:

- Structure and usability of the integrated methodology manual
- Collaborative Design Platform functionalities

4.3. LAT REPORT UPDATE

The current report is a living document, which will be updated continuously throughout the project life as new LAT meetings are held. In particular, two formal update moments are expected:

- M24: D7.8 Second report on LATs activities
- M36: D7.9 Final report on LATs activities

ACKNOWLEDGEMENTS

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ANNEX A: 1ST LAT MEETING MINUTES TEMPLATE

COUNTRY*:

ORGANIZER*:

DATE*:

VENUE*:

PARTICIPANTS:

Name*	Organization*	Profile	e-mail

TOPICS*:

- Current retrofitting process
- The NewTREND approach
- NewTREND tools feedback (Data Manager & Technology Library)

AGENDA [TOTAL TIME 3:30 HOURS]:

- 1:30 h: Retrofitting & NewTREND workshop
  - 15 mins: Welcome, introduction (tour de table)
  - 45 mins: Workshop: participants' experiences in retrofitting, issues with current process
  - 30 mins: Overview of the NewTREND approach and proposed solutions [PPT: *Overview* section, slides 1-21]
- 15 mins: break
- 1:45 hrs: NewTREND ecosystem and tools feedback
  - 15 mins: NewTREND software ecosystem overview and feedback [PPT: *Software features* section, slides 22-24]
  - 40 mins: Data Manager presentation and feedback [PPT: *Software features* section, slides 25-32]
  - 20 mins: Technology Library presentation and feedback [PPT: *Software features* section, slides 33-38]
  - 30 mins: open discussion [returning to early overview NewTREND presentation as needed]

* All fields marked with an asterisk will be made public

SUMMARY OF MEETING*:

Ca 500 words / 1 page

[describe various parts and steps, general comments; use narrative prose, not bullet lists; anonymise participants if needed to present feedback and thoughts; summarise specific sw feedback and remove confidential information if any]

SPECIFIC FEEDBACK

RETROFITTING EXPERIENCES, ISSUES WITH CURRENT PROCESS

Use as much space as necessary to include all workshop outcomes here, recommended min 0.5 page

DATA MANAGER FEEDBACK

Use as much space as necessary to include all feedback here, divided by questions as presented in the PPT; recommended minimum 1 page

ATTRIBUTE EDITOR

…

FILE UPLOAD

…

TECHNOLOGY LIBRARY FEEDBACK

Use as much space as necessary to include all feedback here, divided by questions as presented in the PPT; recommended minimum 1 page

COMPETITORS

…

CONTENTS

…

INTERFACE

…

CASE STUDY INFORMATION

…

TECHNOLOGY FILTERING

…

NEWTREND TOOLS ECOSYSTEM AND OTHER FEEDBACK

Use as much space as necessary to include all other feedback here, recommended minimum 0.5 page