



AFFIRMATIVE INTEGRATED ENERGY DESIGN ACTION

AIDA

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D6.1 – 1st feedback loop: results of the first evaluation period

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1 INTRODUCTION

Feedback loops will be used to guarantee a continuous improvement of the AIDA project. Troubles related to missing actions and failing proposed action and impact can so be managed and steps against this deficiency can be taken.

To gain insight in the quality perception of the participants of the study tours in WP2, an evaluation by means of a questionnaire is carried out immediately after each study tour. Questionnaires and also continuous communication are used to gather feedback to the Integrated Energy Design (IED) process in AIDA. The aim is to evaluate the application of the different tools used in WP3 and even more important the perception of municipalities on the cooperation with the project consortium and the municipalities' needs.

All this information will be used for a continuous improvement process of the action as well as the evaluation of performance indicators in the project.

D6.1 is the documentation of the first feedback loop and includes the results of the first evaluation period (until month 18).

Please note: In WP2 (organisation of study tours) and WP3 (Integrated Energy Design in municipal Practice) are all AIDA consortium partners involved, except CIMNE. So therefore there are no results of CIMNE to be found in this D6.1.

2 METHODOLOGY


2.1 Evaluation of the Study Tours

The evaluation of the study tours is realised with a questionnaire which is handed out to all study tour participants at the beginning of the event and collected at the end of the study tour. Thereby the technical tour / -site, the presentations, the general organisation of the study tour and some other additional and personal questions are included.

The used evaluation sheet was developed in following steps:

1. A first draft of the evaluation sheet was designed based on previous evaluation sheets and experience of the project partner AEE INTEC. This first draft was then presented and discussed at the first AIDA consortium meeting in Vienna.
2. Afterwards the consortium members had the opportunity to give feedback and additional inputs to this first draft.
3. All inputs and opinions were gathered and a second draft of the evaluation sheet was prepared. This second draft represented the first official version to be used in the first AIDA study tours in each country.
4. After the first AIDA study tours in the different consortium countries each partner could feed back his or her experience to the use of the evaluation sheet and deliver suggestions for improvements. Based on this feedback the evaluation sheet was optimized and the second version was prepared, which is the current version of the evaluation sheet at the time of D6.1.

Figure 1 shows the current version of the evaluation sheet which can also be found in Appendix I of this deliverable.



Evaluation Sheet
AIDA – Study Tour
Affirmative Integrated Energy Design Action¹

Date/Time: (to be filled in by the organizer)
Location Address/Country: (to be filled in by the organizer)
Building Type (Site): (e.g. new built or renovated public office building) (to be filled in by the organizer)

1. Please comment the technical tour / site (only if participated)

Do you think the site is worth to be visited as nZEB*?	<input type="checkbox"/> yes <input type="checkbox"/> no
Do you think the site has potential as a European nZEB* front runner?	<input type="checkbox"/> yes <input type="checkbox"/> no
Did you see interesting solutions regarding building services?	<input type="checkbox"/> yes <input type="checkbox"/> no
Did you see an interesting solution regarding the building envelope?	<input type="checkbox"/> yes <input type="checkbox"/> no
Did you find implemented innovations like prefabricated solutions, water reuse...?	<input type="checkbox"/> yes <input type="checkbox"/> no

*nZEB = nearly Zero-Energy Building = energy efficient building that covers its very low energy consumption mostly by renewable energy sources

Comments

2. Please comment the presentations (only if participated)
(Marks: 5= very good to 1= insufficient)

Lecturer	Title of the presentations	Marks
1. Xxx (name)	To be filled in by the organizer	
2. Xxx (name)	To be filled in by the organizer	
3. Xxx (name)	To be filled in by the organizer	

Comments

¹ More information about this Intelligent Energy Europe Project: www.aidaproject.eu

3. Please comment the organisational points of the tour / workshop
(Marks: 5= very good to 1= insufficient)

	Marks	Comments
General organisation		
Tour guide (name)		
Catering / Lodging		
Tour / Workshop fee		
Announcement / Written information (if available)		
Translation service (for international)		

4. Are you interested to join another AIDA Study Tour?
 yes no maybe

5. Will you be able to use any of the presented information in your daily business?
 yes no maybe
If yes, which one:

6. May we contact you in one year with a second questionnaire to ask you about your impressions of this study tour again?
 yes no
Email address:

7. Some questions about your person:
What's your profession?

Mayor	<input type="checkbox"/>	Architect, Planner	<input type="checkbox"/>
Municipal Representative	<input type="checkbox"/>	Master builder	<input type="checkbox"/>
Representative of (local) Authority	<input type="checkbox"/>	Energy manager	<input type="checkbox"/>
Association of municipalities/local authorities	<input type="checkbox"/>	Civil / Environmental engineer	<input type="checkbox"/>
Association of building professionals	<input type="checkbox"/>	Student	<input type="checkbox"/>

other:

Your special interest regarding nZEB:

Do you wish to receive the biannual AIDA Newsletter? yes nein

Female: **Male:**

Your Age:

Thank you very much!

Figure 1: current version of the study tour evaluation sheet (version of AEE INTEC)

In addition an Excel file to summarize all evaluation results was developed and adapted to the evaluation sheet. With this Excel file a quick overview of the evaluation results and a comparison of the results with the objectives, defined for example in the performance indicators, are easily possible.

In further consequence the study tour evaluation sheet and the Excel file will be steadily improved and updated.

2.2 Evaluation of the Integrated Energy Design Process in the municipalities

The evaluation of the Integrated Energy Design (IED-) Process for the first half of the project duration was accomplished with a questionnaire for all AIDA consortium members (same questionnaire for all partners). Based on the answers to is questionnaire further and more personalised questions for each partner were prepared. Additionally individualized questions for two municipalities (Bolzano and

Merano) were also prepared to assess the collaboration within AIDA from their point of view as well and also to hear their opinion about nearly zero-energy buildings.

The questionnaire was developed by AEE INTEC. Feedback came from the consortium partners. The evaluation sheet includes the main topics “contacting municipalities”, “IED-process”, “IED-tools” and “perception of overall IED progress”.

Figure 2 shows the questionnaire to evaluate the IED-process in the municipalities from the consortium partner’s point of view. Please find the questionnaire also in Appendix II.



 <p>AIDA - Evaluation Sheet Integrated Energy Design (IED)</p> <p>Date: to be filled in Consortium partner: please fill in the name of your organization Country: please fill in your country</p> <hr/> <p>1 <u>Contacting municipalities in WP3</u></p> <p>1.1 How many municipalities have you contacted up to now?</p> <p>1.2 How many municipalities have been interested in collaboration within AIDA?</p> <p>1.3 Could you name the reasons for the municipalities to collaborate (brief description) / not to collaborate (detailed description)?</p> <p>1.4 If no collaboration was established, what are your plans to attract municipalities? Which additional efforts do you intend to undertake?</p> <p>2 <u>IED-process</u></p> <p>2.1 Characterize the collaboration with the municipalities! How does the IED-process look like? (main steps, keywords)</p> <p>2.2 From your point of view, is the collaboration successful? Why / why not?</p> <p>2.3 Please describe obstacles/barriers to the collaboration</p> <hr/> <p style="text-align: center;">1</p>	 <p>2.4 When the collaboration runs well, what are the important aspects of the successful collaboration?</p> <p>2.5 Potential for optimization: What could be improved?</p> <p>2.6 Which issues are most important for the municipalities?</p> <p>3 <u>IED-tools</u></p> <p>3.1 Which tools have been used up to now?</p> <p>3.2 Have you offered them for free? If not, explain why!</p> <p>3.3 Positive/negative feedback to these tools!</p> <p>3.4 Necessary points to optimize the use of the tools!</p> <p>3.5 Are new tools required?</p> <p>4 <u>How is your perception of YOUR overall IED progress with municipalities?</u></p> <p>5 <u>Additional comments?!</u></p> <hr/> <p style="text-align: center;">2</p>
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Figure 2: evaluation sheet for the AIDA consortium partners to evaluate the IED-process in the municipalities (version of AEE INTEC)

3 EVALUATION OF THE STUDY TOURS

In the first 18 months of the AIDA project (01.04.2012 to 30.09.2013) 20 study tours were organized in total, four study tours in Austria, three in France, two in Greece, two in Hungary, four in Italy, four in Spain and one study tour in the UK.

The described evaluation sheet (see chapter 2.1) was used to evaluate the quality perception of the study tour participants. The collected evaluation sheets were analysed afterwards. The results of these analyses are presented in the following chapters 3.1 and 3.2. Unfortunately there are for some reasons no evaluation results for the three French study tours and one Italian study tour. Furthermore no participants came to the UK study tour, so only 15 study tours could be included in the detailed analysis. For the three French study tours and the missing Italian study tour at least the number of participants is known and could be included in the analysis.

3.1 Overall results

This chapter includes the overall results of the 15 study tours to which the evaluation results exist. The exception is the evaluation result in Figure 3, where the number of participants and the number of received evaluation sheets is analysed. Therein 19 study tours could be analysed (see explanation above).

In this chapter the specific results of each consortium partner were summed up resp. averaged to one overall result. Figure 3 to Figure 8 show these results.

The first figure shows on the left side the number of participants and the number of received and completed evaluation sheets of the first 19 study tours. By now 777 people participated in the study tours and 383 evaluation sheets could be collected. Based on these values an average number for the participants and the received evaluation sheets per study tour can be calculated. These average numbers were used to calculate a forecast for the end of the project (month 36) to compare them with the defined performance indicators in the proposal.

In the proposal following performance indicators were defined:

- *at least 63 study tours held*
- *with a minimum of 3000 participants*
- *and minimum 75% of the participants complete an evaluation sheet*

The calculated forecast, based on the average numbers so far, in Figure 3 shows that at the end of the project 2,576 people will have visited the study tours and 1,270 evaluation sheets will be received (about 49% of the total number of participants). This means that at present state the defined performance indicators cannot be achieved, because in total 424 participants and 980 evaluation sheets will be missing. In general the rate of organised study tours per month is too low at the moment and so therefore has to be increased to achieve the planned 63 study tours at the end of the project.

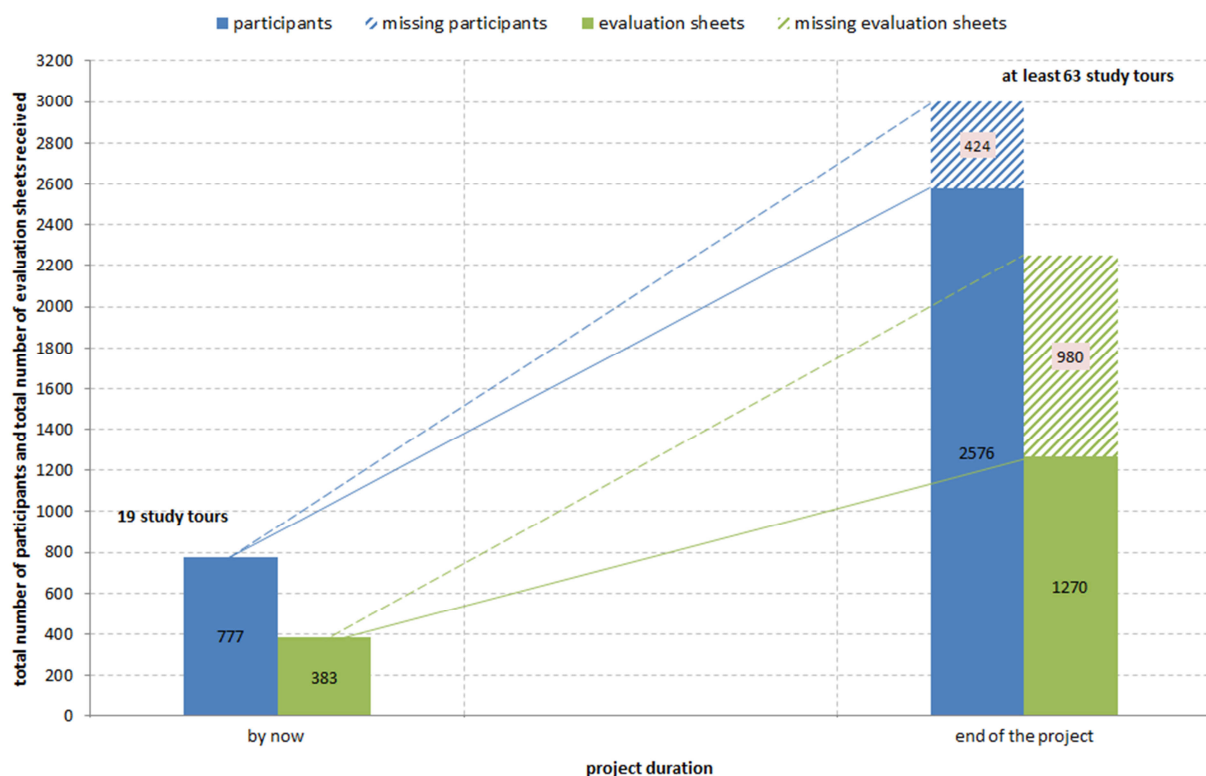


Figure 3: number of study tour participants and received evaluation sheets – status quo and forecast for the end of the project

Next figure (Figure 4) shows the results of the evaluation of the technical tour / -site. Summarized all results regarding the visited buildings are (quite) positive. Interesting is the result of the question, if the people found any implemented innovations. Despite the fact that only 7% and 11% say that they don't have seen any interesting solutions regarding the building services and the building envelope, 24% of the participants feel that the solutions are not that innovative.

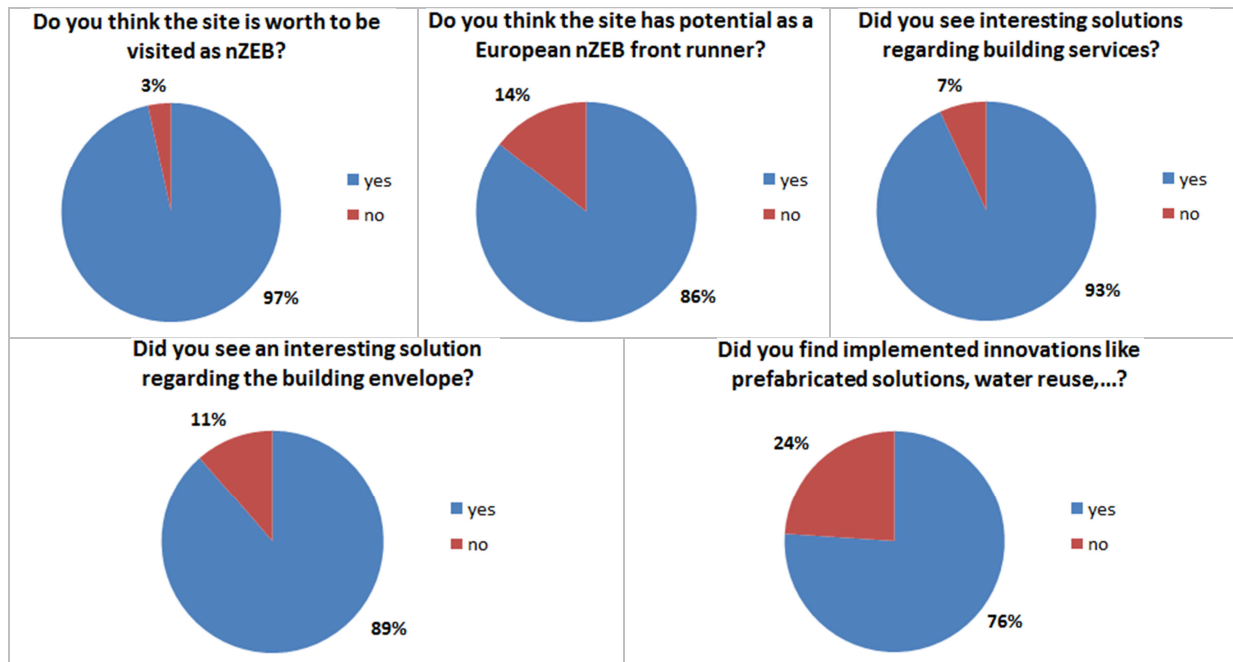


Figure 4: results of the evaluation of the technical tour / -site

Figure 5 shows the evaluation results of the general organisation of the 15 study tours. In general the organisation was very good assessed. 5 out of 6 results range between 4.3 and 4.7, where 5.0 would be the best value. Only the announcement and the written information of the study tours could have been better and slightly shows potential for improvement.

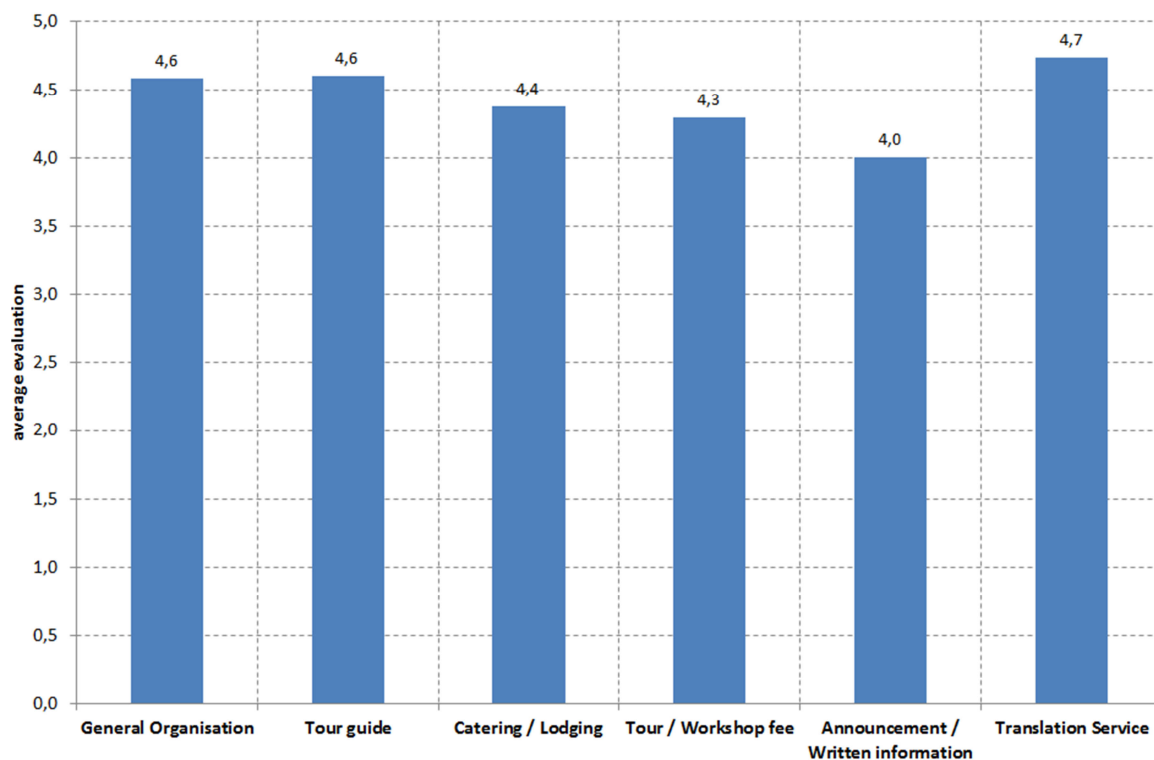


Figure 5: evaluation results of the general organisation of the study tours

Another result shows that, 81% of all participants said that they will definitely join another AIDA study tour and 16% are likely to do this. Only 2% of the participants refuse to join another study tour (see Figure 6 – left chart).

Also 70% of the study tour participants said they can use any of the presented information in their daily business and 28% probably can. Here, too, the percentage of people negate the answer is very low. Only 2% of the participants say that they can't use any of the presented information. See right chart in Figure 6.

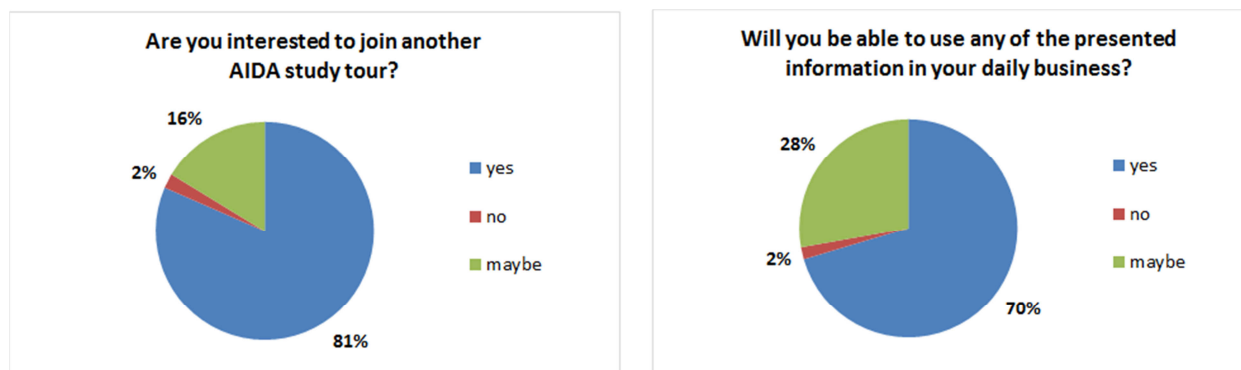


Figure 6: additional questions

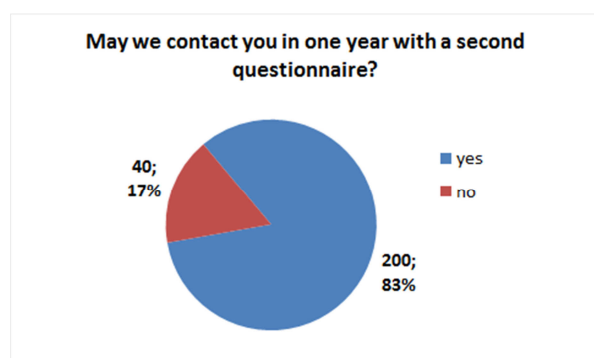


Figure 7: permission for a second questionnaire

To get insight in the mid-term impact of the study tours the participants will be contacted via a second questionnaire one year after they attended the study tour. Therefore the participants were asked about their permission to send them a second questionnaire because only participants who provided their allowance will be contacted again.

83% of the participants who answered this question did this with “yes”, only 17% said that they don't want to be contacted again (see Figure 7). Unfortunately not all participants who answered with “yes” also have written down their email addresses, so actually the correct number is a little bit lower.

Additionally some personal information of the study tour participants was gathered. These were the gender (see Figure 8) and the average age (see below).

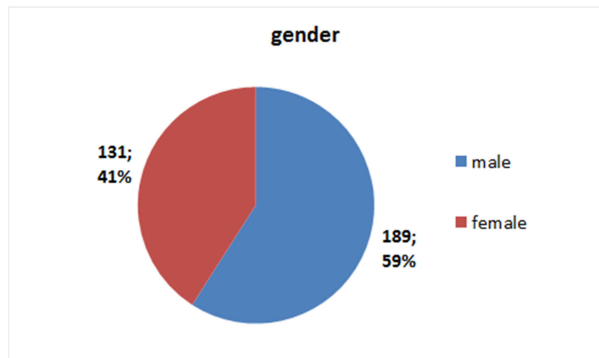


Figure 8: gender distribution

- Average age of all participants: 39 years

These results are positive because the participants were relative young and the percentage of female participants was high.

3.2 Results for each country

Besides the overall results some evaluation results are worth to be analysed separately for each country. In this way each partner could see where room for optimization and improvement exists. Chapter 3.2 includes the most important results for each partner country.

Figure 9 shows the evaluation results of the technical tour / -site. Every bar represents a separate country. The blue line marks the overall average of all study tour evaluation sheets (compare with Figure 4). The analysis shows that most of the country results are quite similar (fluctuation of a few per cent).

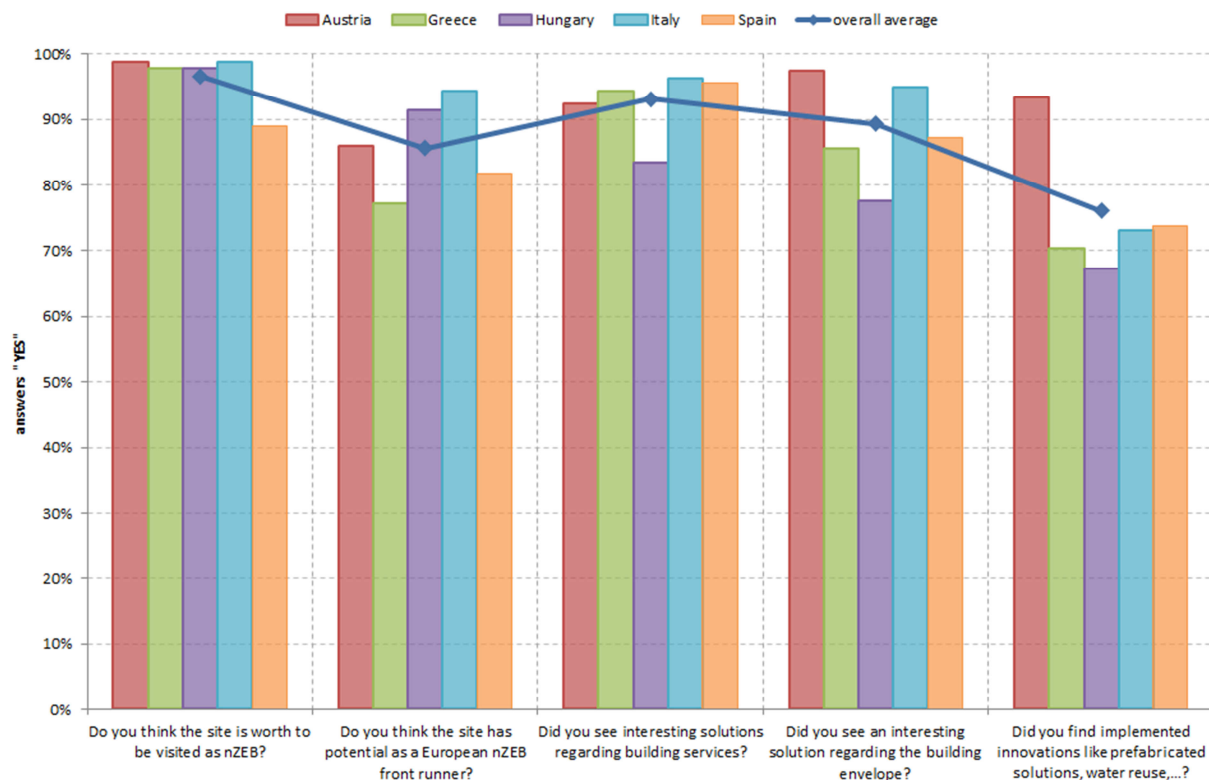


Figure 9: results of the evaluation of the technical tour / -site

The next chart (Figure 10) shows the evaluation results of the general organisation of the study tour(s) in each country. The single country results are all quite good and quite similar. There were no tour/workshop fees in Greece, Hungary, Spain and partly in Austria. Therefore the results refer to the other countries only. Also the translation service was only evaluated at one study tour in Austria.

The only “greater” variance from the overall average can be observed in Greece and also a little bit in Spain regarding the announcement and the written information. In these two countries more emphasis has to be put on this subject.

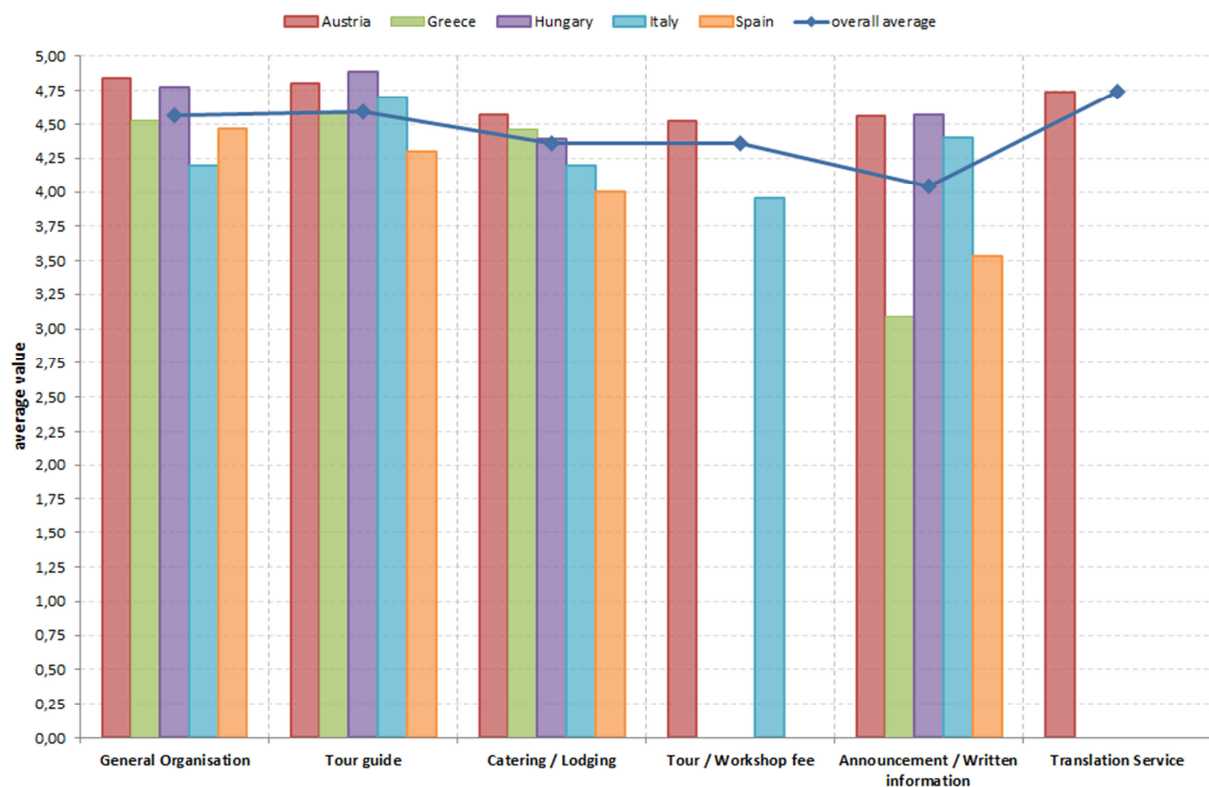


Figure 10: evaluation results of the general organisation of the study tours

The interests of the participants to join another AIDA study tour are very high in Spain and in Greece (see Figure 11). 100% of the Spanish and 95% of the Greek study tour participants said they will join another tour and the remaining 5% are not sure about it. This results are followed by Hungary (88% positive answers) and Austria (66%). In Italy (agreement of 62%) the participants are still undecided, 35% of the participants answered with “maybe”. One reason for the lower interest in joining another AIDA study tour in Austria and in Italy might be that the participants for the most parts already know all the buildings in the region because there are a lot of other study tours and site visits to these buildings.

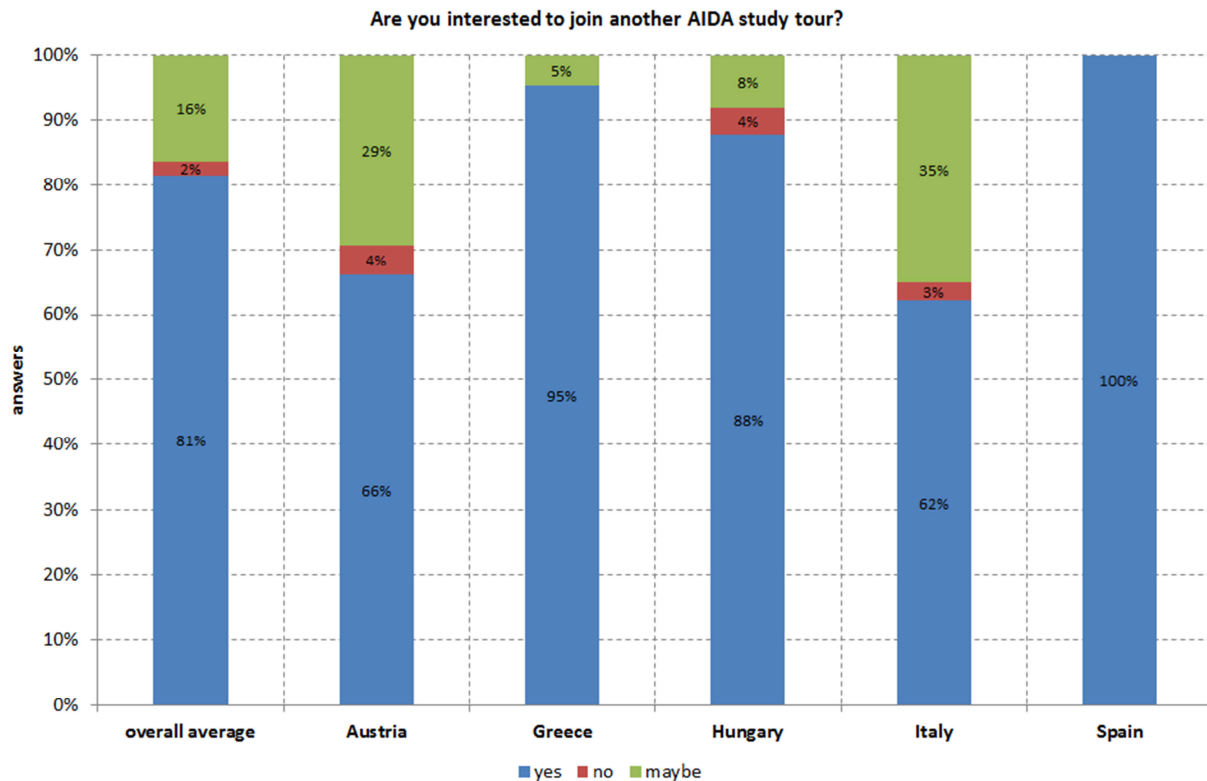


Figure 11: interest in joining another AIDA study tour

The ability to use the information, which was presented at the study tours, is highest in Hungary (see Figure 12 on the next page). 85% said they can use the information in their daily business, 13% denied this. Hungary is followed by Greece, Italy, Spain and last Austria. In Austria 63% of the study tour participants stated that they can use the presented information in their daily business. Generally were the participants unsure about the use of the information because the values for the answers “maybe” are relative high in each country.

The permission to send the study tour participants a second questionnaire one year after the event is highest in Spain, where 100% of the participants agreed (see next page - Figure 13). The numbers in Greece (94%) are also very high. Hungary and Italy are a little bit behind these two countries with consent of 88% and 84%. Far behind all other countries is Austria. At the Austrian study tours only 58% of the participants agreed to a second questionnaire. A reason for that might be the aversion to reveal personal data (-> “data privacy”).

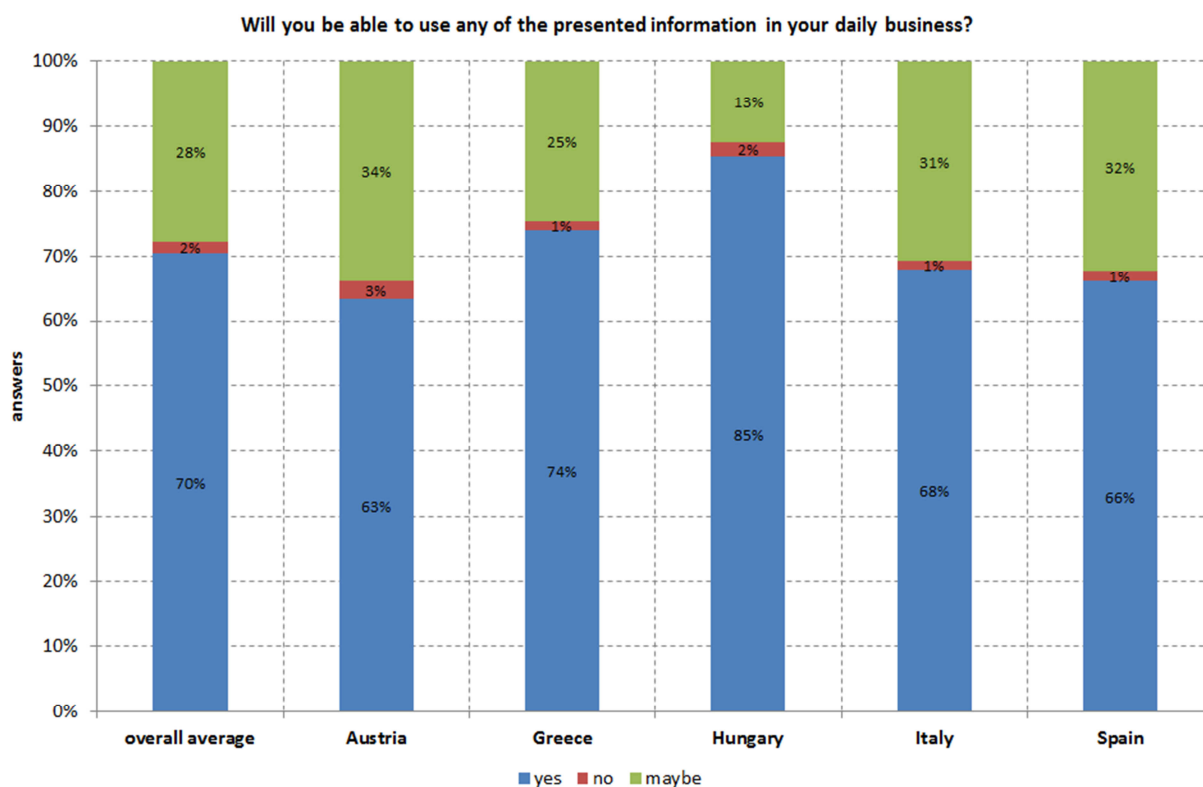


Figure 12: use of presented information in daily business

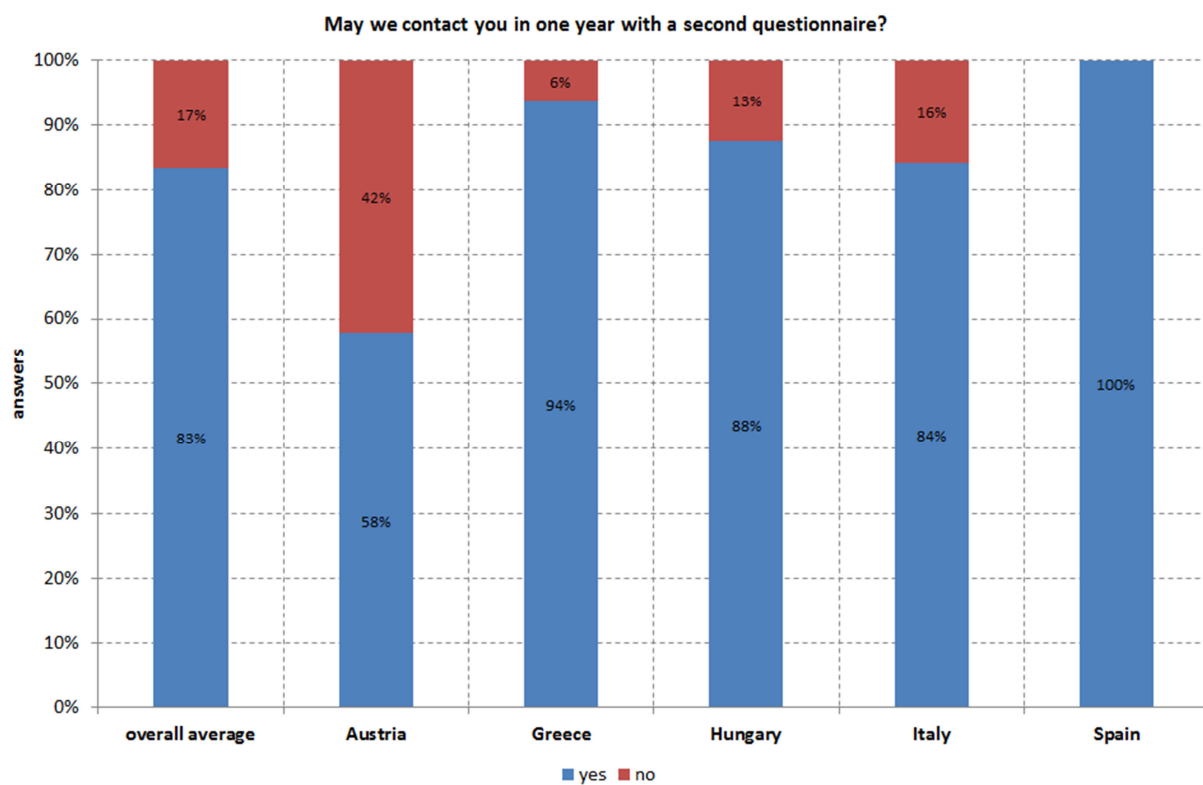


Figure 13: contact with second questionnaire

The profession of the study tour participants is shown in Figure 14. The analysis of these values shows that most of the attendees were architects (about 135), followed by students and civil / environmental engineers (about 40 each). From the other target group, besides the building professionals, the municipalities about 30 representatives came to the first study tours. Unfortunately no mayors and therefore no direct decision makers were present. Mayors are always elusive because they are very busy or sometimes also unwilling to participate in the study tours.

For that reason in the second half of the project the whole consortium has to focus more on the motivation of mayors and municipal representatives to come to the study tours as well as on journalists, because they have an important role in the distribution of the project activities and results.

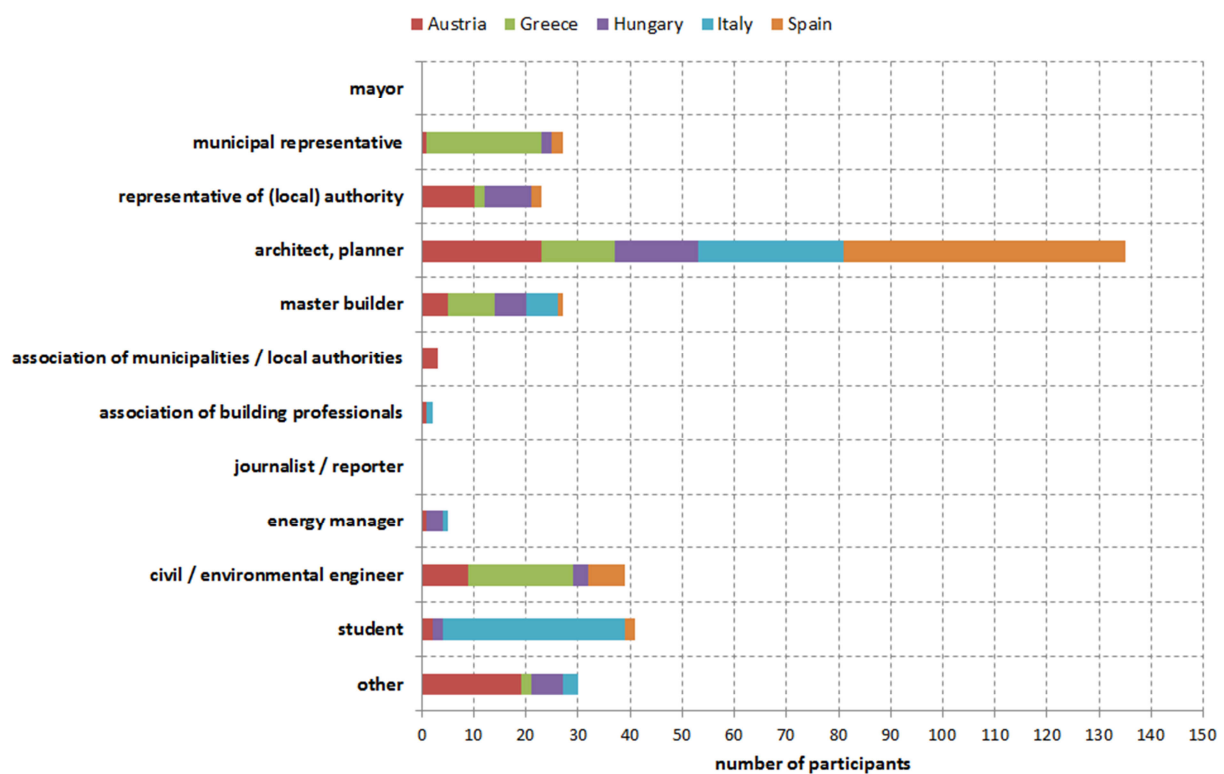


Figure 14: profession of the study tour participants

4 EVALUATION OF THE INTEGRATED ENERGY DESIGN PROCESS IN MUNICIPALITIES

4.1 Overall results

The first results concern the contacting of the municipalities. In total all AIDA partners together have contacted 251 municipalities by now. Thereby different ways of getting in touch with the municipalities were used. Personal talks at AIDA study tours and at AIDA information events and other congresses, but also emails and telephone calls were used to contact municipalities.

From these 251 contacted municipalities altogether 30 communities want to collaborate/ are already collaborating with the local AIDA partners.

Table 1 shows the number of contacted and collaborating municipalities per AIDA partner.

Table 1: number of contacted and collaborating municipalities per AIDA partner in WP3

AIDA partner	contacted municipalities	collaborating municipalities
AEE INTEC	6	3
CRES	25	4
EURAC	123	3
Geonardo	7	1
Greenspace	60	6
HESPUL	13	2
IREC	12	9
TU Wien	5	2
Sum	251	30

For information Table 2 shows the number of municipalities per AIDA partner which showed commitment to collaborate in WP4 and which also have signed an agreement to do so (see also D4.3).

Table 2: number municipalities per AIDA partner which showed commitment in WP4 (see also D4.3)

AIDA partner	municipality agreements
AEE INTEC	3
CIMNE	5
CRES	2
EURAC	3
Geonardo	1
Greenspace	1
HESPUL	1
TU Wien	0
Sum	16

Analysing the reasons why municipalities want to collaborate and also don't want to, demonstrates different causes and arguments. In following Table 3 it was attempted to summarize and to show the reasons for collaborating.

*Table 3: arguments and reasons of the municipalities **for** collaborating*

Argument / reason	Number of answers
Lack of (technical) knowledge resp. need of expert knowledge	6
Interested in nZEB and/or RES	3
Participation in (inter)national initiatives	2
Possibility of study tours	1
Positive experience with previous research projects	1
Interested in reducing carbon and energy costs	1

Looking at the results in Table 3 it is obvious that the lack of (technical) knowledge resp. the need of expert knowledge to realise specific building projects is the driving force for the municipalities to collaborate. The general interest in nZEB and RES is also a more important fact as well as the participation of the municipalities in national or international initiatives force them to take action.

In Table 4 it was attempted to summarize and to show the reasons for the municipalities **not** to collaborate.

*Table 4: arguments and reasons for the municipalities **against** collaborating*

Argument / reason	Number of answers
Municipalities unwilling to take action / energy efficient buildings no important issue	7
Financial situation	6
No building projects within AIDA timeframe	4
No technical persons in the municipalities to guide the AIDA collaboration	1
Lack of nZEB specification in legislation	1
Ownership situation (buildings owned by private or state)	1
Technical problems concerning the implementation of innovative solutions	1

The evaluation showed that two main reasons hinder the municipalities to cooperate: first of all the unwillingness of the municipalities to take action towards nZEB and RES. The experience has shown that energy efficient buildings are no important issue for the communities. The second obstacle is the tensed financial situation where often the money is needed for other investments and no money seems to be left for investments in energy efficient buildings.

A further point, which was more often mentioned, is the circumstance that the municipalities don't have building projects now or anytime soon, which are in line with the AIDA timeframe. For that reason the communities often forgo the collaboration with the AIDA partners.

Even when collaboration with a municipality is accomplished, are there many obstacles to overcome. Following Table 5 shows the results of the evaluation of the barriers and obstacles to the collaboration.

Table 5: barriers and obstacles to the collaboration

Obstacles / barriers	Number of answers
Missing funds / unresolved financial questions	5
Missing personal awareness of the mayor or high-level officials for nZEB	3
nZEB standard not established in municipalities	3
Project length / AIDA timeframe	2
Missing infrastructure (building projects)	1
Changes to thermal building regulations which bring adaptive difficulties	1
Missing (clear) definition of nZEB	1

Again missing funds and unresolved financial questions represent the main obstacles to a successful collaboration. But also the missing personal awareness of mayors and other high-level officials as well as not established nZEB standards in the municipalities are bigger barriers.

But the evaluation of the IED-process in the municipalities also found some aspects which characterise a successful collaboration. These aspects are listed in Table 6.

Table 6: aspects of successful collaborations

Aspects	Number of answers
Municipalities have to be convinced of the advantages of buildings with high energy performance and the collaboration within AIDA	3
Set focus on on-going communication and active interaction	3
Motivate and interest the municipalities	2
Define targets and common strategy first	2
Getting into the process very early	1
Establish heterogeneous team with varied expert knowledge	1
Flexibility in IED work plan	1
Having a contact person at the right technical level in the municipality	1

Very important for a successful collaboration is, according to the evaluation, the persuasion and the motivation of the municipalities as well as the on-going communication and active interaction with the involved parties.

To establish a successful collaboration with the municipalities it is also necessary to know their most important issues. Therefore every consortium partner was asked to tell the most important issues from their point of view. For comparison a municipality was asked to tell the most important issues from their point of view.

Table 7: Most important issues for municipalities from **AIDA partners'** point of view

Issues	Number of answers
Cost efficiency / cost ratio	4
Funding schemes and subsidies / financing	4
Technical support	2
Long-term support	1
Consulting services	1
Ease implementation for new processes	1
Doing sth. really innovative	1
Improve energy performance of buildings	1
Generation and management of RES	1
Quality assurance to reach expected targets	1

From the consortium's experience and point of view the cost efficiency resp. the cost ratio and the funding schemes and subsidies, respectively the financing in general are the most important issues.

To get to know also the opinion of the municipalities the municipality of Bolzano was asked in a separate questionnaire about their expectation to the collaboration within AIDA and also their opinion about nZEB and why energy efficient buildings are important for the municipality.

First of all, the municipality of Bolzano decided to collaborate within AIDA because for them as representatives and as technicians of the public administration it is important to build as energy efficient and resource efficient as possible and to sensitise planners to that. From the AIDA collaboration they expected project support to reach their defined objectives. At the moment the municipality's expectations are satisfied, even if the building project is still at the beginning (feasibility analysis is ready).

From nearly zero-energy the municipality expects primarily two things:

- a significant lower and optimised energy consumption
- significant higher construction costs

At the moment they see the finding of necessary energy sources which help to equalise the total energy balance of the building as the biggest obstacle, which keeps the municipality off from constructing only nearly zero-energy buildings. That means that in their point of view not the financing or funding is the biggest obstacle, in fact it is a technical problem.

The evaluation of the used IED-tools showed that different tools have been used up to now. So were tools in use for the national energy performance calculation as well as a tool for calculating the life-cycle costs of the building projects. Some AIDA partners also used some project management tools like Bizagi, WebRatio and Microsoft Visio. Besides this software programmes also dynamic simulations with TRNSYS, TRANSOL and DAYSIM were carried out and the gModeller tool from GreenspaceLive was used to check the achievement of the building requirements.

The consensus among all AIDA partners is that a sufficient number of software programmes already exists and therefore no new tool is required. More important is to focus on a few of them and on the training and experience using these tools, than using a lot of different software programmes with less expert knowledge. Another important issue is to use the software tools "in the right place at the right time". That means that it is necessary to know when to use which of the different tools to obtain optimum performance.

4.2 Results for each country

As with the study tours it is worth to analyse and illustrate the evaluation results of the IED-process for each partner separately. Therefore in the following paragraphs the main evaluation outcomes are presented.

The first point is the display of the **different steps of the IED-process** for each country: Each partner has a different approach to that and so therefore the following paragraphs should give an overview for all partners:

AEE INTEC

1. *Contacting the municipalities, LIG and BIG by phone and/or email*
2. *Personal meetings with the interested municipalities to clarify collaboration (in total five personal meetings hold)*
3. *Elaboration of retrofit strategies for a school building and a kindergarten as well as forwarding the results to municipality representatives, architect and planners per email*
4. *Two workshops to discuss the retrofit strategies of these two public buildings*
5. *One personal meeting to discuss the study works for the renovation of a school building*
6. *Elaboration of a retrofit strategy to include mechanical ventilation into the school building*
7. *Workshop to discuss this retrofit strategy with municipality representatives.*

CRES

Actual collaboration has started with the municipality of Maroussi. Already two personal meetings have taken place. CRES plans on providing technical support for introducing energy requirements for the construction of a new school building according to the concept of nZEB.

- *Municipality of Maroussi plans to have a tender for a prefeasibility study for the school. In this prefeasibility study the necessary requirements of the final tender (which will lead to the final study) will be identified and outlined (design requirements, special requirements for school building etc).*
- *CRES has given to the municipality some general guidelines in order to include in this tender energy aspects as well.*
- *Municipality of Maroussi will negotiate with the relevant authority of the Ministry in order to approve this tender for the prefeasibility study.*

EURAC

The IED process supports very well the collaboration between the municipalities involved and the EURAC team. Thanks to this procedure, different figures are involved to work and discuss together. Workshops were organized to introduce nZEB target to the municipalities and the design teams.

In the collaboration with the municipality of Merano a strategy was elaborated able to define the most efficacious way to introduce energy performance requirements into the 'negotiated tender'.

In the collaboration with the municipality of Bolzano the design team was supported calculating the energy balance during the preliminary design phase using an IED.

In both cases the decisions are taken together with the municipality, tenants, design team (architects, structural and mechanic engineer...) and the EURAC team in order to achieve also the nZEB target beyond economic, functional, aesthetic and thermal comfort aspects.

Geonardo

/ No IED-process until now /

Greenspace

Engage with municipality, offer the use of tools and design support.

HESPUL

- *Awareness – initiate the partner to the concept of nZEB and its advantages*
- *Information – provide detailed information on how it is possible to reach nZEB (building design choice, accompaniments available, referential, tools)*
- *Accompany – accompany the partner in the use of pre-collaboration tools such as infrastructure evaluation tools, climate action plan guidelines etc.*
- *Initiate – initiate workshops and meetings with parties involved in building renovation / construction process, from elected officials to council technicians, economists, architects, engineers' offices and management consultants...*

IREC

1. *Know the needs and project of the municipality and important dates and process (deadlines).*
2. *Adapt the IED work plan to different scales and times of execution (timing schedules and deadlines, design phases, different actors involved: design*

teams, external consulting, administrative departments in large municipalities, different types of procedures and contract typologies, etc.)

3. *Made a work plan, and then adjust them if necessary, during the process.*
4. *Establish a direct contact with the municipality technician (in general architect), if there is, to set up their knowledge and capacity to participated in the IED process (capacity to do calculations and simulations related to energy efficiency and RES).*
5. *Invite all contacts from the municipality to participate in the activities of AIDA in Catalunya, Spain (example: Study Tours, Workshops).*

TU Wien

- *analysis of the building stock (municipality owned buildings)*
- *discussion of innovative solutions for nZEB*
- *definition of specific solutions with a focus on solar micro-grids with geothermal seasonal heat storage*
- *technical concept*
- *financing options*
- *search for window of opportunity*
- *implementation*

An essential subject of the IED-process evaluation in the municipalities is the resulting nZEB-implementation in the building tenders, thanks to the AIDA (project) support. In the performance indicators 15-21 implementations were defined as the objective.

Now, after the first half of the project each AIDA consortium partner tried to assess the resulting nZEB-implementations for the end of the project duration. Should an insufficient number be foreseeable, an adjustment of the next project steps would be necessary.

Following Table 8 shows the assessment of the resulting nZEB-implementations at the end of the project.

Table 8: assessment of the final nZEB-implementations per AIDA partner

Consortium partner	nZEB-implementations
AEE INTEC	1-2
CRES	2-3
EURAC	3
Geonardo	2
Greenspace	7
HESPUL	3
IREC	2
TU Wien	1-2
Sum	21-24

At the moment 21-24 nZEB-implementations could potentially be achieved, which would be even above the in the performance indicators defined number. However, it has to be noted that due to the economic crisis several planned tenders were stopped or are on hold. Thus, the above mentioned numbers include tenders and feasibility studies for potential tenders.

However, **further plans to attract municipalities** (only when no successful collaboration was established until now!) exist and were asked in the evaluation questionnaire. The following paragraphs show the evaluated plans:

AEE INTEC

/ Collaboration established -> no active plans to attract additional municipalities / stay tuned at existing collaborations /

CRES

/ Collaboration established -> no active plans to attract additional municipalities /

EURAC

/ Collaboration established -> no active plans to attract additional municipalities /

Geonardo

Energy efficiency is key in general especially when it manifests in cost reduction for the municipality on regular costs such as the energy bills of a public building. Our next step is to engage larger municipalities of a more solid financial background using avenues of already existing personal connections to them. The targeted municipalities will ideally have a few new plans developed or at least talked about

regarding the construction of new public buildings or the renovation of the existing stock.

Greenspace

Try different contact level in organisation.

Attend more events to display AIDA project

HESPUL

Although some collaboration has been established, it is not sufficient for Hespul. Consequently, an action plan has been developed within Hespul to raise the profile of the AIDA programme and gather new support and collaboration. This plan includes involving more employees in the programme, taking a more structured approach to contacting municipalities (not relying on contacts and partnerships already in place, contacting more municipalities...). The most important of these actions is the implication of new personnel within Hespul, as they bring a fresh approach and established contacts to the programme.

IREC

Collaboration established -> no active plans to attract additional municipalities

TU Wien

If fundamental hindering factors exist, which cannot be eliminated or reduced in the runtime of AIDA project, municipalities will not be processed any longer (e.g. no need for renovation, ownership situation). But they will get all AIDA information during the runtime of AIDA project if they agree.

All other municipalities with minor reasons not to collaborate will be invited to AIDA project actions and information activities like in the past with a special focus on the hindering factors.

Finally every AIDA consortium partner was asked to assess their **own overall IED-progress**:

AEE INTEC

In general the progress is good but the municipalities and planners / architects are not really amused about such strict processes offered by us.

CRES

Although the procedure in the AIDA project is still at an early stage, our experience tells us that IED is moving smoothly to the right direction. The technical staff has a good grasp of the concepts and the methodology of IED and is willing not only to implement it in one particular case, but use the experience in the future, even if the nZEB targets are not easily met in many cases, especially in retrofitting. However, constant technical support is needed, and building technical skill and confidence in the municipal teams is a goal to be met.

EURAC

The municipalities have not the knowledge to evaluate the energy performance part of the design proposals. Therefore, they are very interested to participate in the AIDA project and have our support to develop this aspect through an IED process. Furthermore, the IED process guarantees a collaborative procedure between different specialist figures and permits to organize meeting and workshops to inform the work team on different issues and ride out them.

Geonardo

Similarly to other AIDA partners Geonardo's progress in terms of cooperation with municipalities on the subject of IED is slow and based on the experience of the first 18 months is as tough as a nail. Municipalities so far do not seem to be interested in the activities which are offered to them – including their participation on the free-of-charge study tours, resulting in unsatisfactory outputs in this regard. New strategies have been drafted and there is a certain level of anticipation about how the new approached will work out to provide the project with measurable indicators on the IED subject.

Greenspace

To date most effort has been in the development of the tools, now the process of engagement with municipalities can gain more momentum.

HESPUL

Our overall progress is not satisfactory as we do not have enough municipalities involved. It is also difficult to develop projects at a speed compatible with the programme duration. It is particularly frustrating to have projects cancelled because of budgets cuts etc., as the work expended on inciting, educating and accompanying the municipality is difficult to valorise.

IREC

Despite we are already in process of all the IED assisting, we considered that it is a very positive action to increase the general and particular knowledge of IED process and is a good opportunity to introduce real experience in this topic in the municipalities (involving majors and technical team, and not only in a concretized IED assisting). Also, is it a good starting point to spread in real projects this kind of design process.

TU Wien

It is good, municipalities are very interested, but we must not negate the short-term political restrictions of municipalities concerning priorities of investments and restricted budgets;

5 CONCLUSION, PROSPECT AND RECOMMENDATION

5.1 Study Tours

In general were the evaluation results of the first study tours quite positive. So were the technical tours / -sites and the general organisation assessed as very well. Furthermore there is a high permission to send the participants a second questionnaire to evaluate the mid-term impact of the study tours and positive is also the fact, that the study tour participants were relative young and the percentage of female participants was high. However there is some room for improvements:

At the moment the average number of participants and the number of collected evaluation sheets at the study tours are too low. If these average numbers are kept until the end of the project, the defined objectives cannot be achieved. Therefore two different options exist to achieve the set goals:

- The first one would be to attempt to increase the number of participants and received evaluation sheets per study tour.
- The second option is to organize additional study tours so that at the end of the project more than the planned 63 study tours were held.

In general the rate of organised study tours per month has also to be increased to achieve the planned 63 study tours at the end of the project.

The technical tours / -sites were assessed as very well but it seems that the innovations of the buildings are not always easy to find. So therefore a recommendation for the upcoming study tours is to direct the attention more to the innovations of the building.

Additionally the announcement / written information of the upcoming study tours have to be improved because this assessment category was evaluated worse than the others of the general organisation.

All AIDA consortium partners have to set the focus in the second half of the project on the motivation of mayors, municipal representatives and journalists to come to the study tours, because at the moment the participation of these target groups is unfortunately very low, in particular no mayor and no journalist participated so far!

5.2 Integrated Energy Design Process in the municipalities

Until now 251 municipalities in total were contacted and 30 of these are already collaborating or willing to collaborate within AIDA.

The most important argument/reason for the municipalities to collaborate is the lack of (technical) knowledge or rather the need of expert knowledge to realise the imminent building projects.

The most important arguments/reasons for the municipalities not to collaborate are the unwillingness of the municipalities to take action resp. the fact that energy efficient buildings are not important issues for them and of course the financial situation which is very tense in many cases.

Asking the AIDA consortium partners to assess the most important issues for the municipalities the most frequently mentioned issues are the cost efficiency / cost ratio of a nZEB and the funding schemes and subsidies resp. the financing of the building project in general.

The most important issue for the municipality of Bolzano¹ however is the finding of necessary and usable energy sources to equalise the total energy balance of the buildings. That means it is not an economic topic they have to deal with, in fact it is a technical problem which has to be solved.

The prospect of the total nZEB implementations at the end of the project is very positive. At the moment it is estimated that 21 to 24 nZEB implementations in tenders thanks to the AIDA (project) support can be achieved. That would be in line with the defined performance indicator of 15-21 successful implementations.

¹ The hereinafter mentioned municipality of Bozen was the only one that provided full response to the asked questions and therefore only their opinion could be outlined.

APPENDIX

Appendix I. Current version of study tour evaluation sheet

Appendix II. Questionnaire for evaluation of IED-process (for consortium members)



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Evaluation Sheet

AIDA – Study Tour

Affirmative Integrated Energy Design Action¹

Date/Time: (to be filled in by the organizer)

Location Address/Country: (to be filled in by the organizer)

Building Type (Site): (e.g. new built or renovated public office building) (to be filled in by the organizer)

1. Please comment the technical tour / site (only if participated)

Do you think the site is worth to be visited as nZEB*?	<input type="checkbox"/> yes <input type="checkbox"/> no
Do you think the site has potential as a European nZEB* front runner?	<input type="checkbox"/> yes <input type="checkbox"/> no
Did you see interesting solutions regarding building services?	<input type="checkbox"/> yes <input type="checkbox"/> no
Did you see an interesting solution regarding the building envelope?	<input type="checkbox"/> yes <input type="checkbox"/> no
Did you find implemented innovations like prefabricated solutions, water reuse...?	<input type="checkbox"/> yes <input type="checkbox"/> no

*nZEB = nearly Zero-Energy Building = energy efficient building that covers its very low energy consumption mostly by renewable energy sources

Comments

2. Please comment the presentations (only if participated)

(Marks: 5= very good to 1= insufficient)

Lecturer	Title of the presentations	Marks
1. Xxx (name)	To be filled in by the organizer	
2. Xxx (name)	To be filled in by the organizer	
3. Xxx (name)	To be filled in by the organizer	

Comments

¹ More information about this Intelligent Energy Europe Project: www.aidaproject.eu

3. Please comment the organisational points of the tour / workshop

(Marks: 5= very good to 1= insufficient)

	Marks	Comments
General organisation		
Tour guide (name)		
Catering / Lodging		
Tour / Workshop fee		
Announcement / Written information (if available)		
Translation service (for international)		

4. Are you interested to join another AIDA Study Tour?

yes no maybe

5. Will you be able to use any of the presented information in your daily business?

yes no maybe

If yes, which one:

6. May we contact you in one year with a second questionnaire to ask you about your impressions of this study tour again?

yes no

Email address:

7. Some questions about your person:

What´s your profession?

Mayor	<input type="checkbox"/>	Architect, Planner	<input type="checkbox"/>
Municipal Representative	<input type="checkbox"/>	Master builder	<input type="checkbox"/>
Representative of (local) Authority	<input type="checkbox"/>	Energy manager	<input type="checkbox"/>
Association of municipalities/local authorities	<input type="checkbox"/>	Civil / Environmental engineer	<input type="checkbox"/>
Association of building professionals	<input type="checkbox"/>	Student	<input type="checkbox"/>

other:

Your special interest regarding nZEB:

Do you wish to receive the biannual AIDA Newsletter? yes nein

Female: **Male:**

Your Age:

Thank you very much!



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AIDA - Evaluation Sheet

Integrated Energy Design (IED)

Date: to be filled in

Consortium partner: please fill in the name of your organization

Country: please fill in your country

1 Contacting municipalities in WP3

1.1 How many municipalities have you contacted up to now?

1.2 How many municipalities have been interested in collaboration within AIDA?

1.3 Could you name the reasons for the municipalities to collaborate (brief description) / not to collaborate (detailed description)?

1.4 If no collaboration was established, what are your plans to attract municipalities? Which additional efforts do you intend to undertake?

2 IED-process

2.1 Characterize the collaboration with the municipalities! How does the IED-process look like? (main steps, keywords)

2.2 From your point of view, is the collaboration successful? Why / why not?

2.3 Please describe obstacles/barriers to the collaboration



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2.4 When the collaboration runs well, what are the important aspects of the successful collaboration?

2.5 Potential for optimization: What could be improved?

2.6 Which issues are most important for the municipalities?

3 IED-tools

3.1 Which tools have been used up to now?

3.2 Have you offered them for free? If not, explain why!

3.3 Positive/negative feedback to these tools!

3.4 Necessary points to optimize the use of the tools!

3.5 Are new tools required?

4 How is your perception of YOUR overall IED progress with municipalities?

5 Additional comments?!?