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Site specific reports for Bolzano and Innsbruck

Site-specific reports per pilot city

SINFONIA

“Smart INitiative of cities Fully cOmmitted to iNvest In Advanced
large-scaled energy”

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List of abbreviations

ACC	Agenzia Casa Clima
AEW	Azienda Energetica Etschwerke
BBT	Brenner Basistunnel
BOZ	City of Bolzano
CEN	European committee for Standardization
EIB	European Investment Bank
EURAC	European Academy of Bozen/Bolzano
GIE	Greenovate!Europe
IBK	City of Innsbruck
IIG	Innsbrucker Immobilien Gesellschaft
IKB	Innsbrucker Kommunalbetriebe
IPES	Istituto per l'Edilizia Sociale
KPC	Kommunkredit Public Consulting
MAG IBK	Magistrat Innsbruck
MoB	Municipality of Bolzano
NHT	Neue Heimat Tirol
PHI	Passive House Institute
PUM	Urban Mobility Plan of Bolzano
PUT	Urban Traffic Plan
SAT	Standortagentur Tirol
SEAP	Sustainable Energy Action Plan
SEL	Società elettrica altoatesina SpA
TIGAS	TIGAS Erdgas Tirol GmbH
TIS	Techno Innovation South Tyrol KAG
TIWAG	Tiroler Wasserkraft AG
UIBK	Universität Innsbruck
WP	Work package



Executive Summary

The aim of WP6 within the SINFONIA project is to assist local partners in the involvement of target stakeholder groups, to test and develop innovative methods for stakeholder engagement and furthermore to extract general guidelines and learnings to be applied by Early Adopter Cities. Based on the credo that the successful implementation of energy saving strategies stands or falls with the acceptance of corresponding measures, all activities within WP6 are aligned under Shakespeare's principle "What is the [smart] city but the people?"

At the time of the submission of this report, SINFONIA has been running for one year. After an orientation phase in the beginning of the project, all work packages have proceeded with their agenda. The conception of demonstration measures within the work packages 7 and 8 is well advanced and their implementation is imminent. The same applies for the monitoring concepts that have been elaborated within WP5. All these activities have been accompanied by WP6, since stakeholder management and involvement is an indispensable prerequisite for the success of the project. The envisaged very ambitious aim of reduction of energy demand can only be met, when the local acceptance for demonstration measures is high.

Materials for empirical data collection already tested are listed in the appendix.

The two Demo Cities Innsbruck and Bolzano, although geographically close and comparable regarding size, show besides many similarities also differences, concerning stakeholder mapping, expected barriers or communication routines between and within single stakeholder groups.

SINFONIA was not as well received in the general public and local press as originally expected (Innsbruck). Articles in local newspapers subjected rising rents and individual hardships of tenants due to SINFONIA. A need for action on the development and local coordination of a common PR strategy in Innsbruck was detected, in order to sustain a positive public opinion towards the project.

Energetically refurbishment in lived-in buildings is a challenge that goes far beyond solving technical problems. All tenants, families and individuals that live in the apartments face individual challenges and fates. Hardship cases such as bedridden or disabled tenants illustrate this.

In Innsbruck, the involvement of tenants is challenged mainly by two factors: Firstly, the non-existence of tenant organisations that represent all inhabitants of a single building what makes it necessary to address each single party individually, and secondly, the strong legal status of tenants, that allows single tenants to object and stop refurbishments for the complete building.

The institutional setting at the Demo site has major influence on the stakeholder involvement process (e.g. through building codes, rental laws, consumer protection laws, consumer protection



agencies and further external factors). Therefore, a single master template for a stakeholder involvement process to replicate across the EU is unrealistic. Stakeholder involvement processes for smart districts have to be individually adapted to the local situation.

Trans- and interdisciplinary collaboration with a broad range of partners and institutions from different backgrounds and cultures, such as governing bodies, politics, companies and research institutions, represents a not to underestimate challenge for all partners. Appropriate time and endurance has to be foreseen to establish mutual trust and forms of collaboration. This is the case for all spatial levels from Demo City to EU level. Face to face meetings, including high-level decision makers, are regarded as the most appropriate mean of communication to establish mutual trust and a spirit of collaboration among the partners.

Stakeholders in the two Demo Cities Innsbruck and Bolzano are structured into INTERNAL and EXTERNAL ones, whereas the first are defined as stakeholders represented in the project consortium (e.g. housing associations) and the latter as stakeholders that are not represented in the consortium (e.g. tenants). Information about INTERNAL stakeholders is of same importance for Early Adopter Cities as information about EXTERNAL stakeholders. In particular, since the composition of responsibilities for the implementation of smart measures might differ in Early Adopter Cities, stakeholders defined as INTERNAL may become EXTERNAL ones. WP6 activities first focus on the characteristics of INTERNAL stakeholders, but also EXTERNAL stakeholders have already been addressed, mainly tenants, since refurbishment activities in some SINFONIA buildings are already to be started.

The most central player for the development of smart districts is the municipality/city including its political and its administrative function. Thus, the city is the focal point and driver for smart districts.



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INTRODUCTION

The report at hand is summarizing all activities concerning local stakeholder involvement and evaluation in the first project year. The first part of the report is dedicated to the definition of common goals and describes current general approaches in stakeholder management based on in-depth literature research. Besides showing the process of stakeholder mapping in the two Demo Cities, it summarizes the outcomes of the work package kick off-event at the very beginning of the project that served to determine a first strategic thrust according to the expectations of the project partners.

Site-specific reports on activities in Bolzano and Innsbruck define the second part of the report. Due to regional and local particularities, each city has its own stakeholder map and consists of a different local key stakeholders' profile that hence are described separately. A special focus is also on communication structures between and within the local stakeholders.

A summarizing chapter about lessons learnt completes the first and the second part of the report.

All activities described build the thematic core of the "toolkit for local stakeholder and consumer/tenant assessment and involvement" whose structure is described in the third part of the report. The toolkit aims to facilitate replication processes of demonstration measures in the Demo Cities Innsbruck and Bolzano and shall assist Early Adopter and Replication Cluster Cities in the realization of smart city measures. The toolkit's contents will be provided to the Early Adopter Cities as well as to other interested parties in form of an interactive web application.



1. COMMON GOALS/APPROACHES IN STAKEHOLDER INVOLVEMENT

1.1 DEFINITION OF STAKEHOLDER

The general definition of stakeholder used in the SINFONIA project follows those of Savage et al. (1991):

„Stakeholders include those individuals, groups, and other organisations who have an interest in the actions of an organisation [project] and who have the ability to influence it.”

In contradiction to such a common definition of the term “stakeholder”, the SINFONIA partners did not perceive themselves as stakeholder right at the beginning of the project. Asked at the WP6 kick-off meeting, October 2014, the SINFONIA project partners indicated the following actors as stakeholders in smart district refurbishment processes: citizens, tenants, industrial consumers/enterprises, designers, certifiers or builders. Nonetheless, several project partners represent groups of stakeholders that have been identified as key stakeholders for smart city projects, as shown later in the present report (e.g. housing associations or electricity suppliers). Hence, information about these groups, defined as INTERNAL stakeholders within the SINFONIA project, is of same importance for Early Adopter Cities as information about EXTERNAL stakeholders that are not represented by the SINFONIA consortium. In particular, since the composition of responsibilities for the implementation of smart measures might differ in Early Adopter Cities, stakeholders defined as INTERNAL may become EXTERNAL ones. WP6 activities first focus on the characteristics of INTERNAL stakeholders, providing them with information or supporting them with data acquisition. In the process of implementation activities, EXTERNAL actors will be addressed increasingly.

REMARK: It was highlighted by some SINFONIA partners that a distinction between the term “stakeholder” (a stakeholder affects) and “beneficiary” (a beneficiary is affected) could be made. Anyhow, in SINFONIA no difference between these two terms is made.

1.2 GOALS OF STAKEHOLDER INVOLVEMENT

1.2.1 EU GOALS IN SMART CITIES CALLS

Stakeholder involvement is claimed by the EU SMART CITIES CALL (WORK PROGRAMME 2013, 2nd amendment) COOPERATION THEME 5 ENERGY (European Commission (2013) 3953, 27 June 2013), in the following way: “The activities proposed by the applicants should be based on a convincing city



and mobility planning exercise with special consideration of innovative energy technology integration and participation of all relevant actors, completed at an earlier stage.”

1.2.2 SINFONIA “DESCRIPTION OF WORK” GOALS

In SINFONIA’S “Description of Work”, WP6 is dedicated to stakeholder involvement in the Pilot and Early Adopter Cities. Its objectives are to increase local acceptance of innovative demonstration measures by involving economic, political and local stakeholders in the districts.

In this way WP6...

- ...capitalises on the know-how on site derived by in depths socio-economic investigations on the institutional embedment of relevant stakeholders in the Demo Cities,
- ...develops a toolkit for the Early Adopter Cities based on the findings in the Demo Cities which will take into account scientific socio-economic standards and
- ...facilitates dissemination activities in WP10 (Dissemination and exploitation) by delivering information about the communication paths in the Demo Cities.

The successful implementation of WP6 will help showcasing the solutions from which tools, processes and solutions can be derived to pave the way towards the European goals of nearly zero energy buildings, low carbon and smart cities.

1.2.3 EXPRESSED GOALS OF SINFONIA PARTNERS

Based on the results of the WP6 kick-off event (6th to 7th October 2014) the common goal of stakeholder involvement was defined and framed by the SINFONIA project partners. According to a three-stepped model of stakeholder involvement (based on Arnstein 1969), which comprises 1. information, 2. consultation and 3. co-decision-making, the majority of partners, pursue only level 1 (information) of stakeholder involvement feasible.

Expressed goals of the project partners are e.g. to “generate a positive atmosphere”, to raise or secure “acceptance”, to educate and to teach consumers, to provide knowledge, to assist, or to collect potential ideas.



1.3 LITERATURE BASED KEY MESSAGES OF STAKEHOLDER INVOLVEMENT

Based on a literature review several key messages on stakeholder involvement were extracted and further analysed. Although big attention was given to the stakeholder group “tenants” most of these key messages can be generalized for the involvement of other stakeholder groups.

The key messages selected were – in a second step – discussed with the SINFONIA partners at the WP6 kick-off, October 2014. The outcomes of this discussion serve as a basis for the measures to be taken within the project. The comparison of the “scientific” knowledge emanating from an idealized world and the situation in SINFONIA will generate additional benefit for the Early Adopter Cities, the Replication Cluster and other cities willing to initiate a smart city project. The synthesis of this comparison, together with the knowledge collected in the project, will be presented in the toolkit for stakeholder involvement (see chapter 3).

The following 16 key messages were extracted based on the literature indicated in Annex 2:

- A participation process is a benefit for every stakeholder due to reduced conflict and cumulative knowledge over market demand and needs.
- Every project will differ in size, type, economic-, cultural- or social characteristics. Therefore, every measure must be adapted individually for the situation at hand. Hence, most guidebooks put a special emphasis on a degree of flexibility that each method should inherit.
- For all levels of participation that exceed the basic level of information, it must be clear that no result of a participation process can be fixed from the beginning; a participation process will inevitably result in new results. Therefore, no decisions should be predefined.
- External moderation is a key criterion to guarantee fair and neutral discussions between the stakeholders.
- The involvement action should start as early as possible in the process.
- Participation structures should be confirmed until the refurbishment is finished and beyond to be able to react to failures and foster social bonding within the community.
- All tenants (from every social and cultural group) must be informed and invited to be part of the involvement process.
- Different representatives within the stakeholder groups may have very different access to certain types of information. Thus, alternative methods may need to address these



different groups with respect to stakeholder characteristics (social class, migration, type of business, size of business...).

- Architects, construction managers and similar executives should be personally available onsite.
- Graphical support like thermo-graphic images or construction time-lines should be prepared in order to gain widespread acceptance and support for energy efficiency measures.
- Critical, highly engaged individuals or organisations that normally exacerbate conflict and distrust can be highly useful for the project.
- Housing associations should draft individual rent agreements to acknowledge already refurbished flats through the tenant in order to clearly account for the work needed to be done by the general refurbishment.
- Wherever possible, to include certain aspects of co-determination, no matter how small the decision would be, is immensely beneficial for the acceptance of the project.
- As consumer behaviour can highly affect the final energy savings, educational measures about heating, electricity and appliance should be offered.
- Tenants should be able to control their services independently (gas, water, electricity, etc.); immediate savings should be made as transparent as possible in order to fully convince tenants of the use of a retrofit.
- Many retrofits turn out to save less energy than expected, therefore they are often unable to meet the expected financial benefits in saving energy. This can significantly be influenced by consumer perceptions of warmer living comfort and energy scarcity.

Out of these 16 key messages, eight were selected and discussed at the WP6 kick-off meeting, October 2014, in two different working groups with the SINFONIA partnership (Table 1). Working group 1 was dealing with the “general involvement of stakeholders” and working group 2 was dealing with the “stakeholder group – tenants”.

TABLE 1. DISCUSSION OF KEY MESSAGES

Key message	Outcome of the discussion at the WP6 kick off
Involvement of stakeholders – General	
The early and intensive involvement of all stakeholders is beneficial for the success of the project.	<ul style="list-style-type: none"> - Not all stakeholders can be involved at the same time. - Based on a classification of stakeholders a timeline



	<ul style="list-style-type: none"> - of involvement should be prepared. - A clear assignment of stakeholders is essential for the success of the project.
Involvement methods have to be chosen in order to reach all stakeholders and all social and cultural groups.	<ul style="list-style-type: none"> - Not all stakeholders should be involved in SINFONIA but the relevant ones; preparation of a priority list - Involvement methods: workshops, platforms, questionnaires (important: keep questions open; do not suggest anything).
For the success of large scaled energy measures a single neutral figure/institution responsible for the project coordination is indispensable.	<ul style="list-style-type: none"> - Not relevant for SINFONIA (district leaders).
Powerful and critical individuals/institutions can pose a risk for the project success, but are very helpful if asked to contribute early in the process.	<ul style="list-style-type: none"> - Identification of potential risk groups is important (a stakeholder risk analysis is part of the SINFONIA DoW). - SINFONIA is based on technical issues and thus potential changes (e.g. in the political frame) should not become a problem. - The involvement of citizens is crucial to confirm the project against external factors.

Involvement of stakeholders – Tenants

The early and intensive involvement of tenants is beneficial for the success of the refurbishment process.	<ul style="list-style-type: none"> - 1st hand information from the building owner/developer should be provided to tenants. - Tenants in SINFONIA are mostly limited to the “information” level (minimum level of involvement) - Organisation of consumer “trainings” to achieve desired behaviour
Involvement methods have to be chosen in order to reach all social and cultural groups within the community of tenants.	<ul style="list-style-type: none"> - Important: bilingual information for Bolzano - Investigations on influence of cultural background in Bolzano - Methods: information meetings, communication team (continuous information flow), board of representatives in each floor, questionnaires
It is very beneficial for the acceptance of the project, to include certain aspects of co-determination wherever possible (no matter how small the decision would be).	<ul style="list-style-type: none"> - Generally co-determination is not possible/foreseen within SINFONIA - Co-determination should not be done for technical issues but for organizational ones
Trainings of tenants’ consumer behaviour are indispensable in order to reach envisaged energy savings.	<ul style="list-style-type: none"> - Important for SINFONIA (e.g. education on ventilation procedures) - Training – how? <ul style="list-style-type: none"> o Elaboration of guidelines (user manual) o Information events during refurbishment process o Yearly (Municipality of Bolzano) information o Internal trainings (Municipality of Bolzano)



- “Jahreshauptversammlung” – obligatory
- Language: clear and easily to understand

1.4 STAKEHOLDER MAPPING

1.4.1 1ST DRAFT, LITERATURE BASED AND COMMENTED BY THE CONSORTIUM

The first step of the SINFONIA stakeholder analysis for each Demo City was to identify relevant stakeholder groups based on a common literature research. The following list of potential stakeholder groups was assembled by the WP6 project team:

- End users
- Executive actors scientific and technical consultants
- Housing owners
- Policy makers
- Legal authorities
- Energy suppliers/utility companies
- Local/regional authorities
- General public and representatives

Within these stakeholder groups, certain subgroups were identified as described in Figure 1.



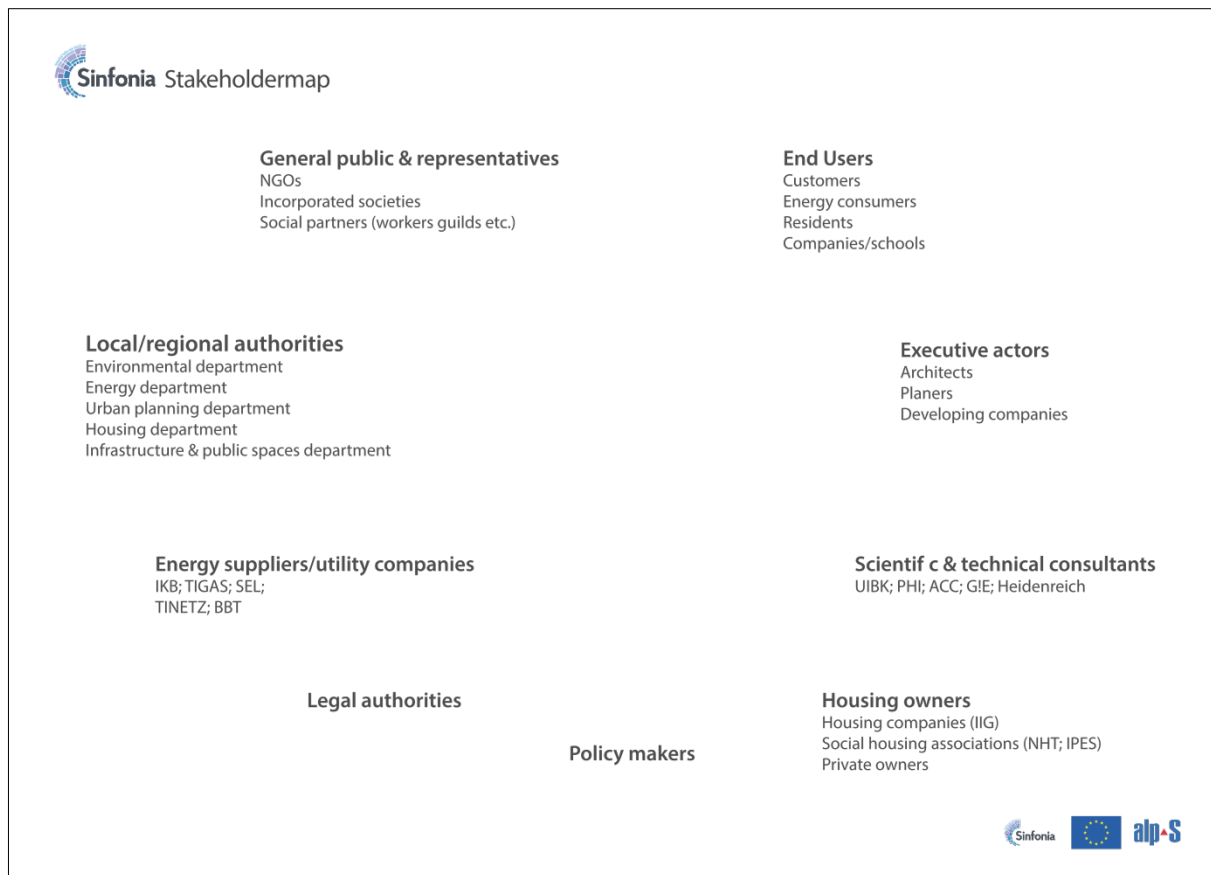


FIGURE 1 SINFONIA STAKEHOLDER MAP – 1ST LITERATURE-BASED DRAFT

During the WP6 kick-off event, October 2014, the literature-based draft of the SINFONIA stakeholder map was presented. In an interactive workshop the partnership was invited to discuss and analyse the stakeholder map and to add comments to the poster (compare Figure 2).

The following inputs were gained:

- Necessity of two stakeholder maps for each of the two Demo Cities due to stronger reference to local differences
- Additional stakeholder groups should be added:
 - Financing and funding institutions with the two subgroups
 - Private banks
 - Funding banks
 - Media
 - Early Adopter Cities
- The stakeholder group “End users” plays a central role for demonstration actions in both Demo Cities and should thus be placed prominently in the centre of the map



In addition, workshop attendees indicated strong interactions and/or dependencies between stakeholder groups by drawing arrows.

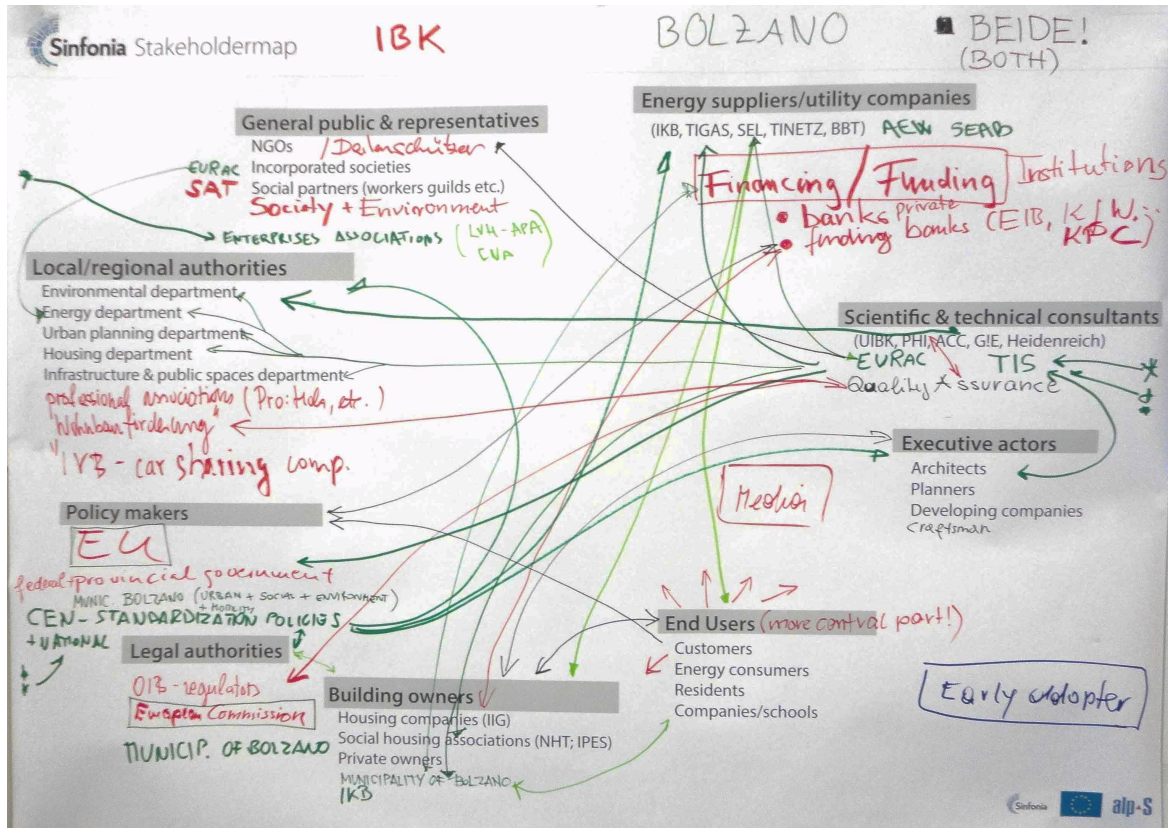


FIGURE 2. DRAFT SINFONIA-STAKEHOLDER MAP COMMENTED BY THE CONSORTIUM

1.4.2 CURRENT STATE: STAKEHOLDER MAPS IN BOLZANO AND INNSBRUCK

The first draft of the stakeholder map was redesigned based on the outputs of the WP6 kick-off meeting. The final stakeholder maps of Bolzano and Innsbruck are shown in Figure 4 and Figure 7.

In these maps, a distinction of three different types of stakeholders, subsequently called stakeholder “categories”, is made:

- End users
- Implementing parties and
- Legal, governing and regulatory parties.

The stakeholder category “end users” is now placed in the centre of the map, corresponding to its central role in the SINFONIA project. “End users” consist of the target groups of SINFONIA’S implementation activities, i.e. performed measures shall serve for the benefit of this group.

“Implementing parties”, consisting of the groups’ executive actors, energy suppliers/utility companies, local/regional authorities, scientific & technical consultants and building owners, are defined as institutions or groups that are directly involved in the implementation of SINFONIA activities, representing the three SINFONIA branches, retrofitting, district heating and cooling as well as smart grids. The implementing parties are arranged in an inner circle around the category “end users”, as they are directly affected by their activities.

Finally, the stakeholder category “legal, governing and regulatory parties” build the outer circle of the stakeholder map, forming the outline of the project. “Legal, governing and regulatory parties” are indirectly affecting SINFONIA activities, by e.g. legal regulations (group “Legal authorities”) or financial support (group “Financing & funding”). The category consists of the stakeholder groups policy makers, financing/funding, Early Adopter Cities, general public representatives, media and legal authorities.

1.5 KICK-OFF MEETING: ANALYSIS

1.5.1 PARTNERS’ ROLES, REQUIREMENTS AND EXPECTATIONS TO WP6 ACTIVITIES

During the WP6 kick-off meeting, project partners were asked about their roles, requirements and expectations to activities planned within the work package. Outputs of this interactive workshop are listed in Table 2.



TABLE 2. PARTNERS' ROLES, REQUIREMENTS AND EXPECTATIONS TO WP6 ACTIVITIES

Partner	Role in WP	Requirements	Expectations of WP
Agenzia CasaClima (ACC)	<ul style="list-style-type: none"> - Contributor - Education of designers, certifiers, auditors, builders - Technical information for users and builders 	<ul style="list-style-type: none"> - Guidelines for users 	<ul style="list-style-type: none"> - Increase of tenants' consciousness on how to use refurbished buildings/flats
City of Bolzano (BOZ)	<ul style="list-style-type: none"> - Contributor - Elaboration of questionnaires for tenants - Contact to tenants - TIS provides platform and methods with local market actors 	<ul style="list-style-type: none"> - Sharing of instruments already elaborated by the City of Bolzano - Acceptance of the local communication approach 	<ul style="list-style-type: none"> - Positive attitude and expectations of Bolzano's tenants and citizens
City of Innsbruck (IBK)	<ul style="list-style-type: none"> - Information transfer - Communication between politicians (IBK) and consumers - Share experiences with stakeholders and consumers - Integration of Innsbruck's Energy Plan (IEP) 	<ul style="list-style-type: none"> - Clear/simple organization and structure - Regular information exchange 	<ul style="list-style-type: none"> - Ideas and methods for future stakeholder participation in local energy development plan
EURAC	<ul style="list-style-type: none"> - Task 6.4 leader - Contribution to reports - Data collection via surveys 	<ul style="list-style-type: none"> - Data - Coordination of information collection - Common database 	<ul style="list-style-type: none"> - Improved knowledge of stakeholder's behaviour
Innsbrucker Kommunalbetriebe AG (IKB)	<ul style="list-style-type: none"> - Contributor - Active contribution with respect to energy services (VAS) - Communication to heat and electricity end users 	<ul style="list-style-type: none"> - Consideration of heat and electricity end user as stakeholders - Consideration of industrial consumers and enterprises as stakeholders 	<ul style="list-style-type: none"> - Information for the development of energy services - Positive attitude of consumers/tenants/industry towards energy services and installations (e.g. PV panels, batteries, EV charging stations) - "Willingness to pay" for sustainable energy services
IPES	<ul style="list-style-type: none"> - Data provider - Contributor - Communication to tenants 	<ul style="list-style-type: none"> - Support for data collection 	<ul style="list-style-type: none"> - Positive communication with tenants - Collection of know-how for future projects



Neue Heimat Tirol (NHT) & Innsbrucker Immobilien Gesellschaft (IIG)	<ul style="list-style-type: none"> - Communication/contact to tenants - Providing information/know-how about tenant involvement - Support of real estate management 	<ul style="list-style-type: none"> - Information via surveys - Introduction of tenants 	<ul style="list-style-type: none"> - Sharing of experiences - Training of tenants user behaviour - Joint development of surveys
Passive House Institute (PHI)	<ul style="list-style-type: none"> - Task 6.2 leader - Providing of expertise on energy efficient buildings on European level - Assistance of local stakeholders directly on building sites 	<ul style="list-style-type: none"> - Common definition of "stakeholders" - Use of existing platforms and EU-projects 	<ul style="list-style-type: none"> - Good reliable "sets of solutions" (well-presented and useable by different stakeholders)
SEL	<ul style="list-style-type: none"> - Contributor - Data provider - Communication to citizens and tenants on district heating 	<ul style="list-style-type: none"> - Common database on buildings/flats/tenants 	<ul style="list-style-type: none"> - Positive attitude of citizens towards district heating
Standortagentur Tirol (SAT)	<ul style="list-style-type: none"> - Task 6.3 leader - District leader - Survey coordination between WPs - Support of mutual learning process - Conclusion for know-how transfer 	<ul style="list-style-type: none"> - Sharing of data and information - Collaboration with other partners 	<ul style="list-style-type: none"> - Replicable conclusions - Mutual learning process
University of Innsbruck-department timber engineering (UIBK)	<ul style="list-style-type: none"> - Assembly of building companies (carpenters) - Build up a quality circle - Implementation of Early Adopter Cities - Quality management 	<ul style="list-style-type: none"> - Elaboration of guidelines - Data from developers 	<ul style="list-style-type: none"> - Positive attitude towards renewable and environmental friendly materials

1.5.2 IDENTIFICATION OF STAKES

The stakes of the SINFONIA project partners were elaborated during the WP6 kick-off meeting, October 2014. The results of this bottom-up analysis was based on self-reporting of SINFONIA partners and reflect the intensions of the EU towards SINFONIA, where technical and strategically innovations for marketable approaches are targeted in order to reach the EU 2020 goals (quality of living). According to Figure 3, the project partners were classified in eight groups (local regional authorities, policy makers, legal authorities, building owners, end users, executive actors, scientific & technical consultants and energy suppliers & utility companies). The self-reported stakes of these



groups have been clustered pragmatically into the following self-explanatory domains: economics, innovation, image, quality of living, regulations and politics.

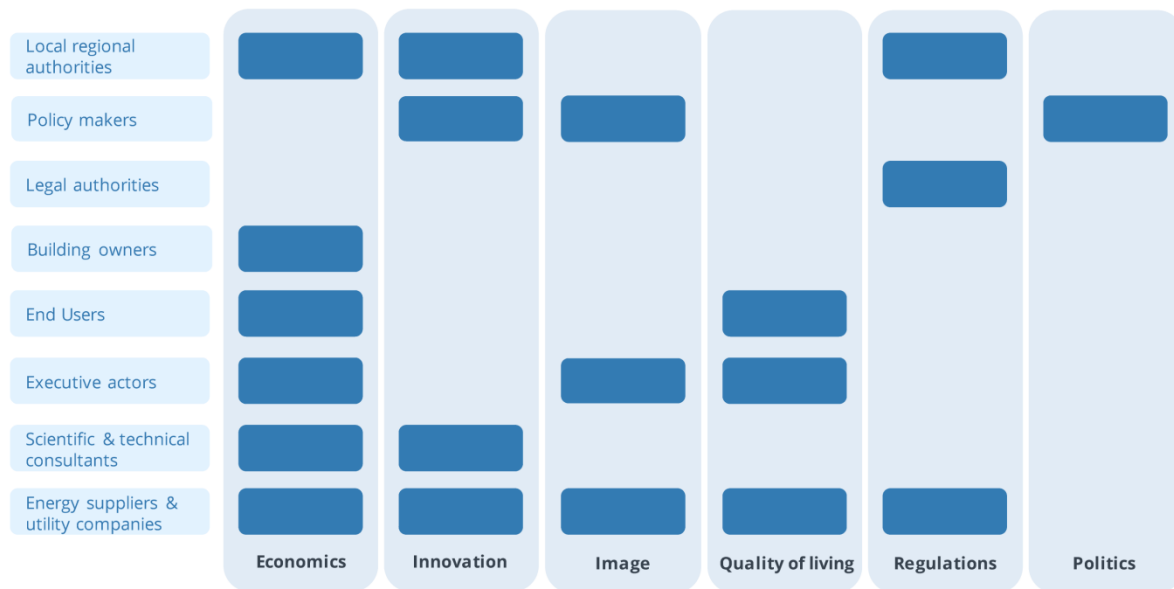


FIGURE 3 STAKES OF SINFONIA PARTNERS, CLUSTERED BY DOMAINS

Economic and innovation stakes are the top ranked domains, equally followed by the domains of image, quality of living and regulations, while stakes in the political domain are only held by a single group of stakeholders (policy makers).

In detail, the economic domain describes the vast field of interests deriving from the development of market strategies and consulting activities to the appreciation of building values, increasing cost efficiency and lower energy costs. The innovation domain covers questions and challenges in research and development with regard to technical solutions as well as new forms of collaboration and governance. The image domain is a stake of energy suppliers and utility companies, executive actors and policy makers. Within SINFONIA these actors strive to (re-) position their public reputation. The improvement of quality of living is a major stake in SINFONIA. This domain describes the quality and comfort in refurbished buildings as well as future-need oriented functionality and design features. The regulations domain describes stakes of the SINFONIA partners to meet recent regulations and laws and to develop future-proof institutional settings for the establishment of smart districts and regions. Politics represents the domain least mentioned by SINFONIA partners. Nevertheless, using the momentum of SINFONIA for the implementation of political goals from EU to local level plays a major role for policy makers.



According to the described multitude of stakes in a single project, stakeholder involvement processes and communication activities are regarded as crucial success factors. In this sense, first actions have already taken place or are planned. A “Communication Team” was installed in Innsbruck, working on information needs of different EXTERNAL stakeholder groups, on how the City of Innsbruck can be supported in their external communication activities, on thematic foci that can highlight different interesting aspects of SINFONIA or on supporting a positive perception of SINFONIA in the public. In this communication strategy emphasis will be given on EXTERNAL stakeholders. All these activities shall be performed or supported by WP10 respectively.

In Bolzano a communication team has been established already in the beginning of the project that is composed by the representatives of the communication departments of each partner of the district of Bolzano. The communication team jointly developed the communication strategy at the Bolzano district level as well as towards outside of the district. First examples of such collaboration were the development of the press conference and press release at the beginning of the project that were documented in WP10. This group is in direct connection with the representative of the replication team of the Bolzano district for the development of all promotional and communication materials of the project. Very importantly, the communication group is also developing strategies for a more effective communication of the project towards EXTERNAL stakeholders, especially tenants whose buildings will be refurbished in the SINFONIA project.

1.5.3 EXPECTED BARRIERS AND DRIVERS

At the WP6 kick-off, October 2014, main barriers for implementing activities regarding retrofitting, heating/cooling networks were discussed for Bolzano (Table 3) and Innsbruck (Table 4). Barriers were classified along the following categories (D2.1 of the SINFONIA project):

- Financial barriers
- Technical barriers
- Regulatory barriers
- Organisational barriers
- Administrative barriers
- Legal barriers

Furthermore, “general” challenges for each of the Demo Cities were discussed.



TABLE 3. MAIN BARRIERS FOR IMPLEMENTATION MEASURES IN BOLZANO

Bolzano		
Retrofitting	Heating/Cooling Network	Electricity Supply Grid
Timing of public procurement procedures and tender publication (regulatory barrier)	Lack of business model (H2 engine) (administrative barrier)	Communication standards (information and awareness)
Urban constraints to building extensions (regulatory barrier)	Need of clearer understanding of the future requirements of the net (technical barrier)	Hand-over certificates (administrative barrier)
Acceptance of monitoring in flats (behavioural barrier)	Who can issue certificates? (administrative barrier)	Smart Point: Challenges with tendering processes (administrative and legal barriers)
Work in flats (behavioural barrier)		
Multifunctional facade (technical and financial barrier)		
Tenants (during and after the project): Information and awareness raising (behavioural barrier)		
Data management standards for monitoring – PHPP? (technical barrier)		

General challenges in Bolzano:

- amendment of the contract (legal barrier)
- multifunctional points (technical barrier)
- definition of Smart grids and interaction with existing ones (technical barriers)
- communication with citizens (information and awareness)
- connection between Best sheets, PHI, Energieausweis, CasaClima (technical barrier)

TABLE 4. MAIN BARRIERS FOR IMPLEMENTATION MEASURES IN INNSBRUCK

Innsbruck		
Retrofitting	Heating/Cooling Network	Electricity Supply Grid
Challenging targets (e.g. energy saving) (technical barrier)	Materialization of district heating/district cooling sinks and sources network (technical barriers)	Existing guidelines defined by EIWOG (regulatory barrier)
Motivation of tenants (behavioural barrier)	Requested resources to meet targets (financial barrier)	Tight boundaries for product development of smart grids



		due to dependencies (organizational barrier)
		Alignment of time table of retrofitting and smart grid measures (organizational barrier)

General challenges in Innsbruck:

- Amendment of the contract (legal barrier)
- Visibility, coordination and steering of the project (administrative barrier)
- Interaction between partners from the building and heating/electricity sector
(organizational barrier)
- Conflict with existing strategies e.g. IEP (regulatory barrier)
- Commitment of partners to the project goals (behaviour barrier)
- “Description of work” versus feasibility (technical and financial barriers)
- PV implementation (legal barrier)

1.6 SUMMARY

An important prerequisite for the definition of common goals and approaches in stakeholder management is, simply said communication. Experiences show that it is highly necessary to define a common language at the beginning of a stakeholder process and to guarantee that all partners stay included and informed, e.g. by the implementation of regular exchange meetings.

Literature research and outcomes of relevant other smart city projects provide a good insight into the state-of-the-art and theoretical stakeholder management. Nonetheless, coming to “real” implementations and measures, it is often not feasible to act in generalized patterns but based on case-by-case decisions.

The two Demo Cities Innsbruck and Bolzano, although geographically close and comparable regarding size, show, besides a lot of similarities, also differences, concerning stakeholder mapping, expected barriers or communication routines between and within single stakeholder groups. Anyhow, the aim of WP6 is to collect information about the stakeholder involvement in the two Demo Cities, to generalize it and to make the synthesis (including lessons learned, possible measures and solutions) accessible for Early Adopter and Replication Cities.

In the first project year the focus lied on the analysis of INTERNAL stakeholders, which is of importance to characterise pre-requisite steps and accompanied communication routines before



actual implementation starts, meaning e.g. planning activities. Concerning EXTERNAL stakeholder management, at this stage of the project mainly the group tenants has been addressed, because implementation activities in the SINFONIA branch Energetic refurbishment are further advanced than in the branches Smart grids or District heating/ cooling. Housing associations, supported by the WP6 project lead, give a strong effort to involve their tenants and to implement refurbishment activities to tenants' satisfaction. The level of involvement mainly comprises information and consultation. Although co-determination in some refurbishment details is already made possible (regarding the implementation of measures in the different flats that may differ in order to minimize the intervention in the flat), a stronger effort should be made to give tenants the possibility for co-determination.

To guarantee a good perception of the project on a local level, more emphasis has to be given to stakeholder group "general public".



2. SITE SPECIFIC REPORTS

2.1 BOLZANO

2.1.1 STAKEHOLDER MAP BOLZANO

In the following chapter, the final version of the stakeholder map in Bolzano is presented (Figure 4).

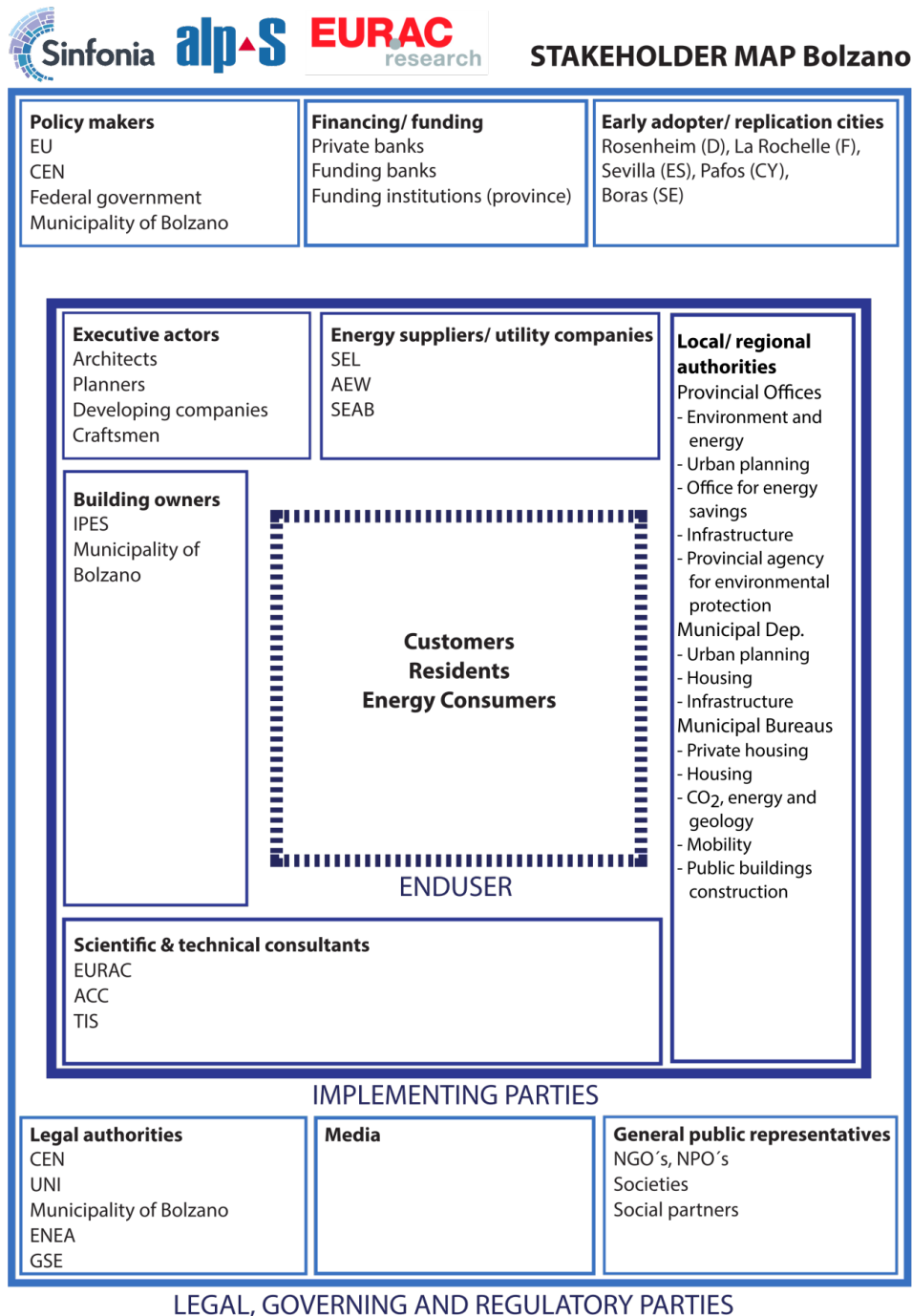


FIGURE 4. STAKEHOLDER MAP FOR THE CITY OF BOLZANO – CURRENT STATE



2.1.2 SELECTION OF KEY STAKEHOLDERS

The overall list of stakeholders that should be included in the Bolzano stakeholder map for the SINFONIA project was discussed during the district meeting (that is held every first Friday of the month). Then the consolidated list with the proposal of the importance of the stakeholders and the identification of key stakeholders was sent to all Bolzano district partners for the revision. In the list of stakeholders each partner was asked to assign the importance of the stakeholder within the SINFONIA project on the scale from important to obligatory. The stakeholders that were indicated as obligatory and very important were then selected and are considered as key stakeholders. The final map of the stakeholders for Bolzano is therefore a result of the abovementioned iterative process.

The following institutions were considered as key stakeholders:

Internal:

- SEL
- MoB
- IPES
- ACC
- EURAC
- AEW

External:

- Tenants

Beside tenants (see chapter 2.1.4.1 and 2.2.4.1), other EXTERNAL key stakeholders will be addressed in a later stage of the project.

2.1.3 INTERNAL KEY STAKEHOLDER PROFILING

Any stakeholder involvement process has to be tailored to local networks and institutions as well as their specific needs. In the case of SINFONIA it came up to be crucial to find out how the INTERNAL stakeholders (project partner) perceive their role in the project. Thus, a profiling and characterization of relevant INTERNAL key stakeholders was applied in Bolzano. Key stakeholder profiles provide basic information concerning the partners' individual attitudes, motivation and scopes of action in SINFONIA. The profiling is based on a common template (Annex 3: Stakeholder Profiling Template).

The following INTERNAL key stakeholders have been addressed:

- SEL



- MoB
- IPES
- ACC
- EURAC
- AEW

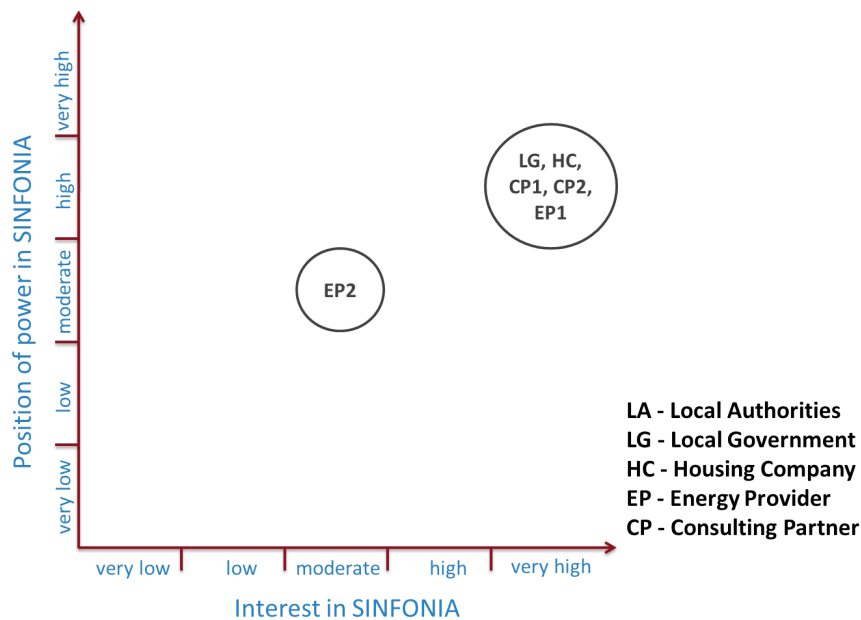
These stakeholders were chosen based on their direct influence and potential involvement in the project activities especially all demonstration activities that will be carried out in the Bolzano district.

In general, the following results were obtained:

- High commitment to SINFONIA. A majority of partners in Bolzano that answered the questionnaire report a high or very high interest in SINFONIA, see Figure 5
- SINFONIA deepens collaboration. The inter- and trans-disciplinary collaboration of partners from different domains (e.g. housing companies, science, energy suppliers and public administration) are fostered. Networks of trust are built and established. This provides mutual learning possibilities.
- SINFONIA develops markets. Partners with commercial interests often regard SINFONIA as a vehicle to facilitate the testing of future energy services.
- SINFONIA realises political visions. Through the implementation of SINFONIA, political agendas from EU to local level are stepwise realised.

Additionally, to the general results of the profiling, specific information concerning interests in and expectations towards SINFONIA, as well as perceived roles and positions in the project were gained from the key stakeholders. The specific results are presented and in the following paragraphs in a condensed manner to protect data privacy of partners.





6

FIGURE 5 SELF REPORTED INTEREST & POSITION OF POWER IN SINFONIA OF THE BOLZANO PARTNERS

2.1.3.1 DESCRIPTION OF THE INTERNAL KEY STAKEHOLDERS'S SPECIFIC INTEREST, MOTIVATION AND EXPECTATIONS TOWARDS SINFONIA

The specific interest of Bolzano's key partners in SINFONIA can be summarized in three categories that are: learning through exchange, economic benefits through innovation and sustainability of goals:

- Learning through exchange is a common motive of all key stakeholders. This covers mutual learning and exchange on Demo City level as well as the interest in international exchange of expertise and widening of networks.
- Economic benefits through innovation are achieved by a majority of the key stakeholders in Bolzano. Technical innovation, the development of new markets and cost efficiency measures are named as main motives in Bolzano.
- Sustainability goals by Bolzano's partners consider community development, safety, environmentally friendly technologies and energy efficiency.



2.1.4 INVOLVING OF EXTERNAL STAKEHOLDERS IN BOLZANO

EXTERNAL stakeholder involvement in the first project year focussed on the involvement of tenants, since Energetical refurbishment is most advanced within the three SINFONIA branches (besides Smart grids and District heating/ cooling). In the course of the project other EXTERNAL stakeholders will be increasingly considered.

2.1.4.1 INVOLVING OF TENANTS IN BOLZANO

At this stage of the project all involved housing institutions, in Bolzano as in Innsbruck, agreed in keeping the level of involvement of their tenants on the information level and, if possible and reasonable, on the consultation level. The co-determination regarding decisions of retrofit activities in the refurbishment buildings is not envisaged at this stage of the project.

In general, it has to be highlighted that the institutional setting regarding refurbishment activities are different in Bolzano and in Innsbruck. This is basically set by differences in the tenancy laws in Austria and in Italy.

Generally, building owners in Bolzano would be open to test other potential schemes of tenant involvement proposed by research participants, based on a thorough review of already available good practices and the level of their applicability in the case of Bolzano. EURAC would undertake such analysis process and would then decide together with the building owners of Bolzano on potential other strategies in communication with tenants.

LEGAL BACKGROUND

In Bolzano, there are no provisions for the tenants to give their approval to refurbishment measures. In principle, the housing company is the owner of the building and has the primary responsibility to carry out and to bear the cost of refurbishment measures on its building. Tenants do not financially participate in building maintenance and consequently they usually do not have any active role in selecting and implementing refurbishment measures. For its part, the housing company has the obligation to timely communicate and explain to the tenants the foreseen measures and their schedule.

IPES tenants regulation compels tenants to grant access to their apartment in case of maintenance or refurbishment measures. IPES can call a tenants assembly at any moment during the year to present and discuss refurbishment measures. Tenants are consulted and they can express their opinion but



cannot veto any foreseen measures (even if it is normal practice to meet tenants requests when feasible and properly justified). It is of utmost concern for IPES to assure the widest level of tenant involvement; the final aim is not only to collect tenants perception of foreseen refurbishment measures, but also to provide simple and friendly information on attitudes and behaviours to adopt to maximize benefits. Questionnaires support this process by providing useful data on tenant perception and behaviours. Tenants cannot be compelled to fill in the questionnaires, but they are strongly suggested to. In order to maximize the number of replies, IPES will firstly call a tenants assembly to introduce the refurbishment measures and then it will actively carry out the survey on a door-to-door basis. Similarly to IPES, the Municipality of Bolzano tenants regulation is subject to the Provincial law (L.P. n. 13 of 17.12.98, ss.mm.) and to the Municipal Rules for the Management of Social Housing (Regalament Gestione Case Comunali - Deliberazione Consiglio Comunale n. 59/12784 of 29.04.97), in addition to the contract for rent. In accordance with this, the relationship between householder and tenants is assisted by the figure of the housekeeper that is elected by tenants separately for each building, and the at least annual tenants assembly.

INVOLVEMENT STRATEGIES

Since deep refurbishment works require proper involvement in order to create real participation in the development of technical and architectural solutions in the design process and to support the implementation of these, at the first stage of the SINFONIA project (autumn 2014) the Municipality of Bolzano, with the support of TIS, elaborated an own questionnaire. It was firstly presented to housekeepers to show the modality of BOZ work. Then, during tenants' assemblies, technical and political representatives of the Municipality of Bolzano and TIS introduced the foreseen refurbishment measures and support the step-by-step compilation of questionnaires. This first survey does not only give an insight in the tenant's perception and behaviour but also provides tenants the possibility to express requests and opinions concerning the actual state of their building. The elaborated results, when feasible and affordable, were considered in the design competitions for the refurbishments launched in December 2014.

The next submission of questionnaires planned in autumn 2015 will follow the same procedure: a call for tenants assembly and step-by-step compilation.

Generally, the information of tenants in Bolzano by the two local housing institutions Municipality of Bolzano and IPES is based on periodical meetings with the Municipality of Bolzano, IPES and representatives of tenants. All other tenants also have the possibility to assist the meetings.



The regularity of these information events is different for the Municipality of Bolzano and IPES. While former conducts such meetings on an annual basis (normally during the autumn months), the latter organizes the meetings in case of necessity, with a capacity to organize ad hoc meetings on specific topics.

Another communication channel regarding are journals, where news relevant for tenants are published and distributed regularly by the Municipality and IPES.

Within the SINFONIA project both of these channels (meetings and journals) are used by the entities in order to inform and ensure the participation of their tenants.

In addition, the distribution of questionnaires helps to understand the feedback of tenants on several issues. In case of IPES, the distribution of the questionnaires is foreseen to be conducted through a door-to-door procedure before and after the refurbishment activities, while in case of the Municipality of Bolzano, annual meetings are the occasions for the distribution of questionnaires (Table 5).

TABLE 5. INVOLVEMENT ACTIVITIES OF HOUSING ASSOCIATIONS IN BOLZANO

Level of involvement	Housing association	Activities
Information	<ul style="list-style-type: none"> - BOZ – Comune di Bolzano - IPES – Istituto per l'Edilizia Sociale dell'Alto Adige 	<ul style="list-style-type: none"> - Distribution of invitation to tenants meeting - Execution of two tenant meetings per building - Distribution of information brochures - Design of the user manual at the end of the refurbishment process
Consultation	<ul style="list-style-type: none"> - BOZ – Comune di Bolzano - IPES – Istituto per l'Edilizia Sociale dell'Alto Adige 	<ul style="list-style-type: none"> - Design of questionnaires for tenants - Distribution of questionnaire - Assistance with completing the questionnaire if necessary - Data entry - Data analysis (by EURAC)

Results and outcomes (besides the one of TIS) of the surveys are not available yet, because data acquisition just started.



2.1.6 ORGANIZATIONAL STRUCTURES

2.1.6.1 HISTORICALLY GROWN STRUCTURES/EXISTING STRUCTURES

SUSTAINABLE ENERGY ACTION PLAN - MUNICIPALITY OF BOLZANO

The Sustainable Energy Action Plan (SEAP) of Bolzano was presented in June 2014. It was elaborated accordingly with the methodology defined at European level. Moreover, the SEAP is consistent with the Local Masterplan and is an ideal improvement of the previous evaluation plan of CO₂-emission “Bolzano. Fonte di Energia” (2009).

The local Action plan consist of two different parts: the collection and systematic cataloguing of consumption and local energy production and a series of specific actions agreed with the Municipality in order to reduce green house gas emissions by 2020. Basing on the availability of the CO₂-emission data, 2010 was chosen as the baseline year, hence the scenario envisaged for 2020 is defined by a reduction of 20 % (20,5 % to be precise).

In 2010 every citizen in Bolzano produced 5,2 tons of CO₂. (consisting of 43% thermal energy, 40 % electric energy and 17 % for mobility and transports). For the Municipality of Bolzano 28 different types of actions have been identified, and subdivided into the following main area of intervention: public buildings, private buildings (for residential and tertiary use), public lighting, transports, local production of electric and thermal energy, involvement and sensitization of citizens and stakeholders and monitoring.

The most relevant initiatives highlighted in the SEAP could be listed as follows: a change of the building code that includes the previsions of the recent provincial resolutions and directions of the Plan-2050 climate-Alto Adige; the construction of a district heating network powered by the incinerator; a wide program of refurbishment for municipal buildings; the increase in power per capita of photovoltaic systems installed (up to 0.4 kW per person); the completion of the cycle network and a new urban transport system toward Oltradige (municipalities Appiano and Caldaro).

URBAN MOBILITY PLAN OF BOLZANO

The Urban Mobility Plan of Bolzano (PUM 2020) was approved in 2010. It is the tool that defines the long-term guidelines for the whole urban mobility actions. Bolzano is also equipped with a planning tool for the short-term interventions that is called PUT (Urban Traffic Plan).

The main targets of the PUM 2020 are 1) to improve the quality of public places (squares, roads, parks, etc.), 2) to improve the quality and efficiency of the public transport, 3) to give a mobility offer more and more attractive due to the requirements of tourism, commerce, culture and services and



4) to reduce the impact of the long and medium distance traffic displacement at the interior of the urban area (hence reduction of the CO₂-emissions within the residential areas).

These main targets are in line with the guidelines contained in the “Masterplan” approved by the municipality in 2010.

The strategies foreseen in the PUM in order to reach its ambitious goals are the following:

- Creation of a system of roads external to the city with the aim of reducing the impact of the vehicles that traverse the territory of Bolzano but are headed elsewhere;
- Increasing the role of the public transport: realization of two new tram lines, empowering of bus service, utilization of the existing train lines for urban use;
- Enhancement of the use of bicycle via new bicycle lanes, new public services, and economic incentives;
- Rationalization of the public parking system (shift public space from parking use to other activities)

Table 6 provides an overview of the subdivision of means of transport employed by the citizens of Bolzano and the objectives that the Municipality has set for the years to come.

TABLE 6. SUBDIVISION OF MEANS OF TRANSPORT AND OBJECTIVES OF THE MUNICIPALITIES

Means of transport	State of the art 2005	Goal for 2012 (PUT 2007)	State of the art 2009	Goal for 2014	Goal for 2016
Pedestrians	31,6 %	33 %	29,5 %	31 %	31 %
Bicycle	22,7 %	27 %	29 %	30%	30 %
Bus/train		8 %	7,6 %	9 %	10 %
Motorcycle		5 %	6,7 %	5 %	5 %
Car		27 %	27,2 %	25 %	24 %
Others	0,2 %		0,2 %		

2.1.6.2 SINFONIA INDUCED STRUCTURES

WORKING GROUPS

The intensive exchange between local political and economic stakeholders and concerned consumers is the basis of a successful implementation of many energy strategies throughout Europe.

In order to meet this challenge and to collect information about consumer behaviour for all smart measures outlined in the implementation activities the active and constant exchange between stakeholders and consumers was set up in Bolzano.



A local stakeholder panel was initiated consisting of a core group (project partners), selected market actors, decisions makers on a political level and of course residential representatives of the smart district. Facilitated pools of innovators in technology and awareness raising sustain the pace of progress through innovation and collaboration in local networks.

In total, four working groups were formed (compare Figure 6). Each group involves a set of stakeholders working on the topics of energy efficiency in buildings, smart grids and ICT and economic aspects.

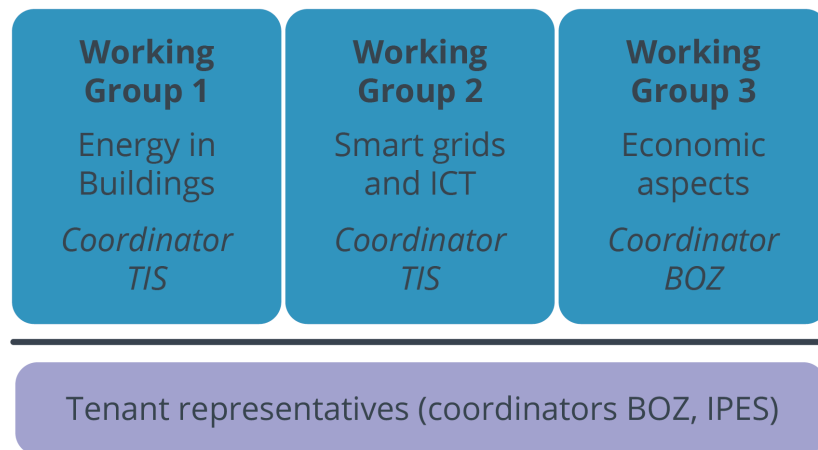


FIGURE 6 WORKING GROUPS IN THE DISTRICT OF BOLZANO

The group of tenant representatives is involved per modalities described earlier. Two meetings with the tenants representatives were held by Municipality of Bolzano and IPES in order to present the project during the course of 2014. Within the course of 2015 there will be two more meetings with this working group to present the advancement of the project and distribute the questionnaires. Overall, the meetings of the working groups are planned to be performed based on the timing of the activities that are being implemented in the project and at least two times per year.

The specific organizations in the district of Bolzano representing different groups of stakeholders are presented in Table 7.

TABLE 7. ORGANIZATION IN THE DISTRICT AND THEIR REPRESENTATION OF STAKEHOLDER GROUPS

Type of stakeholder	Specific organizations in the district of Bolzano
Customers	Consumer protection of Bolzano
Residents	Representative of tenants, ANACI (National Association of building managers)
Energy consumers	Tenants of the SINFONIA buildings
Architects & planners	Or dine degli architetti (professional association of architects), Ordine degli ingegneri (professional association of engineers), Collegio die geometri (professional association of



	surveyors)
Developing companies	Collegio dei costruttori (Board of constructors), Assoimprenditori (association representatives manufacturing and services companies), Camera di commercio (Chamber of Commerce), EOS (Export organisation Südtirol)
Craftsmen	LVH-APA, CNA

SINFONIA DISTRICT ORGANISATION STRUCTURE

District management is performed by EURAC with several tasks, among which it supervises the technical work of the DEMO activities and the monitoring of the progress and quality of the different tasks.

Furthermore EURAC

- supports co-operation between the local partners in order to achieve the targets
- reports corresponding advances of tasks to the technical coordinator
- ensures that relevant communication is distributed between the local project partners
- guarantees that each local partner delivers the project deliverables on time
- takes care that the project plan and objectives are targeted
- supports if needed for the setting up of the financial reporting system
- handles all relevant communication with the project coordinator on behalf of the district
- organizes and chairs of local partner's meetings and workshops.

The district meetings convene with all district partners on a monthly basis at each first Friday of the month. The meetings are presided by EURAC.

The list of Bolzano district project participants is shown in Table 8.

TABLE 8. ORGANISATION OF THE SINFONIA DISTRICT – PROJECT PARTNERS

District	Name
Bolzano	City of Bolzano (BOZ)
	Accademia europea per la ricerca applicata ed il perfezionamento professionale Bolzano (Accademia europea Bolzano) (European academy of Bolzano)
	Istituto per l'edilizia sociale della provincia autonoma di Bolzano (IPES)
	Società elettrica altoatesina per azioni (SEL SPA)
	Agenzia per l'energia Alto Adige -CasaClima

In addition to the district project participants, there are three third parties in the district of Bolzano involved in SINFONIA. Table 9 provides an overview of third parties represented in the district:



SINFONIA; “Smart Initiative of cities Fully cOmitted to iNvest In Advanced large-scaled energy solutions” has received funding from the European Union’s Seventh Programme for research, technological development and demonstration.

TABLE 9. ORGANISATION OF THE SINFONIA DISTRICT – THIRD PARTIES

District	Name
Bolzano	Techno innovation south tyrol SCPA
	Ecotherm srl
	SEL srl

2.1.7 SUMMARY

As the first year of the project has been in its preparatory phase of defining all necessary activities for the demonstration phase of the project (procurement procedures, stakeholder mapping, definition of the proper communication channels, etc.), there were few direct interactions with the stakeholders for the purposes of the SINFONIA project. In particular, the interactions with the tenants through the distribution of the questionnaires will be performed in the summer-autumn 2015, therefore the first lessons can be derived after this first official project encounter with them. In regards to other stakeholders, the main observation that can be done at this stage is that several stakeholders outside the consortium react differently on the requests of the provision of the quantitative data for the purposes of the project (i.e. electricity, gas consumption). While some companies share willingly the data, others are much more hesitant so its provision.



2.2 INNSBRUCK

2.2.1 STAKEHOLDER MAP INNSBRUCK

In the following chapter the final version of the stakeholder map in Innsbruck is presented (Figure 7).

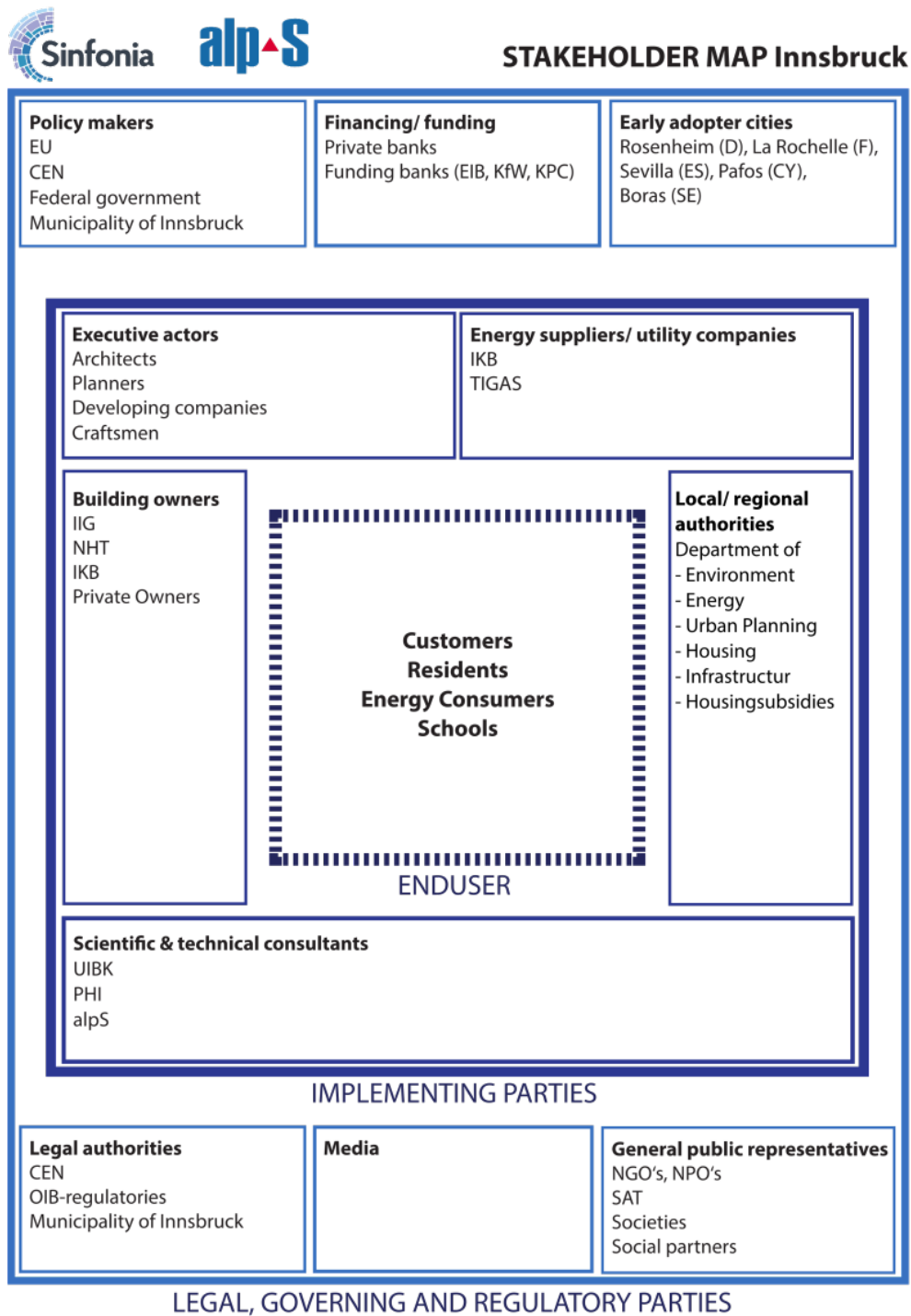


FIGURE 7. STAKEHOLDER MAP FOR THE CITY OF INNSBRUCK – CURRENT STATE



2.2.2 SELECTION OF KEY STAKEHOLDERS

To be able to focus on selected stakeholder groups and hence facilitate stakeholder management, identified stakeholders were analysed with regard to their importance for the SINFONIA project. The selection of key stakeholders in Innsbruck was performed by the local SINFONIA partners in an interactive workshop during a meeting of the “Local stakeholder panel Innsbruck” (see chapter 2.2.5.2). The following questions were considered for the prioritisation:

- How high is the interest/concern of the stakeholder group towards SINFONIA-activities?
- How can potential reactions of the stakeholder influence the success of the project, whether in a positive or negative way?
- How high is the stakeholder’s power to influence, positively or negatively, the project?

Additional feedback of partners that were not present at the local stakeholder panel meeting was gathered later per mail. The local partners identified the following priority stakeholder groups for SINFONIA activities in the City of Innsbruck:

INTERNAL:

- Policy makers: Municipality of Innsbruck
- Local authorities: Municipality of Innsbruck
- Building owners: IIG, NHT
- Scientific and technical consultants: UIBK, PHI
- Energy suppliers/utility companies: IKB, TIGAS
- Financing and funding: Funding banks

EXTERNAL:

- Tenants

Selected key stakeholders subsequently are analysed in more detail via key stakeholder profiling (see chapter 2.2.3).

2.2.3 INTERNAL KEY STAKEHOLDER PROFILING

Any stakeholder involvement process has to be customized to local networks, needs and institutions. Therefore a profiling and characterization of relevant INTERNAL key stakeholders was applied in Innsbruck. Key stakeholder profiles provide basic information concerning the partners’ individual attitudes, motivation and scopes of action in SINFONIA.



The following INTERNAL key stakeholders have been addressed:

- City of Innsbruck (political level)
- Magistrate Innsbruck (administrative level)
- Housing associations IIG and NHT
- PHI
- Energy providers IKB, TIGAS and TIWAG
- UIBK

The profiling is based on a common template (Annex 3 – Stakeholder Profiling Template). In general, the following results were obtained:

- High commitment to SINFONIA. A majority of the partners in Innsbruck report high or very high interest in SINFONIA (see Figure 8).
- SINFONIA as an innovation motor. SINFONIA is regarded as stepping stone for innovation regarding technology, energy and governance.
- SINFONIA deepens collaboration. The inter- and transdisciplinary collaboration of partners from different domains (e.g. housing companies, science, energy suppliers and public administration) is fostered. Networks of trust are built and established.
- SINFONIA reveals emerging challenges. The energetic refurbishment of inhabited buildings is exploring the limits of feasibility. Proactive communication and involvement beyond the activities planned in the DoW is urgently needed.

In the starting phase of the project, resources and attention were allocated on the establishment of Demo projects and activities. Up to now, the collaboration activities primarily focus on this level. A “European spirit” of international exchange and collaboration is limited so far. It seems, that at this stage of the project, replication and scaling activities play a minor role.



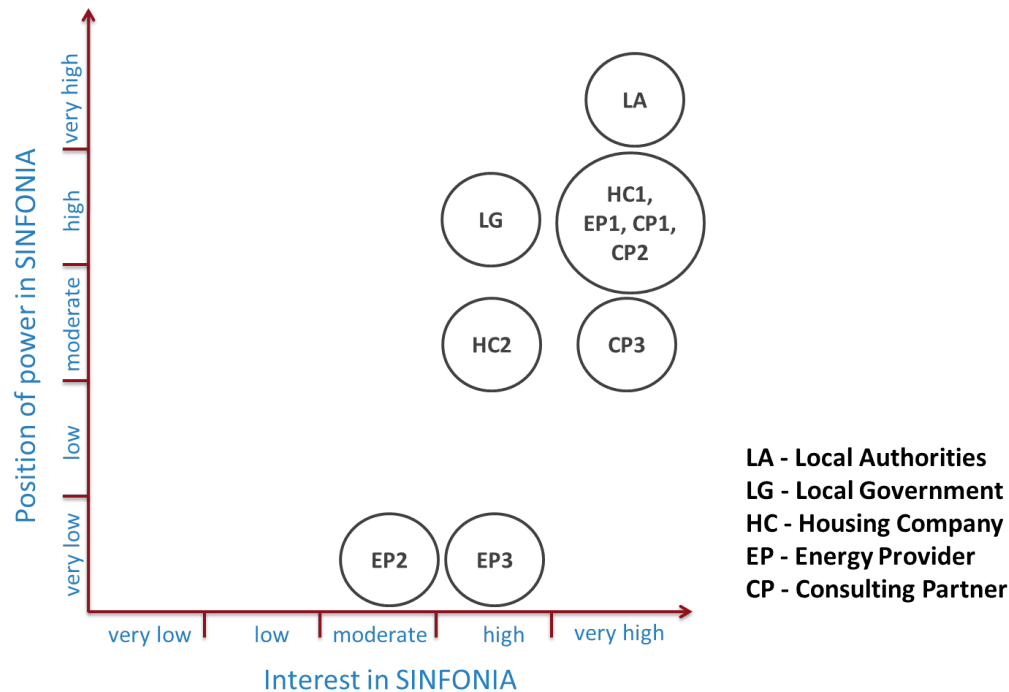


FIGURE 8. SELF REPORTED INTEREST & POSITION OF POWER IN SINFONIA OF THE INNSBRUCK PARTNERS

Additionally, to the general results of the profiling, specific information concerning interests in and expectations towards SINFONIA, as well as perceived roles and positions in the project were gained from the key stakeholders. The specific results are presented and in chapter 2.2.3.1 in a condensed manner protect data privacy of partners.

2.2.3.1 DESCRIPTION OF THE INTERNAL KEY STAKEHOLDERS'S SPECIFIC INTEREST, MOTIVATION AND EXPECTATIONS TOWARDS SINFONIA

Generally, the INTERNAL key stakeholders in Innsbruck expect from SINFONIA

1. an impetus for innovation, and
2. the development and deepening of expertise.

In detail this means:

1. That SINFONIA triggers the application of state-of-the art technologies for energy efficiency on household level as well as the integration of renewable energy sources in the supply networks for heat and electricity. The focus on the refurbishment of inhabited buildings can be regarded as both, a special challenge and a unique market opportunity.



2. That the development and application of new, innovative technology as well as their demonstration aspect creates new know-how and expertise.

Apart from the three described, mutually shared and closely interrelated motivations, further factors were described by Innsbruck's stakeholders, such as: economic (accessibility to public funding or direct market as well as location advantages), or political factors/goals (e.g. EU2020 and subordinated goals).

Innovative projects provide chances and risks. The main risks documented by the key stakeholders in Innsbruck are:

- Loss of public image/reputational damage, due to negative press coverage (e.g. increasing rents due to SINFONIA activities or privacy rights protection)
- Non-feasibility of innovative technologies regarding financial and technological possibilities
- Increased costs due to unforeseen challenges of implementation (see also chapter 2.2.4.1 - Challenges of Retrofitting within SINFONIA – Stories of tenants)

2.2.3.2 SPECIFIC ROLES AND POSITIONS OF INTERNAL STAKEHOLDERS IN SINFONIA

Despite initial expectations, the self-perceived roles and positions of power of SINFONIA's key stakeholders in Innsbruck seem to be independent from their actual project budget share. Among some partners, the self-positioning (Figure 8) on the y-axis ("position of power in SINFONIA") rather reflects ownership structures partners, as the City of Innsbruck holds shares in IIG (100%), NHT (50%) and IKB (50%). Most partners describe self-induced limitation for action and innovation by the strict targets of the DoW. For some partners, a key learning thereof is to pay closer attention to future project application and setup phases in order to minimize frictions during implementation phases.

Until now, inter-organizational co-operations between the key stakeholders are limited to the local scale within Innsbruck. Replication activities and exchange of experiences beyond the local level are expected to gain importance at a later stage of the project.



2.2.3.3 DESCRIPTION OF COMMUNICATION ROUTINES AND SUGGESTIONS FOR IMPROVEMENTS

The provided template for stakeholder profiling also collected information concerning communication routines and suggestions for improvement. The following information was reported by key stakeholders in Innsbruck:

- Limitation of large panel meetings (district meetings, e.g. only twice a year)
- Enhancement of social media contacts between partners but also for external communication
- Synchronization of PR and direct customer relation activities of project partners
- Increasing the transnational (Bolzano-Innsbruck) exchange, e.g. between housing companies
- Installation of a PR and communication strategy in the Demo Cities and a co-ordinated role-out through well-established local institutions ,e .g. the City of Innsbruck
- Scientific dissemination
- Overcoming of existing language barriers (English/German)
- More direct/personal contact to the project co-ordinator.
- More face to face meetings with the consortium are preferred
- End-user/consumer workshops
- In-transparencies due to project size can be tackled by obligatory reports of all partners at each district meeting

2.2.4 INVOLVING OF EXTERNAL STAKEHOLDERS IN INNSBRUCK

EXTERNAL stakeholder involvement in the first project year focussed on the involvement of tenants, since energetical refurbishment is most advanced within the three SINFONIA branches (besides Smart grids and District heating/ cooling). In the course of the project other EXTERNAL stakeholders will be increasingly considered.

2.2.4.1 INVOLVING OF TENANTS IN INNSBRUCK

The involved housing institutions, in Bolzano and Innsbruck, agreed in keeping the level of involvement of their tenants on the “information level” and, if possible and reasonable, on the



“consultation level”. The co-determination regarding decisions of retrofit activities in the refurbishment buildings is not envisaged at this stage of the project.

In general it has to be highlighted that the institutional setting regarding refurbishment activities are different in Bolzano and in Innsbruck. This is basically set by differences in the tenancy laws in Austria and in Italy.

LEGAL BACKGROUND FOR IIG

Tenants don't have to give their approval for envisaged constructional measures on the building envelope or the home entrance doors (competence under the law rests with the landlord), but tenants can refuse the entrance to their flats, which can inhibit refurbishment measures such as exchange of windows. Concerning measures in the flats, tenants in Austria do have the legal right to refuse these. Forcing tenants to the refurbishment measures in their flats by legal process, if indeed possible, can lead to delays of about one year. Measures in the flats comprise different SINFONIA activities, like the installation of centralized heating systems, mechanic ventilation systems or a system for monitoring of energy consumption.

In order to reach the approval of 100 % of the tenants for complete refurbishment of the building envelope and the interior, housing companies inform the tenants to allay their doubts regarding the planned and on-going activities via personal consultation, tenants meetings, an ombudsman or via the property management.

LEGAL BACKGROUND FOR NHT

The implementation of refurbishments is amenable to the Austrian tenancy law and the „Wohnungsgemeinnützigkeitsgesetz“. The financing of refurbishments depends largely on the housing subsidy models, which are subjected to the provinces' law since 1987.

For measures on the facades or envelopes of the buildings no permission of the tenants is necessary, as the responsibility of the maintenance of the building lies with the landlords. However, if changes in the flats are necessary (e.g. by installing a central ventilation or heating system), the affected tenants must register their agreement.

A percentage of tenants' rent forms the so called Conservation and improvement contributions (Erhalt- und Verbesserungsbeitrag). Maximum amount of the contribution depends on the age of the flat and is defined by the “Wohnungsgemeinnützigkeitsgesetz“. These contributions serve for the financing of building maintenance activities.



However, if the Conservation and improvement contributions are not sufficient for the refurbishments envisaged, at least 75 % of tenants have to give their approval for the increase of the contribution. If this percentage can't be reached, landlords have the possibility to force tenants to accept the increase by legal process.

Summarising, tenants of IIG as of NHT buildings can be affected by rent raises, as they have to contribute to the refurbishment costs.

INVOLVING STRATEGIES

To inform tenants about the planned refurbishment measures the housing institutions in Innsbruck are organising tenant meetings in every single SINFONIA building. Objective of these meetings is the transfer of technical information on the refurbishment, on the time schedule and other relevant information, as well as to set the environment for further discussions.

Vice versa, the housing associations gather information from their tenants by distributing questionnaires. IIG developed a questionnaire for their tenants (see Annex 4) in co-operation with alpS, consisting mainly of technical questions important for the refurbishment activities. In order to minimize the time of effort for tenants additional questions relevant for other SINFONIA partners (EURAC, PHI, IKB and UIBK) were collected and included in this questionnaire. Data collection at IIG building was carried out by personal consultation mainly. The return rate was nearly 90 %.

The above mentioned questionnaire of IIG was further developed and adapted to the needs of NHT buildings (see Annex 5). The NHT questionnaire was distributed in the building by the concierge. Tenants filling in the questionnaire and sending it to NHT could participate at a tombola – the return rate was higher than 50 %.

The stakeholder (in this case “tenants”) involvement activities of housing associations are listed in Table 10.

Data analysis is on-going and performed in co-operation with EURAC.

TABLE 10. INVOLVEMENT ACTIVITIES OF HOUSING ASSOCIATIONS IN INNSBRUCK

Level of involvement	Housing association	Activities
Information	<ul style="list-style-type: none"> - NHT – Neue Heimat Tirol - IIG – Innsbrucker Immobilien Gesellschaft 	<ul style="list-style-type: none"> - Distribution of invitations to tenants meeting - Execution of two tenant meetings per building - Distribution of information brochures



Consultation	<ul style="list-style-type: none"> - NHT – Neue Heimat Tirol - IIG – Innsbrucker Immobilien Gesellschaft 	<ul style="list-style-type: none"> - Design of questionnaires for tenants - Distribution of questionnaire - Assistance with completing the questionnaire if necessary - Data entry (by alpS) - Data analysis (by alpS)
--------------	--	---

CHALLENGES OF RETROFITTING WITHIN SINFONIA – STORIES OF TENANTS

A range of individual fates documents the social challenges of energetically retrofitting projects of inhabited buildings. It focuses on tenants and their perspectives as the final target group of SINFONIA. The real life examples from Innsbruck shall provide a cross section regarding how single fates may have influence refurbishment activity projects across Europe.

Each tenant has his/her own single history and demand, which many reveal unforeseen challenges far beyond technical barriers. Thus, additional time and costs have to be foreseen.

Example 1: Loss of living space and custom-made furniture

Ms. P extended her living space to the glazed loggia, where a boiler is installed and a sitting bench mounted. Her custom-made kitchen furniture reaches to the ceiling. No space for radiators is foreseen.

In the course of SINFONIA retrofitting activities, the new loggia will be outside the thermal envelope. The extended living space will be lost. The ceiling has to be lowered to install a ventilation system. Radiators need to be mounted as well. The custom-made kitchen has to be fundamentally reworked with the consequence that its unique design and functions are lost. Additional costs for reconstruction this kitchen are not budgeted within the refurbishment activities.

Example 2: Psychological problems

The balcony door of Ms. X is always open. She takes care of a number of dogs that sleep on the balcony. Her flat is in a mess. She is upset about her neighbours, because she thinks that they are ventilating cold air into her apartment and plans to accuse them. She is mentally disturbed and calms herself down by hitting a screwdriver into the floor and walls of the apartment.

How will she react on the refurbishment activities?

Example 3: Bedridden & disabled tenants

Ms. K. is 84 years old. She is bedridden for weeks. She is not able to attend tenant meetings. She receives confusing bits of information from her neighbours and friends about the planned



refurbishments. Four years ago she installed a new gas heater and new ceilings. She was advised by the consumers protection agency to demand a transfer-fee from her landlord for the ceiling and the heater. She is afraid of a „strange pipe“(automatic ventilation system) in her flat.

Where will she stay during the refurbishment? Who will pay the transfer-fees and the relocation costs?

Example 4: Refurbishment – twice?

Family Z. refurbished their apartment at own expenses in the recent years. In 2014 they installed a new kitchen, a new low-energy heating system and the bathroom was refurbished. New Windows were installed in 2012. The apartment provides a high quality of living with low energy consumption. In the course of SINFONIA this apartment has to be refurbished again in 2015.

2.2.5 ORGANIZATIONAL STRUCTURES

2.2.5.1 HISTORICALLY GROWN STRUCTURES

In 2008, the Municipality of Innsbruck launched an initiative focusing on raising the energy efficiency on one side and to increase the production of renewable energies on the other side. Based on this objective, measures were taken matching with national and international legislation and recommendations in particular the EN16001, RL 2006/32//EG and the Tyrolean Energy strategy 2020 (Amt der Tiroler Landesregierung, 2006). In the years 2011 and 2012 this process has been underpinned by the development of a smart energy vision for 2050, a roadmap till 2025 and beyond and an action plan 2012-2015 within the National Austrian Smart City call of the Energy and Climate Fund (fit4SET – smart energy demo). During the last years a reasonable number of institutions, political parties, citizens, associations, companies, universities, etc. have been activated and brought together. A critical mass has been established willing to invest and/or implement measures towards Innsbruck’s Master Plan. Most Innsbruck based SINFONIA Partners and 3rd Parties are participating to this core group of innovators.

Main results so far are the establishment of a public funding scheme for energetically refurbishments of existing buildings, public energy counselling, networking and communication activities, e.g. the participation in the European E5 programme. SINFONIA represents a new milestone towards the goal of energy autonomy.

The City of Innsbruck represents the main driving force in this process. Many activities are realised through its subsidiary companies (e.g. IKB, NHT, IIG). A range of consultants from scientific,



intermediary or commercial domains are supporting the developments (e.g. UIBK, SAT, alpS, Energie Tirol and many more). The Province of Tyrol plays a supportive role.

2.2.5.2 SINFONIA INDUCED STRUCTURES

In order to facilitate communication procedures and to find common approaches for the stakeholder management three different organisational bodies (see Figure 9) have been set up in Innsbruck for constant exchange between the partners and involved stakeholder groups, respectively.

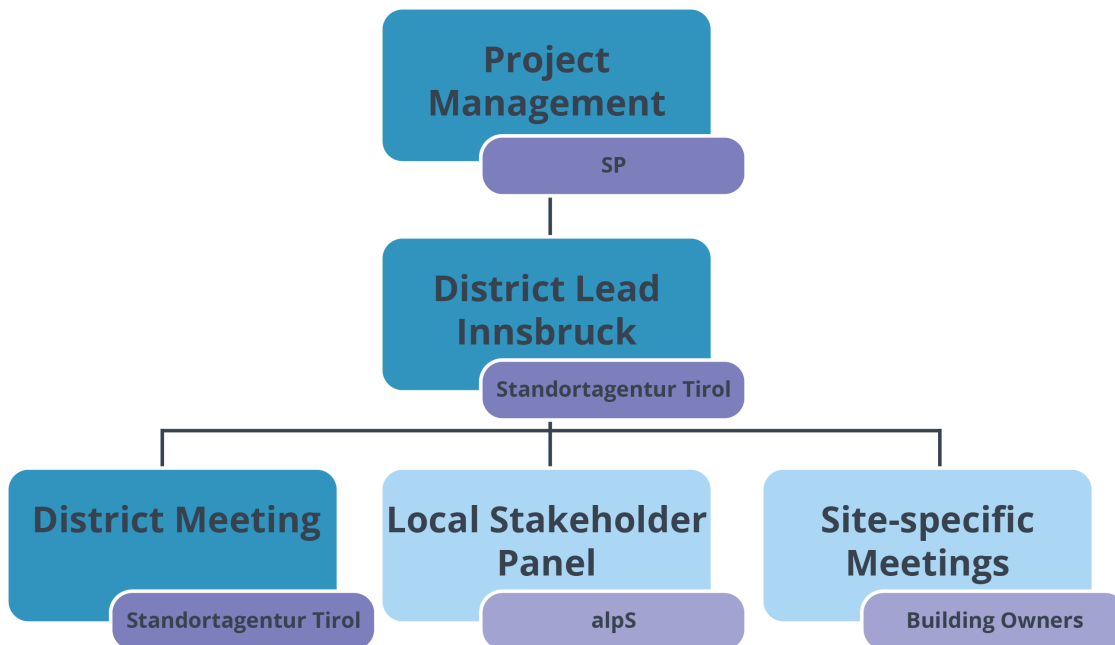


FIGURE 9. ORGANISATION OF THE SINFONIA DISTRICT IN INNSBRUCK

DISTRICT MEETINGS

SAT performs the district management in Innsbruck and is responsible for the organisation of the monthly district meetings. The district meetings serve as an information platform for on-going SINFONIA activities and for the exchange between the local partners. The frequency of district meetings is every three months.

LOCAL STAKEHOLDER PANEL INNSBRUCK

The local stakeholder panel was set up following the aim to provide a platform for regular exchange between the partners. It serves to co-ordinate data acquisition necessary for the evaluation of participation structures. Furthermore, internal and external experts invited to the meetings provide the panel members with topic specific inputs. Unlike in Bolzano, the local stakeholder panel in



Innsbruck is not divided into topic specific working groups but covers all three SINFONIA branches, district heating and cooling, smart grids and retrofiting. Nonetheless, single panel meetings can be under the focus of one branch and hence, attendees might differ.

Meetings take place regularly in a frequency of three months in coordination with the district meetings organised by SAT. The panel members consist of a core group formed by the following partner institutions:

- IBK
- UIBK
- SAT
- PHI
- IKB
- TIGAS
- NHT
- IIG

In addition, market actors, decision makers, residential representatives and other experts are invited depending on the topics of the meeting agenda.

SITE-SPECIFIC MEETINGS

In addition to district meetings and local stakeholder panel meetings, site-specific meetings serve for the communication between partners and stakeholders connected to them.

Project team members of IIG and NHT for instance are organizing site-specific meetings for single SINFONIA buildings, including architects and planners to find adequate solutions.

2.2.6 SUMMARY

The first year of implementing SINFONIA in Innsbruck revealed challenges and provided learning for all partners and stakeholders on all levels.

SINFONIA was not as well received in the general public and local press as originally expected. Articles in local newspapers subjected rising rents and individual hardships of tenants due to SINFONIA. A need for action on the development and local coordination of a common PR strategy in Innsbruck was detected, in order to sustain a positive public opinion towards the project.



Energetically refurbishment in lived-in buildings is a challenge that goes far beyond solving technical problems. Individual challenges and fates are faced by all tenants, families and individuals that live in the apartments. Hardship cases such as bedridden or disabled tenants illustrate this.

In Innsbruck the involvement of tenants is challenged mainly by two factors: Firstly, the non-existence of tenant organisations that represent all inhabitants of a single building. Therefore each single party has to be individually addressed; secondly, the strong legal status of tenants, that allows single tenants to object and stop refurbishments for the whole building.

The institutional setting at the Demo site has major influence on the stakeholder involvement process (e.g. through building codes, rental laws, consumer protection laws, consumer protection agencies and further external factors). Therefore a master template for a stakeholder involvement process to replicate across the EU is unrealistic. Stakeholder involvement processes for smart district have to be individually adapted to the local situation.

Trans- and interdisciplinary collaboration with a broad range of partners and institutions from different backgrounds and cultures, such as governing bodies, politics, companies and research institutions, represents a not to underestimate challenge for all partners. Appropriate time and endurance has to be foreseen to establish mutual trust and forms of collaboration. This is the case for all spatial levels from Demo City to EU level. Face to face meetings, including high-level decision makers, are regarded as the most appropriate mean of communication to establish mutual trust and a spirit of collaboration among the partners.

The most central player for the development of smart districts is the municipality/city including its political and its administrative function. Thus, the city is the focal point and driver for smart districts.



3. TOOLKIT FOR STAKEHOLDER INVOLVEMENT - DRAFT OF WEB APPLICATION

In order to present the outcomes of WP6 an online toolkit for stakeholder involvement will be part of the official SINFONIA website in form of an interactive web-application. Figure 10 structures and contains the contents of WP6. Items in the figure represent the different entry-levels to contents of the toolkit. All elements of the graph will serve as clickable entry links to detailed information about the single subjects. Subsections will be interlinked to enable a multi-dimensional access to contents resulting of WP6 outcomes. This way, it shall be ensured that different target groups can easily orientate in the toolkit and easily screen relevant information. The know-how derived on-site from the Demo Cities is capitalized in this toolkit for dissemination in Early Adopter Cities and the Replication Cluster.

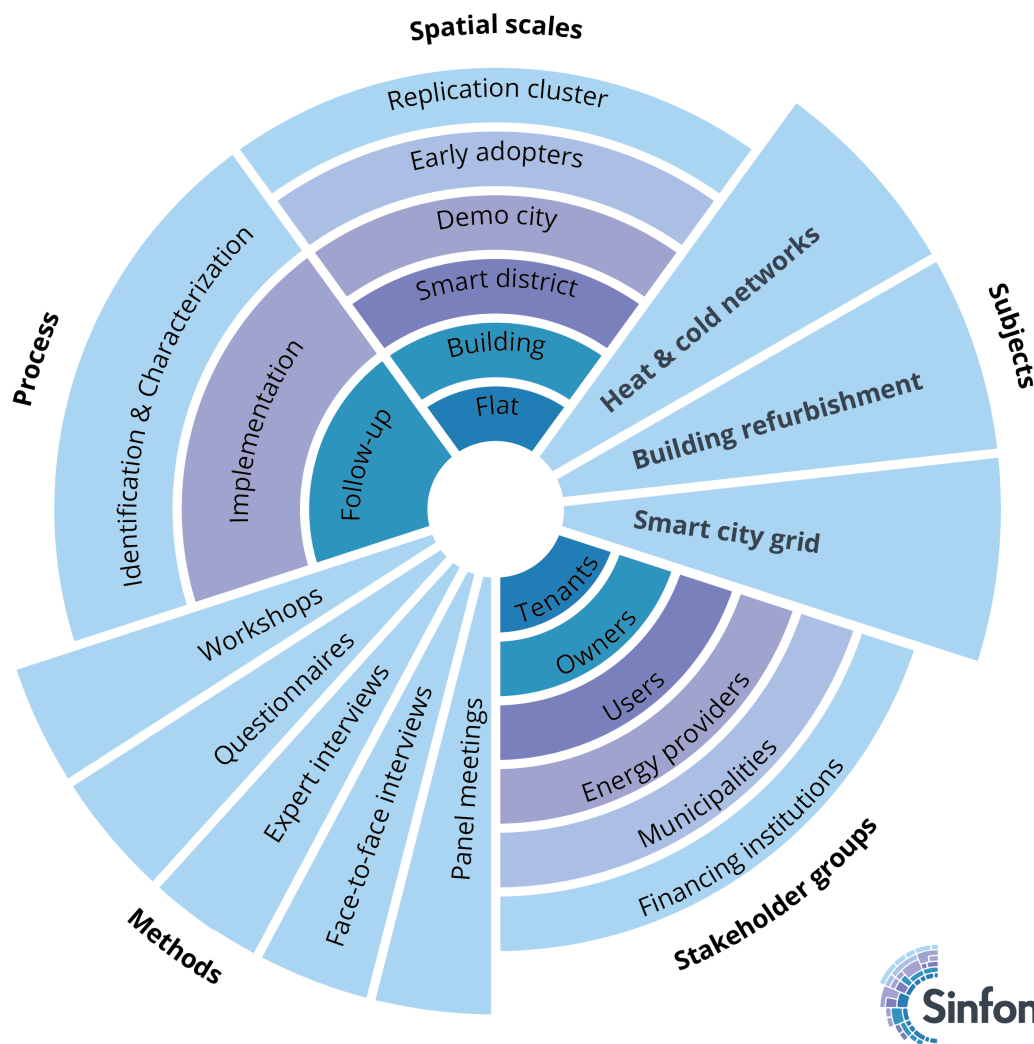


FIGURE 10. TOOLKIT FOR STAKEHOLDER INVOLVEMENT



Five subdivisions sorted by spatial scales, subjects, stakeholder groups, methods and process are made to address different approaches. While the topics, subjects and methods present different tasks and methods on the same level that cut-through and apply to all parties and levels, process, spatial scales and stakeholder groups are ranked by scale. This structure represents the core structure and intro dialogue for an interactive web-tool in stakeholder involvement. It serves for the EU-wide replication of smart districts.

Figure 10 names the three main issues of SINFONIA and smart districts in general: the instalment of heat and cold networks, the refurbishment of buildings and the establishment of a smart city grid on district level.

The implementation of these issues affects several stakeholders. Six stakeholder groups were identified in the Demo Cities, which are the tenants that are living in the flat, the building owners, the (energy-) service users, energy providers, municipalities and financing institutions.

The methods used to identify the specific stakeholders and their stakes and to gather information on their involvement during the process are workshops, questionnaires (e.g. for tenants, owners and users), expert interviews, face-to-face interviews and a variety of panel and onsite-meetings. The methodology is to be adapted to specific local needs.

The process of stakeholder involvement is structured by the identification and characterization of each stakeholder (-group) and their communication paths as well as site-specific drivers and barriers, accompanying the implementation of the three main subjects and the follow-up and monitoring of the whole smart-city project within the Demo City.

This process with its main subjects is executed by different stakeholder groups on different spatial scales: With the flat being the smallest unit that is located in a building, this building is placed in a smart district of a Demo City. In addition to the spatial scales of the Demo City, on a bigger scale there are the Early Adopter Cities and the replication cluster where the process is to be adapted and replicated.



4. LITERATURE

Amt der Tiroler Landesregierung (2006): Tiroler Energiestrategie 2020 – Grundlage für die Tiroler Energiepolitik. Innsbruck.

Arnstein, S.R (1969): A Ladder of Citizen Participation. In: Journal of the American Institute of Planners (JAIP) 35 (4), S. 216–224.

Savage, G.T; Nix, T.W.; Whitehead, C.J.; Blair, J.D. (1991): Strategies for assessing and managing organizational stakeholders. Academy of Management Executive, 5/2.

European Commission (2013): WORK PROGRAMME 2013 COOPERATION THEME 5 ENERGY. C(2013) 3953 of 27 June 2013.



Annex 1: DOCUMENT INFORMATION

SINFONIA DELIVERABLE FACT SHEET	
PROJECT START DATE	1 st June 2014
PROJECT DURATION	60 months
PROJECT WEBSITE	http://www.sinfonia-smartcities.eu
DOCUMENT	
DELIVERABLE NUMBER:	D 6.1a
DELIVERABLE TITLE:	Site specific reports for Bolzano and Innsbruck
DUE DATE OF DELIVERABLE:	
ACTUAL SUBMISSION DATE:	
EDITORS:	
AUTHORS:	Steffen Link, Kathrin Schwab, Tobias Huber, Alyona Zubaryeva, Sara Verones, Gianluca Baldisserrri, Karen Stocker, Barbara Andergassen, Emiliano Gorá, Alexander Told, Davide Gigli
REVIEWERS:	Daniela Hohenwallner-Ries
PARTICIPATING BENEFICIARIES:	
WORK PACKAGE NO.:	6
WORK PACKAGE TITLE:	Local Stakeholders involvement, evaluation & follow up in demo cities
WORK PACKAGE LEADER:	UIBK, alpS GmbH
WORK PACKAGE PARTICIPANTS:	SP, MAGIBK, IKB, UIBK, SAT, BOZ, EURAC, IPES, SEL, ACC, BORAS, LARO, SEV, PAFOS, GIE, PHI, ROSE, ALF, LIE
DISSEMINATION LEVEL:	
CO (CONFIDENTIAL, ONLY FOR MEMBERS OF THE CONSORTIUM INCLUDING THE COMMISSION SERVICES)	
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COLLABORATIVE PROJECT; GRANT AGREEMENT NO
609019

WORK PACKAGE:
VERSION:
DATE:

6
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DRAFT/FINAL:	
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KEYWORDS:	



Annex 2: LITERATURE KEY MESSAGES

Beckmann, J.; Keck, G. (1999): Beteiligungsverfahren in Theorie und Anwendung, Akad. für Technikfolgenabschätzung in Baden-Württemberg.

European Federation for Living (2011): The value of tenant communication in the process of renovation: Practical advice to reach your energy-efficient goals.

Fink, K.; Laborgne, P.; Koch, A. (2011): Leitfaden für Wohnbaugesellschaften und Wohnbaugenossenschaften: Möglichkeiten der BewohnerInnenbeteiligung bei energetischen Sanierungen, Karlsruhe.

Galvin, R. (2014): Why German homeowners are reluctant to retrofit, Building Research & Information, Vol. 42 No. 4, pp. 398–408.

Fuchshofer, R. (2003): Lebensraum im Umbau: Ergebnisse und Analysen der BewohnerInnenbefragung zur abgeschlossenen Sanierung der Siedlung Neue Heimat in Bischofshofen.

Tappeiner, G; Koblmüller, M; Loibl, C.; Walch, K. (2004a): Erfolgreich Sanieren mit Bewohnereinbindung: Leitfaden für Bauträger und Hausverwaltungen.

Tappeiner, G.; Walch, K.; Koblmüller, M.; Loibl, C.; Lukovnjak, M. (2004b): Sanierung Pro!: Sanierung und Partizipation im mehrgeschossigen Wohnbau, Wien.

Suschek-Berger, J.; Ornetzeder, M. (2007): Kooperative Sanierung: Methoden zur Einbeziehung von BewohnerInnen bei umfassenden Gebäudesanierungen, Haus der Zukunft, Wien.



Annex 3: Stakeholder Profiling Template



Innsbruck, 26/02/2015

WP6 communication characteristics of key stakeholders

Template



Scope & how to use the document

This document contributes to the development of a "Toolkit for local stakeholder and consumer/tenant assessment and involvement" (D 6.11), which shall provide condensed information about the involvement of stakeholders in Innsbruck and Bolzano, possible and tested means of involvement, a profound description of the main actors and lessons learnt out of the participation processes in both demo cities.

A systematic collection of stakeholder's communication characteristics serves as a basis for the development of adequate methods for a successful participation process. Any information provided will be kept in confidence and will be used in an abstracted matter. Dissemination materials developed upon the provided information will be anonymized.

Based on the prioritisation of stakeholders in Innsbruck and Bolzano prior to this document the following key stakeholders in Bolzano and Innsbruck were identified and should thus be described:

SINFONIA stakeholder profile:

Name(group) of Stakeholder

Pilot City: **Innsbruck or Bolzano**

1. Description of the stakeholder's specific interests in SINFONIA:

Please describe the motivation of the stakeholder group to participate in SINFONIA and their individual expectations towards the project. Please consider the following possible dimensions: politics, ethical values, budget and/or economic interests, image and more. Additionally, please describe the expectations of the stakeholder towards SINFONIA, considering both chances and risk:

Please add your description here:

Motivation of stakeholder to participate in SINFONIA

Expectations of the stakeholder towards SINFONIA



In order to summarize and conclude your description above, please tick the respective box.

The specific interest of this stakeholder in SINFONIA is...

very low low moderate high very high

2. Description of the stakeholder's role and position of power in SINFONIA

Please describe the stakeholder's role in SINFONIA and his/her position of power within the project. Please consider the importance of the stakeholder for/in the project as well as his/her influence on the project:

Please add your description here:

In order to summarize and conclude your description above, please tick the respective box.

The specific position of power of this stakeholder in SINFONIA is...

very low low moderate high very high

3. Description ideal communication routines for stakeholder involvement

Please describe the planned communication structures for the involvement of the specific stakeholder by referring to an ideal situation.

Please characterize the communication channels and involved positions and refer to the utilized means of communication (oral, written, panels, etc.) and their frequency/regularity. Feel free to add sketches or graphics.

Please add your description here:



Annex 4: Tenant Survey – IIG Questionnaire, Innsbruck

SURVEY QUESTIONNAIRE

Please use BLOCK LETTERS!

Address

Building x		Building x		Building x	
Building x		Building x		Building	
Date	_____	Floor	_____	Door	_____
Telefon			E-Mail		

General Information

1)	Age	_____	Family status	_____	Since when do you live in this flat?	_____
2)	How many persons are using the flat? [Please indicate the number of persons per age class]					
	_____ adults (> 65 Years)	_____ adults (18-65 Years)	_____ teenagers (13-17 Years)	_____ children (3-12 Years)	_____ infants (0-2 Years)	

Information about the flat

3)	How do you use the rooms?					

4)	Do you use the living room as sleeping room?	<input type="checkbox"/>	yes	<input type="checkbox"/>	no	
5)	Does the floor plan match with the one attached?	<input type="checkbox"/>	yes	<input type="checkbox"/>	no	
6)	Do you have a credit for housing subsidies? If YES, which measure was funded?					

7)	Did you renew your kitchen?	<input type="checkbox"/>	yes	<input type="checkbox"/>	no	If YES, when? _____
8)	Did you renew your bath?	<input type="checkbox"/>	yes	<input type="checkbox"/>	no	If YES, when? _____
9)	Do you have a shower or a bath tub in your bathroom?	<input type="checkbox"/>	shower	<input type="checkbox"/>	bath tub	
10)	Are the water or gas pipes in your bath room visible?	<input type="checkbox"/>	yes	<input type="checkbox"/>	no	
11)	Are the water or gas pipes in your bath in a shaft?	<input type="checkbox"/>	yes	<input type="checkbox"/>	no	
12)	Did you refurbish your flat yourself?	<input type="checkbox"/>	yes	<input type="checkbox"/>	no	If YES, when? _____
13)	Are all rooms of your flat equally high?	<input type="checkbox"/>	yes	<input type="checkbox"/>	no	ceiling height [m]? _____
If NO, please indicate the room and the corresponding ceiling height [m].						



	name of the room	_____	ceiling height [m]	_____
	name of the room	_____	ceiling height [m]	_____
	name of the room	_____	ceiling height [m]	_____
	name of the room	_____	ceiling height [m]	_____
14)	Do you have single action doors/single leaf doors (= a barrier of approx. 1-3 cm on the ground floor) or stripe doors (= no barriers on the ground floor)?			
	all single action doors/ single leaf doors	<input type="checkbox"/> yes <input type="checkbox"/> no	all stripe doors	<input type="checkbox"/> yes <input type="checkbox"/> no
	mixed	<input type="checkbox"/> yes <input type="checkbox"/> no	If MIXED, please indicate the name of the room with swing doors.	

15)	Are your ceilings suspended?	<input type="checkbox"/> yes <input type="checkbox"/> no	If YES, where?	
	If YES, do you have integrated light spots?		<input type="checkbox"/> yes <input type="checkbox"/> no	
16)	Do you have roller blinds or other sunscreens?		<input type="checkbox"/> yes <input type="checkbox"/> no	
	If YES, please indicate the room and the type (rolling shutter, venetian blind, jalousie etc.).			
	name of the room	_____	type	_____
	name of the room	_____	type	_____
	name of the room	_____	type	_____
	name of the room	_____	type	_____

Information concerning energy and building

17)	Did you change the windows?	<input type="checkbox"/> yes <input type="checkbox"/> no
	If YES, did you apply for public housing subsidies?	<input type="checkbox"/> yes <input type="checkbox"/> no
	If YES, when?	_____
18)	Consumption figures - Please indicate costs for heating in Euro and consumption rates.	
	heating costs (Euro)	actual consumption (litre oil, kWh electricity)
	_____	_____
19)	Is there an electricity meter in the staircase?	<input type="checkbox"/> yes <input type="checkbox"/> no
20)	Are the distribution board and the cutouts in the flat?	<input type="checkbox"/> yes <input type="checkbox"/> no
	If YES, did you embellish this wall with e.g. a wood boarding?	<input type="checkbox"/> yes <input type="checkbox"/> no
21)	Which lamps do you use? (Multiple answers possible)	
	<input type="checkbox"/> energy saving lamps	<input type="checkbox"/> halogen lamp <input type="checkbox"/> light bulbs
	<input type="checkbox"/> neon tubes	<input type="checkbox"/> LEDs
22)	How do you use your balcony? (e.g. housing space, storage room, dining room)	



23)	Is your balcony open or glazed (closed)?					<input type="checkbox"/>	open		<input type="checkbox"/>	glazed								
24)	What is on the balcony? (e.g. furniture, plants)																	
25)	Where do you hang your laundry for drying? (Multiple answers possible)																	
	<input type="checkbox"/>	balcony		<input type="checkbox"/>	in the flat		<input type="checkbox"/>	drying room in the cellar		<input type="checkbox"/>	somewhere else: _____							
	Where would you like to hang your laundry for drying?																	
	<input type="checkbox"/>	balcony		<input type="checkbox"/>	in the flat		<input type="checkbox"/>	drying room in the cellar		<input type="checkbox"/>	somewhere else: _____							
26)	How important is an elevator for you?																	
	<input type="checkbox"/>	very important		<input type="checkbox"/>	important		<input type="checkbox"/>	equal		<input type="checkbox"/>	unimportant		<input type="checkbox"/>	not at all important				
27)	How do you evaluate the actual noise insulation?																	
	Street noise			<input type="checkbox"/>	very loud		<input type="checkbox"/>	loud		<input type="checkbox"/>	normal		<input type="checkbox"/>	quiet		<input type="checkbox"/>	very quiet	
	noise from neighbours			<input type="checkbox"/>	very loud		<input type="checkbox"/>	loud		<input type="checkbox"/>	normal		<input type="checkbox"/>	quiet		<input type="checkbox"/>	very quiet	
	noise from staircase			<input type="checkbox"/>	very loud		<input type="checkbox"/>	loud		<input type="checkbox"/>	normal		<input type="checkbox"/>	quiet		<input type="checkbox"/>	very quiet	
	noise from courtyard			<input type="checkbox"/>	very loud		<input type="checkbox"/>	loud		<input type="checkbox"/>	normal		<input type="checkbox"/>	quiet		<input type="checkbox"/>	very quiet	
28)	Do you use the laundry?					<input type="checkbox"/>	yes			<input type="checkbox"/>	no							
29)	Do you use the drying room?					<input type="checkbox"/>	yes			<input type="checkbox"/>	no							
30)	Requests from tenants: What should be taken into account with the refurbishment?																	
31)	What is your personal impression concerning the refurbishment?																	
32)	How do you evaluate the overall state of your flat?																	
	<input type="checkbox"/>	very good		<input type="checkbox"/>	good		<input type="checkbox"/>	satisfactory		<input type="checkbox"/>	Not satisfactory		<input type="checkbox"/>	very bad				
33)	Could you provide pictures of your flat, bathroom, boiler for better planning of the refurbishment? (Please send an e-mail to the property management)																	
						<input type="checkbox"/>	yes			<input type="checkbox"/>	no							
34)	Parking area for the bike?			<input type="checkbox"/>	available		<input type="checkbox"/>	available but too few		<input type="checkbox"/>	not available							
35)	Parking area for the buggy?			<input type="checkbox"/>	available		<input type="checkbox"/>	available but too few		<input type="checkbox"/>	not available							



36)	Do you use the garden?	<input type="checkbox"/>	very often	<input type="checkbox"/>	normal	<input type="checkbox"/>	very few		
	What is the reason for your indication? (e.g. very comfortable, no seats, too loud)								
37)	Do you use the playground?	<input type="checkbox"/>	very often	<input type="checkbox"/>	normal	<input type="checkbox"/>	very few		
	What is the reason for your indication? (e.g. very comfortable, no seats, too loud)								
38)	How do you evaluate the condition of the staircase?								
	<input type="checkbox"/>	good	<input type="checkbox"/>	equal	<input type="checkbox"/>	bad			
39)	How do you evaluate the condition of the cellar?								
	<input type="checkbox"/>	good	<input type="checkbox"/>	equal	<input type="checkbox"/>	bad			
40)	How do you evaluate the condition of the attic?								
	<input type="checkbox"/>	good	<input type="checkbox"/>	equal	<input type="checkbox"/>	bad			
41)	Do you have problems with mildew?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no		
	If YES, in the wet room?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no		
42)	Do you have your own cellar?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no		
43)	Do you have a storage in the attic?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no		
44)	Are your outlet pipes made of cast iron?		<input type="checkbox"/>	yes	<input type="checkbox"/>	no	<input type="checkbox"/>	not known	
45)	Are your sanitary pipes...?		<input type="checkbox"/>	surface mounted	<input type="checkbox"/>	Installed/wall integrated	<input type="checkbox"/>	freely accessible	
46)	How does you hot water preparation work for washing, cooking etc.?								
	<input type="checkbox"/>	gas	<input type="checkbox"/>	oil	<input type="checkbox"/>	additional stoves	<input type="checkbox"/>	boiler/Off-peak electricity	
	<input type="checkbox"/>	electricity	<input type="checkbox"/>	wood	<input type="checkbox"/>	pellets	<input type="checkbox"/>	others _____	
47)	Where is your boiler?		<input type="checkbox"/>	bath	<input type="checkbox"/>	room (which?) _____			
48)	Which volume does your boiler have? (In litres)					_____			
49)	How is your boiler heated?			<input type="checkbox"/>	electric	<input type="checkbox"/>	with gas	<input type="checkbox"/>	others: _____
50)	How old is your boiler in years?					_____			
51)	What is the distance between the boiler and the ceiling? (In cm)					_____			
52)	How do you heat your flat during wintertime? (Multiple answers possible)								
	<input type="checkbox"/>	gas	<input type="checkbox"/>	oil	<input type="checkbox"/>	additional stoves	<input type="checkbox"/>	others _____	
	<input type="checkbox"/>	electricity	<input type="checkbox"/>	wood	<input type="checkbox"/>	pellets			
53)	How do you evaluate the room temperature of your flat...?								
	...in winter?		<input type="checkbox"/>	too warm	<input type="checkbox"/>	comfortable	<input type="checkbox"/>	too cold	



	...in summer?	<input type="checkbox"/>	too warm	<input type="checkbox"/>	comfortable	<input type="checkbox"/>	too cold			
54)	How often do you ventilate your flat...?									
	...in winter?	<input type="checkbox"/>	I never ventilate.	<input type="checkbox"/>	once a day, in the morning or in the evening					
		<input type="checkbox"/>	several times during the day (if possible)	<input type="checkbox"/>	One window is always tilt for air exchange.					
		<input type="checkbox"/>	others: _____							
	...in summer?	<input type="checkbox"/>	I never ventilate.	<input type="checkbox"/>	once a day, in the morning or in the evening					
		<input type="checkbox"/>	several times during the day (if possible)	<input type="checkbox"/>	One window is always tilt for air exchange.					
		<input type="checkbox"/>	others: _____							
55)	Do you have an electric continuous flow heater for e.g. warm water in the kitchen?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
56)	Do you have radiators in your flat?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
	If YES, are they (partly) installed?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
	If YES, which? (if known)									
	<input type="checkbox"/>	ribbed radiator	<input type="checkbox"/>	surface radiator	<input type="checkbox"/>	others: _____				
57)	Is your heating controlled by a room thermostat?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
	If YES, are you able to control every room independently?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
58)	Do you have a stove that is using combustion air from your flat?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
59)	Would you prefer central heating?		<input type="checkbox"/>	yes	<input type="checkbox"/>	no	no preference			
60)	Would you in case of central heating abstain from your stove?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
61)	Do you use your chimney?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
62)	Do you know the term comfort-ventilation?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
63)	What do you think of comfort-ventilation?									
	<input type="checkbox"/>	very important	<input type="checkbox"/>	important	<input type="checkbox"/>	equal	<input type="checkbox"/>	not important	<input type="checkbox"/>	not at all important
64)	Do you have an extractor hood in the kitchen?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no			
	If YES, which type?		<input type="checkbox"/>	air circulation	<input type="checkbox"/>	exhaust air via the roof	<input type="checkbox"/>	exhaust air via the wall		
65)	Waste collection place: Is the current situation satisfactory?			<input type="checkbox"/>	yes	<input type="checkbox"/>	nein			

Information concerning your approach towards energy efficiency and renewable energy

66)	Would you like to get additional information concerning energy-technical aspects of the refurbishment?			<input type="checkbox"/>	yes, an overview	<input type="checkbox"/>	no
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67)	In which format would you like to receive information?							
	<input type="checkbox"/>	dedicated meetings	<input type="checkbox"/>	brochures, guidebooks				
	<input type="checkbox"/>	via internet	<input type="checkbox"/>	others: _____				
68)	In the frame of a scientific project energy consumption should be analysed in selected households. Do you have ...							
	...interest in an energy consultation free of charge?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no	
	...interest in detailed measures of your electricity consumption?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no	
69)	Which of your electric devices is older than 7 years?							
	<input type="checkbox"/>	washing machine	<input type="checkbox"/>	refrigerator	<input type="checkbox"/>	laundry dryer		
	<input type="checkbox"/>	dishwasher	<input type="checkbox"/>	oven	<input type="checkbox"/>	others: _____		
70)	Which measures did you take to save energy?							
	<input type="checkbox"/>	temperature reduction	<input type="checkbox"/>	(electronic) radiator valves				
	<input type="checkbox"/>	sealing of windows	<input type="checkbox"/>	others: _____				
71)	What do you expect from the energy efficiency refurbishment of your building?							
	<input type="checkbox"/>	financial advantages	<input type="checkbox"/>	higher comfort				
	<input type="checkbox"/>	financial advantages AND a higher comfort	<input type="checkbox"/>	no essential advantages				
72)	Which of the following terms do you know?							
	<input type="checkbox"/>	Low energy house	<input type="checkbox"/>	passive house				
	<input type="checkbox"/>	EnerPHit	<input type="checkbox"/>	Klimahaus				
73)	Do you have information about the project SINFONIA or the energy development plan of Innsbruck (IEP)?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no	
74)	How important is for you the topic....?							
	...climate protection		<input type="checkbox"/>	important	<input type="checkbox"/>	medium	<input type="checkbox"/>	not important
	...energy saving		<input type="checkbox"/>	important	<input type="checkbox"/>	medium	<input type="checkbox"/>	not important
	...renewable energy (sun, wind etc.)		<input type="checkbox"/>	important	<input type="checkbox"/>	medium	<input type="checkbox"/>	not important
75)	What do you expect from renewable energy sources in your building?							
	<input type="checkbox"/>	reduction of operation costs	<input type="checkbox"/>	climate protection	<input type="checkbox"/>	increase of living conditions	<input type="checkbox"/>	constant electricity prices
76)	E-mobility – Are you interested in a charging station?			<input type="checkbox"/>	yes	<input type="checkbox"/>	no	
	If YES, for...?		<input type="checkbox"/>	...bike	<input type="checkbox"/>	...moped	<input type="checkbox"/>	...car
77)	Which energy services would you like to get from your energy supplier?							



78)	In this context, do you know what Value Added Services (VAS) are?	<input type="checkbox"/>	yes	<input type="checkbox"/>	no
	If YES, which VAS would be interesting for you?				

Other Information

79)	Other feedback to your housing association



Annex 5: Tenant Survey – NHT Questionnaire, Innsbruck

QUESTIONNAIRE FOR TENANTS

Please fill in in CAPITAL letters.

Address information

1)	Building	Flat	
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Information on living satisfaction and comfort

2)	How much are you satisfied about the current building's conditions?										
	<input type="checkbox"/>	Very comfortable	<input type="checkbox"/>	Quite com- fortable	<input type="checkbox"/>	Rather com- fortable	<input type="checkbox"/>	Not comfortable			
3)	How do you perceive TEMPERATURE in your apartment...?										
	...in summer	<input type="checkbox"/>	Very hot	<input type="checkbox"/>	Hot	<input type="checkbox"/>	Neutral	<input type="checkbox"/>	Chilly	<input type="checkbox"/>	Cold
	...in winter	<input type="checkbox"/>	Very hot	<input type="checkbox"/>	Hot	<input type="checkbox"/>	Neutral	<input type="checkbox"/>	Chilly	<input type="checkbox"/>	Cold
4)	Are you in a draft in your flat?										
								<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
	If YES, why?		<input type="checkbox"/>	Leaky windows	<input type="checkbox"/>	Leaky balcony door	<input type="checkbox"/>	Leaky entrance door			
			<input type="checkbox"/>	Others: _____							
5)	How do you perceive HUMIDITY in your apartment...?										
	...in summer	<input type="checkbox"/>	Very humid	<input type="checkbox"/>	Rather humid	<input type="checkbox"/>	Neutral	<input type="checkbox"/>	Rather dry	<input type="checkbox"/>	Very dry
	...in winter	<input type="checkbox"/>	Very humid	<input type="checkbox"/>	Rather humid	<input type="checkbox"/>	Neutral	<input type="checkbox"/>	Rather dry	<input type="checkbox"/>	Very dry
6)	Do you notice moisture or mildew on the pavement, on the walls or on the ceiling?										
								<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
7)	Which kind of noise do you perceive in your apartment?										
	<input type="checkbox"/>	External noise (traffic)	<input type="checkbox"/>	Noise from adjacent apartments	<input type="checkbox"/>	Noise from technical installations	<input type="checkbox"/>	Others: _____			
8)	Which is your perception of the noise level in your apartment?										
	<input type="checkbox"/>	Very noisy	<input type="checkbox"/>	Rather noisy	<input type="checkbox"/>	Neutral	<input type="checkbox"/>	Little noise	<input type="checkbox"/>	No noise	
9)	How do you consider current expenses for...?										
	... renting	<input type="checkbox"/>	Very high	<input type="checkbox"/>	High	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Low	<input type="checkbox"/>	Very low
	... electricity	<input type="checkbox"/>	Very high	<input type="checkbox"/>	High	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Low	<input type="checkbox"/>	Very low
	... heating	<input type="checkbox"/>	Very high	<input type="checkbox"/>	High	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Low	<input type="checkbox"/>	Very low
	... hot water	<input type="checkbox"/>	Very high	<input type="checkbox"/>	High	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Low	<input type="checkbox"/>	Very low
	... operating costs	<input type="checkbox"/>	Very high	<input type="checkbox"/>	High	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Low	<input type="checkbox"/>	Very low
10)	What is more important for you concerning your balcony (if you have one)?										



<input type="checkbox"/>	A profound balcony and thus more space	<input type="checkbox"/>	Ideal light exposure of the rooms bordering the balcony
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Information concerning your opinion towards energy efficiency and renewable energies

11)	Is energy saving important in your daily life?			
	<input type="checkbox"/> Yes, very much	<input type="checkbox"/> Yes, reasonably	<input type="checkbox"/> Not very much	<input type="checkbox"/> Not at all
12)	Do you know the terms <i>low-energy-building</i> or <i>passive house</i> ?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
13)	Do you think that living in a <i>low-energy-building</i> or a <i>passive house</i> has advantages? If YES, which advantages?			
	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
	<input type="checkbox"/> Only economic	<input type="checkbox"/> Only regarding comfort	<input type="checkbox"/> Both	<input type="checkbox"/>
	Others:	<input type="checkbox"/>		
14)	Which kind of renewable energy sources do you know and how well?			
	Photovoltaic panels	<input type="checkbox"/> I know very well	<input type="checkbox"/> I know in main	<input type="checkbox"/> I do not know
	Solar thermal systems	<input type="checkbox"/> I know very well	<input type="checkbox"/> I know in main	<input type="checkbox"/> I do not know
	Geothermal plant	<input type="checkbox"/> I know very well	<input type="checkbox"/> I know in main	<input type="checkbox"/> I do not know
	Biomass for heating	<input type="checkbox"/> I know very well	<input type="checkbox"/> I know in main	<input type="checkbox"/> I do not know
	Heat pumps	<input type="checkbox"/> I know very well	<input type="checkbox"/> I know in main	<input type="checkbox"/> I do not know
	Wind power	<input type="checkbox"/> I know very well	<input type="checkbox"/> I know in main	<input type="checkbox"/> I do not know
15)	In the frame of a scientific project, electricity consumption will be analysed from different apartments. Are you interested in ...			
	... a energy consultation free of charge?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
	... a detailed measurement of your electricity consumption?		<input type="checkbox"/> Yes	<input type="checkbox"/> No

Technical information and information on your energy behavior

16)	From which material are most of your window frames made of?			
	<input type="checkbox"/> Wood	<input type="checkbox"/> Plastic	<input type="checkbox"/> Aluminium	<input type="checkbox"/> Wood-Aluminium
17)	Are all rooms heated during winter?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If NOT, which rooms are not heated?			
18)	Did you install your heating yourself?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
	If YES, when and which type?			
19)	Where is it possible to regulate internal temperature during winter season?			
	<input type="checkbox"/> In every room	<input type="checkbox"/> Centralized in the apartment	<input type="checkbox"/> Centralized for the whole building	<input type="checkbox"/> It is not possible
20)	If you can regulate temperature, which type of heating control do you use?			



<input type="checkbox"/>	Manual thermostat	<input type="checkbox"/>	Programmed chrono-thermostat	<input type="checkbox"/>	Via thermostat valves directly on the radiator
<input type="checkbox"/>	Others: _____				
21)	Which room temperature do you approx. have in your ROOMS...?				
...in SUMMER?	<input type="checkbox"/>	below 20 °C	<input type="checkbox"/>	20 – 22 °C	
	<input type="checkbox"/>	22 – 24°C	<input type="checkbox"/>	above 24 °C	
...in WINTER?	<input type="checkbox"/>	below 18 °C	<input type="checkbox"/>	18 – 20 °C	
	<input type="checkbox"/>	20 – 22°C	<input type="checkbox"/>	above 22 °C	
22)	Which room temperature do you approx. have in your BEDROOMS...?				
...in SUMMER?	<input type="checkbox"/>	below 20 °C	<input type="checkbox"/>	20 – 22 °C	
	<input type="checkbox"/>	22 – 24°C	<input type="checkbox"/>	over 24 °C	
...in WINTER?	<input type="checkbox"/>	below 18 °C	<input type="checkbox"/>	18 – 20 °C	
	<input type="checkbox"/>	20 – 22°C	<input type="checkbox"/>	over 22 °C	
23)	How often AND how do you ventilate your flat...?				
...in winter?	<input type="checkbox"/>	I never aerate	<input type="checkbox"/>	Once, in morning or in the evening	
	<input type="checkbox"/>	Several times daily (if possible)	<input type="checkbox"/>	One window remains tilted for aeration purposes	
	<input type="checkbox"/>	Others: _____			
...in summer?	<input type="checkbox"/>	I never aerate	<input type="checkbox"/>	Once, in morning or in the evening	
	<input type="checkbox"/>	Several times daily (if possible)	<input type="checkbox"/>	One window remains tilted for aeration purposes.	
	<input type="checkbox"/>	Others: _____			
24)	What kind of lighting systems do you use in your apartment (multiple choices possible)?				
<input type="checkbox"/>	ECO saving bulbs	<input type="checkbox"/>	Neon	<input type="checkbox"/>	Halogen bulbs
<input type="checkbox"/>	LEDs	<input type="checkbox"/>	Regular bulbs		
25)	Do you use electric devices energy efficiency class A+ to A++?				
<input type="checkbox"/>	Yes, most	<input type="checkbox"/>	Yes, some	<input type="checkbox"/>	Rarely
<input type="checkbox"/>					No, none
26)	Do you normally leave your electric equipment in standby modus (e.g. TV)?				
<input type="checkbox"/>	Yes, always	<input type="checkbox"/>	Yes, sometimes	<input type="checkbox"/>	Rarely
<input type="checkbox"/>					No, never
27)	Which of your electric equipment is older than 7 years?				
<input type="checkbox"/>	Washing machine	<input type="checkbox"/>	Refrigerator	<input type="checkbox"/>	Tumble dryer
<input type="checkbox"/>	Dishwasher	<input type="checkbox"/>	Oven	<input type="checkbox"/>	Others: _____

Information on the planned refurbishment activities

28)	Are you interested to be included in some aspects of the	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
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	refurbishment?						
	If YES, which?						
29)	Would you like to be informed about energy-technical aspects of the refurbishment of your building?	<input type="checkbox"/>	Yes, in detail	<input type="checkbox"/>	Yes, as an overview	<input type="checkbox"/>	No
30)	If YES, how would you like to get this information?						
	<input type="checkbox"/> face to face	<input type="checkbox"/>	Via printed brochures or guidelines				
	<input type="checkbox"/> Via internet	<input type="checkbox"/>	Others: _____				
31)	Would you like to have a comfort ventilation system for better air quality?						
	<input type="checkbox"/> Yes	<input type="checkbox"/>	Rather yes	<input type="checkbox"/>	Rather no	<input type="checkbox"/>	No
32)	The filter of the ventilation system needs to be changed 2x per year (similar to the exchange of a vacuum cleaner bag). Could you imagine changing the filter yourself?						
	<input type="checkbox"/> Yes	<input type="checkbox"/>	Rather yes	<input type="checkbox"/>	Rather no	<input type="checkbox"/>	No

Information about your housing complex and housing environment

33)	How much are you satisfied with the current status of the housing complex concerning ...?										
	... the accessibility by public transport	<input type="checkbox"/>	Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Less satisfied	<input type="checkbox"/>	Not satisfied
	...the accessibility via private cars	<input type="checkbox"/>	Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Less satisfied	<input type="checkbox"/>	Not satisfied
	...the accessibility of local supply (groceries)	<input type="checkbox"/>	Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Less satisfied	<input type="checkbox"/>	Not satisfied
	...the accessibility of medical infrastructure (e.g. pharmacy)	<input type="checkbox"/>	Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Less satisfied	<input type="checkbox"/>	Not satisfied
	...the state of repair	<input type="checkbox"/>	Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Less satisfied	<input type="checkbox"/>	Not satisfied
	...the overall equipment (staircase, drying room, etc.)	<input type="checkbox"/>	Very Satisfied	<input type="checkbox"/>	Satisfied	<input type="checkbox"/>	Normal	<input type="checkbox"/>	Less satisfied	<input type="checkbox"/>	Not satisfied
34)	Are there any spaces within your building complex you would like to use in a different way (e.g. green space or parking area or playground)?							<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
	If YES, how would you like to use this space?										
35)	Where do you recognise possibilities to optimize urban planning?										
	<input type="checkbox"/> Waste collection place closer to the building	<input type="checkbox"/>	Bike rental								
	<input type="checkbox"/> Establishment of additional parking possibilities	<input type="checkbox"/>	Others: _____								



36)	Are you interested in a common electric car (shared by several Buildings/users)?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No					
37)	How often would you use a common electric car?									
	<input type="checkbox"/>	Never	<input type="checkbox"/>	Rarely	<input type="checkbox"/>	Monthly	<input type="checkbox"/>	Weekly	<input type="checkbox"/>	Daily

General informationen & informationen about the person who fills the questionnaire

38)	Contact					
	Name					
	Age					
	Tel. Number		E-Mail-Address			
39)	Gender	<input type="checkbox"/>	Male	<input type="checkbox"/>	Female	
40)	How many persons live in the flat? <i>[Please indicate the number of persons per age class]</i>					
	<input type="text"/>	under 17 years old	<input type="text"/>	18-65 years old	<input type="text"/>	over 65 years old
41)	For how many hours, on average, is the apartment occupied per day?					
	<input type="checkbox"/>	Less than 8 hours				
	<input type="checkbox"/>	8-12 hours				
	<input type="checkbox"/>	12-18 hours				
	<input type="checkbox"/>	More than 18 hours				
<input type="checkbox"/> I would like to participate in the tombola.						

Data privacy - questionnaireHerewith I ... **this section needs to be adapted**_____
Signature_____
Venue, date