Stakeholder Process in the City of Bruck an der Mur: Lessons Learned in Developing a Vision and Designing an Action Plan for a Smart City

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1 ABSTRACT

Select The City of Bruck an der Mur is located in the alpine space of Austria at the convergence of the rivers Mur and Mürz. As an industrial and commercial centre of the region Bruck/Kapfenberg/Leoben in Upper Styria with a population of about 12.500, the city faces multiple challenges such as a declining population, a dwindling communal budget and competition for space. Therefore, the city council and the mayor of Bruck decided to engage in a multi-stakeholder process within the Fit4Set smart energy initiative (Austrian Klima- und Energiefonds). The objective of that process was to build a new image and work towards a smart city by taking a holistic approach emphasizing urban planning and quality of life aspects as well as energy and resource efficiency issues in order to achieve climate protection. About 30 stakeholders from universities, research institutes, the City of Bruck an der Mur, transport companies, industry, politics as well as non-profit organisations came together to develop the future of the city in an open, participative and creative process.

The stakeholder process was divided into 3 moderated workshops: in a first step, the stakeholders developed a vision as to what the city should offer in 2050. The stakeholders then developed a roadmap listing measures in all urban sectors nessecary to achieve a smart city vision. Lastly, participants drew up an action plan for the immediate future that enables the City to implement a number of innovative and integrated planning measures towards climate protection and a higher quality of life. Before, between and after the workshops numerous, very crucial bilaterial discussions took place between members of the consortium and project management in order to provide room for information exchange, critique and feedback. Project management kept the mayor of Bruck closely informed about all steps throughout the process.

This paper describes and analyses the stakeholder process and provides the lessons learned in the process. These include the importance of involving all relevant stakeholders, the crucial role of trust and open communication and the high value individuals place on quality of life issues and the adaptive approach required by all participants to carry such a process through to the end. The stakeholder process enabled the city for the first time ever to openly discuss critical topics in a large forum and to work toward the common goal of developing a smart city.

2 INTRODUCTION

Amongst other issues, the smart city concept advocates an integrated planning framework at an urban scale and aims at profiting from synergies between strategic measures in different fields of activity. The city of Bruck an der Mur is one of the cities selected for grants by the Austrian Klima- und Energiefonds in the Fit4Set funding framework.

Bruck an der Mur has a population of 12.500 inhabitants and is the district capital of an industry hotspot located at the confluence between Mur and Mürz rivers in Austria. Hence, Bruck an der Mur represents one of the most important traffic junctions in Austria. Its residential areas and industrial structures are strongly determined by its geographical situation, and characterised by great density and only little open space. Due to this situation, public facilities, residential and recreational areas for citizens, commerce and tourism as well as transport infrastructure need to coexist in a sustainable way with industrial and business facilities in a confined geographical area. Beyond this, Bruck an der Mur is confronted with a constant decline in population since the early 1970s. Hence, economics, urban planning and development, buildings, energy supply, mobility, supply and disposal systems as well as communication become central fields of action and need to be considered in an integrated way when it comes to decision making (DiNucci R., et al, 2010). To

ISBN: 978-3-9503110-2-0 (CD-ROM); ISBN: 978-3-9503110-3-7 (Print)
Editors: Manfred SCHRENK, Vasily V. POPOVICH, Peter ZEILE, Pietro ELISEI

date, the implementation of such integrated and interdisciplinary strategies has been impeded because of conflicting interests and the lack of coordination and communication rather than due to technological issues.

Therefore, a stakeholder process was initiated to involve all relevant local stakeholders including local authorities and administration, industrial representatives, representatives of local housing companies and political representatives in a process to shape a common vision for the future of the city and draft a set of measures and projects which would contribute to tackle the main issues Bruck an der Mur is confronted with. The aim of the paper is to introduce the stakeholder process which took place in Bruck an der Mur, highlight and analyse the different phases of this process and present some lessons learned.

3 STAKEHOLDER PROCESS

3.1 Role of Stakeholders

The smart city topic is highly integrative and deals with a broad set of issues. Because of its integrative character, many stakeholders from diverse fields and organisations need to be involved very early on in the process and motivated to participate and contribute. Therefore a large number of individuals respresenting a diverse set of organisations were invited to participate in the process. With that the process and decisions resulting from it are better legitimized and chances are much higher that innovative climate protection projects are realised (Nordström, E. et al, 2010). It is crucial to not only involve public authorities, but to also motivate those who will actually have to implement the projects. Those include representatives from industry, hospitals, public transit companies, residential construction companies, real estate companies and developers (Sinning, H. et al., 2011). The term stakeholder takes into account that stakeholders‘ specific interests and their options to act diverge (Albrechts, L., 2003).

The stakeholder process in the Smart City Bruck project included an all encompassing communication and coordination process with workshops and numerous coordination meetings. The following diverse set of stakeholders with different duties, responsibilities and roles was integrated in the process:

- Municipality and associated businesses: project coordination, making available information and documents for appraisals and analyses, critical reflection of the process, developing ideas and concepts
- Technical project team: Analyses, formulating technical requirements, designing communication and cooperation process, developing concepts
- Mayor and city council: political backing and decision-making
- Project Management: networking, organizing the communication and coordination process, lobbying and coordinating between mayor, stakeholder and the project team
- Stakeholders: generation of ideas, critical reflexion, feasibility
- Urban sociologist: motivation, formulating the guiding concept
- Moderation: designing the communication and cooperaton process and selecting methods and exercises for the workshops.

The involvement of these stakeholders in the different phases of the processes in Bruck an der Mur is visualized in table 1.

3.2 Methodology

The stakeholder process lasted about 6 months and consisted of several preparation and research phases and three one to two-day moderated workshops (see table 2) with the objective to develop a vision, a roadmap and lastly an action plan for projects in the City of Bruck an der Mur. In the workshops, most exercises were done in small groups of 5-8 persons and the results were then presented to and discussed in the plenary. Participants from the following organisations belonged to the core project team (Unversity of Leoben, AIT, the City of Bruck, Stadtwerke, Mürztaler Verkehrsbetriebe, verkehrplus GmbH, Voest Alpine Austria Draht, Norske Skog, LKH Bruck, Biomasse Heizkraftwerk). In addition to that, non-profit organisations, sociologists and members of city council also participated in the workshops. All participants acted as multipliers in their respective organizations and were instrumental in conveying the message to those who were unable to participate.

Most workshop participants demonstrated from the very beginning a strong interest in the process and a high desire to achieve results that would further the interests of each stakeholder and his/her organisation as well as the city of Bruck. Some participants initially were hesitant with their contributions and had to get used to working in this very open, participative workshop atmosphere. Discussions were at times highly controversial which is typical for stakeholder processes (Maguire, B., 2011). The mayor personally supported the process and participated part time in all workshops. The following table illustrates the main methods applied during the process.

Stakeholder process phases, dates and number of participants in the workshops	Municipality	Technical project team	Mayor	Project manager	Stakeholders	Urban Sociologist	Moderator
1 Coordination phase	■		■	■			
2 Kick-off Meeting	■	■		■			
3 Workshop 1, Oct. 3-4, 2011 (40)	■	■	■	■	■		■
4 Coordination phase	■	■		■		■	
5 Workshop 2, Nov. 10-12, 2011 (30)	■	■	■	■	■	■	■
6 Coordination phase	■	■	■	■		■	
7 Workshop 3, Dec. 20, 2011, (30)	■	■	■	■	■	■	■
8 Coordination phase	■	■	■			■	

Table 1: Integration of stakeholders

Workshops/Date	**Methods**
Coordination Phase 1	Data gathering, stakeholder coordination, workshop preparation
Workshop 1 - Vision, Oct. 3-4, 2011	'future conference'- holistic, systems-oriented, topics covering past (last 10 years), present, future **Small group sessions => vision**
Research phase 2	Data gathering, data analysis, energy and CO_2 emission modelling, bilateral discussions between project partners, interviews, sociological analysis, workshop preparation
Workshop 2 .- Roadmap, Nov. 11-12, 2011	Sociological analysis of Bruck an der Mur Energy demand and supply scenarios until 2050 and assessment in terms of CO_2 emissions Travel demand and traffic emissions model (CO_2) for all modes World Cafe, small group sessions **Assessment of all measures => roadmap**
Research phase 3	Bilateral discussion, needs analysis of town segments, workshop preparation
Workshop 3 – Action plan, Dec. 20, 2011	Presentations, small group sessions Determining requirements for all 5 geographic areas **Concretising of 5 project ideas => action plan**

Table 2: Methods applied during stakeholder process

3.3 Results

The results of the workshops as illustrated in table 3 below reflect the diversity of participants' backgrounds and interests. The holistic approach with the focus on achieving a high quality living and working environment in an attractive location for business, living and recreational activities was carried through the entire process. The overarching issues of a shrinking and ageing population and the high level of industrialisation were driving discussions and the need for changes in the urban environment. Energy and mobility issues were considered important, but only two of many topics that needed consideration. During the workshops, it repeatedly became evident that the smart city concept with its focus on integrated urban planning provided a very good basis for discussions and an opportunity to take into account a broad set of topics. Participants expressed the wish to implement many of the smaller project ideas generated during discussions even without external funding opportunities.

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Workshops/Date	Results
Workshop 1 - Vision, Oct. 3-4, 2011	**Past and present**: major issues- demographic change, social and societal issues, economic needs and employment, traffic and mobility, energy, politics, financial markets, construction/living situation, health, quality of life **Future – Vision**: alternative forms of energy and combinations thereof, cultural and creative think-tank, excellent education opportunities at all levels, new living facilities, new mobility concepts, public participation, concept 'kurze Wege' (small distances), need for a change in values
Workshop 2 .- Roadmap, Nov. 11-12, 2011	**Guiding concept** – Lebens(t)raum am Fluss (living along the river – a dream come true)-all other issues were fit into this concept **Energy demand** and **supply scenarios** presented in terms of CO_2 emissions: Industrial energy use 8 times higher than residential energy use, separate scenarios for both sectors **Multi-modal traffic demand model** for Bruck an der Mur: CO_2 emissions for all modes presented **Measures for roadmap** developed and assessed in following areas: mobility/traffic, energy/energy efficiency, renewables, industry and urban planning
Workshop 3 – Action plan, Dec. 20, 2011	Bruck an der Mur divided into **6 geographic areas**: Grazer Vorstadt – smart economy, Altstadt – smart downtown, Bahnhofsviertel – smart mobility, neuer Siedlungsraum –smartest living, bestehender Siedlungsraum – smart living and Gewässer – smart streams – developed requirements and needs for each area Five **potential projects** discussed in-depth: -Eco-electricity for households: 100% of households obtain electricity from renewables -City reframing: telemetric approaches, public participation, public space central -Smart climate place: telemetric approaches, regional products -Mobility management: improve public transit connections, reduce automobile traffic, find innovative multi-modal options -LED for public streets: install LED in public places to improve lighting

Table 3: Results of Workshops 1-3

4 LESSONS LEARNED

A number of crucial lessons can be drawn from this stakeholder process and applied in similar activities in other communities. The outcomes may lead to concrete demonstration activities in the future. The stakeholder process can be considered successful for the following main reasons:

- Stakeholders: a large number of stakeholders from various different backgrounds and organisations were involved early on in the process, attended all three workshops and were very much engaged in the at times controversial discussions. This did not only guarantee that they felt included and could contribute, but it also helped legitimize the process and enabled stakeholders to bring in their individual knowledge and interests. During the process, it became transparent that a lot of ideas could not have been developed without the power of collective knowledge of all stakeholders. Because of an open and adaptable process design, stakeholders could also develop trust and become used to the process and each other.
- Professional moderation: the moderator provided appropriate and flexible methods depending on the needs of the stakeholders and the process in order to achieve the objectives set during the three workshops. She also set the stage for a very open and transparent process during all workshops.
- Project management: the project manager was highly engaged, professional and diplomatic and knew the city and ist political environment very well. He also was well-known in the community. He spent a lot of time in bilateral discussions between workshops with project partners to inform, gather data and develop project ideas. He also regularly informed the major about current project activities and new and potenially sensitive information to ensure project success.
- Sociological impetus: the stakeholders became highly motivated when an urban sociologist provided input to workshop participants as to how the city might be able to change its image from an industrial town to an attractive town along rivers and provide better access to them. He also emphasised the importance of public participation in the urban improvement process.

- Building on strengths: Bruck an der Mur benefitted from being able to build on existing activities. A lot of activities such as increasing the capacity of the biomass district heating plant, suggestions to improve energy efficiency from industrial partners, refurbishment of the train station and associated mobility-related project ideas as well as ideas to improve the attractiveness and livability of the town to turn it into a more viable business location had already been in discussion or under way.
- Focus on holistic, integrative urban redevelopment: issues surrounding the topics of energy and mobility only played a minor role. Those topics could have played a much more prominent role given the fact the project was mainly aimed at considering energy and mobility issues. Instead, it was much more important to all stakeholders to view the city as an urban environment with a broad set of issues that should all be looked at simultaneously in order to find viable long-term solutions. Participants wanted to work toward a higher quality of life in the face of a shrinking population, a dwindling communal budget and economic competitiveness in the region. During the discussions mobility and energy topics were woven into project ideas rather than being the drivers for specific projects.
- Funding impetus: it needs to be stated very clearly that this process and with it the opportunity to renew the city of Bruck would never have taken place without the funding impetus provided by the Fit4Set programme. Given the budgetary constraints in communities at the moment, initiatives such as this stakeholder process or the construction of demonstration projects would never have occurred.
- Large pool of project ideas: aside from the actual project ideas relevant for the next call, the stakeholders developed numerous project ideas that can be developed step by step in the future. They vary in size and financial volume and most of them will require additional public or private funding. Nevertheless, some like providing better access to the river Mur at some key access points could be implemented very soon. Both, big demonstration projects and small projects all work toward the common objective of achieving a high quality of life in a high quality environment where the rivers and streams play a much more prominent role.

5 CONCLUSIONS AND NEXT STEPS

The city of Bruck an der Mur is a highly industrialised city facing demographic problems such as a declining and ageing population, competition for space and budgetary constraints. In an effort to reduce conflicts and find viable, long-term solutions, the city engaged in a large stakeholder process involving a variety of local stakeholders including the city of Bruck an der Mur, city council, industry, business, energy providers, public transit companies, mobility firms, non-profit organisations, research organisations, and universities. In the course of the 6 months long stakeholder process dealing with urban development and climate protection issues, stakeholders developed a vision for 2050, a roadmap and an action plan for a smart city.

The smart city approach offered a new way to find integrated and interdisciplinary solutions to existing problems. The holistic approach allowed all stakeholders to develop interlinked ideas for the entire urban region and to take advantage of synergies when applying measures in different fields simultaneously toward the same objectives.

Lessons learned from this process are numerous and can and should be considered in similar processes in different communities. They include the important role of a diverse set of engaged stakeholders who have the opportunity to contribute in an open, engaging and trusting environment. Project management was instrumental in keeping all participants informed, passing along new and sensitive information when appropriate and involving key individuals. An urban sociologist provided highly motivating input and a guiding concept (Lebens(t)raum am Fluss) that was carried through the entire process and will certainly live on even beyond this project.

5.1 Next steps

Bruck an der Mur submitted a proposal in the second Fit4Set programme call which focuses on the historic town centre of Bruck an der Mur with its large urban development potential. The project „Smart historic site Bruck an der Mur“ will deal with climate protection and restructuring and refurbishing parts of the existing old town. An integrated planning concept with interlinked demonstration projects in the historic old town is supposed to show how climate protection measures and measures to improve quality of life can counteract

population decline. The following topics will be dealt with integratively in the project: mobility management, creating attractive public space, energy networks, communal supply and disposal systems, buildings as well as information and communication technologies. It is also planned to intensify communication with the population, because everyone's life style (consumer behaviour, mobility, leisure activities) determines the success of local climate protection and quality of life measures.

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