imagine

Low-Energy City Policy Handbook

Part B

Lost in ENERGY transition?

Methods & tools

energycities
WHERE ACTION & VISION MEET

European Union
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INNOVATION & ENVIRONMENT
REGIONS OF EUROPE SHARING SOLUTIONS

CONTENTS

WHO IS THIS HANDBOOK FOR?

This handbook is aimed at decision makers in European local authorities searching for new ways to work towards achieving low energy cities. It is intended to give inspiration and practical advice to elected political leaders as well as civil servants to run their own energy transition process at the local level.

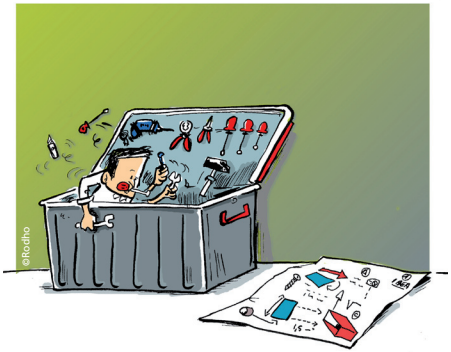
There are two ways to read this handbook.

In Part A, it explains the way local authorities organise themselves to start and run a political and organisational process to set sustainable energy policies. This part of the handbook presents the results of the development of Local Energy Roadmaps 2050 in the eight IMAGINE pilot cities.

Part B provides insights on citizen and stakeholder involvement at city level, answering the question "how does a city, including all its components, manage to change its energy system?".
Indeed, the role of local authorities in tackling climate change and energy issues is essential, not only as important players, but mostly as coordinators of a whole mix of stakeholders. This part goes behind the scenes and gives details on the making of local authorities' efforts in favour of the energy transition.

Who is this handbook not for?

What you will not find in this handbook are answers to technology-related questions. You will not learn about kWhs, energy production, energy management, building efficiency or "smart technologies".



Too often, decisions are made behind closed doors, or are made because one didn't know better, or because "it has always been done this way". This handbook highlights the results of three years of interregional exchange of experiences. You will find processes that have been experimented, feedback on their implementation and advice on how to carry them out. You will find ideas for new forms of political practises, communication and participation processes, and inspiration to involve people and help them work together.

Who's afraid of the active citizen?

By Ingrid Prikken, INVOLVE (www.involve.org.uk)

Negative myths about citizen engagement sometimes prevent elected representatives and decision-makers from engaging as it is "too risky", "too expensive", or "inefficient". Is it really so?

Myths and mistakes

Mob rule. Decision-makers may have had negative experiences of engaging citizens when they were confronted with combative people. Yet, most people are polite and keen to have a civilised, constructive and informed discussion.

Citizens cannot discuss complex issues. There are so many examples of engagement processes where groups of 'ordinary' citizens engaged intelligently in complex topics. Engaging people in a meaningful way can have a positive impact on attitudes and behaviours. We may find that 'ordinary' citizens are able to come up with ingenious solutions which may have eluded experts.

Engagement is too expensive... unless the costs of not engaging are considered together with the costs of your project. Non-engagement may result in obstacles with rather serious consequences in terms of costs, both from a monetary (complaints procedures or legal costs) and non-monetary (negative impact on image or decrease in trust) point of view.

Overcoming the myths

Focus on what unites citizens, not on what divides them. Start by identifying with what you have in common and map the strengths. Make it relevant to citizens, but do not assume that the incentives that work for one group can automatically be transferred to another. Find out what the "entry" point is for different types of people, who will have different attitudes and behaviours towards engaging with energy.

Inspire citizens to engage. A powerful way of engaging citizens with the transition to a low carbon future is to bring positive messages. Show the difference people are making, whether that is through "storytelling", challenge prizes, or celebrating good practice... And make it fun!

Engaging citizens is not straightforward. There are many obstacles and areas of confusion. However, engaging citizens can ensure that public values are taken into account, develop a better understanding of complex issues, and create greater ownership for energy transition decisions.

The key is to find that space where citizens are empowered to engage and where those in power demonstrate strong leadership and have the courage to step back and let things happen.

Involving citizens

Estaminets du Climat (Climate Cafés) in Lille

Background

In order to involve citizens and local stakeholders in the local Climate and Energy plan, the municipality of Lille decided to run an experiment in two neighbourhoods. In *Moulins*, and *Saint Maurice Pellevoisin*, residents were invited to participate in the *Estaminets du Climat*. (*"Estaminets"* are typical local small bars in the Lille area).

Process

Citizen involvement

Three meetings were organised in each neighbourhood from March to June 2012. Those meetings were held in small local bars, usually in the evening, where participants were offered drinks. A lot of effort was made to create a relaxed and cosy atmosphere.

Each of the three meetings focused on a particular topic:

1. Awareness-raising on climate change issues, challenges, perspectives and levels of action;
2. Individual practices and initiatives – What's already been done? Suggestions and personal engagement;
3. Collective proposals – Objectives of the residents, role of the municipality.

Involvement of local stakeholders

One specific *Estaminet* was dedicated to local stakeholders in October 2012. The topic of discussion was managing energy consumption and energy efficiency. This meeting was presided by the city councillor in charge of energy savings, Mr Philippe Tostain.

Results

- Outputs of the citizens' *Estaminets* were introduced to Lille City Council and will be integrated into the city's Climate and Energy Plan.
- During the stakeholders' *Estaminets*, the decision was made to create a local network for interested local players and to implement new energy efficiency measures.

Budget

€25,000 for organising, preparing, reporting and moderating the Climate *Estaminets*. The City of Lille engaged in a public procurement process in order to entrust the activities to a private consultancy.

Outreach

The participants of the *Estaminets* are expected to play the role of multipliers in their families, in their neighbourhoods, friends and work networks.

Modena's school awards

Background

In order to involve primary and secondary school children and their families, the City of Modena launched a competition between schools. A number of energy-related initiatives involved numerous schools and families.

Process

1. Imagine Modena in 2050

The idea of "Imagine with schools | Imagine Modena in 2050" is very simple: each pupil was given the opportunity to develop proposals for the city's sustainable development. More specifically, the participants in the competition (either in groups or individually) worked on various issues linked to mobility, urban planning, energy saving, building, etc., and submitted projects in the form of models, drawings, websites, presentations and videos.

In March 2013, at the inauguration of the exhibition "EnergETICally" *(EnergETICAmente)*, the competition was presented. The project involved twelve local schools, nearly 600 students and 30 teachers. The best entries were selected by a jury consisting of the local IMAGINE project team and external experts. The selection was made according to defined and shared criteria, taking into account different age groups. Three winners of each school were rewarded on 5 June 2013 during the international IMAGINE seminar. The initiative was a great success and the ideas presented were imaginative, creative but also feasible and substantial.

2. Training for teachers

As an accompanying measure, the City of Modena decided to offer teachers a training course on energy and sustainability.

The course was aimed at promoting actions to achieve more sustainable behaviour in schools, and at delivering educational and training tools and information to teachers and environmental educators that would allow them to develop a teaching method on energy and sustainability (through an "energy performance audit" of the school building). The training was composed of three two-hour sessions.

3. Exhibition

The exhibition was hosted by a high school and was divided into two parts with about 50 posters and two videos. The first part called "Italian pioneers of solar energy" was dealing with the issues of pioneers, technologies, machines and solar systems that marked the fundamental stages in the development of solar technologies, with photographs and unpublished stories that were retrieved from archives and collections, sometimes even forgotten. The second part of the exhibition, "Solar energy from the past to the future", drew the attention of the visitors to the use of energy on Earth, combining history, arts, science and technology. The initiative involved students of primary and secondary schools. As a conclusion to this exhibition, a public conference was organised.

Results

- Strong involvement of children (and their families) in issues regarding climate change, energy efficiency, energy savings, smart solutions in buildings and in the city, sustainable mobility, water savings;
- Training and awareness-raising of teachers and education body;
- Effective collection of ideas and projects;
- Innovative point of view on the future of the city.

Budget

€203,50 for the first step. No additional costs for step 2.

Outreach

Around 100 people took part in the main workshops.
The events were promoted through the local IMAGINE project website and also *via* press releases, especially on the occasion of the award ceremony for schools.

This method was also successfully used by the City of Figueres.

Energy Twitter™ and Instagram™ photography competition in Figueres

Background

The city of Figueres was willing to involve citizens in the IMAGINE project using "2.0" tools. The objective was to involve the general public – and particularly youngsters, who often use new technologies and photography as a means of expression.
The municipality decided to organise a photo competition using the social networks Twitter™ and Instagram™.

Process

1. Setting up the rules of the game

The first step in preparing this competition was to establish the rules and to provide participants with basic information such as the objectives of the competition, how to participate, themes and format presentation of the pictures, jury members, etc. These rules were approved by Figueres City Council.

2. Advertising the competition

The second step consisted in advertising the competition through "2.0" tools such as Twitter™, Facebook™ and the webpage of the city council.

Two different categories were defined:

- "No" > Photos picturing undesired situations, consequences, effects of the current (and potentially future) energy situation. [hashtag #Fgs2050No]
- "Yes" > Photos showing a new, positive (and desired) energy model. [hashtag #Fgs2050Si]

Competition was opened from 1 July to 15 August 2013.

3. Selection of the winners

The jury was composed of the president of the IAEDEN (the biggest environmentalist NGO in the city), a representative of the local media, city technicians and the city councillor for Youth and Environment.
57 photos were submitted on Twitter™, some were dismissed as they did not follow the rules.
After the deadline, the jury met to decide on the winners, evaluating the link to energy issues, but also the artistic and aesthetic aspects of the image.

4. Awards

Three prizes were awarded in each category. The ceremony took place in the Chamber of the City Hall. The awarded pictures were displayed on Figueres' webpage.

Results

The level of participation was lower than expected. However, a strong involvement of the participants was noticed, as most of them sent more than one picture.
The pictures sent dealt with energy in an interesting way and showed a high level of awareness and willingness to switch to a new energy model. The most represented thematic fields were renewable energies, sustainable mobility and the impact of energy infrastructures on the territory.
The competition helped give an overview of the level of knowledge and awareness of the participants regarding energy issues.

Budget

€350 for the awards: two schoolbags, two solar chargers and two low-energy light bulbs kits.

Involvement of school children in Bistrița

Background

In order to raise awareness amongst school children and to involve them in sustainable energy issues, the city of Bistrița extended the focus of the existing "ECO groups" to schools. Those groups focus on general environmental issues. Each group is composed of ten enthusiastic participants and coordinated by a teacher.
The ECO groups were created in 2004 in all 17 – secondary and high – schools.

Process

1. Creation and organisation of the ECO groups

The ECO groups were launched in 2003 as part of the annual "Green Flag" competition between local schools, which was organised by the municipality on the occasion of the World Environment Day.
The objectives of this competition were to:

- Strengthen civility amongst the inhabitants with the help of younsters;
- Making the city cleaner;
- Encourage positive competitiveness between schools in Bistrița.

Each year, the ECO groups are informed of the rules of the "Green Flag" competition on the same day when the municipality organises the "In town without my car" event. The competition takes place throughout the school year. Actions undertaken by each school are evaluated and the award ceremony is held during the World Environment Day (on 5 June).

2. Using the ECO groups to focus on energy

In the framework of the IMAGINE project, the ECO groups participated (100 pupils) in three Local Energy Forums. They got involved in the dialogue initiated by the facilitator, proving to have a spontaneous, creative and serious approach to such a complex topic such as the transition to a sustainable energy future.

Budget

€1000 for 200 tee-shirts customised with the "ECO GROUP".
€125 for two "green flags" customised with "Bistrița green city, Bistrița clean city!"

Results

By involving all pupils throughout the year, each ECO group organises about ten actions in favour of environmental protection.
In 2014, each ECO group committed to keeping clean one public green space or public playground near their school. The municipality placed signs stating that: "The pupils of XX School maintain this place. Please respect their work. Keep it clean!"

Competition among citizens for reducing water consumption in Bistrița

Background

On 31 March 2012, on the occasion of the Romanian "Earth Hour" event, Mayor of Bistrița Ovidiu Teodor Crețu officially launched an environmental challenge.
The idea was simple: a competition between the inhabitants of blocks of flats to reduce their water consumption. The aim of the challenge, which took place from July to December 2012, was to promote energy efficiency measures and eco-friendly behaviours.

Process

1. Monitoring

The energy department of the municipality monitored the monthly consumption of water for each condominium, relying on the bills issued by the local supplier and sent in copy to the city department by housing associations.
The energy department of the municipality created a database for the 14 condominiums that entered the competition.

2. Objective

Reducing water consumption in blocks of flats by at least 5m³/month/person.

3. Advertising

- A giant poster was hung in the City Hall;
- Representatives of the housing associations were provided information and given the registration package (a poster, the city council decision establishing the challenge and registration forms);
- Cooperation with utilities for promoting ideas to reduce water consumption in the monthly municipal newspaper.
- Throughout the duration of the competition, intermediary results were continuously published in the online newspaper.

4. Awards

An award ceremony was organised in January 2013. The owners of the apartments of the winning block were exempted to pay the local tax for their habitation in 2013.

Results

The owners of the apartments of the winning block managed to reach a monthly average consumption of 3m³/person. Four other blocks reached a monthly consumption of less than 5m³/person. The competition also helped identify malfunctions in the water pipes and meters.

Budget

€10 for the registration package, copies of the bills and diplomas.

Outreach

14 blocks for a total of 168 flats participated in the competition, which was promoted at local, national and European levels by posting an engagement poster in the online newspaper, and in the European gallery of the ENGAGE campaign[1].

1-Energy Cities' ENGAGE campaign www.citiesengage.eu

An online survey to get citizens' opinions on energy issues in Figueres

Background

With the aim of getting an idea of the citizens' level of knowledge on energy issues and of presenting possible pathways for a local strategy, the City of Figueres created an online survey accessible to all citizens.

Process

1. Preparing a questionnaire

This was the difficult part, as the staff had to define all the questions. The questionnaire started with a brief presentation of the issues related to energy and the goals of the IMAGINE... low energy cities project. They came up with 15 questions, some were closed questions and some allowed for an open answer. All in all, the questions were designed to evaluate the opinion of citizens on individual use of energy (especially at home), energy consumption in the city and the future energy options for Figueres.

2. Going online

The municipality of Figueres wanted to reach citizens through online media and investigated the possibilites of an online platform that could have a survey providing statistical treatment. This task required external expertise. The company *E-encuesta.com* was chosen to manage the questionnaire. An online platform was set up, which allowed for the survey to be easily designed and for a complete statistical analysis via graphs and data tables.
Citizens could fill in the survey on the webpage of the municipality. It was open from 1 January 2013 to 30 April 2014.

3. Advertising

The city webpage and Twitter™ were used to promote the survey and invite all the citizens to fill it in. The online platform was also advertised during Local Energy Forums. In order to reach even more people, the survey was distributed in all the schools in Figueres. The school children were asked to complete it at home with the help of their parents.

4. Analysing results

One of the most intensive tasks (with the design of the survey) was to analyse the opinions of citizens and to draw conclusions from them. In the end, there were 507 questionnaires to analyse.

Results

The results of the survey were presented in a technical analysis document.
The survey brought outputs for the municipality as well as interesting feedback:

- The perception of energy use is strongly focused on the kitchen devices and air conditioning, followed by heating. This perception is probably linked to the costs, as the electric kWh is nearly three times more expensive than city gas.
- People perceive the business sector as the biggest energy consumer in the city.
- Regarding consumption habits, people answering the survey are aware of the energy waste issue. 90% of them answered that they switch off the lights and electrical appliances when they get out of a room. More than 70% often or always use low-energy bulbs, or buy low-energy electrical appliances and use them at their maximum capacity.
- Regarding the attitude on reducing energy costs, nearly 60% declare that they have taken measures in the fields of heating, 40% on insulation, 80% on lighting, 50% on electrical appliances, but only 5% on other things such as renewable energy (solar or wind power).
- Regarding consumption patterns, producing energy from renewable sources appears as an important measure to take for the citizens - followed by energy efficiency - while reducing energy demands is according to them one of the last actions to undertake. The respondents chose economic costs, space in the city and awareness as main drivers to reach sustainable energy objectives.
- The public administration is expected to continue promoting renewable energies.
- Concerning mobility, people pictured the year 2050 as dominated by e-mobility. Cycling and walking also play an important role in the future of mobility. 90% of the respondents would agree on making the city more peaceful by promoting the use of bikes and adapting streets to pedestrians.

- 90% of the participants in the survey would like to get locally-generated energy as well as renewable sources for energy production. 85% would see it positive if the municipality was the producer and distributor of energy and 60% would be ready to participate as investors.

Budget

€100 – cost of an IT program for the statistical treatment and survey creation.

Outreach

Participation in the survey was a success as 507 questionnaires were filled in.

Figueres' development of a vision through citizen forums

Background

Within the IMAGINE project, the city of Figueres chose to delegate the organisation of three citizen forums to an external consultancy. The reason for this choice was the lack of internal capacity to design, coordinate, invigorate and analyse the results of these three forums. It was then decided to hire a company specialised in participatory processes.

Process

1. Choosing a service provider

Neopolis, a consultancy specialised in citizen participation, was contacted as it had already worked with the municipality on other participatory issues.

2. Designing the participatory process

The process was designed by the consultancy with contribution from the city staff. They discussed the format of the sessions, the documents to be prepared and the equipment required.

3. Linking the process to institutional process

The city administration seized the opportunity to link the IMAGINE project to the public consultation process organised in the framework of the revision of the urban planning documents. It was decided to connect the processes.

4. The local forums

• First local forum - 4 November 2013

Prior to the forum, the registered participants were provided with information about the current energy situation and with a presentation of the issue to be addressed.

Session:

1. Collecting participants' contact details to send the results of the session and other documents of interest;
2. Presentation of the context (the energy issue, the IMAGINE project, objectives of the forum);
3. Creation of three discussion groups of 4-5 people on the following topics: energy at individual and household level, energy at collective and public level and energy production & distribution;
4. Each group had a coordinator and was provided with questions to focus the debate;
5. Once the discussion time was over, the ideas were shared with all groups. Participants were also requested to specify the challenges and difficulties they could see for their proposals;
6. Neopolis prepared a document with the outputs of the forum, which was sent by e-mail to all participants.

• Second local forum - 25 November 2013
This forum was reserved for energy experts. Researchers on energy, representatives of energy companies, of professional associations, and energy experts were invited. The session unfolded the same way the first forum did. The themes and the methodology were the same. Only the participating stakeholders changed.

• Third local forum - 3 February 2014
A document gathering ideas and proposals from the two first forums was prepared. This summary, seen as a first draft of the city's vision for 2050, was sent to the participants of the two forums. All of them were invited to a third forum with the aim to discuss this draft and define a roadmap showing the ways to implement this vision.
Once the energy vision was read, participants were divided into three groups to discuss specific aspects of this vision and were asked to define pathways and milestones for a corresponding Energy Roadmap. Neopolis prepared a document with the results and conclusions of the session.

Results

These three local forums built the core of the definition of the future energy vision in Figueres and allowed the energy roadmap to be defined. This process allowed for discussion and for concerns, knowledge and proposals from the citizens to be gathered. The participatory forums were set out to be very open. As a result, very different proposals emerged, including many ambitious targets, picturing a completely different scenario than the current one, a

new energy production and consumption model.
Even if larger participation was expected, the engagement and motivation of participants was very high, which has provided solid ideas with a high consensus level.
Surprisingly (or not), the proposals from the citizens were the most ambitious and require a much more radical change of the energy model.
The municipality staff was really pleased with the external expertise, as *Neopolis* provided different participatory methodologies and brought experience to handle participatory processes. Successful citizen participation requires prepared professionals.

Budget

€6,752 for external expertise.
€350 for catering expenses.

Outreach

1st workshop, open to all citizens: 27 participants and 3 moderators.
2nd workshop - for experts, on invitation only: 28 participants and 2 moderators.
3rd local forum, preparation of the roadmap: 28 participants and 3 moderators.

Raising awareness through conferences on energy in Figueres

Background

The City of Figueres and the Local Energy Agency organised a series of conferences opened to all citizens dealing with different aspects of energy. These sessions took place in public areas such as the local library or the training centre of Figueres.

Process

Three conferences were organised.

1. The consumer and the electrical market (26 January 2012)
This first conference focused on how to reduce electricity bills. The speaker was Montse Porterias, from the Local Energy Agency. The aim was to provide citizens with information to understand their electricity bills and to promote energy savings.

2. The Transition Towns initiative (26 February 2013)
The speakers of this conference were Filipa Pimentel and Juan del Río. The aim was to present the Transition Towns movement, which suggests an alternative model of local development with energy and goods produced in a sustainable way, getting the sense of community back and living in an eco-friendly way.

3. The experience of the city of Wildpoldsried (Germany)
Günter Möguele, Deputy Mayor of Wildpoldsried, presented the energy transition model in his town. In only 20 years, Wildpoldsried, the "Energy village" has been able to produce five times more energy than it uses, using renewable sources.

Results

It was the first time such conferences on energy issues were organised in Figueres. The discussion on the energy model and the need of a public debate had never been suggested to the citizens. Therefore, that was the first step to open a debate and the first experience of exchanging knowledge between experts and citizens.
These conferences helped raise awareness amongst citizens.
Citizens showed a great interest in learning how to read their bills, as it is a daily concern which usually brings confusion.
The experience of Wildpoldsried was a positive surprise for citizens as they could see a city project come true.
The *Transition Towns* presentation brought together followers of this movement, who had the opportunity to know it better.

Budget

€250 to cover the travel costs for speakers from the *Transition Towns* network.

Outreach

The attendance was different in every session, with an average of around 30 participants per conference.

Odense's Sustainability Puzzle - A tool for considering sustainability in all aspects of a project

Background

The Sustainability Puzzle developed by Odense is a unique tool that helps to consider sustainability in all dimensions of a project, a work area, a plan, a campaign or a business. Through the puzzle it is possible to analyse all the components of a task or project and find out where and how to integrate sustainability.

Process

1. The puzzle

The puzzle has pieces of three colours representing the social (orange), economic (blue) and environmental (green) fields of sustainability. Each piece proposes a sub-theme of one of the three dimensions (such as health, education, climate adaptation).
The puzzle helps a group of people make sure that they have taken all sustainability fields into account in their project.
Each piece/sub-theme is discussed by the group. First, it is discussed whether or not the topic is relevant. If so, the group discusses how to integrate it in the project. This way, the sustainability puzzle helps consider the task/project as a whole and generate ideas to make the solutions more sustainable.

2. The game

Before the puzzle session, it's important to get participants to focus on the wide sustainability term. It's important to try thinking "out of the box" to come up with new ideas and new aspects that should be considered in the planning process of a project. It is also important to have representatives from various sectors, as they will add different perspectives to the case. The puzzle can be used at different stages of projects, but preferably early in the process. Otherwise some issues can be very difficult to integrate.

Results

Odense uses this tool to ensure its sustainability efforts are reflected into the staff's daily tasks. Employees in all five city departments work with the Sustainability Puzzle.
The puzzle is an efficient tool to generate sustainability innovation. The tool can be used by employees of the municipality, or in a participatory process with citizens and other stakeholders in the city for a broader view in the planning process.

Budget

Staff working hours for holding sustainability workshops. The puzzle itself can be printed on paper or carton at low cost on any printer.

Training of energy managers for municipal buildings in Bistrița

Background

In order to get an overview of the energy and water consumption of its own buildings, the city of Bistrița trained staff members to allow them to become energy managers.

Process

1. Use of an Energy Management System

The municipality acquired an application that allows for the creation of a data base of the energy and water consumption figures in public buildings, in order to ensure a continuous monitoring and to get analytical reports.

2. Energy managers

Bistrița organised a training course for the 40 energy managers in schools and municipal offices. Those people are responsible for drawing up charts (one per building) thanks to the software application. The chart summarises the monthly water, electricity and gas consumption and a series of data to allow for monitoring.
This way, the energy department and the environment protection department monthly monitor the data that is reported by the 40 energy managers in the Energy Management System application.

Results

©Shutterstock

- Evaluating the necessity of energy refurbishment of the public buildings managed by the municipality;
- Monitoring the consumption (gas, electricity and water) after having implemented energy efficiency measures in public buildings;
- Data necessary for the reports to be submitted (every two years) to the Covenant of Mayors Office regarding the implementation of Bistrița's Sustainable Energy Action Plan;
- Annual allocation of utilities budget of the city-owned public buildings;
- Using the data in the local Display®[1] campaign.

Budget

€1,000 for the "Energy Management System" application, the training course for 40 energy managers from schools and the municipality and office supplies.

Outreach

40 persons trained as energy managers for almost 112 city-owned buildings.

1-Energy Cities' Display® campaign: www.display-campaign.org

Milton Keynes took a fresh look at the local low carbon strategy

Background

The core project team associated with producing the Roadmap consisted of 4-5 staff members working on the project as well as their normal roles within the organisation. The work was set up as a formal project within the council and required a project sponsor, manager and 'client' with key objectives and milestones. These roles were not fixed, and varied according to the demands of the tasks. A weekly project management meeting allowed progress updates and issues to be discussed and dealt with. Less regular meetings allowed the project sponsor to track progress against the agreed project milestones. The project staff acted as the point of contact between the different sections of the council, helping break down barriers between them. Staff time was recorded to enable resources for the project to be used appropriately.

Process

1. Initially, the project team had to determine why there was a need for the strategy and how it would link into the council's existing priorities and areas of influence. Once it was formalised, it could be used as the basis for communication of the core project aims, both within the council and to a wider audience. A difficult task was to determine who the stakeholders for the strategy were, how they could be engaged with and how to make sense of their input. Fortunately, the council has an existing database of consultees used in other policy and strategy consultations.
2. Three local engagement events combined the ideas of the stakeholders into a coherent format. After each event, the project team developed and refined the strategy further, taking feedback from the attendees into account.
3. The information from the engagement events along with the use of the project's common assessment grid was used to develop the draft strategy. The environmental assessment "grid" was an important tool to identify existing policies, responsibilities and actions for most of the areas covered by the draft strategy. Its use lead to direct engagement with internal actors within the local authority, allowing the project team to incorporate existing strategic aims into the combined long term strategy. This is important, as previous strategies operated in narrow areas, dealing with that section's responsibilities and not how these may have other social effects. For example, housing policies take into account the fabric of the buildings, but not the social consequences of poor thermal quality of structures, which have health and economic implications.

4. The final draft of the Roadmap was released on the council website for public consultation, along with a web survey designed to gather wider response to the document. After taking the results of the public consultation into account, a final version of the Roadmap was circulated within the council, including the legal section, before being presented to the elected members for approval. After approval, the document becomes a formal council strategy, which all sectors of the council must take note of when making policies and operating decisions.

Results

The interest generated by the project has been considerable. A key outcome is the dialogue between the project team and other sectors of the local authority, where previously this had been limited. The project has also received support from elected members, who recognise the importance of public consultation on these issues. The impact is to focus attention on the importance of early action for long environmental and economic benefits.

Budget

The global budget for the project for the City of Milton Keynes was €145,000, including exchange visits with project partners and attendance at appropriate seminars.

Outreach

The process of engagement with local stakeholders has been good for publicising the need for action now to reduce dependency on external resources. The message is that this will have long term impact on jobs and the local economy, reducing the flow of finances out of the area, to be used for local environmentally sound and sustainable solutions to global issues.

Involving stakeholders

Munich's multi-stakeholder alliance

"Without the active and innovative cooperation of the about 100 members of the local alliance Munich for Climate Protection, the city cannot achieve its ambitious target - reducing CO_2 emissions by at least 50 % by 2030 compared to 1990."
Mayor Hep Monatzeder, 2013.

Background

The "Munich for Climate Protection" alliance is an informal gathering of local stakeholders (administration, companies, science, institutions, associations) which aims at developing common climate protection strategies.

Budget

Around €60.000/year for coordination and communication.

Process

Mayor Hep Monatzeder founded "Munich for Climate Protection" in 2007 and headed the steering committee until 2013. The alliance is coordinated by the Department of Environment, with the support of a consulting agency for the communication and implementation process.

1. 2007-2010: Planning

During the planning phase, the alliance was organised in four working groups (sustainable energy production, efficient use of energy, energy conservation, and sustainable mobility), each coordinated by a key local player. Participants could share experience and develop new climate protection projects. Furthermore, some of the largest companies in Munich could be involved from the start. For instance, Siemens offered a study titled "Paths towards a carbon-free future for Munich" on the city's 850th anniversary in 2058.
The Department of Environment also coordinated a working group focused on communication and education.

2. 2010-2013: Implementation

Members of the "Munich for Climate Protection" commit to:
1. In-house CO_2 monitoring and reporting,
2. Participate in at least one CO_2 reduction project.
During the implementation phase, the alliance was organised around four interdisciplinary projects: Munich Model House, Solar Energy for Munich, E-Mobility in Munich, Eco-friendly Oktoberfest.

Results

Incentives for joining are: economisation of energy, priority access to key actors, cooperation opportunities and prestigious awards. More than 100 partners have been involved and developed over 60 CO_2-reduction projects, such as training course for teachers, workshop on energy-efficient lighting, the Munich Refurbishment agreement, development of a taxi sharing app, e-bikes for municipal staff, etc.

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Using the World Café method to build a local long-term vision in Munich

Background

In April 2014, the Department of Health and Environment of the City of Munich organised a local forum entitled "Munich on the way to a 2000-Watt society" with stakeholders from different sectors and backgrounds. About 60 participants discussed a vision for Munich as a low energy city in 2050. The event was jointly facilitated by a consulting agency and the employees of the department.

Budget

€27,250 for the consulting agency
€2,280 for catering services

Process

The idea was to prepare a local energy roadmap 2050 to support Munich's vision of a 2000-Watt society with the participation of local stakeholders.
The municipality decided to involve the city administration, NGOs, commercial and industrial companies.

Organisation of the workshop:

- Creating the concept, setting a framework (brainstorming with colleagues, exchanging experience with others)
- Launching of a tender procedure for the consulting agency and the catering company
- Inviting the stakeholders (save-the-date, letter of invitation, reminder by e-mail)
- Planning the event with the consulting agency:

What results do we want to get? Which methods would be suitable? What is possible within one day? How can we explain the idea of the forum to the participants? What kind of background information do we need to provide? What issues should we deal with? What material is necessary? What about the costs? Who takes on the different roles in organising and facilitating the event?

- Moderating the local forum
- Debriefing the local forum with the consulting agency:
  What are the positive and negative aspects? Has anything unexpected happened? Are we satisfied with the outcome? What about the visions and milestones? Which feedback did we get?
- Creating a detailed documentation
- Drafting a local energy roadmap

Methods

The World Café is a structured conversational process in which groups of people discuss a topic at several tables, with individuals switching tables periodically and getting introduced to the previous discussion at their new table by a «table host». The municipality of Munich used this method to collect ideas for a 2000-watt society and to allow the municipality to gather expectations of the participants.

After a welcome and introduction to the concept of a 2000-Watt society and existing strategies of the City of Munich, all participants split up into groups of about 15 participants to develop innovative ideas and visions for a 2000-Watt society in 2050. Four different topics were discussed (energy production and distribution, buildings and private households, mobility and retail and industry) to find a way to achieve this vision.
The same question was used for the 4 topics. Each group walked from board to board to add in their ideas to the different topics, based on the ideas of the previous group.

The two main questions in this forum were:

- "What does the 2000-Watt society mean for energy production and distribution/ for buildings and private households/ for mobility/ for retail and industry for Munich in 2050?"
- "What kind of support do you expect from the city administration?"

At each station, a consultant was the "table host", being responsible for collecting the ideas of the participants and reporting them to the next group before they could start working on the same issue.
The results of both workshops, a detailed milestone plan for each of the four streams from 2020 until 2050, were presented to the plenum and discussed in-depth. They were included into the local energy roadmap.
All participants of the one-day forum were asked to send their feedback, comments and suggestions for improvement to the department of health and environment. The results of the IMAGINE forum as well as all presentations and background material were provided to all participants through an online platform.

Results

The forum successfully offered the opportunity to bring together stakeholders with various backgrounds. All participants were satisfied with being able to exchange in a relaxed atmosphere. All showed great motivation in searching common visions and milestones for a low energy city in 2050 and the results were interesting.

There was a consensus on the fact that the ambitious vision of Munich as a 2000-Watt society would only be achieved through multi-stakeholder cooperation.

Collaborative initiatives in Milton Keynes

Background

Milton Keynes (MK) is one of the few cities that was planned as a whole and built with future growth in mind. Today, it is one of the fastest growing cities in the UK. The challenge of supporting sustainable growth without exceeding the capacity of the infrastructure, and whilst meeting key carbon reduction targets, is a major one. Therefore, several collaborative initiatives were born, such as the Low Carbon Living Programme, MK:Smart and IMAGINE MK 2050.

Process

The Low Carbon Living Programme is developed to re-establish the city as a place where new ideas can be tested and innovation incorporated into daily living. A range of projects are proposed to support and encourage residents to embrace the low carbon agenda and offer a business environment which welcomes companies working in the "green" economy.
The Milton Keynes Low Carbon Programme prospectus[1] sets out the city's sustainable development under four main themes:

- Your part in the future: Engaging the community and local initiatives
- A low carbon city: Reducing the environmental impact of buildings and transport
- Technology: Improving the present and protecting the future
- Direction: Clear and informed strategies, policies and masterplanning

MK:Smart is a large collaborative initiative, partly funded by the Higher Education Funding Council for England (HEFCE) and led by The Open University to develop innovative solutions to support economic growth in Milton Keynes.
In addition to these technical solutions, MK:Smart also comprises ambitious education, business and community engagement activities, including:

- An integrated programme of business engagement, aimed at supporting businesses that wish to take advantage of the innovation capabilities developed in MK:Smart. A key component of this activity is the Innovation and Incubation Centre (IIC) at University Campus Milton Keynes (UCMK), providing training in data-driven business innovation and the digital economy, as well as hands-on support for business development, demonstration facilities, and an incubation space.

1-Available at www.zerocarbonhub.org

- A smart city education programme engaging a wide range of audiences, from local schools to higher education students and businesses. This programme is to provide advanced training covering digital technologies, business innovation and urban services to empower students and practitioners with the skills and competences needed to participate in the creation of a smart city.
- Engagement activity to involve citizens in the innovation process, not just through an outreach programme, but also by engaging the community in innovation-centric decision-making processes through the establishment of a Citizen Lab.

The MK:Smart partnership brings together The Open University, University of Bedfordshire, Cambridge University, British Telecom, Dell, E.ON, Anglian Water, HR Wallingford Ltd., the Satellite Applications Catapult, Milton Keynes Council and Community Action MK, together with a number of small and medium sized businesses.

Preparing the IMAGINE MK 2050 Roadmap was the occasion to take a fresh look at the Low Carbon strategy for Milton Keynes *(see Part B page 18)*.

Next steps

A key outcome is the dialogue between the project team and other sectors of the local authority, where previously this had been limited. The project has also received support from elected members, who recognise the importance of public consultation on these issues. The impact of the work to date is to focus attention on the importance of early action for long environmental and economic benefits.

The process of engagement with local stakeholders has been good for publicising the need for action now to reduce dependency on external resources. The message is that this will have long term impact on jobs and the local economy, reducing the flow of finances out of the area, to be used for local environmentally sound and sustainable solutions to global issues.

Odense's Green Business Growth – Craftsmen as energy ambassadors

Background

The municipality of Odense is a partner in "Green Business Growth" (www.grønerhvervsvækst.dk) which is a public-private partnership for municipalities, businesses, utilities and education centres. Its main mission is to create green jobs focusing on the energy renovation sector.

Process

When it comes to energy renovation solutions, local craftsmen are key players. This is why they are offered training in the fields of energy efficiency, sales and business development. The training lasts for nine days over three months. In Odense fifty craftsmen already benefitted from this training (carpenters, bricklayers, plumbers and electricians).
As a part of the training, the craftsmen present their skills and energy solutions at a local energy fair, where house owners can ask for an energy audit. After the energy audit, the craftsmen propose energy renovation measures to implement.
"Green Business Growth" and the City of Odense support the craftsmen by publishing case studies to inspire house owners to undertake energy-retrofitting works.

Results

For the municipality, the "green business" approach means considering sustainability in a socio-economic context. A new green job can be converted into economic value if you consider local development, tax, income and savings in social welfare. It also helps the municipality reach its ambitious climate and energy goals.

For companies, the approach opens new business areas and develops networking and cooperation. Craftsmen are encouraged to create networks (e.g. an electrician can provide a carpenter with work and the other way round). The craftsmen of the network have increased their turnover by 29% over the last two years while the other craftsmen have not experienced any growth in their activity. For home owners, it means a wiser energy use, better comfort, higher savings and it allows them to secure the value of the property.

Budget

€27,000 for the annual membership fee in "Green Business Growth".
€10,000 for initiatives such as renting a hall for an energy exhibition, marketing, catering on meetings and training days.

"Fifty-Fifty": Everybody wins when saving energy in Munich!

Background

Fifty-Fifty is an energy and water saving programme coordinated by the City of Munich that has been running in schools and kindergartens since 1996. It was first tested in 1994 in Hamburg, where all 450 schools are now participating.

It consists of an agreement between the municipality and the schools. Teachers and pupils are encouraged to reduce their energy and water consumption simply by changing their behaviours.
Half of the money saved directly goes to the school itself, as the name of the project suggests, and can be used for improving quality of life in schools.

This programme aims at:

- Playing a part in protecting the environment and reducing carbon emissions (ecological aspect)
- Teaching children about responsibility and using resources carefully (educational aspect)
- Saving energy and water costs (economic aspect)

Budget

Between €300 and €500 per school/kindergarten for information material, measuring kits and promotion of the programme.

The project was proposed as a measure to be integrated in the extended Integrated Action Program for Climate Protection in Munich (IHKM) , with a financial support of €30,000 per year to cover the costs of the materials. The city council will decide on this issue in autumn 2014. This extra funding would enable to provide advanced trainings for teachers as well as for children, special measuring tools, competition, videos, games, educational workshops, etc.

Process

If they are interested in taking part in the project, the schools and kindergartens first have to address the Department of Education and Sports.

The department clarifies the requirements for participation:

- It is necessary to know whether the kindergarten/ school belongs to the city or the land of Bavaria.
- Will the necessary data on electricity, water and heating consumption be available?
- Is it possible to get a reference value from the last 3 years?

The second step is to visit the building to get an idea of its spatial and technical conditions. This is done together with representatives from the Departments of Education and Sports and of Public Building Construction, an energy consultant, a (pre-school) teacher and the caretaker of the building. The goal of the visit is to find out how energy and water can be saved by simple actions or behaviour changes besides low investment measures. The institution also gets some information material and a measuring kit (including multipoint connectors, thermometers for the rooms, a lux meter and a measurement equipment for the energy operating costs).

After a year, the Department of Public Building Construction will calculate the consumption of energy and water and the savings made from the new behaviours adopted in the building - against the reference value from the last 3 years. If the schools and kindergartens have achieved savings, they receive half of the money saved for their own use. They can reinvest it in energy saving technologies or they can organise activities for the kids, such as a school party or an educational trip.
In the following years, the institutions have to inform the departments about any structural changes in the building or when they get new electrical equipment that would considerably alter the electricity consumption. That is very important to make proper calculations.

Results

Around 40 kindergartens and play groups and 130 schools have already signed up to the Fifty-Fifty programme, which is currently being expanded. Since 1994, a total of €5.49 million has been saved in energy and water costs, meaning a total dividend payment of €2.7 million to the participating institutions.

More than 8.5 million kilowatt hours of electricity, nearly 63 million kilowatt hours of heating energy and about 243,000 m^3 of water have been saved so far. This equals to more than 16,000 tons of CO_2 – approximately 133,000 flights from Munich to Berlin.

This programme has been running for 17 years. The evaluation shows that it is possible to achieve high cost savings, preserve lots of resources and contribute to climate protection only by changing behaviours. That is why the programme is now supported by a climate protection manager paid for up to two-thirds by the German Federal Environment Office in order to encourage even more schools and kindergartens to participate in the programme.

Sustainable Energy Days in Dobrich

Background

Dobrich has established a tradition of organising a sustainable event every year, usually under EU initiatives such as the European Sustainable Energy Week, Mobility Week, Car-Free Day, etc.
Encouraging citizens and businesses to adopt energy-efficient measures can significantly reduce the overall energy consumption.
Each year different target groups take part in the activities, even if these events are mainly aimed to youngsters. The aim is to encourage eco-friendly behaviours from an early age. As part of the implementation of the local energy strategy, the municipality will launch a pilot scheme designed to develop energy efficiency practices at home, work and school.

Dobrich was the first town in Bulgaria to open an energy efficiency information centre. The centre provide citizens with information on possible measures for improving energy efficiency, energy-efficient materials and appliances, the current regulatory framework, opportunities for financing sustainable energy projects, examples of successful projects, etc. The information centre is the local authority's main instrument to organise information campaigns and Sustainable Energy Days.

Budget

Around €10,000/year for the aforementioned actions - including awards and awareness-raising materials.

Process

Bearing in mind that stakeholder involvement is a crucial aspect of the local energy transition, organising Sustainable Energy Days is very relevant for the municipality. Amongst the activities organised during the Sustainable Energy Days are: guided visits and study tours, conferences, exhibitions and fairs, educational challenges, local forums and seminars.
Dobrich notably organised a cycling competition for kids, a seminar on intelligent energy and energy efficiency, an exhibition of children's drawings, and launched the «Free of charge trolley transport» initiative.

Results

Real and significant results can be achieved via the active participation and cooperation of private and public sector entities, local and national institutions, non-governmental organisations, media and the general public.
Through such initiatives, Dobrich municipality addresses key messages to its citizens as a leading authority able to guarantee a cleaner, more eco-friendly and energy-independent environment, to ensure a better quality of life for the present and future generations and to contribute to facing the challenges of climate change.

IMAGINE Assessment Grid

HafenCity University - Hamburg

What?

To comprehend the energy transition process in urban areas, the IMAGINE project developed an assessment grid. This tool enables local authorities to self-evaluate the progress of their own energy transition.

Why?

Fundamental for a successful energy-efficient urban development on the long run, a trajectory of change needs continuous input, monitoring and evaluation of the process. The grid supports three main points:

- Evaluating the local progress or local situation of the transition towards a low energy future;
- Guiding the decision-making process towards transition policies;
- Triggering an internal discussion by drawing out different views through responses of employees, politicians, etc.

How?

The assessment grid is a matrix containing:

- **Specific aims in energy-related sectors**, such as energy generation, distribution and consumption, mobility and transport, urban planning, waste, housing and buildings, water, health and liveability, and lifestyle consumption patterns in the rows;
- **Governance-related aspects** such as policy targets, institutional responsibilities, interdepartmental cooperation, financial resources, instruments used by local authorities (LAs) and ownership structures in the columns.

Each field is assessed using different types of questions: Is the aim sufficiently considered in the city's policy? Is the agreed target suitable to promote the local low energy city vision? Is the status quo sufficient to bring the community closer to the local vision?

The tool delivers a critical self-assessment and depends on honest application. A biased user will not achieve a reliable assessment and will not gain information needed for the transition process. It enhances collecting and elaborating data and motivates the dialogue with colleagues and stakeholders. This tool is not for comparison or benchmarking amongst municipalities but is meant for the comprehension of a municipality's own trajectory.

Entering data into the assessment grid provides information on cities' performances in each energy-related sector and specific aims within the sector.

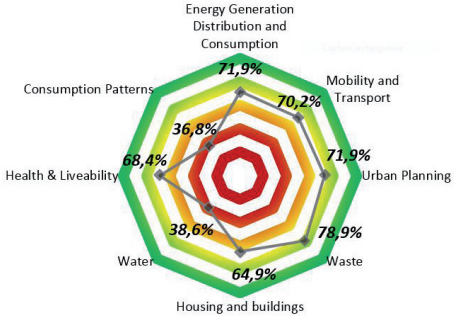


Figure 1: Energy assessment per sector (in %)

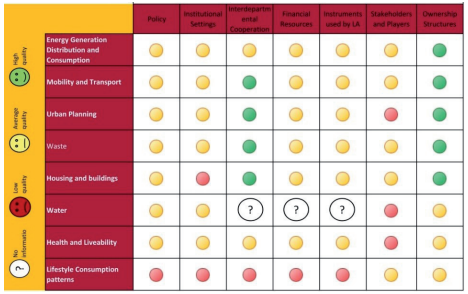


Figure 2: Assessment of governance-related aspects

In *Figure 1*, the self-evaluation shows that consumption patterns gains 36.8% of possible points and is the field with the weakest performance in the city. Urban planning (71.9%) and energy generation distribution and consumption (71.9%), on the contrary, are performing well. It is important to be aware of the subjectivity of the assessment made. Subsequently, it is up to the applicants to decide whether a specific sector matters to the city or not. If targeting consumption patterns is a relevant policy field, it would need improvement. Next to energy sectors, insights about governance aspects can be derived.

According to *Figure 2* showing performance of different governance-related aspects, the consumption patterns sector leaks especially within the fields of policy, institutional settings, interdepartmental cooperation, financial resources as well as instruments used by local authorities which can be read off by the red colour indicating low performance. Mobility and transport could be seen as the sector with the highest performance in governance structures, since out of seven it scored highest, indicated by the green colour twice. Adding insights about governance performance helps find which sector needs to be improved for reaching the goal of becoming a low energy city, and how to do it. It also indicates which lever should be triggered as well as what the city's next fields of action could be. Filling in the assessment grid offers helpful insights about the local energy structure. The interpretation of the outcomes is the task of the applicant.
The assessment grid eases identification of strengths and weaknesses of the local energy structure. Within the transition process it allows for regular feedback loops and selecting relevant action fields. Thereby it can contribute to keeping track of the trajectory of change cities are going to face on their energy transition process.
In practice, the grid proved to be a useful tool to fight silo mentality drawbacks as the person in charge of filling in the grid will need assistance from colleagues. Some pilot cities used the grid in "grid sessions" where a group of colleagues were invited to discuss each field and evaluate the actions of the municipality.

Backcasting: And now... how to achieve the city's vision?

Background

As opposed to *forecasting*, *backcasting* starts with defining a desirable future. Then, it works backwards to identify milestones and steps that will have to be achieved to pave the way from the present to the future. Backcasting refers to a central question: "If we want to achieve this, what actions do we have to take on?" This approach takes the opposite course of forecasting as the latter bases on current trends to predict the future.
The IMAGINE project partners ran a backcasting session moderated by representatives from the Transition Network[1]. This session focused on imagining a common vision for the city of the future.

Process

The IMAGINE backcasting session unfolded as follow:

1. Introduction

In a circle, each participant introduces themselves.
Validation of the agreements:

- Respect, mobiles off (at least sound off), active listening, confidentiality, punctuality, hand signals (a series of hand signals are agreed on to ease quiet communication), any other? (to be defined by the group).

2. Getting into the subject

The topic of interest is discussed in order to make it clear for every participant and to understand what is at stake.

3. Individual visioning

Participants are asked to close their eyes and to relax. That way, participants feel comfortable and are ready to "imagine". Then, the moderator takes them to an imaginary journey to 2050. Participants travel through all aspects of everyday life and are invited to imagine what life will be like in 2050.
A time for sharing is taken to allow a first rough and quick exchange on the first shape of the emerging visions.

4. Collective visioning

Participants gather in groups of 4 to 5 persons and are asked to draw a picture of their community in 2050. All means to describe can be used. Describe it, write it, draw it… be creative!
The groups are then mixed up except for one person who is responsible for reporting on the progress of the previous session to the new group. After the new group is informed about the vision developed by the previous group, they now focus on defining the most important fields of action. The group has to explain why the chosen fields are important.

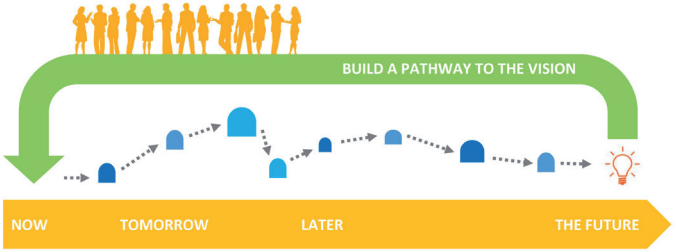
5. Reporting

One person per group reports to all participants about the outcomes of the process.

1-www.transitionnetwork.org

6. Backcasting

The actual backcasting session starts with choosing a series of domains to be addressed and for which milestones and steps will be proposed.
Once this is done, all participants are asked to write down steps they have come up with on a timeline.



Afterwards, the results are discussed and redefined. The backcasting roadmap now stands.

7. Recap

A recap of the process is done at the end to allow all participants to get an overview of the results.

Benefits

Backcasting allows for a good balance between liberty of imagination, structuration of a process, individual and collective aspirations. This tool helps prevent a visioning process from being "polluted" with daily issues and current problems.

Budget

Costs for moderation (internal or external), room, catering.

Open Space Technology

Background

With the Open Space Technology, participants create and manage their own agenda and self-organise the working sessions.

Process

The organisation of an Open Space event requires a clear and compelling theme, an interested and committed group, a specified time and place and a facilitator. No detailed programme or informational material is necessary.
Defining one clear, short and engaging statement for the discussion theme is crucial to orient discussions and drive participation.
The group must be formed by interested and engaged participants (at least 20). A room large enough to contain the entire group, with enough space for participants to move easily is needed. Tables are useless. An event can take from half a day to 3 days depending on the specificity of the expected result. The continuity of the event is crucial: you need to avoid interruptions and secure participation of all. Lunch, coffee and refreshments are located in the main room and are available at all time.

Running an Open Space event:

1. Opening: Welcome, short presentation of the theme and participants
2. Agenda creation: Setting up of the agenda together with the participants
3. Open Space: Work in groups
4. Conclusion: Specifying participants' commitments and next steps

Agenda creation:

Participants are asked to identify and briefly describe problems or discussion topics and to hang them on a wall. The participant who comes up with a topic is responsible for the incurred discussion ("moderator").
Participants then distribute the issues raised on the time schedule ("market place").

Open Space

Participants choose the sessions they want to attend and each "moderator" welcomes participants to their session. At the end of each session, a report is prepared, printed and displayed.

The conclusion

The conclusion must be simple and concise. It is the time to announce the participants' commitments, compile their comments and agree on the next steps.

Results

Open Space allows for the most important issues to be discussed and to be handled by the most qualified and eager participants. Specific reports are prepared right away and results can be immediately available to the entire community, which allows for including all those interested in the implementing phase.

Group Model Building

Background

Group Model Building is a methodology for analysing complex problems within a participatory workshop format. The perspectives and ideas of participating experts and stakeholders are translated "live" into a System Dynamics computer model. The workshop results in a causal map showing a meshwork of interconnected feedback loops (circular causal chains) and picturing dynamic patterns, relations between crucial factors.

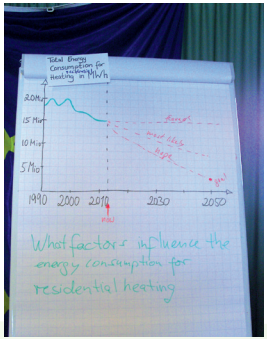
This method helps clarify problems, share mental models, discuss on basis of a common simulation model and visualise ideas. The graphical structure determines the optional underlying mathematical structure that allows for simulations.

In 2012, the Department of Health and Environment of the City of Munich organised a half-day workshop using Group Model Building with employees of two city administrations on the topic of energy consumption of residential buildings. During the IMAGINE seminar, project partners tested the method.

Process

Usually, the process includes different steps that require one to several workshop days.

The process is prepared and facilitated by a consultant team specialized on System Dynamics modelling and group facilitation. The main decision makers and stakeholders must participate in the process and the discussion.



Group Model Building is most effective for groups of 5 to 12 participants. The added value of the method is much higher if the participants come from various backgrounds and are stakeholders of the problem, ensuring a diversity of perspectives into the investigated problem.

During the test at the IMAGINE seminar, all participants were asked to think about *"What factors influence the*

energy consumption for residential heating". Examples of identified factors were the price of energy or living space per person. Each participant was then asked to share its ideas and present the factor (variable) he or she considered as being the most important. Then, variables were presented to the group, clarified and discussed and eventually renamed in case of ambiguity. The variables were then grouped in order to find a common topic.

The second phase used the Vensim modelling software. This software allows picturing and causally connecting the different variables. During this phase, it is still possible to add variables, to change names and to delete some. The aim of this phase is to identify important feedback loops and structures within the system around the problematic issue.

Benefits

- Idea generation and clarification of counterintuitive complex dynamic problems
- Constructive discussions on basis of a common model instead of "turf wars". Process creates consensus and commitment by including main stakeholders and synthesising multiple perspectives and expertise
- Solution emerges from the combined expertise of the participants
- Decision support through a simulation model which enables:
  - » Analysis of the complexities of interdependent social, economic, technical and ecological challenges of a (local) transition to a low-energy, post-carbon future, including intangible variables
  - » Ex-ante analysis of proposed policies (policy impact analysis) e.g. finding counterintuitive unwanted side-effects or foresee and deal with policy resistance
  - » Finding and designing new innovative and effective policies
  - » Designing integrated bundles of policies that together form robust strategies (adequate performance under various scenarios)
  - » Strategic scenario-based planning, implementation planning, (e.g. development of local energy roadmaps)

"All models are wrong, but some are useful" (J.W. Forrester).

Working with professional support

Background

A participatory process has to be taken very seriously. Most of the time, and in particular in small municipalities, administration staff does not have facilitation skills. And even if they do, they often lack time to prepare, run and report on a participatory process. To overcome this obstacle, a solution is to call on a professional facilitator.

Process

There are many professionals specialised in participatory approaches who are able to provide advice at different stages of the process.
Is a participatory process needed? What for? Who to involve? When? How? Using which method? How to build on the outputs of the sessions? How to make sure the participants receive a feedback? Those are all questions that need to be considered.
Objectives and contexts have to be clear to all when starting cooperation between a facilitator and the municipality.
When choosing a method to involve local stakeholders, many questions are to be considered, such as: How does it work? What kind of audience does it target? What should or shouldn't we expect? How long does it take? What does it cost? Are there successful examples of the method?

The case of Milton Keynes[1]

©Shutterstock

In Milton Keynes, the three local forums were organised so that each forum could base on the ideas that had emerged from the previous one. For the first event, the project team decided to allow for free discussion amongst the stakeholders and, as representatives of the City Council, act as listeners only.
An independent facilitator initiated discussion on key themes after a short series of scene-setting presentations by three experts: one from a utility company, one from a major academic institution and one from a major telecommunication company. The result of this, and the following two engagement events were recorded. After each event, the project team developed and refined the strategy further, taking into account the feedback from the attendees.

Budget

Widely varies depending on the final service agreed on.

1-See more examples in Part B : Methods & Tools

The Integrated Action Programme for Climate Protection in Munich (IHKM)

Background

In December 2008, the City of Munich adopted ambitious CO_2-emission reduction targets for 2030: reducing carbon emissions by 10% every 5 years and reducing carbon emissions per capita by 50% compared to the reference year 1990.
The same council decision charged the city administration with developing an "Integrated Action Programme for Climate Protection in Munich" to ensure that the objectives set for Munich are met.
In Munich, several municipal departments have responsibilities with respect to climate protection. The basic decision on the IHKM programme led to the creation of an interdepartmental team to manage the city's climate protection measures. The objective is to increase the efficiency of measures taken and to make better use of synergies.
The Department of Health and Environment (DHE) is responsible for developing the IHKM programme in close cooperation with all other departments. To that end, the DHE pools the climate protection measures and strategies developed by interdepartmental working groups. The first package of measures developed in the framework of the IHKM programme – the "Climate Protection Programme 2010" - includes measures for the 2010-2012 period and was adopted by the city council in June 2010.
At the end of 2012, the "Climate Protection Programme 2013" (for the period 2013/2014) was adopted.
At the moment the administration is preparing the next programme – the "Climate Protection Programme 2015" for a period of three years (until 2017).

Budget

Climate Action Programme 2010:
€25.6 million invested in 55 measures
€1.4 million for material resources and 7 additional jobs

Climate Protection Programme 2013:
€59.2 million invested in 63 measures
€2.1 million for material resources and 16.5 additional jobs
10 of these 16.5 additional jobs are funded by the Federal Ministry for Environment, Nature Conservation and Nuclear Safety up to 65% and for a period of three years.

Process

Three decision-making and working levels were established:

- The Steering Committee - consisting of the heads of departments, is responsible for initiation and final decisions;
- Coordination is ensured by the management officials of the relevant administrative bodies. They initiate and manage the entire process of IHKM development which is headed by the full-time Deputy Mayor of the City of Munich;
- The practical expert work is coordinated by the project group which draws up the Integrated Action Programme for Climate Protection in Munich and is responsible for adjusting and updating it until the CO_2 reduction targets are achieved. This group consists of civil servants from municipal departments. They develop suggestions for the Steering Committee.

The project group is composed of 8 specific working groups developing cross-cutting climate protection measures and standards:

1. Housing construction – energy-efficient construction in existing and new buildings
2. Urban development, land-use planning, landscape planning
3. Mobility and traffic
4. Energy efficiency in the business sector
5. Energy generation and distribution
6. Energy management for municipal buildings/infrastructure
7. Public procurement, company cars and business trips
8. Awareness raising (since 2011)

The process is accompanied by an independent external institute, which estimates the CO_2 emissions and evaluates the programme.

To succeed, the IHKM needs a well-structured reporting system in which the measurable results of the climate protection measures are published:

1. The climate protection report briefly presents the climate protection activities of the city administration and of the municipal companies and contains a "Service Part". This report is made public.
2. The CO_2 monitoring can serve as evidence for saving CO_2 to the City Council and to the Covenant of Mayors .
3. The IHKM project group has to report on the evaluation of the past periods, the update of the programme for the next 3 years and to assess the measures adopted for the next period to the City Council and the Covenant of Mayors Office.

Results

In the first period (2010-2012) annual CO_2 savings were estimated to about 454,000 tonnes and in the second period (2013-2014) to about 591,000 tonnes after completing implementation of all measures.

With the development of the Climate Protection Programme, the City of Munich sets an important example and wishes to inspire other municipalities.

SOURCES... AND RESOURCES

Contributors

- **Bistrița**
www.primariabistrita.ro
- **Dobrich**
www.dobrich.bg
- **Figueres**
www.figueres.cat/imagine
- **Lille**
www.lille.fr
- **Milton Keynes**
www.milton-keynes.gov.uk/MK2050
- **Modena**
http://comune.modena.it/imagine
- **Munich**
www.muenchen.de
- **Odense**
www.odense.dk
- **HafenCity University – Hamburg**
www.hcu-hamburg.de
- **Energy Cities**
www.energy-cities.eu

Useful resources

IMAGINE project website
www.imaginelowenergycities.eu

IMAGINE Resource Centre
www.energy-cities.eu/imagine

The eight IMAGINE Local Energy Roadmaps and the case studies prepared by HafenCity University - Hamburg will be made available on the project website.

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