EUROPE'S LOCAL ENERGY CHALLENGES

stories and research priorities from 17 multi-stakeholder city workshops

SHAPEENERGY

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Executive summary

SHAPE ENERGY is Europe's Platform for the energy-related Social Sciences & Humanities (energy-SSH) running over 2017-2019. A central component of the Platform's work has been the organisation of 17 city workshops across 17 European countries, held between Nov 2017 and Jun 2018 (see the front cover for locations). The workshops aimed to explore the role of the Social Sciences & Humanities (SSH) in meeting local or regional energy challenges: how do those working in energy at the local level feel SSH understandings could help them in their work? Workshop organisers were trained beforehand in participatory 'storytelling' methods, which were designed into the workshops in order to enable rich and diverse contributions from participants to help understand these challenges and draw out SSH-relevant themes. In most cases participants both told individual stories and generated collaborative visioning stories; many examples of the latter are included in this report. In all but one case (Riga) the workshop was held in a local language.

The workshops each focussed on a specific local issue, and in 14 cases the Local Authority was directly involved in the event. Energy and buildings proved topical, but other issues chosen included citizen initiatives, local authority collaborations, and fuel poverty. These workshop topics each related to one or more of the four SHAPE ENERGY topics. Overall therefore ten workshops tackled aspects of 'Energy efficiency and using less', six linked to 'Competitive, secure, low-carbon energy supply', seven to 'Energy system optimisation and smart technologies' (often this topic was included in an implicit rather than explicit way), and five to 'Transport sector decarbonisation'.

Workshops involved on average 20 attendees, who ranged across: local business as well as industry support organisations, local and national policyworkers (both elected officials and civil servants), NGOs and community groups, academics (often from local universities), as well as citizens who had a stake in the topic being discussed. The workshops had active social media streams, and a large number of blogs and videos are available through the SHAPE ENERGY website. Participants often commented in particular on the value they saw of bringing different groups together around the same table, including in cultural contexts where interactive workshops are less common than traditional presentation-focussed events. In many cases efforts are being made to capitalise on the workshops through taking 'next steps', for example beginning a series of meetings, or feeding the work into local energy strategies.

From the workshop data, six themes were identified by Energy Cities (the workshop lead) as take-aways for local politicians and civil servants looking to deepen their work on social and human dimensions of energy at the local level. These involve exploring: Changing energy behaviours; Energy education and engagement; Vision, inclusivity and fairness in energy matters; Energy collaborations and partnerships; Creating alternative (energy using) systems; Timescales of energy systems.

In-depth analysis of the workshop reports and the stories generated also identified detailed SSH priorities 'from the front line'. They were grouped broadly under seven categories: 1) Education and awareness raising; 2) Understanding change: from behaviours to citizenship to broader processes; 3) Policy(making), governance, city planning, legal frameworks; 4) Economy, jobs, poverty and inclusion; 5) Communication, stakeholder dialogue processes, navigating conflict; 6) Data, research design, and integration of SSH into energy projects; and 7) Cultures, philosophies and histories of energy. From these, firstly, the direct relevance of energy-SSH to local energy initiatives is made plain. Secondly, the priorities will be of interest to energy-SSH researchers, both in terms of food for thought for future research but also because they (in many cases) represent the topics which non-SSH-researchers tend to identify when it comes to social and human dimensions of energy. This raises equally interesting questions about which priorities are not so often identified.

The organisation of those workshops involved using a common method (storytelling) to bring together local stakeholders many of whom do not normally think of their energy-related work in terms of SSH themes. Storytelling proved fruitful in many ways for achieving learning, conflict solving and inclusion, but other methods could certainly be used. The materials coming out of the workshops can now be used in diverse ways by city administrations, those working in all aspects of energy, as well as SSH researchers.

Contents

1. Introduction to the workshops

SHAPE ENERGY (*Social sciences & Humanities for Advancing Policy in European Energy*) is a 2-year Horizon 2020 project, working to develop and better utilise European expertise in the energy-related Social Sciences & Humanities (energy-SSH) – see Box 1. When it comes to funding and policy, the solutions to the problems we face in moving toward a low-carbon, secure and accessible energy future are very often portrayed as mainly technological. In contrast, active energy-SSH communities recognise change cannot be achieved without full consideration of the social and human dimensions of energy systems, and this message is beginning to have wider impact on decision making at various policy levels. SHAPE ENERGY has run a large number of activities designed to engage different groups with energy-SSH (and with each other), as well as enable their voices to feed into the project's 'Research & Innovation Agenda 2020-2030', which will outline priorities for energy-SSH research in the coming years. Such activities have included: scoping workshops, interviews and surveys; interdisciplinary collections of academic writing; an Early-Stage Researcher programme; and events bringing SSH researchers together with those working in technical disciplines[1].

Box 1. What are the energy-related Social Sciences & Humanities?

The **energy-related Social Sciences** (*e.g. Economics, Psychology, Sociology, Anthropology, Political Science, Human Geography, etc.*) study norms, values, perceptions, beliefs, attitudes, regulations, institutions, behaviours, practices, etc. that organise how humans interact with the energy system.

The **energy-related Humanities** (*e.g. Philosophy, Law, Theology, History, etc.*) study issues of equity, fairness, duty, faith, morality, attribution, care, justice, charity, cruelty, etc. in the context of the energy system.

A key stakeholder group for the SHAPE ENERGY project is policyworkers, and in particular those working at a local or regional policy level. Thus, our city workshop series – running from November 2017 up to June 2018 – has formed a very significant part of the project's work programme, involving 11 of the 13 SHAPE ENERGY partners in its delivery (as well as numerous local co-hosts). The overall objective of the city workshop series was to gather together diverse local/regional stakeholders in order to define with them the energy-related challenges they face in their activities, which could (in the future) be overcome or better understood using energy-SSH research. Thus, it aimed at helping direct future energy-SSH research agendas from the 'front line', as well as highlighting the utility and necessity of energy-SSH involvement in meeting local energy challenges. In total 17 city workshops were run, evenly spread across Northern, Eastern, Southern and Western Europe (see Table 1). Overall, 314 stakeholders were involved in organising or attending the workshops, which utilised novel storytelling methods to stimulate discussion and interaction. Indeed, the workshops also represent a significant roll-out of storytelling methods in an energy research context.

1 A large number of open access publications relating to SHAPE ENERGY activities are available via its website www.shapeenergy.eu.

Table 1. Overview of the SHAPE ENERGY city workshops, in date order

City (Country)	SHAPE ENERGY facilitation lead (and other partners in attendance)	Date	No of organisers + participants	Title	SHAPE ENERGY topics
Riga (Latvia)	Energy Cities	10 Nov 2017	17	*Challenges and solutions for the refurbishment of multi-apartment buildings*	
Cambridge (UK)	Anglia Ruskin University (Tomas Bata University)	14 Nov 2017	29	*Zero Carbon Cambridge: achieving low energy housing via multi-stakeholder collaboration*	
Turin (Italy)	Politecnico di Torino (École Nationale des Travaux Publics de l'État, Middle East Technical University)	1 Dec 2017	25	*Decentralisation of renewable energy production and transmission for the Turin metropolitan area*	
Brussels (Belgium)	Energy Cities	30 Jan 2018	18	*How to support citizen initiatives in the field of energy at local level*	
Trondheim (Norway)	Norwegian University of Science and Technology	15 Feb 2018	28	*Decarbonisation of Trondheim's transportation sector*	
Heidelberg (Germany)	Karlsruhe Institute of Technology (Energy Cities, École Nationale des Travaux Publics de l'État)	20 Feb 2018	23	*The 'energy citizen' and 'prosumer' – indispensable or unattainable?*	
Lisbon (Portugal)	Energy Cities	22 Feb 2018	32	*Innovative financial instruments to support energy efficiency in urban residential building refurbishment*	
Belgrade (Serbia)	Black Sea Energy Research Centre	27 Feb 2018	26	*Sustainable transition of district heating systems in Serbia*	
Brasov (Romania)	Black Sea Energy Research Centre	2 Mar 2018	22	*Sustainable regional transport – challenges and solutions*	
Granada (Spain)	Acento Comunicación (Politecnico di Torino, Anglia Ruskin University)	5 Mar 2018	24	*A multi-stakeholder approach to energy poverty*	

Ankara (Turkey)	Middle East Technical University	15 Mar 2018	31	*Energy efficiency and building insulation policy*	
Skopje (Macedonia)	Black Sea Energy Research Centre	15 Mar 2018	19	*The role of energy efficiency in the reduction of air pollution*	
Chisinau (Moldova)	Black Sea Energy Research Centre	20 Mar 2018	22	*Challenges for the future of the Chisinau heating system*	
Grand Lyon (France)	École Nationale des Travaux Publics de l'État (Energy Cities)	20 Mar 2018	13	*How to approach energy in a transversal way from the perspective of the Grand Lyon local authority*	
Utrecht (Netherlands)	Duneworks	24 Apr 2018	30	*Sustainable renovation of housing property owned by landlords*	
Zlin (Czech Republic)	Tomas Bata University	23 May 2018	26	*Zlín region energy strategy visions 2030*	
Sofia (Bulgaria)	Black Sea Energy Research Centre	22 Jun 2018	20	*Do Renewable Energy Sources damage or support the security of energy supply?*	
		TOTAL	**316**		

 **Energy efficiency and using less** (10 workshops)

 **Competitive, secure, low-carbon energy supply** (6 workshops)

 **Energy system optimisation and smart technologies** (7 workshops)

 **Transport sector decarbonisation** (5 workshops)

In planning the workshops, it was vital that they were: well attended by a diversity of participants; productive for both participants and organisers; and well-disseminated in a timely manner. Therefore the identification in each case of a central energy theme of relevance to the intended (local/regional) audience was critical. For each city therefore, the organising SHAPE ENERGY partner undertook a scoping exercise based around the four SHAPE ENERGY topics – 1) Energy efficiency and using less, 2) Competitive, secure, low-carbon energy supply, 3) Energy system optimisation and smart technologies and 4) Transport sector decarbonisation. The final workshop foci and SHAPE ENERGY topics these relate to can also be seen in Table 1. Examining these themes already gives a sense of the concerns and priorities of Local Authorities and businesses. For example, five of the workshops focussed on 'energy efficiency' specifically in homes and/or other buildings, whereas 'system optimisation' was included as more of an implicit theme which often came up in the discussions rather than necessarily in the workshop titles.

1.1. *Storytelling at the workshops*

As highlighted above, a core element of the workshops was their novel use of storytelling. Storytelling involves *"communicating in a way which emphasises plot, characters, and narrative"*[2]. In this case, the workshops all included interactive elements where participants were invited to write and discuss their own stories (e.g. from personal experience) and/or come up with collaborative imaginative stories, for example envisioning possible energy futures for their city/region. Strengths of storytelling methods which had led us to build it into the project design include their capacity to support: learning and unlearning, empathy and conflict solving, inclusion and participation of different voices. It is important to note that – although in this report English translations are presented – the workshops were held in the local language in all but one case (the Riga workshop being facilitated in English, which all participants were fluent in); this was seen as particularly important to facilitate the telling of the 'stories'.

To facilitate the storytelling design of events, a full guide to storytelling[2], a two-day training event in September 2017, and an internal facilitation guide with templates were prepared or run by storytelling lead Duneworks (with support from Anglia Ruskin University). Up to four storytelling phases were included at each workshop: (i) setting the story scene (icebreaker type activities), (ii) inviting diversity (hearing people's stories from their experiences), (iii) envisioning (individual and/or collaborative), and (iv) recording storytelling videos with a few participants.

1.2. *Data from the workshops*

The SHAPE ENERGY multi-stakeholder workshops involved a significant amount of data collection. In the 2-4 weeks following each workshop, organisers completed a workshop report (see Box 2) and collated accompanying material. This data fed or is feeding into: 1) fairly immediate online content for the project's communication channels, including Twitter, YouTube, and blogposts/photos on the SHAPE ENERGY website; 2) the present report; 3) evaluation deliverables from the project (in particular the Research & Innovation Agenda 2020-2030, Evaluation report and Reflexive review of interdisciplinary working); and 4) future academic publications.

2 Mourik, R., Robison, R., and Breukers, S., 2017. *Storytelling - SHAPE ENERGY facilitation guidelines for interdisciplinary and multi-stakeholder processes.* Cambridge: SHAPE *ENERGY. Quote from page 4.*

Box 2. Structure of the main workshop report which all organisers completed

THE WORKSHOP

Workshop city; Workshop organiser(s), assistant(s) and co-host(s); Venue; Date / time.

Title:

Participants:

STORYTELLING

1. How did the facilitation go?
2. Could you collect stories as expected?
3. What were the main points coming out of the stories?
4. How did the participants react to the storytelling method, did they comment on it?

PARTICIPANTS

1. How easy was it to gather the participants beforehand?
2. Were there significant absences?

ENERGY-SSH

1. Which main issues came out that could be dealt with from an energy-SSH perspective?
2. Could you identify specific research themes or research questions?
3. How can the material you collected be further analysed in order to shape the energy-SSH agenda?
4. Could you gather any lessons/messages potentially relevant for SHAPE ENERGY Research & Innovation Agenda?

TOPIC

1. Describe the topic chosen:
2. What were the main points of discussion?
3. Did the workshop allow participants to come further within the topic? Did the workshop allowed for improvement into the local process? How?
4. Did the participants identify potential next steps? Which ones?
5. Have you scheduled a debrief session with the co-host? Have you gathered any feedback from the co-host already?

WORKSHOP ORGANISATION

Do you have any other comments that you think could help future organisers of the SHAPE ENERGY workshops?

Additional collated material comprised:

- Scanned copies of the sign-in sheet (for ethics records)
- Scanned copies of every story written by the participants
- Typed and English translated versions of five individual stories (including the reasons why these were chosen - diversity, generated discussion, etc.)
- Typed and English translated versions of all collaborative stories
- Feedback questionnaire responses, to feed into the quantitative project evaluation
- A participant observation report analysing interactions which took place during the workshops, to feed into the qualitative project evaluation
- Photos of the workshops and flipchart sheets
- Video recordings of interviews with participants (including English subtitles)
- Other preparation materials such as slides presentations, story spines, etc.

This material was sent to the workshop series coordinator, Energy Cities, as well as partners responsible for communication and evaluation tasks. Some materials were immediately uploaded to a private page of the SHAPE ENERGY project website in order to help those organising later workshops.

1.3. *Structure of this report*

For this report, the primary data utilised was taken from the individual workshop reports (which themselves included summaries of key themes from the stories), the typed and translated versions of the collaborative stories, the online content generated following each workshop, and in some case comments made by participants in their feedback forms.

From all the individual workshop reports and collaborative stories, analyses were undertaken related to (i) critical challenges for local energy transitions presented from the perspective of European Local Authorities (in section 2) and (ii) the formulation of priorities to fuel the energy-SSH research agenda (in section 4). In between these sections, the bulk of this report (section 3) is given over to presenting the 17 workshops (in alphabetical order by city), giving firstly a description of the workshops themselves (topics, organisations represented, main discussion points and story themes), and then a flavour of the collaborative stories generated. These presentations closely follow the views and insights given by the on-the-ground workshop organisers themselves, as to what they saw as the key themes.

The final portion of the report steps back to consider the series' methods. In section 5, reflections from the workshop organisers on the use of storytelling are summarised by storytelling lead Duneworks – how did facilitators and participants find them as tools? In section 6 some brief 'tips' are finally presented for those who may be interested in running similar activities in future.

The engagement of all workshop participants with the energy issues discussed was impressive and in many cases is leading to further initiatives; we hope this report can also both aid and inspire future multi-stakeholder initiatives in energy.

2. Local energy transitions: six key social themes

It was of the highest importance for project partners to organise workshops that would not only feed into the SHAPE ENERGY project, but would also be directly useful for those Local Authorities (and other local stakeholders) involved in the preparation and running of the events. This was a key consideration in the choice of topic, the design of materials and activities, and the follow-up work which has been undertaken in several cases or is ongoing. Across the 17 workshops, 14 involved representatives from local or regional government, with three of these 14 (Ankara, Sofia, Utrecht) also including representatives from national government.

The workshops therefore generated numerous insights into which topics are currently 'top of mind' for Local Authorities in Europe when it comes to our cities' current and future relationships with energy. Energy Cities undertook an analysis of the workshop reports to draw out headline themes which stood out as being central for Local Authorities to consider in their energy work, and which go beyond questions of technical feasibility to focus more on human and social dimensions. We included them here, at the front of the report, to immediately highlight the relevance of these dimensions to the implementation of local and regional energy projects. A fuller discussion of the variety of research priorities for the energy-related Social Sciences & Humanities arising from the workshops is given following the individual reports, in section 4.

2.1. Changing energy behaviours

Participants of most of the workshops agreed that there is an urgent need to change. It seems obvious that current levels of energy consumption in cities are not sustainable. So, why haven't things already changed? Why aren't people's behaviours changing? Indeed, there seemed to be a level of 'mystery' associated with how to change energy behaviours.

In this way the question of behaviour change remains attractive (as a solution) yet elusive, at the local level. Whilst not all scholars from the Social Sciences & Humanities agree that a focus on behaviours will ultimately produce significant changes in consumption (see section 4 for alternative framings of change processes), it is undoubtedly true that this is a question which local actors would like to understand in greater depth.

2.2. Energy education and engagement

Many participants suggested that awareness raising measures, education and campaigns are needed to encourage change, be that change in the field of direct energy production, transport, housing, heating, etc. They noted that information seems not to flow to consumers or citizens, or it arrives but is not seen as an incentive to drive change. This aligns with research which has shown that information and education, whilst they may improve knowledge, often do not on their own produce changes in attitudes or actions[3].

In this context then, attention often turns to questions of 'engagement', understood as a more two-way process of communication. Society is often perceived as unengaged in energy. In some countries, it was felt that levels of poverty lead to a focus on only the economic aspects of life. Energy transition is then seen as a luxury instead of a way to solve essential problems. How could we change the image of energy efficiency to be 'in'?

There was a particular question around the role of education in the professional world (including education of elected representatives), to increase knowledge of sustainability issues.

3 Cf. research into the 'deficit model' and/or the public understanding of science.

2.3. Vision, inclusivity and fairness in energy matters

A shared vision was seen as critical at local level to achieve change. Elected representatives were often seen as conservative in their assessments of the need to start energy transition and begin to build this vision. Some explanations for this were given as Local Authorities' fear of criticism, and a strong focus on avoiding risk, which can lead to paralysis. Political will is expected but is sometimes not felt to be there.

Energy is an issue which touches us all, and thus inclusive approaches to vision-building were suggested as likely to bring more success. Many participants felt that energy transitions need a political approach that (re)considers the fairness of the energy system, property regimes and the sharing of the benefits (often monopolised by big companies).

2.4. Energy collaborations and partnerships

Better methods for collaboration are needed, both when building and enacting local (or national) visions. Local actors all saw the urgency of working effectively together, but the facilitation of diverse interests, different goals, know-hows and knowledge levels is hard to balance. Which institutions may need to change? How to achieve effective communication between local and national levels? How can multi-stakeholder aims be achieved beyond very simple win-win situations?

There seems to be a huge need for, and interest in, new methods which help parties to communicate and work together, and of course the workshops themselves were testing such methods. Questions of trust were seen to play a big role, as well the responsibilities held across or between different actors.

2.5. Creating alternative (energy using) systems

The systems which lead to society's levels of energy use incorporate both social and technical/infrastructural elements. This messy relationship of both creating new physical infrastructure (for example sustainable transport alternatives) as well as influencing social demand to engage with that infrastructure (for example changing work obligations) needs a strategic approach. New technology implementation on its own will not bring the changes anticipated.

Many different systemic issues were seen as critical here. Cities were seen as needing to open up to experimentation and citizens' initiatives. New business models may be needed, as the ones available often do not support a drive to sustainable changes in the energy field. New ways of thinking about economic (and other) benefits have to be created, with pricing and affordability of energy as a further central issue. A balance between incentives and 'command and control' policies has to be found. Effective legal instruments are important to ensure enforcement and at the same time avoid bureaucracy as well as incompatible regulations. None of this work is straightforward, and it should not be a surprise that energy systems change is an involved process.

2.6. Timescales of energy systems

Finally, the issue of time was often discussed. Consideration of time horizons is crucial when addressing ambitious objectives to tackle threats such as climate change. Cities need a long-term vision, long-term policies, but also are confronted with the need of having clear milestones in order to keep to tangible goals, and have to deal with very short term political horizons.

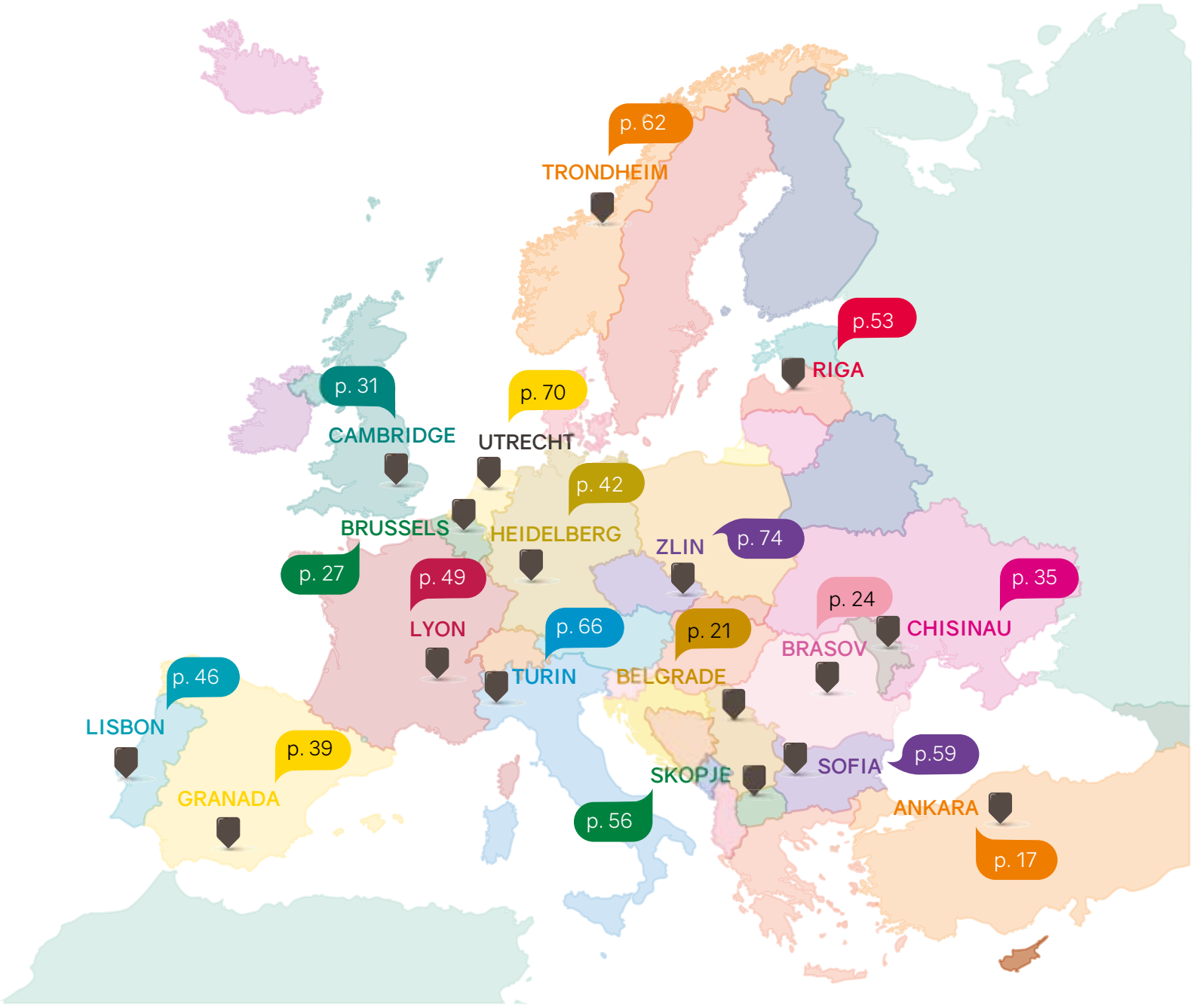
Time was also linked to the stress of a society going faster and faster, and time spent in activities such as travelling and work. Slowing down seemed to be an essential topic to address for some.

2.7. Using these themes

These six headlines will be directly taken up by Energy Cities in their networking and advocacy role, and can also be used by Local Authorities in Europe looking to formalise consideration of these dimensions in their energy work, determine their own stance on them, or engage more fully with researchers. In every one of these areas (and many more), energy-SSH researchers are undertaking cutting edge research (again, see section 4 for further details). These workshops, and this report, aspire to opening up more channels between local energy stakeholders and SSH researchers.

3. City workshop reports and energy stories

In this section are presented the 17 SHAPE ENERGY city workshops, in alphabetical order by city.



Energy Efficiency and Building Insulation Policy, in Ankara (Turkey)

The workshop

Venue: Middle East Technical University (METU), Ankara, Turkey

Date: 15 March 2018

Language: Turkish

Workshop organisers: Ramazan Sari, Ugur Soytas, Melek Akin Ates (METU), Dursun Bas (Regional Environmental Center, Turkey)

Workshop assistants: Dilge Kanoglu, Basak Ar, Ismail Yilmaz, Mehmet Olcay Aydemir, Mert Ak (METU)

Other organisations represented included: Acwapower International llc, Çankaya Municipal Authority, Chamber of Environmental Engineers, Çiğdem (Education, Environment and Support Association), EKODENGE, EnerjiSA, ETIMADEN, Ministry of Development, Ministry of Economy, Ministry of Energy and Natural Resources, Nature Conservation Centre, OSTIM - Renewable Energy Cluster coordinator, Pertek Electric, THK Aircraft Maintenance Technical Services, TRT WORLD, TUBITAK, WWF Turkey, as well as individual consultants.

What topic did you choose?

We chose energy efficiency and insulation in Ankara, to discuss current challenges and opportunities for future improvements, while integrating social sciences and humanities in achieving acceptable solutions. Building insulation is an important topic in Turkey in general and for its capital Ankara in particular where the high use of fossil fuels for residential heating contributes to poor air quality. Although government regulations on energy performance in buildings have been introduced, insulation is not reaching desired targets. There is a need to understand why.

What were the main points of discussion?

- Advantages/disadvantages of various heating systems used at home/business i.e. the type of fuel (e.g. coal, natural gas) and the type of system (e.g. central, combi, heat-share-meter). Alternative options like solar energy, passive house, etc.
- Different types of housing, increasingly most new accommodation is quite large.
- Legislations/policies on heating and energy efficiency. Lack of appropriate legislation, some legislation not being clear and guiding, planned legislations not yet fully implemented, some implementations in industry providing hopeful results.
- Different usage patterns of people with different needs (e.g. home-office vs. large family). Personal awareness and consciousness, different sources of motivation, lack of education, etc. Is our society ready yet?
- Use of social/behavioural science in understanding differences in usage patterns, and adoption of legislation.
- Micro versus macro factors affecting energy efficiency and energy use in building: how do these factors interact?

ONLINE CONTENT FROM THE ANKARA SHAPE ENERGY WORKSHOP

CITY WORKSHOP IN ANKARA: feedback from participants (Turkish w/English subtitles)

▸ You can watch this video here

What were the main points coming out of the energy stories?

- Some practices aimed at improving energy efficiency can cause harm in other areas. For instance, one respondent stated that sheathing of buildings can bring in some health issues, the effects are not yet known to a full extent.
- Biases, personal characteristics, or other background factors that impact how people respond to energy efficiency policies. Resistance to change. Participants concluded that policy makers should integrate social science researchers more, to investigate these.
- Legal requirements and laws are some of the most powerful enforcement options, especially in industrial buildings.
- It is not clear 'who' should be the party responsible for implementing energy efficiency policies in buildings (e.g. government, individuals, home owners, etc.)
- There is a need for energy efficiency policies being less dependent on 'people' (e.g. who is undertaking that particular energy project, etc.), and more on established, structural, institutional systems.
- Energy efficiency has to be integrated into the education system. There are some nice developments already, but these efforts can be extended.
- Energy efficiency should not be evaluated purely in environmental terms, but instead new advancements/energy options must be seen as economic 'products'. Related to that, we should not forget about the triple bottom line, and consider economical, environmental, and societal impact.
- There is a need for better access to good quality information, for public information and consultancy services related to energy efficient buildings.

Finally, a number of topics were identified by participants as needing further input from the energy-related Social Sciences and Humanities in order to understand energy efficient buildings transition. These included the impacts/roles of: provision of guidance; awareness and acceptability; perceived competency of service providers; regulation; vision creation; trust and communication; visibility of 'good practice'; consumer behaviours. They are discussed further in the Ankara blog post (see image).

> *A few participants from government organizations mentioned that they felt comfortable in expressing their views freely at a university setting. They liked free discussion with a diverse set of participants, this method is more flexible and productive than a traditional workshop where a few people make presentations and others either ask questions or make comments after the presentations.*

What next steps were identified?

All participants were enthusiastic about following up the results of the workshop. A few participants shared contact details and one participant shared information regarding a 100% renewable energy prototype residential building and offered to give a tour. Several participants illustrated their interest in continuing these discussions, possibly by means of follow-up workshops or by participating in related research (e.g. interviews, surveys). Indeed, the METU organising team are planning another workshop before the end of 2018, building on some of this work.

These participants in Ankara chose to relate the story in the form of a conversation between friends, leading up to reflections on the number and complexity of issues generated within the group's experience.

RECOGNIZE, UNDERSTAND, GUIDE ME! *a collaborative story from the Ankara workshop*

A group of friends, all living in Ankara, were enjoying a lively discussion about energy use in buildings. One of them started to complain about how his heating invoice doubled after the apartment management had switched to heat-share-meter. Another friend was surprised, stating that before they were not very happy about the central heating system, but now they were paying less for heating with the new heat-share-meter. Other friends joined the discussion, trying to figure out the reasons for this difference, and also elaborated on the advantages/disadvantages of different heating systems, discussed the 'what, who, when' of energy efficiency in buildings in Ankara.

Participants at the Ankara SHAPE ENERGY workshop

Regarding the differences, one of them stated that first we should distinguish between i) the type of fuel (e.g. coal, natural gas) and ii) the type of system (e.g. central, combo, heat-share-meter), which is not only affecting the energy use, but also the energy expenses. A friend said that in their multi-story building natural gas use was forbidden, but then the group was in disagreement: was it due to legislations, aesthetic reasons, or impracticality/technicality?

Another one added that the competence of the firm offering the heating system might be affecting the efficiency of the heating system. A friend jumped in, stating that due to legal obligations, there seems to be a 'rush' in trying to implement some energy policies, but that causes data problems and wrong calculations, which could be lessened by using online tracking systems. An enthusiastic friend stated that energy efficiency is heavily dependent on how the buildings are designed in the first place. Regarding the building characteristics, one of them made a remark about the 'energy score card', which will be compulsory for all building by 2020. The group acknowledged that although the aim was 8,000,000 energy cards by 2020, so far only 100,000 building energy score cards were achieved. Another building design related factor was the lack of a well-crafted, overall city/region planning, and instead we were having 'random buildings'.

Another one indicated that the users have a variety of needs and also usage patterns, and further added that their central heating system was operating at a very high level, making it extremely hot inside, and some people were even opening the windows. She further stated that this relates more to personal awareness and consciousness about energy efficiency. Other people agreed, stating that in a single building, there are several people with different needs (e.g. home versus office, peak hours different, etc.), then the challenge becomes how to find the best option, or even harder, creating a customised option. A sceptical friend jumped in, arguing that he would actually prefer to be less dependent on other people, as a matter of social taste, not just due to energy reasons.

The debate was now shifting to the question of 'who': was it the apartment management, social institutions, or personal awareness that were the most responsible for energy efficiency in buildings? A related point made was who will be renewing the old buildings? In the case of renting a house, sometimes owners were not eager to make energy efficiency investments, and there were tensions between owner and tenant.

A common point made was that society was not ready yet. Even in this small group, they were not even sure about what kind of legislations were in place. Additionally, many of them were stating that they were paying too much attention to their 'neighbours', being discouraged by bad examples. Neighbour factor also came

into play, when usage rates were compared. One of the friends stated that when his neighbour was out of town, his energy bills were increasing.

In several parts of Ankara, there are very large apartment sites, consisting of multiple, 20-storey buildings, and of very large surfaces. The remark was made that this was due to changing living standards; that we were nowadays finding it even difficult to live in a 4+1 (4 sleeping rooms, 1 living room) apartment. Starting with micro issues like which energy system to use or personal awareness, now the discussion was moving towards macro factors; another one stated that we should not forget generation and education differences as well. She stated that her father-in-law would not change his habits very easily, and will think that switching to a new energy system is very costly. The group stated that this is a cultural issue; that we are not good at making calculations and considering long-term impact, but mostly focus on what we see from other people and short-term impact. A friend stated that nowadays we have more educational programs about energy efficiency, but we should start this education earlier, even in kindergarten.

Participants at the Ankara SHAPE ENERGY workshop

The group was arriving at the conclusion that micro and macro factors regarding energy efficiency are sometimes in conflict, and there is a need for investigating these conflicts and different objectives at different levels. A suggested approach for this was more scientific, evidence-based analysis.

One of the friends made the comment that legal requirements and laws are one of the most powerful enforcement options, especially in industrial buildings. She gave an example from the OSTIM industrial area, where firms were required to get a license and put solar energy systems on their roofs.

A friend brought up the issue of sheathing of buildings, and stated that despite the energy benefits, that could also bring in some health issues and these health effects are not yet known to a high extent. He was wondering whether our technology is sufficient and up to European standards.

Participants at the Ankara SHAPE ENERGY workshop

The group was surprised about how many different points were made. At the end of the discussion, they also discussed how policymakers should integrate social science researchers more, and, for instance, investigate behavioral characteristics and use mechanisms that include triggers like "how much has your neighbour spent on energy?" or "tick the energy saving options that you DO NOT want".

The group was predicting that in the future we will slowly shift towards alternative energy options. For instance, in Ankara there is this Passive House, created by Sepev, illustrating a good example of how design can help energy efficiency. A common aspiration in the group was without being dependent on 'people' (e.g. who is the major now, who is undertaking that energy project, etc.), more established, structural, institutional systems will be in place for promoting these new means of energy efficiency in buildings. A final comment for the future was to treat the issue of energy efficiency in buildings not only in purely environmental terms, but instead see new advancements/energy options as an economic 'product'. This remark made the group of friends conclude that we should not forget about the triple bottom line, and consider economic, environmental, and societal impact.

Sustainable Transition of District Heating Systems in Serbia, held in Belgrade

The workshop

Venue: IN Hotel, Bulevar Arsenija Čarnojevića 56, Novi Beograd, Belgrade, Serbia

Date: 27 March 2018

Language: Serbian

Workshop organiser: Dejan Ivezić (Black Sea Energy Research Centre / University of Belgrade)

Other organisations represented included: Academy of Engineering Sciences of Serbia Business School Novi Sad, City of Belgrade, City of Kraljevo, City of Niš, City of Petrovac, City of Šabac, CMS, Efektiva, Greens of Serbia, Ministry of Mining and Energy, Beogradske elektrane, Secretariat for Environmental Protection, Secretariat for Utility, Energy and Transport, Standing Conference of Towns and Municipalities, Telekom Serbia.

What topic did you choose?

The issues in focus were the introduction of Renewable Energy Sources (RES) into District Heating (DH) systems' fuel mix, and the changing of payment methods for delivered heat to meet requirements of the recently adopted National Energy Strategy and Law on Efficient Energy Use. Namely, DH systems are currently almost completely based on fossil fuels (natural gas, heavy fuel oil and coal) and the payment method in households is predominantly based on a flat rate (the size of heated area), which is a disincentive for saving energy.

What were the main points of discussion?

In the first part of the workshop representatives of DH companies and/or local government from Belgrade, Niš and Šabac shared their experience with the introduction of a new payment method based on actual consumption (an incentive for energy saving) and ideas for increasing the share of RES in the energy mix. Belgrade's system is the biggest DH system in Serbia with about 300,000 households connected, but with less than 0.5% of RES use and with only 6% of households having implemented the new payment method. The new payment method has been implemented in Niš since 2013, but with many obstacles and non-acceptance, including street protests and decreases in the number of consumers. Representative of the city of Šabac presented a good practice example – the new payment method was introduced in 2011 simultaneously with refurbishment of buildings, while introduction of biomass for heat production is an ongoing project.

These presentations provided a current overview and introduction to the second, interactive part of the workshop. In the first part of the interactive section participants wrote stories with the aim of identifying and analysing key issues related to low share of RES and non-acceptance and delays in the new payment method implementation.

During the discussion, it was decided to focus in on envisioning solutions for the changing of payment methods for delivered heat, as participants felt this was a more interesting field for Social Sciences and Humanities, compared to the introduction of RES.

> *very useful*

ONLINE CONTENT FROM THE BELGRADE SHAPE ENERGY WORKSHOP

You can read this post here

What were the main points coming out of the energy stories?

Some of the most repeated issues in the stories included:

- Low levels of energy efficiency in consumption
- Incompatible regulations
- Lack of strategic approaches to technology implementation
- Environmental problems
- Issues with affordability of energy
- Problems in communication with consumers/ citizens
- Necessity for information and education of consumers/citizens.

> *some participants fed back that they felt the work of SHAPE ENERGY in helping to bring Social Sciences & Humanities into energy issues should be continued*

What next steps were identified?

More intensive communication with the citizens, informing and training, together with implementation of innovative business models in operation of DH companies (on supply side) and new financing and supporting mechanisms for energy efficiency measures implementation (on demand side) were recognised as the main actions that need to be undertaken before the introduction of the new payment method. These understandings are being taken back by the cities which attended to feed into their ongoing work in the area.

> *In Belgrade, participants described an 'ideal' future, where many of today's issues were solved, in particular relating to people's active and harmonious participation in our energy systems.*

AN ORDINARY DAY
a collaborative story from Belgrade

"I'm waking up in a warm apartment. A look through the windows shows that it was snowing during the night. The controller in the corner of the room displays five below zero. It's freezing outside. It does not come out to me, but the kids have to go to school, my wife and I have to go to work.

Before we leave the apartment, I enter into the controller the time when the children will return from school. Since technicians from the local district heating company installed this device and automatic valves, the heating bills have been significantly reduced. At night and when we are not in the apartment, we automatically reduce our consumption and thus save energy, but also our money. At the information office of the local district heating company, it was explained to me how to set the controller. In addition, the user manual that I got there was very useful.

Of course, the control system and achieved savings would not be possible if our building remained uninsulated. We took a loan provided by the Energy Efficiency Fund to insulate the building. The credit conditions were quite favourable. Credit payments are approximately equal to the difference between the 'old' and 'new' bill for heating.

After work, I'm going to the municipality to take part in a workshop about solar energy introduction in local district heating system. Engineers from the district heating company, representatives of municipality

Participants at the Belgrade SHAPE ENERGY workshop

and we, interested citizens, are going to be present there. And, yes, the moderators are coming too. They work for local district heating company with educational backgrounds from psychology and sociology.

The municipality always organises workshops when some important decisions regarding communal systems should be made. However, since moderators direct the discussion, there is no more quarrelling, people have the feeling that each voice is important and the conclusions are much more useful. Similar workshops were organised when the topics were the introduction of heat pumps and building insulation. Mostly thanks to them, one third of energy in district heating system originates from a wastewater treatment plant. Besides, moderating the workshops, they organised excellent informative campaigns related to building insulation and helped engineers to better understand people's behaviour related to energy and motivation for investment in energy efficiency measures. If this idea for solar energy is accepted, we will not use natural gas any more.

In the evening, we are going to visit friends. Recently they moved to the first-zero energy building in the city. They boast that even under such terrible weather, they do not need sweaters. Should I trust them?"

ONE WINTER DAY
a collaborative story from Belgrade

"Today it is snowing in Belgrade. This is the only snowy day this winter. The weather is similar to the day when we had the workshop dedicated to district heating systems. It was ten years ago.

I have a plan to pay my bills in the afternoon. It is interesting that my bill for communal services is less than ten years ago. At that time it accounted for 12% of my salary. In the meantime we switched to the new payment method – based on actual consumption. The bill is reduced. Fortunately, my salary increased.

I am still living in the same apartment in the building built in 1968. Two years ago our building was isolated. Finally, I managed to replace the old windows in my apartment. We are repaying new windows in 60 instalments without loan interest with bills for communal services. It is good that we don't argue any longer at meetings of homeowners. Now everyone is happy because they pay lower bills than before. We can thank educational campaigns and simulation of situations like "What may happen with my home budget in the future?" that convinced my neighbours we will all gain if we reduce energy consumption. The manager of the building called us for a meeting in the evening. There is a possibility to get a discount on a heating bill if we start to separate organic waste.

As I am going to the meeting of homeowners I am wondering about the reaction to the proposal for district cooling. In Belgrade, winters are becoming shorter, while summers are longer and warmer."

Participants at the Belgrade SHAPE ENERGY workshop

Sustainable Regional Transport – Challenges and Solutions, in Brasov (Romania)

The workshop

Venue: Hotel Kolping, Sala Transilvaniaș Str. Petofi Sandor nr.27, 500107 Brașov, România

Date: 2 March 2018

Language: Romanian

Workshop organiser: Nicoleta Ion (Black Sea Energy Research Centre)

Workshop assistant: Bogdan-Grig Moldoveanu (Center for the Promotion of Clean and Efficient Energy in Romania – ENERO)

Other organisations represented included: Association City Hub, Autonomous Administration of Transportation Brasov, DRR.RO, Țara Bârsei, Metropolitan Development Agency of Brasov (AMB), Municipality of Bod, Municipality of Brasov, Regional Development Agency – Centru, University Transilvania Brașov, VISUM Association.

What topic did you choose?

In recent years, the main problem faced by the transportation sector in the Brasov Growth Pole area has been meeting the transport needs of the region while minimising the environmental impact of this activity as well as maintaining an acceptable (and effective) level of costs.

The transport sector is very important in this region, which is located in the centre of the country and is an intensive transit area as well as an area with significant tourist potential. Thus, a number of social, economic and environmental factors must be taken into account when talking about the sustainability of mobility in this region.

This workshop was run in collaboration with the Metropolitan Development Agency (AMB) which is coordinating the development of the regional sustainable urban transportation plan. AMB was set up in 2008 by Brasov Municipality, County Council Brasov and other 18 municipalities in the neighborhood of the city of Brasov, with the aim of promoting and supporting of co-operation of public, private and civil stakeholders towards a sustainable economic, social and cultural development of the region.

What were the main points of discussion?

Key topics included:

- Transport infrastructure
- Urban pollution
- Commuting between cities within the Growth Pole Brasov
- Behaviour change research from the Social Sciences and Humanities

Participants at the Brasov SHAPE ENERGY workshop

ONLINE CONTENT FROM THE BRASOV SHAPE ENERGY WORKSHOP

You can watch this video here

What were the main points coming out of the energy stories?

Most of the participants felt that improper infrastructure does not encourage sustainable transport (bicycles, public transport, electric cars etc.).

Another important factor discussed was commuting between the cities within the Growth Pole of Brasov (even though the main starting topic of the workshop was urban transport).

Other problems identified related to the level of awareness of the main principles of sustainability and the level of pollution generated by the current modes of urban transport.

> *participants saw this workshop as a good opportunity to interact with each other and to further develop their vision of sustainable transportation in their area*

What next steps were identified?

The regional sustainable urban transportation plan is being continuously adapted and improved, and discussions from the workshop are directly feeding into this process. Participants concluded that an important part of the future development of the sustainable urban transportation plan will be further common actions, gathering together local stakeholders under the umbrella of the AMB, in order to further improve this very important document for local development.

LEGAL SOLUTIONS FOR A SUSTAINABLE FUTURE IN URBAN MOBILITY IN THE GROWTH POLE BRASOV
a collaborative story

> *In Brasov, the role of law (one the social science and humanities) was brought to the fore in one story. In the other there was a primary focus on technical infrastructural solutions, and how these could be supported.*

The following challenges were identified as being important for a sustainable mobility in the Region:

- Poor quality of commuting between cities
- Need for an optimised legal framework enabling competitiveness
- But also, the existence of several transport operators

We wish, at the level of Growth Pole Brasov to increase quality of life and increase mobility for all social and demographic groups.

To solve these problems in the medium term, between 2018-2030 there were amendments to public transport legislation. In the longer term, after 2030, there was harmonisation of legislation with community requirements, and methods for self-management of transport choices.

Social Sciences and Humanities research can also contribute to solving these challenges through awareness, and promotion of public / ecological transport systems. As a final remark, it is important to know that improved laws leads to a development of transport quality.

TECHNICAL SOLUTIONS FOR A SUSTAINABLE FUTURE IN URBAN MOBILITY IN THE GROWTH POLE BRASOV

a collaborative story

"Inadequate infrastructure – difficulties for all motorised and non-motorised means – was identified as an important challenge for sustainable mobility in the region.

Actions to be undertaken to solve this problem in the medium term, in the time frame of 2018-2030 include ...

- Developing the metropolitan road and rail transportation
- Development of bicycle, park and ride infrastructure, modal nodes, dedicated lines, 'user friendly' pedestrian routes
- Developing of electric transportation
- Replacement of RAT Brasov (public transport) fleet

Also, in the long term, after 2030 ...

- Sustainable way of transportation should become normal
- Public transport should become entirely non-polluting

SSH research can contribute to solving this challenge through ...

- Studying and gathering information about citizens' perceptions of sustainable urban mobility measures and solutions
- Education of citizens

This research is of a great importance because it provides data, figures, ideas and statistics that can substantiate and help inform administrative and political decisions

As a final remark, it is important to know that developing a sustainable transport infrastructure will increase personal satisfaction and interaction between citizens and improve the quality of life. Time means money."

Participants at the Brasov SHAPE ENERGY workshop

How to support citizen initiatives in the field of energy at local level, in Brussels (Belgium)

The workshop

Venue: Bruxelles Environnement, Site de Tour & Taxis, Avenue du Port 86c/3000, 1000 Brussels, Belgium

Date: 30 January 2018

Language: French

Workshop organisers: Kinga Kovacs, Perrine Ethuin, Stéphane Dupas (Energy Cities)

Organisations represented included: 21 Solutions, APERe, Brulocalis, Bruxelles Environnement, CAFA asbl, Community Land Trust Bruxelles, CPAS de Watermael-Boitsfort, écoconso (non for profit association encouraging eco-consumption), Fédération des Services Sociaux – SocialEnergie, REScoop.eu, Réseau Transition and Une Maison en Plus.

What topic did you choose?

Together with host Bruxelles Environnement we chose the topic 'Energy & citizens' initiatives'. We wanted to think about how public actors can help, support and develop energy transition initiatives carried out by citizens. More specifically, the workshop discussed how public actors in Brussels can cooperate positively with existing and emerging citizens' initiatives locally. How can these initiatives be helped to grow and develop further? What is the role of the sharing economy? What kind of networking should be in place for bottom-up actions? Which communication channels are the most appropriate?

You can read this post here

Online content from the Brussels SHAPE ENERGY workshop

What were the main points of discussion, and from the energy stories?

In the Brussels workshop we worked a lot with post-it notes to capture key challenges, which included:

We then considered in-depth responses to the challenges of citizen burn-out / how to sustain initiatives, and overcome communication difficulties. Here solutions were seen as including:

Secondly we discussed the challenge of needing new methods for this work, and how this could be addressed:

What next steps were identified?

The stakeholders appreciated the networking opportunity the SHAPE ENERGY workshop offered and are looking forward to new collaboration opportunities. Some participants felt further engagement with the issues raised was needed in order to begin to realise impact on the ground. To this end, on the 22 June 2018, Bruxelles Environnement organised a follow-up workshop on citizen initiatives and building refurbishment. There are plans to further support small citizen initiatives, in particular by highlighting them via a future common branding. This work is particularly intended to give more space to citizen-led initiatives and avoid them being taken over by the local administration.

Taken from the workshop's blogpost, the challenges of citizen disempowerment are captured here in storyform

AGATHE'S STORY
a story of challenge from the Brussels workshop

"Agathe, single mother of 2 children, gets support from a social assistant. She is not the owner of her apartment and she is living in an energy-hungry home. She would like to refurbish it or move out to a decent flat. She does not know what to do and she feels that it might be easier to do the works without getting a permit as procedures are unclear and complicated."

Participants at the Brussels SHAPE ENERGY workshop

BRUSSELS' ENERGY CITIZENS
a collaborative story

Participants spoke about the need to match programmes from public bodies up with citizen-led initiatives.. this integration is embedded in the future story presented here

"In our educational system we have integrated modules focusing on communication, collaboration, empathy citizenship. Alphonse and Agathe are not afraid to work together to renovate their building and make it more energy efficient. Together they made contact with key resource persons who can accompany them in this process. Now that all this information is centralised, just like the participative budget, Alphonse and Agathe can give free rein to their imagination. And their children participate in the project and involve other students from their class in their approach. They understood the behaviours that had a strong impact on climate and take action on all available levers. Later on, they will present the progress of the project to their community space. They will go with their bikes made available by their municipality (bakfiets / vélocargo / cargobike). And thanks to the universal income for all and the tutoring project, the parents of the other children come to help them with their work in their home. Agathe and Alphonse, with their children, also take part in intercommunal and regional meetings to exchange good practices in the community renovation of the participative restoration site. Agathe and Alfonse invite children and neighbours to come and see their renovated home and encourage others to do the same."

Zero Carbon Cambridge: achieving low-energy housing via multi-stakeholder collaboration (UK)

What topic did you choose?

As part of Cambridge City Council's Climate Change Strategy for 2016-2021, an aspiration has recently been set for Cambridge to be zero carbon by 2050. To meet this, emissions from the city will need to reduce at an even more rapid rate over the next few decades, requiring key organisations such as local authorities, businesses, universities and colleges, and voluntary / community groups to work more closely together. This reduction in emissions must also be achieved at a time of rapid growth; in Cambridge and South Cambridgeshire, at least 1,700 new homes need to be built every year to meet assessed needs. Considering how both new and existing housing can meet low energy targets will be critical in the Climate Change Strategy's success.

What were the main points of discussion?

After introductions, there were three main sections to the workshop:

1. A first group working session, where people wrote and shared their individual stories, focussing on the issue of *collaborative working/collaborative projects* and when these had worked well/badly.

2. A short keynote on local case studies and the Cambridge Sustainable Housing Design Guide. Amongst other things, the discussion covered:

    - A 'national policy vacuum' since the UK's Code for Sustainable Homes was scrapped, which is hard for developers and has led to frustrations in industry (where people had worked hard to meet the new requirements).
    - That there is currently a grey area over local authority oversight for different areas, what they are allowed to require / regulate and what they are not allowed to.
    - A skills gap in the construction industry.

3. A second group working session, where groups chose a particular challenge raised from session 1 to address using a collaborative vision story (see pp. 32-34).

The workshop

Venue: The Guildhall, Cambridge, UK

Date: 14 November 2017

Language: English

Workshop organisers: Rosie Robison, Chris Foulds and Lenke Balint (Global Sustainability Institute, Anglia Ruskin University), Janet Fogg (Cambridge City Council)

Workshop assistants: Viera Pechancová and Premysl Palka (Tomas Bata University, Czech Republic [Czechia]), Aled Jones, Lauren Stabler and David Skinner (Anglia Ruskin University), Emma Davies and David Kidston (Cambridge City Council)

Other organisations represented included: AECOM, Cambridge Architectural Research, Cambridge and County Developments, Cambridge Carbon Footprint, Carbon Neutral Cambridge, Federation of Cambridge Residents' Association, Greater Cambridge Greater Peterborough Enterprise Partnership, Hill, Cambridgeshire County Council, North West Cambridgeshire Development, Transition Cambridge, Open University, Max Fordham, as well as independent architects.

"For me the mix of participants was a real benefit ... it highlighted issues and areas for collaboration that would have perhaps not come up if you just had a bunch of consultants more focussed on technological approaches to zero carbon. So we had a lot more discussion ... looking at some of the wider societal benefits."

ONLINE CONTENT FROM THE CAMBRIDGE SHAPE ENERGY WORKSHOP

▸ You can watch these videos here

What were the main points coming out of the energy stories?

Points which were repeated in two or more stories included:

- Developing a shared vision: how is this done successfully? As well as managing differences in vision.
- The importance of the set-up phase of a project, and multi-stakeholder buy in early on. Related to this, reflections on the resources needed (time and money) in order to do proper set up and detailed data gathering.
- A focus on young people and/or education.
- Importance of widening scope from one area of sustainability to many interconnected elements.
- Generating clear and agreed metrics and sharing data, and the difficulties in doing this.

What next steps were identified?

Cambridge City Council was keen to use the workshop to identify pilot projects which could be taken forward by local actors, so this was very much the focus of the collaborative story session. These are being reported to the Climate Change City Leaders group in Cambridge in autumn 2018 to discuss how these may be taken forward. A number of participants said there were specific connections they planned to follow up on, and/or that they were going to take new ideas back to their teams.

"In Cambridge, four detailed collaborative stories were written, each packed with a variety of ideas for future 'pilot projects'. Two are presented here."

THE PROBLEM OF POLICY (IN)CONSISTENCY: OR HOW TO DEAL WITH MOVING GOALPOSTS

a collaborative story from Cambridge

"In order to respond to a lack of policy clarity and consistency, the following understandings were needed: how to have influence, for example through the new mayor and combined authority, or local business such as the big-technology firms; how to create a common vision, which would ensure cross-sector and multi-sector buy-in; the fact that it was important to not necessarily talk about low-carbon energy or sustainability, and that traction could be achieved through other issues; and how best to engage people.

So between 2018-2022, the following three pilot projects were run...

Cambridge: Europe's first healthy city

... Developing a 'healthy city vision', under the banner of which other sustainability characteristics were explicitly attached. This acted as a pilot for arguing for a new European Award (e.g. similar to city of culture status). However, various problems/conflicts arose, including: how to define 'healthy'; how to measure/compare cities; general boundaries and methods issues (e.g. integrating both qualitative and quantitative); managing expectations and identifying common problem definitions; how exactly to be inclusive and engage


Participants at the Cambridge SHAPE ENERGY workshop

'everyone' through dialogue. Particular groups worked to address these problems by: using existing institutions with track records in health, cities and sustainability; focusing on young people, e.g. through school workshops and curricula; and making the most of the local National Health Service resources. Ultimately, in working towards zero carbon Cambridge 2050, the outcome was Cambridge being awarded European Healthy City of the Year.

The Combined Authority brings about updates in Planning

... Identifying how to influence policy levers in planning for new homes, e.g. through the new combined authority plans. However, problems/conflicts arose, including: access; conflicts of interest; ideological differences on the role, purpose and capacity of the planning system; and rural-urban differences for planning decisions. Particular groups worked to address these problems by: identifying actors, timetables, strategies and plans currently under development by Government and beyond; and gaining commitment from senior staff and key decision-makers early on. Ultimately, in working toward zero carbon Cambridge 2050, the outcome was that central Government and the Local Plan policies delivered zero carbon homes in use.

Better data sharing for better performance of new housing

... Finding ways to focus policies more on performance-in-use and therefore different ways to measure success of new homes. One specific project focus was that all new housing developments had a mandatory requirement to share energy performance information. However, problems/conflicts arose, including: commercial interests making it difficult to share 'bad' results; the need to provide appropriate accompanying information to help contextualise the data; debates regarding the 'objectivity' of the data; and the cost of doing all this extra work. And particular groups worked to address these by: having conversations with developers early on, in conjunction with councils and researchers; being clear on what was being measured, with a clear hierarchy of metrics; and focusing on longevity. Ultimately, in working toward zero carbon Cambridge 2050, the outcome was people better understood the value of how to live low-impact lifestyles and the councils better understood how new homes were being used. ”

BUILDING THE 'ZERO CARBON CAMBRIDGE' BRAND
a collaborative story

“In order to respond to the question of how to support people in continually engaging with 'achieving zero carbon' as an aspiration, and to influence solutions, the following understandings were needed: a baseline of the level of grassroots support for this aspiration, including an assessment of what this target means, and how the market and consumers currently express their true desire (for example, do house buyers consider the Energy Performance Certificate and energy running costs when making an offer for a home?); a clear strategy for how to reach the groups not traditionally engaged; exploring how housing and community can link and support this aspiration; looking at how to re-introduce the Code for Sustainable Homes to allow for underpinning legislation.

Between 2018 and 2022 the following new projects were run:

Benefits of zero carbon housing for landlords: A study was commissioned to better understand the revealed preferences for consumers and how value can be demonstrated through achieving the zero carbon target, including:

a. A study on the added value for the rental market (for landlords) – are there retention, cost, compliance or marketing benefits?

b. A study on the speed/ease/value of sale for highly energy efficient houses.

The future home: A visioning exercise with the public to explore future homes and communities (not framed in sustainability or energy terms). What value exists in the homes and communities that people want to leave to the next generation/next occupants?

Reimagining council tax: A differentiated council tax was trialled based on the energy performance of homes with a clear support mechanism for those in energy poverty.

Participants at the Cambridge SHAPE ENERGY workshop

However, problems arose and in particular it seemed as though there were broadly two groups of individuals in Cambridge – those that were engaged and knowledgeable about energy, and everyone else. Charity groups were seen as self-selecting. It was also difficult to get real engagement from the private rented sector given the imbalance between supply and demand which meant that the landlords did not have to do very much to rent out their properties in the short term. Often cheap technology fixes existed for some of the problems identified and while these fixed some issues they did not allow for real change over the long term.

Particular groups worked to address these by being very transparent around the findings of the early studies and highlighting, even limited, benefits of added values to the renting sector including retention of tenants, reliability of paying rents, and the value of rents possible. Specifically, young(er) tenants were empowered through the engagement process. Workshops, questionnaires, discussions and interviews gave voice to a wide range of stakeholders and a common vision was developed. These were run through different organisations and groups to ensure as wide a range of cohorts were represented as possible including through the council, charities, faith organisations, schools, housing supply chains (including estate agents), big employers, banks and mortgage lenders. There was a particular focus on understanding the social impact of any changes (such as differentiated council tax) and clear routes for mitigation of these impacts were put in place. A massive marketing campaign was run to ensure the common vision was embedded across the community.

Ultimately in working towards zero carbon Cambridge 2050 the outcome was a clear recognition of 'brand Cambridge' which was owned by everyone and the delivery of quality low cost homes fit for the future embedded in communities.

Challenges for the future of the Chisinau heating (Moldova)

The workshop

Venue: Institute of Power Engineering, 5 Academiei str. of. 434, Chisinau, Moldova

Date: 20 March 2018

Language: Romanian

Workshop organiser: Mihai Tirsu (Black Sea Energy Research Centre / Sveatoslav Postoronca Mihai Lupu - Institute of Power Engineering)

Other organisations represented included: Agency for Energy Efficiency, Association of Energy Consumers in Moldova, Alvieteh Ltd, Energoplan, ESCO Moldova, Institute of Public Polices, National Agency for Regulation in Energy, State Energy Inspectorate, Technical University of Moldova, Termoelectrica S.A., as well as representatives from civil society and small business.

What topic did you choose?

We looked at the future model of the heating system of Chisinau city, the capital of Moldova. The existing system has low energy efficiency. With the collapse of the Soviet Union, practically all centralised heating systems in the country were destroyed, with the exception of Chisinau and part of Bălţ city. Due to the low quality of the centralised system almost 50% of consumers have disconnected from the heating network and installed individual natural gas fired boilers. This has led to an increase in the tariff for those who remain. New multi-storey buildings are being built intensively, which do not connect to the centralized heating system, and old buildings are not thermally isolated. The topic is therefore very sensitive for our citizens due to many factors: cost, level of comfort, environment. Additional social aspects are very important, because many people can't pay for service due to their low income. Additionally, development of district heating is also a priority on European level.

What were the main points of discussion?

Key elements focused on the technical, economic, environmental and social issues with existing district heating. Participants highlighted that there are no possibility to regulate the level of apartment heating for yourself (individual comfort), the quality of services provided by central heat suppliers are very low, buildings are not insulated and therefore they spend a lot of money, that the individual gas boilers of neighbours are not fitted properly and therefore they breathe in the smoke. The lack of energy meters for each consumer is also a big problem. Another point of discussion concerned improvement of the heat energy market to facilitate the supply of all categories of people with quality energy products and services of heating and domestic hot water. Also, some felt that consumers are not interested in energy efficiency, because existing payment systems are not correlated with consumer needs. Finally, there were a lot of discussion about the lack of specialised programs for children, students, etc. on energy efficiency and how these may help.

> *"It is a good platform to have in one place a large number of stakeholders and to give them possibility to express freely their point of view."*

What were the main points coming out of the energy stories?

Many ideas were put forward regarding how to improve the existing heating system of Chisinau. Many participants supported centralised

heating systems in order to make heat and domestic hot water available for every consumer, to mitigate the level of pollution from the energy sector, to assure a high level of energy security, to reduce health impacts, as well as to reduce the bills for energy products and services. However some supported decentralised systems. Everyone felt it must certainly include Renewable Energy Sources, be smart, efficient and accessible as a service for any consumer.

ONLINE CONTENT FROM THE CHISINAU SHAPE ENERGY WORKSHOP

▸ You can watch this video here

What next steps were identified?

All participants agreed that it is necessary to develop a city development strategy for 2050, including plans for action on the future development of the city's heating system in conjunction with construction plans. Specifically, it was agreed with Termoelectrica S.A. (the main company providing operating district heating system of Chisinau city to 60% of all consumers), to develop at least two studies, related to:

1. Impacts of individual heating boilers on environment and human health.

2. Benefits of connection of all public buildings to centralised heating system in terms of energy efficiency and environment.

Both studies should help to develop the Chisinau city strategy up to 2050.

THE FUTURE OF THE HEATING SYSTEM OF CHISINAU CITY: STRATEGY 2050
a collaborative story

> *The way of organising the event was an unprecedented one, which was appreciated by the participants themselves, where they all were able to express their vision of the future and the problems of the thermal system of Chisinau.*

"*We identified the following issue of high importance to assure a centralised and efficient heating system in Chisinau...* the lack of a feasibility study and development plan for the central heating system together with Demand Side Management.

I would like the future of the heating supply system of Chisinau city ... to be efficient, with the connection of Renewable Energy Sources (RES), and characterised by a high level of SMART-ness.

To find a solution for these problems in the medium term, in the period 2018-2030 ... a strategy of the heat power supply is developed, adjusting the legal and normative framework, implementing energy certificates, upgrading energy sources and decentralising them[1].

As well as, in the long term, after the year 2030 ... a strategy 2050 is created for the development of the city, with plans of the development of the heating system in correlation with this strategy. The connection of the trigeneration systems (plants producing electricity, heat and cooling), RES, thermal energy accumulators, engagement at large scale of the local experts to the development of the 2050 Strategy and of the Heating Plan.

Research in the Sciences Socio-Economic and Humanities (SSH) can contribute to finding the solutions for existing problems through... development of studies and curricula in kindergartens, schools, universities and others. The integration of specialists from various domains of activity, the increase of the level of

1 Decentralised energy *sources* can be implemented at the same time as centralised heat *supply*.

Participants at the Chisinau SHAPE ENERGY workshop

information for society, development of the support programs for vulnerable consumers, easy access to information.

Research is of high importance ... to benefit energy policymakers and also consumers, generation utilities, companies for supply of heating energy, as well as the environment.

As a final conclusion, it is important to know that ... a constructive dialogue with all categories of interested stakeholders is the single way to implement this solution. "

THE FUTURE OF THE HEATING SYSTEM OF CHISINAU CITY: LEGAL FRAMEWORKS AND VISION
a collaborative story

"*We identified the following issue of high importance to assure a centralised and efficient heating system in Chisinau...* the lack of the coherence of the legal framework and norms, as well as the lack of a feasibility study concerning a clear vision on the central heating system.

To find a solution for these problems in the medium term, in the period 2018-2030 ... an integrated feasibility study and a development of the plans of actions for the future of the central heating system was performed, prioritising uninterrupted supply to consumers. This plan of action was developed with the identification of the funding sources in order to: refurbish supply sources; increase the reliability of the network; implement new legislation framework to align with the requirements of EU.

As well as, in the long term, after 2030 ... development of the strategy of extension of central heat supply and integration of the RES, implementation of Energy Efficiency measures in buildings, and development of local energy generation activities.

Research in the Sciences Socio-Economic and Humanities (SSH) can contribute to finding solutions for existing problems through... informing society; bringing their insights to new technologies; involvement of suppliers and companies who manage the housing stock.

Research is of high importance because ... it supports continuity in heat supply of consumers based on their necessities and best available technologies.

As a final conclusion, it is important to know that ... successful planning relies on successfully finding common solutions to problems. "

Participants at the Chisinau SHAPE ENERGY workshop

THE FUTURE OF THE HEATING SYSTEM OF CHISINAU: A MODERN CITY
a collaborative story

"*We identified the following issue of high importance to assure a centralised and efficient heating system in Chisinau...* the promotion of prosumers [individuals both consuming and producing energy] and Demand Side Management (DSM); a systemic and cross-cutting approach; encouraging business.

I would like the future of the heating supply system of the Chisinau city ... to operate in the context of the modern market and relationships of high performance between consumers and producers/ suppliers.

To find a solution for these problems in the medium term, in the period 2018-2030 ... it is necessary to implement a step-by-step transition to centralised autonomy heating (Individual Thermal Points), of DSM, and increasing the level of SMART-ness.

As well as, in the long term, after year 2030 ... enlarging the scale of use of RES

Research in the Sciences Socio-Economic and Humanities (SSH) can contribute to finding solutions for existing problems through... exploring awareness of the consumer; scientific support; a coordinated story of good practice.

Participants at the Chisinau SHAPE ENERGY workshop

Research is of high importance, because ... it can help monitoring of the situation and identification of the solutions for the problems of the energy systems for heating and supplying of domestic hot water.

As a final conclusion, it is important to know that ... a competent choosing of the energy product and service depends on the level of information, knowledge and quality guidance of the final consumer."

A MULTI-STAKEHOLDER APPROACH TO ENERGY POVERTY, IN GRANADA (SPAIN)

The workshop

VENUE: Parque de las Ciencias, Granada, Spain

DATE: 5 March 2018

LANGUAGE: Spanish

WORKSHOP ORGANISERS: Sonia Moreno, Olga Garzón, Gustavo Gómez (Acento Comunicación)

WORKSHOP ASSISTANTS: Giulia Sonetti (Politecnico di Torino), Lenke Balint (Anglia Ruskin University)

OTHER ORGANISATIONS REPRESENTED INCLUDED: Agencia de Vivienda y Rehabilitación de Andalucía (Junta de Andalucía), Agencia Provincial de la Energía (Diputación de Granada), Agenda Local 21 (Granada City Council), Asociación Almanjáyar en Familia (NGO), BANKIA (Corporate Social Responsibility Department), CLUSTER Construcción Sostenible de Andalucía, CooperaSE (energy cooperative), Cátedra HIDRALIA, ENDESA, FACUA Granada (consumers' association), el Defensor del Ciudadano (Granada ombudsman), Granada Red Cross, SETEM (NGO), Seven Solutions, University of Granada, CICODE.

What topic did you choose?

This workshop gathered key stakeholders to explore local challenges and solutions to energy poverty in the city of Granada.

Currently, 11% of Spanish households are unable to maintain adequate warmth in their homes during the cold season (5.1m people) according to the Spanish Association of Environmental Sciences, a supporting organisation of the EU Energy Poverty Observatory. A recent study commissioned by the Granada Provincial Council (Diputación de Granada) reveals that in the province of Granada the rate is 12.5-13.9%.

What were the main points of discussion?

Participants were divided into small groups with representatives from academia, administration, business and civil society in every group; we tried to maintain gender balance too. During the first group working session, participants wrote individual stories to prompt debate about the most important challenges regarding energy poverty in Granada. The four challenges selected by the groups were: 1. Humanising the energy transition; 2. Renewable energy and new energy models; 3. Training projects for local collectives; 4. Raising citizen and political awareness.

In a second group working session, the same groups had to envision a city without energy poverty and identify which disciplines and measures helped to achieve it. In a final session, all groups came together to share their conclusions.

Key elements of the solutions identified across all groups were:

- *Expert Social Sciences & Humanities knowledge needed to feed in, relating to:* people; ethics; big data management and platforms; communication; the politics of energy (as well as a need for politicians who specialise in energy); multidisciplinary and cross-cutting new disciplines in renewable energies.
- *Measures needed to be taken:* better communication from media and key stakeholders; identify good practices in all sectors and disseminate widely; training projects for families and vulnerable groups on digital skills, participation and energy consumption involving local NGOs; energy

> *"Great journey, very productive day"*

ONLINE CONTENT FROM THE GRANADA SHAPE ENERGY WORKSHOP

▸ You can watch this video here

education at schools; energy efficiency trainers to work with key stakeholders (including politicians); fostering consumer associations and energy communities / cooperatives to improve participation and engagement (leaving behind individualism and particular interests to work for a common good); a multi-stakeholder approach, holding regular networking meetings and working groups in the local area; and finally, to foster the use of renewable energies applying tax incentives in the private sector and for consumers and new 'energy zero' regulations for the public sector.

What were the main points coming out of the energy stories?

Undoubtedly the issue of education and lack of awareness was a point that was repeated in almost all stories. Education from childhood, education for families,groups, companies, etc. Education is the first step to get consumers involved and aware of the responsible use of energy and good practices. Participants suggested that the population do not consider investing money in energy because they do not see it as an important thing. The subject of education seemed vital to attendees.

> *"Thanks for excellent organization and creation of conditions for fruitful discussions!"*

But it is also interesting how urban infrastructure appeared in all the stories some way. Either from the construction sector, the quality of housing, insulation and conditioning of homes, use of renewable energy sources, the urban transport model, urban pollution.

And of course the political issue, since the current energy system is not fair, property is not well distributed, it is the large companies that determine the policy to be followed, and this does not take into account the whole society, particularly the most disadvantaged. Therefore, it is necessary to collaborate between private and public entities to understand well what the problems are and look for solutions from a holistic vision, a more integrated vision.

What next steps were identified?

Building directly on this event, there is an exciting proposal to create a permanent working group (mesa de trabajo) on energy poverty in Granada, which most stakeholders present at the workshop expressed their interest in helping to develop and which will begin to take shape in future meetings. Indeed, there is a concrete plan for another event to run before the end of 2018. Everybody made new connections and many participants said verbally that there were specific connections they planned to follow up on.

Participants at the Granada SHAPE ENERGY workshop

It was amazing to see how such different stakeholders found common points for a better city in the future.

ENVISIONING A SUSTAINABLE CITY WITH ENERGY FOR ALL
a collaborative story

"The future Granada that was dreamed of had:

- Grandparents who teach energy efficiency classes.
- School students learning about energy poverty.
- A political class able to know the problems and create solutions without so much investment of money, but approaching the citizens and becoming aware of the small solutions.

It is a Granada that has returned to architecture ... and with sustainable urban planning.

Between 2018 and 2028, three major actions were undertaken for the future:

1. Public buildings have to be self-sufficient in energy, 'zero energy by law' is the name of this pilot project.
2. There are great incentives for companies to be energy sustainable.
3. Promotion of the creation of energetic communities in which citizens, companies and local public administrations converge.

The disciplines of the social sciences and the humanities that proved to be most valuable to achieve this change were: ethics, geography, sociology, political ecology and environmental psychology. The future Granada of which this group dreamed had a better quality of life, healthier people, with more accessibility, much happier and with basic needs covered. A Granada 'zero energy' that is self-sufficient energetically.

The Granada of the future is filled with positive labels. And words like marginalisation or social exclusion no longer exist. We have achieved that all consumers are trained and therefore are empowered consumers. Politicians are engaged and connected to community.

In the future we imagine a Granada where there is a guaranteed minimum energy access for all."

Participants at the Granada SHAPE ENERGY workshop

The 'energy citizen' and 'prosumer' – indispensable or unattainable? In Heidelberg (Germany)

The workshop

Venue: Rathaus Heidelberg, Germany

Date: 20 February 2018

Language: German

Workshop organisers: Patrick Sumpf, Christian Büscher, Jens Schippl (Karlsruhe Institute of Technology), Stéphane Dupas (Energy Cities), Sabine Lachenicht (Stadt Heidelberg)

Workshop assistants: Christine Fiedler (Stadt Heidelberg), Pauline Claudot (École normale supérieure de Lyon / École nationale des travaux publics de l'État)

Other organisations represented included: Amt für Umweltschutz, Gewerbeaufsicht und Energie, Attac, ExploHeidelberg, HCE Heidelberg, HfWU Nürtingen Geislingen, Institut für ökologische Wirtschaftsforschung, KEFF Rhein-Neckar, päd-aktiv, Stadt Heidelberg, Stadtwerke Heidelberg, Vegan in Heidelberg e.V., Volkshochschule Heidelberg, VRD Stiftung für Erneuerbare Energien, ZIRIUS Universität Stuttgart.

What topic did you choose?

In the climate protection process in Heidelberg, participation and citizen motivation are of central importance in order to achieve its 'Masterplan' ambitions: the reduction of CO_2 emissions by 95% compared to 1990 and a halving of final energy consumption by the year 2050.

Private households are the largest sector in terms of final energy consumption and CO_2 emissions. Although successes have already been achieved in reducing these, the city of Heidelberg is asking: "How can citizens be motivated to actively implement a strategy after its development?" (Masterplan Projektantrag Stadt HD, p. 15). In commercial and transport sectors CO_2 emissions have been stagnating for years, and in private households additional efforts are needed in order to raise potentials. This raises the question of the chances of realizing an 'energy citizen' and 'prosumer' who actively contributes to climate protection.

The energy turnaround in Heidelberg is therefore essentially also a 'behaviour turnaround' of citizens. The problem of citizen motivation to affect (further) behavioural changes is in the foreground in order to achieve the ambitious climate protection goals. Which strategies are promising to ensure continued and increasing citizen motivation, especially in private households? How to prevent further stagnation of emissions in areas such as commerce and transport?

What were the main points coming out of the discussion?

Overall, education, intention-behaviour gap, awareness, motivation and feedback, nutrition and agriculture, human routines/laziness, citizen energy cooperatives, (local) incentives and policy vs. voluntary commitment, real-world base of climate change, energy efficiency and renewable energies were all discussed.

ONLINE CONTENT FROM THE HEIDELBERG SHAPE ENERGY WORKSHOP

▸ You can watch this video here

What were the main points coming out of the energy stories?

For the latter part of the workshop (including construction of collaborative stories), participants were split into 2 groups.

In group 1, through their individual 'stories' and discussion, participants agreed on a common problem for Heidelberg as follows: Do the existing education and information strategies related to environmental action fulfill their purpose? If not, why? What are the deficits, what potentials for optimisation are there?

Participants were aware that many different variables are working together in influencing environmental behavior. Yet their future projections of a dream city were quite bold, involving climate-neutral lifestyle as the standard, e.g. through energy consumption in the house and mobility by default as regenerative, as well as organic diets, regional, vegetarian and vegan lifestyles. A potentially contradictory approach was identified by participants in terms of establishing ways to open up choices for consumers, e.g. through an 'eco-app' which would provide easily digestible information on climate friendly/hazardous activities, through green/red lights, for instance. These approaches signal the distinction participants were occupied with, which is the continuum between nudging, i.e. pushing people towards certain behaviours by default mechanisms deemed positive by collective decision, or rather incentivising certain behaviour by providing information and rewarding for actions deemed favorable.

> *Participants in Heidelberg gave in-depth consideration to the involvement of different Social Science and Humanities disciplines in understanding and addressing climate protection issues*

The latter scheme is visible in the group's imagined actions and policies up to 2030, involving various public control mechanisms (tax increases, legal requirements, incentives, punishment, fees, laws), voluntary behavioural changes being rewarded, and 'Round Tables' to steer actions and coordination between actors from different fields. To make sense of the different possible approaches one can take to prompt change, research from the Social Sciences and Humanities (SSH) was called for by referencing: Historians and Ethnologists/Anthropologists (to assist with a revival of ancient knowledge, 'common good' research), Communication researchers and Linguists (looking at language research/framing), (Social-) Psychologists (to explore cognitive dissonance between awareness and action, motivation research) as well as Political Scientists and Sociologists (looking into political requirements versus voluntary commitment, monitoring of the transition process).

Climate protection, engagement and sustainability were imagined to have been transformed into 'sexy' social paradigms (attractive, desirable, socially rewarded), and have been related to real-life problems of people instead of being abstract collective goals (like reducing CO2 emissions). A final point of discussion was the re-evaluation of known scientific insights with regard to practical problems that have come up over the past years, so that a mirroring process might generate helpful advances (for all disciplines). In the same vein, participants noted that the basic structure of research projects related to energy and climate should involve practical elements as much as possible, securing applicability of results for real-life change. This might include funding and support for 'maker spaces', 'real-world laboratories' and similar new sociotechnical arrangements in order to achieve innovative solutions to the identified problems.

Participants at the Heidelberg SHAPE ENERGY workshop

Their 'story' ended as follows: *"Sufficiency and 'happiness' research managed to display alternatives to the consumption-based society, to make it more sustainable, and to create communication channels in order to reach out to different social groups."*

For group 2, in the debate about the 'couleur locale', a variety of different topics were mentioned in Heidelberg. But three main issues and the linkages between them emerged as central challenge: the linkages between issues awareness, motivation and feedback.

Climate issues are an important topic in public policy making in Heidelberg. But to achieve more commitment and motivation amongst the citizens, awareness for this problem and also for the available solutions needs to be increased to trigger and support motivations to act and change behaviour. Furthermore, awareness and motivations need to be stabilised or further increased by feedback about the measures taken, for example in the form of smart meters that give useful information about energy consumption and/or about the share of renewables in the power mix.

This triangle of awareness-motivation-feedback was seen as needing to be much more in the focus of SSH research to support developments towards a desirable future. How can climate change activities and smart energy strategies be framed in a positive and interesting way to motivate different target groups in different social settings? How can the exchange of knowledge between the scientific realm and society be improved, what kind of transdisciplinary approaches are the right ones? What kind of information and feedback is needed to support awareness and motivation for sustainable lifestyles?

Group 2's story can be seen on p.45.

What next steps were identified?

The workshop co-host (the City of Heidelberg) was very much interested in learning about how SHAPE ENERGY is feeding its results into EU policy process; Karlsruhe Institute of Technology is in communication with the co-host and participants about this. Further, Heidelberg is a member of the Energy Cities network, and this workshop formed part of their continuing relations regarding the achievement of local energy transitions.

I IMAGINE A FUTURE CITY..
one of the collaborative stories from the Heidelberg worskhop

"I imagine a future city in which:

- An integration of climate protection measures from as many as possible is considered useful
- Wide supply by regional products is possible
- A sustainable lifestyle is sought by all
- Energy and climate are not separated anymore, but become a routine and are integrated in all long-term decisions
- We use 100% renewable energy and give up fossil fuels
- Resources are used and shared effectively.

To solve this problem in between 2018 and 2030:

- Violations of laws and regulations brought consistent sanctions
- Awareness campaigns were run in the media
- Energy efficiency got a 'new' image (being 'in', lifestyle choice) and through campaigns was distributed to different target groups
- Intelligent (smart) solutions were developed to support options
- Conditions were made which support climate-friendly behaviour and investments (for example less space for private cars, more for walking and cycling paths, higher energy standards for buildings)
- Educational institutions offered free and regular environmental education for all ages

Social Sciences & Humanities research has been proven to be particularly valuable in achieving a change, through exploring:

- How climate change can be used positively
- Minimising the difference between acting and awareness
- What motivational feedback looks like
- Facilitating access to scientific results / transdisciplinarity
- What smart entry strategies look like in different social settings
- How to use information properly to optimally support behavioural changes

The research was of significance for Heidelberg's social and climate protection issues, and meant the city was less dependent on energy imports."

"In Heidelberg, some participants felt the prepared templates meant issues were reported instead of told in storyform. Nevertheless the collaborative 'story' presented here imagines a future where interactions between awareness, motivation and feedback are addressed. Further reflections on storytelling across the workshops are given in section 5."

Innovative financial instruments to support energy efficiency in urban residential building refurbishment, in Lisbon (Portugal)

The workshop

Venue: Holiday Inn Continental Hotel, Lisbon, Portugal

Date: 22 February 2018

Language: Portuguese

Workshop organisers: Francisco Gonçalves (Energy Cities), Vera Gregório and Maria João Ramos (Lisboa E-Nova – Lisbon Energy and Environment Agency)

Workshop assistant: Marta Peixinho (Lisboa E-Nova)

Other organisations represented included: ADENE - agencia para a energia, Banco BPI, Banco Santander Totta, Camara Municipal de Lisboa, Centre of Engineering and Product Development (CeiiA), Center for Environmental and Sustainabiltiy Research (CENSE) Nova University of Lisbon, Companhia Carris de Ferro de Lisboa, Departamento de Planeamento, Direcao-Geral do Territorio, Direcao Municipal de Urbanismo, forum cidadania, Gestão do Arrendamento da Habitação Municipal de Lisboa (GEBALIS), Institute of Social Sciences of Lisbon University, National Laboratory of Energy and Geology (LNEG), Municipia, Ordem dos Arquitectos – Seccao Regional Sul, RdA Climate Solutions, Zero, as well as independent stakeholders.

Participants at the Rehabilite event, immediately prior to the Lisbon SHAPE ENERGY workshop

What topic did you choose?

The aim of the workshop was to promote initiatives supporting energy efficiency and urban renewal, as well as identifying barriers and solutions to leverage innovative financial mechanisms, such as the recently launched IFRRU (National Financial Instrument for Urban Rehabilitation and Urbanisation). The workshop therefore explored challenges, finding new solutions and synergies for future programmes and incentives.

The storytelling activities were preceded by a very well attended and informative session (see picture) within the framework of the Interreg-funded project 'Rehabilite' – a transnational platform to support energy renovation of buildings in the SUDOE space (Spain, France and Portugal).

ONLINE CONTENT FROM THE LISBON SHAPE ENERGY WORKSHOP

You can read this post here

What were the main points of discussion?

The workshop addressed key obstacles and problems related to energy efficiency residential building retrofit in Lisbon and the implementation of innovative financial mechanisms, recognising that to do this successfully a host of other issues also need to be considered such as legal, skills-based, etc. Moreover, it reflected on future solutions.

The main challenges discussed were:

- Lack of knowledge, from building owners to construction companies, regarding energy efficiency measures and their benefits; Lack of, or bad, information;
- Lack of capacity for the initial costs demanded by financial institutions; Long payback periods;
- Unclear refurbishment building codes;
- Poor governance between different levels of the organisation and funding bodies;
- Time consuming and complex application processes for funding;
- Real state pressure towards tourism and lack of diversity in the recent investments for housing use;
- Increasing housing price (both renting and selling) and a loss of population because of pricing and tourism pressure; Gentrification;
- Condominiums' complex legislation and difficult decision-making processes;
- Heavy regulations related to cultural and architectural heritage;
- Complexity of refurbishment processes;
- Lack of people trained in critical areas.

When considering responses and solutions aimed at overcoming these difficulties, these included:

- The need to raise awareness, change behaviours and communicate better, including the development of interactive and educational platforms. Such actions could help strengthen relations between various players, including investors;
- The creation of technical support organisations/facilities for designers, but also consumers;
- The 'rebalancing' of neighbourhoods, returned to the population, with greater integration of residents, social cohesion, local energy production, and multifunctionality;
- The use of social sciences as a means of assisting in the analysis of attitudes and behaviours related to energy efficiency as well as conserving aspects of Bairist history and traditions;
- The difficulties of retrofitting shared buildings suggests the need to rethink the legal model, namely with the amendment of the Civil Code with regard to the majority and unanimity of decisions.

> *"It was a good session/meeting"*

- Participants were keen to bring the idea of 'dreams' to their analysis of financial issues, they wanted a 'cinematographic' Lisbon, a city on a human scale and more seductive for its inhabitants. To this end they defended the creation of financial instruments with a joint social and governmental vision, based on inter- and multi-disciplinarity and the participation of the various actors, including the final beneficiary.
- The municipality must also give an integrated response to those who want to undertake renovations. One idea was a focal point for energy efficiency, a unique place to bring together issues related to this area.

What were the main points coming out of the energy stories?

Towards the end of the workshop, participants put together the problems identified at each of the tables, the proposed solutions, and, with this material, they built a common story (see below).

What next steps were identified?

Improve communication channels between organisations who participated in the workshop to foster new partnerships and governance systems.

"The title decided upon by participants in Lisbon is a play on words, referring to the need to comply with the Paris Agreement on climate change and with the acceleration of the Portuguese capital towards meeting the tight targets already set for 2030."

PARIS WAKES UP IN LISBON!
a collaborative story from the Lisbon workshop

"I dream of a renewed Lisbon, more energy efficient, resilient, flexible, which shares the many available resources and is free of fossil fuels! However, there are still many obstacles to overcome!

I see a lot of energy misinformation and poverty...There is still waste of resources, skills to improve, a need for a better coordination between institutions and an excessive bureaucracy for the goals we want to reach.

Nevertheless, the road is being already beaten, with more information tools, financial mechanisms and more simplified legislative actions.

Today, we have more actors involved, a bigger civic and environmental awareness, which together gives us a holistic vision for the future, which allows us to implement integrated solutions.

I wake up in my cinematographic Lisbon, opening the windows and breathing clean air! The light of the Tagus River reflects in the windows and the greening of the hills extends until the buildings' roofs. Then I watch a lively and a lived city!"

Participants at the Lisbon SHAPE ENERGY workshop

How to approach Energy in a transversal way from the perspective of the Grand Lyon local authority (France)

What topic did you choose?

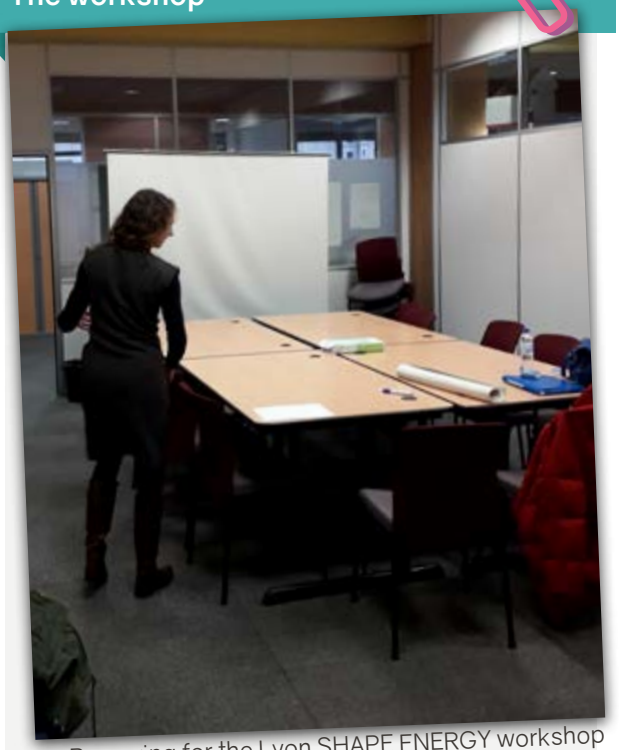
After discussions with a representative of the Grand Lyon Local Authority working on its climate plan, we decided to focus on the internal approach the Local Authority is taking on energy and how this transversal topic (i.e. which touches so many areas) is being addressed. Indeed, many of the staff have difficulties in dealing with this broad subject within a typically silo-ed administration. On top of that, the involvement of local stakeholders with such a transversal object is also difficult. An important part of the context is that a year ago the perimeter of the metropolis evolved. It has resulted in Grand Lyon and the 'département du Rhône' are now brought together under the same organisation of 'Lyon Métropole'. As most administrative services, and in particular those related to energy, existed in both administrations, this change has complexities and is slowing down decision processes.

What were the main points of discussion, and from the energy stories?

The metropolis is at the crossroads of two transitions:

- An internal one, following the merge of departments and a renewed internal organisation;
- Another, external one, linked to the current energy transition, which requires rethinking consumption patterns as well as electricity distribution and production.
- On 'transversality':
- Today's transversality (the way energy is considered across sectors) is either due to the legacies of Grand Lyon or in some cases enacted on purpose to help colleagues. It is not however fully embedded within the metropolis;
- Transversality works when there is an exchange of services on a give and take basis;
- Transversality could make it possible to highlight how certain topics concern

The workshop



Preparing for the Lyon SHAPE ENERGY workshop

Venue: Mission énergie, 203 Rue Garibaldi, Grand Lyon, France

Date: 20 March 2018

Language: French

Workshop organiser: Nathalie Ortar (École nationale des travaux publics de l'État)

Workshop assistants: Stéphane Dupas (Energy Cities), Luce Ponsar (Métropole de Lyon)

This workshop was held exclusively with members of Lyon Metropolis and of the local urbanism agency. Departments represented included: Department of Ecology and Sustainable Development, Department of Urbanism, Strategy and Sustainable Development, Division on Renewables, Division focused on Energy and Inhabitants, Division focused on historical buildings and energy, Division focused on waste prevention, Division focused on cycle paths, Division focused on the local Climate and Energy Action Plan. A mix of civil servants and elected representatives took part in the workshop.

everyone within the metropolis and could help to put on the agenda some less 'trendy' problems like questions of building heritage, waste or water.

The energy transition, just like climate change, raises anxiety-provoking issues that are difficult, for example:

- Time. The energy transition, like other issues including the management of buildings or water, exceeds the time available of elected members. How can they be put higher on the agenda?
- Objectives. Long-term objectives are huge and seem unachievable, milestones are needed in order to secure the path;
- Generations. The mindsets of civil society are evolving faster than that of many elected officials, to change that a new generation of officials would be needed.

The transition is already underway, its culmination will be the production of a change in mindsets and lifestyles. Participants were vocal on the need to be sensitive to how such 'ruptures' are talked about, as they can prompt anxiety or even fear about change.

What next steps were identified?

Lyon Metropolis is an active member of the Energy Cities network, and the two organiations worked closely together in delivery of this workshop. One of Energy Cities future studies – possibly resulting in a European collaborative project – will be dedicated to a thorough analysis of the municipal organisational models and decision making processes in different national and local contexts and the impact of these on the energy transition process, quality of services provided, efficiency, finances etc. The results will link into many of the pertinent themes for Lyon Metropolis raised in this SHAPE ENERGY workshop.

"The way the Grand Lyon workshop was organised and moderated meant participants did not produce a collaborative story, we share here some of the individual stories."

THE TRANSFORMATION FROM ONE WORLD TO ANOTHER
an individual story from Lyon

"In 2017, the main problem identified was managing to convince people of the absolute necessity to go towards change, to let people express themselves and give them a taste for change.

I dream of a future... where people get in touch to check that projects are progressing with shared objectives. Where exchanging ideas is fluid, its less about written records, less hierarchy.

To solve this problem, between 2017 and 2027... The local council, after having shared and debated in several stages the ambitions of the climate plan and its interconnections with local policies, decided on a common goal for the whole municipality. It met local inhabitants and discussed the participation of civil society and its aspirations.

Local projects grew in numbers on frugal and simpler ways of living, well-being, and living well together, a local economy that serves its inhabitants.

Research in social sciences and humanities contributed... by supporting intergenerational commonalities, inter-social class professionals, within the various areas of the municipality and with adjacent municipalities

The research brought on board a great number of people from a range of backgrounds. It enabled a change in how the municipality works, its rules and its management."

IN THE END, IT WASN'T SO DIFFICULT!
an individual story from Lyon

"We were at the start of the transition between the old ways and the future, which caused anxiety.

The way appeared full of obstacles, we had the solutions but didn't feel empowered. Hierarchies hesitated to trust us to innovate.

I dreamed of a future where... we [professionals in the field] knew very clearly in which direction we must take our region to make it more sustainable, we had arbitrated and made structural choices towards a plan that would benefit the inhabitants.

New politicians confirmed their wish to transform the town to be more sustainable. The need for experimentation was accepted by those in power, who also decided to engage with the model of the 'freed' business: because challenges are constantly changing (something proposed by the civil society), teams reform themselves to better adapt to the reality on the ground.

From 2027 to 2037... Ways of working with associations and businesses have changed a lot, I can work for 2 years with an association, then set up a project in a business, and then work with the council. The 'project' way of working has become common/cross-cutting to all structures.

SSH contributed to this change by... understanding the individual and collective dynamics that enable the management of the transition. It has shed light on the renewal of generations of politicians, understanding of the dynamics of citizens and business, and the way in which the municipalities use it.

In the end, it is vital to know that we are moving towards a desirable future."

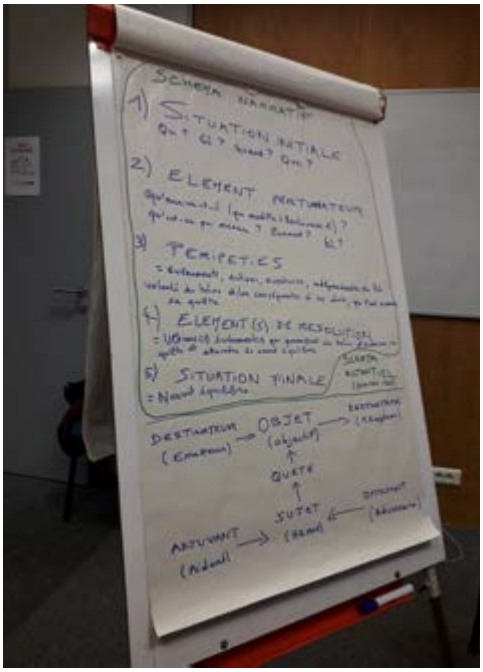
HOW CITIES LEGITIMISE THE ONGOING ENERGY TRANSITION
an individual story from Lyon

"I find that the city of Lyon is a council where cross-sector working and cooperation are well developed. Even if I see a reduction in this in recent years. An increasing workload means less time for cooperation and cross-sector initiatives, a lack of political decision making between the divergent interests of structures and services, and an organisation which is more hierarchical and rigid than before.

Consequences are:

- Less taking of the initiative
- 'Fatigue' when obstacles come up
- Less cooperation and cross-sector working due to lack of time

There is no engaged action that I know of to deal with this problem.



In 2017, the principal problem was... conducting the energy transition of the Lyon municipality

I dream of a future where... there is no longer any need to convince the public of the need for the energy transition and to fight against other actors who want to keep the existing status quo of a world that uses a lot of energy.

To achieve this... it was taken on board in public policies, debated and owned by the politicians, who embedded them in services and with their partners. (Roles: diagnose realistic and progressive propositions, share internally.)

The number of inhabitants, businesses and users of the region that transform their lifestyle is ever increasing, which creates a virtuous circle. It encourages politicians to go further. (Roles: follow, evaluate, communicate.)

Decisions and strong actions progressively allow new practices to emerge, and find a new balance, and new ways of living (which political work can elaborate). (Role: implementation.)

SSH helped to... understand the mechanisms of individual and collective change and understand generational conflicts and how they can be overcome. ”

Challenges and solutions for the refurbishment of multi-apartment buildings, in Riga (Latvia)

The workshop

Venue: Riga City Hall, Latvia

Date: 10 November 2017

Languages: English and Latvian

Workshop organiser: Kinga Kovacs (Energy Cities)

Workshop assistant: Francisco Gonçalves (Energy Cities), Timurs Safjulins (Riga Energy Agency)

Other organisations represented included: NGOs working in energy efficiency, Rigas Namu Parvaldnieks, Rigas Siltums, Riga Technical University, a private housing management company, as well as multi-apartment building house managers and home owners.

What topic did you choose?

The workshop focused on the SHAPE ENERGY topic of *Energy Efficiency and Using Less*, and more specifically on the challenges of the refurbishment of 6,000 multi-apartment buildings by 2030 in Riga. This is one of the major challenges within the framework of the local Sustainable Energy Action Plan of Riga targeting the 20-20-20 objectives by 2020 (20% cut in greenhouse gas emissions from 1990 levels; 20% energy from renewables; 20% improvement in energy efficiency). The objective of the meeting was to create a favourable discussion framework among the different key local stakeholders in Riga. Being the city with the lowest heat tariff in the Baltic states has contributed to building renovation stagnation in Riga, where most apartments were privatised after the communist era, but not fully, resulting in apartments being privately owned with common areas (entrance hall, staircases) being state owned. This can makes the decision-making process concerning refurbishment very difficult.

What were the main points of discussion, and from the energy stories?

In Riga, we classified challenges (and then solutions) according to the following categories: social; technical; economic/financial; legal; educational; communication/dissemination; organisational/ governance.

- **Social challenges:** Lack of awareness, mistrust in institutions (fear of corruption, doubts over the quality of building work); unengaged society who are not participating in activities organised for them but also not taking the initiative; greater emphasis on 'cosmetic works' than energy savings.
- **Organisational/governance challenges:** Bureaucracy; high number of renters; lack of political support for building renovation strategy development.
- **Educational aspects:** skills shortages; passivity of customers, who do not understand the refurbishment process; little awareness of the impact of refurbishment on health issues.
- **Communication and dissemination aspects:** Lack of information on how to engage in the renovation process step-by-step; difficulties in reaching the end user.

ONLINE CONTENT FROM THE RIGA SHAPE ENERGY WORKSHOP

You can watch this video here

- **Legal challenges:** Lack of legal obligation to renovate; difficulties in setting up residents associations.
- **Economic/financial challenges:** Long payback time due to low heating prices; lack of loans; hard for businesses to create refurbishment market if no demand; lack of good renovation examples; lack of affordable buildings in Riga in the future, lowering social cohesion.
- **Technical challenges:** Common energy meters.

Group 1 then decided to tackle the problems as a whole, rather than selecting only one key problem, as they are all closely interlinked.

- **Organisational solutions:** set up a local stakeholder matchmaking platform where each individual stakeholder or stakeholder group can register as one of the first steps is to ensure contact among the key stakeholders.
- **Educational solutions:** cooperate with universities and technical schools as a priority! Research on the impact of air quality on health issue and how to communicate this well.
- **Legal solutions:** set legal instruments to 'encourage' citizens to renovate (e.g. previously if residents living in the Riga historic city centre didn't renovate the building facades they needed to pay 10% more on the property tax – this worked very well); establish associations of home owners.
- **Economic/financial solutions:** Focus on (new) business models; making solutions more visible at a large scale - a whole street renovated, or a neighbourhood.
- **Communication/dissemination solutions:** communication in different languages to reach minority groups; tailor communication to the specific target group e.g. paper on the wall at the entrance of the building worked better than the webpage or social media; understandable guidelines for citizens (not so easy when you are doing it for the first time).

> *.. a very good organised event, I would recommend to other people..*

In Group 2, the topic chosen by participants to focus on was lack of awareness related to mistrust and a feeling of *"this is not my responsibility, someone will do it for me"*. Someone used the term of 'sovietisation' (a historical legacy).

- **Social solutions:** engage and enhance the community spirit: rediscover what brought people together in the past and what can bring them together now (more action and less blaming the institutions); create conditions to bring people back to the city (mobility, social, more kindergartens, public spaces), to bring investments back.
- **Communication/dissemination solutions:** Share good experiences from building retrofits.
- **Legal solutions:** National and local authorities should have a role via clear building codes, but also penalties (e.g. CO_2 taxes).
- **Economic/financial solutions:** Standard prefabricated solutions for refurbishment may be replicated with important economic benefits

Overall, the solutions identified included improving living conditions and health issues (such as indoor air quality), fostering community spirit, increasing of trust, changes in demography (more people coming back to the city) and a better quality of life.

What next steps were identified?

Four concrete follow-on actions were suggested by participants:

Participants at the Riga SHAPE ENERGY workshop

1. Create a stakeholder matchmaking platform (see collaborative story);
2. Improve the communication and dissemination processes;
3. The necessity of organising more such workshops;
4. Importance of involving citizens directly in these workshops in the future (we had one citizen participating in Riga).

"This story from Riga envisions a future where communication and information issues work very smoothly, as well as conveying a sense of pride in one's city."

THE RESILIENT CITY OF RIGA
a collaborative story

"I live in the resilient city of Riga, where sustainable policies are integrated with smart vision. Today in my city, there is a strong link between different groups of stakeholders (stakeholder matchmaking platform), that ensures circular economy is working (business model). I don't search for information, as information finds me, and suits me well. I can easily reach common agreements with my neighbours while having a nice barbecue together. Here I have the chance to chat with them discussing the things we achieved together and planning next steps. With our experience we now see the results of the healthier environment of our apartments. My city is green and I enjoy the green roofs and plants on facades. My building is located in a very liveable district. And I bring my friends from abroad to come back to Riga, and live here again!! Ohhh....and I'm happy the value of my property increased!"

Participants at the Riga SHAPE ENERGY workshop

The role of Energy Efficiency in the reduction of air pollution, in Skopje (Macedonia)

The workshop

Venue: Conti Club, Hotel Continental, Skopje, Macedonia

Date: 15 March 2018

Language: Macedonian

Workshop organiser: Zarko Ilievski (Macedonian Center for Energy Efficiency)

Workshop assistant: Natasha Tanevska, Saso Tanevski (SFERA Citizen Association)

Other organisations represented included: Center for Climate Change, City of Skopje including the Energy Efficiency Sector and Environmental Sector, Eko-Svest, International Balkan University, Ministry for Environment and Spatial Planning, Ministry of Economy, Municipality of Aerodrom, Municipality of Kisela Voda, Public Transport Company Skopje, SDEWES Skopje.

What topic did you choose?

Skopje is one of the most polluted cities worldwide and the workshop topic – air pollution – was of high interest for public authorities, NGOs, experts, media, and the public as a whole. The levels of air pollution in Skopje, especially of PM10 particles, have been 2 to 3 times over the recommended limit in wintertime over the past half decade. Obviously, the problem was often reported a lot by the media, and the municipal elections in 2017 were also driven by problems related to air pollution. Consequently, there was an immediate response from those invited about participating.

What were the main points of discussion?

Representatives discussed general and in-depth problems related to air pollution in the capital and the possibility to solve this problem through increased implementation of the energy efficiency measures. The main points of discussion were:

- Possibilities to reduce the extensive use of firewood for heating of households (in winter season 50% of the households use firewood);
- Public transport in Skopje (although it has a fairly new car park), there was a discussion about new measures involving electric buses and CNG fuelled busses, possibility of tramway transport.
- Gasification of Skopje suburban areas (households);
- Institutional problems regarding measures for air pollution reduction;
- Horizontal and vertical coordination between relevant bodies/institutions about problems/ measures concerning air pollution.

Participants at the Skopje SHAPE ENERGY workshop

ONLINE CONTENT FROM THE SKOPJE SHAPE ENERGY WORKSHOP

You can watch this video here

What were the main points coming out of the energy stories?

Key points were related to the incompetence of institutions to cope with the problem of air pollution and poor communication between institutions on vertical and horizontal levels. Participants reflected that the types of measures already used are unsuccessful. Gasification of households, and the decarbonisation of transport were the primary topics around which all other discussions evolved.

> *... the method is innovative ... and positive. I did not hear ealier that this method has been implemented in our country so far.*

What next steps were identified?

The workshop advanced local discussions by exchanging new valuable information between the local authorities and citizen organisations. The participants identified next steps as follows: more stringent (faster and stronger) legislation on the fuel combustion in the local area; measures to decarbonise public transport; better coordination between the Ministry of Environment, City of Skopje, and local municipalities; and immediate gasification of the city's rural and suburban areas. Follow-up meetings have been agreed to continue the discussion.

ECOLOGICAL (GREEN) AND EFFICIENT TRANSPORT
a collaborative story from Skopje

In 2018, the following problems were identified:

- Weak bus line connections
- Lack of sufficient number of vehicles
- Expensive transportation
- Lack of diversity (choice) of transportation
- Poor bicycle infrastructure
- No incentives to use a bike

I dream of one city where there will be:

- Increased number of buses
- Tramway infrastructure
- Electric buses
- Trolleybuses
- More bicycle pathways
- Subsidies for spent miles on a bicycle

> *As in several of the workshops, many of the problems and therefore the primary solutions to energy-related challenges in Skopje were seen as technological. At the same time, a major challenge identified at the start of the event (that of the functioning and coordination of institutions), is inherently related to social relationships and political involvement. Thus the workshop began a conversation about the role of Social Sciences & Humanities in energy.*

To improve this situation, from 2018 to 2027:

- The necessary planning documents were made
- Funds were allocated

And from 2027-2037:

- Tramway infrastructure, trolleybus, bicycle trails were developed
- Transportation was made cheaper
- But environmental fees were also introduced

Research from the Social Sciences & Humanities contributed to these results through economics, sociology and psychology raising public awareness, thereby contributing to the increase of individual knowledge and additional ideas for creating a policy for improvement of the transport.

A FUTURE COMMON VISION
a collaborative story from Skopje

In 2018, the following problems were identified:

- High levels of air pollution
- The dysfunction of local and central government

We dream of a city that will be self-sufficient.

To improve this situation, from 2018 to 2027:

- Public awareness was increased through campaigns
- Capacities of the local and central government were strengthened
- Tailor-made budgeting took place

And from 2027-2037:

- There was the implementation of computerised public transport without drivers
- Programmes for smart and passive buildings for households were undertaken
- Electricity production from RES was at the level of 50%

Research from the Social Sciences & Humanities contributed to these results by analysing statistical data, determining energy poverty, determining implemented energy efficiency measures in households, psychology and education (raising public awareness), law - by changing the legislation, and the economy through financial resources. Their significance is considered small to moderate, i.e. it is indirect.

Do Renewable Energy Sources damage or support the security of energy supply? In Sofia (Bulgaria)

The workshop

Venue: Ministry of Energy, Sofia, Bulgaria

Date: 22 June 2018

Language: Bulgarian

Workshop organiser: Angel Nikolaev (Black Sea Energy Research Centre)

Organisations represented included: researchers, grid operators, RES associations, local and State authorities.

What topic did you choose?

The workshop aimed to develop a common vision about the contribution of Renewable Energy Sources (RES) in the national electricity supply between 2030 and 2050, which would be laid down in the national energy strategy and the integrated national energy and climate plan.

The discussions focused on the future RES share and the related challenges (e.g. the balance of the electricity system), in the context of the Paris Agreement on climate change, electricity demand trends, technology development, and public acceptance. The event identified key policy directions and research needs to ensure smooth development of the electricity sector.

What were the main points of discussion?

- Possible future RES share, in the context of the Paris Agreement on climate change, electricity demand trends, technology developments.
- Challenges related to higher RES share – the balance of the electricity system (storage, Demand Side Management (DSM), Demand Side Response (DSR), import/export), public acceptance, competition from other electricity sources, etc.
- Policy instruments to ensure smooth transition to RES.

What were the main points coming out of the energy stories?

Participants discussed fairly concrete strategies which could form part of future policy. These included:

- Only small-scale RES receiving financial support and other privileges; this support being technology-neutral.
- Annual quotas for large-scale RES, according to grid capabilities. Currently

> *In Sofia, the workshop involved several senior figures, many of whom knew each other well. The 'storytelling' method was heavily adapted in this case, with less focus on individual' prior experience and their own 'stories' and more focus on the elaboration of participants' visions, challenges, and recommendations. This is discussed further in section 5.*

ONLINE CONTENT FROM THE SOFIA SHAPE ENERGY WORKSHOP

these capabilities are limited. In the short term, there being no substantial RES-E development (electricity from renewables), but after 2020, it will be necessary.

- The necessity to change behaviours and perceptions of consumers, in order to take informed decisions and become prosumers (involved in both producing and consuming energy). This requires studies of consumer behavior, education, training, and information.

You can read this post here

What next steps were identified?

The immediate next step is to include the workshop outcomes in the Integrated Energy and Climate National Plan of Bulgaria, developed by the Ministry of Energy with the support of Black Sea Energy Research Centre. Many participants agreed that this forum (participation of appropriate experts as well as the structure of discussions) was very productive and suggested future meetings on the topic. This suggestion was welcomed by the Black Sea Energy Research Centre and the Ministry of Energy and as such, the workshop is likely to be is the first of a series of similar meetings dedicated to national renewable energy policy.

"In Bulgaria, the overall focus of the workshop was highly technological. Nevertheless, we see social issues arising explicitly and implicitly in discussion through ideas of political commitments, consumer perceptions and behaviours, active involvement in the energy system (sometimes termed energy citizenship), as well as recognition of the need to start interdisciplinary conversations."

RENEWABLE ENERGY IN BULGARIA
a collaborative story

"The role of renewable sources in the electricity supply in Bulgaria shall be gradually increased by 2030, and further by 2050, mainly because of the expected political commitment of Bulgaria in relation to EU requirements, but also because this may bring under certain circumstances environmental and economic benefits. The increase shall come from a number of small-scale renewable energy capacities and consider the capabilities of the electricity system (e.g. quotas and tenders agreed with the system operator).

This future, however, faces several challenges:

- Limited technical capability of the electricity system to accommodate more intermittent renewables and lack of, or inappropriate, policies to incentivise its improvement (storage, demand side management, demand side response, etc.).
- Negative, or at least not positive consumer perception about renewables, resulting in opposition.
- Passive and un-informed consumers, who are unable to play active role in the market.
- Heavy administrative burden and inadequate regulations for small-scale projects.

The following solutions need to be implemented:

- Identify the most desirable scenario for the development of the electricity sector by 2030 and by 2050.

- Identify policies to incentivise all market players to act in line with the desirable scenario; policies and regulations shall promote mostly small-scale renewables.
- Improve consumers' attitude towards renewables.
- Inform and activate consumers to become prosumers (distributed generation, demand side management).

To realise these solutions, research from the energy-related Social Sciences and Humanities has a role to play. It is necessary to use interdisciplinary approaches to model and evaluate different electricity system scenarios, to design policies that ensure smooth development of the sector, and to study the ways to change the behaviour of energy consumers.

Presenter at the Sofia SHAPE ENERGY workshop

Decarbonisation of Trondheim's transportation sector (Norway)

The workshop

Venue: Trondheim municipality council chambers A, Norway

Date: 15 February 2018

Language: Norwegian

Workshop organisers: Marianne Ryghaug, Marius Korsnes, Roger A. Søraa, Martin Anfinsen, Robert Næss (NTNU: Norwegian University of Science and Technology), Jøran Solli (Trondheim Municipality)

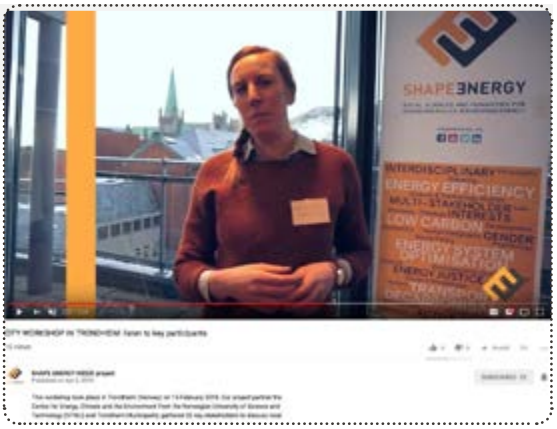
Other organisations represented included: Besteforeldrenes klimaaksjon, Bring, Council of European Grandmothers, ENOVA, Lademoen Vel, NAF – Sentralt, NAF avd. Sør-Trøndelag, NIT, Posten, Statens Vegvesen, Sykkelsentralen (The Bicycle Central), Trøndelag Fylkeskommune (Trøndelag Regional Municipality), TrønderTaxi, Ungdommens bystyre (the City Council for the Youth), as well as self-employed professionals.

Participants at the Trondheim SHAPE ENERGY workshop

What topic did you choose?

Our workshop explored decarbonisation of Trondheim's transportation sector. The city has initiated several programmes that aim to improve on sustainability related issues (e.g. connected to transportation, open city and smart sustainable cities). Trondheim Municipality is involved in a range of pilot projects and experimental efforts. Over the next few years, they will further develop the low-emission area of 'Sluppen'. This area will be a testbed for energy and transport oriented innovation including shared electro mobility (both Electric Vehicles and e-bikes), electric-mobility assistance services, energy efficient buildings and trials targeting pro-environmental energy choices, and a node for public transport such as the metro-bus (operated by AtB). Trondheim Municipality also has an extensive program targeting mobility oriented behaviour, which will be well suited for InfraLab (a participatory analysis method). This includes efforts to inform and incentivise walking, biking and electromobility on small scales, but more extensive experimental efforts, e.g. to reduce driving to large sports events etc. For these reasons, the topic of decarbonisation of transport was a rather natural choice for this workshop, in order to ensure that a variety of stakeholders actually are engaged in this process, and that the solutions chosen can become more robust.

ONLINE CONTENT FROM THE TRONDHEIM SHAPE ENERGY WORKSHOP



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What were the main points of discussion?

The main points of discussion were twofold. First, the current situation was discussed, especially in the context of which transportation challenges the participants saw in their daily lives in Trondheim. A wide range of different problems arose, especially concerned with car-infrastructure, biking infrastructure, and mobility in winter versus warmer seasons of the year.

The second focus for the discussion was the future city of Trondheim, from the perspective of 10- and 20-years ahead. Here different tables were asked to focus on one particular challenge that they collectively had found for the present day situation, and further explore how that challenge could be solved in the future.

What were the main points coming out of the stories?

There were no main points, but several points that were mentioned by many. One issue was connected to time use in traffic congestion - which was then addressed in the future stories as an obstacle also to overcome also by changing overall everyday life issues such as time spent at work vs. leisure and so on. Another point was relating to families with children who spend a lot of time driving their children to pastime activities, sports, theatre and so on: this could be organised better, e.g. through ridesharing or different timing. Discussions around transportation issues during the winter (the season when the workshop was held) was seen as especially problematic, but something that was difficult to deal with in regards to infrastructural change.

> *"It's very interesting for me to see how the different people here are thinking.. researchers.. from the municipalities.... universities.. private sector (as myself)"*

What next steps were identified?

- Some participants suggested that it would be a good idea to hold more meetings like this one to make sure that progress is made.
- Representatives from the local post office had some interesting ideas on how goods could be transported and distributed, NTNU will follow their project if possible.
- Participants were asked to disseminate the topic of the workshop to the organisations they represented.

TRONDHEIM 2038
a collaborative story

"Trondheim city has seen major changes in the year 2038. Among other things, the public sector is a good role model for a low-emission society. The private sector, e.g. goods and transport, has adapted to a low-emission society. There is also major logistic collaboration between the municipality's different actors. This way, the municipality has created a positivity that has inspired the general public. People want to contribute to lower emissions, and it is trendy and the norm to act with the climate in mind, in your daily life.

Good climate choices are rewarded, economically and socially. It has become the norm to choose climate friendly transport. Due to this, we have a less stressed society, where the inhabitants accept that things can take a little longer time to do. The city is now noise-, dust- and emission-free, and public and private actors are onboard on this. They do not find it difficult to live in a climate friendly manner."

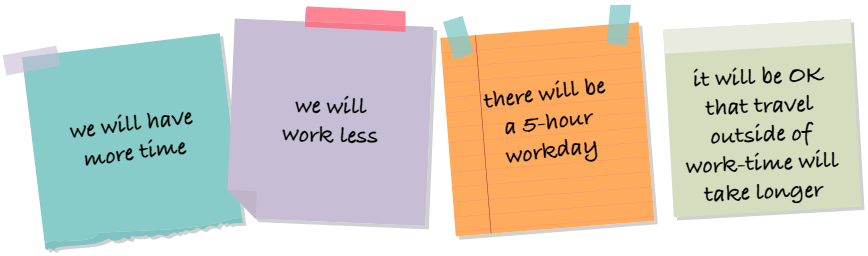
"In the first story presented here (written through participants contributing one sentence each) the creation of a low emission 'culture' is invoked. As reflected by one participant at the end of the event, it's not just having the bikes, you also need the culture for cycling. This is one area where understandings from the Social Sciences & Humanities have a strong role to play."

Participants at the Trondheim SHAPE ENERGY workshop

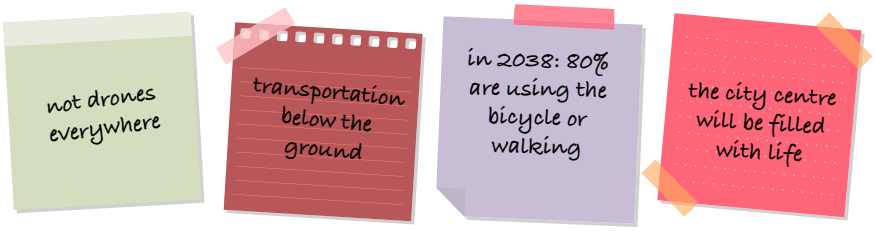
> *For the other Trondheim collaborative stories, groups discussed overarching visions for the future, and these were then enriched through post-its from members of the other groups, as illustrated here.*

A POST-IT STORY FROM TRONDHEIM

In this future... there will be a focus on the human, the social and experiences of nature.



In this future... there will be well thought through densification



In this future... less time will be spent on transportation

In this future... the Government takes the lead

Decentralisation of renewable energy production and transmission for the Turin metropolitan area (Italy)

The workshop

Venue: Iren headquarters, Turin, Italy

Date: 1 December 2017

Language: Italian

Workshop organisers: Osman Arrobbio, Isabella Lami, Patrizia Lombardi, Giulia Sonetti, Jacopo Toniolo (Politecnico di Torino), Laura Pellegrini (Iren).

Workshop assistants: Pauline Claudot (École normale supérieure de Lyon / École nationale des travaux publics de l›État), Ramazan Sari (Middle East Technical University).

Other organisations represented included: AIESEC Torino, ANCE Torino, API Torino, APPC Torino e Valle d'Aosta, Ascom Confcommercio Torino, CGIL Torino, CISL Torino-Canavese, Comune di Torino - Circoscrizione IV, Legacoop Piemonte, Parco Nazionale Gran Paradiso, Unione Industriale Torino, Unione Nazionale Consumatori, Università di Torino.

What topic did you choose?

An important energy player in the Turin area, the co-host Iren established in 2014 a number of 'Territorial Committees' with the purpose of including local stakeholders in the evaluation of projects and strategies enhancing social and environmental sustainability. Participants of the Turin workshop were drawn from the members of Iren's Turin Territorial Committee. The decentralisation of renewable energy production and transmission was the challenge discussed among four groups of participants, considering a temporal horizon of 10-20 years from 2017. The facilitators from Politecnico di Torino – who came from STEM and SSH backgrounds (architecture, engineering, sociology) – set four scenarios to reflect on the future energy strategies for the Turin metropolitan area.

What were the main points of discussion, and coming out of the energy stories?

The storytelling approach was applied to four scenarios built on the combinations of the 'centralisation/ decentralisation' and 'renewable/non-renewable' dimensions – see pp. 67-69. A collaborative story was written about each scenario, trying to understand the current barriers and opportunities to reach the envisioned future state of the city, with special attention to new business models for energy providers and new roles for the Social Sciences & Humanities. Health problems, loneliness, protests for poor air quality and international wars were all identified in the story as ingredients potentially impacting citizens' daily lives. These indicate issues to consider for measurement and tailoring of future energy strategies at the local level.

> *... according to participants, the workshop has been a successful way to interact and brainstorm about the future, scary or desirable, city of Turin. The discussion was very lively ...*

The stories were highly imaginative, and in many cases built on improbable or external events: heavy health crises due to air pollution (the air pollution problem in Turin being very much discussed at the moment); sabotage to power plants by future revolutionary groups; in one of the stories the future was in reality just a dream. Towards the end of the workshop, one

ONLINE CONTENT FROM THE TURIN SHAPE ENERGY WORKSHOP

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final story was started where a sociologist became the CEO of the energy utility, however this story was not completed (see discussion in section 5). This may in part be due to the lack of trust (or lack of willingness) in current institutions, or to a perceived lack of institutional power.

What next steps were identified?

The event allowed participants to reflect upon the requests and activities of different actors involved in an energy transition process at the local level, as well as getting to know other committee members better (which was highly valued). It also identified the many barriers to energy transition that could be overcome or softened through a higher integration of different disciplines from the Social Sciences & Humanities (SSH). Participants identified some steps (improvement of education, awareness, need of long-term planning, etc.), but most were steps that other institutions should take, not theirs. However, the Territorial Committee is now exploring how they might integrate SSH more into their activities.

In Turin, four collaborative stories were written, imagined by each group as a day in the 2030s. They are some of the most 'storylike' to be produced from across all 17 SHAPE ENERGY workshops, in particular through the use of imagined characters and organisations.

WHERE WILL THE NEW RENEWABLE HEAT PLANT BE BUILT?
a collaborative story on a centralised and renewable Turin

"At the presentation of the industrial farm to citizens and potential investors, the press office of ENERCREAS aims to describe how, in the year 2030, a centralised renewable network will cover the whole territory.

An individual shareholder (who is also a customer) takes the floor: "Why did the cost not decrease? Why is the quality of your service so low?"

A retired man asks to speak and says: "I live in a mountain village. Since ENERCREAS is buying my wood I have two benefits: a small additional income and I can warm my house more intensively while paying the same price".

The mayor of Orbassano intervenes: "The past has not been easy, but with the new heat plant financed by ENERCREAS there will be an important job-creation effect. However, I underline once again the importance of building the plant in the old industrial area to minimise land use." The mayor also remembers that for the correct use of energy, the municipal plan called "Energy saving", which envisages measures about household appliances and home automation, should be implemented.

A member of the ENERCREAS board says to himself: "If only the implementation of the industrial farm occurred with more time to design it. We could have carried out a truly participatory process".

Two years later, the plant is built (on a green area, of course). Then, the citizens' committee 'Parliamoci prima' was born."

HEAVY SLEEP
a collaborative story on a decentralised and renewable Turin

"This is the story of a person who falls asleep in 2017 and wakes up in 2035.

He wakes up. He goes for a walk downtown and he feels lost: the air seems to be clean. "Is it because again EURO5 cars have not been allowed to circulate?"

He begins to look around. He cannot see the smoking chimneys. There are solar panels on the roofs of all houses all around. In the street, only electric (and silent) cars.

Participants at the Turin SHAPE ENERGY workshop

He meets an elderly gentleman who is looking at a construction site and asks:

"Excuse me sir... What happened? I fall asleep just a few seconds and I find myself in a different Turin!"

The old gentleman envisages the wonderful opportunity to spend an alternative afternoon and begins to explain:

"In 2019, the health-psychological situation was unsustainable. Every hour ten men were dying from pollution. Heating was allowed every other day, but the usual scoundrels didn't follow this rule. So, a general refurbishment for buildings became mandatory every 5 years. The economic incentives rose to a level never seen before, accompanied by the prioritisation of scientific research for efficiency improvements. The military demolished all inefficient buildings; children convinced their parents to adopt environmentally sustainable policies practices that they were taught at school; a new sensitivity was born; individuals raced to achieve the goals in the shortest time as possible. The public sector drove this revolution. The efforts for refurbishing the buildings was not enough, so new solutions were proposed, for example a particular asphalt that allowed electric cars to be recharged and photovoltaic cells on people's hats."

The man: "Wow!... Are you happy now?". And suddenly the morning alarm rang."

HANDS ARE COLD, BUT THE HEART IS WARM
A collaborative story of a centralised and non-renewable Turin

"The revolutionary man opens the windows and tries to breathe. He does not know if it's due to car exhaust fumes or to heating, but the sky is grey and the air is heavy. He cannot see the Alps, even!

"I have to buy the oxygen bottle again. And the price keeps going up."

The front-of-house information screen highlights how the number of deaths has increased. He also observes the long queue of trucks that deliver the biomass to the power plants daily.

"They said that the biomass had to be the solution! Now stop! Today is the day!"

He meets up with his historical group 'Gli accaldati' who by all means had always tried to block the construction of those power stations. The action is taken: a simultaneous sabotage at the three power stations during the night.

The next morning, Turin wakes up in the cold. But nature came to help: a strong wind blows, the sky is blue and people can finally see the mountains. Hands are cold, but the heart is warm.

He looks around. Neighbours are looking at the mountains from their windows and look happy.

The historic revolutionary group of 'Gli accaldati' now changes its name to 'Cold, but happy'. ”

THE GOOD OLD AND NEW DAYS
A collaborative story of a decentralised and non-renewable Turin

“Grandpa Giuseppe lives in his old mountain house in Usseglio, in the Lanzo Valleys.

We are in the middle of the winter, at Christmas time. Giuseppe gets up to make coffee with his old moka pot. The stove is on thanks to the timer he had set the night before.

While loading the stove with pellets, he thinks he is happy because he has spent little money. The pellets (who knows where they come from?) were bought online by his nephew. It is not a good quality pellet, but it is cheap, it is convenient, and it is directly delivered to his home.

Participants at the Turin SHAPE ENERGY workshop

While drinking his coffee, he remembers the good old days: "I remember, 20 years ago, they had to block the car circulation because of PM10! In 2022, there was even a very strong popular protest: discontent was high, to such a level that 'Liberitutti' won the election". 'Liberitutti' was the party that promised not to block the car circulation anymore, not to impose control on pellets origin, to get out of Europe, to not pay the fines to the European Commission for our disregarded promises, to liberalise [?!] the heating systems in every house. Following these elections and the political choices of 'Liberitutti', the air quality in Turin worsened dramatically. Due to breathing problems, Grandpa Giuseppe moved from Turin to Usseglio just one year later, in 2023.

Nonetheless Usseglio didn't become a metropolis. Nobody except Grandpa Giuseppe moved there. People continued to move to the suburban areas of Turin. In 2030, there were new popular protests, due to a sharp increase of respiratory diseases.

Grandpa Giuseppe gets up, gets dressed, and goes to Turin with his EURO3 Diesel car registered with the Italian Ancient Car Association. In fact, he has to go to the hospital for a visit. He goes to take his nephew who wants to assist him, but remains stuck in traffic. There, he received a flyer with the words "Clean City = Clean Bronchus".

They come from the pulmonologist, where they see mothers who take children in a stroller with a mask, and it is another trauma for the grandfather, struck by how much the problem of air quality is affecting everyone now.

He understands that he must do his part to clean the air of Turin. He then asks his nephew if there are available cleaner pellets for his stove, and it happens that in 2020 the intergenerational education grandfather-grandson started working in reverse. In fact, his nephew has long been involved in an environmentalist party, which in 20 years has given rise to a different sensitivity towards climate change and urban pollution.

His nephew, a trained sociologist, teaches him how to do his part for the community and for himself, to buy in a better and more conscious way, to buy 'greener'. In the end, grandpa Giuseppe asks his nephew to help him buy the greenest pellets available on the market, and to look for an electric car that maybe, in the future, he could donate to his nephew. ”

Sustainable renovation of housing property owned by landlords, in Utrecht (Netherlands)

What topic did you choose?

The topic was the sustainable renovation of property owned by landlords. It was an important topic to the co-host, the Municipality of Utrecht, and we worked hard with both them and the tenants association of TaRuFa in planning the event. Not much research has been done in this area yet. In the Netherlands a lot of attention is paid to private home owners and social housing corporations on national and local policy levels, but not to landlords. Also, the property of landlords is relatively unsustainable (e.g. in terms of energy consumption) in the Netherlands. It is difficult to stimulate this group to take action.

What were the main points of discussion?

These included: the business cases used by landlords; the role policy could play in stimulating the renovation of property; the diversity of interests of the stakeholders involved; the division of responsibilities among the stakeholders, cooperation and coalitions; how to involve landlords positively; monitoring (energy) data and using this data for business-case models.

What were the main points coming out of the energy stories?

From the stories related to the 'issues', these included that:

- Renovation is linked to other problems in the neighbourhood
- Business cases of landlords do not stimulate them to invest in renovation
- No laws force landlords to take action
- There is no clear responsibility for involved stakeholders
- There is no clear division of costs
- Diverse interests are difficult to align
- Local government has no means to stimulate landlords to action
- There is a lack of trust between stakeholders

The workshop

Venue: Johannescentrum Overvecht, Utrecht, Netherlands

Date: 24 April 2018

Language: Dutch

Workshop organisers: Ruth Mourik, Diana Uitdenbogerd, Mariska de Zeeuw (DuneWorks), Freerk Veldkamp, Moniek Elskamp (Municipality Utrecht)

Workshop assistants: Galina Sander (Tenants Association TaRuFa), Yvette Jeuken, Sylvia Breukers (DuneWorks)

Other organisations represented included: Blijstroom, Eneco (Het Breed), Gemeente Utrecht and Vergunningen, Toezicht en Handhaving Gemeente Utrecht, Ministerie BZK, Overvecht, TNO, Wijkbureau, Wijkondersteuning, Milieu Advies, Ministerie BZK, Woonbond and residents.

Participants at the Utrecht SHAPE ENERGY workshop

ONLINE CONTENT FROM THE UTRECHT SHAPE ENERGY WORKSHOP

You can read this post here

You can read this post here

- Cooperation is not strong enough: strong tenants' organisations and coalition forming are needed
- Factual data on energy and indoor climate is needed to able to start discussions with landlords
- Adjustment of financial regulations and national law is needed

For the 'vision' stories, see pp. 72-73.

What next steps were identified?

Participants identified several areas where they could each, individually or collectively, take ownership/ responsibility for 'solving' part of the issues identified. These included:

- Stakeholders seeing each other as equals and improving communication
- Stakeholders working together and discussing concrete plans that are acceptable to all parties involved; Building a strong tenants cooperation; Cooperation between stakeholders, coalition forming
- Through this, generating commitment among stakeholders
- Agreement for renovation by this coalition, based on facts/data and a business case
- Seeing sustainable renovation as part of improving the whole neighbourhood
- Working towards adjustment of policy regulations and law (for landlords) on tenant participation and energy performance of houses

> *"Participants were very positive about the organisation of the day and the job of the facilitator as well as the table moderators. Some expressed disappointment that one key stakeholder (a landlord) was unable to attend yet still felt happy this difficult topic was finally discussed and that so many different stakeholders were present."*

Participants expressed hope that this will be the start of something new: new collaborations and better research. Indeed, some are also researching possibilities related to legal actions that could be taken to force landlords to undertake retrofits without too much rent increase, if all other negotiations fail. A few weeks after the workshop an additional group of tenants reconvened with participants of the workshop to discuss concrete steps forward and action points with respect to their landlord.

The Utrecht workshop was facilitated by our storytelling lead, DuneWorks, and the three collaborative stories produced really give life to the issues discussed. They show both social tensions and aspirations of different people affected by renovations in rented accommodation.

IT IS A LONG ROAD, BUT WE ARE ON OUR WAY!
a collaborative story from Utrecht

In 2018... there appeared to be different interwoven/interconnected problems. For a long time, there had been overdue maintenance of apartments, degradation of the environment, and a disturbed relationship between landlords and tenants. When landlords' apartments are going to be renovated, the question arises of how the interests of tenants will be safeguarded. The absence of a shared interest is problematic. Tenants want to live in qualitatively good and affordable homes. The landlords want to make a profit and the least possible trouble. The municipality has its 2030 horizon ambitions in relation to energy. Different perspectives, levels, and time frames make the conversations between the parties even more difficult.

But I dream of a future in which rented apartments... are nice homes to live in, with a nice environment and a start has been made to improve them.

To be able to this, from 2018 until 2028... a masterplan is developed together with all stakeholders involved on an equal basis. Soon (before 2020) it becomes clear what the financial consequences will be for the partners (who pays what).

And from 2028 until 2038... everyone is aware that sustainability is natural/normal. The subject receives attention in all the actions taken in society. Everyone considers what is the best time, rhythm, and living conditions for them to go energy neutral.

Social Sciences & Humanities research proves particularly valuable... in bringing about those changes, because stakeholders began to gain a better understanding of each other's viewpoints without immediately judging each other.

As a final remark... it is a long road, but we are on our way!

TENANTS ARE ALSO THE MARKET
a collaborative story from Utrecht

In 2018... there was a lot of overdue maintenance of apartments, and the neighbourhood was neglected/degraded. Tenants paid high rents, but their homes were not sustainably renovated. The high costs for living did not lead to better living conditions. Because of conflicting interests a deadlock existed that could not be solved. It was not clear to anybody who bore responsibility for which actions or what the current laws and regulations were. Parties were not motivated or able to take action, because of the following situations:

- No financial instruments
- No rules, regulations, laws that could be applied to this situation
- Communication, but no action and no alignment of interests

The most important stakeholders (landlords, tenants, energy companies, municipal mediators, researchers and experts) play a role in the issue, but until now, the situation has not changed.

But I dream of a future in which rented apartments... are comfortable, sustainable and affordable. They are situated in a safe, liveable environment with a lot of utilities. In ten years sustainability is self-evident. It has become the new way of thinking.

To be able to this, from 2018 until 2028... stakeholders worked together, had a hands-on mentality, were engaged, and communicated well. All stakeholders were heard and involved in developing a concrete action plan for the sustainable renovation of the buildings. The buildings looked great, tenants paid equal rents, and the public environment was upgraded.

And from 2028 until 2038... the parking lot was redeveloped (for Combined Heat and Power, urban agriculture, houses).

Social Sciences & Humanities research proved particularly valuable... because it used available expertise, experiences, and examples of sustainably renovating buildings (such as Stroomversnelling, social housing corporations). Qualitative research was conducted on social interactions, perceptions and perspectives using these cases and projects.

As a final remark... eventually it is up to the market to decide, but tenants are also the market.

CREATING A POSITIVE EXAMPLE FOR THE NETHERLANDS?
a collaborative story from Utrecht

In 2018... there was a major issue regarding the sustainable renovation of apartments owned by landlords. There was little trust, little cooperation, and little 'inclusive' communication. Further, there were few means to do such renovations. There was little to no national and financial regulation that could enforce municipalities to reach their 2030 goals and there was a lack of data needed to start a conversation with the landlords.

But I dream of a future in which rented apartments... are affordable, safe, comfortable, and energy neutral. In short, they are lovely homes to live in, just as delightful as the environment. Residents know each other and support each other.

Participants at the Utrecht SHAPE ENERGY workshop

To be able to this, from 2018 until 2028... a strong tenants association was set up in the first place. A coalition including tenants, landlords, municipalities, TNO, Eneco, regional governments, Stroomversnelling, and contractors was built. A cooperation agreement was signed with the landlords. Several models were made with a time frame of 40 years, divided in periods and measures. Good monitoring of energy data took place. A major renovation trajectory was set up. Investments were recouped within a time frame of 15 years, with inconvenience only lasting for one week or less, and tenants could personally contribute to the plans. Rules and regulations were adjusted, which meant: 1. The 'Woningwet' (Housing Act) is also applicable to property owned by landlords; 2. The ability to oblige landlords to implement energy saving measures. Grants were awarded and there is better cooperation between all parties involved.

And from 2028 until 2038... continued maintenance of the buildings took place and the buildings were adjusted to new developments.

Social Sciences & Humanities research proved particularly valuable to achieve the change... by finding common solutions and overcoming language barriers by writing accessible reports.

As a final remark... if all involved stakeholders would work together and have confidence in the cooperation, these buildings could become a positive example for the Netherlands.

Zlín region energy strategy visions 2030 (Czech Republic)

What topic did you choose?

The main topic of discussion was Zlín region energy strategy visions for 2030. This topic was selected by the Tomas Bata University team in cooperation with the Zlín regional authorities (including the Energy Agency), because it aligns with their current activities and prepared energy strategy. It reflects current issues which individual participants are working on today.

What were the main points of discussion?

Participants discussed current and recent energy projects in their organisations and potential future projects. Smart city best practice and municipal bioenergy projects were presented. Participants were also encouraged to describe and evaluate the level cooperation they had experienced with other partners during the implementation of these projects, their positive experiences, and problems they had to face in the past.

The following specific topics were discussed:

- Reasons and solutions to incoherency of national and regional energy strategies with municipality action plans
- Possibilities of municipalities to be self-sufficient in energy
- Best practice examples of smart villages/cities/regions
- Perspectives of electromobility in the Zlin region

The role of education (as part of the Social Sciences and Humanities) was also one of the hot topics.

The workshop

Venue: Town Hall of Valašské Meziříčí, Zlin, Czech Republic

Date: 23 May 2018

Language: Czech

Workshop organisers: Přemek Pálka, Michal Pilík, Michaela Blahová (Tomas Bata University in Zlín), Viera Pechancová (Krajský úřad Zlínského kraje)

Other organisations represented included: Agropodnik - a.s., Czechinvest, CZT Valašské Meziříčí s.r.o., Ecological Institute Veronica, Energy Agency of the Zlín region, Fordham University at Lincoln Center - New York, Tepelné hospodářství Hradec Králové - a.s., Town of Rožnov pod Radhoštěm, Town of Valašské Meziříčí.

What were the main points coming out of the energy stories?

During the creation of new proposals that should be implemented into Zlín region energy strategy visions for 2030, the following topics were discussed:

- Renewable resources
- Equipment for energy recovery of waste, photovoltaics, wind power plant,
- Transportation
- Education
- Cooperation of project stakeholders

> *the event was evaluated very positively by all participants*

Using the storytelling method, participants discovered also some hidden aspects that were not anticipated but grew from the discussion itself – for example the issue of safety.

ONLINE CONTENT FROM THE ZLIN SHAPE ENERGY WORKSHOP

▸ You can watch this video here

What next steps were identified?

The stories of key participants were very useful, complex and relevant. These stories were subsequently reported to the authorities of Zlín region as useful sources to help the development of the Zlín region energy strategy visions for 2030.

Through the workshop, the bilateral cooperation and relationship between Zlín and Valaske Mezirici has also been strengthened. A major follow up and spillover effect of the workshop is the fact that some of the stakeholders who participated in the workshop have now become active cooperating partners of the Zlín energy strategy working group.

"In Zlin, participants were encouraged to create a collective story about inter-sector cooperation in the field of energy, and formulate the key questions to feed into strategic energy visions for 2030"

ZLÍN REGION ENERGY STRATEGY – VISIONS FOR 2030
a collaborative story

"The Zlín region strategy in the area of energy should be based on issues of public transport and its availability, environment-friendliness and the concept of electric cars. This also concerns the need to increase the network of electric vehicle charging stations and its capacity in order to ensure charging of a huge number of electric cars. Energy problems must be solved compactly with all involved groups, because the projects are obviously based on the enthusiasm and visions of individuals. A set of very serious constraints to be considered are legislation barriers or interventions of other groups who are already running projects without any legal responsibility, and who may suspend or cancel projects. The strategic mix of the Zlín region within an energy policy vision for 2030 will be based on mutual cooperation, synergy of individual interests and development of renewable resources in the region. Nuclear energy and extracting energy from nuclear waste can become another independent chapter of the above mentioned strategic mix. The SMART region of Zlín requires high awareness of citizens and a high level of education in the areas of resources management, traffic systems which work well, and infrastructure."

Participants at the Zlin SHAPE ENERGY workshop

4. Energy-related Social Science & Humanities research priorities

As detailed in the preceding section 3, the workshops helped organisers, co-hosts and participants to delve further into each specific energy topic in their local/regional context. But, as a series, they were also designed by the SHAPE ENERGY project to collect ideas for priorities and topics for future energy-related Social Sciences & Humanities (energy-SSH) research.

It's important to remember that this process deliberately collected questions 'from the front line', i.e. from those who are dealing with local or regional energy issues in their everyday working. Most were not energy-SSH specialists, many came from technical backgrounds or professions. This means many of the social- and human-centred questions raised by participants and organisers cover topics where a lot of SSH research has already been carried out (but isn't necessarily widely known about outside of academia) or indeed where the debate in SSH research has 'moved on' to some degree. Nevertheless, we felt there was particular value in reflecting on, and highlighting, the energy-SSH issues raised in these settings.

In the post-workshop reports, we thus specifically asked organisers to outline which main issues, themes or questions came out that they felt could be dealt with from an energy-SSH perspective. These details were collected and themes developed below, each of which includes a list of priorities and questions. These are reported in a close form to organisers' own words in this section (a very few were removed since they were not directly about energy-SSH research). In addition, an analysis of the fuller reports and energy stories themselves (section 3) was undertaken, which highlighted further priorities and questions, again incorporated into these themes.

This section of the report therefore helps us immediately understand and demonstrate the very many ways in which understandings from the Social Sciences & Humanities are central to any energy intervention or programme. It is also a helpful reminder for researchers of the questions non-academics are most interested in.

Under each of the seven themes a few example SSH disciplines are given which may be particularly concerned with that theme. These are taken from the list of disciplines the SHAPE ENERGY project aims to cover, and are given for illustration and to help orient the reader who may be less familiar with disciplinary divisions. It is important to note however that the precise framing of problems or questions directly links to which disciplines may feel most interested or relevant, and *all* SSH disciplines are likely to have something to say about each theme listed here. Indeed the priorities were, most of the time, not phrased in the form of actionable research questions – there was still ambiguity or generality over for example the 'outcome' being examined (for example the inherent question of what 'better' policy or practice looks like), the target groups or contexts, and of course what existing research to build upon. This demonstrates how, in many cases, a key role for SSH researchers in such projects or collaborations can be to help determine precise question framing in liaison with stakeholder(s).

4.1. Education and awareness raising

Example SSH disciplines: Communication Studies, Economics, Education, Psychology

By far the most common area where the Social Sciences & Humanities were seen as having a role to play in energy issues was related to education. Thus organisers wanted to see work on:

- Energy / environmental education, as an important means to support more sustainable policy making and lifestyles. Research into programmes for pupils, students, and even adults about energy consumption / energy efficiency.
- Educational modules on social, health and economic aspects (of low-energy building refurbishment in this case) introduced in universities.

- Learning modules for architects, technicians etc (see also discussion of the 'skills gap' in section 4.4.). Training programmes.
- Monitoring of awareness and acceptance of more sustainable ways of living (e.g. transport modes).
- Campaigns, such as public announcements. Methodologies which deal with changing mind-sets.

In summary, they asked:

- What kind of information and feedback is needed (including tailoring to different groups) to support awareness and motivation for decarbonisation and sustainable lifestyles?

It is important to note here that a common 'complaint' of those undertaking energy-SSH research is that often they are seen as an add-on to a project, essentially helping to 'educate / inform' others to take the 'right' action once the real research/work/decisions have been made, rather than being integrated from the start of projects in terms of the questions being asked. Thus, some further more reflexive questions were proposed:

- Do existing education and information strategies related to environmental action fulfill their purpose? If not, why? What are the deficits, what potentials for optimisation are there?
- Exploring the very fact that education is seen as a primary solution to energy challenges by so many.

Thus, understanding the role, potential, and limitations of energy education was a key area of focus for workshop participants.

4.2. Understanding change: from behaviours to citizenship to broader processes

Example SSH disciplines: Business, Environmental Social Science, Human Geography, Psychology, Science & Technology Studies, Sociology

This brings us onto the question of what this education or campaigning is seen as being *for*, what is it trying to achieve? In many cases this was left unsaid, however in some we can see that it was connected to the ideas of behaviour/lifestyle change:

- How can energy efficiency attain a 'new' and positive image? It needs to be 'in' and should become an exciting element of people's lifestyles. How can climate change activities and smart energy strategies be framed in a positive and interesting way to motivate different target groups in different social settings?

This then links to the many ways in which motivating new behaviours and use of energy were mentioned:

- Investigation of, or changing, the perspectives and/or behaviour of citizens.
- Investigating biases and personal characteristics to understand energy efficient system use.
- The trade-offs people consider (e.g. regarding heating systems in buildings). The impact of risk-taking propensity on decisions with impacts for energy use.
- Overcoming the intention-behaviour gap (the difference between what we say we want to do, and what we do). Similarly some talked about exploring the discrepancy between people's will to engage in citizens' initiatives and actually doing this (given their other social and economic obligations).
- Household/family dynamics in influencing use of energy.
- Evaluating nudging (making the 'default' option more sustainable) vs. incentivising (rewarding sustainable behaviours).

Some started raising questions or areas which seemed to delve into the notion of energy 'citizenship' (active involvement in the energy system):

- Changing the behaviour of consumers e.g. to demand 'green' energy (even at higher price), to implement Demand Side Management and small-scale Renewables, etc.
- Looking at the real contribution of each consumer to the development of common benefits related to energy supply.
- How to become a prosumer of energy (individual both generating and using energy).

Finally, some wanted greater understanding of change processes more broadly, i.e. not just at the individual level:

- Exploring new trends in energy consumption, and usage patterns.
- Better understanding of how people's practices can be oriented through ecological lines.
- In general, researching how to guide change/transition processes.
- Exploring inter-generational dynamics.
- Considering whether our society is ready for change yet? Resistance to change.

This leads us onto discussion of change at the political level, as given in the next subsection.

4.3. Policy(making), governance, city planning, legal frameworks

Example SSH disciplines: Human Geography, Law, Planning, Politics, Sociology

Key areas of SSH interest and expertise are those of policy, politics, government and governance. These were of course brought to the fore by many, including consideration of the following factors, in achieving changes in our energy systems:

- The role of trust, as given to policymakers and local authorities.
- The role of political will.
- Interaction of micro vs. macro-factors in understanding the formulation and implementation of energy policies.
- Interaction between acceptance of technologies (such as solar energy deployment) and city planning.

Several groups highlighted the important 'trade offs' and balances made at the political level, and wanted more research which examined how this balance may affect outcomes (presumably since it might directly inform current decision making):

- Balance between economic incentives and command and control policies. Tax structures.
- Comparison of political regulation vs. voluntary commitment.
- Short vs. long-termism in policy.
- Harmonization (and tensions) between different regulations, for example integrating climate and energy policy, international and national policy targets, or different policy timescales. How to connect bureaucratically different institutions with each other (at a technical level), or indeed the challenge of merging or devolving administrations.
- Triple-bottom-line concept: balancing economic, environmental, and social requirements.
- Interconnection between many different sustainability elements, at the city planning level. The implementation and impact of taking a (more) 'holistic' view.

Processes of city planning came up implicitly in the workshop reports, including how these relate to: urban infrastructures; green spaces; liveable cities; interaction of tourism and those who live in a city; conserving aspects of a city's history.

Interestingly, although law and legal frameworks was repeatedly mentioned in the workshops themselves, they was not highlighted explicitly when asked for key SSH relevant questions. In addition, there was less explicit emphasis on questions regarding political involvement and democratic processes, although see the discussion of social justice in section 4.4., and there was mention of:

- Involvement of new generations in politics.

Finally, a need was seen for research which could provide better:

- Assessment of policy and legislation, tools for monitoring transition processes.

4.4.Economy, jobs, poverty and inclusion

Example SSH disciplines: Business, Economics, Ethics, Gender, Human Geography, Law, Social policy

Since there was a particular emphasis on city-level topics, questions related to the economy were primarily linked to the local economy and local business, rather than e.g. whole country economic analyses (although there was some reference to national energy imports and exports). In this way, the main issues put forward included:

- Implementation of innovative business models (e.g. district heating companies).
- Exploring society's response to new business models introduced by local authorities.
- Design and testing of innovative financing and supporting mechanisms (e.g. for energy efficiency measures / building retrofit). Examination of the economic aspects related to upscaling of energy measures (e.g. refurbishment solutions).
- Attention to distribution of costs in business models that stimulate actors to invest, e.g. landlords investing in sustainable renovation of private rented properties.
- Develop cost-benefit analyses that include societal aspects/criteria and non-economic value.
- Development of a (more) circular economy.

Some asked specific questions regarding the roles of certain professionals in the energy system (of course, questions could be asked about a number of other actors, from a professional viewpoint):

- What are the roles of apartment managers in choosing energy efficient behaviours?
- What are the roles of private investors in the energy transition?
- How might policies incentivise landlords (rather than householders) to sustainably renovate properties?
- How is energy policy experienced by those somewhat outside it, such as small and medium sized business?
- Occurrence of a 'skills gap' in the construction industry regarding low-carbon housing. How does this arise? How can it be addressed?
- The organisation of work within society.

This second to last point of course links back to discussion of education, but education primarily for employment rather than 'just' awareness.

There was also a significant amount of attention, particularly at a few workshops, on social justice and poverty issues. These included recognition of the importance of SSH work in exploring:

- Situations of vulnerability, and access to energy. Energy as a factor of inclusion, empowerment, responsibility. The meaning of 'fairness'.
- How income differences may lead to situations where poor people cannot actively participate to the energy transition.
- Protection of vulnerable tenants in sustainable renovation projects (especially those with lower incomes). Relatedly, the process of 'gentrification'.

- The phenomenon of energy poverty (and possible solutions). Development of energy policy that avoids energy poverty (e.g. regulation of tariffs with fair prices, avoiding cutting the supply of households who cannot pay bills). Linked ideas of energy comfort.
- Accessibility of public transportation.
- Health impacts, and safety issues related to energy.

4.5. Communication, stakeholder dialogue processes, navigating conflict

Example SSH disciplines: Communication Studies, Education, Psychology

Similarly to education, there was significant emphasis on communication – but this time framed in terms of dialogue, stakeholder processes, and questions related to getting people to work together. Many of these are inherently 'practice' oriented (i.e. applied rather than theory-based research). Thus, participants and organisers wanted to understand and apply lessons related to:

- Communicating more effectively (including through local channels) and improving dissemination. Exploring the use of real-life and good practice examples in this work.
- Coalition building, building trust and connection, finding shared goals and solutions, learning how to work together, investigation of values in this process, allocating responsibilities.
- The process of creating a shared 'vision' on low-carbon energy / climate action. How is this done, how is it experienced, how is it portrayed? Creating collaborative goal setting and commitment, and focal points for energy.
- Successful project management/leadership, and multi-stakeholder working. Both avoiding difficulties, but also dealing with those that (inevitably) occur.
- How to organise, moderate, facilitate, meetings between stakeholders on difficult topics (which could turn to chaos as they can be very conflicting). Researching trust and connection between difficult to align stakeholders. Learning how to align different interests that are hard to align, but do rely on each other in solving the issues.
- Collaboration between private and public entities.
- Participative approaches for stakeholders in the early stage of energy planning; studying the set-up phase of projects.
- Development of methodologies and tools for local stakeholders to organise themselves.
- Bottom-up initiatives and the role of community groups (such as faith organisations).
- The role of networks in supporting energy transitions.
- The phenomenon of burn-out/exhaustion of those working to implement change.

Some raised questions which 'took a step back' and considered the role of multi-stakeholder working itself:

- Exploring why there may be relatively little cooperation and communication between stakeholders, and the impacts of dialogue between stakeholders.

4.6. Data, research design, and integration of SSH into energy projects

Relevant for all disciplines

In some workshops, groups debated in more depth about the process of research itself, and some of the questions this brings up. These included calls to examine:

- Use of data, and resources input into data gathering. Who sets the agenda of what data is collected? The role of new types of data (e.g. big data). Difficulties of agreeing metrics, and

the changeable nature of these. Sharing data, and the difficulties of acknowledging 'bad' data or results.

- The re-evaluation of known scientific insights with regard to practical problems that have come up over the past years, so that a mirroring process might generate helpful advances (all disciplines).
- Integration of practical elements into research projects related to energy and climate, securing applicability of results for real-life change. This might include funding and support for 'maker spaces', 'real-world laboratories' and similar new sociotechnical arrangements in order to achieve innovative solutions to the identified problems.
- How to communicate findings of action research in such a manner that findings can be used in stakeholder discussions/negotiations.
- Examining the use of research evidence to inform or to justify political decisions.

Given the format of the workshops, some also raised questions about storytelling methods themselves. This is discussed in more detail in the reflections in section 5, but one question specifically raised was:

- Are fantastical actors and events more likely to enter stories when real actors are not seen as reliable and trustworthy? Or when those who create the stories are deprived of power to influence and/or of possibilities to participate in policy processes?

Several organisers put forward statements referring to the necessity of an interdisciplinary or multidisciplinary approach (e.g. of involving energy partners from non-technical areas), as well as asking questions related to what its impact might be. This might be to be expected, given the premise of the events.

- How can the exchange of knowledge between the scientific realm and society be improved, what kind of transdisciplinary approaches are the right ones?
- Integrative approach and implementation of engineering and SSH disciplines could bring additional benefit and overcome the significant number of observed barriers and obstacles.
- Only interdisciplinary research could bring interesting results in the domain of multi-apartment building refurbishment.
- New technology needs to have an understanding of human involvement
- Modifying energy projects given understandings of behaviour.

4.7. Cultures, philosophies and histories of energy

Example SSH disciplines: Development, History, Human Geography, Philosophy, Social Anthropology, Sociology, Theology

As has been highlighted elsewhere by the SHAPE ENERGY project (e.g. Foulds and Robison, 2018)[4], 'higher order' questions such as what a society sees as good or desirable (which are often grounded within the humanities) are rarely given explicit attention when it comes to energy research. Yet, they are often present as unspoken assumption within discussions, and this was the case with our workshops. Many of the questions contained within this theme were therefore drawn from this report authors' analysis of the individual workshop reports, rather than the energy-SSH questions explicitly raised by workshop organisers.

Firstly, questions of cultural and local contexts were raised explicitly and implicitly:

- Why in some countries some measures are successful, while in other they are not? Does it depend on the local context?
- Study of pride in our cities and the places we live.

4 Foulds, C. and Robison, R., 2018. Mobilising the Energy-Related Social Sciences and Humanities. In: *Advancing Energy Policy: Lessons on the integration of Social Sciences and Humanities*. Cham: Palgrave Macmillan.

Secondly, several issues related to individual or societal 'philosophies' were detailed:

- Tranquillity, and a simpler 'stress-less' kind of life. Much of the transportation that contemporary society is indulged in, was described as a bit too stressful, and many participants questioned if society could benefit from taking a step back, and being a bit more relaxed. Frugality, and simpler ways of living were mentioned.
- Giving a slightly different take on education, in one case there was a call for research into 'ancient' or traditional knowledge, perhaps harking back to a time when energy usage was lower, even a few decades ago.
- Some asked: What is a desirable future? What is a high quality of life? What is the 'common good', when it comes to energy?
- The ethics of energy.

Finally, aspects related to histories were implied:

- Legacies of previous political or cultural environments were mentioned in several cases, for example communism.
- The role of revolutionary actions and protest was raised in some of the stories.

4.8. Reflections on the types of priorities identified

As a final thought, the design of the workshops, the mix of stakeholders, and the storytelling methodology, all encouraged participants to focus on certain types of questions – for example, relatively practical and instrumental questions aimed at achieving particular outcomes, as well as issues which stakeholders felt comfortable discussing in a professional context. Further critical analyses and reflexivity can offer insight into issues that may have been 'missed', and this will be further elaborated in future journal papers and academic outputs from the SHAPE ENERGY project.

5. Storytelling at the workshops: reflections

This section provides an overview of lessons learnt and experiences of using the storytelling methodology at the 17 SHAPE ENERGY workshops across Northern, Eastern, Southern and Western Europe (see details in Table 1, p. 7). These reflections are informed by the reports delivered by each workshop organiser as well as participant feedback related to the storytelling methods used. For more information on each of the workshops, their themes, participants etc., please see section 3.

As mentioned in the introduction of this report, the overall objective of the city workshop series was to gather together diverse local/regional stakeholders in order to define with them the energy-related challenges they face in their activities, and explore how some of these could (in the future) be overcome or better understood using research from the Social Sciences and Humanities. To enable this, storytelling methods were used in the form of interactive workshop activities. Thus participants were invited to write and discuss their own stories (e.g. from personal experience) and/or come up with collaborative imaginative stories, for example envisioning possible energy futures for their city/region. Different workshops used different precise formats of storytelling, with organisers tailoring template materials to their particular topic and situation.

The storytelling methodology was in particular chosen because of its capacity to support learning and unlearning, empathy and conflict solving, inclusion and participation of different voices (for a full discussion of these factors see the open access SHAPE ENERGY storytelling guide[2]). These potential outcomes of using storytelling were deemed especially relevant in the context of contested energy themes (so-called wicked problems) involving multiple stakeholders with different levels of power, capacity for participation, and perspectives. For this present report, the feedback from the workshop participants and organisers was analysed to provide insight on whether/how storytelling in the workshops did contribute to learning and unlearning, empathy and conflict solving, inclusion and participation of different voices. The results are discussed in the next subsections.

5.1. Learning and unlearning

The use of storytelling aimed both at creating learning and 'unlearning' potential amongst the participants (the latter being realising the implicit frames of mind that shape our thinking and realising there might be other relevant ways of thinking and doing,), but also to allow for deeper learning about the chosen theme for the organisers and the SHAPE ENERGY project team. This learning took place in different ways, through listening to each other's stories as well as trying to 'merge' stories. And the successful creation of collaborative stories in almost all cases (see section 3 for examples across the workshops) is in itself evidence of this learning to varying degrees. In addition the creation of pilot project plans, networking and so forth are all elements resonating learning and unlearning. These project plans and other outputs could indeed have been achieved by other means, but they do need this context of learning and unlearning that during these workshops was achieved by means of the storytelling methodology. Learning also took place on another level, a methodological one. In several quotes, discussed in section 5.2, participants are described as being surprised or uneasy with storytelling at the beginning, but appreciative of it in the end, seeing what it had brought to the table: understanding, respect and dialogue about the selected issue.

The stories collected also provided the opportunity for organisers and co-hosts to enrich their existing knowledge about the issue being discussed, as several organisers mention:

"...ultimately the stories gathered (both the individual and collaborative stories) are a really rich dataset." (Cambridge)

In some cases workshop facilitators reported that the in-depth learnings from the workshop will be input to national policy processes, for example: *"Participants were encouraged to create a collective story about the inter-sector cooperation in the field of energy and formulate the key questions for the Zlín region energy strategy visions 2030....Especially, the stories of the key participants (which have been already sent) were very useful,*

complex and relevant. These stories were subsequently reported to the authorities of Zlín region as useful sources for creating Zlín region energy strategy visions 2030." (Zlin)

Interestingly, some participants felt that the storyspine templates that had been prepared in advance were not sufficiently inviting of 'real' story writing. This is an issue that is hard to circumvent, partly given the necessity of conducting each workshop within a day or less. The templates were designed to enable participants to bring forth some of their own position. Therefore they contained a clear section for problem definition from the specific perspective of the writer, analysis of the causes from their perspective, and insights into potential solutions and ways forward; this unavoidably demanded 'realistic' stories to be written. At the same time we tried to permit out-of-the-box thinking, creativity, and in many cases this was brought to bear (one can see this for example in the evocative titles sometimes chosen for the stories). This tension was therefore in most cases fortunately not inhibiting, but in a few instances, it was reported to have led to limiting the scope of the story-telling itself:

"Feedback was mixed, because several participants did not recognize enough 'story telling' elements in the prepared templates and therefore rather reported instead of telling stories. This is also partly visible in the collaborative stories." (Heidelberg)

5.2. Empathy and conflict solving

In terms of the conflict solving capacity of storytelling, the experiences of several workshops highlight what storytelling can achieve, i.e. motivating participants to contribute useful elements to the discussion, and actively listen to each other in a safe atmosphere allowing for empathy and thus dialogue to emerge:

"The atmosphere was very cordial, all participants were willing to give ideas and listen to others. The conversations among the participants discussing the problem of energy poverty in Granada flowed along, the truth is that it was quite inspiring for both the facilitators and the participants." (Granada)

"The reaction of participants to the storytelling method was positive. They were surprised in the first moment, but later they fully cooperated and tried to write useful stories." (Belgrade)

In several places, empathy was clearly invited through the storytelling methodology. In some cases participants even figuratively speaking stepped into other people's shoes. In Trondheim for example a participant mentioned: *"I have no problems in my daily life, so I will envision that I am my mother, she needs to drive all across town for work." (Trondheim)*

In Utrecht empathy also took on the form of (uninvited) collective role playing for a missing perspective: *"Some felt uncomfortable writing stories in the beginning, but later they started recognising the positive aspects of the process. The ice breakers were absolutely necessary to get people out of their comfort zones. Eventually participants saw the storytelling method as a means of giving each participant the opportunity to talk about their perspective and treating all participants equally. At one table the participants even took up the role of the landlord to have their arguments in the discussion. The conversations and discussions were focussed and intense." (Utrecht)*

The aim of identifying each and every perspective through the individual stories worked well, and was often mentioned as being a useful starting point. Participants did indeed identify this method as a stepping stone for conflict solving:

"As result, the participants understood that solution can be identified always if dialogue is used as [a] base." (Chisinau)

"They were surprised at the beginning and did not see the value of it. However as it has helped discussion they have enjoyed it at the end." (Lyon)

"The topic was quite interesting, so the discussion after the individual stories was prolonged in order to involve every participants' opinion." (Skopje)

An experience of the Cambridge workshop highlights that the time spent (in general but certainly on the individual stories) is of paramount importance and that it might be effective to allow for more time than might be anticipated. Approaching this phase flexibly may be important for several reasons, including framing the later discussion - which is about creating empathy and focusing on understanding the issue before being able to step into conflict solving – in a more earnest manner:

"Despite me asking people to not elaborate and only read their story straight, only one person out of the five read the story out word-for-word as request. I didn't interrupt and allowed them to do this elaboration... which turned out to be useful because: (1) it allowed everyone to frame the discussion more earnestly; (2) worked out nicely as a networking opportunity for everyone around the table; and (3) provided more detail than the story itself provided." (Cambridge)

The use of the collaborative story writing methodology was certainly useful in conflict solving, as indicated in several of the quotes below, although sometimes conflict was not faced head on or resolved and this resulted in different collaborative stories being written up simultaneously. However, one aspect of conflict solving, which is about setting up collaborative actions to take forward, taking stock of the diversity of perspectives, values, etc., was demonstrated at several workshops, where participants ended up setting up project proposals together, although inclusion was a challenge here (see the Ankara and Cambridge quotes on this in section 5.3).

"It was difficult to identify one 'problem' at the end of the first session. There were an array of views put forward and it was becoming obvious that there would similarly be a range of views in the second session (on the collaborative story around that identified problem). Therefore, whilst one participant suggesting that having two different problems for two different collaborative stories, I opted to get them to instead identify one single problem... I was glad I did because they ended up being keen to push three pilot projects forward (and thus three different collaborative stories). It would have been unmanageable to have two different problems, and then (possibly) further divisions through multiple pilots." (Cambridge)

In some countries the methodology was even proven to be so valuable that discussion is arising on whether it can be used on a national level to tackle challenges.

"All participants appreciated the proposed concept of SHAPE ENERGY workshop. This allowed them to express freely their thoughts and results were of good quality. This type of workshop may be extended at national level, and in this case we can obtain much more 'food' for future challenges." (Chisinau)

5.3. Inclusion and participation of different voices

The storytelling methodology that was used was aimed at ensuring inclusion and participation of different voices. Everyone was to write up their individual stories and then these were read out one at a time, or a selection were read to the rest that were then complemented with pieces of other stories, so that each and every story was heard in part or in whole. Mostly, this aim was achieved:

"Every person contributed to the story except the one before last, who felt that the story was reflecting already what he wanted to include. One person didn't feel at ease at first to put her sentence, but we assured her that her contribution is very valuable and encouraged her to speak. She did it! And felt comfortable with it ☺ and actually all the group encouraged her to do it, so she felt that she was valued for her opinion." (Riga)

Storytelling in one instance was also mentioned to have led to inclusion of a topic hitherto not recognised as being relevant.

"Storytelling method was considered as a useful tool how to get interesting ideas connected with discussed topics. Using storytelling method, participants discovered also some hidden aspects that were not mentioned [or] planned to discuss..." (Zlin)

Experiences from the workshops, however highlight how important the set-up and facilitation of the workshop itself were, also including efforts made before the workshop (related to sending of invitations) to ensure inclusion and participation.

"Facilitation went very smoothly. Facilitators had meetings before the workshop to discuss possible scenarios, create starting discussions in case the groups were too shy (which was not the case at all...) ... They also ensured that everybody participated in the discussions. In the collaborative session, the facilitator of the most voted story moderated the session, combining all three collaborative stories, asking some questions to get other teams' feedbacks, and finalized the overall story." (Ankara)

"Stating from the beginning that there is no correct or wrong answer, helped a lot in creating a friendly atmosphere." (Brasov)

Participation however was sometimes also initially or throughout the workshop difficult, partly because of the innovativeness of the storytelling methodology, as was also expected and trained for with workshop organisers over two-days in Brussels in September 2017 and discussed in preparatory telephone calls with many organisers prior to the workshops. Thanks to the highly prepared facilitation, when initial hesitation or feelings of not being adept at storytelling occurred, these could in most cases effectively be mitigated:

"However, to build a group story altogether was not easy for participants due to not being get used to 'storytelling'... Participants sometimes were a bit hesitant though, because they were not sure whether their story was creative enough, and then we explained that rather than creativity, we are focusing more on real-life experiences and that the 'story' part will be developed collaboratively, after we focus on a particular individual story, which seemed to ease their worries. Facilitators were prepared to a high extent and discussed alternative approaches, so they were quite flexible in facilitating the discussions." (Ankara)

Inclusivity is only possible when feelings of uneasiness like this are actually addressed. The workshop in Riga had to take a different approach to work around this, expecting feelings of uneasiness with the storytelling methodology, considering potential lack of experience with interactive and creative workshops, and provided the following tip to fellow workshop organisers: *"Tip: You need to make sure people are feeling safe and comfortable and that they are confident in themselves and in the others before getting them out from their comfort zones. Otherwise you will not be able to get the best out of them." (Riga)*

When the envisioning took place, many of the workshops achieved creative, inclusive future stories. However, the storytelling methodology also proved challenging for some in this phase. This was experienced both in Cambridge and in the Netherlands and had to some extent potentially to do with the fact that this was the first time many of the participants had met and that they needed time to be able to delve more deeply into each other's perspectives to understand their origin, before feeling able to write a bold yet realistic story (in terms of potential barriers to solve):

"Participants found it very difficult to tell a creative, bold story and instead got caught-up with how realistic a given proposal was based on political, economic, etc. feasibility." (Cambridge)

Inclusion and participation was also affected by whether one person took ownership in writing the collaborative story. The proposed method was for everyone to write a line, with little discussion involved, and only in a second round for discussion to emerge based on potential unclear issues or conflicts in the text. However, in some cases the methods was adapted and when one person took ownership this process this created the risk of this persons' expertise dominating, at the expense of others:

"It did unfortunately seem that those who originally suggested the pilot projects had some form of ownership over it and so led on the follow-on parts of the story (e.g. conflicts/problems of that pilot, etc.). This wasn't necessarily intentional, but just arose naturally given that they had most to say on it – essentially others struggled to contribute, even when they wanted to...One group member was very technical in his background and so, as the story writing developed, struggled to contribute to a certain extent." (Cambridge)

Finally, even with the best preparations, sometimes issues arose which the organisers had not planned for: *"Be sensitive that it is possible participants with dyslexia may feel less comfortable writing stories. This was not something we had anticipated." (Cambridge)*

5.4. Discussion and conclusions – remember storytelling is 'just' a method, a means to an end, not the goal in itself

Summarising, the experiences at the workshops demonstrate that storytelling can be an effective methodology to generate learning, empathy, a conflict solving disposition and can encourage inclusion and participation. Key to success, and something mentioned by many of the workshop organisers, is for facilitators to have 'practised' the use of storytelling, or at least anticipated different responses to the individual storytelling activities, and to be able to respond flexibly, changing the activities to accommodate the ambiance or even the room set-up. The preparation of the workshop was also often mentioned to be of critical influence (see section 6 and the Appendix also). Making sure that diversity is invited in terms of the participants, but also thinking about who to put with whom at each table, the material set-up of the room (avoiding a classical position of tables to avoid the 'listening' mode emerging):

"In general, facilitation went good, but the results were not as we expected. This may be explained by the following: i) discussion was not aimed at reflecting on an existing plan; ii) despite of our desires, and differently from what agreed with the host, the room where the plenary sessions were held was a room for 'frontal lessons'. Because of that, maybe participants entered the 'listener mood'; iii) maybe it was evident that we were disappointed by the fact that discussion [in some cases e.g. related to a final whole group story] was not very fruitful." (Turin)

It is also imperative to take account of cultural aspects with respect to workshopping. Some of the participating stakeholders were not used to interactive settings, let alone storytelling, which can be perceived as childish in certain contexts. Facilitators then chose to slowly ease participants into the storytelling methodology, starting with traditional presentations, or sending the storytelling templates prior to the workshop to familiarise the participants with this novel approach. Many participants felt slightly uneasy or surprised at the start, but most ended being very satisfied with the method, seeing its contribution to the dialogue.

Another highly important issue mentioned is that rushing though is not conducive to the output of storytelling. If more time is needed for people to read-out their stories, providing background explanatory stories, or to introduce themselves and their mandates, restrictions etc. in more detail, it is important to allow for this. Time is of the essence, better to skip a phase altogether, such as the individual future story writing, than to not take time for dialogue. After all, storytelling is 'just' a method to encourage dialogue, not a goal in itself. Ankara solved this time issue very elegantly, see below.

"Time-keeping and focusing on one starting story in the short discussion session: We asked every participant to write an individual story, but then asked one/two people to read their stories (on a voluntary basis), and then asked others to comment/build up on these few stories by also adding relevant arguments from their own individual stories. If we had read all individual stories, it would be more difficult to combine these stories. It seemed people did not feel discouraged at all if their story was not picked up as a starting story." (Ankara)

Also Brasov allowed for alternative (oral instead of written) focus in response to what participants needed:

"Keep in mind that they did not come to the workshop just to write stories we are interested in, but to make their opinion heard. And sometimes they want to express this opinion orally. Be sure that you have enough time for this." (Brasov)

This also implies that facilitators need to feel able to abandon the explicit use of storytelling methodologies altogether if necessary, for example when the specific constellation of participants and their relation demands it. Storytelling is a tool to create a safe, emphatic environment where all perspectives are treated with respect and taken on board when devising definitions of the problem and solutions is ensured. These necessary conditions needed to be achieved and if alterations were deemed necessary to the storytelling methodology something which was effectively achieved in Sofia, this was perfectly acceptable:

"There was opposition to use the storytelling method, as initially defined by the facilitators. This could be attributed to: High age of participants (50% over 60, of which the majority over 70) and dominance of male participants (95%), Seniority of participants – Deputy Minister, CEOs of large companies, prominent researchers, etc. – who made attempts to dictate the discussion rules; Most participants knew each other and they found it unnecessary to introduce themselves through stories. Tradition of non-interactive events in Bulgaria. The participants and facilitators agreed that part of the stories can be skipped and instead they shall focus mostly on the elaboration of their vision, challenges, and recommendations. The applied procedure was as follows: Participants were given time to write down their views, Each of them presented his/her view, Participants further elaborated their view, taking into account the views of other participants – each made an attempt to consider the vision of the others and to provide solutions to the challenges of others. The meeting concluded with a collaborative story, taking into account the views of all participants." (Sofia)

All in all we can conclude that storytelling as a methodology to generate a rich output, and facilitate a rich dialogue was achieved in most cities. The learning about these experiences is continuing and will also be shared in more detail in academic papers that will come out of this work, including some on individual workshops and some on storytelling overall.

6. Tips for future events and final thoughts

In this final section we first gather together some tips from the workshop organisers which may be of use to those looking to plan similar events in future (see also the detailed guide workshop organisers worked through when preparing their events, given in the Appendix), before detailing final thoughts on the workshop series.

6.1. SHAPE ENERGY tips for organising a local or regional multi-stakeholder event

Many of the tips given here (contributed by 11 of the 17 workshop organising teams) were shared between the SHAPE ENERGY consortium as the events took place, to inform ongoing planning. The earliest workshops, in particular Riga, put forward a lot of 'tips', since they were setting an example for later events. However an important consideration in planning was always the local context, as each workshop had a slightly different emphasis and audience.

We outline here seven key areas to consider for a successful, interactive, multi-stakeholder workshop. Of course many of these ideas will be well known to those used to organising such events, however by including them we hope to support those working in contexts or cultures less familiar with them.

Invitations:

- Sending out tailored invitations (which is highly recommended to ensure active participation of key groups) takes a lot of time. ***Overall, the majority of workshops were organised as planned and well attended, however one workshop (planned for Helsinki) was cancelled, and this may have partly been due to the use of mass advertisement rather than individual invitations.*** It may take time and diplomacy to get certain key stakeholders involved.
- Actively consider diversity at the invitation stage. Invite people from various fields of activities, and across genders, ages, career stages.
- Involving a few participants who the organisers know from prior contact may contribute to a friendly atmosphere and ensure several people willing to contribute, which also positively encourages others.

Groupwork:

- Consider carefully when splitting people into groups, if you are doing this. Special attention should be given to ensure diversity among participants, in term of background, gender and age.
- When choosing groupings, two further key factors to consider may be: having enough 'expertise' in each group (relevant to the central topic of the event), and spreading out those who are more dominant in conversation. Of course this cannot always be predicted!

Preparation of facilitators and activities:

- Flexible facilitators: discuss in detail the activities with facilitators and consider with them the specific event context (local culture, who is attending, time constraints, etc). Include the possibility of shifting to alternative approaches if needed. As one organiser advocated: do not be afraid to trust the collective intelligence of the group to handle and discuss what is best for them and what is useful. Be flexible and adapt!
- Having enough support: as well as facilitators, it may be helpful to have one person as a back-up, who is responsible for check-in of attendees and any photos/recordings.
- Thorough piloting of all activities and printed materials beforehand, if at all possible, was found to be very helpful and led to tweaks being made to improve the events.
- Be sensitive that participants may have needs which you didn't anticipate (for example, someone with dyslexia may feel less comfortable writing stories). Relatedly, the SHAPE ENERGY workshops were, in almost all cases, held in the local language to support full involvement.

Venue:

- For an interactive event, make sure that the rooms are suitably arranged, rather than set out in 'presentation mode'.
- Where possible, we recommend separate rooms for small group discussions, to prevent noise and distraction from other groups.

Creating the atmosphere at the start of the event:

- Most workshops used some kind of 'icebreaker' (involving people talking to each other) to help create a comfortable space where people became self-confident, open minded, and willing to participate and contribute. It was recommended by some to do this as close as possible to the interactive sessions, rather than too early in which case it might lost its impact.
- In contexts where people were not so used to interactive sessions in their daily work, organisers planned to take people out of their comfort zones step-by-step in order to get the best out of them. For example, beginning events with traditional presentations were reassuring and felt safe!

Time-keeping:

- Some organisers noted that they deliberately planned a shorter event in order to attract more senior attendees. Techniques used to save time in that case included 'priming' people for the stories they would be asked to tell (either in the form of a brief request, or even sending the full template through).
- But also be prepared to let people take time to discuss: at an interactive event, this time is the really important part. Be prepared for people spending longer than anticipated, especially if they do not know each other, since part of this will be them introducing themselves to others.

At the end of/after the event

- Keep evaluation forms to the point, and short.
- Write up notes from each of the groups/from the event as quickly as possible (ideally within a day or two). Similarly, send materials and any other follow-ups to participants as soon as you can, to keep momentum up.

6.2. Final thoughts

In summary, the 17 SHAPE ENERGY workshops have achieved a number of results. At the local or regional level, each one strengthened or created stakeholder connections across different groups working on energy-related topics. In many cases they fed into ongoing programmes of work, or indeed have stimulated new ones. They started conversations about the role of the Social Sciences & Humanities (SSH) in meeting local energy challenges. The reports arising from the workshops have identified both 'top of mind' SSH priorities of local actors, but also – through an examination of the topics discussed and the stories themselves – a wider set of questions and themes that can be taken forward by energy-SSH researchers. Finally, they have provided both a set of resources related to, and an evaluation of, the use of storytelling methods to build multi-stakeholder collaborations.

The series involved a large number of actors and a huge amount of hard work. We would encourage others to feel free to use any of the ideas and resources contained here[5] in the furthering of ambitions towards low-carbon energy systems fit for our cities, nations, and the world.

5 We would be grateful to both hear about these (for example via twitter), and for SHAPE ENERGY to be acknowledged.

7. Acknowledgements

As well as all the organisers and co-organisers of the workshops from within the SHAPE ENERGY consortium and associated partners, we wish to sincerely thank here representatives who dedicated their time to either co-hosting or supporting the preparation and running of the city workshops. In particular, the following organisations: Amt für Umweltschutz (Stadt Heidelberg), Bruxelles Environnement, Cambridge City Council, Center for the Promotion of Clean and Efficient Energy in Romania (ENERO), Centre for Development Cooperation Initiatives (CICODE) at the University of Granada, Faculty of Mining and Geology at the University of Belgrade, Gemeente Utrecht, Grand Lyon municipality, Institute of Power Engineering (Chisinau), Iren Turin, Lisboa E-Nova, Macedonian Center for Energy Efficiency, Metropolitan Agency for Sustainable Development in Brasov, Regional Environmental Center (Turkey), Riga Energy Agency, SFERA Citizen Association (Macedonia), Standing Conference of Towns and Municipalities (Serbia), tenants association TaRuFa (Netherlands), Trondheim municipality. Thank you all. We are also grateful to Chris Foulds and Kinga Kovacs for their assistance in reviewing this report. The SHAPE ENERGY project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 731264.

8. Appendix:

Organisers' guide to implementing the SHAPE ENERGY multi-stakeholder workshops

Key contact: Stéphane Dupas, Energy Cities

8.1. Objectives and topics of the workshops

Within the SHAPE ENERGY project, the overall objective of the workshops is to gather different local/regional stakeholders in order to define with them the energy-related challenges they face in their activities, which could (in the future) be overcome or at least which could find help from SSH.

In a second step, after the workshop, the analysis of the outputs of the workshops will allow the formulation of research areas, research problematics and research questions to fuel the energy-SSH research agenda.

At a practical or project level it is important the workshops are: well attended by a diversity of participants; productive for both participants and organisers; well-disseminated in a timely manner.

Broadly speaking, they will focus on at least one of the SHAPE ENERGY topics: 1) Energy efficiency and using less, 2) Competitive, secure, low-carbon energy supply, 3) Energy system optimisation and smart technologies and 4) Transport sector decarbonisation. However the most important thing is the identification of a central (energy) theme which is of relevance to the intended audience.

8.2. Workshops basics

- Workshops have to be run and reported on starting from 1 October 2017 until 31 May 2018
- 20-30 delegates (local government, business, academia, NGOs)
- One day workshop (10:00 – 16:00 as indicative time)
- Based on specific local energy challenges
- Storytelling will be used as a facilitation method

8.3. How to prepare your workshop

Note that these steps are not in exact chronological order, and some will need to be done iteratively.

1. *Contact with local stakeholder co-hosting the workshop*

- Explain the initial objectives of the workshop (of course, some of the objectives will also be shaped by them)
- Present the project
- Ensure their support
- Find a date (or approximate date)
- Decide a venue (if possible, the co-host can provide room for free)
- Clarify budget issues (who is paying what)
- Make sure your host understands well the objectives of the workshop. Best is to engage in a dialogue in order to avoid misunderstanding. It should be clear to the host that we want this workshop to be useful for them while still meeting the objectives of the project. In that light, local problematics could be fuel for discussion.
- Where there is no formal 'co-host' you might instead identify a particular local network or stakeholder who is willing to commit at an early stage to attending and helping identify other participants.

2. *Define your workshop 'hook', based on local landscape review, ideally in liaison with local co-host of the workshop (early in the process)*

- Co-define key topic(s) (linked to one or more of the 4 SHAPE ENERGY project focus topics) and programme.
- The topic should relate to the local strategies in order to attract participants and make for a lively discussion.
- Your topic should be specific enough so that participants can understand the boundaries and focus on the one issue instead of keeping on bringing new issues (you experienced that in BXL, remember? ;-)).
- Check if the workshop can be embedded in existing activities or local discussions taking place at the moment.
- Working with the co-host will give you more insights and help you find the right 'hot topic' as well as giving you more background detail on it.
- Use this topic to construct the title of the workshop, as well as a short background context to include in the invitation.
- Examples of the Cambridge and Riga workshops title and background can be found in the annexe.[6] *During the project, the workshop materials (including invitations, slides, story templates etc.) will be saved continually in CIRCABC, giving more and more examples as the workshops take place one after the other.*

3. *Define your workshop objectives which will inform your invitation, and tailored story spine*

- Develop specific objectives in discussion with the co-host, in terms of what you and they want participants to get out of the event. Again, these can be used in the invitation, to attract participants. Do think also about your own organisation's agenda (what would you find helpful to get out of it?), and how can you orientate the discussion so as to collect material to fuel the energy-SSH research agenda. These specific objectives will also directly help you design your story spine(s).
- See also point 8 for further examples of such objectives
- As well, more examples of how these objectives will be turned into story spines can be found in the internal storytelling guidelines

4. *Identify key players to invite*

- Which key stakeholders are essential to the discussion?
- Are there already existing groups?
- Which actors are the co-host already collaborating with?
- Please take gender and age balance into consideration, and keep monitoring this as invitees confirm or decline
- Try also to balance public / private / not-for-profit views of the specific topic
- Think also about potential non-experts that still could be impacted or about social groups that normally do not attend such events and could enrich the discussion from a different perspective (artists? Youth? Etc.)
- Eventually, if this could attract participants, is there someone who would be good to invite as a short keynote speaker? Someone who may have interesting insights into the topic, and also help attract other participants
- You may find a spreadsheet helpful to keep track of who has been invited, who has confirmed, who is still to invite, which groups are well- or under-represented

6 These materials (including template invitations) were also provided to organisers.

5. *Set a definitive date and place*

- Ensure the venue is adapted to the workshop (big, sunny venue, with room to walk around is ideal). Remember you will need spaces for up to four different groups to have separate discussions. Having these in separate rooms or breakout spaces is ideal as it is hard to concentrate with too much noise.
- Make sure the date is not accidentally overlapping with school holidays, bank holiday, other events of the co-host, etc.
- Reserve the venue

6. *Ensure catering and refreshments are taken care of*

- Order catering according to available budget (think about dietary issues)
- Make sure the catering will be time limited so that lunch break does not take too much time
- Try to plan a "light" and "refreshing" lunch
- You will likely need to confirm final numbers closer to the time

7. *Plan your outline agenda, for the invitation*

- It doesn't have to be extremely detailed at this stage but should give an overview of how the day will unfold, so that the potential participants can have an idea of what they can expect. It does need to be clear on the start and end times.
- Example outline agendas of the Cambridge and Riga workshops can be found in the annexe.

8. *Design and send invitations (start at least 2 months prior to workshop, the more notice the better)*

- This step is to be taken carefully since bringing the right people into the discussion will be crucial (see identification of participants)
- Underline what the participants may find attractive in the workshop, what the discussion will bring to their own agenda or work. You can for example state that the project will be reporting directly to the EU commission, so that their influence will be quite direct.
- You can also underline the learning potential of the project in terms of access to feedback from other cities, and the possibility of local networking.
- What will the participants learn? Who else will be there / will there be other experts?
- The participants will be able to voice their own opinion. They will impact the local plans.
- How will the workshop help solve the problem at stake? (Deconstructing wicked problem?)
- Below are some examples of potential motives that could encourage participants to join (for your inspiration)
- "In this context, participants will:
  - *Reflect on, explore and develop the local state of the art related to [e.g. specific policy or initiative];*
  - *Contribute to the discussion of [a specific step] within a broader [local policy] process; Feed into the design of concrete next steps regarding [local policy, initiative, or programme of work];*
  - *Have the opportunity to build or strengthen collaboration with local stakeholders, including [details];*
  - *Directly influence the European Commission's direction on supporting local energy policy;*
  - *Propose their own agendas and priorities in relation to [local energy challenge];*
  - *Find out about European and local-level resources available on the latest social research in energy;*
  - *Hear about latest developments on [topic related to e.g. guest speaker];*
  - *Have access to learnings from the 17 other linked European city SHAPE ENERGY workshops."*

- Example of the Cambridge workshop invitation (annotated) is to be found in annexe, which contains important other details such as giving a deadline for response, and asking for dietary requirements
- Check if anyone has expressed interest to your workshop through the SHAPE ENERGY website (those requests are forwarded by Energy Cities as they come).

9. *Monitor participation confirmation and send new invitations (aim to fill most of the spots about 1 month before the workshop)*

- Keep track of registrations (again, perhaps using a spreadsheet)
- Follow-up (e.g. by phone) if there is no feedback
- Continue with invitations, in liaison with the co-host

10. *Prepare, and test, the story spine(s)*

- Follow the new internal storytelling guidelines provided by Duneworks (this is different to the public guidelines, sent before the training)
- Arrange (as early as possible) a call with Duneworks scheduled for a few weeks before the workshop – not too far in advance as you need to have most of the details set
- Ideally set also a time/date for a pilot of your story spine, in the 2 weeks before the workshop, with your own team or colleagues (you can do this with as few as 3 others). Make sure this is in your/their diary asap
- Create your own draft story spine/story template (ahead of the call/pilot) according to the objectives and topic identified.
- Check with Duneworks for guidance
- Update based on feedback from the DW call and pilot

11. *Ensure human resource to facilitate the workshop*

- Make sure you have enough of the right people and that they know what they will have to do
- What seems to be a minimum:
  - 1 main facilitator (introduces the day and the tasks to the whole group, chairs whole group discussion).
  - 1 table facilitator per group of max. 8 persons (so, total will depend on the number of participants) – the main facilitator will likely also be a table facilitator. A member of the co-host team may be happy to be a table facilitator.
  - 1 participant observer (will fill in the participant observation form for one of the whole group sessions) – who can be the same as a table facilitator if necessary.
  - 1 co-ordinator (taking care of registration, catering, photographs, videos, evaluation forms etc.) – who can be the same as a table facilitator if necessary.
- Tip: create a checklist / detailed agenda for assigning who is doing different specific tasks at the workshops, e.g. observation, taking photos/videos etc. Make sure all those undertaking tasks have read the materials available regarding them (e.g. the 'know how' guide for participant observation, the video consent forms, etc.)
- In case you do not have enough staff available, individual solutions should be sought. Local partners, interns, consortium partners might be able to help. Please advise Duneworks (regarding methodological advice), Energy Cities (as workshops coordinator) and ARU (as project coordinator) about the situation as soon as possible in order to gather some problem solving help.

12. *Identify all materials needed*

- Make sure you have all material needed for facilitation, and that someone is in charge of checking/bringing these
- Do you have:
  - Signs directing participants to the room?
  - Sign-in sheet? Name labels? *IMPORTANT: you will need to use and tailor the SHAPE ENERGY sign-in sheet for your event, this is in part where we inform people what data is collected, and how we use their data*
  - Chairs? Tables?
  - Flip charts? (One per group)
  - Video projector? Computer? Microphones? Clicker?
  - Story spines to fill in? Clip boards? Pencils / pens? Brief instructions for the table groups?
  - Video / photo cameras? Video consent forms?
  - Printed evaluation sheets?
  - Etc.
- Create your own checklist (not all workshops will need all of the above)

13. *Final tasks*

- Complete the first part of the participant observation template, which can be done ahead of time
- Send a final email to all participants confirming the date, times, agenda, and anything you want them to consider ahead of the event (e.g. which will help them 'hit the ground running' when writing their stories)
- Confirm final numbers for catering, and all dietary requirements
- Confirm final room layout with the venue
- Potentially, have a final meeting or call with the co-host. Definitely have a final meeting with those undertaking tasks at the workshop
- Pack materials, finalise any slide presentations

14. *Shortly before the workshop*

- Send to Acento Comunicacion and Friends of Europe topic of the workshop in advance of the event, and if possible, list of participants, so that they may share information on social media (to highlight any important Mayors, or key stakeholders present in the room and promote the workshop in advance).

15. *Run the workshop*

- Make sure all participants sign the sign-in sheet
- Make sure to share with participants in the room the SHAPE ENERGY hashtag and twitter handle (#H2020Energy @ShapeEnergyEU), so that they may tweet about the workshop during the event.
- Important: remember to tell participants that their name will be included as contributing to the SHAPE ENERGY Research & Innovation Agenda (but they will have the opportunity to withdraw it). An example slide on this (e.g. from Cambridge workshop) will be available on CIRCABC
- Use the facilitation skills reminders *(to be found in the internal storytelling guidelines)*
- Run the individual and collaborative sessions
- Run the participant observation in parallel
- Share photos with Acento during the event or as soon as possible after, to ensure timely communication across our networks

- Make sure all participants fill in hard copies of the activity evaluation questionnaire on the day
- Record two (or more) videos of participants (make sure they fill in the video consent form). They should read their story. They could also explain how they felt about the workshop, what it brought to them and ideally hint towards energy-SSH outputs.
- Ensure you collect up all the materials generated during the event, for the reporting

16. *As soon as possible after the workshop (i.e. within 2 days)*

- Send Acento some pictures
- Complete / finalise your participant observation form
- Potentially using some of your reflections from the participant observation process, and/or the videos, draft a blogpost (300-500 words): share your individual impression and ideally some of the participants' feedback on the organisation of the event, the level of participation as well as any outputs from the conversation and key comments made.

17. *Send the workshop report to Energy Cities within 2 weeks of the workshop*

- See separate template document for full details of this.
- The report should contain the following documents:
    1. Scanned copies of:
        - Sign-in sheet
        - Every story written by the participants
        - Any flipchart sheet used during the workshop
    2. Video/recording consent forms of participants (when applicable)
    3. Photos of the workshop
    4. Videos/interviews recorded during the workshop, plus typed subtitles
    5. Storytelling videos with individual participants
    6. Typed versions of all collaborative stories
    7. Typed versions of 5 individual stories
    8. Translations in English of all typed stories, and video subtitles
    9. Filled-in participants' observation report
    10. Enter the feedback questionnaire responses directly into the google forms: *(see reporting template)*
    11. Please also include your preparation materials such as slide presentations, story spines, invitations, agenda, etc.
    12. Filled-in workshop report template *(will be provided by Energy Cities)*

18. *Feedback to participants (as soon as possible)*

- Thank them for their participation
- Send them a link to the blog post / photos, if available
- Send them any materials you promised to share, e.g. slide presentations, photos of flipcharts

19. *Feedback with the host (within 1 month of the workshop)*

- Soon after the workshop, contact the co-host to check how useful the event was, and if potential follow-ups are to be organised. Please share those outcomes with Energy Cities.

20. *WELL DONE! Congratulate yourselves on a good job* ☺

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