



**ClairCity: Citizen-led air pollution reduction in cities**

# **ClairCity Mutual Learning Workshop- Sosnowiec, PO**

**April 2018**

**Report – web version**

# 1 Document Details

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<b>Description</b>	This report is one of the deliverables on the task of WP 4.4.1. Mutual Learning Workshops (MLW). The workshop was held with stakeholders to share and discuss the health risk factors of their changing city environment now and within the timescale of the future scenarios (2020-2030-2050). The current report contains the general concept, the summary of the MLW, the scenario outputs and conclusions

## 1.1 Version History

<b>Version</b>	<b>Updated By</b>	<b>Date</b>	<b>Changes / Comments</b>
V1	Edyta Wykurz and Ewa Karaban, City Hall Sosnowiec	January 2018	Version 1
V2	Eva Csobod, REC	April 2018	Version 2
V3	Edyta Wykurz and Ewa Karaban, City Hall Sosnowiec	April 2018	Version 3
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## 1.2 Contributions and Acknowledgements

The authors would like to thank the following people for their important contributions used in the preparation of this final document.

<b>Quality Assurance</b>	Corra Boushel (UWE), Eva Csobod (REC)
<b>Native Language Check</b>	Corra Boushel (UWE)
<b>Project internal comments</b>	Internal comments ask for detailed information on the stakeholder groups and the conclusions of the MLW.

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## 2 Executive Summary

As part of the ClairCity project, the Mutual Learning Workshop (MLW) brought together stakeholders from health, public transport, energy and air quality to discuss the future visions for Sosnowiec. The Sosnowiec MLW was held on the 26th of January 2018. Twenty participants attended the event.

Sosnowiec is one of the most polluted places in Poland and Europe. The agglomeration of Silesia, to which Sosnowiec belongs, has the worst air (several hundred percent of the exceedance of particulate matter PM 2.5 and PM 10 and benzo (a) pyrene) mainly in the cold months (late autumn - winter - spring). Pollution is caused mainly by the residents themselves burning bad quality fuel in outdated furnaces. Transport and industry are contributing factors, but heating is the dominant source.

The city is currently focused on the modernization of heating, building insulation, expansion and modernization of heating systems and installation of renewable sources. The regional anti-smog resolution implemented in 2017 prohibits the use of poor quality fuels and obliges residents to replace old furnaces. There is also action on reducing the reliance on private vehicles to move towards public transport and active travel (walking and cycling).

Barriers that complicate the implementation of positive future scenarios could be divided into three groups: legal, financial and public awareness. Currently, the law in Poland changes too frequently, it does not give any guarantee for the future. This makes residents afraid to invest in modern solutions. They are not sure that the technology, which is currently promoted and for which financial concessions are granted, will not be charged with additional fees in the near future.

Society is too poor to bear the costs of energy transformation. Earnings of Polish residents are lower than the income of Western European citizens. Co-financing of, for example, replacement of a furnace with a modern one is not sufficient, as the cost of fuel for a new boiler is often impossible to be borne by residents. Furthermore, people are not fully aware of the consequences of their own actions. There is no knowledge about the health consequences of burning low quality fuels or rubbish.

A combination of funding, public education and awareness raising, appropriate and enforced legislation to stop the use of low quality fuels and furnaces and investment in alternatives (district heating, public transport etc) can resolve these issues.

The majority of participants strongly agreed with the statement that by 2030, there would be no private cars in the centre of the city.

### 3 Introduction

This activity is part of the work package Citizens and Stakeholder Engagement, WP4.4 – Citizens and their Health, Task 4.4.1 Mutual Learning Stakeholder Workshop.

The aim is to empower citizens to better understand the specific challenges and opportunities that their city currently offers and engage them into moving towards reduce pollutants emissions and carbon footprints, improved air quality and decreased health risks. This is achieved as part of overall perceptions and ideas of citizens on sustainable lifestyles and a *'better quality of life'* within their city in the future. The main outcomes will support the policy development of the cities towards 2050 in the field of integrated city planning, air quality and climate change.

REC (WP4 lead) are responsible for the design of the Mutual Learning Stakeholder Workshops (henceforth, Mutual Learning Workshops or MLW); the content, methodology, structure, the potential stakeholders and timeframe. The MLW is implemented by the partners and cities/regions.

## 4 Mutual Learning Stakeholder Workshop in Sosnowiec

The Sosnowiec MLW was held on the 26th of January 2018.

### *4.1.1 MLW Concept and Workshop Aim*

The MLW is designed for stakeholders who are engaged in environment, health issues and policies.

The aim of the event is to discuss and identify routes to a “clean air”, healthy, zero-carbon region by 2050 by understanding specific challenges and opportunities for organisations, and engaging them to identify actions, milestones and priorities.

### *4.1.2 Participants and organisations*

Participants from different organizations in public administration, transport, environment and health were invited to the MLW. Twenty participants attended the event. Please see Appendix A for a full list of participants, and Appendix B for the agenda.

# 5 Minutes of the Mutual Learning Workshop

## Sosnowiec

### 5.1.1 *Speakers' session*

The agenda of the Sosnowiec Mutual Learning Workshop was based on the MLW guidelines. To start the event, Barbara Kossowska – Siwiec, from City Hall Sosnowiec introduced the workshop, and the ClairCity project.

Lilia Szymańska-Kubicka, Regional Inspectorate for Environmental Protection then spoke about "Air quality in Sosnowiec: past, present and future". Sosnowiec is one of the most polluted places in Poland and Europe. The agglomeration of Silesia, to which Sosnowiec belongs, has the worst air (several hundred percent of the exceedance of particulate matter PM 2.5 and PM 10 and benzo (a) pyrene) mainly in the cold months (late autumn - winter - spring). Pollution is caused mainly by the residents themselves burning bad quality fuel in outdated furnaces, thus heating their homes and apartments. In the summer months the air condition is relatively good (well below the permissible concentrations), which proves that emissions from transport and industrial activities do not have a dominant influence on the state of air in the city.

The second speaker was Robert Dworak, Department of Road and Traffic Management (City Hall Sosnowiec) who spoke on "Transport in Sosnowiec: past, present and future." The city's intensive development took place in the 1970s. At that time, a road network was planned, which to a large extent functions to this day. At that time, individual road transport was the most important. Creating a network of roads convenient for drivers, giving them priority over pedestrians and cyclists was the main goal of the authorities. The road network was planned in such a way that driving is easier and faster than in neighboring cities. However, the space for pedestrians and cyclists is very limited.

Currently, there is a change in the perception of urban space and more attention is paid to facilitating pedestrians, public transport and cyclists. This is mainly due to the assumption that expanding the road network has the opposite effect from that planned and encourages an increasing number of inhabitants to use cars. That's why the city decided to create the first buspass running through the city center (the main street in the city), city bike rental, new bicycle paths, transfer centers, and the plans for the near future are changing the character of the city center to become pedestrian-friendly. The center's reconstruction plan is in the final phase.

Anna Rączka and Tomasz Przedpełski from the Department of Municipal Property and Environmental Management (City Hall Sosnowiec) spoke on "Energy in Sosnowiec: past, present and future". Sosnowiec conducts a number of activities aimed at improving air quality. The city is currently focused on the modernization of heating, building insulation, expansion and modernization of heating systems and installation of renewable sources. The regional anti-smog resolution implemented in 2017 prohibits the use of poor quality fuels and obliges residents to replace old furnaces. Sosnowiec offers its residents a high co-financing for exchanging the heating method for environmentally friendly ones.

The city also implements measures aimed at energy savings: it exchanges energy-intensive street lighting for LED with an intelligent control system, and also introduces a thermal and electrical energy management system in schools. Sosnowiec as one of the 44 Polish cities participates in a project financed from European and national funds, which will result in the development of an urban plan for adaptation to climate change. The aim of the project is to examine the vulnerability, vulnerability and resilience of the city to possible climate changes and to prepare city authorities and their residents to respond to them responsibly and responsibly.

PhD hab. Danuta Mielżyńska, Deputy Director for Scientific Affairs from Institute of Occupational Medicine and Environmental Health spoke on “Air quality’s impact on the health of residents of Sosnowiec.” Inhabitants of Sosnowiec, inhaling the air, have health effects similar to breathing in the smoke from several thousand cigarettes a year. Diseases affect residents of all ages and vary in severity, depending on individual health characteristics. The catalog of diseases is very wide, from obvious (related to the respiratory system), to autism, diabetes, allergies, etc. Medicine has 100% proven to link certain diseases with the state of air, and science constantly adds new diseases to the existing catalog.

### *5.1.2 Workshop session*

Part two of the workshop was carried out in another hall of the Municipal Office in Sosnowiec. In the first part of the talks on building scenarios up to 2020, 2030 and 2050, the group had the greatest difficulty with the vision of 2050.



#### **Table 1.**

It was decided that by 2020 little will change. There will be the first signs of upcoming changes, but it will be a very preliminary phase. The most important changes will take place by 2030. The year 2050 is very difficult to describe, because technologies change so quickly that it is difficult to predict at the time what solutions will be considered ecological and economic at that time.

#### **Table 2.**

The group discussed the vision of Sosnowiec's development in three perspectives: by 2020, 2030 and 2050. At the beginning of the discussion, it was noted that it was impossible to

build a strategy for Sosnowiec in isolation from the region. One of the discussion participants was a member of the board of the Silesian-Zagłębie Metropolis - an institution responsible for creating a common policy of cities, including in the field of transport.

The group decided that the 2020 perspective will be the time of implementing already initiated measures and possibly new solutions. "Revolutionary" changes can take place in the next decade. The most difficulties were caused by the year 2050 as the most distant, difficult to predict, perspective.

**Table 3.**

Thanks to the participation of people involved in the development of urban transport in the discussion, the group had information about the state of progress of the projects initiated regarding the modernization of electric urban transport or the construction of bicycle paths. The vision of changes in the upcoming 2020 perspective has not created problems for the group.

Visions of development prospects until 2030 and 2050 after the initial brainstorm were also coherently outlined. Interestingly, the group unanimously noted that by 2050 a world-view revolution is needed that would discourage the consumption of society and the sense of a greater bond and responsibility of the individual. The discussion also included observations that in a demographically aging society, seniors are a very important target group of all projects and educational activities. There was a perception that these days this is a neglected group in educational and promotional activities.



### 5.1.3 Summary of table discussions

	<b>Table 1</b>	<b>Table 2</b>	<b>Table 3</b>
<b>By 2020</b>	<ul style="list-style-type: none"> <li>- Public transport will be more ecological (almost all buses will be electric or hybrid); tram transport will also be modernized, new tracks will be created;</li> <li>- first charging stations for electric cars will be created;</li> <li>- the first changes in the behavior of residents should occur, which will be the result of adapting the product to customer expectations;</li> <li>- there will be no significant changes in the method of heating homes, there will still be many residents using poor quality fuels and burning fuels in old furnaces;</li> <li>- the first inhabitants will start using renewable energy sources;</li> <li>- the air quality will still be bad, in the winter months permissible pollutant concentration limits will be well above the limits;</li> <li>- health effects caused by air pollution will be felt.</li> </ul>	<ul style="list-style-type: none"> <li>- Transfer centers will be created.</li> <li>- Car free zones will be introduced</li> <li>- Banning of poor quality fuels.</li> <li>- Subsidies to change the way of heating to more eco-friendly will be sustained.</li> <li>- More greenery in the city.</li> <li>- Free public transport for some social groups.</li> <li>- Educational campaigns that raise the environmental awareness of residents.</li> </ul>	<ul style="list-style-type: none"> <li>- Public health education (using antismog masks)</li> <li>- seniors' education</li> <li>- connecting to the municipal heating network of buildings</li> <li>- actions for the growth of renewable energy through the creation of new funding mechanisms</li> <li>- replacement of boilers for new type boilers (5th class)</li> <li>- building a mechanism for financing new boilers</li> <li>- introduction of legislation regarding the ban on placing solid non-fossil fuels on the market</li> <li>- City Social Assistance Center could buy better quality coal</li> <li>- development of green areas</li> <li>- construction of transfer centers</li> <li>- construction of bicycle paths and bike rental networks</li> <li>- modernization of the tram network</li> <li>- development of electric bus networks</li> <li>- improving access to information for the residents</li> </ul>
<b>By 2030</b>	<ul style="list-style-type: none"> <li>- public transport will not use solid fuels;</li> <li>- a total ban on the use of diesel vehicles will be introduced (this</li> </ul>	<ul style="list-style-type: none"> <li>- Replacement of heat sources throughout the city for low-emission.</li> </ul>	<ul style="list-style-type: none"> <li>- Public transport</li> <li>- cars excluded from the city center (except for electric cars)</li> </ul>

	<p>will be forced by the European Union);</p> <ul style="list-style-type: none"> <li>- the city center will be more citizen-friendly, cars will be banned from entering center;</li> <li>- old stoves will be removed from homes;</li> <li>- urban lighting will be completely replaced with LED;</li> <li>- more green areas will be created, green buildings will appear (with greenery on the roofs and walls);</li> <li>- in the city, due to population decline, many residential buildings will be abandoned; it will be necessary to demolish them or change their functionality;</li> <li>- the society will be old, there will be a need to provide new services for seniors;</li> <li>- the health effects caused by air pollution will continue to be felt</li> </ul>	<ul style="list-style-type: none"> <li>- Community (group of residents) heating networks will be created.</li> <li>- Waste will be treated not as garbage, but as resources that can be used for energy purposes.</li> <li>- Car traffic in the city will be significantly reduced, favoring pedestrians and cyclists.</li> <li>- Cheaper, better public transport (more connections).</li> <li>- Passive buildings will be more popular.</li> <li>- Better spatial planning - more greenery will appear in public and private spaces</li> </ul>	<ul style="list-style-type: none"> <li>- heating centers - development and connection of all excluded buildings</li> <li>- moving people to city centers</li> <li>- modernization of historic buildings (connection to heating networks and energy efficiency)</li> <li>- a command and relief tool needed to pressure the connection of new buildings to the heating network</li> <li>- development of photovoltaics, wind energy and heat pumps</li> <li>- increased green areas</li> <li>- ban on capping green areas</li> <li>- appropriate provisions in urban spatial development plans for buildings (connection to the network and thermo-modernization) and green areas revitalization of space</li> </ul>
<b>By 2050</b>	<ul style="list-style-type: none"> <li>- most of the heating energy will be generated from renewable sources;</li> <li>- urban lighting will be even more ecological than LED (currently unknown technology);</li> <li>- the city will be definitely greener;</li> <li>- public transport will develop in a difficult direction to determine;</li> <li>- the health effects caused by air pollution will continue to be felt.</li> </ul>	<ul style="list-style-type: none"> <li>- Individual household power plants will be built.</li> <li>- Energy will be obtained mainly from renewable sources (sun, wind) and from waste (thus the problem of landfilling will be completely eliminated).</li> <li>- Car traffic will be significantly reduced due to the lack of frequent</li> </ul>	<ul style="list-style-type: none"> <li>- total reconstruction of green areas</li> <li>- establishing the continuity of the blue and green infrastructure networks</li> <li>- total abandonment of fossil fuel energy</li> <li>- total elimination of individual carbon sources</li> <li>- all houses subjected to thermo-modernization, new built houses only passive</li> </ul>

		<p>movement of residents (they will work in homes - teleworking).</p> <ul style="list-style-type: none"> <li>- Only electric and hydrogen cars will move along the streets.</li> <li>- New energy and transport technologies will be implemented.</li> <li>- City - a garden with lots of greenery.</li> </ul>	<ul style="list-style-type: none"> <li>- Seniors should be exempted from fees for the use and implementation of green infrastructure</li> </ul>
<b>Barriers</b>	<p>Barriers that complicate the implementation of the scenarios can be divided into three groups: legal, financial and related to the awareness of residents.</p> <p>Currently, the law in Poland is not stable, it is often changing, it does not give any guarantee for the future. For this reason, people are afraid to invest in modern solutions. They are not sure that the technology, which is currently promoted and for which financial concessions are granted, will not be charged with additional fees in the near future (<i>legal obstacles</i>).</p> <p>Society is too poor to bear the costs of energy transformation. Earnings of Polish residents are lower than the income of Western European citizens. Co-financing of, for example, replacement of a furnace with a modern one is not sufficient, as the</p>	<p>The basic barriers to the full implementation of the scenarios concern financial limitations and the residents' awareness. For inhabitants, the financial balance is important, both in the case of transport (moving by car is faster and cheaper) and heating homes (it is still cheaper to use coal than using ecological fuels). The introduction of new solutions in the field of thermal energy (considered by the group as the most important) can be a big problem especially for the poorest social groups.</p> <p><b>Other barriers:</b></p> <ul style="list-style-type: none"> <li>- Ownership of the land and spatial and climatic conditions will make it difficult to design a garden city and introduce more greenery.</li> <li>- Current legal regulations prevent the full use of waste as a source of energy.</li> </ul>	<ul style="list-style-type: none"> <li>- Low public awareness of health threats, downplaying the impact of smog on health</li> <li>- mental barrier</li> <li>- insufficient financial support for anti-smog resolution solutions</li> <li>- the need to strengthen social bonds</li> <li>- lack of education regarding the impact on health</li> <li>- difficulty in operating new furnaces</li> <li>- no legislation on the quality of solid fuels</li> <li>- law enforcement difficulties</li> <li>- no quality standards for fuel</li> <li>- no penalties for burning low-quality fuel</li> <li>- administrative barriers regarding renewable energy sources</li> <li>- a problem with the adjustment of low-floor rolling stock</li> <li>- no charging stations for electric cars</li> </ul>

	<p>cost of fuel for a new boiler is often impossible to be borne by residents (<i>financial obstacles</i>).</p> <p>Society is not fully aware of the consequences of their own actions. There is no knowledge about the health consequences of burning low quality fuels or rubbish (<i>an obstacle related to the consciousness of residents</i>).</p> <p><b>Other barriers:</b></p> <ul style="list-style-type: none"> <li>- Employers do not provide employees with adequate provision for cycling. The office employee should be able to shower, change clothes, store the bicycle while working;</li> <li>- local government employees do not take part in trainings offered by, for example, universities increasing their knowledge about renewable energy sources;</li> <li>- activity of energy companies: residents exchange lighting and home appliances for more economical, and electricity bills do not decrease. Energy companies inflate bills to keep profit.</li> </ul>	<ul style="list-style-type: none"> <li>- Aging society, social resistance and architectural barriers will not allow complete elimination of car traffic in the city center.</li> </ul>	<ul style="list-style-type: none"> <li>- a problem with social acceptance of changes concerning the use of personal cars</li> </ul>
<b>Solutions</b>	<ul style="list-style-type: none"> <li>- Introduction of stable, good laws;</li> </ul>	<ul style="list-style-type: none"> <li>- Additional sources of financing for exchanging the heating method</li> </ul>	<ul style="list-style-type: none"> <li>- pre-school, school and seniors education (awareness must increase at every stage)</li> </ul>

	<ul style="list-style-type: none"> <li>- market regulation by the national government (reduction of energy prices);</li> <li>- maintaining the current subsidy for replacement of boilers and introducing co-financing to operating costs (purchase of fuels);</li> <li>- permanent educational activity;</li> <li>- encouraging people to green their surroundings (garden instead of parking space);</li> <li>- adaptation of services to the needs of an aging society;</li> <li>- proper spatial planning (controlled sale of plots for development, creation of so-called green islands);</li> <li>- purchase of air purifiers for public buildings (eg for nurseries, kindergartens);</li> <li>- increasing the involvement of residents in activities to improve air quality.</li> </ul>	<p>and introducing renewable energy sources.</p> <ul style="list-style-type: none"> <li>- Priority given by national, regional and local authorities to pro-ecological activities.</li> <li>- Conducting public consultations, actions raising the health awareness of residents and a clear indication of the benefits of pro-ecological solutions.</li> <li>- New municipal (ecological) housing.</li> <li>- Ban on the sale of coal.</li> <li>- Better planning of space in the city.</li> <li>- Co-financing from employers for public transport for employees.</li> <li>- Relevant legal regulations.</li> <li>- Attempt to overcome architectural barriers.</li> </ul>	<ul style="list-style-type: none"> <li>- using municipal events to promote ecological solutions</li> <li>- creating a help system and advice for users, eg new boilers</li> <li>- eco-radar system</li> <li>- information on exceedances</li> <li>- the system of co-financing changes combined with unavoidable financial penalties</li> <li>- Improvisation of law enforcement for all types of emissions (low emissions, industrial emissions, energy)</li> <li>- changes in the law regarding the possibility of conducting emergency inspections by Voivodship Inspectorates for Environmental Protection</li> <li>- public health as a priority at the government level</li> <li>- lifestyle change for less consumption</li> <li>- a change in the philosophy of life</li> <li>- construction of sustainable zero-emission solutions - secondary use of raw materials</li> <li>- creating exchange points for goods</li> <li>- no fees for seniors for pro-ecological solutions</li> <li>- elevation of the stops (adaptation of the public transport fleet - low floors)</li> </ul>
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#### 5.1.4 *Mood of the room exercise*

Three theses were put forward before the participants. The workshop participants who agreed with the thesis were asked to take a seat on the right side of the room, while its opponents stood on the left side.

1. "In 2030, there will be no private cars in the center of Sosnowiec".

The majority of participants strongly agreed with it. The representative of the opponents group, when asked why he considers the thesis impossible, explained that in his opinion, the use of personal cars for official purposes would be exercised on special rights by people holding public functions working in public buildings located in the city center.

2. "Introduction of a total ban on using coal as fuel in households would have a significant impact on air quality and our health".

All participants of the workshop agreed with the thesis No. 2.

3. "Entry into force of the "anti-smog resolution" (Resolution No. V / 36/1/2017 of the Śląskie Regional Assembly of April 7, 2017 on the introduction of restrictions on the operation of installations in which the fuel is burned) will result in a significant reduction of "low emissions" in the cities of our region".

In the case of thesis No. 3, only 3 people claimed that it was true. The comment of a representative of this small group, however, indicated the need to introduce in Poland legal provisions regulating the issues raised in the "anti-smog resolution" at the national level. The vast majority of participants were opposed. The representative of this group, asked to explain this position, stated that without increasing the awareness of all residents, despite the legal regulations, the use of highly harmful fuels and even rubbish will still take place.

## 6 Appendix A – Logistics

The Sosnowiec MLW was held on the 26th of January 2018.

### 6.1.1 *Facilitators*

- Barbara Kossowska – Siwiec, City Hall Sosnowiec
- Ewa Karaban, City Hall Sosnowiec
- Edyta Wykurz, City Hall Sosnowiec
- Barbara Grzebulska, REC Poland

### 6.1.2 *Participants and organisations*

Participants from different organizations in public administration, mobility, environment and health were invited to the MLW.

- Department of Municipal Property and Environmental Management (City Hall Sosnowiec) - Anna Dębiec
- Department of Municipal Property and Environmental Management (City Hall Sosnowiec) - Anna Rączka
- Department of Municipal Property and Environment Management (City Hall Sosnowiec) - Tomasz Przedpełski
- Department of Road and Traffic Management (City Hall Sosnowiec) - Robert Dworak
- Regional Inspectorate for Environmental Protection - Lilia Szymańska-Kubicka
- Regional Inspectorate for Environmental Protection - Arkadiusz Goleniak
- Institute of Occupational Medicine and Environmental Health - Deputy Director for Scientific Affairs, PhD hab. Danuta Mielżyńska
- Health Department (City Hall Sosnowiec) - Joanna Gronczewska
- Health Department (City Hall Sosnowiec) - Zuzanna Labocha
- Project Implementing Unit (City Hall Sosnowiec) - Grażyna Kowalska
- Humanitas University – Dean of the Administration and Management Faculty – prof. Maria Zrałek
- Municipal Property Management Office - Joanna Sekuła
- Public Transport Company - Piotr Drabek
- Silesian Trams - Grzegorz Woźniak
- Zagłębiowski Smog Alert - Krzysztof Olszak
- Silesian Marshal Office, Department of Environmental Protection - Katarzyna Bielich
- Górnośląsko-Zagłębiowska Metropolia - Member of the Board Danuta Kamińska
- Municipal Waste Management Company - President Jacek Gaim
- Senior Council - Jerzy Karpiński
- REC - Eva Csobod

### 6.1.3 Logistics

One big room was used for the plenary section and for the group activities. Prior to the meeting, the tables were organized for group work, the posters were posted and materials were put on the tables. For the working group sessions, a series of power point slides were prepared and presented, aiming to help the moderator to explain the tasks and the participants to better understand what they were asked to do at each step.

### 6.1.4 Resources

- Participant sign-up sheet
- Participant information sheets
- Consent forms
- Large posters for Sosnowiec 2020, Sosnowiec 2030, challenges and barriers, Sosnowiec 2050
- Ppt slide presentation

## 7 Appendix B – Agenda

The agenda of the Sosnowiec Mutual Learning Workshop was based on the MLW guidelines.

07.30 – 08.00 – registration

08.00 – 09.40 – presentations:

**Barbara Kossowska – Siwiec**, City Hall Sosnowiec –  
introduction to the workshop, presentation of ClairCity project

**Lilia Szymańska-Kubicka**, Regional Inspectorate for Environmental Protection -  
" **Air quality in Sosnowiec: past, present and future**".

**Robert Dworak**, Department of Road and Traffic Management (City Hall Sosnowiec):  
" **Transport in Sosnowiec: past, present and future**"

**Anna Rączka, Tomasz Przedpełski**,  
Department of Municipal Property and Environmental Management (City Hall Sosnowiec):  
" **Energy in Sosnowiec: past, present and future**".

**PhD hab. Danuta Mielżyńska**, Deputy Director for Scientific Affairs,  
Institute of Occupational Medicine and Environmental Health:  
" **Air quality's impact on the health of residents of Sosnowiec**"

End of part 1.

9.40 – 10.00 – breakfast break

**10.00 – 12.00 – workshop session**