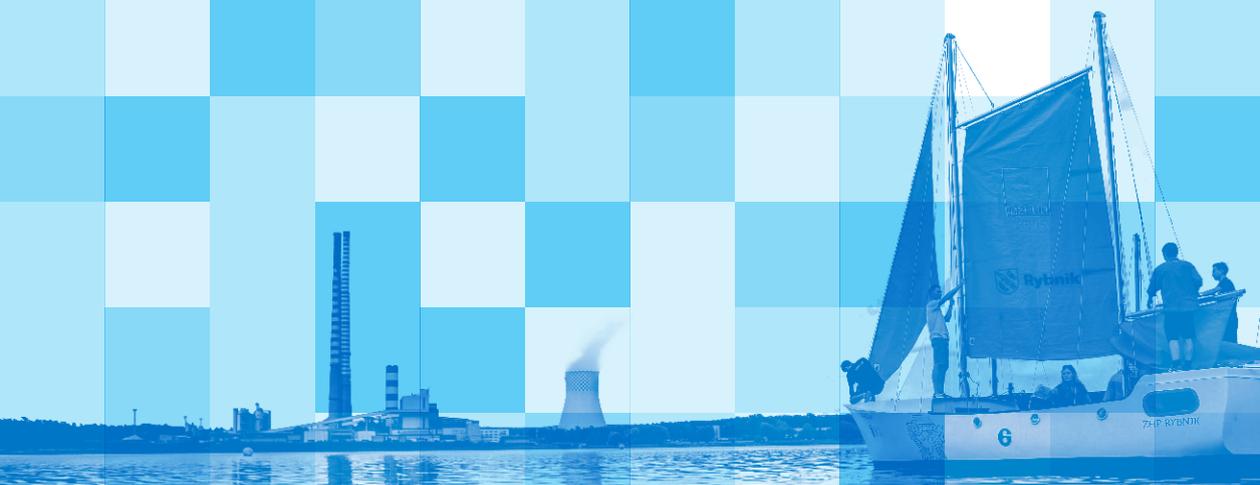
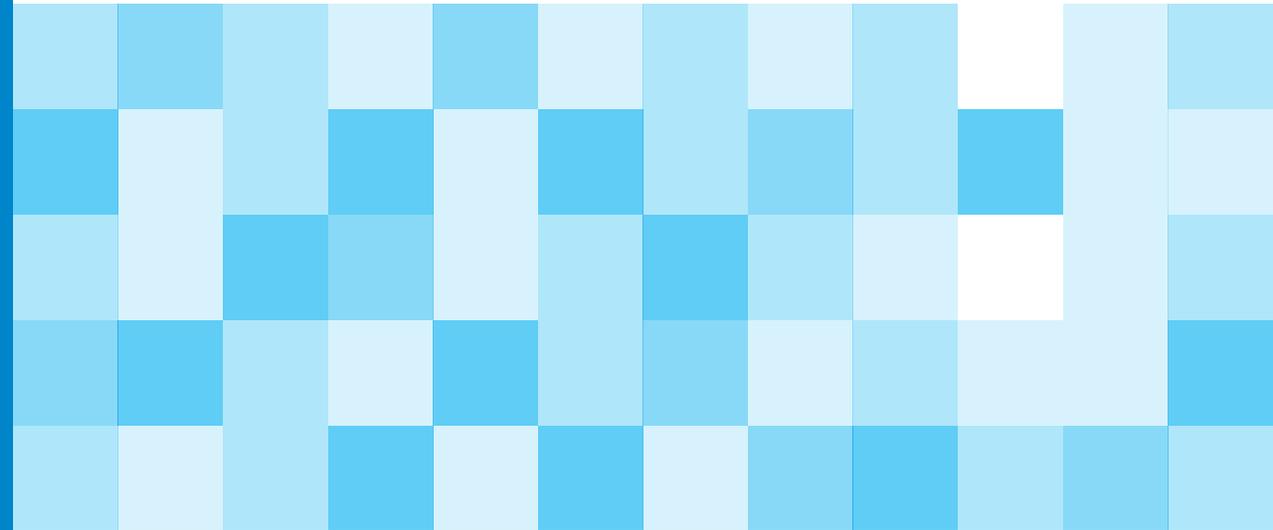


R Y B N I K



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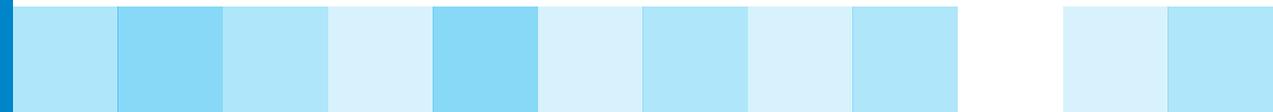
R Y B N I K



A research report on the narratives of Rybnik's inhabitants

T R A N S I T I O N

C I T Y



RYBNIK
TRANSITION
CITY

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Rybnik 360 narratives

instruction for readers

Rybnik 360 is an element of the Just Transformation Deep Demonstrations¹ programme run by EIT Climate-KIC along with partners from multiple European countries. It aims at initiating systemic innovation processes addressing the key climate challenges that the Old Continent is facing.

In 2020 JT Deep Demonstrations processes took place in Rybnik, Poland, Emilia Romagna region, Italy and the Debagoiena comarca, Spain.

¹ <https://www.climate-kic.org/programmes/deep-demonstrations/>

Rybnik360 – welcome onboard!

Rybnik is a city located in southern Poland, historically belonging to the Upper Silesia region. This largest municipality in the Rybnik agglomeration and the Rybnik Coal Area is now facing such challenges as energy transition and fight against smog. In the difficult process of transition from coal, in which various stakeholder groups have different and often contradictory interests and expectations, the highest stake is to become one of successful **transition-cities** and to avoid threats related to shrinking and collapse of the city or its districts or of becoming a 'museum piece'. Rybnik government's and inhabitants' readiness, their early reactions, and their ability to adapt to the new situation will determine the scenario the city will face in the future.

The R360 project is a pilot aiming at developing systemic innovations supporting the transformation process. The following report is the outcome of diagnostic studies which should serve as a starting point for the transition process. Rybnik360 is a long-term process aiming at a just social, energy and economic transition of this Silesian city. The basic tool used is a new growth strategy for Rybnik, based on systemic innovations and implemented in cooperation with city stakeholders.

Within the process, we are developing a portfolio of strategic solutions, including interrelated investment and soft projects, which are to strengthen the impact on the entire urban ecosystem. Based on knowledge possessed by all participants, we are developing a map of the current city system, identifying correlation between resources and challenges, and selecting points in the system for necessary interventions (e.g., support for inhabitants who would like to replace their furnaces, development of green areas

in Rybnik, etc.). Rybnik360 is not a typical project model with pre-defined and pre-planned activities. It is a continuous process of verifying initiatives and adapting them in order to optimise their effectiveness.

Old action methods are ineffective in coping with climate challenges; therefore, the process is based on other assumptions than the classic project approach to change ideation. What matters the most is the outcome (improved quality of inhabitants' life, attempts to achieve climate neutrality, generally – preparation for the closing of coalmines) which is to be accomplished (just transition). The process is constantly monitored in order to introduce changes in undertaken activities and ensure their higher efficiency.

This initiative is unique on a national scale since both inhabitants and other stakeholders are involved in the planning of the city growth strategy and its implementation. This process employs the Deep Listening method consisting in a profound diagnosis of the situation based on a series of interviews with inhabitants.

Deep listening to the city

Deep listening is about focusing on inhabitants' needs, problems, and desires. We listen to their narratives; we engage in the dialogue and this is how we define the direction of our actions.

In the difficult 2020, together with inhabitants, entrepreneurs, non-governmental sector and urban activists, as well as local authorities and many other institutions, we talked about the past, the present and the future of Rybnik to gather knowledge necessary to plan its further growth. Our *action research* and the dialogue it stimulated were at the same time the first transitions which in years to come will allow for achieving the assumed goals.

The report content is based chiefly on dozens of talks and discussions we conducted throughout the year. In difficult times of COVID-19 restrictions, the life and functioning of all of us has considerably changed. Some conversations were conducted over the phone or the Internet for safety concerns. But whenever the situation allowed for face-to-face sessions, we visited popular meeting places, pubs, cafés, offices, cultural institutions, companies, plants, backyards and homes of hospitable Rybnik inhabitants. We went down to coalmines together with miners, we met with youths downtown, we took part in official and business meetings, we observed the stove replacement process. Over 200 individuals in total took part in our research. **For the detailed description of research methods and participants see the first chapter called WORKSHOP devoted to the methodology.**

Initially, our talks focused on important past, present and future events in Rybnik and on future opportunities and challenges. This is how the picture of Rybnik as a (post)mining transition-city was created. A city in the process of constant change, with both rich and complex past, thanks to which it perfectly fits into Silesian identity. A city whose mining history still strongly affects the Rybnik labour market and professional activity of its inhabitants, even though its influence is weakening year by year. A city whose inhabitants are trying to look beyond the current perspective by developing modern and future-oriented firms. A city whose citizens are learning to appreciate high quality of life more and more, expecting the local

government and institutions to develop an offer that will address these needs. A city fighting a long and exhaustive battle against the smog problem harming its residents. **The second chapter, namely SCENES, has been devoted to reconstructing the key areas, i.e., domains setting the growth path for Rybnik as a (post)mining transition-city.**

Rybnik is a multidimensional and highly diversified city made of many different districts. We can find here resourceful entrepreneurs, passionate social activists, many youths, wise seniors, hardworking miners, clerks, artists, football fans, immigrants. Wishing to preserve that richness and map the social space in an accessible manner at the same time, we decided to select the key domains of the city functioning (transition of the economy and the labour market, quality of life, air quality) and describe the key categories of inhabitants on each of the above dimensions. **The third chapter of the report, namely ACTORS, is devoted to describing personas identified in the process of analysing and interpreting the research material.**

During our talks, we tried to embrace the diversity of values, interests, outlooks and attitudes. We attempted to create the right space for everyone to have a say, to understand everyone. We invited Rybnik inhabitants for both individual conversations and talks in a larger circle. Face-to-face contacts create favourable conditions for discussing more complicated issues, in a group people tend to be more innovative, but also more sensitive to others' needs. We collected comments about the past and the future, we talked about ups and downs, we listened to stories of pride, fear and hope. We talked to people living, working, studying, running business in Rybnik, or whose life is related to the city in any other way. The city is for everyone, isn't it! **Chapter four of the report, i.e., NARRATIVES, is laced with multiple stories we have gathered, and offers the perspective of the city of Rybnik as a polyphonic narrative.**

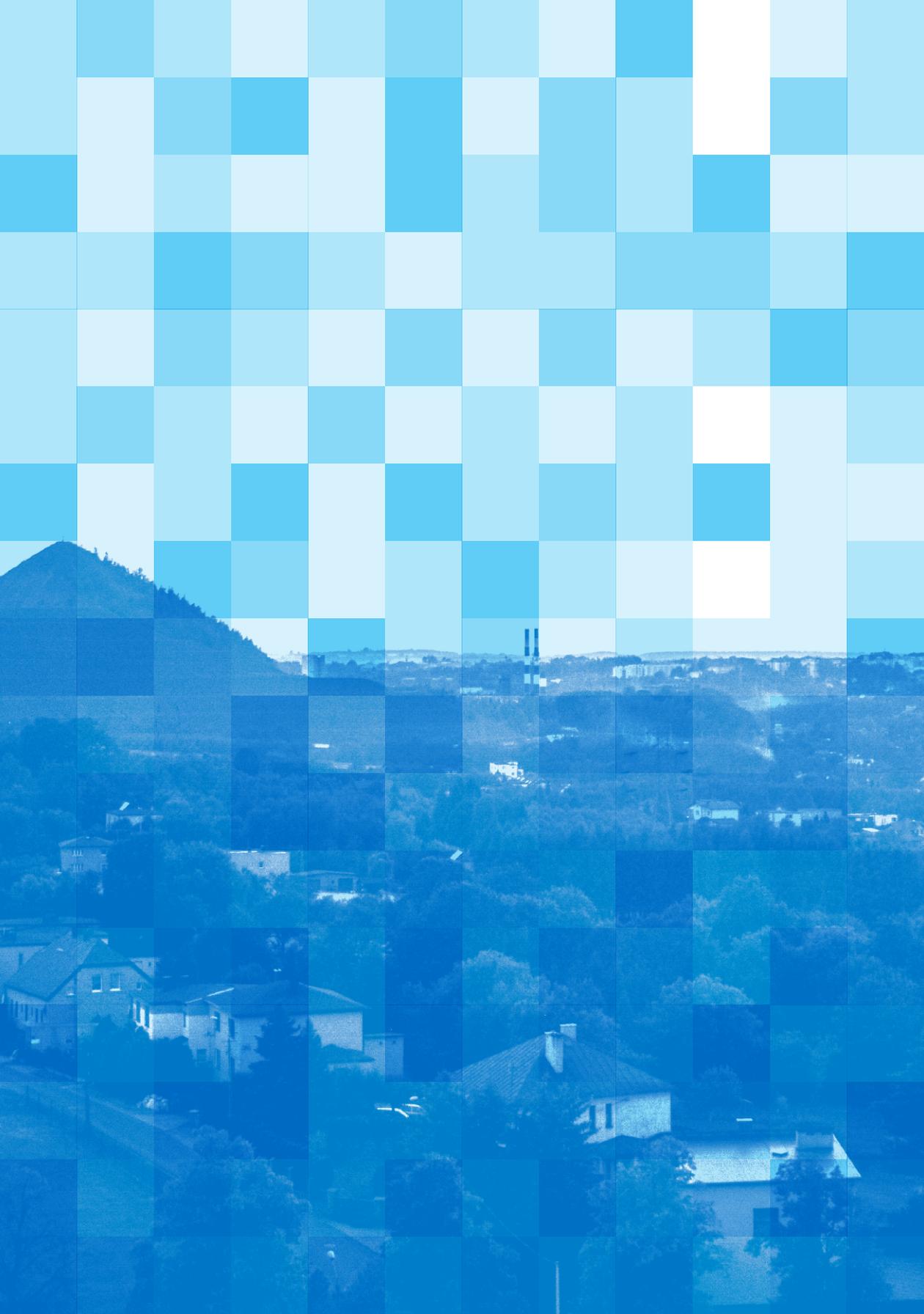


Finally, we decided to think about the learnings from these stories and how they can be utilised to help the city grow and to ensure wellbeing for its inhabitants. Each resident is different, has different needs and ideas, but are there any common elements for the above narratives, actors and scenes? **The summarising chapter of the report, i.e., RYBNIK OF THE FUTURE AS THE PLAY OF IMAGINATION AND HOPE, is devoted to putting all the puzzle elements together.**



The report summarizes and analyzes one of the many activities and sources of knowledge within the Deep Demonstration process. We can talk about this process as one of several layers of analysing the reality in which we operate as partners in the Rybnik360 project-process. Deep Listening is connected on the one hand by summaries and analyses from SPIN-US concerning various documents. This includes the strategic documents of the city of Rybnik. On the other hand by the document prepared by EIT Climate-KIC, which compiles the first necessary actions and processes of change in Rybnik (the so-called portfolio brief, i.e. a set of interconnected projects to be implemented). The most important conclusions from listening to the inhabitants are also one of the pillars of the documents prepared by Swarmcheck, which in various ways portray the overall situation of the city as it functions today, as well as its vision of Rybnik in the future.





Chapter one

Workshop

Deep listening and action research

The study was conducted between April and October 2020 and was broken down into two sections: the reconnaissance (general) and the exploration. The process was concluded with a collective interpretation of results gathered, in cooperation with selected interlocutors.

During the **reconnaissance**, the research team conducted ca. 100 partially structured individual interviews with individuals living and/or working in Rybnik. The interviews were conducted over the phone and focused on the following issues:

- evaluation of changes taking place in the city over the last 30 years,
- perception of the current situation in the city,
- challenges and opportunities related to further development of the city.

Then, the key issues spontaneously brought up by interlocutors were identified and four topics/domains were selected for the exploratory research.

The exploratory part of the study included over 110 interviews and was devoted to mining, entrepreneurship, the quality of life and air quality in Rybnik. It consisted in the reconstruction of various visions of Rybnik by introducing a full spectrum of perspectives. It was based on deep listening and understanding the needs and motivations of each inhabitant group. The key research methods included face-to-face or remote individual interviews (partially structured, free and biographic), participant observations, ethnography, participation in social events, observation of Rybnik inhabitants' everyday activities, accompanying miners during their work in the coalmine; netnography, i.e., virtual ethnography which by means of traditional cultural anthropology methods explores the discourse, signs and meanings, as well as a telephone Mystery Shopper study. The project was complemented with a desk research.

34 Individual In-Depth Interviews (including 8 mini ethnographic interviews in the Chwałowice coalmine) and 2 Focus Group Interviews were conducted with the following respondents, focusing **on the topic of mining**:

- current miners
- former miners
- miners' families
- Niedobczyce inhabitants
- mining supervisors
- administrative workers
- representatives of trade unions
- representatives of the Chwałowice and PGG S.A. coalmine management
- current and former President of the Miner Trade Union in Poland
- former Vice Minister of the Environment and the Chief National Geologist
- representative of the President of Rybnik responsible for mining (the interview was conducted by researchers from a team exploring the topic of air quality in Rybnik).

The study was complemented with ethnographic exploration in the Chwałowice coalmine and a desk research (documents and interview/conference recordings). Furthermore, on October 8 and 9, 2020 study findings were collectively interpreted with Chwałowice coalmine miners split into two groups: young miners (mostly working for under 5 years), and mining supervisors (six individuals, foremen and chief foremen).



The study on entrepreneurship included three groups of respondents: entrepreneurs, clerks, and employees of business-related institutions. 23 Individual In-Depth Interviews were carried out:

- Representatives of enterprises (16) of different sizes, i.e., small, medium and large (plus micro-entrepreneurs mentioned in the context of various threads across the entire study). The respondents represented the following sectors: media, consulting, hospitality, IT, cosmetology, food/catering services, retail, real estate, construction, education, banking, production of domestic appliances.

- Representatives of business-related institutions (6): Śląskie Centrum Obsługi Inwestora (Silesian Investor and Exporter Assistance Centre), Izba Przemysłowo – Handlowa Rybnickiego Okręgu Przemysłowego (Chamber of Industry and Commerce of the Rybnik Industrial Area), Cech Rzemiosł oraz Małej i Średniej Przedsiębiorczości (Craft and Small and Medium Enterprise Guild), Rybniczanki w Biznesie (Female Rybnik Inhabitants in Business), a Business Incubator run by CRIS for UM, the Rybnik municipal department responsible for analysing assistance for investors.

The following stakeholders were directly engaged in **the study devoted to the quality of life** and leisure offer:

- Senior activists (7 individuals aged 65-89) – representatives of the University of Third Age, Rybnik’s Women’s Council and Rybnik’s Senior Council.
- Senior females (14 individuals aged 60-75), living in Niedobczyce.
- Youths aged 13-18 (11 individuals) – charges of a streetworker representing the ‘17-tka’ Association. Youths exposed to social exclusion from the Niedobczyce district.
- NGO representatives (2 individuals) - CRIS and the ‘17-tka’ Association.
- Parents of children aged up to 18 (4 individuals).
- Youths (15 individuals) – activists, university graduates, pupils of technical secondary schools (in total: Individual In-Depth Interviews, an online workshop, a Focus Group Interview in Rybnik).
- Miners (2 individuals) – a foreman and an administrative worker at a coalmine, member of the KADRA Trade Union Board.

The study devoted to air quality included phone interviews focusing on the topic of air quality in Rybnik, carried out with city inhabitants changing their coal stove to a gas one, as well as a representative of the Rybnik Smog Think-Tank, an employee of the Development Department at the Municipal Office, Manager of the Air Protection Unit at the Ecology Department, a Representative of the President of Rybnik responsible for mining, a Spokesperson of the Municipal Police, an employee of the 'Pure Air' consultation desk.

Individual In-Depth Interviews in Rybnik, either fully or partially devoted to air quality: short individual conversations with miners leaving work at the KWK Chwałowice coalmine (8 interviews), an individual interview with a member of the Youth Strike for Climate, 3 FGIs with Rybnik youths, an interview with a city inhabitant using a coal-burning furnace and suspected by neighbours of burning garbage.

Telephone Mystery Shopper study included the following companies: Ognik, Instalbud, Hussar Pelet, Instal-Krzyś, Adi-Instal, Sobik, Warex.

The research was complemented with collective interpretation focus groups during which we met with ca. 30 inhabitants, users of coal-burning furnaces planning to replace them. Moreover, we thoroughly analysed bulletin boards/online discussion posts, e.g., under articles in local media or profiles of Rybnik anti-smog activists.

Scenes

Rybnik as a (post)mining transition-city and research domains

Former coalmining centres are commonly perceived as either shrinking cities or ghost towns. The former, widely covered in scientific literature², constantly experience the loss of population as a result of structural changes (e.g., the loss of work or exhaustion of resources). As a result of this process, the urban infrastructure contributing to the 'quality of life' becomes too extended and too costly to maintain. When former social and financial structures supporting it no longer work, while new ones have not been developed yet, the quality of social services, and consequently also the quality of life drastically deteriorate. It is followed by an uncontrolled collapse and the city dies out.

² CRISTINA MARTINEZ-FERNANDEZ, CHUNG-TONG WU, LAURA K. SCHATZ, NOBUHISA TAIRA and JOSÉ G. VARGAS-HERNÁNDEZ The Shrinking Mining City: Urban Dynamics and Contested Territory International Journal of Urban and Regional Research Volume 36.2 March 2012 245–60

Challenges related to closing down of coalmines should by no means be neglected, and negative scenarios should not be excluded a priori. But this sequence of events does not have to be true for every coalmining city. Despite the above concerns, **there are numerous examples showing that 'there is life after coal', which can be confirmed by many stories of successful transition cities.** Rybnik government's and inhabitants' readiness, their early reactions, and their ability to adapt to the new situation will determine the scenario the city will face in the future, **as this is the readiness of local authorities and residents to take shared responsibility for the (post)coal transition city that determines the final outcome of the transformation.**

Loos-en-Gohelle, a small town in the north of France, can serve as a good example here. After the closing of coalmines in the nineteen eighties, the local authorities had to make an important decision: should an attempt be made to replace mining, attracting new investors from other sectors of industry or should a totally new route be considered. The latter was selected. Activities taken up covered all sectors, from building renovation to tourism, green technologies and renewable energy production. According to the 'we cannot build the future, if we reject the past' rule, coal slag heaps were turned into a cultural facility and an R&D sustainability centre, and were entered to the UNESCO World Heritage List, which allowed for combining the mining past with the green future³.

After the closing of coalmines in the nineteen seventies, the Dutch Heerlen started shrinking. Old mining tunnels were filled with groundwater naturally heated by the earth. In 2008, the first geothermal mine waterworks in the world were opened and the first connection with the Mijwater water supply system was established.

³ <https://energy-cities.eu/transition-cities-there-is-life-after-coal/> Discover all the actions taken by Loos-en-Gohelle on the Renewable Networking Platform

At the time being, the company supplies renewable energy to apartments, offices, primary schools, supermarkets, kindergartens, and sports facilities. The venture allowed for creating local workplaces, investment opportunities in the region, and generated local knowledge and experience⁴.

Not trying to predict which growth scenario Rybnik will select or even trying to suggest any direction, we wanted to start from having a closer look **at its resources and key city functioning aspects from the point of view of its inhabitants and opinion leaders.**

An average Pole wishing to learn something Rybnik will read in Wikipedia that Rybnik is a city located in the south of Poland, historically belonging to Upper Silesia. It is the largest centre of the Rybnik agglomeration and the Rybnik Coal Area. It has 138 000 inhabitants (as of December 31, 2019), and is the 16th largest city in Poland according to total area, and the 25th according to the population. It is also the 8th biggest city in the Śląskie province in terms of the number of inhabitants.

We wanted to explore the knowledge about Rybnik among experts, representatives of local authorities and people living there. It should come as no surprise that a lot of attention was paid to the past and current condition of the mining sector. Hence, we have decided to briefly reconstruct here what we established about the transition of the mining sector which serves as the declining socio-economic structure still maintaining the functioning of the city. Rybnik is also facing the decision about how to respond to the energy transition, whether to try to replace mining and attract new industrial investors or whether to look for alternative business growth routes.

⁴ Mine water for renewable energy, broszura zamieszczona pod adresem <https://www.renewables-networking.eu/documents/NL-Heerlen.pdf>, dostęp 24.11.2020 r.

Over the last two decades, the idea of measuring the success of public policies no longer by mean of GDP (one of its drawbacks is the fact that it measures almost exclusively consumption, which can have highly negative impact on our climate), but first of all by means of inhabitants' wellbeing and the condition of their health (satisfaction with life is, among others, one of the Better Life Index indicators, used by OECD⁵) has been gaining popularity. On the level of city management, it has become a standard. One of the most important aspects of urban policy is the inhabitants' wellbeing resulting, among others, from pleasure and joy drawn from relaxation, free and good ways of spending time, taking advantage of valuable leisure activities near one's home, comfortable public transport, properly functioning public services, etc. It was plain to see in comments made by Rybnik inhabitants, who assessed it chiefly by means of the perceived quality of life. Hence, it was the third aspect explored during the project. If the quality of life is so important, then it is more than obvious that the last topic brought up by our respondents was awful quality of air in Rybnik, affected by a huge smog problem, and posing a hazard to inhabitants' health. This is why the key domains of our diagnosis included changes in the mining sector, entrepreneurship, the quality of life, and the smog problem.

The situation of mining in Poland and in Rybnik

The restructuring process of the Polish mining sector started along with the systemic transformation: in 1989 there were 70 coalmines hiring 415 900 individuals compared to only 20 now, giving employment to 82 500 individuals at coalmines, not counting affiliated sectors. The restructuring processes were inevitably related to closing of workplaces, reduction of employment and miners' privileges or wages in the sector. This has led to many social tensions manifested in the form of numerous protests, warning strikes, or occupations of coal management seats organised by miners' trade unions.

The sector needs to be restructured due to increasing problems in the coalmining industry, e.g., high cost of labour, growing cost of extraction related to the necessity to mine coal from deeper and deeper seams, increasing prices of CO₂ emission allowances, which all represent only a small proportion of environmental damage related to coal extraction. Polish coal does not stand the competition against its foreign equivalent, which is not only cheaper, but also has higher calorific value and is less polluted.

Ca. 20 million tons of coal are stockpiled on slag heaps by coalmines and power plants. Ca. PLN 230 billion was spent between 1990 and 2016 in Poland on subsidies for the mining sector to save it. The cost of early retirement, coal allowance in kind, keeping unprofitable coalmines is incurred by the entire society.

⁵ <http://www.oecdbetterlifeindex.org/topics/life-satisfaction/>; # <https://www.earth.columbia.edu/sitefiles/file/Sachs%20Writing/2012/World%20Happiness%20Report.pdf>

According to estimates, in 2035 only 15 million tons of power coal will be needed (compared to 63 million tons used now) and will be delivered by only three coalmines, including two in Rybnik. According to the update of 'Polityka Energetyczna Polski do 2040 roku (The Polish Energy Policy until 2040)' project until 2030 the share of coal in the energy mix will be reduced to 37-56 percent, and by 2040 to 11-28 percent, depending on the price of CO₂ allowances.

According to the most recent agreement between trade unions and the government, the last two coalmines in Poland include KWK Chwałowice and Jankowice in Rybnik, which are to be closed in 2049. Nevertheless, when we finished the report, the document was still was not approved. Coalmines in Rybnik are to be kept for the longest because of their relatively good financial performance and availability of relatively easily accessible deposits of high-quality coal. But it does not change the fact that the mining-related industries are being phased out in Rybnik. The power plant is to be closed by 2030, and the largest factories producing mining machines, i.e., Silesia Steelworks, Ryfama and Rybnickie Zakłady Naprawcze, have already been closed.

Mining has its negative outcomes in the form of mining damage, but one has to bear in mind the fact that traditional coalmines played a very important and positive role in the social and economic life of the city. Therefore, the closing of coalmines was and still is related to new challenges for Rybnik and its inhabitants. Apart from creating workplaces, coalmines engaged in activities aiming at improving the quality of life for inhabitants of districts in which they were located. The restructuring of the mining sector, and consequently also liquidation of some coalmines led to a social and economic crisis affecting entire quarters. The Niedobczyce district and the Rymer coalmine working there until 1999 can serve as a good example here. According to inhabitants, in the past the mine managed a considerable proportion of the district infrastructure, including

waterworks. In its glory days, the mine hired ca. 3600 employees, and when it was closed many individuals moved out of Niedobczyce. Some of its current inhabitants treat it as 'commuter district' because of the lack of workplaces and interesting cultural offer⁶. A similar scenario can be observed for the Boguszowice-Osiedle district, facing a dramatic growth of unemployment and poverty after the transformation. Some Rybnik inhabitants still perceive it as a dangerous and unfriendly place, despite gradual changes taking place over the last couple of years⁷.

Business in Rybnik

The structure of Rybnik enterprises does not differ considerably from the country average – micro companies prevail (13500 out of 14150 businesses registered in the city). Under 100 enterprises are medium, and 11 hire over 250 individuals. The labour market is still under strong influence of companies related to the mining and energy sector and other industries from the value chain (including such large enterprises as PGG S.A. or PGE GiEK S.A.). In the city there are certain institutions that support and gather entrepreneurs (Izba Przemysłowo-Handlowa Rybnickiego Okręgu Przemysłowego, Inkubator Przedsiębiorczości (Enterprise Incubator) in Rybnik, Cech Rzemiosł oraz Małej Przedsiębiorczości, BNI Orion) as well as the Special Economic Area which is a part of the Jastrzębsko-Żorska sub-zone included in the Katowice SSE.

⁶ <http://www.nowiny.rybnik.pl/arttykul,46465,osiem-wiekow-niedobczyc.html>

⁷ Conclusions based on Individual In-Depth Interviews conducted with Rybnik inhabitants and, for instance, <https://lokalsi.net/osiedle-dobrych-ludzi/> or <https://www.rybnik.com.pl/wywiady,nie-wierzmy-w-stereotypy,wyw4-663.html>.

The current economic situation of Rybnik is influenced by the economic growth of the country and the region, as well as the strategy of local authorities, and – last but not least – transformational character of this (post)mining transition-city. Postmining cities cannot ignore their industrial heritage, instead they have to look for ways to avoid traps related to it, to utilise it as a resource and to reach for its other assets.

Rybnik is at the risk of experiencing unfavourable feedback: unattractive labour market (number of well-paid jobs of high quality) **leads to an outflow of young people which in turn reduces the attractiveness of a given place as a labour market for modern business services.** Therefore, the key areas of activity in this domain include not only finding a way to attract investors and ensure high quality workplaces but also to increase entrepreneurship among Rybnik inhabitants.

Local entrepreneurs complain about the lack of clearly defined growth directions for Rybnik (this is also the question of informational policy) and stress the necessity to invest in the development of the sector of modern services. There is a common belief that the role of mining and affiliated industry sectors is weakening which leads to the necessity to look for alternative growth routes.

Such mid-sized cities as Rybnik can, for instance, look for their advantages over metropolises on soft, intangible growth factors such as lower cost and slower pace of life, better spatial access to services and green areas, which can promote lifestyle changes (more stress on work-life balance). Nevertheless, these **soft aspects are crucial, but without being accompanied by proper 'hard' factors**

(e.g., availability of skilled workforce, access to transport connections to a metropolitan centre, access to office space) **will not suffice to attract investors from the modern business service sector.** The growth of the latter can be hampered by the deficiency of high-class office spaces and professionally arranged coworking areas. One also has to bear in mind the fact that in the post-COVID world, smaller locations gain attractiveness due to the following:

- smaller number of people,
- access to recreation and green areas,
- proximity of services,
- no necessity to cover a large distance to run errands,
- increased scale of remote work and education.

Moreover, megatrends show that in 20 years' time we are likely to work in professions that do not exist today, which is why both entrepreneurs and employees have to be open to innovations and to acquiring new skills. Otherwise, they will not be competitive on the market of products, services and labour.

Quality of life

Rybnik in the “Przystanek Miasto 2017” study conducted by Gazeta Wyborcza in cooperation with Kantar Millward Brown was positively rated by its inhabitants. The vast majority of respondents claimed that the city had its unique atmosphere. They also appreciated it for its cleanliness and a lot of greenery. The vast majority perceived their city as either very or rather safe⁸.

In the light of the aforementioned study results and our exploration, Rybnik tends to be perceived as green and good to live in. The quality and the number of recreational areas is believed to be satisfactory. One of the key factors affecting positive evaluation of the quality of life in Rybnik is the access to the cultural offer of libraries, theatres, cinemas, evaluated positively even by youths. The offer was defined chiefly via open, mass cultural events on the city or district level. Another important aspect affecting the perceived quality of life is the access to services, e.g., the ease of running errands at municipal offices, access to healthcare professionals. At the same time, young people appreciate the presence of two shopping malls with chain stores functioning there.

From the point of view of youths, the educational offer of currently functioning universities is insufficient, and their potential is too low to talk about ‘academic life’ there.

⁸ <https://katowice.wyborcza.pl/katowice/7,35063,22755366,lepiej-nie-pytac-czy-ktos-chce-wyjechac-z-rybnika-przystanek.html>

Public transport is still not a sufficiently attractive alternative to cars. But the quality of life in the city is largely affected by the quality of life in a given district. Proximity of recreational areas and services matters the most. Hence, what can be problematic is the centric growth and differences in the environmental conditions between districts, but also centric access to leisure services. Therefore, it seems necessary to ensure even access for all districts by taking up initiatives in more neglected industrial quarters of the city (Niedobczyce, Paruszowiec, and Boguszowice).

Inhabitants notice the need for better communication with local authorities and for meeting places open to grassroots initiatives, e.g.: by attributing a new function to cultural institutions already active in the city: a platform of community integration or creating new spaces, giving inhabitants an opportunity to act.

Nevertheless, the key problem ruining the quality of life in Rybnik is the quality of air. Outdoor activities are impossible during the autumn and winter season because of smog. The impact of this aspect on the evaluation of Rybnik can grow along with increasing health awareness and increasing expectations towards the quality of life.

Smog – nature of the problem in Rybnik

The problem of poor quality of air in Rybnik is related to drastically exceeded levels of suspended particulates and polycyclic aromatic hydrocarbon⁹. **Rybnik held the fifth position on the WHO list of 50 most polluted cities in the EU in 2018.** It is particularly visible for BaP (benzo-alpha-pyrene), for which the norm was exceeded in 2018 by 1300% (with the mean for the entire province at the level of 650% - all these values are not registered in other EU countries).



The key cause of air pollution in Rybnik is the so-called **low emission, related to heating (usually with coal, in old, inefficient furnaces)**. This is typical for the Śląskie province, but also more widely for the entire Poland. **In Rybnik, low emission is responsible for nearly 60 % of PM10, over 70 % of PM 2.5 and for nearly all BaP concentration.**

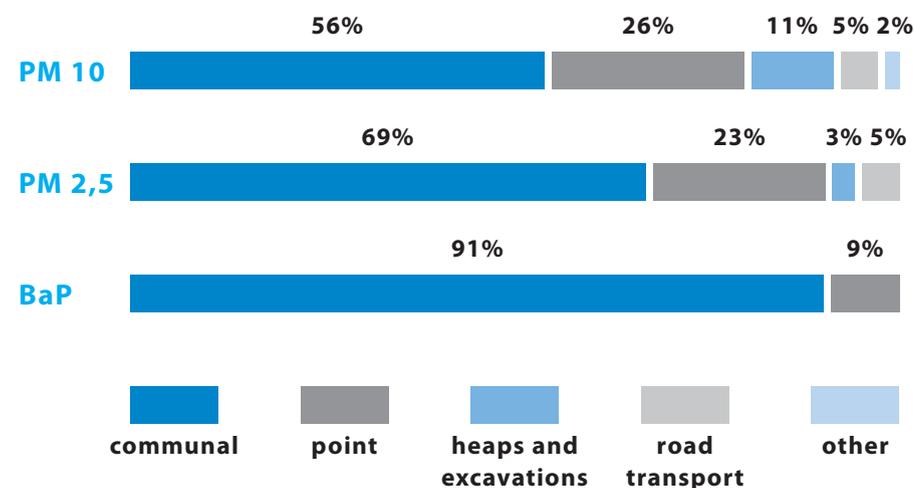


Furthermore, in Rybnik **high emission coming from the so-called point sources (factories, power plants) as well as slag heaps and excavations also has relatively high share, not observed to such an extent elsewhere.**



⁹ cancerogenic, mutagenic chemical compounds, characterised by chronic toxicity since they accumulate in the organism. Benzo-alpha-pyrene (BaP) is representative of this group (and monitored).

CHART 1. Sources of air pollution emission in the Rybnicko-Jastrzębska agglomeration, in 2019.



Source: 'Roczna ocena jakości powietrza w województwie śląskim. Raport wojewódzki za rok 2019'(2020), Główny Inspektorat Ochrony Środowiska ('Annual Air Quality Assessment in the Śląskie Province in 2019'. Chief Environmental Protection Inspectorate)

Smog-fighting activities organised in recent years focus chiefly on low emission. It results from the fact that smog is caused chiefly by heating. Such activities can be broken down into two main types: regulations and support in replacing sources of heat and improvement of thermal efficiency.



The most important regulation is the anti-smog resolution adopted by the Śląskie province authorities in 2017, prohibiting the use of most harmful solid fuels and imposing the replacement of old furnaces at various deadline dates, depending on the heating method. After 2027 only 5th class furnaces, far more efficient than older devices, are to be used¹⁰.

¹⁰ This is the 5th class meeting the requirements of the PN-EN 303-5:2012 norm, such devices emit ca. 90% less pollution than old non-class furnaces.

As regards support in the process of replacing sources of heating and thermal efficiency improvements, mostly subsidising programmes targeted at owners of private single-family houses should be mentioned. The first programme of this type in Rybnik was introduced by the Municipal Office. It allowed for signing over 2 000 contracts for subsidised to be spent on the replacement of heating sources between 2015 and 2018. In September 2018, a nationwide 'Czyste powietrze (Pure Air)' programme was launched, with a budget amounting to PLN 103 billion. In the beginning of next year, the governmental 'Stop smog' programme joined by the city should be commenced. It will cover ca. 100 single-family houses of the poorest inhabitants¹¹, almost fully financing the cost of the replacement of furnaces and thermal efficiency improvements.



Once the 'Czyste powietrze' programme was introduced, the Municipal Office redirected its own subsidy programme to multi-family houses (as well as owners of single apartments in multi-dwelling units). Moreover, the Municipal Office also replaces furnaces and improves thermal efficiency of its own council apartments, relying largely on external subsidies (e.g., EU funds).



The scale of the problem is high. The communal sector in Rybnik includes chiefly ca. 20 000 residential buildings, the vast majority of which are single-family houses. According to the Municipal Office estimates, ca. 14 000 single-family houses and 600 multi-family houses fail to meet low-emission standards, i.e., they require the replacement of the heating source to a 'cleaner' one. In council flats only, ca. 2600 old furnaces still need replacing¹².

¹¹ Ibidem

¹² Ibidem

According to estimates based on analyses carried out by the Instytut Badań Strukturalnych dla Śląska (Institute of Structural Research for Śląsk), the problem of the so-called energy poverty can affect ca. 1400 households in Rybnik. Anti-smog regulations eliminating the worst but also the cheapest types of fuel are likely to further increase energy poverty of some households or push new ones into it (or provoke them to evade the law)¹³. Individuals at risk of energy exclusion can be found in the entire city, but their number is particularly high in neglected industrial districts.



On the other hand, the smog problem gained publicity in 2014 thanks to grassroot anti-smog activities in the entire Poland, making people aware of its negative impact on health. The situation looks similar in Rybnik in which Rybnik Smog Alarm was established in 2014, and a group of Rybnik activists is known not only on locally but also on the national scale¹⁴. They manage to mobilise increasing groups of inhabitants, demanding more radical solutions.



¹³ Coal flotation concentrate can still be purchased in Rybnik, which can be confirmed by announcements on the OLX platform.

¹⁴ For instance, Zdzisław Kuczma became the 'Social Activist of 2019' selected by the Newsweek Polska weekly. He is also the first person in Poland to have sued the State Treasury to get a compensation for living in a polluted environment (the case is in progress; it has gone to the Supreme Court).

To reiterate

The city is in the middle of a difficult and probably long-term process of shifting from coal, with various stakeholders having different, often contradictory interests and expectations. Transition from the coal-based economy can be a source of hope for some, but it can raise reservations among others. A clear future scenario for the city development has not been defined yet. It is not obvious what and when could replace the mining industry in forming the basic economic structure of the city. The significance of such non-material elements of quality of life as overall comfort, wellbeing and valuable pastime activities, has considerably increased in recent years. However, inhabitants' aspirations encounter a major threat, namely the smog problem. Despite activities taken up and gradual improvement of air quality, dissatisfaction of large groups of inhabitants is increasing and the pressure on more radical actions is likely to grow. Nevertheless, the attempts to implement such solutions can lead to an increase of energy poverty and/or major resistance which can slow the fight against smog down.



Chapter three

Actors

Key categories of inhabitants and their attitude to transportation, smog and the quality of life

Prior to presenting inhabitants narratives about the past, present and the future, we would like to create their general profiles. In each domain explored we managed to identify the key categories of inhabitants representing specific attitude to a given dimension.

Smog

A study devoted to the smog problem has allowed for identifying various types of furnace users, representing different attitudes to fighting smog and to the air quality problem as such. We have identified the following 5 categories: activists, modernised, burners, conformists and cynics.

Activists (professed and moderate)

Socially engaged in fighting smog in their city and the region. They agree that the smog problem is very serious and requires fast actions. **Professed ones** opt for strict regulations (a total ban on coal) and fines, they are ready for non-compromising initiatives. **Moderate ones** prefer education rather than fines, they are against a total ban on coal burning in individual households. Their actions are driven by concern about their own and other inhabitants' health.

Modernised

They do not use furnaces that do not meet current norms. They have switched to gas or – if it was not possible – to a heat pump or a state-of-the-art coal-burning furnace. They are aware of harmfulness of smog, but they also value comfort high (coal is messy to use). They have incurred the cost of such an investment (sometimes taking advantage of some subsidies) and pay higher bills, but it is often accompanied a house erection/renovation. This group seems to be more affluent than other ones.

Burners

They use coal for heating due to reasons related to tradition, habit, or because they like doing it. They believe the smog problem to be blown out of proportion. They have certain concerns about new technologies (they believe handling an automated furnace to be more difficult or more expensive, and the replacement as such to be complicated and bothersome). They are terrified by the scale of such a venture: *I have no time and energy to take care of it all: to select a new furnace, make arrangement with the installer, obtain a subsidy. I have my family and work. After work I am tired, and I just want some peace of mind.*

Conformists / comfort-seekers

They are ready to change their furnace or in favourable conditions even switch from coal under social pressure (complaining neighbours, municipal police audits). They are often traditional coal-burning furnace users who just want *'some peace of mind in their golden years'* (not to be bothered by neighbours and guardians of public order). They value comfort very high. With proper financing, they will not hesitate to switch to gas, for instance *(it is not messy, and you do not need to stoke the furnace)*.

Cynics

What is characteristic of *Cynics* is their anti-community approach: they do not intend to follow regulations imposed in the name of common good. They treat their home/apartment as a fully autonomous zone in which nobody can impose anything on them by force – which pertains to the heating method either. They use coal and sometimes also garbage in their furnaces, as this is the most convenient and cheapest option for them. They are extremely resistant to interventions (taken up by their neighbours, municipal police, courts).

Mining

The exploration devoted to the mining sector included various social groups. We decided to identify four categories differing from one another in terms of their situation on the labour market or the type of link to the sector, and the evaluation of energy transformation as well as the attitude to it. These include Older Miners, Young Miners, Trade Unionists and the Affiliated to the Sector.

Older Miners – former miners or the ones who have reached or will soon reach retirement age. An internally diversified group including both pit workers and current/former supervisors. Most are **strongly attached emotionally to the mining culture and tradition**, aware of the upcoming end of this sector, but rarely accepting economic, social and climate arguments for the shift from coal. They want to keep the status quo for as long as it is only possible, they are attached to the ethic of hard work.

Young Miners – individuals who have been working at coalmines for several years only. Compared to older pit workers, they are better educated, have a more individualistic approach, more likely to tattoo a hammer and a pick or a mineshaft than take part in the traditional gwarki event (a tattoo is about commemorating a thing of the past rather than practising what is still alive). **They often have a second profession, run their own business**. Most of them just want to wait until retirement and run their own firm, even though some consider quitting because they see their work as too hard. They are concerned about the quality of life.

Trade Unionists – trade union activists, miners delegated to work in various trade unions in Rybnik coalmines (Chwałowice and Jankowice). They are most **aware of how close the end of the sector is, but also of how much depends on politics**. Face-to-face, they are open and rational in their assessment of the situation. In a public debate, they often assume the role of uncompromising defenders of the sector, which they believe is expected of them by the miners.

Affiliated to the Sector – individuals professionally affiliated to mining (working in mines on the ground, at companies related to the mining sector, in services offered in mining districts) and/or having family ties to it (whose family members work in the mining sector). These are often people who are dependent on mining, but who make far less money. This paradoxically makes them **'hyper-miners'**. **They far more often use coal for heating than miners themselves. They are most afraid of transformation and its outcomes, they most strongly negate climate change, the need to fight smog, etc.**

Quality of life

Our study allows for identifying five segments of inhabitants representing different attitudes towards the city and the quality of life:

Living Near the Mine – inhabitants of districts located near coalmines are the least satisfied with the quality of life in Rybnik, regardless of their age, since they perceive their quarters as ‘forgotten ghost towns’ deprived of leisure offer, exposed to negative effects related to the proximity of a coalmine.

Seniors – older inhabitants of other districts than the ones located in the immediate vicinity of coalmines. They stress that Rybnik has its drawbacks (e.g., inconvenient public transport system, few green areas in the city centre, poor air quality), but it is still a very good place to live which they are emotionally attached to. They are convinced that ‘everything will work out somehow’.

Family-Oriented – individuals aged ca. 30-45 perceiving Rybnik as a ‘good enough location’ in which they can live a peaceful family life. The key advantages include leisure offer, green and recreational areas. They have many reservations about the functioning of the city on many levels, including air quality, but the sense of satisfaction prevails.

Youths – chiefly secondary school pupils believing Rybnik to be a place that is good to live up to a certain moment. They appreciate the leisure offer, and are usually emotionally attached to the city, but most of them see neither opportunities nor sense in planning their future in Rybnik; they want to study and then work outside their hometown.

The Modern – entrepreneurs, specialists, employees of modern companies. They appreciate compact character of the city and the direction of its changes. They expect some counterbalance for the industrial character of their city. They see that the attractiveness of their hometown does not compensate for low quality of air which curbs the city development in many areas.



Chapter four

Narratives

Rybnik jako polifoniczna opowieść

Szczepan Twardoch: a good story should be polyphonic, just as non-reducible as life. (...) The history of the region is not only about the problem of interaction between Polish, German and Silesian identity, but also mutual relations of dominance and submission, gender issues, battle of the generations, attitude to the past.

Polyphony is the combination of two or more tones. Neither a homophonous choir nor a chaos of clashing sounds. We have organised inhabitants' narratives according to the transition timeframe (past-present-future), but across thematic domains (mining, entrepreneurship, smog, quality of life) serving as matrices which the key actor categories come from. It has formed into a non-random order.



The key narratives about the past

Stories about the past are the **narratives of pride** (about work ethics and power of the industry), **narratives of nostalgia** (about the 'black' Silesia as the lost paradise), but also **narratives of crisis and collapse (about the environment, industry, and the city)**.



The narrative of pride was most often used by individuals related to the mining sector (Older Miners and Trade Unionists). These are stories about a more or less idealised past, emphasising typical threads of the working-class culture, e.g., the cult of manual labour as something 'genuine' (as opposed to 'false' office or white-collar occupations). **Working in a mine or in a large facility (steel-works, power plant, factory) was so hard and dangerous that nobody back then could think about air quality in terms of the 'quality of life'** (sic!). It was understood as affluence and wellbeing coming from the well-developed mining sector and huge industry. Thriving industry was a condition facilitating the execution of the traditional Silesian entrepreneurial quality (which is still an element of the self-stereotype of people living in this region: *'Silesia inhabitants are resourceful and entrepreneurial'*) also among those who benefited from it indirectly only, working in commerce or services. The role of mining in the economy of the Second Polish Republic,

especially during the communist times, translated also into symbolic appreciation for the 'mining trade' (*'Miners were respected in Poland', 'Those living in Silesia were appreciated'*). Participants of miners' strikes, manifestations and protests during the transformation era were proud of the fact that they were the only professional group in those times to have successfully fought for their interests (*'The capital was scared of us'*).



Among individuals who come from families related to mining and the industry, **pride gives way to nostalgia**. They talk about the mining culture (miners' uniform, anthem, orchestra) as the core of Silesian identity (sic!). Beer celebrations, Saturday cabarets, and Sunday masses that in the past soothed the hardship of underground work and helped build the sense of miners' unity have lost the character of an ethos carrier for a specific professional group, spreading to a wider, more regional identity: *'you do not have to work at the mine to share these emotions'*. **There is also room for smog in such nostalgic stories** in which it tends to be euphemised ('the fog has always been there'), recalled as the 'characteristic smell of the streets', 'the colour of the air', 'greyness' of snow and net curtains, the practice of constant window cleaning and washing white collars (which was, of course, done by women). For those who are in their forties now the 'then' smog was something as natural and neutral as the multicultural and multinational character of the region, e.g., a granny speaking German only, Silesian language used at home. For others (for instance belonging to the Burners category) nostalgia has become an additional justification for their habit: *'I like going to the boiler room to start the fire, stoke the furnace. I also like to sit there. It is so peaceful and quiet there. This whole smog is a problem that has been somehow artificially blown out of proportion. We have always been burning coal and nobody made a fuss out of it back then. I remember that when I was a kid, I went outside in winter and there was this yellowish fog and such a nice smell lingering in the air.'*



Smog, identified as a problem affecting quality life is a relatively recent perspective, characteristic of **crisis narratives**. *'Even 30 years ago everyone used coal refuse for heating, which produced so much smoke, yet there were no complaints, I do not know, maybe in the past there were more winds, and it was not all that bothersome... but today it is becoming an inconvenience, or maybe we seek more comfort now, we have become more sensitive'* (a miner, a trade union member aged 40+). Such motifs are mentioned in relation to the past mostly in the form of retrospective 'trips' of Rybnik inhabitants concerned about the condition of the air, blaming former miners for smog (Activists, the Modern). *'Miners used to make a lot of money during Gierek's times (times of relative prosperity during the communist era), so they had houses. And since their wages were paid partially in kind, i.e., in coal, even back then it meant that a lot of it was burnt in furnaces. Now the local government has counted 18500 <black-smoke-belching-stoves>. They are replacing them with gas ones, but when I go there during the heating season, I can see that coal is still used in familoki (a dialect word for family apartment houses)!'*



But retrospective narratives most often focus on **social and economic decline** experienced by the mining sector and culture, and Silesian communities (Affiliated to the Sector, Living Near the Mine, Older Miners, Trade Unionists).

'When the mining sector started being restructured, when relatively many mines were closed... and then this message... these were mid-nineteen nineties... and they showed back then in the media that [miners] were such incapable people who did not know what to do with their life, that they saw the mine as the only option, etc. I have to make you aware of a certain thing here, as you have surely seen many movies, and for me it has always been so... (...) and now this ecology is killing the entire sector only by claiming that coal is bad. Kids in school no longer learn rhymes about what can be made of coal, it is just... there are no more school events celebrating it.' [trade union member, 40+, Chwałowice mine].

These are not only memories of an ordinary crisis. These are stories of the transformation trauma, of being deprived of pride and dignity and of economic pauperisation. Tales of the end of the social world told in a breaking voice:

'Everyone knew someone ... who had worked at a mine that was closed. The city or its districts are becoming... maybe not delinquent, but they start downgrading a lot. Problems start occurring, people... It [the mine] ensured thousands of workplaces, apart from miners there was also the entire infrastructure, i.e., stores, etc.... And when the shortage occurs, then the environment starts changing... The city also starts breaking, everything... it just... the bubble just bursts and ... problems – from social to administrative ones- start occurring. Here it is not all that visible, but if you went to Ruda Śląska or somewhere near Bytom, there is real mess there! I have some relatives there... when mines were closed, they said: Sodom and Gomorrah came, we were seized with fear, everything was closing...' [trade union member, the Jankowice coalmine].



Narratives about the present

Inhabitants' narratives about present times reveal an important change in the way in which the 'quality of life' is understood and how it affects the overall evaluation of Rybnik as a place to live. Issues related to purely economic functioning of the city recede into the background (which does not mean, however, that they totally lose their significance). Criteria related to personal safety, comfort, satisfaction are gaining significance, aspects of life related to work tend to be assessed to a smaller extent, and more attention is paid to all other elements, such as commuting (transport and means of transport) and communication with other cities, public services, including both public and non-public childminding and educational offer, leisure activities (including commerce, culture, sports&recreation, tourism), the quality of public spaces and green areas.

If we were to focus on the largest categories of Seniors and Family-Oriented individuals who focus the most on here&now, we could hear typical stories of a relatively convenient life in a mid-sized city, accompanied by digressions about equally typical inconveniences of urban living: failing transport and communication, worse air quality compared to rural areas. But this is how we could fail to notice the elephant in the room, which in this particular case is called coal. Both comments focusing mostly on the past (the time before the 'fall') made by those Living Near the Mine, and future-oriented opinions expressed by Youths and the Modern refer to the (post) mining character of the city: working-class and industrial character of districts located by coalmines, the alternative in the form of new business sectors, or the lack of it, but first of all high share of coal-burning furnaces as the source of heat generating smog perceived as increasing bothersome and posing a hazard to inhabitants' health and life.

If we add categories of inhabitants identified based on their opinion about the quality of life, the ones classified according to their attitude to mining and smog, it will turn out that the current situation resembles a ping-pong match between the past negating the future and the future refusing to acknowledge what has already happened ('coalmines must stay' vs 'coal is the curse of this land'). **Here the narratives are organised chiefly by the respondents' readiness to accept what is real, namely the truth about the climate disaster and smog, inevitable fall of coal energy and the mining sector, but also about the fact that it means extermination of the social and cultural world related to it and a threat for the (post)mining city. Narratives based on the reality principle can be juxtaposed with stories based on the strategy of 'denial/repression', 'separation/detachment', or 'projection'.**

Rejection manifests itself in various **denial narratives** (e.g., questioning people's responsibility for climate change). They are preferred by the Affiliated to the Sector, Trade Unionists and Cynics. Here we have to do with a whole array of attitudes from total negation ('*this is a lie, the climate is not changing*', '*what smog? Have a look: in Rybnik there is no smog!*'), through various form of negotiating with the reality ('*the climate is changing, but humans are not responsible for it, smog has always been there, and we have to get used to it instead of complaining. It is just like living at a chicken farm and complaining about stench*' (...)) '*what sense does it make to stop burning coal, if winds blow it all to us from Russia or China.*' (ground mine workers).

Many individuals closely related to mining (especially Older Miners and Trade Unionists) tend to engage in **narratives segmenting the reality**, e.g., separating 'neutral' mining industry from the 'harmful' coal energy sector ('*we are not poisoned by the coal that we put in our furnaces, but the smoke that comes out of them*'), belief in safe pollution retention technologies and proper ways of burning coal (a common belief among inhabitants that upper combustion is harmless, partially popularised by Moderate Activists, too). They refer to deeper attitudes to coal which can be interested in categories of 'purity' and 'danger' which are classic for anthropology (see M. Douglass '*Purity and Danger*'). The same coal which in the mine is referred to as 'black gold', becomes dirty at home. Most miners have carefully established methods of getting rid of coal remains after work: '*soft soap is the best*', '*I carry my wife's makeup removal kit on me*', and against financial arguments either use gas or plan to switch to gas ('I do not want dirt at home'):

'20 years ago, when I was building my home, I decided to get a gas furnace and everyone treated me like a lunatic, because I got 8 tons of coal in kind. But convenience was the key argument for me.'

It is expressed very well by a fairy tale called 'Angry Coal' by Ondřej Sekora, telling the story of coal that is rejected because of its dirt and ugliness and that forces children to apologise by cutting the city from heat. This is a story about the coal's transformational potential: dirt turns into life-giving warmth. It is followed by reverse transformation: 'black gold' turns into lethal smog. Segmentation is about breaking a connection between the two.

Denialism is often related to a belief in conspiracy theories and **projective narratives or attempts to find someone to blame**: *'The EU is exerting pressure on switching from coal, acting to the detriment of miners, and posing a threat to Polish energy security', 'Maybe it is [coal] our asset? I have just read that Japan is opening to new coal power plants, and Germans are opening the largest coal plant in Europe. What is it really like, then?'*

The above examples pertain to individuals linked to the coal sector (Older Miners, Trade Unionists) who defend coal mining, but also to various categories of respondents using coal to heat their homes (Cynics, Burners, but also Conformists) defending the use of this material as the source of heat. But similar **mechanisms and narrative strategies based on denial** showing the lack of readiness to accept complexity of the situation, can also be found in comments made by activists fighting against smog, modern entrepreneurs, politicians, and ordinary city inhabitants concerned about the quality of life. The awareness of health risks generated by smog, emotions related to being exposed to its impact, and concern about their and their children's life makes some representatives of these groups simplify motifs behind the use of coal for heating, e.g., **denying or belittling the phenomenon of energy exclusion and poverty as a trigger to coal use**, negating significant role of the coal sector as a direct and indirect source of income for inhabitants, the meaning of symbolic attachment to mining and coal:

'Coal burners have enough money to buy cars and smartphones, but they do not wish to change their furnace, as they need to invest money, change their habits. Many claim that people do not do it out of poverty. But I know some research results indicating that poverty is the reason for not more than 10-12% of them. I do not even believe in these figures. Now I use such an argument that it is a shame, cringe, backwardness. I show the pictures of the same person paying for shopping with their smartphone and stoking an old furnace with coal, wearing rubber-soled felt boots. This is what is most irritating.' (Anti-Smog Activist).

Another strategy of questioning the problem of poverty is also related to **a tendency to often erroneously attach coal burning to miners and other individuals related to the mining sector**: *'People do not accept the existence of smog. This applies to those who work in mines and the entire coal sector. No arguments work for them. There is no cure.'* (a politician coming from Rybnik). The impact of economic factors on the decision to change the furnace can be confirmed by the fact that many miners (i.e., affluent people) have decided to install gas at home and that many individuals who are well-aware of negative effect of smog have not done it yet (even one of our respondents, engaged on energy transformation initiatives, admitted to still use a coal furnace).

A tendency observed among many Rybnik inhabitants to deny economic significance of mining, for instance, by one-dimensionally perceiving the industrial character of the city as a 'burden' and not a 'resource' in the Modern's narratives, does not necessarily have to accelerate the growth of entrepreneurship. The use of simplifications and stereotypes by enthusiasts of faster energy transformation and fight against smog hinders communication both with those who are affiliated to mining (Younger and Older Miners), but also coal furnace users susceptible to changing their attitude (Conformists or Burners), facilitating – at the same time – a tactic alliance between those who mine and burn coal. To a smaller extent it also leads to

increased susceptibility to **conspiracy theories**, for instance, that a new coalmine in Paruszowiec is to be opened by a mysterious Chinese investor or miners from other mines (*'ryle'* (an offensive dialect word used to refer to miners) *who cannot do anything else and only look for an occasion to get rich at the expense of the city*).

Because of the lack of access to reliable knowledge, a habit of referring to it or the natural and universal tendency to ignore inconvenient information, comments made by inhabitants representing various categories are rarely **based on the reality principle**. But it is not impossible. Miners know that changes in the sector are necessary and that unprofitable mines need to be closed. **But they expect a fair dialogue based on mutual respect**. Anti-smog activists are ready to acknowledge the significance of mining industry as the source of income for inhabitants or the importance of the financial factor in continuous use of coal for heating. An example of a narrative based on the reality principle could be a critical response to plans of commencing mining in Paruszowiec, stressing that this investment is economically unviable but first of all that it will generate considerable damage to both Rybnik and people living there, **shared by representatives of all groups identified among Rybnik inhabitants**. It forces respondents to agree that also other mines give employment to thousands of workers, and are a part of the Rybnik history, but at the same time their economic viability is declining.

Narratives about the future

Respondents' comments about the future create the narratives of anger, fear, concerns and hope.

The narrative of anger is willingly employed by populist politicians and radical trade unionists who in coal basins try to mobilise employees to fight for their dignity and workplaces. The higher the risk for a given facility to be closed, the higher the tendency to accept radicals. In Rybnik, such narratives are relatively weak now, and their potential is limited by good economic situation of local coalmines and late date of their closing, confirmed by a plan presented to trade unionists (*'so far we are the last ones to be executed'* – a comment made by one of the Chwałowice coalmine directors). Furthermore, such narratives resonate with some representatives of the mining community only (Trade Unionists). Older Miners are convinced that they will work until their retirement and that the battle has already been lost. Younger ones do not trust trade unionists and are more likely to select individual coping strategies. Most respondents believe that it will be very difficult to motivate miners to protest. **On the city level, the anger narratives are more likely to be picked up by the Affiliated to the Sector, namely entrepreneurs linked to mining, inhabitants of districts located in close vicinity of mines (Living Near the Mine) as well as those who will be dissatisfied with the anti-smog policy if it intensifies (Cynics, the Poor). It would be particularly risky if narratives against energy transformation and anti-smog policy are combined (which is already happening) and activities of various dissatisfied groups are coordinated.**

At the time being, **narratives of fear** prevail in these groups. They can be observed in comments made by Trade Unionists and Rybnik inhabitants (especially those Living Near the Mine and Affiliated to the Sector) and refer to aforementioned memories of mines being closed down in this region in the nineteen nineties. These are fears related to an uncontrolled crisis and its outcomes, such as deterioration of personal financial situation. Those who are affiliated to this sector or live in districts located near mines tend to call for

either slowing down or stopping the process of shifting away from coal: *'Poland should shift away from coal, but you cannot deprive mine employees of their source of income – it might lead to another economic and social collapse, the way it happened in Bytom or Wałbrzych'*. Experts, some managers affiliated to the mining sector, decision-makers, but also Activists and the Modern are rather afraid that the British or Belgian model will be followed, unless the transformation process starts early enough.

'As an eco-activist I believe we have a problem. Two mines are believed to be profitable, namely Jankowice and Chwałowice. As long as they are there, we will have that moon landscape with slag heaps, etc. There is also an attempt to build a new coalmine in an area that is not degraded at all. The Council has recently blocked a plan of opening yet another mine (...) and there are several thousand people protesting against such activities. If it happens, it will be a true tragedy for Rybnik. There is a town called Jastrzębie near here, they are happy, because they have loads of mines, but when it is all over, they will be left with nothing.' (Eco Activist).

Just like narratives of anger, narratives of fear are attractive for radical activists, and the potential to utilise them in Rybnik seems high.

Moderate **narratives of concerns** are more common than those of fear. They usually pertain to the intensification of processes that are already taking place or a large scale of phenomena which are considered inevitable. They result from the **lack of access to reliable information and absence of these topics in public debate**. These include, among others, issues related to gradual phasing out of mines and power plants (Young Miners) and consequently also reskilling of employees and their adoption by the local labour market or more widely – creation of workplaces for future generations based on the new economic structure of Rybnik. Fears also concern unfavourable demographic tendencies and the outflow of youths (whether it will be possible to prevent the process of Rybnik depopulation and how to do it without universities; whether the outflow of youths can be replaced by migration, etc.). The pace of the fight against smog also gives rise to concerns. Inhabitants (especially Activists and the Modern) are afraid that the rate of replacing furnaces and connecting gas is too slow and the problem is unlikely to be solved without reaching for more resolute methods over the next decade which – along with obvious health costs – can squander chances for attracting qualified specialists and investors to the city.

'Poland has not established any legal mechanisms for its citizens to appeal against such local legal acts as the 'air protection programme'. We need to focus on individual claims and fight, because if we keep on replacing furnaces at this pace, we might not live long enough to witness the end of the fight against smog. We have to intensify our battle.'

If concerns are not systematically monitored and addressed regularly by means of public debate, they can easily transfer into narratives of fear, creating favourable conditions for populist manipulations and mobilisation.

The most common **narratives of (seeming) hope** in Rybnik – just like other types of narratives – are taken up by both enthusiasts of acceleration (Activists, the Modern) e.g., representatives of green movements or the RES sector ('Switching to RES and improvement of thermal efficiency will generate more workplaces than the entire mining sector'), and those who want the energy transformation process to be slowed down/stopped (Trade Unionists, Affiliated to the Sector). They usually pertain to specific activities or changes which are to lead to a happy ending, for instance taking advantage of future changes in the economy (a return of demand for Polish coal), politics (EU disintegration, the end of the environmental policy) or in technology (renewable energy resources, new methods of burning coal or pollution retention).

'In Poland coal should still be mined, but at the same time it is necessary to invest in more sustainable solutions in mining: purer coal burning methods, chemical coal processing, e.g., for the pharmaceutical industry, erection of pumped-storage hydroelectricity plants utilising existing mineshafts and excavations.'

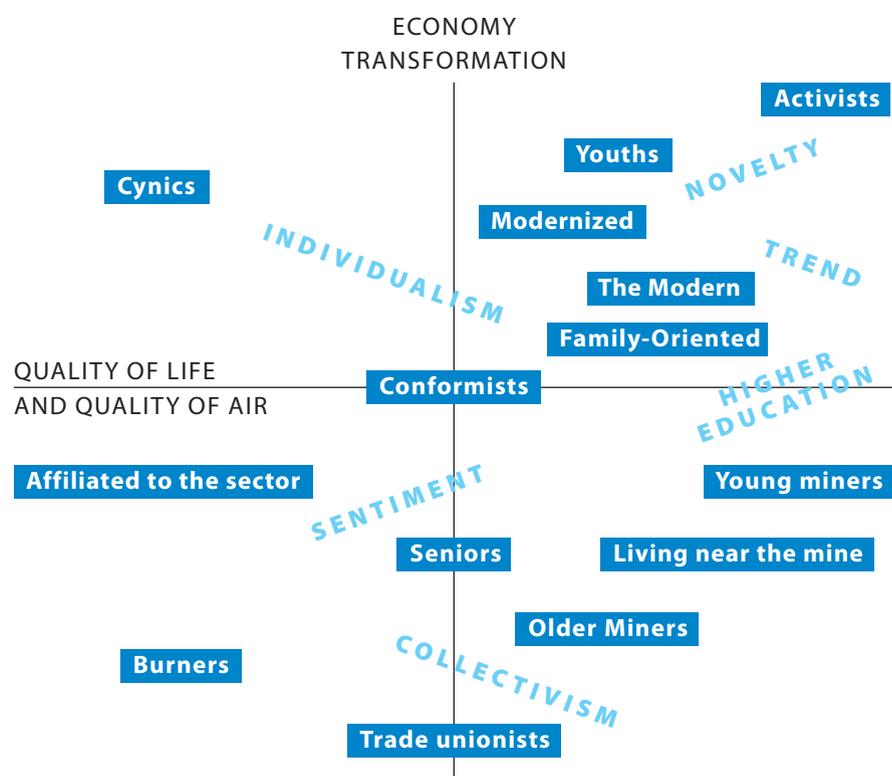
This is the character of hopes for fast and dynamic growth of technologically advanced industries fuelled by cooperation between local authorities and entrepreneurs with the revitalised scientific sector (university branches, etc.) which are common among the Modern, but rather questionable in the light of knowledge about regional trends. It is also true for the belief in an improbably fast end of the smog problem by one of deadlines recorded in regional or governmental documents (2026, 2029, 2030) as a result of the furnace replacement and/or a ban on the use of solid fuels. A good example of these hopes would be such a general statement as: *'All hopes lie with the EU decarbonisation policy and the coal mix'*.

Without the system of verifying the likelihood/realness of various forecasts and scenarios available *'on the market'*, they are likely to turn into wishful thinking and less and less often reach the unconvinced with their proactive communication. It might turn out that it will be easier to use them in a demobilising manner, absolving inhabitants from responsibility (*'if they are to eliminate smog on the governmental level, then nothing else needs to be done'*) or a relatively negative verification by reality, exposing anti-smog and energy transformation policy to ridicule (*'it will never work'*).

Compared to the above vivid narratives, the vague hope expressed by Seniors, the Family-Oriented and Conformists sometimes also shared by Older or even Young Miners, the closest to cautious optimism according to which *it will work out somehow* seem to be far less prominent.

Relations between narratives represented by inhabitant segments identified earlier (Living Near the Mine, Young Miners, Burners, etc.) can be presented more easily in a two-dimensional space. This is why we would like to propose a system described by means of two axes. The vertical one describes the continuum of attitudes to alternative visions of organising economic life of the city, assuming values from extreme orientation on the traditional mining sector and rejection of modern sectors of economy (IT, etc.) at the bottom of the axis ('the mine must stay'), to absolute orientation towards modern sectors and a radical negation of the mining and energy industry ('the faster we close mines the better'). The horizontal axis is defined by attitudes to the quality of life and air. On the left we have those for whom safety and economic independence are the key priority (even at the expense of pure air or the quality of life), and on the right those for whom health and the quality of life matter the most (even at the cost of economic burden).

CHART 2. The distribution of attitudes



The above chart is a certain graphic simplification describing the possible distribution of attitudes and narratives identified during the study. **The spatial distance between specific segments shows how close or far their narratives, values, and attitudes are and defines their ability to form alliances.** Alliances can also be formed in the process of discursive interventions, e.g., the combination of various denial narratives, fears related to the ban on coal burning, and fears about the future when coalmines are closed can form an alliance combining three thirds of the chart, strongly resonating with Conformists, Seniors and the Family-Oriented located in the centre. In such conditions it would be virtually impossible to win support of the Rybnik community for daring plans to fight smog or the development of a smartcity. Paradoxically, the discursive alliance between ecologists and anti-smog activists, their dominance in the movement of protests against coalmines, can pose a threat as defenders of the smog and energetic status quo are likely to react to it by closing their ranks.

On the other hand, **separating the smog and mining topic (and avoiding linking them to the climate narrative) may allow for forming alliances supporting individual solutions**, e.g., a more daring anti-smog project combined with an extended revitalisation in selected districts could win support among Young or even Older Miners, Seniors or those Living Near the Mine.



Summary

Rybnik of the future as the play of imagination and hope

The analysis of problem areas conducted in previous chapters as well as the presentation of inhabitants' narratives allow for identifying the key areas for intervention.

As we have already said, the future of Rybnik will be largely determined by decisions made by local authorities and decision-makers on the regional and national level concerning the so-called hard factors determining development, namely the pace of shifting from mining, the profile of new investors (new profiles of industry, renewable sources of energy, the creative sector), the type of technology and strategies used in fight against smog. Nevertheless, decisions about those most obvious areas will not be made in a social vacuum. The future is determined by soft factors too, affected largely by imagination, courage, hope, and vision. Both types of factors determine one another. To stimulate the positive feedback loop we need a portfolio of innovations addressing the key inhabitants' needs and supplementing the diagnosed shortages and deficits. Below, we offer a preliminary catalog of inspirations and solution ideas resulting from the study of narratives of different groups of city residents.

There is a strong connection between uncertain future and generally high level of uncertainty among Rybnik inhabitants. The lack of easily available tools for strategic thinking and communication between all stakeholders has its consequences in strong attachment to the status quo which is approachable and understandable. Strategic documents on the local, regional and national level do not build a comprehensive image of the future. The educational system lacks the **Future Literacy** module. Future-oriented thinking is also not comprehensively present in activities taken up by NGOs.



Because of deficiency of information about possible scenarios and plans for the city, no knowledge about other people's actual attitudes and behaviours, and no reliable information allowing for verifying gossip narratives of fear, concerns, uncertainty and anger continue spreading. The future is perceived as a great unknown. In such conditions, scenarios based on conspiracy theories, wishful thinking, and negative stereotypes gain popularity. In the long run it can hinder or even prevent communication with inhabitants, and if they are not included in the decision-making process, it will not be possible to implement ambitious scenarios.



Quality of life should be one of the key areas of activity to focus on. It was brought up as the central element of a narrative characterised by the potentially most inclusive nature. The quality of life is also one of the factors attracting investors and employees to the city (and limiting the outflow of youths). It affects the development of the city and the wellbeing of its inhabitants, which indirectly affects their readiness to engage in social activities for their hometown. It will require the development of infrastructure and the offer of leisure activities near the place of residence, integration of district communities, revitalisation of areas near mines, and ensuring equal opportunities for all districts. It should be followed by the development of an attractive and sustainable transport system

integrating districts. The first goal should be to win the fight against smog. A significant success in this field, not achieved at the expense of those at risk of energy poverty and not harming the economic interest of other people in a difficult situation, would allow for believing that other elements of energy transformation in Rybnik are just as feasible.



Social resilience requires strengthening

Working on local identity in order to arouse 'radical hope'¹⁵. Radical hope is born in circumstances in which we expect a happy ending, but we do not know where it should come from. Radical hope is targeted. It is a social equivalent of what psychologists refer to as life optimism. Hence, it is the prerequisite for ordinary hopes to emerge (related to specific scenarios, technologies, policies). The presence of such hope can be understood as the key element of social resilience. In order to strengthen this approach, it is necessary to refer to sources of identity that are deeper than the mining culture (Silesian heritage), to look for a new myth according to an emerging conviction that the 'myth of powerful industry and region needs to be replaced with something else – by creating a new myth and a new vision'. The beginnings of radical hopes can be observed in more moderate attitudes of satisfied inhabitants of the city, namely the Family-Oriented, Seniors, Conformists, some Young Miners, the Modern, and Gas Furnace Users.



¹⁵ Jonathan Lear, *Radical Hope. Ethics in the Face of Cultural Devastation*, Warsaw 2013.

Open, fair dialogue

Starting an open dialogue by means of narratives based on the reality principle (acknowledging complexity of the situation) to consult proposed solutions. This process of deliberation should include the development and implementation of solutions allowing for the identification and exposure of narratives referring to either untrue or unverified information.

Access to knowledge

The launch of the 'Myth Busters: monitoring, fast assessment and response' programme – including local opinion leaders accepted by the local community and experts, if needed. This activity could also include feasibility studies for various ideas related to the possible use of coalmines and power plants (e.g.: stories about the use of a power plant as the source of heat for the city, or mines used as pumped-storage hydroelectricity plants, etc.), further development of renewable energy sources, specific solutions used to fight smog, etc.

Social revitalisation

Taking care of post-mining districts by creating revitalisation plans together with inhabitants, supporting local communities and showing other residents that the closing of a coalmine does not have to lead to shrinking of the city. It would allow for addressing concerns among other categories of inhabitants (for instance, including the Living Near the Mine in the 'coalition of hope' would reduce some fears among the Affiliated to the Sector).

Memory revitalisation

Wide consultations with miners and inhabitants, aiming at stressing the historic significance of the region and individual mines. It might be a good idea to co-create with inhabitants a 'living memorial' devoted to what mining used to be and what it is now for them. It would also be crucial to create a platform for inclusive dialogue, taking into account different perspectives (based on the reality principle, namely *'the mine as the source of income, but also as the destroyer'*), acknowledging architectural elements related to mining in the urban space, referring to the narrative of pride and addressing inhabitants' sentimental attachment to this heritage.

Soft communication activities create the conditions for positive change scenarios to occur. But change also requires 'hard' actions. More on this topic can be found in the strategic foresight report, prepared by SPIN-US, as well as in the so-called portfolio brief, a document collecting ideas for the first actions and change processes needed in Rybnik, prepared by EIT Climate-KIC. For the city to flourish, it is necessary to continuously develop the labour market (attracting or retaining people with key competences) and that which shapes the market, i.e. the infrastructure (transport, space, offices), simultaneous expansion of the service sector with new proposals and development of various active industrial areas. It is important that the development of these two sectors should not be treated as alternative growth paths, but that everything should be done to ensure their complementary functioning, enabling the use of a synergistic effect between them. To achieve this change, it is necessary to launch a 'laboratory of social change'.

Rybnik CityLab

The 'lab' formula addresses the key challenge the best: taming the unknown and frightening future. CityLab is the experimental and educational platform on which ideas get a more concrete and tangible shape the fastest – even if it is extremely simplified (a prototype). In such a form they are likely to be tested the quickest, while the learnings gathered can help optimise the prototype, form even more ideas worth verifying, or asking the starting question more effectively. But first of all – to give shape to the unknown.



Genuinely breakthrough ideas and tools are likely to be generated during the CityLab – as breakthrough as the moment that Rybnik is experiencing now.



The work of CityLab teams does not serve a specific group, but it is beneficial for all inhabitants and city stakeholders.



CityLab is the kingdom of reason, of rational discourse in which the power of arguments counts more than the power of their expression, and facts matter more than fake news.



This is also the right place to share knowledge, to inspire others, for leadership through knowledge, and experience.



Rybnik CityLab can become a workshop of social and technological energy transition, serving to develop socially-approved solutions that will be both economically viable and innovative.





Deep Demonstration

Just Transformations



Climate-KIC

Climate-KIC is supported by the EIT, a body of the European Union

