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**InnovationCity Ruhr: A prime example for social and
technological innovation**

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InnovationCity Ruhr

A prime example for social and technological innovation ¹

Adrian Götting

Abstract:

The project “InnovationCity Ruhr” deals with the reconstruction of the city of Bottrop with regard to energy saving measures. The aim is to make the city more environmental friendly in order to create a model for other industrial cities. Until the conclusion of the project in the year 2020, it is planned to change the surface of Bottrop in several positive ways. This paper focuses on the description of the project to give the reader an example of what exactly is done within the scope of InnovationCity Ruhr. Besides that, the link to the subject of sociology shall be given in order to show that the project is a prime example for social innovation.

Keywords:

Innovation, Innovation City, Ruhr, social innovation, model city Bottrop, energy efficiency

JEL codes:

O32, O38, R58

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1.0 INTRODUCTION

“InnovationCity Ruhr” is a project, which is concerned with the environmental friendly reconstruction of the city of Bottrop. The project started in the year 2010 and has the aim, to change the surface of the pilot area within the next ten years. All in all InnovationCity Ruhr encompasses 125 individual projects that are all located in the areas habitation, labor, mobility, energy, city and activation. Those individual projects are mainly focused on technological innovation, still the focus lays on implementing those innovations to the public and the citizens of the pilot area. Therefore emphasis lays on the ways and means to motivate people in order to make them actively take part in developing ideas and concepts for the project, so that sustainability can be guaranteed.

In this paper InnovationCity Ruhr and the undertakings concerning the projects shall be described. Therefore I will start by giving general information about the topic, while putting emphasis on the way the society of the pilot area is incorporated. A link to social innovation and an explanation why InnovationCity is a prime example for that shall be given as well. In the next chapter I would like to give short background information on the project and the manner it was initiated. I will also present the InnovationCity Management GmbH, who is mainly responsible for the realization of the project, due to the fact this information is necessary in order to understand the functioning of InnovationCity Ruhr. The following chapter deals with a description of some of the individual projects of the five fields: housing, labor, mobility, energy and city. By doing so, it can be ensured that the reader gets a detailed image of the exact undertakings of the project. After that, the focus should lay on the sixth field of activation, in which the citizens of Bottrop stand in the foreground. This field deals with the question of how the aims can be realized and how the public interest can be gained. In the same chapter a link to sociology of environment and some on-going discourses in this connection shall be given. In the last chapter I would like to give my conclusion, by evaluating the success of the project so far with regard to the acceptance in the public of Bottrop.

2.0 INNOVATIONCITY RUHR AND SOCIAL INNOVATION

The main areas in which greenhouse gases are produced are big cities. In order to stem the progressing climate change, the necessity to reconstruct those big cities with regard to less energy consumption and less exhaust emissions becomes more and more obvious. Therefore the aim of the project InnovationCity Ruhr is to reconstruct the city of Bottrop in an environmental friendly way. It is not just planned to use technical innovation on buildings that are about to be constructed in the future, but to reconstruct the buildings, companies and areas that already exist. The pilot area of Bottrop encompasses 70.000 citizens that are about to play a major role in reaching the aims of the project. Even though the EU guideline allows 20%, the CO₂ emission of Bottrop should be reduced to 50% in the areas of habitation, economy and traffic until the year 2020. To reach this aim, the help and participation of the citizens is needed. Out of this reason, it is planned to make the city more green and liveable. The people should be convinced of the necessity of CO₂ reduction by feeling positive changes in the city. More green areas in the urban regions of Bottrop and a noticeable betterment of the air in the city are the aims. Another crucial factor in order to reach participation more lucrative is the prospect of reduced energy costs. This two main fields of the project InnovationCity Ruhr also explains the motto "blue sky, green city" ("Blauer Himmel. Grüne Stadt) (Denkel, 2012: 12).

In all the intentions planned within the scope of InnovationCity Ruhr, society and the people themselves often stand in the foreground. An example is the master plan of the project, in which the citizens of Bottrop are actively integrated. It is planned that the people living in the pilot area take part in developing this master plan that is the foundation for the realization of the project. Therefore the aim is to inform them about, and to emotionalize and activate them for the purposes of InnovationCity Ruhr (Denkel, 2012: 13). It plays a crucial role to analyse the needs, utility expectations and the opportunities for action of the target groups. Otherwise it is unlikely that people use the innovations offered,

consequently they wouldn't invest in new technologies as well. In a second step it is necessary to inform, to advise, accompany and support the citizens with regard to a conscious dealing with energy consumption. Only by doing so it can be ensured that people are aware of their behaviour and thereby willing to change it. Another aim is to strengthen the social communication between the citizens in order to extend the awareness for energy efficiency. Those responsible for the project expect social interaction, for example among neighbours to have positive indirect consequences for environmental saving measures (Denkel, 2012: 86, 87). By contemplating the individual projects of InnovationCity Ruhr, it gets clear that technical innovation forms a basis for the reconstruction of the city. The development of solar power systems in order to save energy costs and prevent pollution is just one example. Other than that, electro cars, bikes and scooters are developed; LED streetlights are placed all over Bottrop and gas heat pumps are innovated. Nevertheless, the project InnovationCity Ruhr is a prime example for social innovation as well. Due to the fact that social innovation can be understood as the solution for problems that affect society, the project fits the subject. Climatic changes and the environmental pollution caused by mankind are about to affect society in a negative way within the next decades. On the other hand the incorporation of those technical innovations is going to have a crucial effect on the daily routine of human beings. Put another way, if the aims of InnovationCity Ruhr are realized, it will cause changes in the daily life of the pilot area society. Besides that almost none of the technical innovations can be realized, if the acceptance among the people isn't existent. Technological innovation goes hand in hand with social innovation in this case. Innovations of technological nature can be described as the means, while social innovations can be seen as the actions necessary for social change (Grillwald, 2000: 36). A crucial difference between technical and social innovation is the fact that innovations of technological nature are only seen as innovative before their diffusion, while it is the exact opposite with social innovations. More precisely, social innovation is not existent without diffusion (Grillwald, 2000: 37). Still it is difficult to say whether technological innovation determines social innovation or the other way around, but it can be said that the

two components often stand in relation to each other and in the case of InnovationCity Ruhr, they both play main roles.

3.0 BACKGROUND INFORMATION ON INNOVATIONCITY RUHR

3.1 Competition/City of Bottrop

The project InnovationCity Ruhr got initiated by a consolidation of 65 enterprises, called "Initiativkreis Ruhr ("initiative Ruhr"). The aim of this consolidation is to conceptualize ideas and projects in order to forward the development of the Ruhr-region. InnovationCity Ruhr started with a competition between 16 cities within the borders of the Ruhr region. Besides Bottrop, the cities Essen, Mühlheim, Bochum and the city-tandem Gelsenkirchen/Herne reached the finals. The question was which of these cities will be reconstructed concerning energy efficiency and pollution control within the next ten years. In November 2010 an independent jury made the decision in favour of Bottrop. Thereby not the whole city of Bottrop gets reconstructed, but a certain area, which is described as the pilot area ². The reasons for the jury to choose Bottrop were numerous. One important factor was that Bottrop already won several awards and prizes for an innovative dealing with regard to tasks in connection to energy efficiency and climate change. Furthermore the city was still involved in projects concerning basic issues that fit those of InnovationCity Ruhr. Besides that, the city managed to reduce the energy consumption in public buildings drastically and therefore proved its efficiency and the will to find solutions for challenges in connection to a more environmental friendly development. Another point is that Bottrop has a perfect size in order to realize a project like InnovationCity Ruhr. With 118.000 inhabitants it is more or less average sized, while the pilot area encompasses 70.000 citizens. The ultimate aim is, to use the measures that were taken in order to make Bottrop more environmental friendly

² <http://www.i-r.de/projekte/innovationcity-ruhr/>, 22.01.2014

on other cities. Starting with cities of the Ruhr region, the concept could be applied on industrial cities all over the world. Therefore Bottrop can be seen as a model city and an example for other cities.

3.2 InnovationCity Management GmbH

The Innovation Management GmbH is responsible for the project management of InnovationCity Ruhr. The company exists since 2011 and has its main office in Bottrop. An interdisciplinary team of the staff of Innovation City Management GmbH works along with employees of the public sector, the industrial and the economic sector. The role of the company in the process is to serve as a platform and a moderator to better the communication between the different groups and foster new partnerships. Currently the core team for InnovationCity Ruhr consists of 25 people. Burkhard Drescher is the executive director of InnovationCity Ruhr since 2011. He is the former city manager of Oberhausen and was board member of "RAG Immobilien AG" and the CEO of the Gagfah Group. His extensive networks in the fields of policy, economy and science make him predestined to assume the responsibilities necessary in order to lead the project in the future. As city manager of Oberhausen, he is also associated with the structural change concept "Neue Mitte Oberhausen", which served as an example for how to turn industrial wasteland into prosperous districts. The former executive director (from the founding of Innovation City Management GmbH in 2010 until 2011) was Markus Palm, but his qualification as a learnt architect didn't fit to the task field needed for the project.

4.0 THE FIVE PROJECT FIELDS OF INNOVATIONCITY RUHR

InnovationCity Ruhr consists of 125 individual projects, which can all be allocated in the six fields of habitation, labor, mobility, energy, projects concerning the city itself and activation. In order to give an idea of what exactly

is done to accomplish the objectives of the projects, I will describe a few of those individual projects of each of the first five fields.

4.1 Housing

In the field of housing (“Wohnen”), plans mainly concern an improvement of the living conditions in Bottrop and energy-saving measures in certain areas. The field encompasses 11 individual projects. A specific example for one of those projects is energy-saving measures that were planned for a certain street, named “Blumenstraße”, house number 13 – 15. The project is now already concluded and took place in the period of September 2011 until May 2012. The aim was to reduce the heating costs and besides that an addition respectively an extension of the balconies in this street, in order to improve the living conditions for the inhabitants. Stakeholders were, alongside the InnovationCity Management GmbH also the GBB (Gesellschaft für Bauen und Wohnen Bottrop), which anticipates thereby a stable bond between the company and the tenants ³.

A comparable project, which took place in the same timeframe and which is also concluded is concerned with a street called “Kirchhellenstraße”. The plan was to apply energy-saving measures, to reduce the utilities for the tenants and therefore an improvement of the living conditions in the street ⁴.

Another very interesting project in the field of habitation is called “SusLab” (“Wohnlabor”). It aims at the promotion of transnational activities and nationwide cooperation while local peculiarities are considered. This project doesn’t just take place within the scope of InnovationCity Ruhr, but is executed in four different cities respectively regions, namely Göteborg (SE), London (UK), Rotterdam (NL) and the Ruhr-Region (GER). Specifically the aim of InnovationCity Ruhr in this regard is to increase the energy and resource efficiency in buildings. The timeframe that is proposed to fulfill those goals is January 2012 until March 2015. The target audiences for this large project are tenants as well as the proprietors of the buildings concerned, certain companies (such as home builders), research facilities, policymakers as well as the citizens.

³ <http://www.icruhr.de/index.php?id=53>, 15.01.2014

⁴ <http://www.icruhr.de/index.php?id=52>, 15.01.2014

The initial point and the basic problem for the SusLab project is the assumption that many innovations associated with products and services aren't accepted by people, even though they theoretically would hold social, financial and technical advantages for the consumers. A crucial reason is that those innovations might not be adjusted to the daily routine of the people and do not fit in the established structural framework conditions. Thereby a lot of potential innovations remain unused. The aim of this particular project is to integrate the users in an effective way, in order to make sure that innovations are developed, which are in any case usable for the consumers. The focus in this regard lays on the topic of heating and the question of how the value for resources can be increased in the process of developing products and concerning services ⁵.

Another project in the field of habitation that is also concluded is the "RWE Zukunftshaus" (future house). The house, which carries the name of the German energy supply company RWE, can be seen as a model home, in which modern technology is applied. The aim is to demonstrate what can be done technically with regard to energy saving measures in order to create a house, which produces more energy than needed. Within the scope of a competition a suitable house was ascertained, this house then got refurbished and modernized. The renovations got concluded in summer 2013, so that the RWE Zukunftshaus got inaugurated on July, 18th 2013. The success of the measures gets documented within the scope of a comprehensive monitoring during the next 24 months ⁶.

⁵ <http://www.icruhr.de/index.php?id=58>, 15.01.2014

⁶ <http://www.icruhr.de/index.php?id=54>, 15.01.2014



1.0 RWE Zukunftshaus

4.2 Labor

The field labor (“Arbeit”) is mainly concerned with the renewal and the restructuring of certain workstations in the city of Bottrop. As it is with most of the projects within the scope of InnovationCity Ruhr, the aim is to increase the efficiency with regard to energy in order to make the city much more environmentally friendly. A few examples of what exactly is done in the field of labor should be mentioned hereafter.

One of the overall nine projects is called “Energy Campus Lab”. Key player is the university “Ruhr West”, with all its students. Due to the fact that the university is new constructed, the aim is to reduce the CO₂ emissions drastically and to reach a sustainable dealing with resources. Therefore the campus is meant to support research in this regard by including innovative building and an efficient dealing with energy in the establishment of the university. On a long term basis the university should be supplied with thermal energy. This project is not finished yet, a conclusion of the construction is planned for 2014 ⁷.

Another project is concerned with the renovation of a gas station. The aim is to create the most efficient “ARAL” (German chain of filling stations) gas station in

⁷ <http://www.icruhr.de/index.php?id=61>, 15.01.2014

Germany. Those aims were already implemented in the year 2012 and the gas station serves as a classic example for energy efficiency. All in all the energy consumption is reduced to about 50 %⁸.

The most comprehensive project within the field of labor is a program called "Ökoprofit 2013/2014" (engl. "Eco-profit"). In this connection local companies develop practical strategies and measures in order to relieve the environment and at the same time reduce the overheads. Thus the companies are in the fore of this project. Overall there have been about 2000 companies that participated in Germany. The city of Bottrop now participates with the cities Gelsenkirchen, Gladbeck und Herne, in total there are 17 companies taking part in the project. The results of those companies are positive in every respect. Over 100 ideas with regard to environment protection got realized and all in all savings of about 416.000 € can be recorded. Due to the fact that the energy consumption is reduced, the CO2 emissions decrease and besides that, a large amount of refuse and wastewater is avoided. It seems that all parties concerned benefit from this project, because of the fact that less energy consumption also means less costs and less CO2 output⁹.

⁸ <http://www.icruhr.de/index.php?id=60>, 15.01.2014

⁹ <http://www.icruhr.de/index.php?id=225>, 15.01.2014

4.3 Energy

Due to the fact that the topic of energy (“Energie”), or more specifically energy consumption respectively the reduction of energy consumption is a central topic in most of the projects of InnovationCity Ruhr, the field of energy also contains the highest number of projects. Overall 21 projects encompass the field of



energy, thereby not all of the projects are concerned with energy consumption, but also the production and the generation of energy play a big role within those projects.

An example for the production of energy is the vertical windmill construction in Bottrop. The windmill should serve as a paradigm for alternative systems to create energy. It got activated in September 2011 and is located in the center of Bottrop ¹⁰.

2.0 Vertical windmill construction

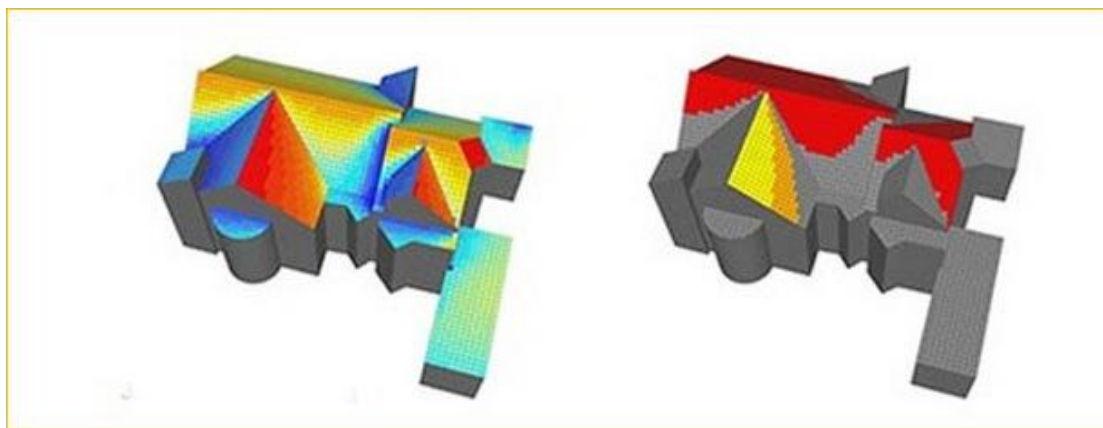
Due to the fact that one of the main aims of InnovationCity Ruhr is to produce all the energy and electricity, which is needed in the city in the pilot area itself, measures and ideas in order to generate energy are needed. Therefore several projects are concerned with the placement of for example photovoltaic plants. One of those plants will be build in a street called “Am Quellenbusch”, in an area that used to be part of a graveyard, but is now not in use anymore. Although not concluded yet, the realization if the project is dated for 2014 ¹¹. A project, which is concerned with photovoltaic plants and already concluded is called “PV Anlagen BEST”. It started in May 2010 and got finished in December 2011. Those responsible used the reorganization of the depot of BEST AöR (a company

¹⁰ <http://www.icruhr.de/index.php?id=266>, 15.01.2014

¹¹ <http://www.icruhr.de/index.php?id=70>, 15.01.2014

responsible for the disposal, cleansing department of Bottrop) to equip the roofs of the buildings with photovoltaic plants ¹².

Within the scope of InnovationCity Ruhr, the city of Bottrop itself developed a way to identify which houses respectively roofs are suitable for the installation of photovoltaic plants. To do so, a 3D model of the city got developed, which constitutes the potential of each house. The aim of this project, which is called “Solaratlas” and still ongoing, is to simplify the arrangement of the construction and the financing of photovoltaic plants. Interested people have the opportunity to evaluate whether a photovoltaic plant will rather pay off or not. The information of Solaratlas is accessible easily in the internet ¹³.



2.0 3D image of buildings; Left: Annual solar radiation, right: Suitable surfaces

A comparable project is called “Energieatlas” and serves as a permanent database for all relevant information concerning environment protection and energy. The results are valuable for the employees of the city of Bottrop, the staff of InnovationCity Management GmbH and the project partners. Besides that, the citizens of Bottrop also have access to the information of Energieatlas. The project started in May 2012 and is currently in a preparation phase. The aim is to create a sort of controlling system that allows those responsible to have an overview of data relevant with regard to environment protection and energy. Therefore, besides the data already existing, a lot of data still has to be gathered and updated regularly. The project Energieatlas serves as a way to optimize the

¹² <http://www.icruhr.de/index.php?id=71>, 15.01.2014

¹³ <http://www.icruhr.de/index.php?id=72>, <http://www.icruhr.de/index.php?id=187>, 15.01.2014

data acquisition and the data administration in order to improve the overview and the control of this data ¹⁴.

Another project within the field of energy is concerned with an innovative gas heat pump for one family houses. The gas heat pump technology combines the heating with natural gas and renewable energy sources. Thereby an energy consumption reduction can be perceived and besides that CO₂ emissions are reduced to 30 percent. This can be achieved with the inclusion of regenerative environmental heat and a higher degree of efficiency. The conclusion of this project is planned for October 2015, so that the project is still ongoing ¹⁵. A comparable gas heat pump is already in use in the “Astrid-Lindgren” School since December 2012 ¹⁶.

4.4 Mobility

Projects in the field of mobility (“Mobilität”) are mainly concerned with a reduction of CO₂ emissions caused by individual used cars. Therefore those responsible are trying to encourage people to use alternative ways of transport. An example is the electro-bicycle (so called Pedelecs) and electro-scooter rental. A small number of pedelecs and e-scooters are placed at the main train station of Bottrop, available for everybody since 2012 ¹⁷. The aim in this regard is to show people the advantages of electro vehicles in general. The citizens of the pilot area also have the possibility to rent an electro car (Renault Twizy) for 48 hours in order to test it and to get an idea of how useful these vehicles are in daily routine ¹⁸. Besides that, the “mobility management” stands as a crucial project of the altogether 9 projects within the scope of the field of mobility. The aim is to influence the citizens in their daily traffic routine, in order to make them use other ways of transport besides the individually used car. Those responsible are trying to inform and to advice the inhabitants better about alternative ways of

¹⁴ <http://www.icruhr.de/index.php?id=86>, 15.01.2014

¹⁵ <http://www.icruhr.de/index.php?id=82>, 15.01.2014

¹⁶ <http://www.icruhr.de/index.php?id=320>, 15.01.2014

¹⁷ <http://www.icruhr.de/index.php?id=321>, 15.01.2014

¹⁸ <http://www.icruhr.de/index.php?id=69>, 15.01.2014

mobility, while the coordination of these ways is improved. Options can be car sharing or the use of public transportation ¹⁹.

Due to the fact that the general aim of all the projects within the scope of the field of mobility is the 30 % reduction of CO2 emissions caused by traffic, all traffic participants have to be involved in order to make change. Therefore the climate protection sub-concept (“Klimaschutz Teilkonzept”) got developed in order to constitute a long-range strategy to make the urban traffic more environmental friendly. The main issue in this regard is the question how traffic in general can be reduced and how the traffic participants can be inspired to use alternative more environmental friendly ways of transportation ²⁰. Summed up, it can be said that the issue of traffic is one crucial point in order to change the face of Bottrop. Even though the people themselves are the center of most projects of InnovationCity Ruhr, the field of mobility is dependent of the decisions people make and their will to change their behavior with regard to the use of cars.

4.5 City

The field of city (“Stadt”) is mainly concerned with innovations that have to do with the image of the city itself. Therefore in a lot of those “city-projects” the city administration is responsible for the execution. An implicit aim of most of the undertakings is to make the city of Bottrop more livable, especially because the cityscape is mostly known for being very industrial, with a lack of nature. Besides making changes with regard to energy efficiency and environment saving measures, an improvement of the living conditions is aspired. All in all the field of city encompasses 16 individual projects.

There are certain projects that are concerned with a betterment of air in the city of Bottrop. The aim in this regard is to lower the pollutants in the city by placing more and more green planting areas on roofs and facades. By doing so, the climate conditions of the urban regions can be improved. Currently there are three companies and three research facilities busy constructing a green roof and façade system. Besides that, the impact and the efficiency of those systems will

¹⁹ <http://www.icruhr.de/index.php?id=304>, 15.01.2014

²⁰ <http://www.icruhr.de/index.php?id=246>, 15.01.2014

get examined, in order to arouse the interest of citizens, house holders and residents of census metropolitan areas²¹. Another idea is to place mosses on certain surfaces in the city, also in order to reduce the pollutants.

A crucial amount of projects deals with the placement of LED (light-emitting diode) lights as streetlights. Firstly it is planned to examine how much energy actually can be saved with the help of LED lights. Within the scope of the project LED street lighting test ("LED Straßenbeleuchtung-Test") the quality of the lighting is also scrutinized. Besides that, the acceptance in the population gets explored as well. To do so, the LED streetlights get placed on certain test routes. The plan is to expand those routes further, in order to track the technological development. The time frame of this project is 2009 until 2020, so that there are already 46 LED streetlights in use and is expected to increase this number within the next years. An energy efficiency increase of 30 % is already noticeable, and scientists predict that it there will be about 3 years in which the energy efficiency and the durability of LED lights can be improved before stagnation is reached²². With five projects in total InnovationCity Ruhr deals with ideas concerning LED streetlights. Since 2011 tests are executed that scrutiny to which extend LED lights can be provided with electricity gained by photovoltaic systems. The idea is to use those on school bus stops in the city. It gets also examined where else a supply with photovoltaic is reasonable. So far the city of Bottrop is still busy with the development of a LED lighting concept that gets supplied with photovoltaic. The conclusion of the project is planned for 2020²³. A long-term aim is to replace all conventional streetlights that have a deficit with regard to efficiency with LED streetlights. Even so it is planned that this replacement should proceed gradually, because otherwise it will be more or less impossible to benefit from further developments and a gain of knowledge with regard to LED lights. Out of this reason those responsible eschew an immediate conversion²⁴.

²¹ <http://www.icruhr.de/index.php?id=97>, 15.01.2014

²² <http://www.icruhr.de/index.php?id=227&L=1%27>, 15.01.2014

²³ <http://www.icruhr.de/index.php?id=94&L=1%27>, 15.01.2014

²⁴ <http://www.icruhr.de/index.php?id=93&L=1%27>, 15.01.2014

5.0 ACTIVATION

Besides the five project fields of habitation, labor, energy, mobility and city, a sixth task field, in which the actual activation takes place, exists. In this project field (“Aktivierung”), solutions and ideas are presented in order to effectuate the concepts of InnovationCity Ruhr. The aim is to incorporate the citizens and the people in the projects and motivate them to take part in renewing the city of Bottrop. Ultimately society plays a major role in realizing innovation itself. In this chapter I will present a few of the 16 projects encompassed in the field of activation, while the link to the subject of sociology should be constituted as well. A method to influence doubtful citizens is to offer a so-called house-to-house consulting. Thereby the house owners that weren’t interested in energy saving measures so far stand in the foreground. Aim is to arouse interest and curiosity among them. In a first step the need of redevelopment gets predicted and ways of energy saving renovation get shown. If the house owners are interested, they get the chance to discuss the options of energy saving measures and possible changes of the technology of the house in detail. The time frame of this project was dated from December 2011 to April 2012. With the conclusion of the project, about 9000 houses in the pilot area got visited ²⁵.

A comparable project deals with the consulting conducted by qualified architects and energy advisors that got together to a partner network in order to advise private house or apartment owners that are willing to redevelop their buildings ²⁶.

InnovationCity Management GmbH also offers guidance by energy advisors for people that are interested in redevelopment. Within the scope of a project that is planned to go until the year 2020, interested parties get informed about offers, events and besides that, they get introduced to other qualified contacts. The project runs since November 17th of 2011 ²⁷.

Moreover a container got placed in the inner of the city of Bottrop. This “info-container” was planned to be the first contact point for citizens that are interested in the project “InnovationCity Ruhr”. The walls of the container were

²⁵ <http://www.icruhr.de/index.php?id=110&L=1%27>, 15.01.2014

²⁶ <http://www.icruhr.de/index.php?id=111&L=1%27>, 15.01.2014

²⁷ <http://http://www.icruhr.de/index.php?id=112&L=1%2715.01.2014>

filled with screens and information walls, in order to present ideas and concepts of the project. The container was placed in the city for altogether six months, from May 2012 until October 2012 ²⁸.



3.0 InnovationCity Ruhr information container

Besides directly talking to citizens of the pilot area, certain projects attempt to make the investment in energy saving measures more lucrative. The aim is to involve the people actively in the project, so that they can experience the advantages of those measures in their own houses. Therefore certain campaigns are initiated, in which InnovationCity Management GmbH and the city of Bottrop works together with certain business partners in order to make offers that are limited in time. One example is the company “STEAG Fernwärme GmbH”, who subsidizes 100 households with a ceiling amount of 2.000 €, if they are willing to get district heating in their homes ²⁹. The company “Stiebel Eltron” fosters solar power plants in combination with a hot-water heat pump with a sum of 500 € and besides that, interested parties get 15% discount on energy saving items

²⁸ <http://www.icruhr.de/index.php?id=118>,15.01.2014

²⁹ <http://www.icruhr.de/index.php?id=78>, 15.01.2014

purchased in the building supplies store “Hellweg”³⁰. Another example is the “ZukunftsWerkStadt”, which is a project initiated by the German ministry for education and research. Within the scope of this project, conferences took place in which ideas and concepts got discussed of how to integrate electro mobility successfully in the daily life of people. The crucial thing about those conferences is that they proceeded in dialog with the citizens³¹. Besides that, InnovationCity Ruhr is also focused on integrating the youth into the project. Therefore schoolchildren get to develop their own projects and deal with subjects that are in the focus of InnovationCity Ruhr. By doing so, the young people get to know the topics and aims, in order to realize the project on a sustainable basis³².

Another way for those responsible of InnovationCity Ruhr is to give awards, prices and rewards to the participants of the project. An example is the award “School of the year”, a price for the school that developed the most useful ideas with regard to environmental saving measures and energy efficiency. The “School of the year” award doesn’t just work within the borders of the pilot area of Bottrop, but nationwide. A comparable award is called “Deutscher Nachhaltigkeitspreis”³³.

By looking at those strategies, it gets clear that the incorporation of the society is a crucial task in order to reach the aims of the project InnovationCity Ruhr. One reason is that the citizens of Bottrop are the ones that are mainly affected by the innovations within the scope of the project. The regional and nationwide economy will also feel the changes. Therefore it is necessary for those responsible to reach a comprehensive acceptance and the willingness to participate in concepts, ideas and projects from all different parties. Due to the fact that the citizens are the ones who should avail themselves with the innovations, their needs and necessities are determining for the success of the project. Out of this reason those responsible do their best in order to incorporate the citizens of the pilot area as much as possible in developing plans and concepts. All in all an interest for environmental saving measures has to be existent in the public. Within the scope of InnovationCity Ruhr, this interest shall

³⁰ <http://www.icruhr.de/index.php?id=113>, 15.01.2014

³¹ <http://www.icruhr.de/index.php?id=114>, 15.01.2014

³² <http://www.icruhr.de/index.php?id=115>, 15.01.2014

³³ German price for sustainability

be woken at an early age, in order to create a sustainable awareness of energy efficiency. This relationship is approached in the field of "Sociology of environment", a hyphen-sociology that deals with the connection between society and nature. Thereby it is said that some sort of environmentalism and ecological awareness arouse around the 1970's in western societies. This environmentalism can be defined as the awareness of the fact that the natural resources are in danger because of human kind, coupled with the will to make changes in this regard (Huber, 2002: 2). The idea of environmentalism is now a basic part in human society, especially in the last 20 years, the interest increased. The public discourse passed through different phases with regard to the topics that stood in the fore. Realizing that the human need for certain natural resources causes environmental problems, the conservation of environment was the crucial point. During the 1970's and 80's the limits of growth stood in the foreground. The fact that growth concerning nature is limited and that society is about to reach those limits became more and more obvious. Especially in the Ruhr region, where coal mining came to an end within the last decades.

In the public discourse of the 1990's, the question which technologies are usable with regard to the environment occurred. More and more debates were held on the issue if the use of for example automobiles is still acceptable. The discourse on sustainability also took over in the 1990's. The model of this discourse considers technological and industrial development that is consistent with environmental saving measures. The question of how this sustainability can be achieved stands in the foreground of the discourse. The *sufficiency discourse* demands an abandonment of consumption and restrictions with regard to traffic from the members of society. Besides that, a decrease of the world economy is expected in the context of the sufficiency discourse. In contrast the *discourse of metabolic consistency* relies on innovations and new technologies that are environmental friendly (Huber, 2002: 5). Those measures come to application in the scope of InnovationCity Ruhr. The two approaches of those discourses are more or less combined. A good example is the restriction of car traffic, which is an aim of the project as well. Informing its citizens about the advantages of alternative transportation and the positive effects this behavior has on the environment is one way to motivate people. Besides that, alternative solutions

with the help of technological innovation are offered as well. Examples are the e-bikes, the scooters and the electro cars.

6.0 CONCLUSION

The project InnovationCity Ruhr is ambitious and difficult to realize. Nevertheless, InnovationCity Management and the city of Bottrop developed detailed and profound concepts and ideas in order to implement the project. Thereby some of the individual projects already got concluded and utilized. An important factor is that a lot of effort is being put in arousing the public interest, which is a crucial point in order to make the project work on a sustainable basis. Therefore the citizens of the pilot area have a lot of different options to get informed about ways and means to make their home more environmental friendly by redeveloping it. Besides that, the city of Bottrop ensured that people have the opportunity to try out certain alternative ways of transport, such as E-bikes, scooters and electro cars. All in all the society of the pilot area plays a major role in realizing the projects of InnovationCity Ruhr. Out of this reason those responsible do as much as possible in order to arouse the interest of the public and in order to motivate people to participate actively in realizing the project. Nevertheless, the project isn't just received positively among the citizens of Bottrop. A lot of people are still skeptical whether the ideas of the project are realizable. A crucial point is that the aims of the project will be impossible to reach if the house owners do not participate with environmental friendly investments for their home. It can be said that, despite all the effort that was put in with regard to information and motivation, there is still a communication and understanding problem in the society of Bottrop ³⁴. A lot of people are skeptical with regard to the financing of the project. However it is obvious that the citizens were motivated in the beginning of the project and contributed a big part in making Bottrop the model city of the Ruhr region. Accusations of some citizens are now that those responsible for the project arouse big interest and hopes, but

³⁴ www.derwesten.de, 27.02.2013

the realization is not as good as expected. Even though inhabitants had the opportunity to get informed and consulted with regard to energy saving measures, some of the citizens have the feeling that the costs are still just on them to carry. As some say, the support money that was more or less promised cannot be felt in the expected way and is not existent in the desired dimension ³⁵. Thereby those people are rather not willing to make the expensive investment in order to redevelop their buildings. Other than that, a lot of people are skeptical concerning redevelopment measures, due to the fact that they are not sure how long their redeveloped homes will be up to date, before new knowledge is gained. So far it seems like the society of Bottrop is split in two even halves with regard to the acceptance of the project InnovationCity Ruhr. Still it is remarkable how the project is approached and it will be very suspenseful to see whether the aims can be reached in all its extend. In any case, the InnovationCity Management and the city of Bottrop already made an excellent job by planning and conceptualizing the undertaking. Therefore it is likely that the project will be a success, so that it can serve as a model and an example for industrial cities all over the world.

³⁵ www.derwesten.de, 15.02.2014

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