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The important increase of cultural tourism interested in the mining topic, touring now the region's fanciful orography (with gullies and crests reaching 3000 meters above sea level), enjoying its special and attractive pine forest and foggy landscapes, are an important motivation to accomplish AHMM,A.C.'s management project for the most emblematic industrial heritage sites in the Real del Monte and Pachuca mining district, this will allow us to help to preserve them and to give them the historical place they deserve. (Fig. 9)

La Dificultad Mine recuperation and reutilization work is a very important step towards accomplishing the management general project for the whole mining district, since this site is for sure the most emblematic one in the region's mining history. Located on top of the mountain range, it has been an important reference point in the mining district geography; we took advantage of this aspect in order to create an interpretation center facilitating a reading of this district's history, origin, and mining heritage sites importance, its towns and the cultural and natural environment aspects, becoming a reference and a model for other restoration projects in mining towns of Mexico. (Fig.10)

Fig.9
View of the boiler room and chimney after restoration.
Photo: Miguel Iwadare, 2011.

Fig.10
General view of the restored mine.
Photo; Marco H. Badillo, 2011.

Tracing the Invisible- Electropolis Berlin

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Abstract
The "Berlin Center for Industrial Heritage" (BZI) is a project jointly developed by the University of Applied Sciences Berlin (HTW) and the Foundation of the German Museum for Technology in Berlin (SDTB). Since autumn 2011, the initial budget is provided by a programme to promote the innovative potential of culture in Berlin which is financed by the European Regional Development Fund. The HTW has been engaged in the broad topic of industrial culture for more than 20 years and has developed its own Competence Centre for Regional Industrial Heritage (KRIK) three years ago to arouse public awareness in relation to industrial culture. It was also the KRIK where the idea to found the BZI was born.

One of the many missions of the BZI is to develop an intelligent and visionary tourism concept for Berlin's industrial heritage. Instead of collecting all data and references of all industrial sites in Berlin and then do a selection based on worn-out criteria from existing touristic concepts, we first of all started thinking: What's special about Berlin's industrial heritage when compared to other places? What's the story it stands for in human history? Why should people – and especially younger generations – be at all interested in listening to this story? Which message could be drawn from Berlin's industrial experience that is useful for the global society of tomorrow? These are the questions that will be answered in the following chapters.

Keywords: technological infrastructures; intangible heritage; universal cultural values; scale-jumping in landscape interpretation; regional messages; participative approach

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The traditional key regions of industrial heritage in Germany are the Ruhr area and the Saarland in the west and Lusatia and Saxony in the east of the country. The industrial heritage movements in all these regions resulted from socially desperate situations: the structural changes – triggered by the coal and steel crisis in Western Germany in the 1960s and the implosion of the German Democratic Republic in Eastern Germany in 1990 – led to the collapse of the whole social system in these regions. The increasing decay and impending demolition of the last witnesses of the long gone economic heydays were conceived by the regional population as an existential affront against their own identity. Hence, their fight for preservation has always been a political project and a fight for social recognition. The German term 'Industriekultur'[1] became internationally known in the wake of such events as the IBA Emscher Park (Ruhr area 1989-1999) or the IBA See (Lusatia 2000-2010). With this term, a new concept emerged in the 1970s, facilitating a global perspective on the phenomena of the industrial age. Until today, the term stands for a comprehensive study of the diverse impacts industrialization has had on human culture, also including a critical

Fig.1
The power plant Oberspree was built outside the city centre in 1896/97. It had its own harbour to improve the supply with coal. It is one of the oldest three-phase power plants in Europe and still preserved.
(Source: Vattenfall Europe, Historical Archives, Berlin)

interpretation of present-day processes.[2]

Next to Saxony, Lusatia, the Ruhr and the Saar, Berlin is currently becoming a new regional focus for industrial heritage in Germany. However, the social context is fundamentally different. Even though there are numerous initiatives in Berlin committed to preserve the industrial heritage, the situation is not as socially desperate as in the traditional industrial regions. Furthermore, it is the first time that the German research activities on industrial heritage do not focus on an industrialized region but an industrially defined metropolitan area. Undoubtedly, Berlin can compete with the traditional industrial regions in terms of unemployment rates, and – almost like samples under a magnifying glass – the social upheavals following 1990 intensify in Berlin. However, Berlin's economic structure is much more diversified than in traditional, mono-structured mining regions, and being a capital and international metropolis, Berlin offers a large variety of opportunities that help to establish a positive urban identity.

This becomes particularly clear when we consider the spontaneous connotations that come to our minds when we think of Berlin: city of subculture, a good place to live even without making much money, or the city where you can make a living out of your creative work... Klaus Wowereit, mayor of Berlin, phrased this as "Berlin is poor but sexy."[3] What is completely missing in the city's public perception is the topic of industrial heritage. Even if you have a beer in Kulturbrauerei[4] you rather think about the future of the creative workers than about the past of the brewers.

The Electropolis Berlin

From a historic perspective, however, Berlin only developed as an industrial city. Following the unification of the Deutsche Reich under the supremacy of Prussia in 1871 and the Electric Revolution that began in 1880, the hitherto provincial Berlin evolved into a rapidly growing city. It became the focus for administration, lobbyists and banks. Also, the Technical University and the outstanding public education system contributed to the development of the unique electricity cluster in Berlin. The stakeholders knew each other well and had excellent international contacts that proved to be a fertile ground for technological and social innovations.

The city itself became a laboratory to test and apply the new technologies. Within just two decades, Berlin advanced to be temporarily the biggest metropolis on the European continent. The booming industries in the electronics, railway and engineering sectors as well as the new radio and communication technologies made industrial and architectural history around the world. Both the industrial production and the organisation of urban life had an enormous hunger for energy. The public power and water supply infrastructure as well as the modern transport systems inspired the whole world. Towards the end of the 19th century "Electropolis Berlin" became a synonym for the modern, networked city.

It is no wonder that Berlin's industrial history is present everywhere in the city – you just do not see it. However, "there is no second place on earth today featuring such a high number of outstanding monuments related to the electro-technical industry and the supply of electricity" says Jörg Haspel, Curator for the Preservation of Historical Monuments in Berlin.[5] Due to the special political situation of the two World Wars and then the divided city, which prevented a fundamental modernisation during the Cold War, an extraordinarily large number of the 120-year-old buildings still exist today. Many kept their original use and remain in operation – a fact that promises particular authenticity and integrity. The new World Heritage initiative, currently being pushed forward by Berlin's Senate Department for Monuments, would be the first in Berlin to explicitly focus on the city's industrial history.

Fig.2
Berlin's forgotten past as an industrial metropolis is what the current World Heritage initiative wants to bring back to people's minds. This aerial view from 1928 shows the AEG Cable Works in Schöneweide. (Source: SDTB, AEG archives)

Among the sites considered for nomination are (in chronological order of their construction): transformer station Buchhändlerhof in Mauerstrasse in Mitte (built from 1885-86 as second municipal block power station in Berlin; today reused[6]); power station Oberspree in Schöneweide (built from 1895-97, Fig. 1); the former AEG Cable Works Oberspree and AEG transformer factory in Schöneweide (built between 1895 and 1929, Fig. 2 and 3); power station Charlottenburg (built in 1899/1900; operating); AEG factories in Brunnenstrasse in Wedding (built between 1906 and 1913; reused after closedown in the 1980s); dynamo hall in Siemensstadt (built in 1906 and expanded until 1942; operating); AEG turbine hall in Huttenstrasse in Moabit (built in 1909; operating, Fig. 4); Siemensforum with Siemens headquarter (built from 1910-13, expanded in 1922 and from 1929-30); switchgear skyscraper and switchgear halls in Siemensstadt (built from 1926-28, 1916, 1921/22 and 1927/28; operating); power station Klingenberg in Lichtenberg (built from 1925-26; operating). In order to emphasise the grid character of the Electropolis as an industrial cityscape, it is planned to include also the electrification of the metropolitan transport systems.[7]

The importance of the architectural and technical sites of the Electropolis Berlin was already recognized on both sides of the wall in the post-WWII time. After the

Fig.3
Some parts of the former AEG premises in Schöneweide reopened as the HTW's second university campus when restoration finished in October 2009. The core area of the cable factory is still operating; the reuse of the remaining areas is currently under discussion. (Source: HTW Berlin)

Fig.4
The AEG turbine hall in Huttenstrasse in Moabit was erected in 1909 and was listed as a monument as early as in 1956. It is still operating today. (Copyright: Deutsche Bundespost Berlin, stamp from 1987)

fall of the Berlin Wall, the city's conservation authorities cooperated with the industry to create concepts for the development and preservation of the Electropolis' buildings. One example is the "Preservation Conception for Siemensstadt"[8]; similar concepts were developed in co-operation with the energy supplier Vattenfall Europe, the former BEWAG.[9] Today, some 20 years after the fall of the wall, the economic situation in Berlin seems to have normalised and the city is striving for re-industrialisation. This new pressure to develop economically is increased by Germany's extreme dependency on exports and its commitment to compete on the global markets. Regulations regarding the conservation of monuments and hitherto existing agreements are increasingly called into question. In addition, all activities regarding the protection of monuments suffer from the disastrous financial situation of the public sector and the extreme downsizing of state agencies in recent years. The companies, on the other hand, lament the shortage of junior employees and a lacking public interest in a vivid industry in Berlin.

Fig.5
The transformer station in Wilhemshavener Strasse, built in 1900/01, was one of the first of its type in Berlin. The technical purpose of the building is difficult to recognise for the layman. (Source: Vattenfall Europe, Historical Archives, Berlin)

Fig.6
Franz Skarbina's painting, View across the Railway in the North of Berlin, dating from 1895, shows how industry settled outside the commuter train ring of Berlin. (Source: Stadtmuseum Berlin)

The "invisible" Electropolis

So far, analysis in the context of the World Heritage initiative has focussed on the morphology, the visible, the "physical landscape". The "mental landscape" and the intangible heritage of the Electropolis Berlin were only partially considered.[10] This subject seems indeed to be as elusive as electricity itself: it is around us, but it remains invisible. We cannot smell it, and we cannot touch it. Electricity is not a material, but a medium; no resource, but a technological infrastructure. It eludes our senses – nevertheless it is the "fifth" element and of substantial importance for our everyday lives.

In a certain way electricity can also be seen as a metaphor for Berlin: the city is fascinating and inspiring and has the power to attract people. Berlin is electrifying – and the electric shock might stimulate us or might result in overkill, a nervous breakdown.

The presence of technological infrastructure is generally hard to trace in the cityscape; this applies in particular to the supply infrastructure for electricity. All cables in Berlin were laid underground right from the beginning. How electricity is produced and distributed, how it arrives in our sockets at home is something that most inhabitants are unaware of. Also, most buildings that are connected to this infrastructure remain invisible in the cityscape. The Berlin transformer stations dating from around 1900 are a good example: they were integrated into the street fronts, their façades were designed as normal office or residential buildings so that their technological functions remain concealed until today (Fig. 5). However, there is still another "invisibility" that makes it difficult to reflect about the

intangible heritage of the Electropolis Berlin: the decentralised layout of the city. With the rapid growth that began in the 1880s the factories abandoned the city centre. New industrial towns, such as Siemensstadt and Schöneweide, or new industrial areas, as in Moabit and Wedding, were built outside the city gates, each of them offering thousands of jobs (Fig. 6). Since the foundation of Great Berlin in 1920, these key areas of the Electropolis are a part of the Berlin municipality. In the collective perception, however, this periphery of the city was widely ignored and still is ignored today. And also the city's living industries – even though they still exist today – are left unnoticed and do not raise the awareness of most Berliners.

Fig.7
Public energy supply in Germany can be traced back to Emil Rathenau's presentation of electric lighting in a luxury Berlin restaurant in 1882. Despite some technical problems backstage (the picture shows him cooling the dynamo) he succeeded in convincing the city's most important stakeholders about the advantages of electricity. (Source: Vattenfall Europe, Historical Archives, Berlin)

This assumed invisibility is in stark contrast to the intensity by which electrification radically and globally changed the way how people lived together in the last 120 years. The wide-spread availability of electricity has produced a new quality of life over the years, which today – at least in Western Europe – is so much taken for granted that we only notice this fact when we have to face occasional power cuts. Being an integral part of the services of public interest, the nation-wide power supply is considered an essential, social and cultural value in Germany, while other parts of the world are striving to reach this goal in their development. Whereas the civilisation's achievements of electrification are generally welcomed today, there is harsh criticism against the technological-cultural system of regulation which evolved from the provision of conventional electricity: waste of electric power, electro smog, "loss of the night", monopoly economy, non-transparent pricing, the unfair way how labour is divided internationally etc. One issue raised during the current structural conflict between conventional and renewable energies is how the system of conventional power supply once developed, how it could be implemented worldwide and how it is affecting our lives. Analysing and reviewing the Electric Revolution 120 years ago may also be helpful in finding reasonable solutions to meet the challenges of the global structural changes taking place at the moment – and when to be alert.

Landscapes of Power

Technology itself has no intrinsic logic. The construction of technological systems is governed by the interests and intentions of certain stakeholders. In order to be accepted by society, technological inventions require important political decisions and a cultural context to promote such ideas. Technological systems use space; they create characteristic structures and hierarchies. The contemporary perspective during the Electric Revolution held the view that large technological systems could solve many social problems. This position was already reflected in the euphoria enthusing about the use of steam engines and railways during the first industrial revolution and gained more and more momentum during the electrification and the second industrial revolution. Today, we are aware of the environmental, social, and cultural "side effects" in the use of large-scale technologies. The current zeitgeist tends to favour decentralised solutions as they seem more human and feasible – and their possible impacts seem to be better manageable.

The history of the Electropolis Berlin shows that the construction of systems to supply electricity in large areas was always accompanied by the conflict between private companies and society at large, which could not be solved until today. Despite this fact, it was the idea to create something for the benefit of all that motivated the municipal protagonists who negotiated the development of electricity grids with private enterprises. The bosses of these companies, which later became large energy corporations, were fully aware of the accumulation opportunities and actively promoted the creation of new markets (Fig. 7). The generation of power developed from “small scale, isolated operations consisting of only a few participants to a phenomenon covering wide areas.”[11] The central power plants for Berlin were built outside the city centre near the water and had their own harbours to improve the supply with huge amounts of coal. The power station Oberspree (Fig. 1) is the first example of this development in Berlin. Once the street lights and the first trams were electrified, it only took a few decades to connect almost all households to the electricity grid.[12] More and more electric appliances were invented and their marketing was massively promoted in public places (Fig. 8). But electricity also empowered completely new applications for entertainment and e.g. paved the way for the film and music industries.

Fig.8
Electric appliances quickly became a status symbol of modern times. New application technologies, in particular for domestic use, were promoted by massive marketing campaigns in the public space. Photography taken in 1931.
(Source: Vattenfall Europe, Historical Archives, Berlin)

Since the beginning, the electrical power industries were dominated by powerful monopolies. The Berlin giants Siemens and AEG (Fig. 9) prevailed on the German market; in “coopetition” with the US corporations General Electric and Westinghouse, they dominated the global market around 1900, concluded agreements to protect their home markets and to divide up the rest of the world. The Berlin banks were involved in these activities right from the start as they were needed to pre-finance the capital intensive building of the facilities. Power plant technology and tram systems were exported to the whole world. Within a few decades, Berlin became a metropolis and Germany an export nation. Even in times when the state intended to exercise more control, it was unable to find a compromise between the economic interests of industry and the overall interests of society. This deadlock remains unsolved until today.[13]

Almost “in the shadow of light”, an energy system emerged that made the consumers unilaterally dependent on a centralised and monopolistically organised electric power industry operating globally. Consumer resistance to this regulation system began with the activities of only a few persons who withdrew from the conventional energy supply by producing their own electricity. Co-operatives set up the first wind wheels, solar panels were installed on the roofs, people tried to save energy – what had started with single actions turned into a broadening social movement and promoted the development of alternative technologies. The structural conflict became obvious. Today, renewable energies leverage a social vision that is seeking forms of global energy supply which are more ecological and more democratic. Maybe this time – with the second attempt – we succeed in making our electricity supply more sustainable. However, we should not only focus on environmental aspects, but should particularly consider how existing international power

structures and the global division of labour can be regulated with greater justice.[14]

Tracing the Invisible

The BZI sees the Electropolis Berlin as a historically grown functional arrangement and a cultural system. The key question is that of the universal cultural value: Which lessons can be learned from Berlin’s industrial past as Electropolis that are useful for our time? Our interpretation comprises a critical discussion of current questions and includes a socio-political and a post-colonial message. Our aim is to encourage public reflection on how a global perspective of human development can help to rethink the energy supply of the future and to make its distribution more just, and we think this would in fact be an extremely worthwhile contribution of Berlin’s industrial heritage on our way to the global society.

Fig.9
Company brand of the Allgemeine Elektricitäts-Gesellschaft (AEG) dating from 1888. (Source: SDTB, AEG archives)

The BZI develops a grid of prototypical theme routes leading across the city that give testimony to the past and present of the industrial metropolis of Berlin. Existing tours will be aligned and integrated into a consistent concept. Our aim is to obtain a connotative overall impression of the industrial metropolis, so that the Electropolis Berlin can be interpreted across time, space and generations as a system that goes far beyond the city’s limits. We want to pull Berlin out of today’s dominating connotations as a cultural metropolis, demonstrate how its powerful electricity industries contributed in a specific way to the development of today’s global “networks of power” and make the particular spatial-functional interconnectedness of the Electropolis Berlin visible and understandable.

For this purpose, it seems appropriate to simultaneously think in two directions: from the city centre to the outside - and then back again from the periphery to the inside. Inside the Electropolis innovations were created, and the young capital and emerging metropolis Berlin outshined the rest of the nation. The province turned into a resource for material and people – and the world became the market. The Electropolis Berlin, as an economic, political, cultural and functional unit, cannot be reduced to its centre, but must encompass the supposedly “invisible” periphery and all international relations. A new conception of the Electropolis should widen our understanding of culture to cross today’s regional and national boundaries. This approach opens new potentials of interpretation aiming at Silesia, Saxony or the Ruhr area – and overseas. And it would reveal the division of labour between the regions which still exists today. In addition, the global understanding of these interregional and transnational relations could serve as good basis for developing specific content profiles and messages for each industrial region in the world.

Fig.10
Ludwig Sütterlin, picture of the "Goddess of Light" with idealised landscape in the background. Issued 1897 in the anniversary publication "The Berlin Electricity Works Until the End of 1896. Planned and Built by the Allgemeine Elektricitäts-Gesellschaft."
(Source: Vattenfall Europe, Historical Archives, Berlin)

The BZI proposes ten thematic routes to approach the particular profile of the Electropolis Berlin, its “spirit of place”, from a global perspective. Each route addresses social questions that shape a time loop engulfing past, presence and future. The current situation can be the starting or end point and invites participants to talk from generation to generation or from region to region. Competing points of view are confronted with each other.

1. The Networked City (Myth of Electropolis): Water, gas, electricity, transport and radio networks as urban root systems. The role of electricity for traffic and communication. The internet. Access points, nodes and control points in the network. Urban quality of life and consumer autonomy.
2. Beyond the Socket: The whole chain of conventional electricity supply: source, delivery of raw materials, power plants, transformer stations, cable networks, different types of consumers. New energy sources (biomass, wind, solar, domestic waste etc.) and their exploration.
3. Landscapes of Power: From early isolated operations to the network system. The electric isolation of West Berlin after 1952, the network system in Western Europe and the former Eastern Bloc, energy reunification after 1994. Outlook on new energy landscapes: new sources, new networks. (Fig. 10)
4. Urban Hygiene: Water supply and waste water, sewage treatment plants, drain fields, public baths, delousing and disinfection facilities, emigration of manufacturing industries, hospitals for epidemics and graveyards outside the city, living in the green outskirts (Berlin Modern Housing Estates).
5. Industrious Berlin: Manufacturing and creative industries. Old factories still operating, creative reuses and new industries (fashion, design, music etc.). Creative clusters in the past and today. Marketing slogans praising Berlin as industrial hub today and 120 years ago.
6. Everyday Life and Dying: Mansions, tenements, applied electric technology, household appliances, department stores, market halls, food industry, breweries, leisure facilities, social housing. Typical diseases, large-sized hospitals, insane asylums, madhouses, graveyards, graves.
7. Urban Mining: Use of resources, origin of reusable waste, waste as a resource, mining in the city, waste collection and management. Green tech. Life cycle of products and criticism of the throwaway society. Dumpsites, mountains of rubble, incineration plants.
8. The Music Industry: Hand-made music, electrification of music. Instruments, compositions, recordings, the juke box. Today's music industry, Technopolis Berlin, independent scene, working conditions and funding, controversy over copyrights in the internet.
9. Made in Germany: Export nation, trade and banks (Deutsche Bank etc.), international financial market, imported and exported products, German companies on the global market, international relations, development aid, German export model.
10. Operation and Administration: Cycles and processes, logistics and organisation. Transit periods and temporary residence. Computerisation of industrial production, just in time management, central server rooms, emergency services. Forced labour and mass extermination.

These ten theme routes will be developed in co-operation with professional tourism providers who know Berlin’s industrial heritage and are experienced in using new, interactive ways to present information. It is planned to co-operate with additional social actors for each route. The BZI routes will be available as virtual routes displayed on a virtual map on the internet and will be marketed as a package. However, the BZI will not act as a tourism provider. Our aim is to help existing providers to increase visibility and their economic potentials by providing an intelligent

and consistent conception and overall marketing – we consider ourselves as their partners and not as their competitors.

The BZI deliberately breaks with traditional tourism expectations. We concentrate on "insider tips" for those who lived in Berlin for a long time and those who just have arrived, and who wish to see the city through different eyes. For us, it is most important to find places where you can strike up a conversation with other people about urban and social developments and the "spirit of place" of the Electropolis Berlin. The BZI will develop new criteria, and to be considered for one of the main routes, a site needs to fulfil at least one of the following requirements: 1) Representativeness and Density: these places are very representative for a theme route and/or showcase a high density of various topics; 2) Explorer potential: there are unexpected things to discover at these places. Hidden treasures; urban exploration; 3) Complexity of meanings of place: the simultaneity of the non-simultaneous is very high at this place. The lost, the never-built and the newly emerging; 4) Meeting places: you can meet contemporary witnesses, activists and/or visionaries here who tell stories about the place’s historic and/or future development; 5) Living the change: locals continuously inform about their progressing work on the internet or by e-mail; interested persons can participate in some of the work.

Network strategy: Organising public interest

The BZI sees itself as an open platform for social communication about the old and the newly emerging industrial heritage of Berlin. Our aim is to organise a joint interpretation process of the Electropolis Berlin and to raise public interest in the city's industrial past and present. It is the BZI's intention to stimulate the exchange and to increase and create new networks between stakeholders, institutions and initiatives who are engaged in Berlin's industrial heritage. Diversity plays a major role in what we do. We co-operate with partners coming from various social and public areas such as monument protection, urban development, industrial and economic policy, museums and archives, non-profit associations, real estate agents, owners and investors, universities and marketing agencies.

In addition, there are various creative communities who use public spaces, the internet or new media (e.g. games[15] or geocaching) to communicate about industrial heritage and the close links between technology and culture. Undoubtedly, they are also story tellers and as such they are important stakeholders in the process to interpret the Electropolis Berlin. The involvement of these creative communities, however, is a novelty in Germany’s discourse about industrial heritage and it requires new ways of thinking. Classic participation models do not seem to fit in this case because they often are drafted as unilateral models by public administration, are too inflexible and do not offer much artistic freedom. For this reason, the BZI prefers the term "Interaction" to "Participation" because we hold the view that meaningful analytical content can only be found jointly, and we are looking for ways to design this public interpretation process openly and with pleasure.

The BZI brings together the various and sometimes contradictory views of different stakeholders by creating global and integrative topics for the theme routes. It is a major concern of the BZI to comply with everybody's right to interpret things differently, even though this can be a complex challenge. The fact that the BZI was founded by academic institutions is a great advantage because it allows us to work independently and in depth. And even though the stakeholders currently do not share the same values, there is at least one bridging interest: they all are seeking

for their cultural roots in Berlin's industrial story (for different reasons of course) and hope to obtain some added value for their own work by actively participating in the network.

Furthermore, tourism is a worthy topic when it comes to building a heterogeneous network, as tourism today is generally understood as a marketing strategy, and marketing is something all groups of stakeholders are somehow interested in. The BZI, however, appreciates tourism in particular as an interactive tool for landscape interpretation – as a collaborative analysis that helps to communicate and implement values. The theoretical reflection on what tourism is and can do for society has not yet been developed further by academics, but to us it looks fundamental when it comes to develop and implement a touristic concept. In this sense, we see the BZI also as an academic experiment put to practice. We work on content, and we play with contents, with different and sometimes opposing contents, looking for messages that are useful on our way to the global society.

Open Roads

One great advantage of not having focussed on industrial heritage in Berlin before is that there is still an array of possible interpretations. Being aware of previous models and traditions but acting independently, we have the great opportunity to develop new contents and messages and new types of storytelling, and to interact with new groups in our society. Due to the particular cultural milieu in Berlin, this might also be the first opportunity to highlight the reasons that contribute to the fascination we have with industrial heritage: it is the reflection about unsolved complex questions we have as persons and which are inherently human. In this new and enlightening sense, we could understand the unfulfilled promise of paradise on earth not as an imposition but as a mental-cultural liberation from worn-out patterns of thought.

And just as some artists did in the 1920s and 1930s when they created the term "Electropolis"[16], we can give birth today to new utopian narratives about the electric city and the global society of the future. However, this requires a high degree of curiosity and open-mindedness including the willingness to give up certainties believed to be true as well as the ability to come to terms with ambivalences and to uphold fairness. The BZI wants to motivate everybody to join this journey into the unknown – as we are convinced it will be really worth it.

Endnotes

1 The term Industriearchäologie could not prevail in German, partially due to a language problem. Facilitating a much broader understanding of the industrialized society, the concept of Industriekultur proved to be more useful in the German context. For details see Helmuth Albrecht, "Zum Verhältnis von Industriearchäologie, Industriekultur und Industriedenkmalpflege in Deutschland", Schriftenreihe der Georg-Agricola-Gesellschaft No. 34 (2011): 22-23.

2 Interestingly, the theoretical debates in the Federal Republic of Germany from which the new concept Industriekultur the emerged, have also been inspired by ideas from the German Democratic Republic. For details on how industrial heritage developed as a new discipline in both German states see Marion Steiner, "Industrial Heritage in Germany" (in English), Patrimonio Industriale: Rivista Semestrale dell'Associazione Italiana per il Patrimonio Archeologico Industriale No. 8 (2011); and Helmuth Albrecht, "Zum Verhältnis von…" (full details see endnote No. 1): 15-30.

3 The mayor of Berlin, Klaus Wowereit, used this slogan for the first time in 2003 and continued using it as some sort of personal motto during subsequent election campaigns. Nowadays, the slogan can be found on various merchandising products such as bags and pouches for Berlin tourists.

4 A former brewery that was renovated and now houses clubs, pubs, a cinema and a theatre.

5 Jörg Haspel and Hubert Staroste, "Das Erbe der Elektropolis Berlin", ICOMOS Journals of the German National Committee No. LI (51) (2011): 74 (original quotation in German).

6 Between 1993 and 1997 this former source of power for the Electropolis became a new source of innovations: the "E-Werk" was one of Berlin's hippest techno clubs and had global influence on the emerging techno scene. Today, it is an event centre and office building.

7 For more detailed information on the World Heritage initiative see Jörg Haspel and Hubert Staroste, "Elektropolis Berlin – Erbe von Weltrang", industrie-kultur No. 03 (2011): 28-30; and Jörg Haspel and Hubert Staroste, "Das Erbe der Elektropolis Berlin", ICOMOS Journals of the German National Committee No. LI (51) (2011): 74-78.

8 See Wolfgang Schäche (ed.), Denkmalschutzkonzeption Siemensstadt, Vol. 1: Industriegebäude, Vol. 2: Wohnsiedlungen (Berlin: Konopka, 1994 and 1995).

9 See Jörg Haspel and Hubert Staroste, "Elektropolis Berlin – Erbe von Weltrang", industrie-kultur No. 03 (2011): 30; and Jörg Haspel and Hubert Staroste, "Das Erbe der Elektropolis Berlin", ICOMOS Journals of the German National Committee No. LI (51) (2011): 78.

10 A first expansion was made by Thorsten Dame in Elektropolis Berlin. Die Energie der Großstadt (Berlin, Gebr. Mann Verlag, 2011). Dame explains e.g. how the term "Elektropolis" originates in utopian narratives from the 1920s and 1930s and describes the network of stakeholders that was essential for Berlin's way to become a metropolis.

11 Axel Föhl, "Bauten der Industrie und Technik", Schriftenreihe des Deutschen Nationalkomitees für Denkmalschutz No. 47 (1995): 105 (original quotation in German). In the beginning, electricity was generated in block power stations, later in power stations and finally in central power plants. The various steps in this technological development can be seen in Berlin at various original sites.

12 In 1914 5% were connected, 25% in 1925, and by 1938 this number had increased to 92%. See Jörg Haspel, "Elektropolis – das Erbe der elektrotechnischen Industrie und der Stromversorgung," in Denkmalpflege und Gesellschaft, Detlef Karg zum 65. Geburtstag, ed. Thomas Drachenberg (Rostock: Hinstorff, 2010): 114.

13 Günter Karweina described the situation in Germany in Der Stromstaat. Stern-Buch-Report (Hamburg: Gruner und Jahr, 1984); for the situation in Europe, see Peter Becker, Aufstieg und Krise der deutschen Stromkonzerne: Zugleich ein Beitrag zur Entwicklung des Energierechts (Bochum: Ponte Press Verlags GmbH, 2011).

14 In his latest book, published before his death, the German economist and social scientist, Hermann Scheer, winner of the alternative Nobel prize in 1999, proved how the complete switch to renewable energies can be realised in a decentralised and cost-effective way and how even the periphery and developing countries can be supplied with electricity; Hermann Scheer, Der energethische Imperativ: 100% jetzt. Wie der vollständige Wechsel zu erneuerbaren Energien zu realisieren ist (München: Kunstmann, 2010).

15 See for example http://amanita-design.net/samorost-1.

16 Examples are given by Thorsten Dame, Elektropolis Berlin. Die Energie der Großstadt (Berlin, Gebr. Mann Verlag, 2011): 24-30. One is Erich Kästner's novel The 35th of May, or Conrad's Ride to the South Seas, first published in 1931 (original language: German).

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