SPIRALCONSTRUCTION GUNTA STÖLZL
FROM THE WORK LESSONS OF PAUL KLEE

NEW EUROPEAN BAUHAUS
DAS SACHSEN-ANHALT PROJEKT

ECONOMICAL DIMENSION

ECONOMY

AESTHETIC-CULTURAL DIMENSION

CITY OF DESSAU-ROßLAU

BAUHAUS FOUNDATION

ANHALT UNIVERSITY

UBA UMWELTBUNDESAMT

RESEARCH & TEACHING DIMENSION

ECOLOGICAL DIMENSION

TRANSFORMATIVE

REAL-WORLD LABORATORY

PARTICIPATION

POST- FOSSIL TRANSFORMATION-REGION

FORUM RATHENAU

LOCAL

„GENOSSENSCHAFT 4.0“ / MLU HALLE

COMMUNITY-SOCIAL DIMENSION

REGIONAL

TECHNOLOGICAL DIMENSION

EUROPEAN

NEW EUROPEAN BAUHAUS
STRUCTURAL TRANSFORMATION LAB
SAXONY-ANHALT

1// Concept
Sustainable structural change as a leitmotif

2// Applied Research and Teaching
In and around the historic Bauhaus Dessau

3// Structural Transformation Lab
Participatory real-world laboratory & implementation

1// Concept

NEW EUROPEAN BAUHAUS | STRUCTURAL TRANSFORMATION LAB SAXONY-ANHALT

#participative #transformative #structural #transdisciplinary #postcarbon #cultural #technological #economical #glocal

The aim of the NEW EUROPEAN BAUHAUS | STRUCTURAL TRANSFORMATION LAB SAXONY-ANHALT is to research, communicate and establish sustainable, visionary design for the 21st century. An outstanding place with international appeal is being created anew, where teaching and research, culture and business interact directly. The NEW EUROPEAN BAUHAUS | STRUCTURAL TRANSFORMATION LAB SAXONY-ANHALT brings together sectors that have hitherto acted individually in order to accelerate the step into a sustainable century. Following the example of the historic Bauhaus, the networking of disciplines for visionary and application-oriented design is being implemented in a real-world laboratory.

To this end, the core competencies of the Bauhaus Dessau Foundation and the Anhalt University of Applied Sciences will be bundled and sharpened at the Bauhaus Campus and networked with the diverse disciplines of the Anhalt University of Applied Sciences at its three locations. Together with other partners from science, business, art and culture, a holistic think & do tank is being established that is committed to visionary, sustainable concepts and their concrete implementation and identity-creating design.

As a foundation in the combination of the Bauhaus Dessau Foundation and the Master's degree programmes in architecture and design with further evaluation partners such as the Federal Environment Agency, whose headquarters is also located in Dessau, everything is already there at the STRUCTURAL TRANSFORMATION LAB. There is just a need to bring all this together and to engage it in dialogue with civil society and a wide range of actors in order to develop holistic strategies together.

The English-language design and architecture master's programmes are truly global. The students at the Bauhaus campus come from over 20 countries and span all continents and time zones. There are also close cooperative relationships, for example with the ensa in Nantes, the Politecnico di Milano or the Technion in Haifa. Together with the appeal of the historic Bauhaus and the international charisma of the Bauhaus Dessau Foundation, it is possible to authentically address global issues with their cultural, social and economic conditions and to test solutions in an exemplary manner in the real-world laboratory.

Whereas the historic Bauhaus set out to master the new challenges of industrial modernity in artistic and design terms, these manifestations of a bygone modernity in the coal-mining region of Saxony-Anhalt form the ideal starting point for tackling the design challenges in the face of the threats to the planet in the 21st century.

Huge open-cast mines, power plants and industrial operations shaped the face of the landscape. When the Bauhaus building, illuminated by electric light as an almost floating cube, fascinated its contemporaries in December 1926, no one had in mind the clouds of smoke, the open-cast mines and the defoliated trees that formed the underbelly of the electrification of the region and the capital Berlin. The lighting fixtures that Marianne Brandt, the only female designer in the metal workshop, created for the Bauhaus building can be admired in the new Bauhaus Museum and in the original buildings in Dessau. What do they tell us today, given the knowledge of the costs of this industrialisation and its lasting consequences for our planet and its climate?

In this respect, the departure into weightlessness in the 1920s is contrasted with the hard and earthy reality of decades of economic structural change in a landscape and region that has been completely shaped by human hands, a case study of the Anthropocene.

How the coal phase-out can be shaped in the region with a new carbon culture, in architecture, in agriculture, in mobility, in education, cultural mediation and in the design of everyday objects: concepts for this are being developed and implemented in Saxony-Anhalt in the real-world laboratory of universities, research institutes, companies and cultural institutions. Their principle is that of the relay: as switching points of translation between natural science and design, materials research and architecture, environmental science and art, climate research and landscape conservation.

Working across disciplines and knowledge cultures does not only mean academic experts but also aims at the cooperation of various local actors.

A far-reaching goal is to network this think & do tank with European and global initiatives and expertise. The self-commitment of all signatory states of the Paris Climate Agreement leads to similar questions in many regions of Europe and worldwide. Learning from each other, the exchange of experiences and best practice examples, will in the best case lead to adaptable joint strategies whose intensive local anchoring integrates the diverse social, economic and cultural conditions and visions of the future.

2// Applied research and teaching

New, transdisciplinary teaching and research with a focus on ecological, social and economic transformation.

The nucleus, in addition to the real-world laboratory, is the academic core: Anhalt University of Applied Sciences, Department of Architecture, Facility Management and Geoinformation and the Department of Design together with the Bauhaus Dessau Foundation, located on the joint campus in and around the historic BAUHAUS building.

The task of the Bauhaus Dessau Foundation is to keep the Bauhaus alive in its ideas and themes and to communicate them. Its legal mandate is „to make contributions to problems of the design of today's living environment in view of the ideas and approaches of the historical Bauhaus". The foundation works in a historically reflexive manner and at the same time asks about today's relevance and the present potentials that can be derived from the Bauhaus heritage for the 21st century. The evaluation of the real-world laboratory in international discourse is an essential contribution to the „NEW EUROPEAN BAUHAUS".

The Department of Architecture, Facility Management and Geoinformation and the Department of Design at Anhalt University of Applied Sciences continue the educational tradition of the Bauhaus at its historic location, but adapt it to today's pressing issues in connection with the rapidly developing technological possibilities of our time. The English-language Integrated Design (MAID) and Architecture (DIA) courses in particular, with almost 300 students from all over the world, are highly attractive to the next generation of global architects and designers.

The NEW EUROPEAN BAUHAUS | STRUCTURAL TRANSFORMATION LAB SAXONY-ANHALT brings the two scientific institutions even closer together and links them with top-class scientific and educational institutions active in Saxony-Anhalt. Together with European and international cooperation partners, experimental learning formats are tested locally, in which holistic design is proven and realised as a process of participatory sustainable transformation. The international students form the research teams, which discursively work on project-specific topics in the real-world laboratory under the direction of the professors of the university and with scientific support from the foundation and other partners. The programmatic approaches of the educational heritage of the Bauhaus are updated in internationally oriented formats.

3// STRUCTURAL TRANSFORMATION LAB

The STRUCTURAL TRANSFORMATION LAB is based at its core on a participatory, “glocal” real-world laboratory, under the direction of the Anhalt University of Applied Science with the Bauhaus Dessau Foundation. Contributing institutions are integrated to ensure participation, scientific support, evaluation and a tangible impact of the initiative. With the Forum Rathenau, the MLU Halle, the city of Dessau-Roßlau and the support of the Federal Environment Agency, a first circle of participating institutions has been formed. In the spirit of the spiral as the symbol of the STRUCTURAL TRANSFORMATION LAB, it invites further actors from science and art, research-based industry and civil society to participate in order to promote the relevant dimensions of social, ecological, technological, economic and, not least, aesthetic transformation.

Selection strategy for the Reallabor project

The project to be worked on as a real-world laboratory requires special criteria and is developed in a qualification process with the supporting institutions of the “New European Bauhaus” and interested local actors. In addition to the concrete implementation possibilities, criteria of social depth in the sense of social participation and sustainable social significance are just as relevant as the degree of technological innovation and the effective contribution to climate improvement and a paradigm shift in the design of people’s built and natural environments.

Design and evaluation of the project progress in the Reallabor

The real-world laboratory project is developed and evaluated by the cooperation partners. The locations are transformation and structural change spaces in areas of the former lignite mining regions. The real-world laboratory-project is being worked on and planned ready for implementation by the international students of the Master’s courses in the Departments of Architecture and Design. Professors and guests accompany and coordinate.

The principle of “cooperative” participation by citizens is an integral part of the project development, accompanied by the scientific interdisciplinary institution (IWE) Cooperative and Cooperative Research of the Martin Luther University Halle-Wittenberg. The project is scientifically evaluated throughout its entire duration by the Federal Environment Agency and international experts as guests of the Bauhaus Foundation.

The planning office of the real-world laboratory is the historic Bauhaus building in Dessau and the workshops and laboratories of the Anhalt University of Applied Sciences.

Radiation and dissemination

The real-world laboratory project is linked to other projects that correspond to the project either through overarching issues or through the exchange of findings and methods.

The international appeal is given both by the international students in the Master’s courses and the international evaluation, as well as by the topic: climate and structural change in rural areas in former lignite mining regions and post-fossil transformation areas.

3// STRUCTURAL TRANSFORMATION LAB

THE REALISATION
THE PLACE: POST-FOSSIL TRANSFORMATION

The Region

In order to achieve the climate protection goals of the European Union and the Paris Climate Agreement, the Federal Republic of Germany has committed itself to phasing out the use of lignite for energy production by 2038.

The model projects for the real-world laboratory are located in southern Saxony-Anhalt. The administrative districts of Anhalt-Bitterfeld, Mansfeld-Südharz and the Burgenlandkreis are located in the Central German lignite district. The Deuben lignite-fired power plant in the Burgenlandkreis district will be taken off the grid at the end of 2021, and in 2034 the closure of the Schkopau power plant, south of Halle, will end coal-fired power generation in Saxony-Anhalt. The Profen opencast mine in the south-east of the state will also be shut down. Consequently, the region will experience intensive structural change, which has already begun.

Strong anchor points for this change already exist: for example, after a decline at the turn of the millennium, the “Solar Valley” near Thalheim is experiencing a sustained upswing again thanks to innovative product development in the field of photovoltaics. The drug manufacturer “Mibe” in Brehna is producing the Biontech vaccine against the Corona virus at full speed and the company IDT Biologica is expanding its production capacity for vector vaccines.

The US company Farasis is building a battery factory in Bitterfeld-Wolfen with a capacity of six to ten gigawatt hours per year. Various companies and research institutes are cooperating in the “Model Region Green Hydrogen Central Germany” to build a complete H^2 value chain. These are just a few examples of a changing business structure away from coal and towards innovation and sustainability. The region is proud of a rich cultural heritage, of which the cathedrals of Naumburg and Zeitz are only exemplary. However, the transformation process also created new cultural highlights in the region, such as the FERROPOLIS venue, the “city of iron”, or new landscape art around the Goitzsche Lake near Bitterfeld, a former open-cast mine.

Nevertheless, the double structural change after the political turnaround in 1989 and now in the wake of the end of coal mining and fossil-fuel power plants is anything but conflict-free. Structural change not only requires great economic efforts, but must also be made tangible for the citizens as a sustainable project for the future, in keeping with the idea of the New European Bauhaus.

Saxony-Anhalt

Coal mines and coal power plants in the EU

Helsinki
Tallinn
Stockholm
Riga
Vilnius
Copenhagen
Dublin
Amsterdam
Berlin
Warsaw
Brussels
Luxembourg
Prague
Paris
Bratislava
Vienna
Budapest
Ljubljana
Zagreb
Bucharest
Sofia
Rome
Madrid
Lisbon
Athens
Nicosia
Valletta

Saxony-Anhalt
Berlin
Dessau-Roßlau
Halle
Leipzig

transition region
brown coal mining
coal fired plant, closing 2034

3// STRUCTURAL TRANSFORMATION LAB

Hohenmölsen, small town on the edge of the Profen open-cast lignite mine
Photo: Andreas Stedtler, MZ-Bildershop. bildershop.mz.de

Roofs in Zeitz
MZ Photo: Hartmut Krimmer

Dance! Zeitz! former noodle factory
Photo: Jeanette Müller

The city

Apart from some industrial cores and spatially limited coal mining areas and post-mining landscapes, the region is rural. The urban structures consist largely of small and medium-sized towns with 5,000 to 50,000 inhabitants. It is precisely these towns that suffer most from structural changes: An ageing population, few cultural offerings, being cut off from transport infrastructures.

On the other hand, they are also the cities that offer the greatest potential for sustainable development in an increasingly digital economy. If these decentralised places are intelligently networked with the central German metropolitan region of Leipzig-Halle, new, forward-looking living and working models can be developed.

The building site

In a competitive process, an urban district is selected for the “real laboratory” that is currently threatened in its structural substance and social cohesion by vacancy and migration, but offers sufficient starting points to test new cooperative development models in a healthy mix of preservation and renewal. In the process, different strategic issues of various individual projects can be tied together in an integrated project.

3// STRUCTURAL TRANSFORMATION LAB

THE CONCEPT
The real-world laboratory is based on direct participation in the sense of a “Cooperative 4.0”

Cooperative residential quarter

In close cooperation with potential cooperative members, a residential quarter will be developed that tests sustainable building methods and materials by revitalising existing structures and adding contemporary additions and extensions. At the same time, through participation, needs and ideas for a communal, integrative way of life are addressed from the beginning and general economic conditions are defined. The participation of people in new housing and structural transformation is to combine identity and economic security through cooperative concepts.

Socio-cultural integration project

An integrative way of life requires close links with socio-cultural offers. These range from enabling co-working and co-living spaces, a cooperative start-up culture, to community care and cultural offerings.

Infrastructure cooperative

The neighbourhood-based, cooperative approach enables decentralised energy supply and smart distribution. By compensating for the lower energy efficiency of existing structures with highly efficient new buildings, sustainability is achieved by balancing in the life-cycle view.

The infrastructure cooperative can also extend to new mobility concepts that are networked with the regional transport infrastructure.

Inclusive open space

The more relaxed real estate market in more peripheral small and medium-sized towns compared to metropolitan regions and the close links with landscape ecosystems allow for ecologically valuable design of open spaces. This is an essential locational advantage of decentralised urban structures. Minimising sealed surfaces, rainwater management, near-natural open space design to increase biodiversity, urban gardening as a component of ecological food supply and conscious nutrition concepts are essential components of the holistic development concept.

Partner-Institution //
Anhalt University of Applied Sciences

Hochschule Anhalt
Anhalt University of Applied Sciences

In addition to the international Master's degree programmes in architecture and design at the Bauhaus Campus Dessau, which support the STRUCTURAL TRANSFORMATION LAB, a number of teaching and research institutions of Anhalt University of Applied Sciences within and outside of the Dessau location provide valuable contributions to the holistic approach in the development, scientific support and realisation of the real-world laboratory.

These include, for example:

- Integrated Design and the German-language Master's degree programme in Architecture with a focus on sustainable building.
- Landscape architecture and environmental planning for the area of open space and biodiversity.
- Real estate management for the internal organisation for the development of the city quarter.
- Photovoltaic Engineering in conjunction with the leading-edge cluster Solar Valley Mitteldeutschland for the implementation of research results in the field of solar energy use in construction.
- Geoinformation and Data Sciences for analysis tools and model projections.
- Design Research as a joint degree programme of the university with the Bauhaus Dessau Foundation and the Humboldt University Berlin for systematic scientific analysis, monitoring and evaluation.
- Preservation of historical monuments (together with MLU) and the English-language course of study "Architectural and Cultural Heritage" on the sustainable use of historic buildings.

Partner-Institution //
Bauhaus Dessau Foundation

Bauhaus
Dessau

Workshops for the whole earth- Experimental educational formats for shaping a new nature-culture

Towards a Bauhaus School Europe :
Workshops for the whole earth

Kick-off: European Forum on Education-Oriented Design Making/ Bauhaus Dessau 4./ 5.6. 2021

What can we still learn from the Bauhaus today in view of the almost planetary challenges of designing our living environment? The European Forum of Design Education is the starting point for a European initiative that develops components for workshops of post-fossil post-disciplinary design for schools, educational projects and universities.

The institutions working together in the Bauhaus Cooperation Berlin Dessau Weimar - the Bauhaus Archive Berlin, the Bauhaus Dessau Foundation and the Klassik Stiftung Weimar - are not only places of collection, mediation and care of the Bauhaus heritage, but also places of experimental learning.

The forum Workshops for the whole earth, which the Bauhaus Dessau Foundation is curating for the Bauhaus Cooperation, is an invitation to discussion and exchange between a wide variety of transcultural educational initiatives, schools, programmes and projects that combine a critical revision of the heritage of the European art school reform movements ¬- of which the Bauhaus was one - with a mandate for alternative forms of design education in the 21st century. The material-based, local resource and common welfare-oriented practices of creation that come together in the Workshops for the Whole Earth present transnational ecological cultures of making.

The event, developed together with international designers, researchers, architects and artists, is the prelude to further conversations with institutions, initiatives and actors across Europe. The aim of these conversations are building blocks of a curriculum of “workshops for the whole earth”, which will be docked and further developed as a quasi travelling experimental workshop at universities and initiatives, cultural institutions and academies throughout Europe.

Contributing Institution //
FORUM RATHENAU / CarbonCycleCultureClub C4

Das Rathenau Forum ist eine Initiative der Partner:

ChemiePark Bitterfeld-Wolfen

FERROPOLIS Stadt aus Eisen

science²public Gesellschaft für Wissenschaftskommunikation

The participatory design phase of the New European Bauhaus movement needs networking communication formats like the CarbonCycleCultureClub C4.

The C4 is our contribution to structural change: together we learn to deal with risks, to design the future - in the sense of a multidisciplinary and multiform New European Bauhaus movement.

In the club, we debate, develop and test necessary transformation processes using the foresight methodology. The concrete standards of action and expectations for the future on site are taken into account as well as the latest scientific influences. The results will be summarised in further phases under the concept of the real-world laboratory, in which pilots of “rurban” digital and carbon transformation processes contribute to the Delivery Phase of the New European Bauhaus. This approach enables the development of concrete perspectives for development and action in the sense of transformation design. We do this in critical appreciation of the historical Bauhaus, but in view of the next industrial-social epoch in responsibility for the Anthropocene.

Contributing Institution //
CITY OF DESSAU-ROSSLAU

The transformative city

As the economic centre of the Anhalt region, the city of Dessau-Rosslau plans to strategically position itself as a campus for the environment and sustainability, with local projects addressing the following dimensions of impact:

Aesthetic - cultural, social and ecological dimensions

In various projects, e.g. residential buildings with the approach of linking aspects of sustainability and energy efficiency with questions of contemporary urban development and architecture, and exemplary cultural buildings, the new real-world laboratory themes should also open up perspectives for new participation options.

Technological, economic and ecological dimensions

In the local “Trains Centre”, work is being done on converting conventionally operated rail vehicles to hydrogen technology. The aim is to extend the useful life of existing vehicles and convert them to a climate-friendly drive technology. This ties in with the debate on improved obsolescence management.

Ecological, economic and social dimensions

Dealing with floods, heavy rainfall events and the consequences of drought, and the development of targeted strategies for climate adaptation in the landscape and built-up areas are central guiding themes.

In all dimensional areas, know-how is being developed that can be used in the central real-world laboratory and findings from the real laboratory flow back into these areas. At the same time, a basis is created for the development of a regional competence network and thus the emergence of new green job opportunities and the sustainable restructuring of the economy (post-transformation).

Contributing Institution //

MARTIN-LUTHER-UNIVERSITÄT
HALLE-WITTENBERG

IWE “Genossenschafts-“ and Cooperative Research Martin Luther University Halle-Wittenberg

The cooperative idea - with the German denomination “Genossenschaft” - is based on the idea of equal cooperation in tasks in which the members have a sustainable interest. The registered cooperative translates this core idea into a legal form of enterprise. In this case, the sustainable realisation of the purpose takes precedence over the profit-making purpose that determines other forms of corporate law.

The infrastructure cooperative uses this cooperative model to fulfil tasks in which there is also a public interest. This is concretised in and through the cooperative and radiates out to society. The openness of the cooperative creates incentives for participation. By formulating the funding purpose accordingly, a corresponding orientation can be legally secured. Municipalities can also participate in infrastructure cooperatives, although they are not assigned a special position.

The Cooperative 4.0 uses, among other things, digital instruments to promote participation. This opens up new fields of activity for cooperative and sustainable management and makes participation processes more effective and transparent. At the same time, several corresponding fields of activity can be integrated.

Contributing Institution //

MARTIN-LUTHER-UNIVERSITÄT
HALLE-WITTENBERG

Martin Luther University Halle-Wittenberg Institute for Structural Change and Biodiversity in Post-mining Landscapes (MIS)

The MIS offers important synergies for the New Bauhaus project. With its complementary social science perspective, it informs the project in the areas of developing participatory post-fossil democracies and sustainable resource cultures. The MIS aims to help ensure that structural change is shaped in harmony with the concerns of the people affected and in relation to their lifeworlds. The institute conducts research from the federal state of Saxony-Anhalt, but works systematically in a comparative way on different regions and their relationship to national or global developments and local characteristics. The goals of the MIS can be summarised as follows:

1. Research into processes of structural change

- Systematic and comparative processing and analysis of processes of structural change
- Bundling of different scientific competences
- Strengthening and international networking of theory-based empirical research
- Development of comparative, transformative, collaborative and participatory research approaches

2. Co-creation through innovation and discussion

- Contributing to the social participation of science
- Inspiring and contributing to the development of concrete innovations in different areas of structural change
- Enabling and establishing forums for societal participation

3. Dialogue and advisory support

- Strengthening the dialogue between practice and basic research
- Policy advice and other advisory activities
- Knowledge transfer to different social fields and actors

Contributing Institution //
Federal Environment Agency (UBA)

The Federal Environment Agency (UBA) with its headquarters in Dessau is Germany's central environmental authority. With its 1600 employees, it ensures that Germany has a healthy environment in which people can live protected as far as possible from harmful environmental impacts. "For people and the environment" is its motto.

In the research agenda "Urban Environmental Protection", it deals with improving the environment and quality of life in cities in three thematic clusters:

- **Cluster 1:** Environmentally friendly, socially acceptable and health-promoting urban development
- **Cluster 2:** Environmentally friendly urban resource use and regional circular economy
- **Cluster 3:** Environmental protection through coordinated urban and infrastructure development

UBA is thus an important partner in the evaluation and scientific monitoring of the projects in the real-world laboratory.

NEW EUROPEAN BAUHAUS
STRUCTURAL TRANSFORMATION LAB SAXONY-ANHALT

Contact: NEB-Sachsen-Anhalt-Projekt@hs-anhalt.de