

Concept Paper New European Bauhaus

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Question: which problem should the New European Bauhaus (NEB) solve?

Answer Sustainable planning and construction is an important part of the EU Green Deal and the Renovation Wave in order to achieve the Paris climate targets. In order to achieve wider acceptance and thus support for sustainable construction methods among clients, stakeholders in the construction value chain and society, design aspects should acquire greater significance. As with the Bauhaus of its time, high-quality and long-lasting sustainable urban districts, buildings and open spaces should be created through targeted collaboration between various design disciplines and with engineers and academics. This means improving processes, disseminating knowledge and expanding communication, with the involvement of all specialist stakeholders.

In Germany, there are already many ideas and points of departure for achieving these goals in terms of climate-friendly construction and resource efficient use of materials.

1. Phase – Design (gathering materials and ideas)

Challenge

The stated objectives are all very admirable. Much has already been considered, researched and implemented. However, there has been a failure to implement the necessary transformation as a real revolution in construction, or to achieve scaling up and the spread associated with scaling up across all stakeholder groups in the construction and real estate industries. Often, good ideas fail because of supposed legal limitations or a lack of knowledge and experience.

Proposed approach

1. Basic evaluation and research on existing solutions (based on what has already been worked out and not starting from scratch again!)
2. Identification of the main reasons (myths, policies, regulations) why sustainable construction is not implemented
3. Identification of the real levers
 - a. What foundations are already in place?
 - New Leipzig Charter 2020
 - Davos Declaration 2017
 - Davos Quality Assessment Draft
 - DGNB Diamond
 - DGNB_Report_Circular_Economy_DE.pdf, Stuttgart 2019

- Hillebrandt, Riegler-Floors, Rosen, Seggewies: Atlas Recycling / Manual of Recycling, Edition DETAIL, München 2018 / 2019
- Reports from the Baukultur Foundation
- Knowledge Foundation (www.norocketscience.earth)
- "Phase Sustainability" initiative by DGNB and BAK
- "Bauhaus of the Earth" initiative in Berlin-Brandenburg

b. What adjustments can be made?

Aesthetics: Sustainable and beautiful architecture can usually only be seen in flagship projects. An overwhelming proportion of the built environment attempts to integrate sustainable elements into construction, but the design component is neglected, because many often fail to draw upon the expertise of planners.

Costs: the rumour that climate protection and sustainability make construction more expensive persists. Poor quality is accepted and sustainable construction is often implemented through technical solutions alone. There is a need for a Europe-wide communication strategy based on real figures that prove that it is no more expensive to build sustainably. Any follow-up costs due to potential pollutant clean-up, disposal costs, etc. must also be made transparent.

KfW (a promotional bank in Germany) and other funding programmes have to focus even more on achieving sustainability goals and not merely on working through energy efficiency measures.

Design/construction and Technology: resource consumption, "embodied energy" and life cycle considerations still do not play the role they deserve in assessing the sustainability of buildings. Easy-to-use databases and integrated evaluation systems need to be promoted: for example, life cycle assessment of structures and entire buildings, including the CO₂ footprint, the use of which simply needs to become widespread. See: <https://urban-mining-index.de/>

In view of the rapidly worsening climate crisis, it is necessary to create in particular the conditions for *emission-negative* construction. This can be achieved by using organic materials (especially wood from sustainable forestry). When trees grow, CO₂ is removed from the atmosphere by photosynthesis, which can be safely stored for many decades through professional installation/construction. This means that by using organic materials, not only high emissions associated with mineral building materials can be avoided, but, moreover, CO₂ inputs from other sectors can be compensated. Recent analyses (see for example Churkina et al. 2020, Nature Sustainability) show that a significant part of global greenhouse gas emissions would be avoided if new construction and renovation were to be carried out predominantly by using wood in the future. Some German federal states (e.g. Baden-Württemberg and North Rhine-Westphalia) are already taking the offensive in this regard, however, this urgently needs to be raised to the national and European level.

Furthermore, no-tech and low-tech approaches and the question of sufficiency must



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become a fundamental part of every construction project.

Law: current procurement regulations have to consistently provide evidence of sustainable construction methods. Also, sustainability criteria have to be mandatory assessment criteria for architectural competitions. Furthermore, the aspects of sustainable construction have to become the basis for every construction, renovation or demolition permit process. Innovation and good planning have to be promoted through targeted deregulation and greater trust in building designers/planners.

Qualifications: providing information on topics such as sustainable planning and construction in education, training, and continuing professional development, especially with a view to interdisciplinary cooperation.

Digitalisation: the possibilities of digital planning methods (BIM etc.) have to take greater account of sustainable planning aspects and, in particular, be made available for continuous quality control of the buildings under construction.

Specific regulations on:

(1) Building without harmful substances – they endanger human health and biodiversity, hinder recycling, make disposal problems a community issue and therefore run up a bill to be presented to future generations of the EU.

- ➔ Removal of all harmful substances from construction products
- ➔ “Healthy buildings innovation drive”

(2) Building with recycled materials – the EU can only cover approx. 9% of the raw material supply from its own sources. In the case of critical materials, the proportion of self-sufficiency is assumed to be less than 3% (European Commission: Report on critical raw materials for the EU – ad hoc Working Group, 2014).

This means that over 90% of resource consumption is satisfied externally, which promotes global injustice and thus burdens future generations around the world.

- ➔ Promotion of the proportion of secondary raw materials in building products
- ➔ “Recycling innovation drive”

(3) Building with ReUse components – they directly reduce the consumption of primary materials without the additional effort of recycling and currently have a very high level of acceptance, keyword “vintage”. However, their use is made very difficult by problems such as changing the planning process, storage and processing, warranty issues, the cost of expert opinions on harmful substances and technical performance, etc.

- ➔ Development of an “EU ReUsed Element Platform” comparable with national or international libraries
- ➔ Promoting the uptake of used construction components
- ➔ “ReUsed elements innovation drive”

(4) Waste minimisation – for decades more than 50% of waste generated in Germany has come from the construction industry; this trend is stagnating despite more than 90% of waste being recycled. Due to the fact that differences between recycling / same quality level and downcycling / loss of quality have been disregarded, waste has been generated which has not yet been factored into the planning costs of new buildings and actual production costs.



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- Cost considerations over the entire life cycle of the building
- "Life Cycle Costs / No waste innovation drive"

(5) Area conservation – new development of land is in conflict with other uses (e.g. for food and recreation) and landscape protection (biodiversity, groundwater conservation).

- "Urban consolidation measures" ("soil sealing moratorium")
- "Premise of protecting existing buildings" ("new construction moratorium")
- "De-sealing measures"
- "Greening measures"
- "Change of use" (from mobility to green and living)

2. Phase: delivery – implementation (including the 5 Bauhaus projects)

There is a need for selection processes that are transparent and completely understandable in terms of sustainability, innovation and design quality.

Sustainability is deliberately prioritised here. So far it has mostly been overlooked by selection panels in favour of other criteria, but it forms the basis for intergenerational fairness: leave no waste, waste no resources!

The composition of the selection panels is of crucial importance.

3. Phase: dissemination – communication according to target groups

- a. General Public
 - Press
 - Radio / TV
 - Publications (guidelines, advice, flyers, etc.)
- b. Clients
 - Real estate associations
 - Real estate fairs
- c. Planners/planning professions
 - Series in DAB (Deutsches Architektenblatt - German Architects Magazine)
 - Training academies
 - Universities
 - "Bauhaus Summit"

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National Advisory Group/ Round Table New European Bauhaus