

The climate crisis and scarcity of resources are forcing us to reduce the ecological footprint of architecture and urban development, but this obligation also opens up new opportunities for cultural expression. The principles of circular economy play an important role in approaches to sustainable architecture. The symposium will address this topic on different scales—from building components to the urban fabric—and under two aspects: How can existing materials, buildings and urban areas be adapted and reused, and how can components, architectural objects and cities be designed for future reuse and transformation? International experts from the fields of architecture and social ecology will present various concepts and discuss them with the audience.

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## Keynotes

Helga Weisz is professor at the Faculty of Humanities and Social Sciences, Humboldt-University Berlin and head of Social Metabolism and Impacts, Potsdam Institute for Climate Impact Research (PIK). She has a background in molecular biology (Mag. rer. nat. from the University of Vienna, 1995), cultural studies (Dr. phil. from Humboldt University Berlin, 2002) and social ecology (venia docendi from the University of Klagenfurt, 2006). Her research focuses on the socially organized extraction of raw materials and energy, their transformation into goods and services, their use and final disposal to the environment as waste, emissions and heat, which collectively define the social metabolism. Transforming the industrial metabolism to reduce its environmental and resource impacts, while maintaining its function for human well-being, is a crucial challenge for sustainability. Currently demographic, distributional, health and power implications of various socio-metabolic regimes are at the center of her research.

Harquitectes: is a practice based in Sabadell/Barcelona, Spain, managed by David Lorente Ibáñez, Josep Ricart Ulldemolins, Xavier Ros Majó and Roger Tudó Galí. With a focus on raw materials and their performance, they work on condensing the projects to the architectural essentials. Harquitectes combine existing structures with new ones to achieve concise, self-regulating buildings embedded in the local context. They received numerous prestigious architecture awards and were shortlisted for the EU Mies van der Rohe Award in 2017 and 2019.

## Session 1 Small Scale

Carola Stabauer is an architect in Vienna, Austria and partner of enster.at. She has been teaching at the Vienna University of Technology since 2012 and held workshops at the Graz University of Technology. She is a founding member of HarvestMAP Vienna, a cooperative for the exchange of reusable building materials. In planning and research, she focuses on the principles of circular economy.

Jan Brütting is a civil engineer and PhD student at the Structural Xploration Lab at EPFL Lausanne, Switzerland. His research focuses on the conceptual design of structures made of reused structural elements and explores new optimization and fabrication methods for resource efficient structural design.

Key to these methods is the multi-disciplinary combination of structural and environmental engineering to obtain solutions of lower environmental impact than possible through conventional design.

Univ.-Prof. Annette Hillebrandt is an architect in Cologne and professor for Building Construction, Design and Materials Science at Bergische Universität Wuppertal, with a research focus on recycling potentials in building construction. She is a member of the German Sustainable Building Council, the Urban Mining Association, the re!source Foundation and various design advisory boards and expert groups for ecological and recycling-friendly construction. She is the main author of the “Manual of Recycling” (Edition DETAIL) and initiated [www.material-bibliothek.de](http://www.material-bibliothek.de) and [www.urban-mining-design.de](http://www.urban-mining-design.de). Her awards include the “Urban Mining Award” and the “Hans-Sauer-Award—Designing Circularity in the Built Environment”.

## Session 2 Medium Scale

Ying Jiang is an architect and co-founder of O-Office based in Guangzhou, China. Motivated to explore new architectural possibilities in the contemporary South Chinese urban dynamics, the studio has a special interest in renovation and reuse of existing buildings. They operate on multiple scales and in their professional practice, they use architectural design as a strategic tool for critical observation and exploration of the spatial and economic reality.

Gert Kwekkeboom is a founding partner of Civic Architects, based in Amsterdam, the Netherlands. With an agenda to “design public places”, Civic works on complex renovation projects as well as newly built structures anticipating future change. One of their most prominent projects is LocHal Tilburg, the conversion of a former locomotive factory into a public library.

Muck Petzet is an architect in Munich and Berlin, a curator and a professor for sustainable design at the Accademia di architettura di Mendrisio, USI (Università della Svizzera italiana). In 2012 he was the General Commissioner of the German pavilion with the subject “Reduce/Reuse/Recycle” at La Biennale di Venezia—introducing a value system of avoidance, reuse and reclamation in the architectonic context. Muck Petzet’s extensive engagement with transformation projects set the basis for the development of a “minimal intervention—transformation theory”.

## Session 3 Large Scale

Helmut Haberl is Associate Professor of Human Ecology at the Institute of Social Ecology of the University of Natural Resources and Applied Life Sciences, Vienna. His research is focused on (non-)sustainable resource use, social metabolism, integrated land-system science and long-term social-ecological research. Helmut served as lead author for the 5th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, WGIII) and was awarded an “Advanced Grant” by the European Research Council ERC in 2018.

Sergio Porta is professor of Urban Design and Director of the Urban Design Studies Unit at University of Strathclyde in Glasgow and Academic Director of Building Beauty. His research is on masterplanning for adaptive resilient cities, urban form evolution and Urban MorphoMetrics, and radical community-based construction. He has published over sixty papers on international peer-reviewed journals and two monographs. His latest book is “Masterplanning for Change: Designing the Resilient City” published in July 2020 by RIBA.

Paola Viganò is a professor of Urbanism at IUAV Venice and a professor in Urban Theory and Urban Design at the EPFL Lausanne where she heads the Laboratory of Urbanism and the interdisciplinary Habitat Research Centre. In 2013 she received the Grand Prix de l’Urbanisme in France; in 2016 the title of Doctor Honoris Causa from the UCL Louvain; in 2017 the Flemish Culture Award for Architecture (Ultima Architectuur) and in 2018 the Gold Medal for Lifetime Achievement (Medaglia d’Oro alla carriera) awarded by the Triennale di Milano. From 1990 to 2014, she ran a studio with Bernardo Secchi, working on numerous projects and visions for Europe. Since 2015 Studio Paola Viganò (based in Milan and Brussels) has been designing urban and landscape projects as well as public spaces in Europe and has won many international competitions.

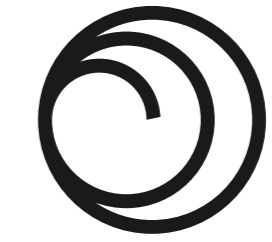
## Respondents from the University of Applied Arts Vienna

Karin Raith is professor for Building Construction at the University of Applied Arts Vienna and also teaches and researches in the field of landscape history and theory. Together with Lukas Allner she curated and organized the Circular Strategies Symposium.

Lukas Allner is an architect and researcher based in Vienna. He teaches at the University of Applied Arts Vienna and he is a co-curator of the Circular Strategies Symposium.

Bernhard Sommer is an architect and researcher based in Vienna. He teaches Energy Design at the University of Applied Arts Vienna and at the Estonian Academy of Arts. He is co-founder and principal of EXIKON, an architecture and energy-design practice.

Andrea Börner heads the Urban Strategies department at the Institute of Architecture, University of Applied Arts Vienna and teaches and researches in the fields of urban strategies, theory of the landscape and theory of living spaces.



# circular strategies

Towards a Sustainable  
Built Environment

Symposium—2 October 2020  
University of Applied Arts Vienna  
Join Zoom Meeting <https://zoom.us/j/97789227836>  
Meeting ID: 977 8922 7836

# Towards a Sustainable Built Environment

We all agree that architecture and urban planning can do a lot to mitigate climate change and conserve natural resources—but what are the most effective strategies for reducing the ecological footprint of the construction sector? Should new “green and smart” architecture be built in place of buildings with low sustainability standards or is it better to preserve existing structures and save their materials and embodied energy? Should we minimize the use of materials in new buildings by lightweight construction or rather save resources by extending the utilization cycle of architecture? Can the lifespan of buildings be extended by taking into account adaptation right from the beginning? Some argue for neutral spaces that can accommodate changing uses, while others prefer modular buildings for dismantling and reassembly. How can dilapidated or unused architecture be refurbished, reprogrammed and improved in quality with reasonable effort?

Lacaton & Vassal’s motto “Never tear down, always transform” seems to characterize a valid approach to counteract a number of crises: not only climate change and the scarcity of natural resources, but also the loss of land for agriculture and environmental services due to progressive urbanization.

We are forced to radically rethink architectural practice, but this also opens up possibilities for a new (technical) culture and design language.

After a short general introduction, the two keynote lectures will contrast a scientific and an architectural understanding of the topic—a specific view of industrial metabolism from the perspective of social ecology and a distinct architectural practice of adaptive reuse. The following three sessions each comprise three lectures and a subsequent panel discussion.

**Session 1: Small Scale—Reuse of building components, design of components for reuse.** Speakers will discuss the recycling of building materials and strategies of Design for Disassembly (DfD)

**Session 2: Medium Scale—Reuse of buildings, design of buildings for reuse** gives an insight into approaches to the renovation and re-activation of existing buildings as well as design practices for future adaptability of architecture.

**Session 3: Large Scale—Reuse of urban areas, design of urban areas for reuse** addresses an urban scale, the topics of urban resilience and social ecology.

Moderated by [Wojciech Czaja](#), author and journalist, Vienna

**Due to the Covid-19 regulations this symposium only takes place online.**

**Join Zoom Meeting <https://zoom.us/j/97789227836>  
Meeting ID 977 8922 7836**

09:30—11:00

## Intro

### Welcome and opening

Gerald Bast  
Rector of the University of Applied Arts Vienna

### Why Circular Strategies?

Karin Raith  
University of Applied Arts Vienna

#### Keynote 1

From the perspective of social ecology

### Energy Revolutions and Material Cycling in Earth and Human History

Helga Weisz  
Potsdam Institute for Climate Impact Research and Humboldt-University Berlin, Germany

#### Keynote 2

From the perspective of architecture

### The Nature of Building

Harquitectes  
Sabadell, Spain

11:30—13:00

## Session 1

### Small Scale

Reuse of building components  
design of components for reuse

### Re:use, Experimental Approach and Practical Application

Carola Stabauer  
enster, Harvest MAP, TU Wien, Austria

### Form Follows Availability—Designing Load-bearing Structures Through Component Reuse

Jan Brütting  
EPFL Lausanne, Switzerland

### Urban Mining Design: Circular Economy Building Strategy

Annette Hillebrandt  
Prof. of Construction | Design | Material,  
Bergische Universität Wuppertal, Germany

### Panel discussion

with Lukas Allner (University of Applied Arts Vienna), Carola Stabauer, Jan Brütting and Annette Hillebrandt

13:00—14:00

## Lunch break

14:00—15:30

## Session 2

### Medium Scale

Reuse of buildings  
design of buildings for reuse

### Three Reuse Projects in Pearl River Delta

Ying Jiang  
O-Office Architects, Guongzhou, China

### It’s Already There—Augmenting Matter and Meaning through Architectural Reuse

Gert Kwekkeboom  
Civic Architects, Amsterdam, Netherlands

### Architectonic Lifecycle Management

Muck Petzet  
Munich/Berlin, Germany

### Panel discussion

with Bernhard Sommer (University of Applied Arts Vienna), Ying Jiang, Gert Kwekkeboom and Muck Petzet

16:00—17:30

## Session 3

### Large Scale

Reuse of urban areas  
design of urban areas for reuse

### The Role of Material Stock Patterns for Societies’ Resource Use and Well-being

Helmut Haberl  
Institute of Social Ecology, University of Natural Resources and Life Sciences, Vienna, Austria

### Masterplanning the Adaptive City

Sergio Porta  
University of Strathclyde, Glasgow, Scotland

### The City Territory as a Renewable Resource

Paola Viganò  
Milan/Brussels, EPFL Lausanne and IUAV Venice

### Panel discussion

with Andrea Börner (University of Applied Arts Vienna), Helmut Haberl, Sergio Porta and Paola Viganò

# “Never tear down, always transform.”

## Lacaton & Vassal

**Concept and organization:**  
Karin Raith and Lukas Allner,  
Building Construction Department  
at the Institute of Architecture,  
University of Applied Arts Vienna.

This event is a cooperation with  
the VIENNA DESIGN WEEK

University of Applied Arts Vienna  
Oskar-Kokoschka-Platz 2  
1010 Vienna