

Summer School on Circularity in the Built Environment

Faculty of Architecture and the Built Environment at TU Delft

5 - 7 July 2023



From “circuits of capital” to “circuits of value”: addressing the barriers of circularity implementation

Overview

Our focus has been on developing (new) ways of performing circularity as a desirable future in the social realm further inquiring on the normative actions required to scale up and accelerate the transition. During the three days we had the chance to visit specific locations, and meet with people who can facilitate the discussion. Based on their input, and the CBE Hub “Scales to aspects model,” we worked together to identify how “circuits of value” can help us develop and prioritize our criteria for enabling circularity informed decisions.

The Circular Built Environment Hub of the Faculty of Architecture and the Built hosted the second Summer School on Circularity in the Built Environment from 5 to 7 July 2023. Students from all levels of education (BSc, MSc) as well as PhD researchers and professionals are invited to participate.

Scope

Circularity is currently facing limited implementation because of difficulties/hurdles that take place at the level of policies, organizations and individual consumers [1]. At *policy* level, a mismatch between targets set and policy implemented has been noted leading to the need for more coercive practices [2]. Furthermore, the recycling interpretation for circularity is still more dominant; even in pioneering countries like NL or Finland most circular approaches remain focused mainly on the material and not on the product scale [3]. At *organization* level, circular business models still encounter multiple institutional or regulatory barriers; their integration in company practices is made even more thorny by an unaware and at times also un/disinterested consumer base [4]. At *individual* level, the shift from production to consumption, however key to circularity, remains still largely underexplored [5] and individuals' intricate relationships with complex material cultures are severely downplayed [6].

For many, the root of these problems lies in that the circular imaginary has been assembled around an objectivist perspective privileging mostly the economic and technical/technocratic aspects of sustainability [1,7,8]. Therefore, it is the lack of consideration of the constructivist perspective and the socio-cultural, political and civic aspects minimises the impact of circularity on our everyday lives' [6], and increases the risk that circular ventures become fully enclosed by capitalism [9].

This aim of this summer school is to explore a transition from 'circuits of capital' to 'circuits of value' for the capacity of the latter to be understood not only in material terms but also social ones [9, 10]. Our discussion will revolve around values hereby intended as "vital, life-sustaining things, ideas, relations and practices consumed, exchanged and produced" [10]. How are current circular practices related to social relations and what capitalist and non-capitalist values they already embed (if any)? What is the relevance of circularity in labour practices, human rights and society in general? What can we learn from what is now peripheral to the mainstream practices? How can we define what our purpose will be for the future and how shall we introduce or reinforce circularity's societal relevance?

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Organisers & partners

TU Delft is one of the world's leading schools of Architecture and the Built Environment. Circularity features as one of the school's key educational themes and CBE Hub - established already since 2017- brings together researchers from all departments interested and/or invested in the topic of circularity. Counting more than sixty members already, CBE Hub supports circular research initiatives and educational activities at all levels of education.

The Summer School is organised by:

Tillmann Klein is Professor Building Product Innovation at the Delft Technical University. He leads the Circular Built Environment Hub at the Faculty of Architecture and the Built Environment and he is editor in chief of the scientific open access "Journal of Façade Design and Engineering".

Olga Ioannou is Assistant Professor at the Architectural Engineering + Technology Department of Faculty of Architecture and the Built Environment at TU Delft. She is also member of the CBE Hub Steering Committee with a specific focus on supporting the integration of circularity in education.

Alexander Wandl is an Urbanist and Associate Professor at the Chair of Environmental Technology and Design at the Faculty of Architecture and the Built Environment, Delft University of Technology. His research focuses on developing sustainable urbanization, using an extended territorial metabolism approach and integrating (GIS-supported) methods and tools from different disciplines.

Karel Van den Berghe is Assistant Professor in Spatial Planning and Urban and Regional Economy at the TUDelft and lecturer at the Erasmus University Rotterdam. Next to his academic education and research, he is part of different strategic expert advisory groups in The Netherlands, Belgium and for the EU.

Programme

DAY 1 | PERFORMING CIRCULARITY

Morning: Introduction Meeting / Afternoon: Excursion in Rotterdam

This day is dedicated to visiting a number of locations in Rotterdam. Our aim is to showcase different circular initiatives and to meet the people who have envisioned them and have been carrying them out. What has been their motivation? How easy/hard has it been for them to fulfil the original plans? We are also interested in understanding how different stakeholders from different or even conflicting standpoints perceive circularity and mapping their nuanced interpretations.

DAY 2 | THE VALUES OF CIRCULARITY ACROSS SCALES

Morning: Lectures & Discussion/ Afternoon: Workshop/ Evening: Public Debate

Day 2 will focus on circular values across scales. What is the relation of the circular transition with the energy transition? Are circular values across scales conflictual? Which values of circularity are predominant and which ones are usually downplayed? Besides the lectures in the morning, and the workshop session in the afternoon, a public debate is organized in parallel to the summer school activities.

DAY 3 | ENVISIONING AND WORKING TOWARDS A CIRCULAR FUTURE

Morning: Lectures & Discussion/ Afternoon: Workshop

Day 3 is dedicated to exploring organizational/ institutional/social values with regards to the transition to a circular built environment. How does circularity affect labour practices, and how does it inform (or is informed by) human and non-human rights? What can we learn from what is now marginal to the mainstream practices? How can we envision a more circular future together and establish new behaviours?

Invited Guests and Lecturers

DAY 1 | PERFORMNG CIRCULARITY



Maurice Specht is trained as a philosopher and with a PhD in political science. He is curious how people make public spaces/places/value. He is mostly interested in what is going on behind the scenes in these processes. Two big ones are Leeszaal Rotterdam West (a voluntary led library/cultural space) and Buitenplaats Brienoord (a cultural space on an Island).



Karel Van den Berghe is Assistant Professor in Spatial Planning and Urban and Regional Economy at the TU Delft and lecturer at the Erasmus University Rotterdam. Next to his academic education and research, he is part of different strategic expert advisory groups in The Netherlands, Belgium and for the EU.

DAY 2 | THE VALUES OF CIRCULARITY ACROSS SCALES



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We urgently need more circular types of working and living. However, current initiatives are often limited to technological innovation and smaller scale practices. This excludes both socio-cultural approaches and larger scale practices. Port city territories that serve the global transmission of goods and people, are still a major challenge for circular development. We need to develop practices where global flows engage local circular practices and deliver value for people and the environment, where global practices do not only have negative externalities but also add economic, social and cultural value.

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Carola Hein

Carola Hein is Professor History of Architecture and Urban Planning at Delft University of Technology, Professor at Leiden and Erasmus University and UNESCO Chair Water, Ports and Historic Cities. She has published widely in the field of architectural, urban and planning history and has tied historical analysis to contemporary development. Among other major grants, she received a Guggenheim and an Alexander von Humboldt fellowship. She leads the LDE PortCityFutures Centre focusing on space, society and culture, particularly through the lens of port city territories. She serves as IPHS President, as IPHS Editor for Planning Perspectives, as editor of the European Journal of Creative Practices in Cities and Landscapes and Asia book review editor for Journal of Urban History. Her recent books include: Oil Spaces (2021), Urbanisation of the Sea (2020), Adaptive Strategies for Water Heritage (2020), The Routledge Planning History Handbook (2018), Port Cities: Dynamic Landscapes and Global Networks (2011).



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Upgrading existing buildings is a necessary step for energy transition. However, doing that in a resource-efficient way is an additional challenge but also an opportunity to tap into the value of the existing building and materials.

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Thaleia Konstantinou

Thaleia Konstantinou is Assistant Professor in the Department of Architectural Engineering & Technology at the TU Delft Faculty of Architecture and the Built Environment. Her activities are related to research and education, focusing on energy efficiency, façade and design of constructions. She graduated her MSc in Environmental Design and Engineering with distinction from The Bartlett School of Graduate Studies, University College London. During and after her studies, she has worked as an architect in Greek and international practices. She completed her PhD at TU Delft in 2014 on the topic of façade refurbishment strategies as part of the research program “Green Building Innovation”. Following this she worked as a post-doc researcher in various projects related to refurbishment and sustainability.



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Designing with future scenarios in mind and leveraging the usage of existing resources are key factors in establishing a thriving circular economy and shifting from economic values to ecological ones.

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Magdalena Zabek



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Circularity compels life-cycle thinking: thinking about performance, care and repair, and life-cycle cost.

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Ad Straub

Magdalena Zabek is currently a Postdoctoral Researcher at the TU Delft developing circular façade refurbishment solutions for the European co-funded "ÆGIR" project. She has participated in various educational and research activities at the Chair of Reuse in Architecture at RWTH Aachen University and the Chair of Sustainable Construction at Karlsruhe KIT University. In 2022, she completed her PhD, which involved examining the flow of information during the circular design process of buildings that use mineral-based building materials and developing an information delivery model for BIM applications. In addition to her academic pursuits, she also coordinated the EFRE-funded Project "ReBAU", where she applied circular economy strategies in the construction industry, collaborating with industrial partners and municipalities.

Ad Straub is working at TU Delft since 1991. He is associate professor in Public organizations and procurement in construction. His topics of interest are amongst others: methods and instruments for asset and property management, supply chain integration and collaborative relationships, circular public procurement strategies, service-life-thinking, life-cycle costing and business models for sustainable transformation. Ad is involved in education in the bachelor and master of ABE and the master Construction Management and Engineering (CME).

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Circularity goes beyond waste reduction and resource optimization, it involves integrating material flows and social practices throughout the entire life-cycle.

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Elham Maghsoudi Nia



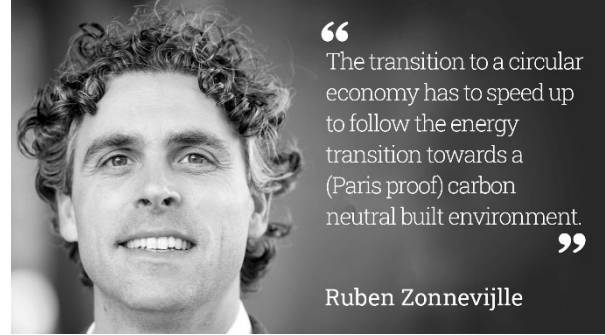
Elham Maghsoudi Nia has been researching sustainable construction materials since 2012, particularly in relation to environmental concerns and the selection of materials for a sustainable future during her MSc and PhD studies (2012 - 2019). She is continuing her research on reducing waste and promoting the reuse of materials in new construction or renovation projects at TU Delft University. Currently, she is working on the project of 'Facilitating the Circulation of Reclaimed Building Elements' (FCRBE) to develop a method to set, measure and report on reuse targets.

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The transition to a circular economy has to speed up to follow the energy transition towards a (Paris proof) carbon neutral built environment.

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Ruben Zonnevillage



Ruben Zonnevillage is program manager for the circular built environment at the Dutch Green Building Council since 2020. In the past, he worked for ENGIE services as a business development and contract manager (2014-2020), at the Deloitte Real Estate Advisory (2008-2014), at Strukton as a sustainability and risk manager and at RHDHV as an environmental, sustainability and external safety expert (2005-2007). Ruben holds an MSC at Sustainable Business and Innovation from the University of Utrecht.

DAY 2 | CAMPUS DEVELOPMENT GROUP SESSION



“Circularity is an urgent topic for all universities, not only academically, but also practically when it comes to managing their own campuses and university buildings.”

Alexandra den Heijer

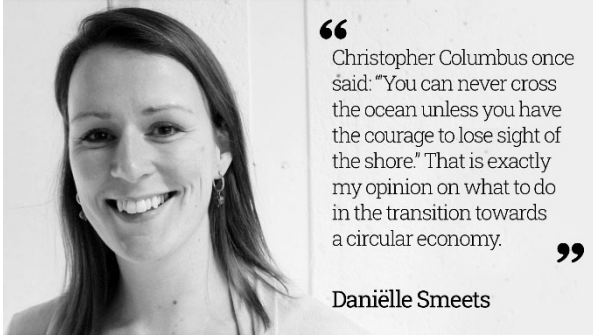


“The most effective way to make circularity common practice, is by letting people experience it is not complicated, but just a different way of thinking and working. Providing good support and relieving the concerns are essential.”

Anke Hacquebord

Alexandra den Heijer is professor of Public Real Estate at TU Delft's Faculty of Architecture and the Built Environment. She has a background in architecture and management. She specializes in university campuses and explores problems and solutions in multi-disciplinary decision-making processes. Over the past decades she has developed models and theories that help universities to design and implement campus innovations. She is internationally renowned for her books and other publications about managing today's campus and planning the campus of the future. Apart from her connections to international universities and campus networks, she actively shares her knowledge with all Dutch universities in project Campus NL. Based on her research for many universities, Alexandra will highlight how campuses could, should and already do serve as living labs for circular transformations.

Anke Hacquebord | After her graduation at the Faculty of Architecture and the Built Environment in Delft, Ir. Anke Hacquebord worked in various research and communication functions. Her personal drive to contribute to a more sustainable society, lead her to the Sustainability programme of Campus Real Estate and Facility Management (CREFM) TU Delft in 2022. As Sustainability Coach, she is the linking pin between the programme (ambitions) and the real estate projects (execution) at the campus. She 'translates' policies to implement these in working routines; she supports project developers to embrace change; and she represents their concerns and obstacles to the Sustainability programme.



Daniëlle Smeets currently fulfils the role of policy officer within the Sustainability Programme of Campus Real Estate & Facility Management. She leads the development and execution of policies concerning sustainable construction and renovation on the TU Delft campus. After graduating at the Faculties of the Built Environment and Industrial Engineering at Eindhoven University of Technology, she was a real estate project manager for Tilburg University, and policy advisor sustainable construction for the municipality of Leiden. It is her goal to shape the sustainable transition in the built environment in a realistic way by engaging stakeholders and creating opportunities to discuss matters in a co-operative way.



Tatiana Gurduza is a project management consultant who focuses mainly on the sustainable side of real estate projects. During her experience as an architect in different architectural offices through the past years, she came to realize that a change of system in the sector is necessary. Tatiana started focusing on sustainable design and ways of improving architectural/construction projects through tools like material passports, urban mining and working with bio-based materials. She believes that by building more knowledge on this topic we can build a better world.



Karlijn Kokhuis is researcher Circular Campus in the Circular Built Environment Hub. After working in an urban design office and the municipality of Amsterdam, she returned to the campus where she was educated as urban planner. In collaboration with the Campus Real Estate organisation (CRE) and the Faculty of Architecture and the Built Environment she investigates how to overcome the challenges that we face realising our ambition to become a fully circular campus, focussing on building materials.

DAY 3 | ENVISIONING AND WORKING TOWARDS A CIRCULAR FUTURE SESSION



Alfons van Marrewijk is Full Professor Construction Cultures at the Department of Management in the Built Environment, Faculty of Architecture and the Built Environment of the Delft University of Technology and Adjunct Professor of Project Management at the Norwegian Business School BI Oslo. Furthermore, he is Associate Professor at the Department Organization Sciences, Vrije Universiteit Amsterdam. In his academic work he uses anthropological theories and methods for studying inter-organizational collaboration and cultural change in technically oriented organizations and complex mega-projects.



Ana Pereira Roders is a Professor in the TUDelft-UNESCO chair on Heritage and Values: Heritage and the Reshaping of Urban Conservation for Sustainability. Ana is Portuguese architect, with a PhD in building technology. She worked at universities in the Netherlands, Portugal, Belgium, the UK and Mozambique. Among the pioneers in the field linking heritage, urban conservation and sustainability, in 2015, Ana gave a TEDx Talk in Hamburg (Germany) on how cities can become resource efficient. Award-winning researcher; Ana partnered in EC projects such as H@V, CLIC, and HERILAND and authored hundreds of publications, disseminating her team's novel work.

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The emphasis on value rather than capital in circularity is a promising development, we must make sure that circular strategies for cities of the future, also address socio-economic challenges and distributive issues. A truly circular system requires systemic change, including a reassessment of our socioeconomic values and priorities.

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Caroline Newton



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What can we learn from citizen-led initiatives on how people collaborate as changemakers toward circular futures?

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Tamara Egger



Caroline Newton is an urban planner, an architect, and a political scientist. Her work and research focus on the social and political dimensions of design. Caroline's research interests encompass the complexity of architecture and planning in post-colonial contexts, intersectionality in/for design and planning, participatory planning and designerly approaches to knowledge production. Caroline advocates for revitalised urban professional participation and the reintroduction of advocacy to the forefront of planning and spatial practises. She advances a critical and involved approach to strategic planning, presenting planning techniques as acts of resistance, as enablers of alternative spatial possibilities and imaginations.

Tamara Egger is a Ph.D. candidate at TU Delft's Faculty of Architecture and the Built Environment. Her current research focuses on socio-spatial aspects and citizen-led initiatives in circular transition. Previously, Tamara worked for the Interamerican Development Bank's Cities LAB in co-productive urban transformation projects in Latin America and the Caribbean. As an urban design consultant, she led various community-based living labs for TU Vienna's Urban Design Lab. Tamara is an active member of "Placemaking Latin America." She contributed to publications such as "Citizen-led Urbanism in Latin America" and is currently producing the documentary film "Reclaiming Lost Paradise."