Newsletter 1

Welcome to the first newsletter of the Interdisciplinary Thesis Lab Group: Circular Building Materials and (re)Manufacturing Hub! The Kick-off Meeting on the 9th of February made it official: for the upcoming half year we (TLBR: Karismi, José-Luis, Batuhan, Alex, Wenhui, Manon, Yajuan, Twan, Koert and Arjan) are the lucky ones that, together with a consortium of partners from practice, the Leiden Delft and Erasmus Universities Center for Sustainability (LDE CfS) and you, will be focussing on one of society's most pressing urban challenges. With this newsletter, we want to introduce ourselves briefly, and reflect on the first two successful sessions that we enjoyed already.

The complex and multidisciplinary nature of Circular Building Hubs demands a holistic approach. Therefore, our group consists of 10 students from 3 different universities and 4 different studies. With backgrounds in Industrial Ecology, Urban Governance, Management in Built Environment, and Applied Mathematics, each of us aims to unravel part of the mystery.

What do we want to achieve in this lab?

First and foremost, each student is working on an individual research report that will be reviewed on an individual basis. Here the added value of the collaboration and input from the peers and partners will be reflected in the research of each student. Working on a joint product with practical relevance will create a dynamic and stimulating environment that will engage participation for all the participants of the lab. The lab is organized around a central issue that will be addressed by all the participants, including partners and thesis researchers. The lab's fundamental inquiry is: "What are the potentials and limitations of a Circular Building Hub?"

This suggests that there are a few fundamental questions that will run across this lab:

- "What exactly is a circular building hub, and what are our goals for it?"
- "What are the prerequisites for a circular building hub in terms of design and management?"

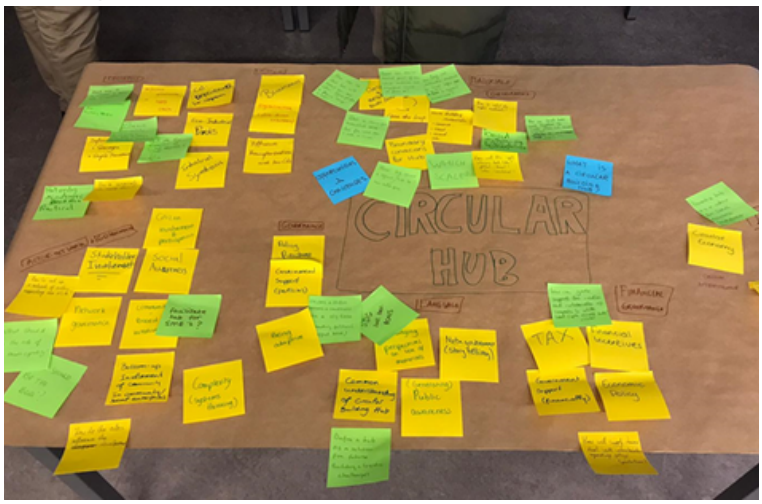
How do we want to engage with you?

For us to come to a good formulation of the concept of what a circular building hub entails, and what it should encompass, we will examine prevailing literature on the topic, as well as doing our own research. Here, we rely on the input of key stakeholders and experts in the field to gather insights about success stories, current shortcomings, (possible) municipal support, etc. We would highly appreciate it, if you could help us with providing us with interesting documents, connect us with interesting stakeholders or are willing to talk to us yourself! If you have tips or ideas, please get in touch with us, via the contact information below.

Scope of the Lab

This lab's geographical scope is the Zuid-Holland province. Zuid-Holland is a sprawling metropolitan region made up of a variety of small to major municipalities. All localities are dealing with a severe housing crisis and are building new homes as a result. Many towns insist that new residences be built in a circular fashion to meet the 2030/2050 CE goal (50 percent /100 percent CE). Where do the circular materials originate and end up? Is it possible for local clusters to meet all the needs, and if so, is it efficient and durable? This is a multi-scale question with many scale levels. The (provincial) area of Zuid-Holland is the focus of this lab. This regional emphasis necessitates a grasp of both national and European trends as well as local events.

Experiences of the first two meetings



In our first meet-up, these perspectives nicely came together when brainstorming important related concepts, questions and characteristics. We did this together with the different consortium members from the municipality of Leiden and Alphen a/d Rijn, Bouwend Nederland, Economic Development Board Alphen a/d Rijn (EDBA), and the province of South-Holland and the LDE CfS. Topics such as 'governance', 'logistics', 'local economy', 'materials', 'geography', and 'language and discourse' were discussed. It soon became clear that everyone of us, as well as the consortium partners had a different idea and interpretation of what exactly a Circular Building Hub would look like, ranging from logistical distribution centers and eco-industrial parks to social workplaces and innovation hubs. Yet, it also became apparent that all forms are important to consider and examine. This was further articulated in our first guest lecture that was provided by professor Karel van den Berghe (Management of the Built Environment, TU Delft) on the underlying drivers of the circular economy and a circular building hub. Moreover, Jan Stokman from demolition company Vlasman B.V shared interesting insights from the field. In the following weeks we will look further in the big black box of the building hubs, and we will update you on our research and progress in two additional newsletters that will be published in May and July. But first we will introduce ourselves. Below, you can read more about each group member, their topic of research and a brief recap on how they experienced our Kick-off event!

Team Members

In the following section all the team members and their first ideas for a research topic will be briefly introduced and they provide a brief reflection on the first meetings that have already taken place.

Karismi Bisesar - 482660kb@eur.nl

My name is Karismi Bisessar, 23 years old and born, raised and still living in Zoetermeer. I have a background in public administration (Leiden University) and currently following the public administration-master 'Urban governance' at Erasmus University Rotterdam. My research topic is centered around the impact of interactions between citizens and local governments on citizen participation in the context of the emergence / use of a circular building hub. For me personally, I experienced the kick-off as an inspirational and motivating start for what is coming the next few months. I found that all the three young speakers, even though all focusing on different areas to make society more sustainable, added great value to the kick-off. Moreover, what I found most interesting in the plenary is to hear all the different perspectives to think about a topic like the circular building and (re)manufacturing hub. I'm very much looking forward to the process and end-result of this thesis lab.

Urban Governance, EUR

Topic:
How can local governments facilitate citizen participation in a circular building hub?

Urban Governance, EUR

Topic:
The role of Meta-governance in the design and Implementation of a circular building hub

José Luis Vázquez - 561655jv@eur.nl

My name is José Luis, I am 26 years old. I am from Guadalajara, Mexico, and have also lived in Vancouver, Canada. Currently I am studying the Master in Public Administration: Urban Governance at Erasmus University Rotterdam. I feel really excited to collaborate in this multidisciplinary lab, where we can meet up and exchange knowledge and points of view from different backgrounds and have perspectives around the same issue. My research interests are on investigating the role of local governments on the implementation of Circular Economy practices in cities. I want to analyze the relation between public and private stakeholders in the design and implementation of Circular Building Material Hub and how Metagovernance can be a tool to achieve circularity in the construction industry. Finally, I would like to explain how a Circular Building Material Hub can have an impact on cities.

Team Members

Koert Nieuwhoff - k.s.nieuwhoff@student.tudelft.nl

My name is Koert Nieuwhoff, 24 years old and I currently live in Utrecht. I have a bachelor's in building engineering at HAN University of Applied Sciences where I specialized in 'organization' within the built environment. I'm currently following the master track Management in the Built Environment at the Technical University Delft. My thesis is about the emergence of the Circular Building Material and (re)Manufacturing hub. My tutors for this research project are Karel van den Berghe and Ruben Vrijhoef. The interdisciplinary nature of the graduation lab was very interesting and pleasant to experience during the real-life kick-off. The first point of interest was the definition of the concept circular building material and (re)manufacture hub, as we had differing views of the concept. I believe this will clear up as we will further develop our understanding and insights into the subject. I'm very curious and excited what the next months of collaboration will bring.

Management in the Built Environment, TU Delft

Topic:
The emergence of the Circular Building Material and (re)Manufacture Hub

Urban Governance, EUR

Topic:
What is the role of Circular Enterprises in managing a Circular Building Hub?

Arjan van Dorsselaer - 474264ad@eur.nl

my bachelor's in Human Geography and Economics (Liberal Arts & Sciences) in Middelburg, I moved to Rotterdam last year for my first master's in Global Business and Sustainability. I enjoyed my stay here so much that I decided to continue studying by doing a master's in Urban Governance. In both my master's my main topic of interest has been social entrepreneurship and community enterprises. Within this thesis lab, I am planning on studying their potential, specifically of circular enterprises', in Circular Building and (Re-)manufacturing Hubs.
For now, I am really enjoying the meet-ups for this thesis lab. I find it a really interesting experience to hear from practitioners in the field, and hear what issues they are facing, which contributes in bridging our theoretical knowledge to present-day challenges. What I like the most is the application of this holistic approach by combining insights from a variety of perspectives and studies. Moreover, the atmosphere during these meetings have been really welcoming and energizing, which motivates me to further unravel the black-box of Circular Hubs.

Team Members

Cenk Batuhan Özaltun - c.b.ozaltun@student.tudelft.nl

My name is Cenk Batuhan Özaltun, 22 years old and from The Hague,and I am following the Master Track Management in the Built Environment at the Faculty of Architecture at TU Delft. For my thesis I chose to focus on the circular economy in the construction sector, because of the major environmental and geopolitical issues we face. While it appears that locating resource loops is important, we must also take into account that current production chains have grown into complex international networks. This creates a paradox in which regulatory arrangements and economic activities to facilitate the circular economy will be scaled up to a supra-national level as well as scaled down to regional and local governments. In my thesis I investigate how inter-firm networks deal with this paradox while realizing the circular economy. To this end, the networks for different building products will be mapped, after which empirical research will be conducted into various links within these networks. The interdisciplinary nature of the thesis lab is very promising. The discussions and work sessions are a great way to share knowledge and see the potential of the circular economy from different perspectives.

Management in the Built Environment, TU Delft

Topic:
Inter-firm networks and glocalization in realizing a circular economy in the construction sector.

Applied Mathematics, TU Delft

Topic:
Integrating statistical simulation with ecological material flow analysis to develop decision-making strategies.

Yajuan Gu - ph.1201.yjg@gmail.com

I'm a master's student at Delft University of Technology majoring in applied mathematics, financial engineering. I also worked for a venture capital firm in the Technology, Media and Telecom sector for several months. Now I participate in the Interdisciplinary Thesis Lab: Circular Building Materials and (re)Manufacturing Hub to explore possible contributions. The Main purpose of my research has been to integrate statistical simulation with ecological material flow analysis to develop decision-making strategies (with economic instruments). The kick-off was very helpful and interesting to me, as I gained a broader insight into relevant topics through the presentations and discussions with other people. I believe that the collaboration makes each one of our research projects better in a meaningful way.

Team Members

Twan Thio - twanthio@gmail.com

My name is Twan Thio, 24 years old, and I am excited to tell you something about the research I will be conducting in the coming months. I have a background in Science & Innovation management which focused mainly on transitional thinking and actor networks. My study will look at how the relationships in industrial parks can be organized for an effective transition towards eco-industrial parks, specifically in Leiden. To acquire a better knowledge of the system as a whole, this study will construct a multi-level perspective (MLP) from all data from a literature review and expert interviews to map the system more clearly. This will be done on a larger scale, as there are no proven eco-industrial parks in the municipality of Leiden yet. Combining recognized drivers and barriers with the system analysis will then lead to a deeper understanding of the current and future systems to integrate all collected data into a conceptual framework that explains the systemic changes required for a successful transition towards eco-industrial parks. Furthermore, these conclusions can be translated towards relevant policy implications in the province of South-Holland and the municipality of Leiden.

Industrial Ecology, TU Delft

Topic:
Transformation of Industrial Parks into Eco-industrial Parks

Industrial Ecology, TU Delft

Topic:
Circular Material Hub for addressing the challenges characterizing urban mining in the built environment

Alex Chiodo - a.chiodo@umail.leidenuniv.nl

My name is Alex Chiodo, and I was born in Italy, more specifically in a small town called Bolzano, located in the northern part of Italy, close to the Austrian border. In 2015 I moved to the Netherlands to start my studies in Environmental Sciences. After my graduation in 2019 I have decided to stay and start working here in the Netherlands.

I am currently following the master program Industrial Ecology at TU Delft. As part of my thesis, I would like to research the feasibility of applying Blockchain technology for tackling the data-related challenges for implementing circular practices in the construction sector.

So far, I have been extremely happy with my experience in the Circular Material Hub. I am especially excited about the interdisciplinary background of the team members. I am confident that people from such diverse backgrounds will contribute greatly to the conceptualization of a Material Hub in Zuid Holland.

Team Members

Manon van Ginkel - manonvginkel@outlook.com

Throughout my master programme Industrial Ecology, I have learned to look at (sustainability) problems for a interdisciplinary, systemic perspective. In my worldview, everything is connected and that is what makes life resilient and beautiful. That is also the reason why looking at issues like Circular Economy, it is impossible to reason from one single perspective. Changes in one area or discipline will inherently result in changes in others. Therefore, my thesis will be an attempt to create systemic change – not focussing on one 'market failure', but addressing a comprehensive overhaul of the system, by looking into changing the basis of the capitalist system: money flows. Specifically, I will be looking into a change in the tax system that promotes circularity through higher taxes on material use and pollution, compensated by a lower tax on labour, including perspectives from multiple stakeholders and disciplines.

For the Circular Building Materials lab, I will look into the implications for the construction sector of this 'circular tax shift'. The LDE thesis lab about is great, because it allows students from different disciplines and professionals from the industry to connect and share views and learnings. The kick-off was a great example of how we can learn to look beyond our own perspective by learning from others!

Industrial Ecology,
TU Delft & Leiden

Topic:
A tax shift for a circular economy and the implications on the Dutch construction sector

Industrial Ecology,
TU Delft & Leiden

Topic:
What is the potential of raw material reduction in the new construction plan by using secondary material?

Wenhui Shan - w.shan@student.tudelft.nl

I am Wenhui Shan, a second-year student from the Industrial Ecology programme. I have a background in environmental engineering, focusing on pollution control and more specifically, solid waste management. I have a great interest in waste management optimization and resource utilization. While making a drastic change in the current system, the transition needs to be considered from an interdisciplinary point of view (social, economic, technological and environmental), and the Circular Building Lab is a good concept to embody it. Hence, my research topic would fall on: what is the potential of raw material reduction in the new construction plan by using secondary material? Will this achieve the 50% CE goals? The research would analyze the potential of waste material flows and stock, and provide a solution to optimize the logistics efficiency of resource distribution in the combination of GIS information, in order to contribute to the development of a material stock and flow model with general applicability for the Circular building sector.
I enjoyed the kick-off meeting from last week. The communication with panellists was truly inspiring, showing the great potential of career options in sustainability. And the discussion with the lab was really helpful for my topic development, I hope we will have more insightful discussions in the following sessions.