



Cross-border Future Studio Rhine — Meuse

#synopsis

from mining
to harvesting

DE-NL2100

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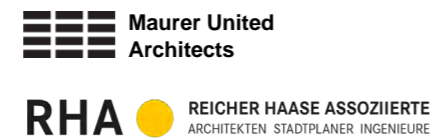


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Background and Introduction

The cross-border future workshop for the region between Aachen (DE) and South Limburg/Parkstad (NL) brought together public authorities from the Netherlands and Germany between June and December 2023. With the help of scenario planning tools, participants bridged national spatial perspectives and explored future possibilities for the region until 2100. The focus was on water, soil, landscape, natural resources and the circular economy. The key question driving the discussions was: **How will the cross-border Rhine-Meuse region collaborate in the coming decennia, to move into an integrated, flourishing and resilient cross-border region in 2100?**





The Future Studio

The cross-border Future Studio Rhine-Meuse is a joint initiative of the Dutch College van Rijksadviseurs (CRa) and the German Federal Institute for Research on Building, Urban Affairs, and Spatial Development (BBSR). It aims to consolidate established planning cooperation structures in the region around South Limburg/Parkstad and Aachen. The process is supported by the Dutch Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, Ministerie van Infrastructuur en Waterstaat, the Federal Ministry for Housing, Urban Development and Building (BMWSB), the Stadsregio Parkstad Limburg, the Provincie Limburg, the StädteRegion Aachen, the Zweckverband Region Aachen, the Stadt Aachen, and the Zukunftsagentur Rheinisches Revier.

Ongoing spatial processes and policies, such as the transformation of the Rheinisches Revier, the Dutch National Strategy on Spatial Planning and the Environment (NOVI), the revision of Dutch Regio Deals, and the Territorial Strategy South Limburg in the Euregion Context (ZL'EU), provide a strong impetus for aligning goals, exploiting synergies, and addressing blind spots.

Using future development narratives and scenarios building, the Future Studio encourages bilateral exchanges and seeks to establish a common understanding of the territory, its developments needs and transformative challenges. Its focus is on developing a sustainable and regenerative region between the Rhine and the Meuse, by emphasising both functional and spatial integration across-borders.

With the help of speculative narratives and scenarios based on circularity and regeneration, participants to the Future Studio were encouraged to imagine their region's future. They were supported by two design offices, the Fischbach Collective (NL) and Must (DE), who used creative inputs rooted in their research of the region, as well as the project management consortium Reicher Haase Assoziierte and Maurer United Architects.

Defining the Project Area of the Future Studio

The project region, encompassing South Limburg in the Netherlands and StädteRegion Aachen in Germany, is a captivating cross-border area with cultural heritage and unique topography. Despite being located at the periphery of their respective countries, both regions are centrally located in Western Europe. They share a functional and structural continuity, through their landscape and settlement structure but also their development potentials. Cross-border cooperation structures, like the Euregio Maas-Rhein seek to improve the living conditions and well-being in the border region.

The region displays a polycentric and dispersed settlement structure, lacking a dominant spatial or functional centre. Notable cities such as Aachen, Maastricht, Sittard-Geleen, and the Parkstad agglomeration frame the Heuvelland landscape, together with a network of smaller cities like Herzogenrath, Valkenburg or Gulpen. Despite the administrative border, the settlement strip from Aachen through Herzogenrath, Kerkrade, and Parkstad has grown together, blurring national and urban boundaries with its Zwischenstadt character – a space neither purely city nor rural.

Home to over a million people, population trends on both sides of the border have taken divergent paths, with StädteRegion Aachen experiencing growth and reaching land reserve limits, while some parts of South Limburg witness a decline. Urban areas form an almost continuous pattern from Aachen along the northern border to Maastricht. Residents routinely cross the border for work, school, or daily chores, aided by cars and an extensive street network, with Aachen and Maastricht as major destinations.

The region's character is defined by its hilly landscape, abundant agricultural land and stream valleys, integrating into various nature systems. To the south lie the Ardennes, the High Fens, the Eifel and the western edge is defined by the Hoge Kempen. The Meuse valley serves as a significant north-south axis, shaping the region.

The region of the Future Studio Rhine-Meuse faces the pressing challenges of climate change and resource scarcity. Questions like energy provision, flooding risks, water quality and ultimately how living in this region should look like in the future can only be addressed together, across national borders.



The Approach and the Process

This chapter offers a succinct overview of the two future-thinking approaches from the design studios. The Fischbach Collective created a border journal through fieldwork and used immersive narratives about water and soil at the border, to foster a dialogue about a common, desirable future. MUST adopts a data-driven approach to challenge conventional resource extraction methods, delving into three main key themes: the woods, the built city and electronic waste.

Both contributions have been discussed, enriched and adapted through interactive workshops with local experts and stakeholders from the region, fostering dialogue and a common cross-border approach to the future.



Mindset shift: A 'Recipe' for a Broader Now

For a liveable future, we need resilience and adaptability. This can only be reached through a deep value shift and a change in our perception of our living environment and how we interact with it. We believe that more connected, informal, flexible, rooted, engaging ways of working will help us to achieve this. Engage with the landscape, its stories + materialities, both present as well as speculative.

The following 'recipe for a broader now' is our recommendation on how to keep involving fieldwork and speculation within all future projects that take place in the region. It is a plea to stay connected to the landscape and its actors, human and non-human. As well as to stay open to continuous collective learning in order to make decisions that are connected to the present as well as the past and the future.

Start with walking, observing, listening and sharing. Dive deeper through research, exchange, creating things and expand through speculation. Invest into designing processes that seek common grounds, both metaphorical as well as physical. Keep evaluating and improving the process. Keep going outside into the world and listen to everyone.

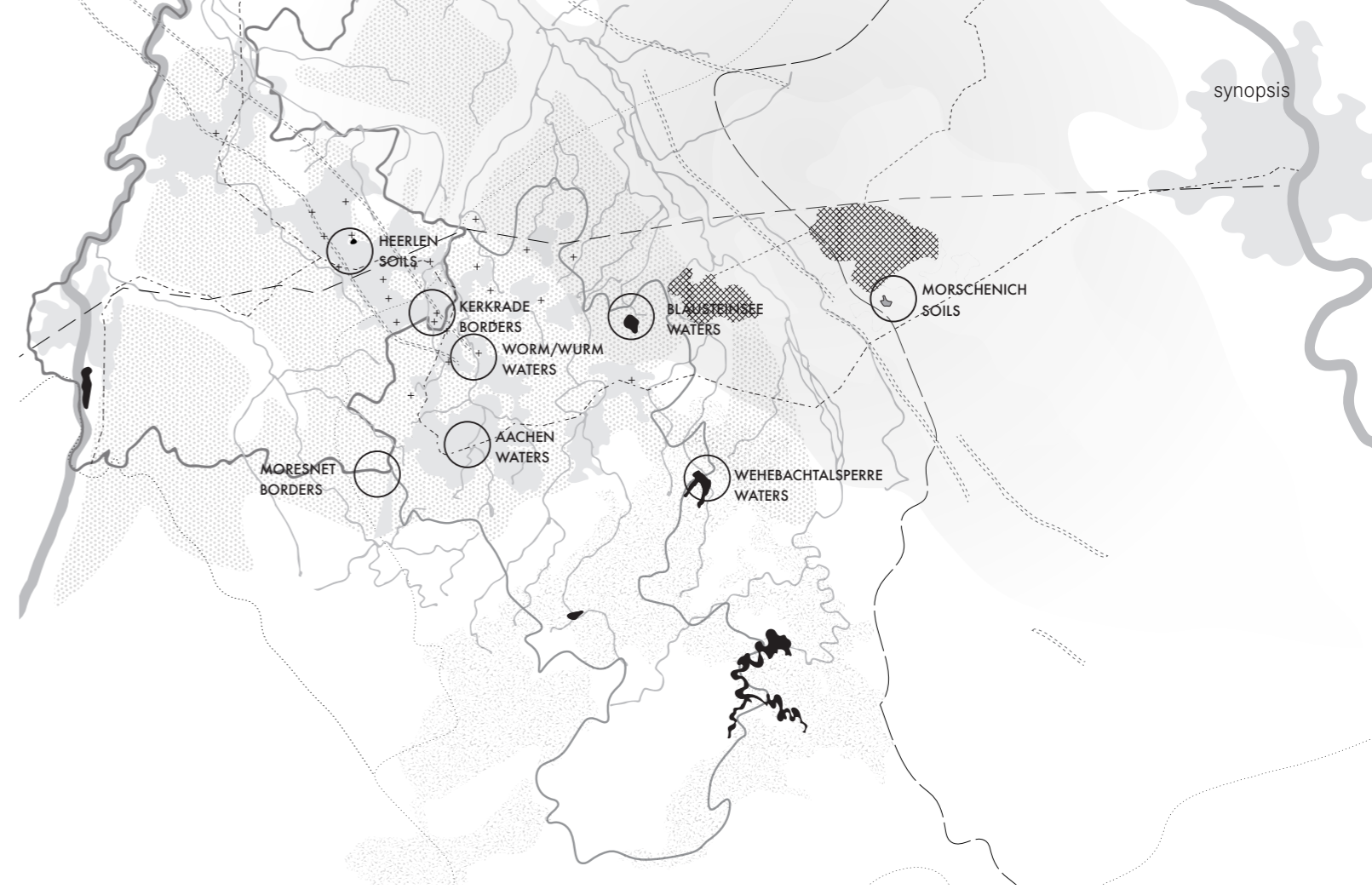
**WALK
LOOK
LISTEN**



WE NEED MORE CONNECTED, INFORMAL, FLEXIBLE, ROOTED, ENGAGING WAYS OF WORKING
ENGAGE WITH THE LANDSCAPE AND ITS STORIES + MATERIALS, BOTH PRESENT AS WELL AS SPECULATIVE

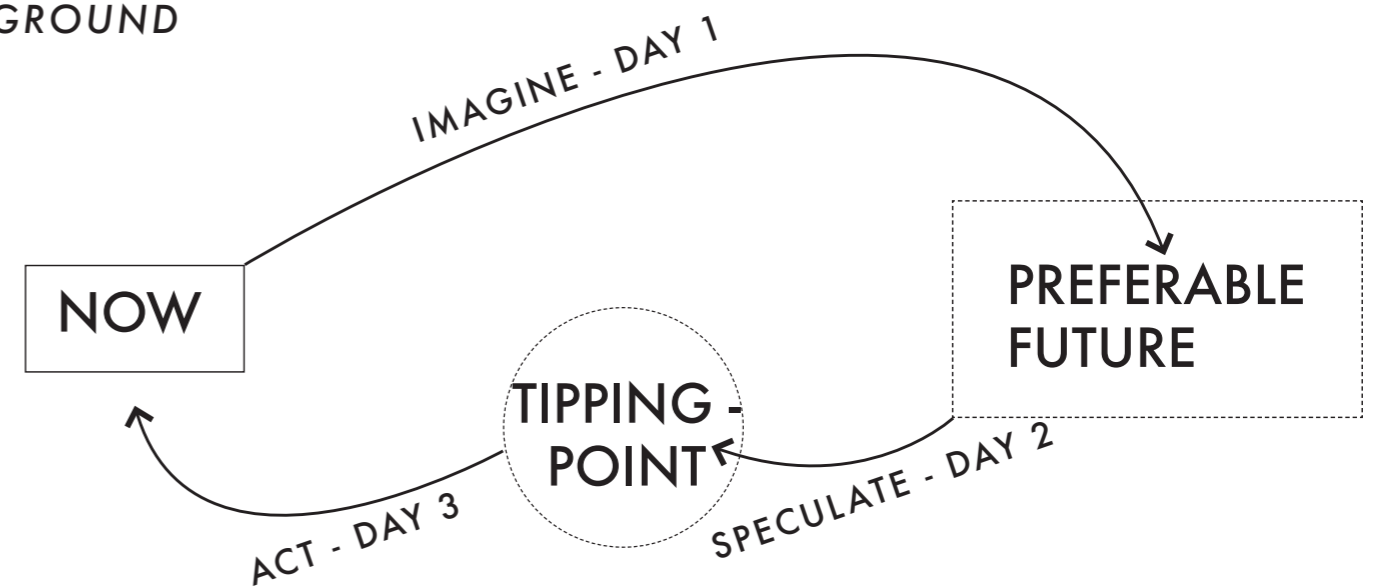
The *MULTIDISCIPLINARY TEAM* of Fischbach Collective looked at the regional landscape from multiple perspectives, scales and backgrounds. During the summer 2023, we immersed ourselves in the border region and collected and researched STORIES, shared relationships and experiences, that are a common ground for the Dutch and Germans in the region. These stories are summarised in the '*BORDER JOURNAL*'.

The central themes of our research is water and soil - these landscapes, both in metaphorical and material ways, that are ultimately relational: crossing all borders, connecting ecosystems, challenging planning strategies, questioning current ways of living and thinking. Our journey into the future stories departs from the past and present eye height perspective of the lived landscape - the dwelling perspective. As such we conceived our fieldwork as an immersive experience, which was interactive, situated, participative and deeply embedded.



THE RESEARCH FOR THE FUTURE STORIES WAS BASED ON FIELDWORK IN THE REGION DIVING DEEP INTO INTERCONNECTED THEMES AND FINDING COMMON GROUND WITHIN THE HISTORY OF PLACES

**RESEARCH
SHARE
MAKE TOGETHER
SPECULATE
FIND COMMON
GROUND**



SPECULATIVE DESIGN METHODS INFORM THE PRESENT THROUGH IMAGINING A PREFERABLE FUTURE; THEY HELP TO CREATE REAL CHANGES THROUGH VALUE SHIFTS

We deepened and enriched our research together with experts and stakeholders and agreed that our future stories should focus on narratives of water and the circular economy. We identified that many of the necessary future transformations require to rethink contemporary values - often based in growth paradigms. For this we looked towards *POST-GROWTH VALUES* and discussed how to achieve value transformations.

In our next reserach step we focused on the border landscape around the river Wurm - *THE WURMTAL*. We looked deeper into the different *WATERS* collected in the river and its surrounding landscape. The Wurmthal as a potential *BIOREGION* - with autonomous, experimental policies - is the backbone for our future stories. The model of the bioregion Wurmthal proposes to create new action frameworks, to overcome current administrative and formal borders that slow down innovation.

**ACT
EVALUATE**

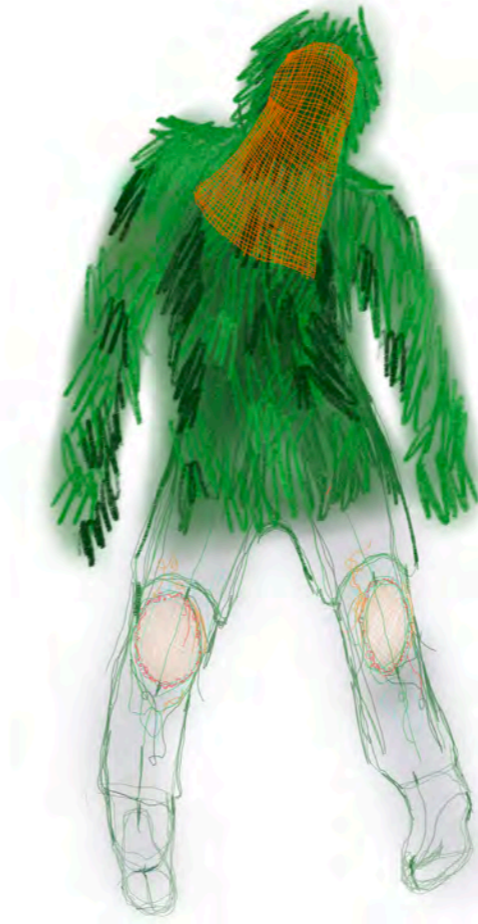


THE MODEL OF THE BIOREGION WURMTAL PROPOSES TO CREATE NEW ACTION FRAMEWORKS, TO OVERCOME CURRENT ADMINSTRATIVE AND FORMAL BORDERS THAT SLOW DOWN INNOVATION

Through speculative design methods we developed two fictional future characters who live in the Wurmthal in 2100. With world building principles of the seven foundations we created two stories of a young swimmer - Yona, and a land custodian - Eva. These stories help us to imagine ourselves closer to the future and conceive the effect a shift in values and policies made today could have on our landscapes in 100 years. To tell these stories, we took workshop participants on a walk into the landscape where we got to meet the two future characters through storytelling.

With Eva we looked into the regenerative potential of landscape management and how a shift from extraction to harvest could benefit both place and people. Through Yona we learned how a renewed relationship with our bodies, our waters and our landscapes could lead to a fully circular way of life and economy. Through the fieldwork, the landscape of the present became our portal into the future, inspiring discussions on how to re-imagine our lived and built environment.

With our way of working we hope to set an example how to involve fielwork and speculation within all projects that take place in the region. A plea to stay connected to the landscape and it's actors, human and non-human.



Eva: *“Our economy is all about circularity. It took a while but now it has become clear to many people that ecology and economy are actually not supposed to be different.*

Both of them are about how we deal with our ‘oikos’, the greek word for house. How we take care or our home, the Earth.

Regenerative work is all about the vitality of this home. My work in particular is about the aliveness of the soil. Back in the days we called this a holistic view. To me it is about understanding how all is one.

What I do is not only about producing goods but about producing relationships.

Everything we use is seen as a moment within a circular process that comes from the Earth and will at some point return back to the Earth. So essentially all humans do is make new soils. With our food, with our houses, with our clothes, with our bodies.

Words like RESOURCE or WASTE do not exist anymore.”

Yona: *“In the past the region has worked very hard to give the creek its dynamic back.*

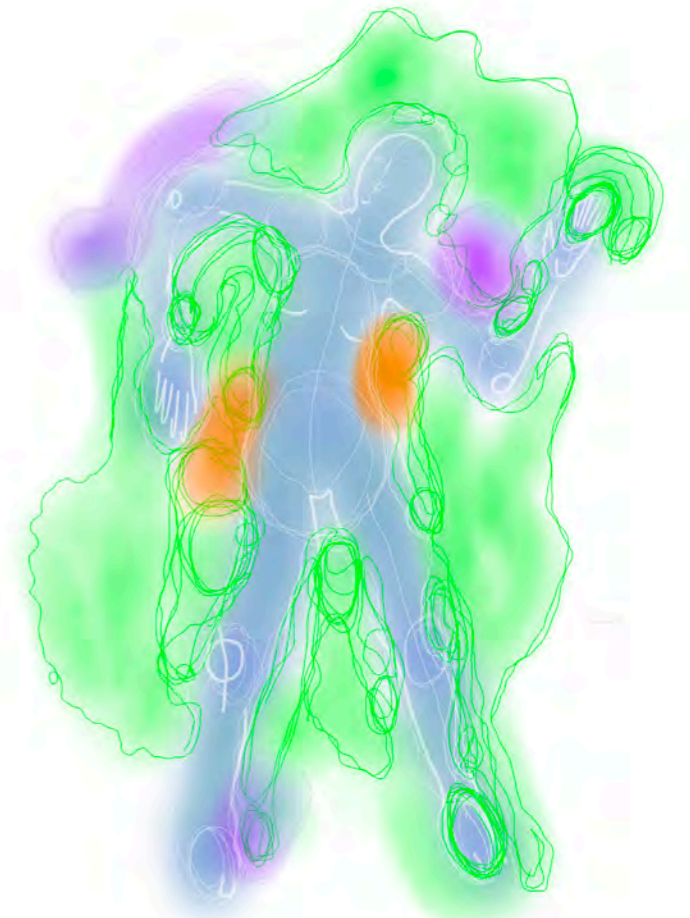
They let the water create its own path, rewinding its course and the entire landscape around it.

Streams and their floodlands became part of the cities and towns once again.

The small creek Wurm, is the center of the valley. Not only spatially but also in our daily lives and our spirit.

As water is seen as sacred today, people are increasing their awareness of the land, the Earth.

In this region we see the Wurm as the center of all relations.”



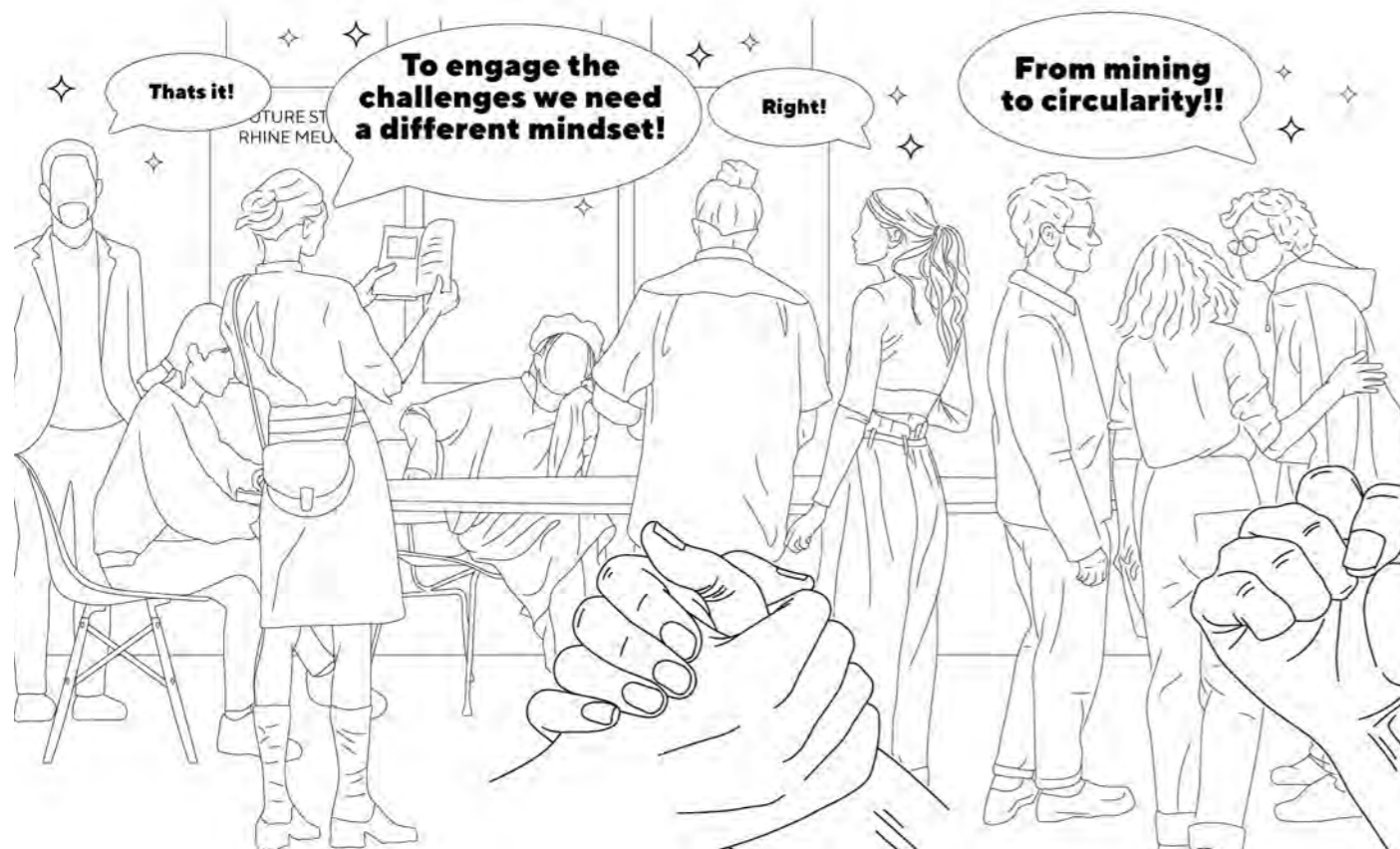
TWO FICTIONAL CHARACTERS - EVA AND YONA - TELL US ABOUT THEIR PERSONAL EXPERIENCE OF LIVING WITH WATER AND SOIL IN A WORLD THAT HAS SHIFTED FROM MINING TO GATHERING

THROUGH STORYTELLING WE CAN GO BEYOND WHAT WE ALREADY KNOW AND CREATE FICTIONAL SPACES FOR NEGOTIATING WHAT DECISIONS WE HAVE TO MAKE TODAY

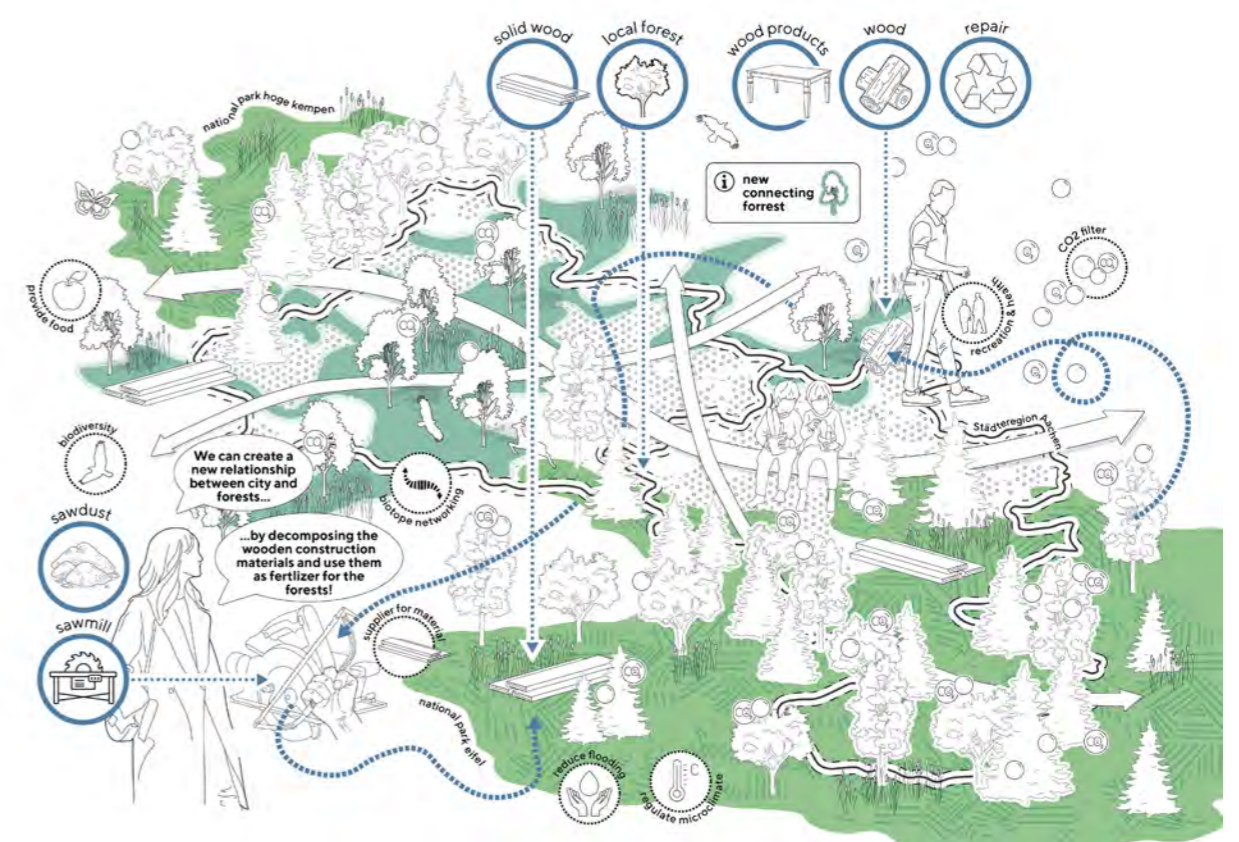
REPEAT AND KEEP ON WALKING...

Diving into key themes: From Mining to Circularity

“From Mining to Circularity” addresses the pressing issues of climate change and Europe’s reliance on rare material imports. As a solution to both challenges, it presents a strategy for the cross-border area of South Limburg and StädteRegion Aachen to make a transition towards a more circular and sustainable future. The strategy focuses on three chances for circular systems: urban renovation, forest management, and the recycling of technical waste. Each of these circular systems is being elaborated by a description of production cycles, local stakeholders, and a development path with tipping-points and key projects. The proposed systems are tailored to specific resources in the cross-border region. They are conceived to take advantages of local specificities regardless of the administrative borders.



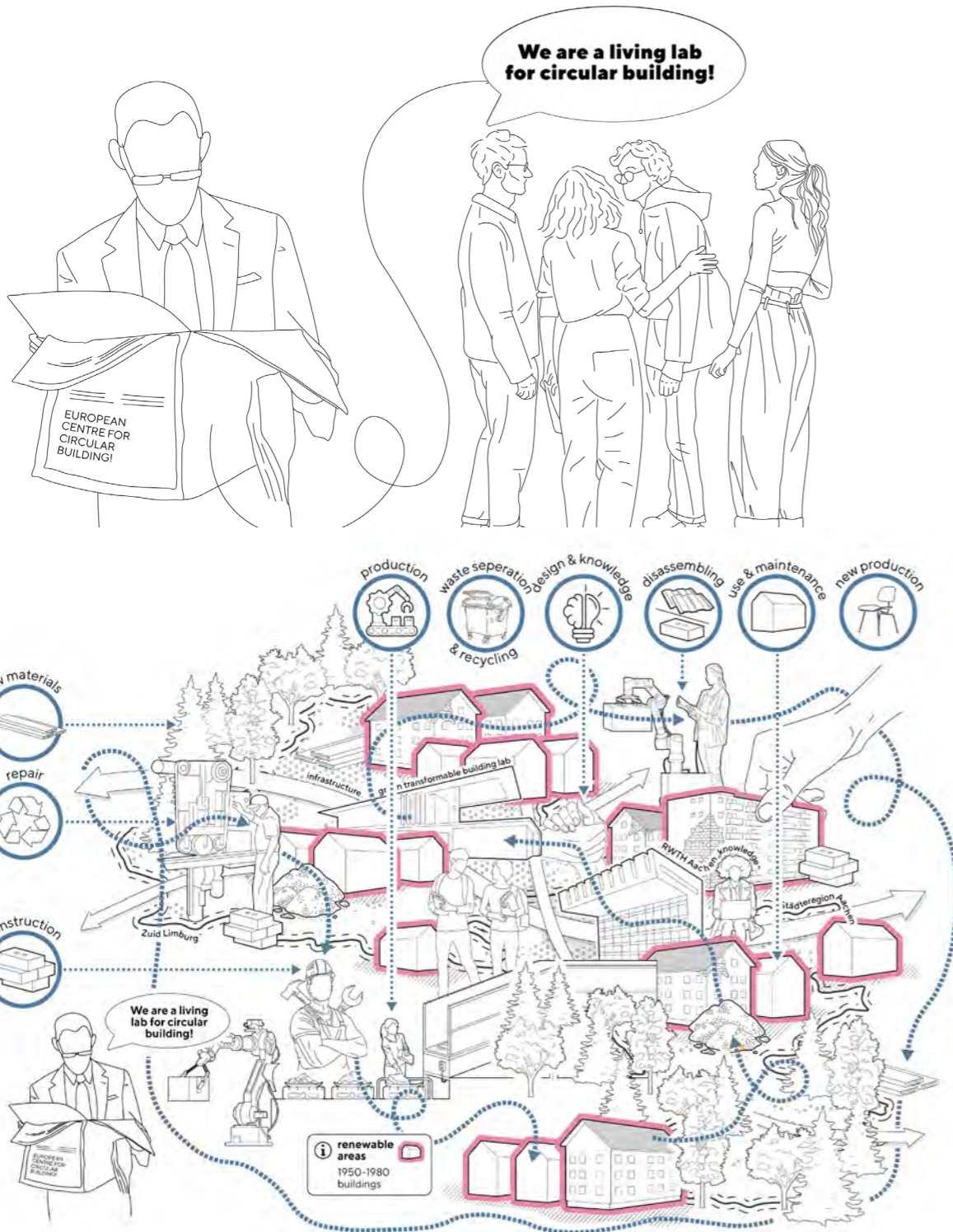
The Woods: The area is partly covered by large forests. Trees have extensive benefits for human health and environmental well-being. Expanding tree coverage can significantly enhance the regional biotope network and increase the abilities to infiltrate water in the ground. Additionally, new forests are recognized as a valuable renewable resource for construction, meeting a critical need in the region. And finally: they can add to the value of the region as tourism destination. New forest management in terms of rotation and avoidance of soil acidification is a necessary condition to make the shift towards increasing the tree coverage.



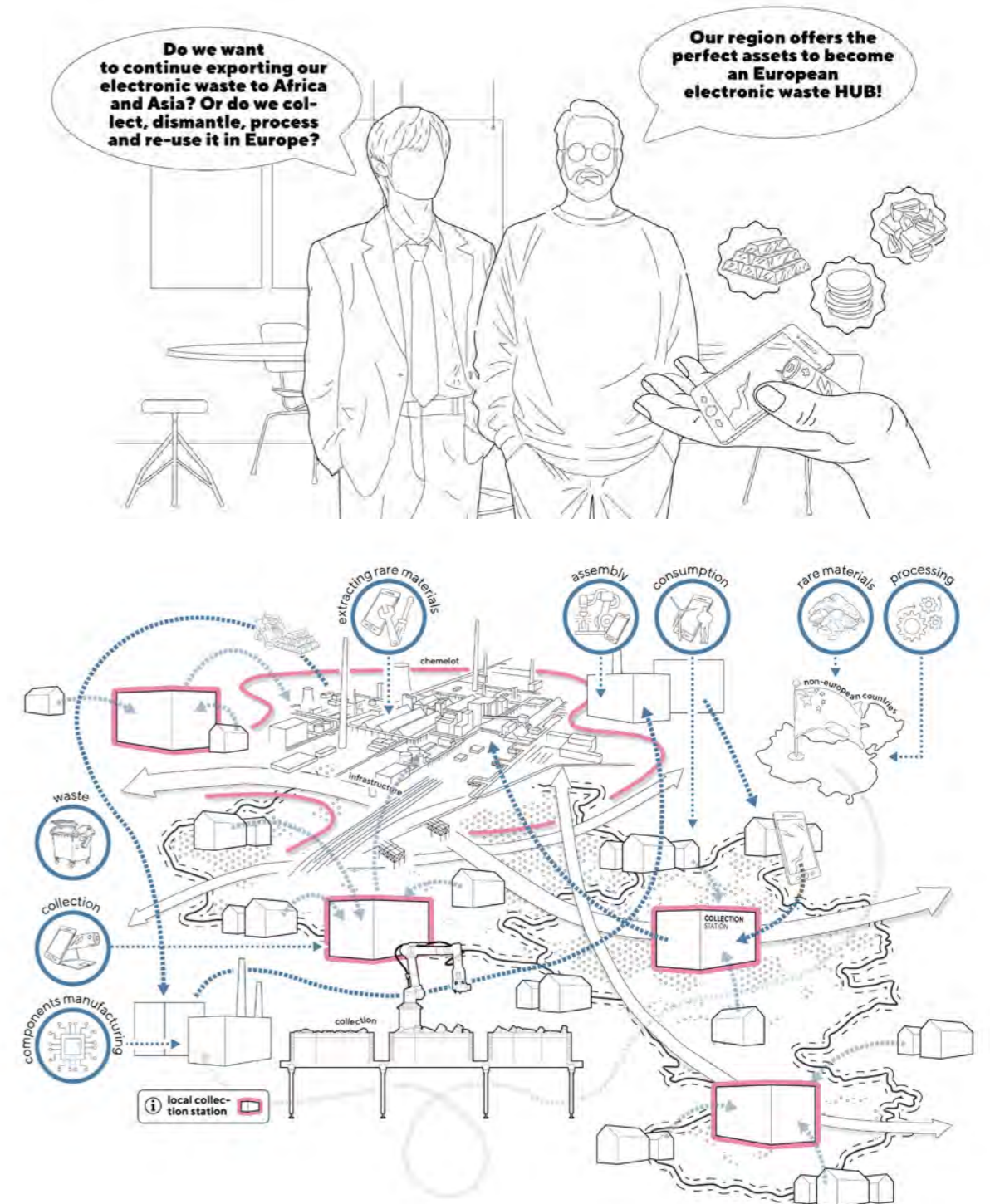


The Built City: Approximately 32% of the building stock in the region must be renovated in the coming two decades. This is a big challenge. At the same time urban renovation is also a unique window of opportunity to make the shift towards a circular and sustainable future, emphasising the importance of recycling, deconstruction and re-use in the building construction sector.

This means it is necessary to create a local eco-system of supply chains and manufacturers, as well as to extensively map and assess what needs to be preserved and which materials are available where in the building stock.



Electronic Waste: The strategic geographical positioning of the Rhine-Meuse region makes it an ideal candidate to emerge as a key hub for the re-use of electronic waste in Europe. The cross-border region could contribute significantly to a circular economy on a continental scale and decrease dependency from the small numbers of countries sourcing raw materials for green technologies.



Interactive Workshops

JUN | JUL | AUG | SEP | OCT | NOV | DEC | 2023

FUTURE STUDIO RHEIN-MAAS

14.06.23

KICK-OFF

IDENTIFYING EXISTING STRATEGIES AND COLLABORATIONS
CLARIFYING TOPICS AND METHODS

07.09.23

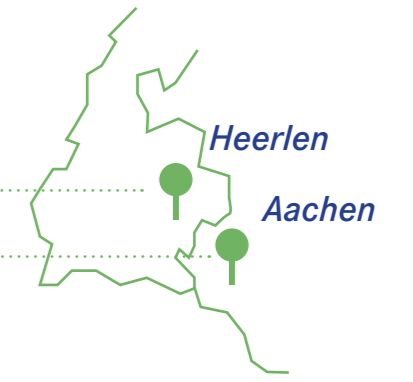
EXPERT ROUND TABLES

PRIORITISING AND VALIDATING KEY TOPICS

29.11.23 - 01.12.23

MULTIDAY WORKSHOP

FINALISING SHARED FUTURE NARRATIVES AND SCENARIOS



PRELIMINARY FIELD RESEARCH

INTEGRATED CROSS-BORDER MAPS
FIELD RESEARCH AND BIOGRAPHIES OF THE REGION

CROSS-BORDER PRESENT

DESIGN RESEARCH ON FUTURE STORIES

ANNOTATED MAPS,
WORKING HYPOTHESES
(QUESTIONS ABOUT THE FUTURE)

LOCAL PAST AND PRESENT
+ GLOBAL FUTURE

FUTURE NARRATIVES FOR A
CROSS-BORDER REGION

REGIONAL AND CROSS-BORDER FUTURES

CORE GROUP

LOCAL, REGIONAL AND NATIONAL AUTHORITIES

CORE GROUP

LOCAL, REGIONAL AND NATIONAL AUTHORITIES

CORE GROUP

LOCAL, REGIONAL AND NATIONAL AUTHORITIES

REGIONAL
THEMATIC

EXPERT

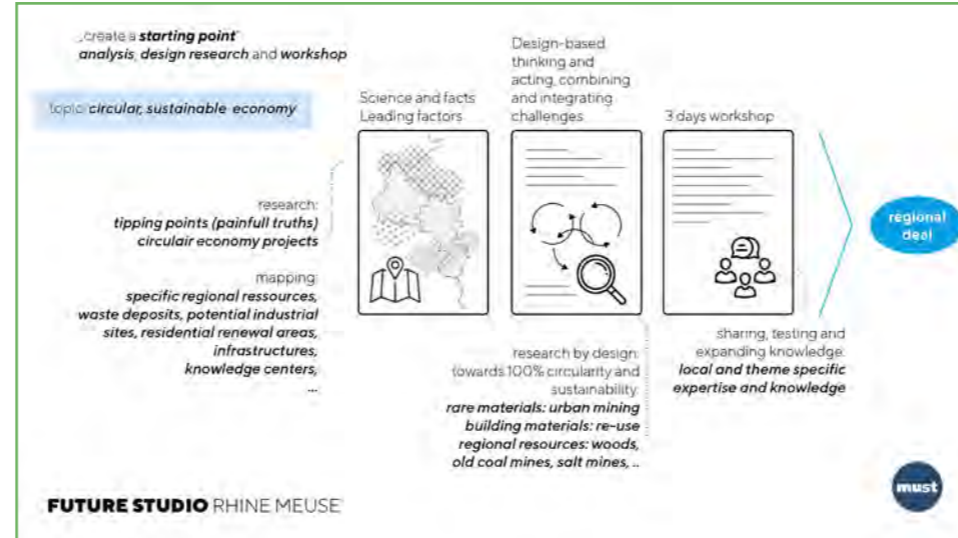
REGIONAL
THEMATIC

EXPERT

Round Tables



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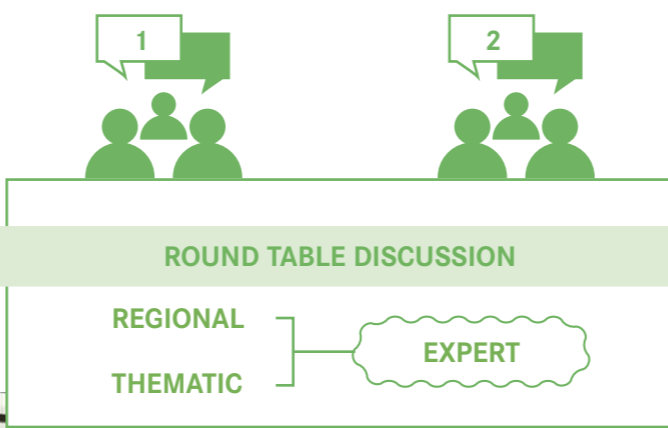


Development means cooperation and vice versa. Shared cross-border data collection and compilation, as a knowledge base to act, has significantly improved and simplified in recent years. However, the primary challenge now lies in institutional cooperation. Therefore, it is crucial to establish suitable structural frameworks that facilitate institutional and transnational collaboration. National actors require corresponding partners to effectively initiate and foster cooperation.



© Lena Bruns

PRESENTATION OF DESIGN STUDIO



Landscapes and nature are shared assets for the German and Dutch participants. It is therefore necessary to establish a protected area at a supraregional and cross-border level, which will form the basis for future interconnections between South Limburg and the StädteRegion Aachen. As a common ground, the shared culture and history of mining fosters mutual learning.



© Lena Bruns

In conventional planning or engineering approaches, there is often a tendency to rely on one large project to solve all problems. However, given the current climate crisis, a singular comprehensive solution is not feasible. It is imperative that we prepare to initiate numerous small projects. While these projects might not all succeed individually, they could incrementally contribute to a sustainable development.



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Multiday Workshop Day 1 - Experiencing the Cross-Border Region

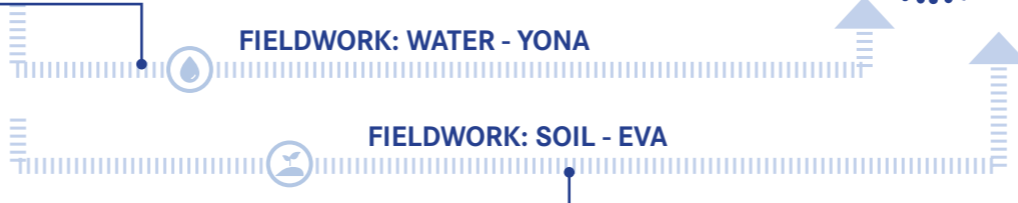


© Frank Kind

Through the fieldwork, participants were able to experience the symbiotic relationship with water and soil of EVA and YONA, two fictional future protagonists. The inhabitants of 2100 live in Bioregions, defined by hydrological and natural resources as well as landscape characteristics. Bioregions are a mostly self-sufficient habitat for human and other living organisms.



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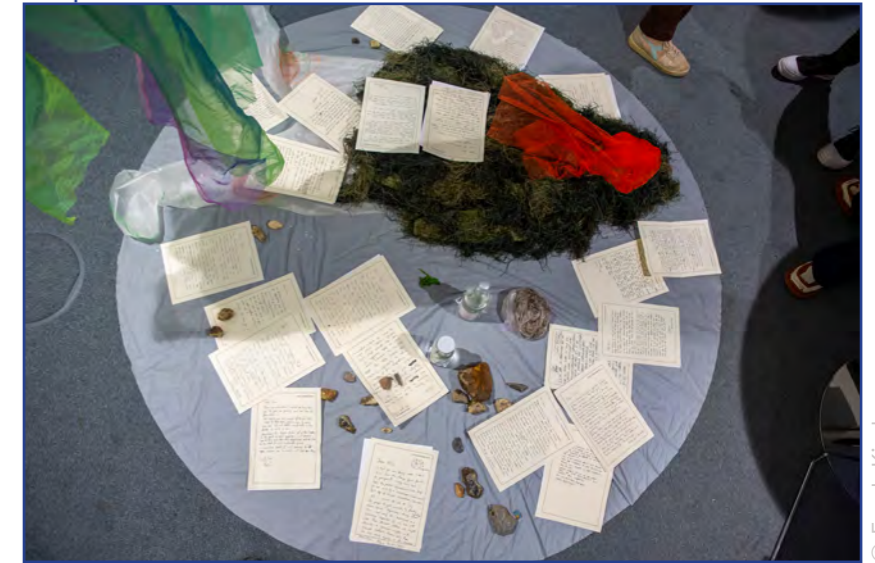


© Marc Mauer

Both Germany and the Netherlands have already surpassed their overshoot days, indicating a consumption rate equivalent to 1.75 Earths. To address these concerning statistics, a shift in our mindset from "mining" towards a circular economy is imperative. A significant opportunity lies in the domain of technical waste, suggesting the establishment of a cross-border technical re-use hub. This would require active advocacy from stakeholders to influence legislative changes that create conditions for the development of the region.



© Yuan-Jung Wang



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Immersive Walking Tours at the Border

YOUNG SWIMMER YONA

The Seven Springs are the strongest group of springs in the Aachen city area: The spring's catchment area extends to Holland and Belgium.

The Wurm Creek, flowing along the Dutch-German borderland, originates in the Aachen region. As a tributary to the River Rur, it crucially sustains biodiversity in the shared landscape. The water system, threading through forests, farmlands, and wetlands, exemplifies the interconnected ecosystems of the Dutch-German border region.

To the left is a viewing tower overlooking the Drielandenpunt, marking the border among the Netherlands, Germany, and Belgium. Behind the Vaalserberg hill lies Moresnet, the neutral state linked to the zinc mine. In the valley, you'll find a historic landscape with old farms, watermills, churches, monasteries, and pilgrimage sites.

LAND CUSTODIAN EVA

Schneeberg - a small hill between Vaalserquartier and Seffent, approximately 250 meters above sea level. Named after its unique white and yellow sandstone soils, the hill is part of the Aachen-Limburger-Kreidetafel, characterized by lime, marl, and chalkstones from the Late Cretaceous period.

50° 46' 44.7" N 6° 02' 46.7" E

WALKING ROUTES IN AACHEN TO GET TO KNOW THE FUTURE STORIES

Multiday Workshop Day 2 - Enriching the Future Stories

The Cross-Border Future Manifesto is a powerful tool that brings together diverse voices and inspires collective action, to ensure a more equitable and balanced future for the region. It stresses human and nature centric values and includes overall commitments, a spatial and content baseline, projects as well as an organisation and cooperation for the involved stakeholders. Drawing from the region's history, the Manifesto addresses themes and projects that transcend national borders.



© Frank Kind



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Using wood as a resource could be central to a regional circular economy addressing the built environment and biodiversity preservation. Considering that trees take about 70 years to grow back, this would require different forest management practices, to establishing a healthy balance between ecosystems and economic activity, as soil and nature require sufficient time for regeneration

- MANIFESTO:**
- SPATIAL AND CONTENT BASELINE
 - CROSS-BORDER PROJECTS
 - THE ORGANISATION AND COOPERATION OF STAKEHOLDERS



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Multiday Workshop Day 3 - Call for Actions



© Frank Kind



© Frank Kind

"We should transfer data between the countries to have different looks on problems."

Sharing information and insight not only provides us with a more comprehensive understanding of the challenges, but also creates fertile ground for innovative ideas and joint solutions.



© Frank Kind



© Frank Kind

"Why don't we simply stop doing the wrong things?"

It is straightforward to identify basic needs, such as air and water quality, the challenge lies in translating these necessities into effective policies that resonate with the diverse cultural aspects of the region.



© Frank Kind



© Frank Kind

"Looking at the region's strengths beyond borders and seeing the border as an opportunity, rather than a barrier, is a good way to start."

Where do we go from here? What are the next sensible steps? We collected an important pool of ideas that emphasize both dialogue and concrete action.

Project Collection

Despite a perceived lack of collaboration on regional and urban planning issues, the Multiday Workshop helped to raise awareness on existing and potential cooperations. Local experts and stakeholders identified past and ongoing projects, paving the way for a better and shared future.





CHEMELOT CIRCULAR HUB

GELEEN, NETHERLANDS

A public-privat alliance between actors of the Chemelot chemistry industry and a materials cluster, the hub seeks to position the region as an ecosystem for a circular economy.

RECONSTRUCTION WORM RIMBURG

RIMBURG, NETHERLANDS

The project seeks to improve the natural system of the Worm stream and thus to comply with the European Water Framework Directive, as well as to variate the stream profile and increase the vegetation coverage.

IBA PARKSTAD

PARKSTAD, NETHERLANDS

Between 2013 and 2021, the International Building Exhibition Parkstad initiated various projects in the region, focusing on heritage and history, addressing population decline and social challenges as well as building renovation.

NL

SUPERLOCAL CIRCULAR ESTATE

KERKRADE, NETHERLANDS

SuperLocal is an experimental concept for building demolition, based on the principles of the circular economy. The houses were built with the ambition to re-use as much material as possible that was released during the demolition on site.

FLOOD CONTROL APPROACH IN EYGELSHOVEN

EYGELSHOVEN, NETHERLANDS

In Eygelshoven, Rimborg, and on Rimbürgerweg, heavy rainfall causes significant issues for residents and businesses. A partnership between the municipality and local stakeholders seeks to address the issue, based on analyses of past rainfall patterns and anticipations of the impact of climate change.

CIRCULAR CRAFT CENTER

A NETWORK IN THE NETHERLANDS, 11 LOCATIONS IN ZUID LIMBURG

A circular craft center is a location or a network where parties work together to reduce waste flows and realize high-quality product and material re-use.

NEW REGIONAL BAUHAUS

HEERLEN, NETHERLANDS + AACHEN, GERMANY

Established by the Chair of Urban Design and the Institute for Urban Design and European Urbanism at RWTH Aachen University, NRB is dedicated to cross-border research, education, projects, and events on building culture and practice. The initiative seeks to revisit the concept of community thinking and emphasizes a local approach to address global challenges.

HYPERLOOP HUB

PARKSTAD, NETHERLANDS + AACHEN, GERMANY

The Parkstad Limburg region and Aachen are planning a Hyperloop test facility in the Avantis industrial park.

THREE-COUNTRY PARK

THE GERMAN, DUTCH AND BELGIAN BORDER REGION

The Three-Country Park (3LP) spearheads and advances crossborder projects, working with land users, stakeholders and professional groups. The cooperation addresses environmental protection, spatial and landscape planning and natural and cultural heritage. It has developed a strong network and experience of cooperation.

DE

VELOCITY CROSS-BORDER EBIKE SHARING SYSTEM

THE PARKSTAD-AACHEN REGION

The scheme connects Parkstad Limburg to the existing network of around 100 ebike stations in and around Aachen, including one in Kerkrade and one in Vaals. The network forms an attractive, sustainable, healthy and affordable alternative for cross-border transportation throughout the Parkstad-Aachen region.

THE GREEN METROPOLIS

THE GERMAN, DUTCH AND BELGIAN BORDER REGION

The Green Metropolis network deals with sustainable and cross-border tourism development in the post-industrial landscapes at the German, Dutch and Belgian border. It promotes cooperation to support and valorise economies, tourism and nature quality.

IGA 2037

GARZWEILER, GERMANY

The IGA Garzweiler 2037 could act as a steppingstone in the upcoming structural change and the recultivation of the coal mining landscapes, through demonstration projects addressing the future of landscape design, climate change, renewable energies and sustainable urban development.

REDEVELOPMENT OF EUROPAPLATZ

AACHEN, GERMANY

Adopted in 2018, the open space strategy for the city of Aachen, "Die Grüne Krone", highlights the importance of developing the Europaplatz as an entry into the city and a liminal place between the settlement areas and the surrounding landscape.

Project: Bioregion Wurmatal

The bioregion Wurmatal is a proposal for a newly introduced administrative territory following the catchment area of the river Wurm. The river originates near Aachen and flows from various sources towards the Dutch border, which it follows for about 5 km, until it flows back to Germany. The various sources, over 10 different types, and the interconnection between Germany and the Netherlands makes the bioregion as a whole an interesting location for a pilot project.

Improving water quality is a good starting point for achieving an overall improvement of environmental quality for the next generation. Water quality is connected to many human activities: how we handle our waste waters or the agricultural and industrial use we make of it. The quality of water is therefore an indicator for improving the environment as a whole. Aiming for healthy water, up to swimmable water with bathing quality, will influence the way we deal with waste, materials and resources and how we handle our soils. It will improve biodiversity and help retaining water, as well as encourage accessibility to the many rivers in the region. Ultimately it will improve the liveability and resilience in the region.

This bioregion can be a demarcated cross-border region, with the opportunity to explore and experience what it takes to be fully committed to a healthy environment with swimmable waters. This will require a value shift amongst the inhabitants but also especially at the institutional level, in order to enable this change through suitable regulations and conditions.

This region contains various types of water. Each type of water contains different nutrients and therefore serves different purposes in the ecosystem at large. Various types of flora and fauna will thrive on very specific nutrients and qualities of these waters. Each water type makes an individual contribution to serving a range of species and is hence essential to the biodiversity of the region.

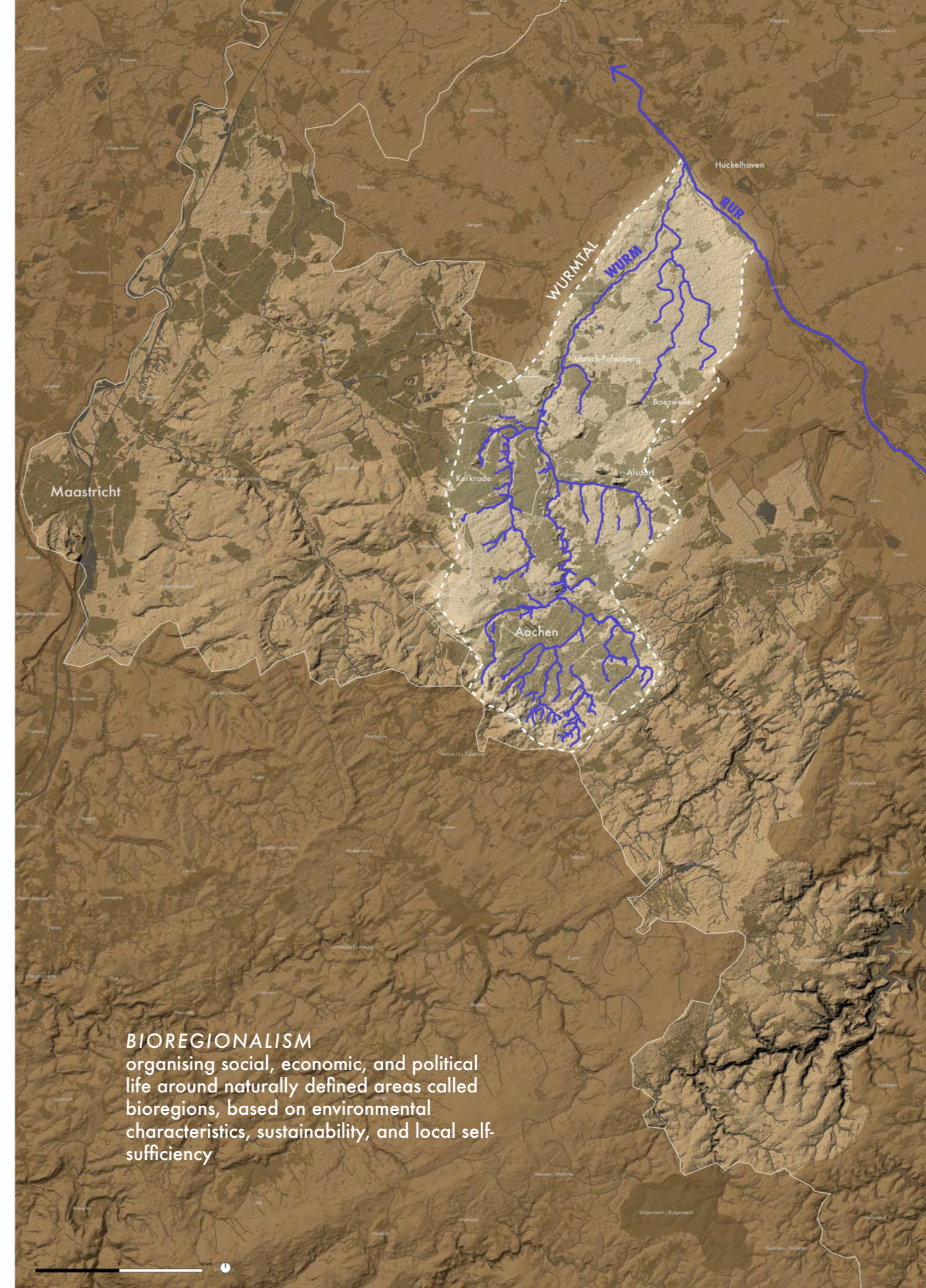
Possible future consequences:

During persistent rain as much water as possible will be retained to prevent flooding further down the stream.

Local water is allowed to flood the banks so that sediments will move.

In the long term this provides the area with extra fertile soils. In the short term some crops will be lost.

The first Wurmatal project has already started around Rimburg and Eyselshoven at the border of Germany and the Netherlands. This Interreg project is aiming to improve the water quality by giving the Wurm stream more dynamics through making specific riverbanks and a landscape design.



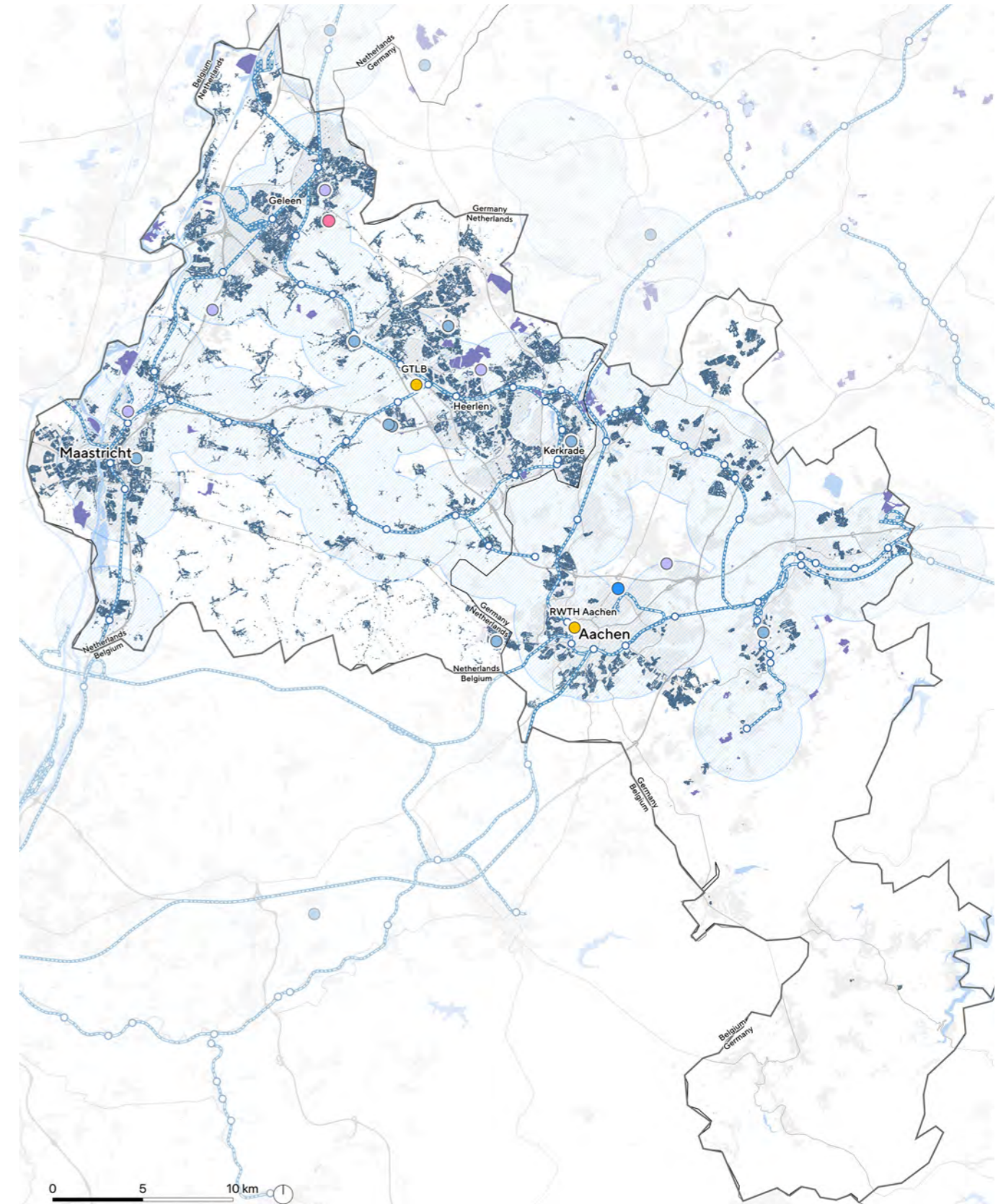
BIOREGIONALISM
organising social, economic, and political life around naturally defined areas called bioregions, based on environmental characteristics, sustainability, and local self-sufficiency

Project: a cross-border living lab for circular building

The built city as a resource

The existing built area is a huge resource. Around 30% of all built-up area was constructed in the 1950s-1980s. The technical quality of housing of that time is nowadays considered as quite poor and is amongst others not adapted to energy efficiency and decarbonisation requirements. In the coming two decades, the renovation of this building stock will be both a necessity and at the same time a chance to make a shift towards circular building. When renewing these areas, the primary emphasis should be placed on the re-use of the materials from the existing buildings and infrastructure. New building materials should be sustainable, like wood from the region. Here a connection to the circular system of „The Woods“ could be made. What kind of housing areas will be developed and in which density, will depend on the location of each neighbourhood and its specific characteristics. In the cross-border region as a whole, a densification with 25.000 dwellings seems possible.

A cross-border project could build upon existing actors and experiences in the area. A first step could be to set up an intensive knowledge exchange between the Rheinisch-Westfälische Technische Hochschule Aachen and the Green Transformable Building Lab in Heerlen, involving housing corporations and the the eco-system of companies involved in circular construction supply chains. This way, scientific research can be implemented in practise and support innovation. Furthermore, it is necessary to create a local eco-system of supply chains and manufacturers, as well as to extensively map and asses what needs to be preserved and which materials are available where in the building stock. Successive neighbourhood renewals in the region could create a true cross-border living lab for circular building, by progressively building up the techniques, networks, supply chains and knowledge (or data) bases needed to reach circularity in construction and renovation.



Renewal areas and companies for circular building, MUST Städtebau

Circular building system

Considering the enormous amount of resources consumed and waste generated over a building's lifecycle, making the construction sector more circular will have a significant impact on the sustainable transformation of the region. To achieve this, different sectors must be connected and work together.

Development path

To reach full circularity in the built environment, it is necessary to progress through several phases, each one requiring conscious choices and interventions towards change. These are tipping-points, understood as pivotal moments, in the development path (see scheme on page 45).

Phase 1: Passive re-use. This is the current practice: re-using building materials is not widespread.

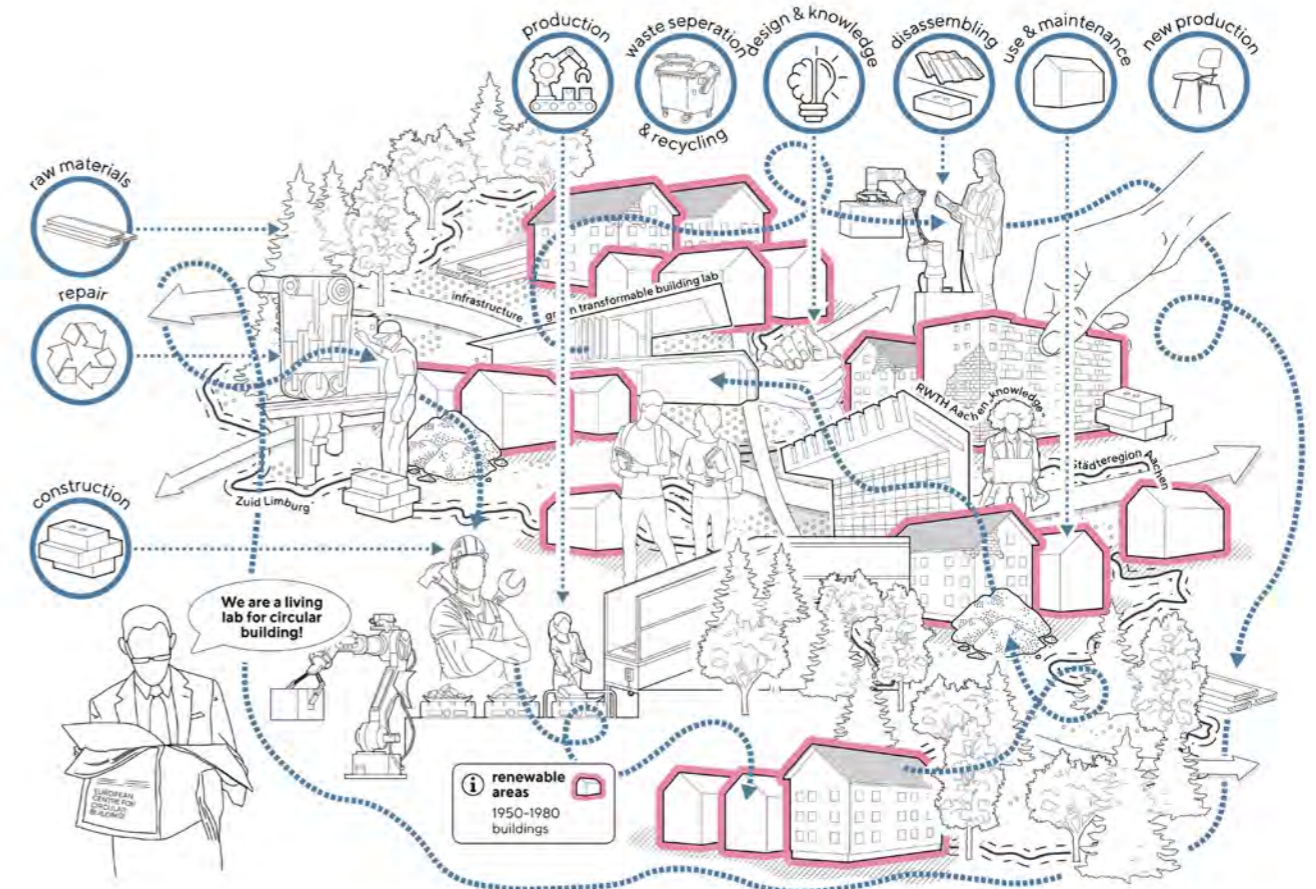
Tipping-point 1: A decision is being taken to switch towards active re-use of existing building materials and thus reduce the excavation of raw materials like sand and gravel.

Phase 2: Active re-use. The building sector (architects, commissioners and different companies in the building sector) systematically re-use materials from existing buildings in renovation projects. New material is only sourced through renewable materials.

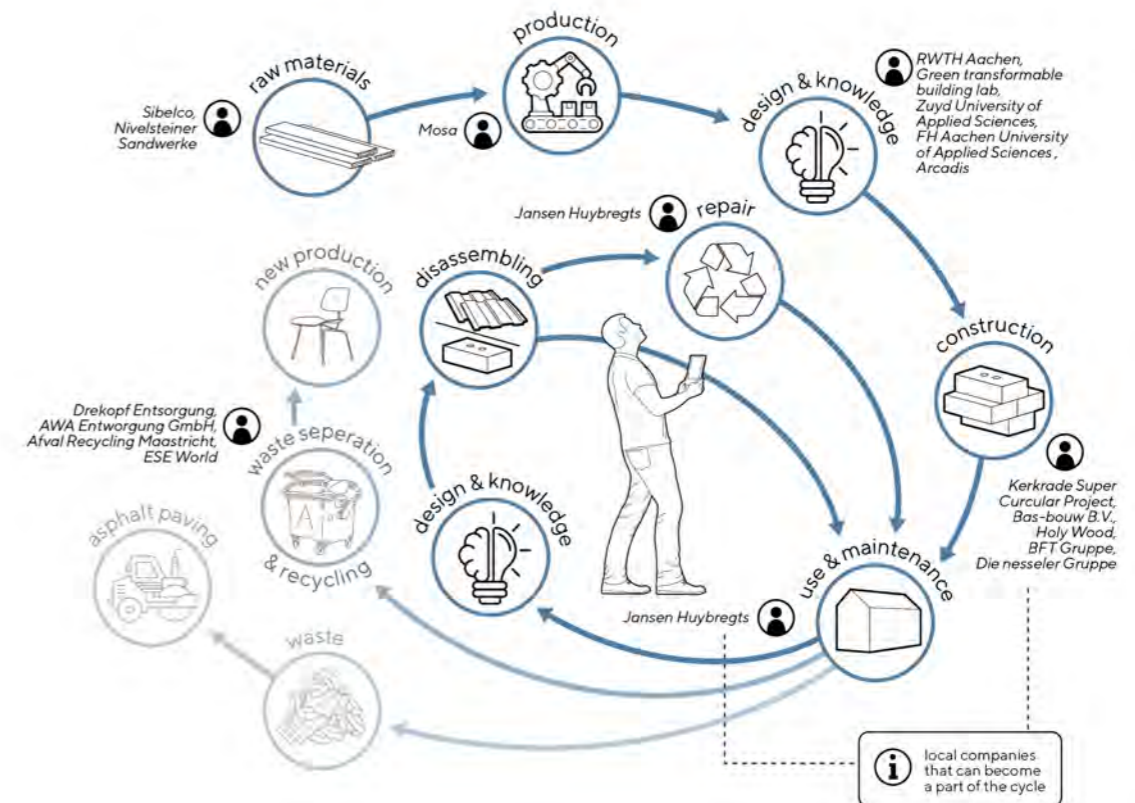
Tipping-point 2: Switch to 100% renewables. From this moment on, materials that cannot be successively re-used are phased out as building resources.

Phase 3: The building sector only uses 100% renewably sourced materials like wood. The wood material preferably comes from the region. Here the connection can be made to the project „The Woods“.

Tipping-point 3: 100% circularity. In 2050, the building process is 100% circular, thus supporting the CO2 neutrality agreement from Paris.

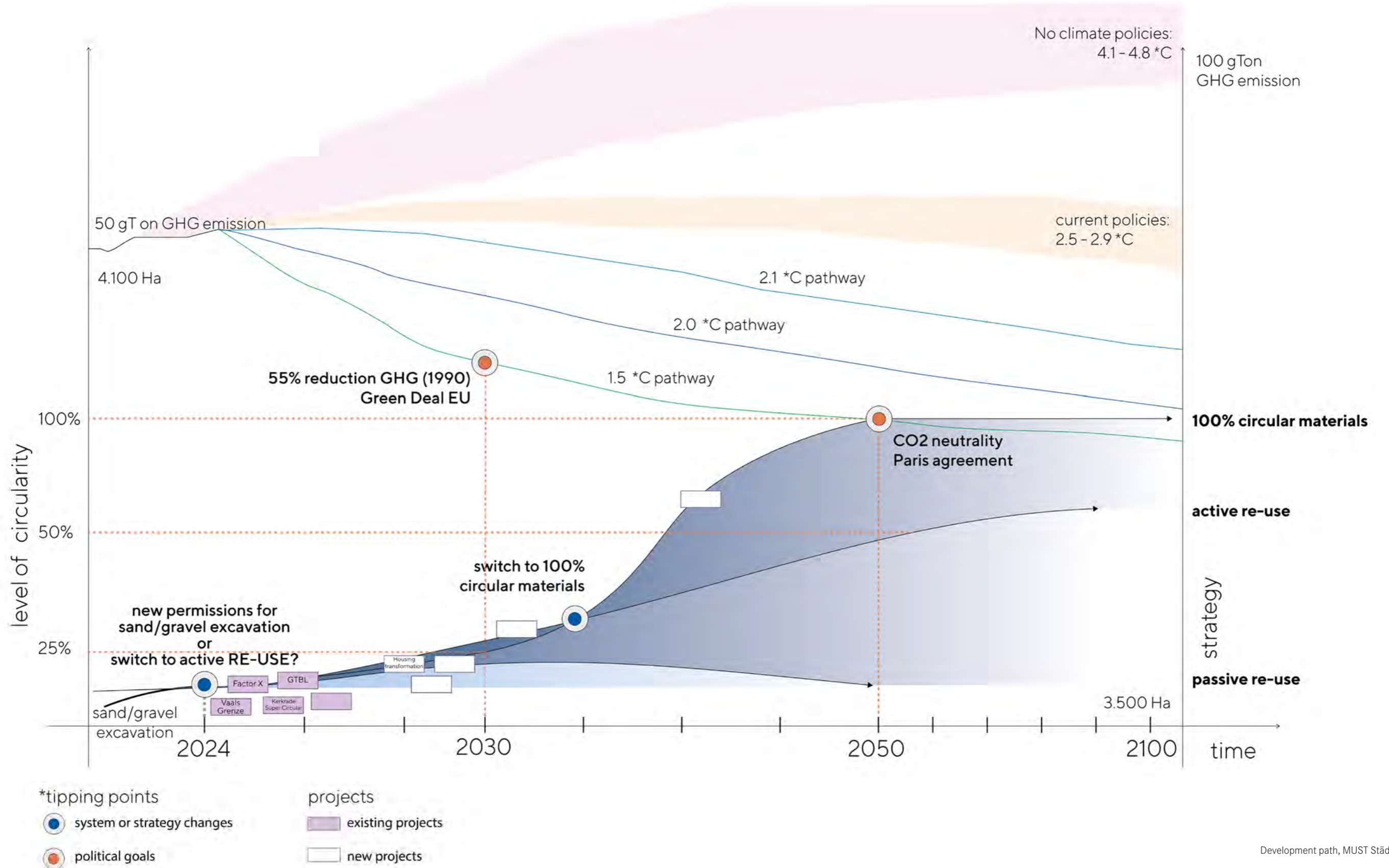


Circular System for the construction sector, MUST Städtebau



Construction material cycle, MUST Städtebau

Development path



Development path, MUST Städtebau

Manifesto “From Mining to Harvesting”

The Manifesto “From Mining to Harvesting” is intended as a cross-border agreement on shared goals and values for the future of the Rhine-Meuse Region. It outlines themes, spatial development priorities and collaborative aspects that will be pivotal in stimulating the region’s future development. It is understood as a strategic guiding document, encouraging further reflection and a large participation of the region’s stakeholders in shaping their future.



Manifesto From Mining to *Harvesting*

Together, we envision a cross-border Rhine-Meuse region in 2100, that has moved beyond the linear growth paradigm and offers quality of life to all. Our commitment is rooted into a harmonious coexistence with nature, water, soils and biodiversity in our region and addresses the distinctiveness of our landscape. Moving forward from a shared extractive history of coal mining, we have learned to sustainably harvest our natural resources and nurture resilient society through the implementation of circular practices.

The overall commitment

POST-GROWTH SOCIETY

MINDSET SHIFT WITH NATURE

SHARED VISION

COMMON HISTORY AND CULTURE

- We emphasise sufficiency over efficiency. Harnessing our common sense of place and our shared mining history, we transition from an extractive mining system towards a circular use of our resources.
- Water and soil form the foundation of our development. Functional Bioregions are the backbones of our governance systems and our communities.
- Our shared and functional cross-border circular system transcends institutional boundaries. Through our common efforts, we are able to address specific challenges in national legislations to implement cross-border flows and networks that feed our circular systems.
- We emphasize the region's shared culture, embracing our mining history as a starting point to shift our mindset into actions and initiatives.

The spatial and content baseline

CIRCULAR ECONOMY

We commit to a circular economy that surpasses borders, preserving landscapes and rivers while a sensitive forest management strongly contributes to our sustainable future by preserving our environment and offering renewably sourced building material. We stand as pioneer by establishing a re-use hub of technical waste in Europe.

RESILIENT SPATIAL PLANNING

We prioritise building within the existing urban structure and create new living opportunities through renovation. A common, cross-border, public transportation network is the backbone of our mobility.

EDUCATIONAL REVOLUTION

We call for a revolution in education, fostering post-growth values and natural intelligence, from primary schools to universities. Our goal is to nurture a new generation equipped with the knowledge and tools for a responsible use of our common resources.

The organisation and cooperation of the network

CROSS-BORDER COLLABORATION

REGIONAL IDENTITY

COMMUNITY ENGAGEMENT

- We work beyond administrative or institutional borders, emphasising open-minded, courageous, and innovative thinking. We advocate for regulations that allow us to develop our cross-border region in a functional way. Our approach includes fostering cooperation between universities, governments, and enterprises, facilitating know-how transfer and long-term perspectives.
- Envisioning the area between Meuse and Rhine as a borderless system, we aim to foster a natural connection among the people of the Netherlands, Germany, and Belgium.
- We commit to engage and involve our citizens, communities, preventing climate denial. We encourage and support cross-border projects that showcase positive changes.

This manifesto is a call for action for individuals, communities, and governments to unite in creating a sustainable, cross-border future. The time is now, and our shared journey begins at the confluence of the Rhine and Meuse.



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Summary and Outlook

With the end of the Future Studio begins a collaborative work, that will carry forward the processes' enriching discussions and visions into concrete cooperations and projects. While the year 2100 may appear distant, addressing and preparing for dynamic and complex issues like climate change and Europe's reliance on rare material imports for its sustainable transition require policy tools able to think in the long term and to handle uncertainties and different perspectives. The developed scenarios have raised awareness on alternative paths for the region, while exploring tipping-points helped conceive how today's choices impact our future. But above all, the Future Studio has highlighted, how entangled a resilient future is with mindset and behavioural shifts, away from a purely linear and extractive consumption of resources ("mining") towards more caring and circular practices of "harvesting".

Transcending existing administrative and institutional boundaries in favour of living and acting along functional boundaries, like the catchment area of the river Wurm, "the Wurmatal Bioregion", is key to move away from our linear growth paradigm. Similarly, a resilient and circular forest management system providing renewable building material for the region as well as preserving soil and water requires cooperation between actors from both sides of the border, in accordance with landscape patterns and resources availabilities.

Adopting a borderless perspective for the region requires also to adapt (national) regulations to support initiatives like cross-border re-use hubs, which can only flourish by being fed through cross-border supply and demand chains. This will require a willingness as well as possibilities to experiment, in order to develop proof of concepts to advocate for such changes.

The added value of the Future Studio has been to allow participants to project themselves into and relate to the future, from which they could reason backward by devising actions required now and in the upcoming decade. Long-term thinking empowers us to take the next steps, while designing with uncertainties and adaptability over time. The success of the Future Studio owes much to the contributions of all local and topical experts. We wish to offer our sincere gratitude to all participants for their invaluable help and insights.





Maurer United Architects

RHA

MULTI DAY WORKSHOP

NL2100

Addendum

The addendum compiles statements from participants and stakeholders around two key questions: “What is your vision for 2100?” and “What are the benefits of cross-border cooperation?” Additionally, the addendum lists the stakeholders and experts who substantially contributed to the content and success of the Future Studio.



Statements to the future

“Speculative design is a design methodology where you start designing for the future rather than when. It also means that you don’t think in problems, you really think in environments. You really start to look at what the real problems are. And speculative design is a very good methodology for that.”

Theo Ploeg, Fischbach Collective



What is your vision for 2100?

“I think these countries are becoming less and less important in a globalized system that we have now and regions are becoming more important. And I think one of the most important aspects of this region is that the people are very self-sufficient and that they have direct democracy where everybody who lives in this region actually has a say in what happens in the region.”

Carine Van Hove, Euregio Meuse Rhine

“The process we’ve ran through together today here in Aachen involved two countries and two languages. As participant representing the Euregio Meuse-Rhine (EMR), I’ve inevitably been extrapolating this process in my mind for our border region with three countries (Belgium, Netherlands, Germany), five partner regions and cultures, as well as three languages (Dutch, German, French). Hence a similar process in the EMR would be even more challenging, but the outlook and the way to go that you’ve designed seem to be expandable and the right one to go.”



What is your vision for the year 2100?

“Hopefully we’ll manage to shape a future in which we will live with a different quality of life as today - different, not less. The way we use natural resources and space will need to change. Initial steps are taken already and the sense of urgency starts to be all around us. But we’ll need to come with even more innovative concepts, smart and environmentally sound technologies, solutions and behaviors to put sustainability, energy efficiency, security, ... first. To go short: we’ll need to live along the rhythm of nature and seasons and the smart eco-availability around us.”

Luise Clemens, Stadt Aachen

What is your vision for 2100?

“... We need a common political system, because we often suffer from the fact that we have different framework conditions, be it in tax legislation, in employment, in the framework conditions for companies. And of course, I hope that in 100 years’ time this will really be behind us and that we will be able to work together much more closely on the entire framework than is possible today.”



“In the year 2100, we will have a United States of Europe. We will have a common set of rules for the Netherlands, Belgium, for the whole of Europe, for Germany, and we will no longer be dependent on national legislation that now affects energy supply, companies or even education, but we really have achieved common goals.”

What is your vision for 2100?

“I imagine that in the year 2100 it will be a very busy region, because of climate change a lot of people will have migrated from the northern Netherlands to this region. And the region has a lot to offer, but (because we will be) with a lot of people, it is necessary that we make good places here on both the German and the Dutch side. “



Jules Beckers, Parkstad IBA

“During my work at Parkstad, but also in recent years I noticed that it is very important that we think across the border. We saw that with the IBA (International Building Exhibition Parkstad), there we brought a German instrument to the Netherlands. We learned from each other. We made projects with support, also from the German IBA organization.”

Koen van Nieuwenhoven, Stadsregio Parkstad Limburg



What are the benefits of cross-border cooperation?

“... what was very clear today was that we are actually working on exactly the same issues on both sides of the border. It is just that the issues are expressed in a completely different way and you can see that we really need each other. And what I really liked about today is that we agreed to talk to each other outside of this process. To see how we can continue to work together on a number of issues.”

“At the College of Rijksadviseurs, we have drawn up an agenda with the motto “The 22nd century starts now”. Because we think it is very important to look far ahead, to know better what to do and what to leave now. And that’s where we organize future. Imagine we slow down deeper thinking to train ourselves in thinking about new values and new ways of doing things.”

What is your vision for 2100?

“In 2100, I expect that we have a much stronger sense of unity in Europe and that a border region is no longer divided into parts. That the border will no longer work as a border, but rather as a zone where it is buzzing with diversity and where you see the different cultures precisely as an advantage.”



Jannemarie de Jonge, College van Rijksadviseurs

What is your vision for 2100?

“I can imagine that we will be a region worth living in, with secure jobs, with a sustainable economy, with a sustainable energy supply and in such a way that we are future-proof, so that we can continue to live well here for hundreds, thousands of years to come, even beyond our borders.”



Sebastian Albring, StädteRegion Aachen

What are the benefits of cross-border cooperation?

Lars Christian Uhlig, BBSR



“Of course, we are interested in the long-term development of an area that has completely different problems and challenges than in a landlocked country, where the systems are one and the synchronisation of events and framework conditions is easier than in such cross-border regions.

... the everyday space of the people here is not dominated by the border. It is rather the political, economic and other space. And these challenges come with a long-term perspective.

We have different developments, different speeds of development and different framework conditions on both sides of the border. And bringing these together is of course a particular challenge.”



Fabian Thimm, Region Aachen Zweckverband

What is your vision for 2100?

“... I hope that our sense of cooperation will continue to be as good as it is now and that we will simply have even more opportunities on top of that, including of a legal nature. ... and that we get even more legal opportunities from the nations themselves to be able to shape our border region in a special way. ”

What is your vision for 2100?

“I advocate the Transnational European Centre for Circular Construction and Transformation. Then we will live in a society and also in a nature that has truly become one with each other, in which social and ecological interrelationships merge. And that means that both product manufacturing and consumption have been converted from linear processes to circular processes.”

That we have actually achieved the socio-ecological balance that we have lost for at least a century.”



Casper Gelderblom, Alderman City of Heerlen

What is your vision for 2100?

“My vision of 2100 is quite aligned with the characters we have invented for this studio who are Yona and Eva. Their world, I think, is a world where this collaboration between people and places, people and landscapes, non-humans and humans is a fully normal kind of thing. You can see that also the human body plays an important role in this. How we relate to the world is much more different than it is now. It’s much more in connection interconnectedness.”



Anna Fink, Fischbach Collective



Lieke Jildou de Jong, Fischbach Collective

What is your vision for 2100?

“Looking ahead to the year 2100, I hope that this will be a place where people can learn from each other. ... So that even at a time when things go wrong or they seem to be failing, they can also examine how we can improve.

I hope that this is a growing process where people can do more each time. We need to adapt and be able to recognise, like an oil spill, what the consequences are of the actions that are being taken now or in the future, and how that can get bigger and bigger each time, so that there is a kind of chain reaction where this area is future-proofed for the climate in the future.”



Robert Broesi, MUST

What is your vision for 2100?

“We really want to use the potential of this region towards a circular economy, a borderless approach is really necessary because for example for the technical waste, we have to assemble it to a large catchment area and also for the woods, we have to connect woods in Germany with the woods in Zuid Limburg and in Belgium. And the same goes actually for the built city. There is a lot of knowledge in the Netherlands and in Germany on this topic and we have to bring the knowledge together. ”

“The opportunity in the Euregio is to overcome borders in all areas of life, especially on Soil. Water and soil are crucial resources, and thinking about them collectively, particularly discussing the efficient use of resources in the context of a circular economy, is an absolute added value.”



Sibylle Keupen, Stadt Aachen

What is your vision for 2100?

“We will have a vibrant civil society that embraces and actively addresses issues to improve our region. Here, people of all ages live together, individuals from all nations peacefully coexist, national borders no longer exist, and we already live in a united Europe, enjoying this wonderful natural and cultural landscape, especially the diversity of people living here.”



Peter Bertholet, Stadsregio Parkstad Limburg

What is your vision for 2100?

“We live in a society, but also in a nature that has truly become one, where social and ecological contexts merge. And that means that both the production of products and the consumption need to transition from linear processes to circular processes.”



Roundtables participants

Jos Bauer - IBA Parkstad
 Jules Beckers - IBA Parkstad
 Jan Benden - MUST
 Peter Bertholet - Stadsregio Parkstad-Limburg
 David Bongartz - Zukunftsagentur Rheinisches Revier
 Bob Borggreve - Stadsregio Parkstad-Limburg
 Robert Broesi - MUST
 Anja Brüll - Dreiländerpark, Euregio Maas Rhein
 Canan Çelik - RWTH Aachen
 Mehmet Çelik - Stadt Aachen
 Jannemarie de Jonge - College van Rijksadviseurs
 Lieke Jildou de Jonge - Fischbach Collective
 Yvonne Debald - Stadt Aachen
 Bart Erens - College van Rijksadviseurs
 Paula Erckmann - MUST
 Anna Fink - Fischbach Collective
 Dirk Gebhardt - BBSR
 Patrick Hahne - StädteRegion Aachen
 Tertius Hanekamp - College van Rijksadviseurs
 Jasper Hugtenburg - H+N+S
 Simone Huijbregts - College van Rijksadviseurs
 Remy Kroese - Dear Hunter
 Ilias Kulbarisov - MUST
 Jonas Lowenich - Region Aachen Zweckverband
 Marc Stroomman - Provincie Zuid Limburg
 Marianne Lensink - Waterschap Limburg
 Marc Maurer - Maurer United Architects
 Nicole Maurer - Maurer United Architects
 Hans Mommaas - Tilburg University, Formerly Director of PBL
 Bérénice Preller - BBSR
 Alankrita Sarkar - Vereniging Deltametropool
 Corné Strootman - College van Rijksadviseurs
 Markus Terodde - StädteRegion Aachen
 Lars-Christian Uhlig - BBSR
 Koen van Nieuwenhoven - Stadsregio Parkstad-Limburg
 Pascal Wauben - Provincie Zuid Limburg
 Christa Reicher - RHA | RWTH Aachen
 Holger Hoffschroer - RHA
 Yuan-Jung Wang - RHA
 Lena Bruns - RHA



Multiday Workshop participants

DAY 1

Raphaela Bartusch - RHA
 Jules Beckers - IBA Parkstad
 Peter Bertholet - Stadsregio Parkstad-Limburg
 Elza Berzina - Collective Fischbach
 David Bongartz - Zukunftsagentur Rheinisches Revier
 Bob Borggreve - Stadsregio Parkstad-Limburg
 Andréa Croé - Schunk
 Lieke Jildou de Jong - Fischbach Collective
 Bart Erens - College van Rijksadviseurs
 Anna Fink - Fischbach Collective
 Catharina Gottschalk - Stadt Aachen
 Christine Hahn - RWTH Aachen
 Patrick Hahne - StädteRegion Aachen
 Ester Heimann - Fischbach Collective
 Holger Hoffschroer - RHA
 Simone Huijbregts - College van Rijksadviseurs
 Julia Krings - MUST
 Ilias Kulbarisov - MUST
 Christian Larisch - RWTH Aachen
 Marianne Lensink - Waterschap Limburg
 Moritz Lippold - RHA
 Benedikt Markett - Velocity Mobility
 Marc Maurer - Maurer United Architects
 Carola Neugebauer - BBSR
 Theo Ploeg - Fischbach Collective
 Bérénice Preller - BBSR
 Christa Reicher - RHA | RWTH Aachen
 Mousavi Seyed Alireza - RWTH Aachen
 Corné Strootman - College van Rijksadviseurs
 Ziega van den Berk - Fischbach Collective
 Manon van der Linden - Gemeente Heerlen
 Anne van Kuijk - Provincie Noord-Brabant
 Joost Waelen - Provincie Zuid Limburg
 Yuan-Jung Wang - RHA
 Jake Wiersma - Delft University of Technology

DAY 2

Ajdin Alagic - Zukunftsagentur Rheinisches Revier
 Sebastian Albring - StädteRegion Aachen
 Raphaela Bartusch - RHA
 Jos Bauer - IBA Parkstad
 Jules Beckers - IBA Parkstad
 Elza Berzina - Fischbach Collective
 Marc Beus - Büro edil
 Bob Borggreve - Stadsregio Parkstad-Limburg
 Anja Brüll - Dreiländerpark, Euregio Maas Rhein
 Canan Çelik - RWTH Aachen
 Luise Clemens - Stadt Aachen
 Andrea Croé - Schunk
 Jannemarie de Jonge - College van Rijksadviseurs
 Lieke Jildou de Jong - Fischbach Collective
 Yvonne Debal - Stadt Aachen
 Robik Diek - Ministerie van Binnenlandse Zaken en Koninkrijksrelaties
 Paula Erckmann - MUST
 Bart Erens - College van Rijksadviseurs
 Anna Fink - Fischbach Collective
 Jouce Finke - StädteRegion Aachen
 Hanna Hage - Entwicklungsgesellschaft inland
 Patrick Hahne - StädteRegion Aachen
 Tertius Hanekamp - College van Rijksadviseurs
 Ruth Hausmann - Zukunftsagentur Rheinisches Revier
 Ester Heimann - Fischbach Collective
 Holger Hoffschroer - RHA
 Johannes Hucke - Zweckverband Region Aachen
 Simone Huijbregts - College van Rijksadviseurs
 Nils Jagnow - IHK Aachen
 Helga Klinkers - Parkstad Limburg
 Julia Krings - MUST
 Remy Kroese - Dear Hunter
 Ilias Kulbarisov - MUST
 Sarah Lambertus - Stadt Aachen
 Christian Larisch - RWTH Aachen
 Benedikt Markett - Velocity Mobility
 Marianne Lensink - Waterschap Limburg
 Moritz Lippold - RHA
 Marc Maurer - Maurer United Architects
 Nicole Maurer - Maurer United Architects

Theo Ploeg - Fischbach Collective
 Bérénice Preller - BBSR
 Christa Reicher - RHA | RWTH Aachen
 Karin Schmitt-Promny - Landschaftsversammlung Rheinland
 Jan Schultheiß - BMWSB
 Mousavi Seyed Alireza - RWTH Aachen
 Sara Sittinger - RHA
 Achim Stahl - RWTH Aachen
 Marc Strookman - Provincie Zuid Limburg
 Corné Strootman - College van Rijksadviseurs
 Markus Terodde - StädteRegion Aachen
 Fabian Thimm - StädteRegion Aachen
 Lars-Christian Uhlig - BBSR
 Ziega van den Berk - Fischbach Collective
 Guido van de Ven - Waterschap Limburg
 Carina van Hove - Euregio Maas
 Koen van Nieuwenhoven - Stadsregio Parkstad-Limburg
 Yuan-Jung Wang - RHA

Multiday Workshop participants

DAY 3

Ajdin Alagic - Zukunftsagentur Rheinisches Revier
 Nicole Arce Valdivia - Stadt Aachen
 Raphaela Bartusch - RHA
 Fabio Bayro Kaiser - RWTH Aachen
 Jos Bauer - IBA Parkstad
 Robert Beentjes - Stadsregio Parkstad-Limburg
 Elza Berzina - Fischbach Collective
 Bob Borggreve - Stadsregio Parkstad-Limburg
 Robert Broese - MUST
 Anja Brüll - Dreiländerpark, Euregio Maas Rhein
 Canan Çelik - RWTH Aachen
 Luise Clemens - Stadt Aachen
 Andrea Croé - Schunk
 Jannemarie de Jonge - College van Rijksadviseurs
 Lieke Jildou de Jong - Fischbach Collective
 Yvonne Debald - Stadt Aachen
 Robin Diek - Ministerie van Binnenlandse Zaken en Koninkrijksrelaties
 Bart Erens - College van Rijksadviseurs
 Anna Fink - Fischbach Collective
 Casper Gelderblom - European University Institute
 Hanna Hage - Entwicklungsgesellschaft indeland
 Patrick Hahne - StädteRegion Aachen
 Ruth Hausmann - Zukunftsagentur Rheinisches Revier
 Ester Heimann - Fischbach Collective
 Holger Hoffschroer - RHA
 Hans Hoorn - RWTH Aachen
 Johannes Hucke - Zweckverband Region Aachen
 Simone Huijbregts - College van Rijksadviseurs
 Nils Jagnow - IHK Aachen
 Peter Jakubowski - BBSR
 Dietmar Jansen - Erftverband
 Julia Krings - MUST
 Ilias Kulbarisov - MUST
 Christian Larisch - RWTH Aachen
 Moritz Lippold - RHA
 Benedikt Markett - Velocity Mobility
 Marc Maurer - Maurer United Architects
 Nicole Maurer - Maurer United Architects
 Volker Mielchen - Landfolge Garzweiler

Regina Oertel - RWTH Aachen
 Theo Ploeg - Fischbach Collective
 Bérénice Preller - BBSR
 Christa Reicher - RHA | RWTH Aachen
 Math Reneerkens - Provincie Zuid Limburg
 Jan Schultheiß - BMWSB
 Mousavi Seyed Alireza - RWTH Aachen
 Lars-Christian Uhlig - BBSR
 Francesco Veenstra - College van Rijksadviseurs
 Wouter Veldhuis - College van Rijksadviseurs
 Joost Waelen - Provincie Zuid Limburg
 Yuan-Jung Wang - RHA
 Jake Wiersma - Delft University of Technology





Dilsen-Stokk

As

Selfkant

Sittard-Galeen

Maasmechelen

Stein

Brunssum

Beek

Beekdaalen

Lanaken

Meerssen

Heerlen

Valkenburg aan de Geul

Voerendaal

Riemst

Simpelveld

Eijsden-Margraten

Gulpen-Wittem

Assen / Bitsingen

Vaals

Visé / Wezet

Voeren / Fourons

Oupeye

Dalhem

Plombières

Kelmis / La C

Aubel