ASSET

Interreg North-West Europe

Co-funded by the European Union

*A **S**patial **S**trategy for a circular **E**urodelta,* boosting a circular buil**T** environment

ASSET

- Small scale project: **Steppingstone for follow-up projects.**

- One of the targets: **Understanding spatial requirements of circularity.**
- **Come up with better questions not answers.**

- Duration: 18 months

External advisors

- BVR / Regenalyze

Supporters

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Industry support organisations
- Business Metropole Ruhr GmbH
- Public Works Duisburg
- Economic Board South Holland
- Economic Development Wuppertal

Government
- Province of North Holland
- City Region Parkstad Limburg
- City of Ghent
- City of Rotterdam
- Team Flemish Government Architect
- City of Utrecht
- GEBAG Duisburg Construction Company GmbH
- Duisburg Port AG
- City of Aachen (Department of Urban Development, Urban Planning and Mobility Infrastructure)
- City of Krefeld
- Ministry of the Interior and Kingdom Relations (Department of Spatial Policy)
- Ministry of Infrastructure and Water Management
- District of Lippe
- City of Dunkirk

Industry/Logistics
- Fiction Factory
- Supply Chain Valley
- Global Entrepreneurship Centre GmbH
- Derix
- BMN Van Keulen Amsterdam
- Healthy Building Movement
- Antea Group

Academia
- ITEM, Maastricht University / Faculty of Law
- Saxion University of Applied Sciences
- Thomas More University of Applied Sciences

Civil Society
- Ellen MacArthur Foundation
- New Efficiency
- DGMB German Sustainable Building Council
- EMBUILD.Brussels

Storyline

1. Knowing: The challenge
2. Exploring: Inspirational visions
3. Recommending: Megaregional collaboration

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Our Shared Assignment: Circularity

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European policies

- By 2050 Climate-neutral, resilient, fair, and competitive continent

Circularity = pathway

- Protecting the environment
- Reducing raw material dependence
- New jobs

Focus Built envrionment

Urgency is high

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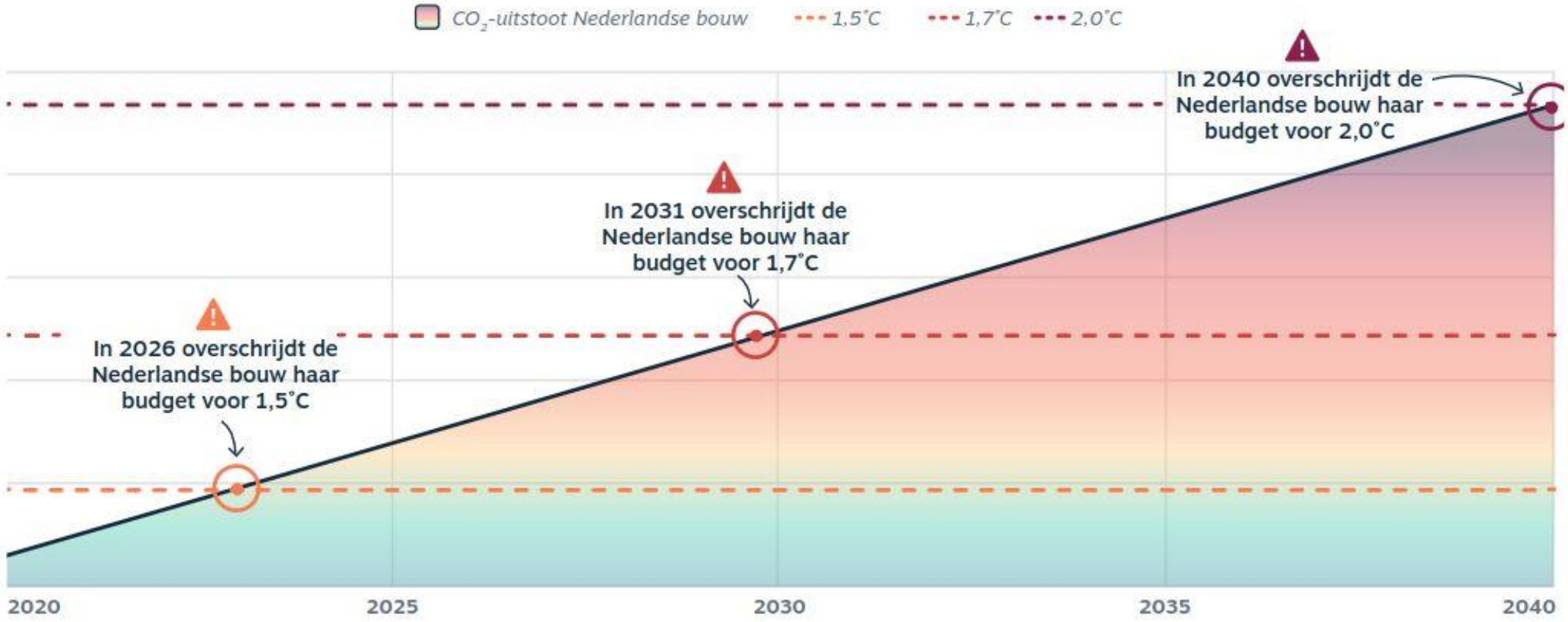
Figuur 8

Overschrijding van het CO_2-budget voor de Nederlandse bouw met de huidige manier van bouwen *(business-as-usual)*



Challenge is huge

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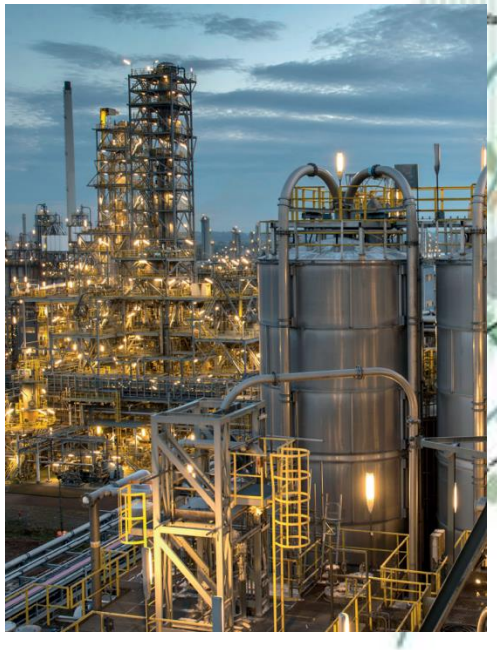
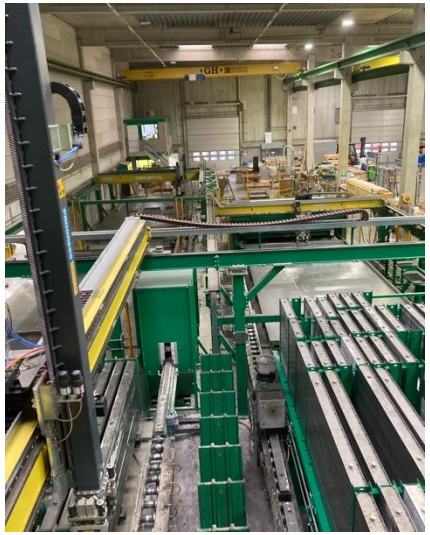
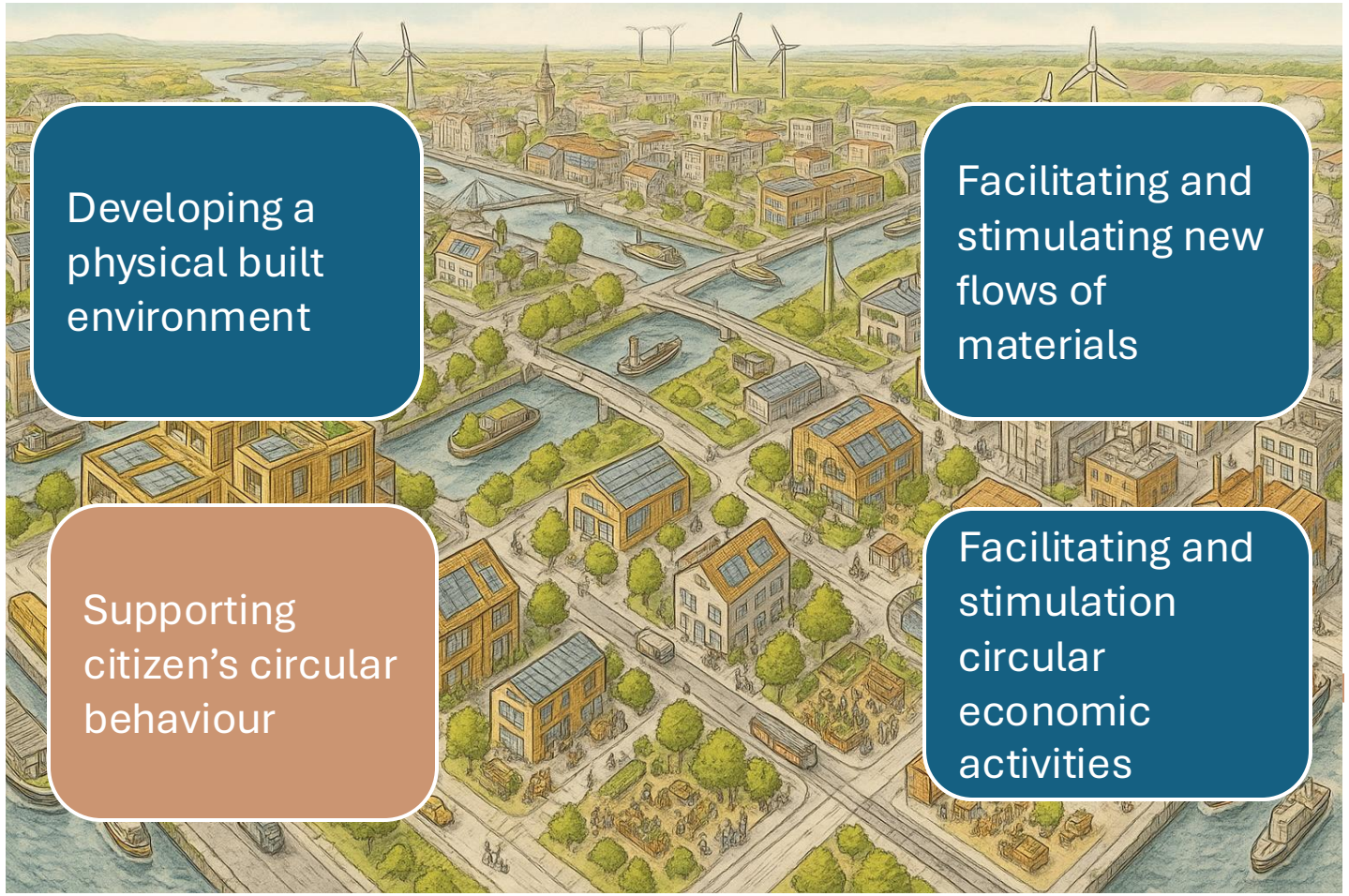
C·C H Chemelot Circular Hub





Cities/regions contribute to the CBE

Four perspectives to approach a circular built environment



@Wandl, EuroDelta 2050+

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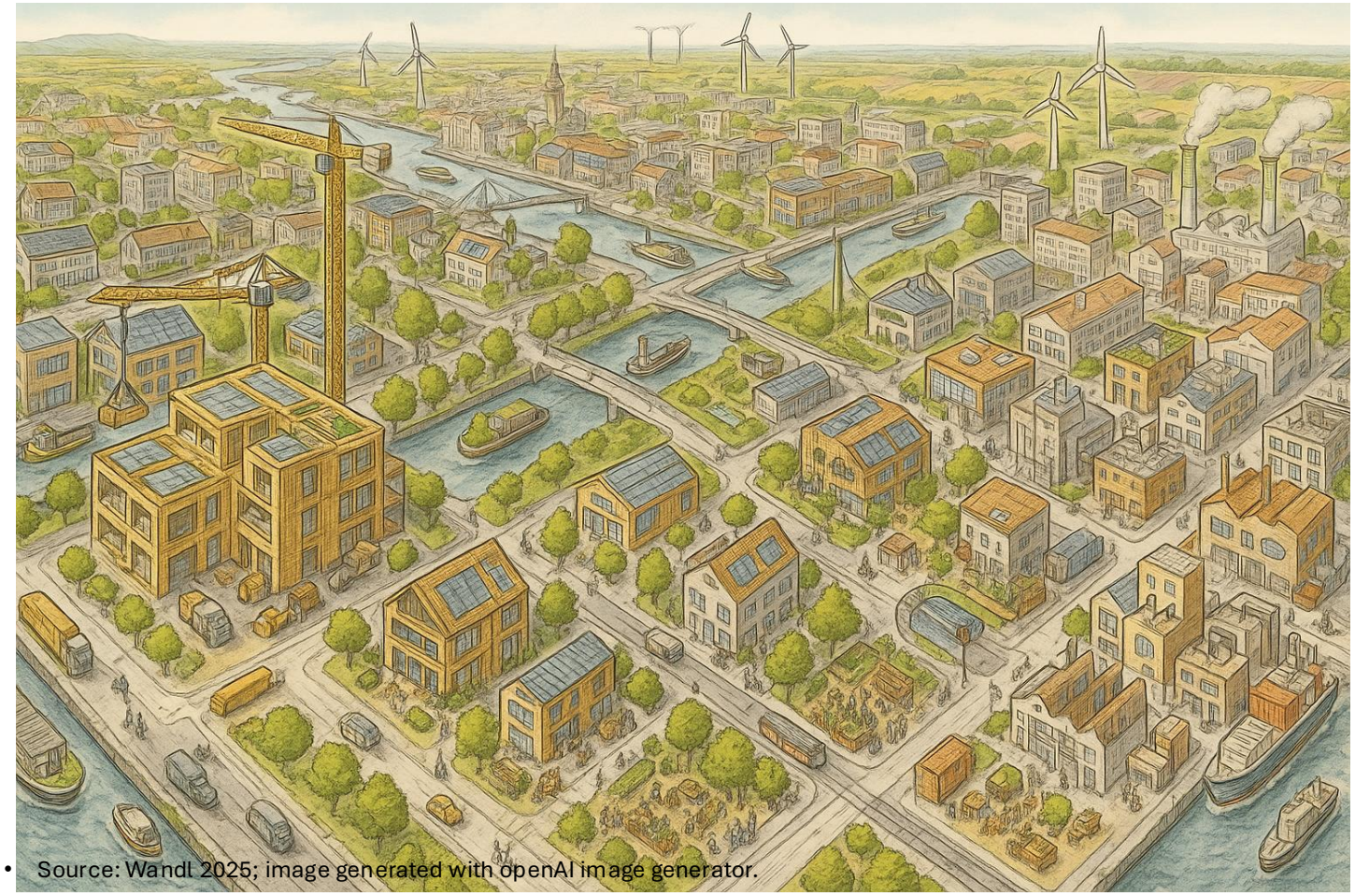
- Development of the circular market
- Space management
- Financing CBE investments
- Data availability
- Cultural shift
- Capacity

@Regenalyze Policy analysis EuroDelta

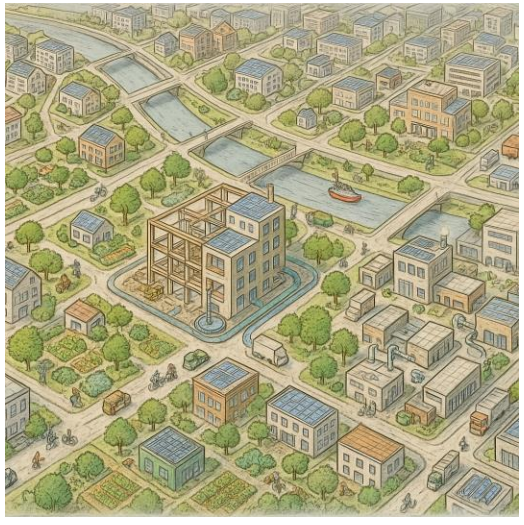
FOUR PERSPECTIVE TO APPROACH A CIRCULAR BUILT ENVIRONMNET



- Source: Wandl 2025; image generated with openAI image generator.

FOUR PERSPECTIVE TO APPROACH A CIRCULAR BUILT ENVIRONMNET – KEY ACTIONS

Developing a physical built environment



- Use renewable and biobased materials
- Regenerate water and soil systems
- Design for material reduction
- Foster emotional attachment and longevity
- Enable disassembly and reuse
- Support upgrades and easy maintenance
- Ensure standardization and compatibility across systems

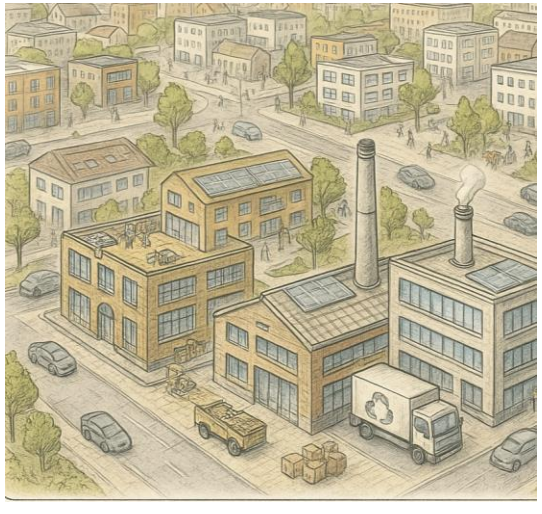
Facilitating circular flows of materials

- Reduce consumption
- Transition to renewable energy
- Design for synergies between functions
- Cascade energy, water, and material flows
- Support regenerative infrastructure (e.g., water reuse, urban mining)

Supporting citizen's circular behavior

- Provide shared infrastructure (e.g., tool libraries, repair cafés)
- Encourage regenerative practices (e.g., urban gardening, reuse stations)
- Foster trust and emotional connection in communities
- Design flexible, multifunctional spaces
- Enable easy maintenance and shared use
- Promote walking, cycling, and public transport

Facilitating economic activities



- Reserve space for urban production and repair
- Promote circular manufacturing and reuse industries
- Design flexible, adaptable structures
- Integrate multimodal logistics and infrastructure
- Avoid displacement of productive functions from cities

Source: Wandl 2025; image generated with openAI image generator.

How do you design for circularity?

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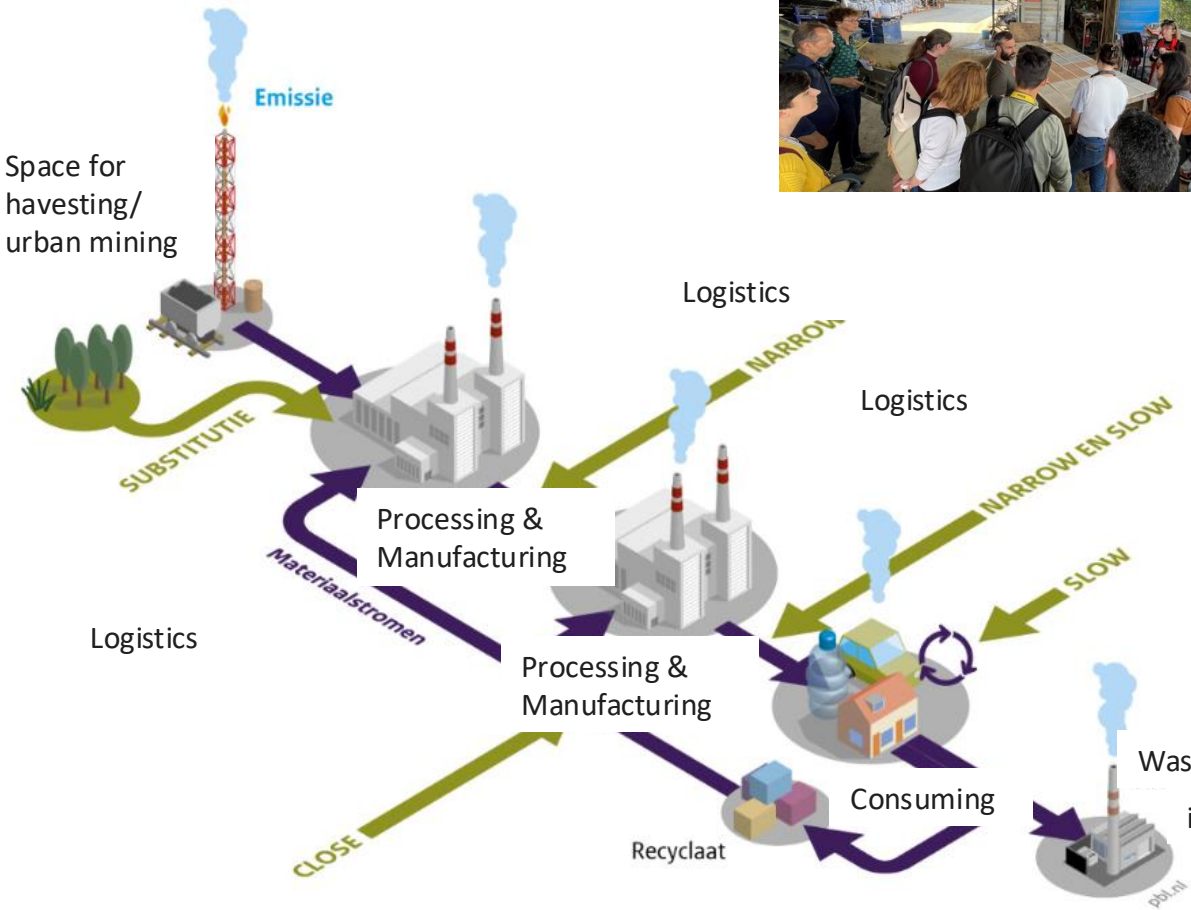
Close, narrow, and slow material cycles

Harvesting / urban mining



Bron: PBL

Processing/Manufacturing

Logistics

Consuming

Reduce use of resources & maximize value

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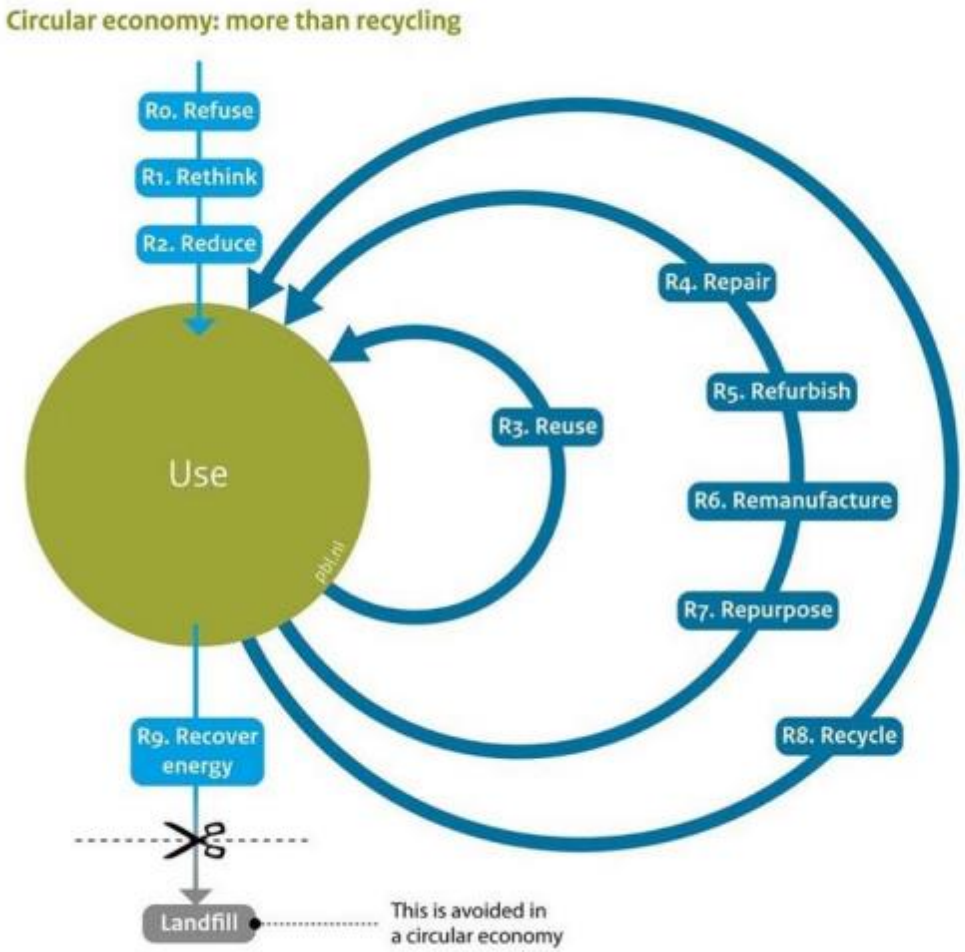

Rethink: substitution of materials

Recycle

Repurpose

The EuroDelta: a functional area

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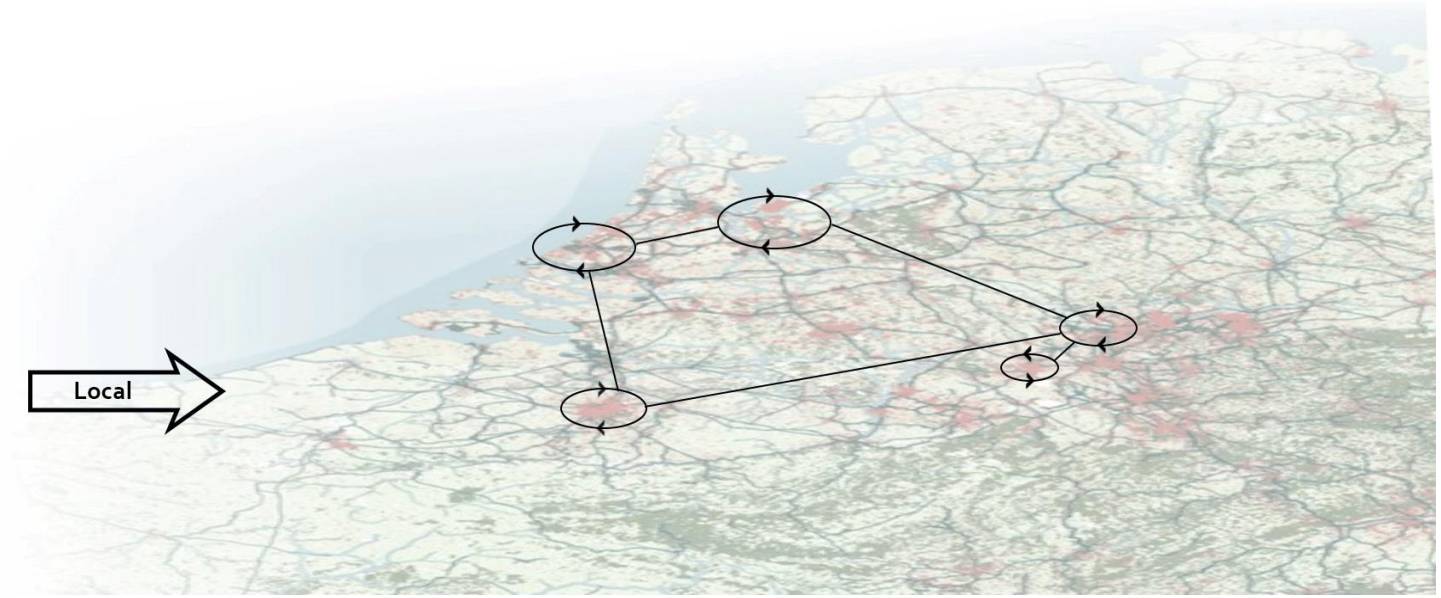
Derix group is delivering timber within the whole EuroDelta!

We recycle steel on the scale of the EuroDelta. (HKS/TSR)



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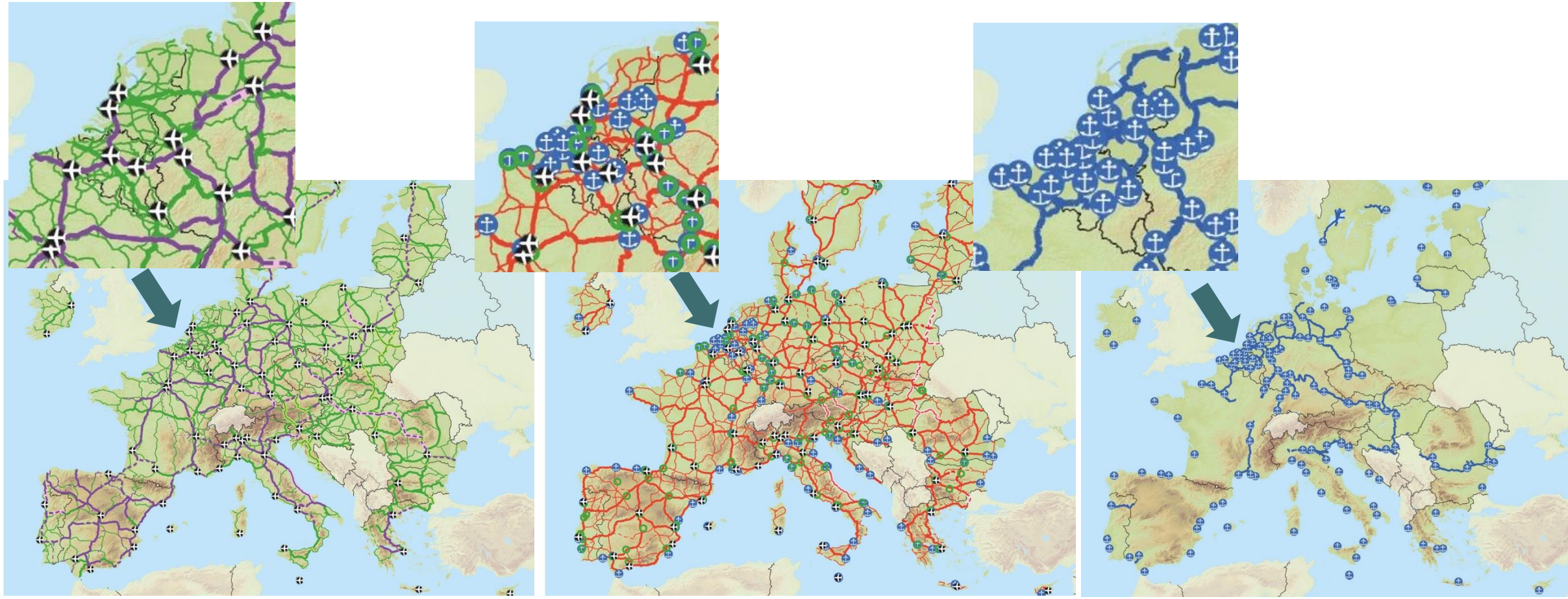
The EuroDelta: Gateway of Europe

Gateway of Europe by land, air and water



TENTnet

The EuroDelta: Most urbanized region of Europe

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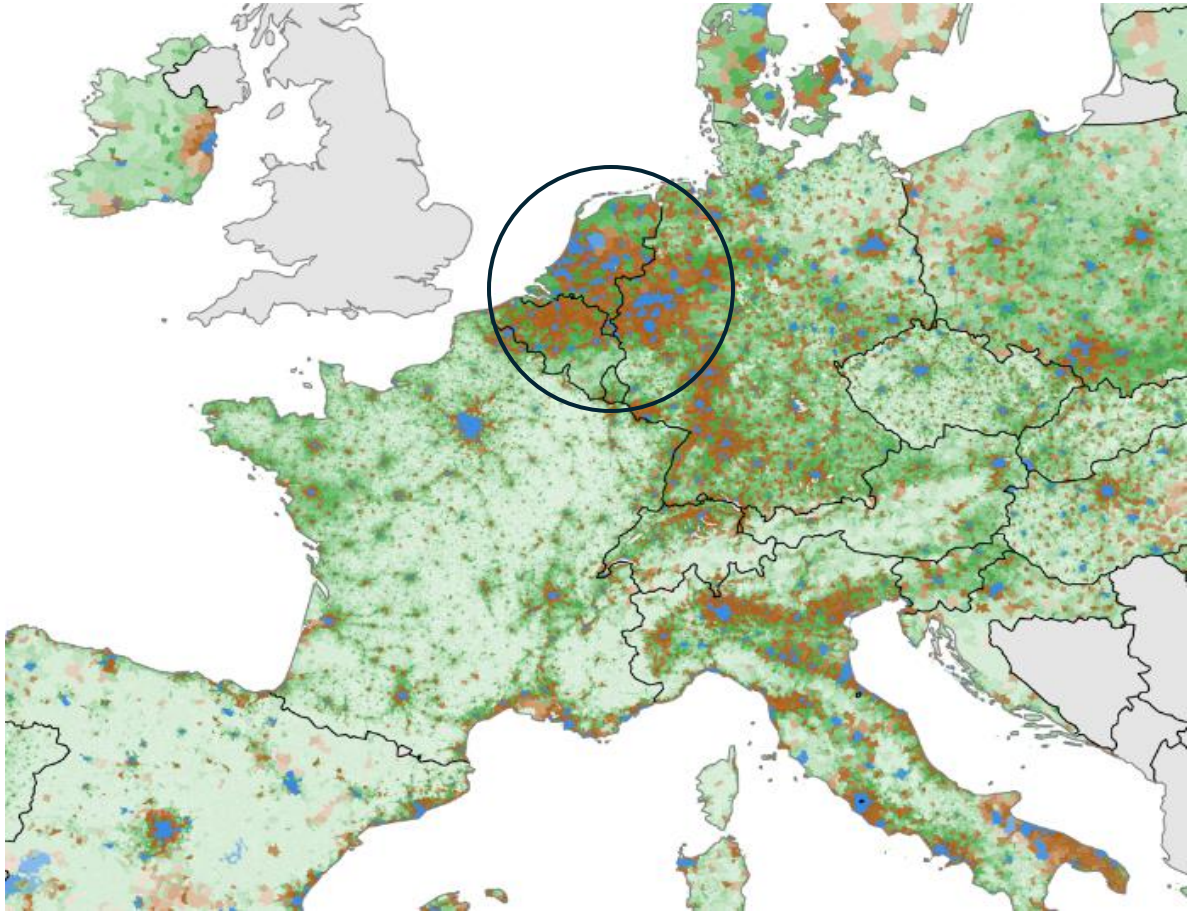

Eurostat (based on Census Population Grid 2021 and Local Administrative Units 2021)

Building challenge B/NL/NRW:

- By 2030, more than 2 million new dwellings to be built,
- next to renovation challenge, infrastructure maintenance, public space, etc.

Challenge is huge! Urgency is high!

One market for urban orientated industries!

Asset activities

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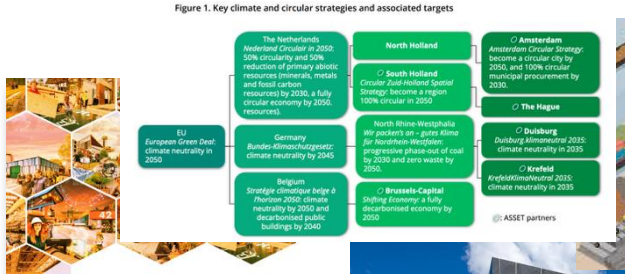
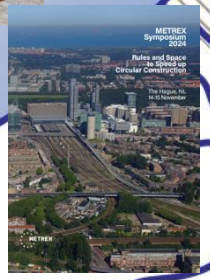


MAIN MESSAGES
CIRCULAR ZUID-HOLLAND SPATIAL STRATEGY
Strategic study



RENOLUTION .brussels

Redesign: Biobased Materials

Inspirational vision

Facilitate the use of biobased (regional) fiber, wood and algae production.

Strengthen urban – rural connectivities

Bring regional produced biobased construction materials to the city

Support development of regional markets

Prioritize the use of timber and regional produced biobased materials

Create space for production and first reprocessing of biobased materials near harvesting locations

- Fiberland

- Agroforestry & Woodland

- Algaeland

Smart Specialization

Potential location for EuroDelta Timber Valley (s)

Stimulate a sustainable Eurodelta logistics network

Stimulate shipping of biobased materials via

- Circular logistics corridors (water first, rail second) with transport hubs for wood and timber

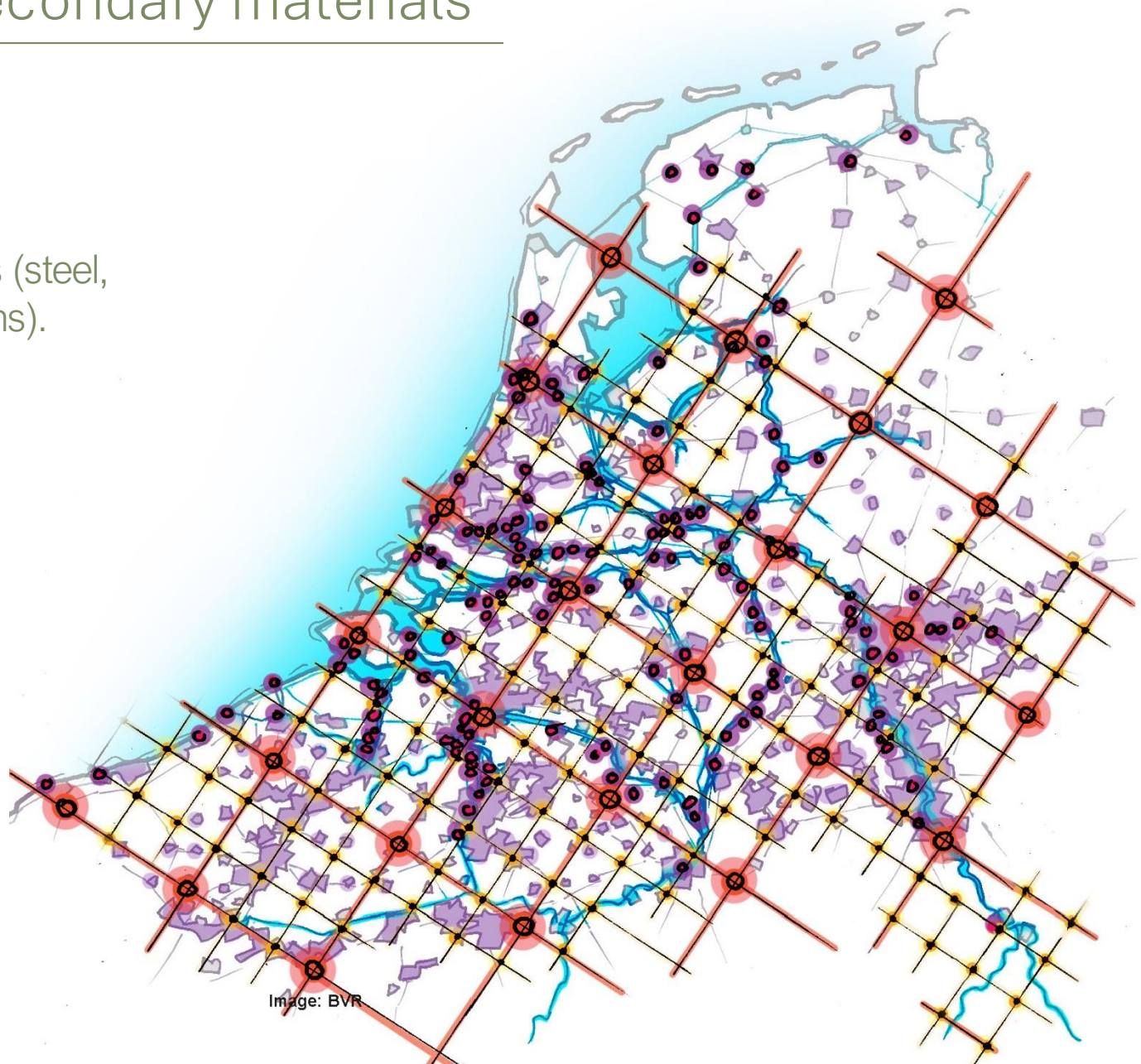
- Transport into the city via innercity-harbours for first and last mile distribution

- Link export and import of bulk (e.g. timber) to the multimodal EuroDelta logistics

Redesign: Secondary materials

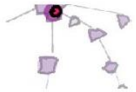
Inspirational vision

Facilitate the use of secondary materials (steel, concrete, installations).



Leverage cities as hotspots for a circular built environment

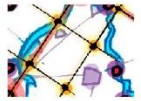
Facilitate the circular loops on the lowest scale (scales of buildings, neihbourhoods, cities and regions)



Facilitate the creation of city-to-city connections to ensure supply security and closing of loops of specialized secondary materials

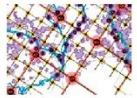
Support development of regional markets

Prioritize the use of local secondary materials



Create space for urban mining and reuse of materials in the city: develop a 20 km hub grid for local loops in urban areas for example for in and outflow of circular concrete and for collecting steel to recycle centers

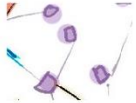
Create spaces for smart specialization



Develop a 60 km hub grid for specializations of e.g. circular processing and manufacturing of metals

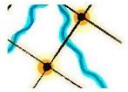
Stimulate a smart specialization strategy for harbours

Stimulate the use of inland harbours as local and regional production, manufacturing and urban logistic spaces (for bulk and containers)



Stimulate inland multimodal hubs to reduce the pressure of logistics on portcities.

Create Circular logistics corridors



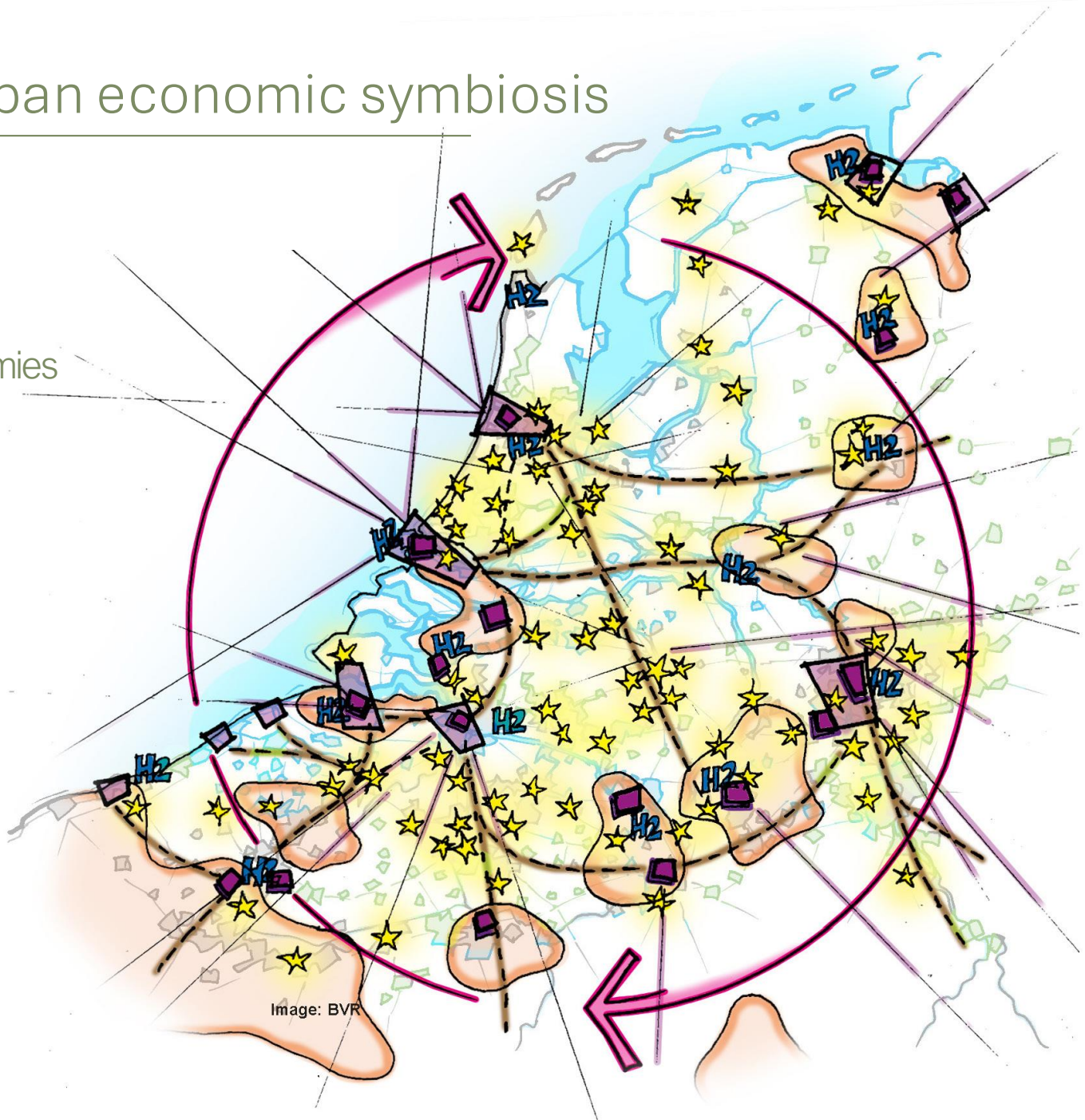
Revitalize and develop waterways as transport system for circular (re-) construction

BVR

Redesign: Urban economic symbiosis

Inspirational vision

Rethink: Facilitate European/global and local/regional economies alike.



Provide space for facilitating synergies

Stimulate industrial symbiosis between industries (within value chains and different sectors)

Stimulate smart specialization and interregional specialized cluster development (e.g. ports)

Stimulate specialized industrial clusters at sustainable high-energy hotspots (H2) for high energy consuming industries like steel- and chemical industries

Stimulate the creation of win-win situations for local communities and industrial activities (e.g. for the reuse of energy)

Stimulate regional economies and urban activities

Align the development of healthy living environments and the development of clean industries and biobased production especially around urban areas

Transform urban local and regional economies to keep their materials in the loop

Reduce traffic impact from industrial activities of e.g. seaharbours on urban areas

Unbundle railroads for goods and railroads for people. Reduce the risk of the transport of dangerous materials

Stimulate the development of regional markets for new job opportunities in pilot areas at urban regions that are eligible for just transition funds (often resource regions like (former) mining areas)

Develop condititions for circularity

Develop and power a grid of main energyhubs for industrialization (hydrogen)

Activate the urban network of knowledge and innovation clusters to boost the circular transition

Prioritize the development of right skills for working in specialized circular industries in area's that are eligible for just transition funds (often resource regions like (former) mining areas). Bring work to people not people to work

Take Leadership – start megaregional collaboration

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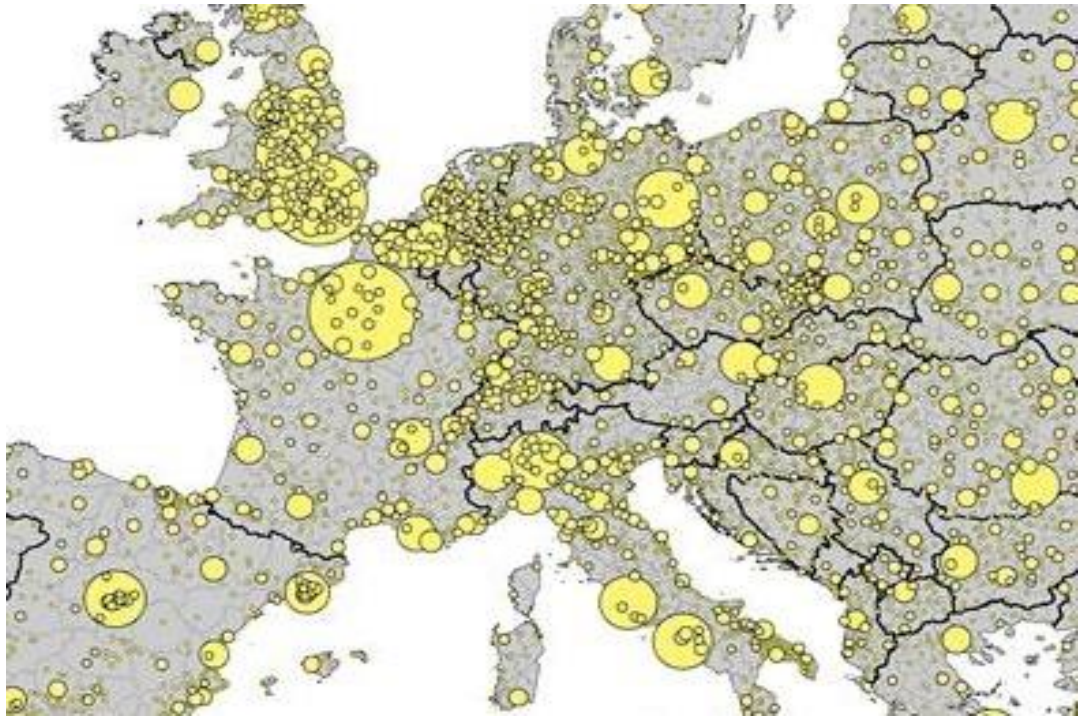

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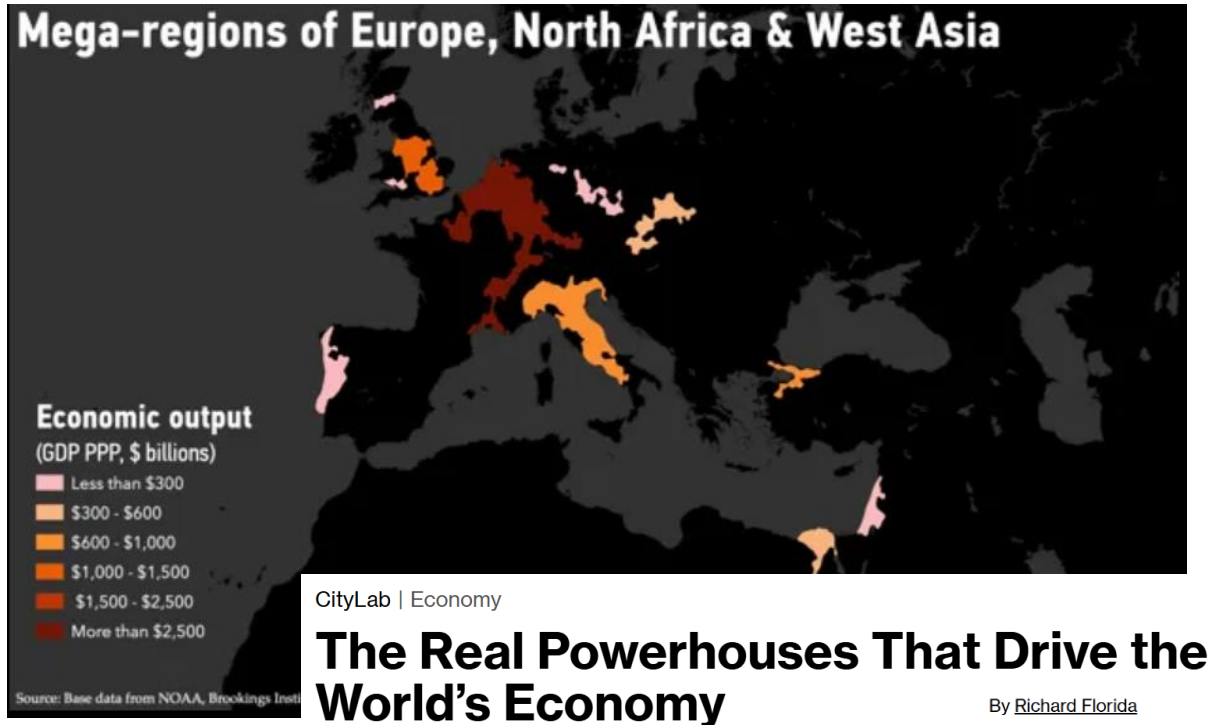

CityLab | Economy

The Real Powerhouses That Drive the World's Economy

By Richard Florida
28 februari 2019 at 15:57 CET

It's not nation states or even cities, but mega-regions—combinations of multiple metro areas—that are the real forces powering the global economy.

Start: The EuroDelta Alliance

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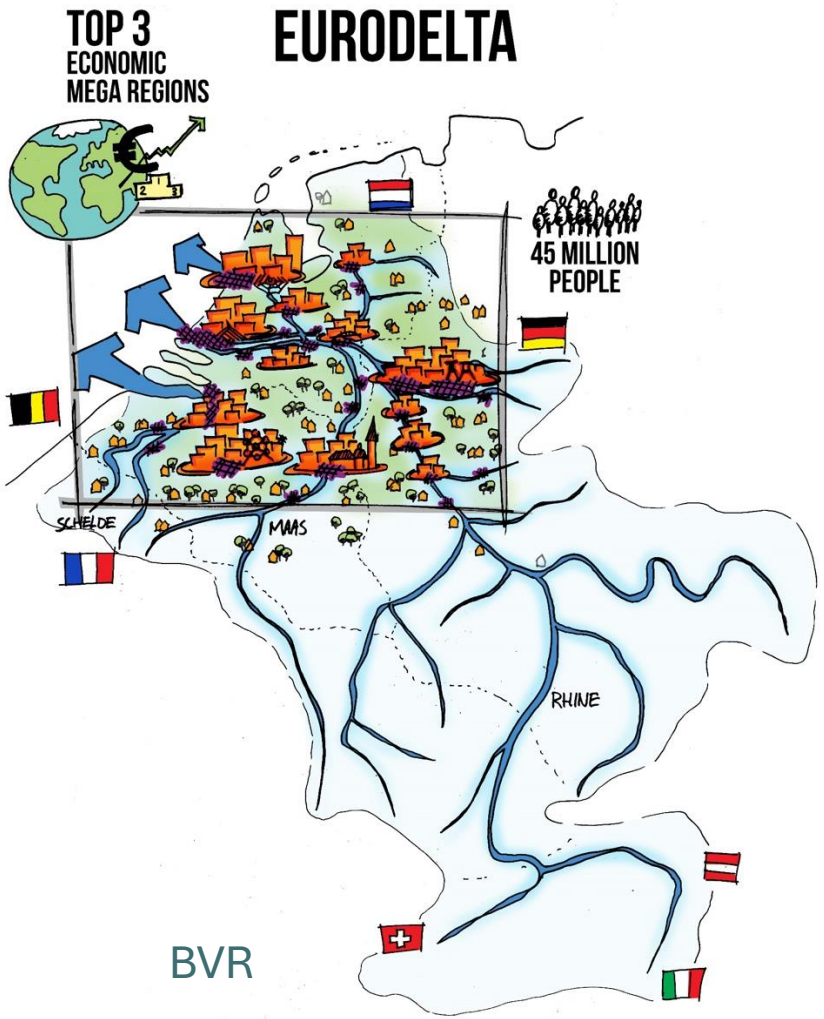

BVR

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