



# **Spatial strategies on circular economy**

## ***lessons learned***

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# From a linear to a circular economy

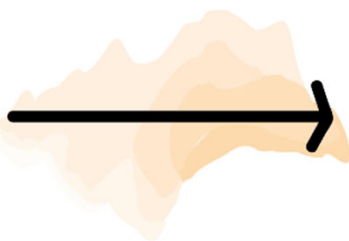
NL Goal 2050: 100% Circular Economy  
2030: -50% virgin abiotic materials

CURRENT ECONOMY

ECOLOGICAL CEILING



FOSSIL



LINEAR

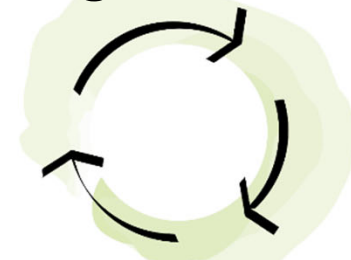
SOCIAL BASIS

ECOLOGICAL CEILING

CIRCULAR ECONOMY  
R-Strategies



RENEWABLE

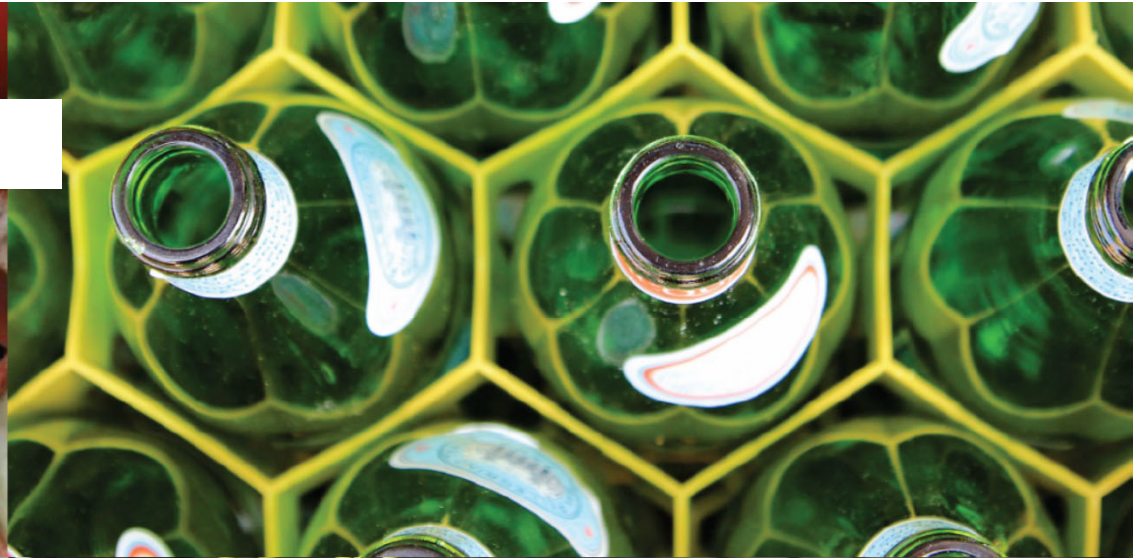


CLOSED LOOPS

SOCIAL BASIS



**Circularity starts close by**





# circular business



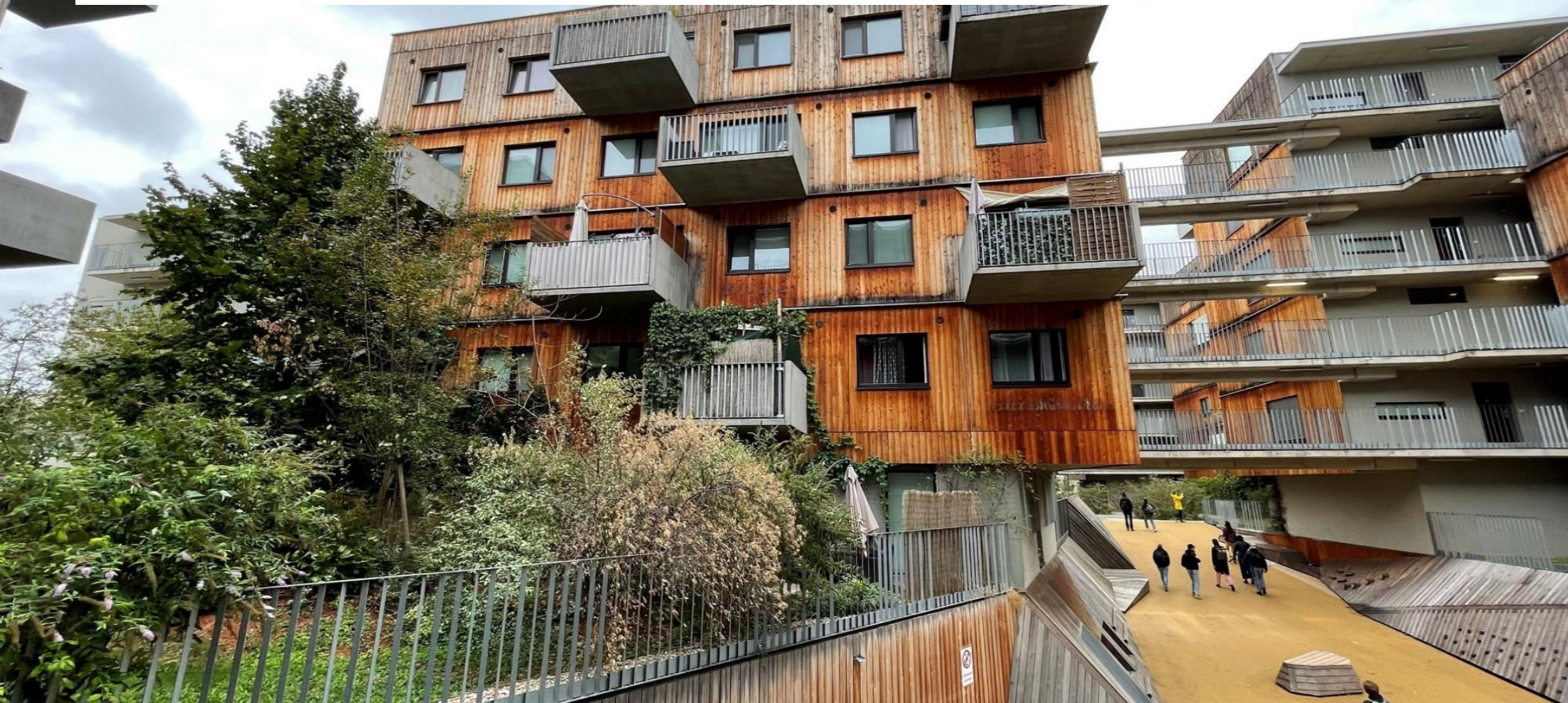


**Sometimes noisy and dangerous**





**Sometimes beautiful**





# A new (wood) building culture





# Basement + top





# Donorbuildings





**Fibres for insolation: 1ha/hous/yr**





# Biobased products



Insulation materials  
Platematerials

Important: early  
integration in the  
design process



# Green hubs





# Valuable waste





# Circulair concrete / stone





# **Circular MDF industries**





# With circularity comes logistics





# Crossdock 1 ha





# Hub voor big secondary materials



**CITY DOCK**  
BOUW- & GOEDEREN HUB AMSTERDAM  
← PAPIERWEG 7

Papierweg  
7





**Heavy and big**



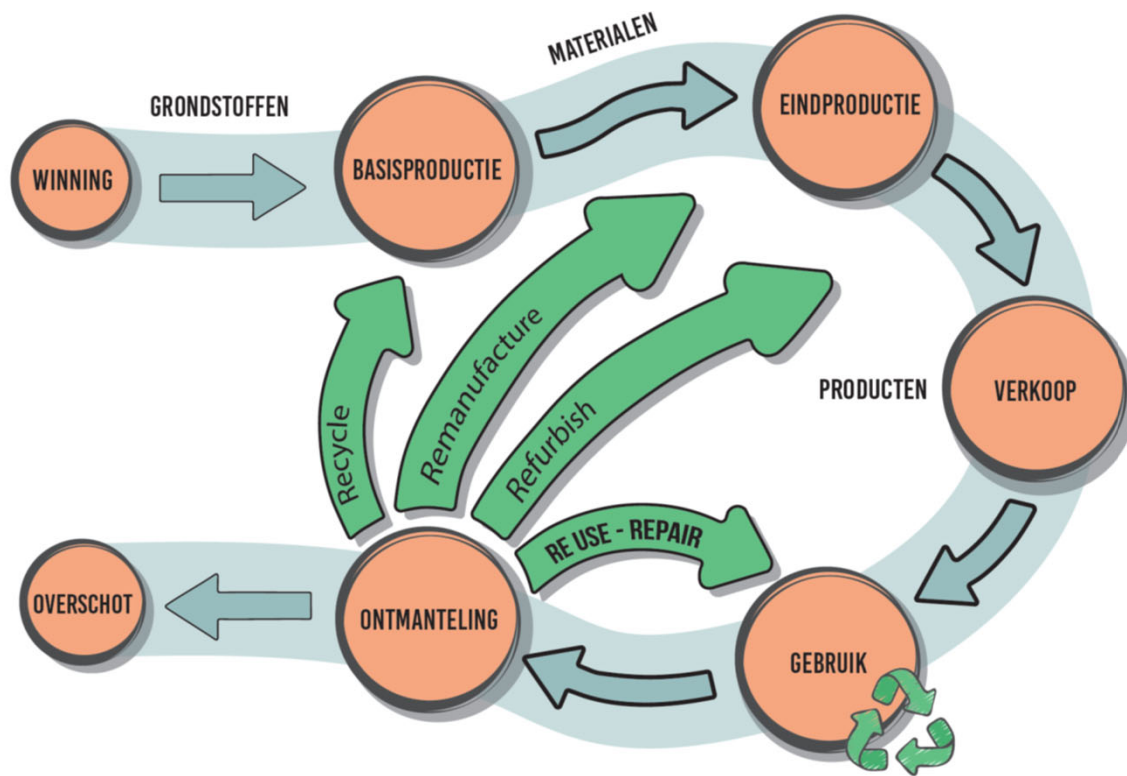


# Multimodality cityhub

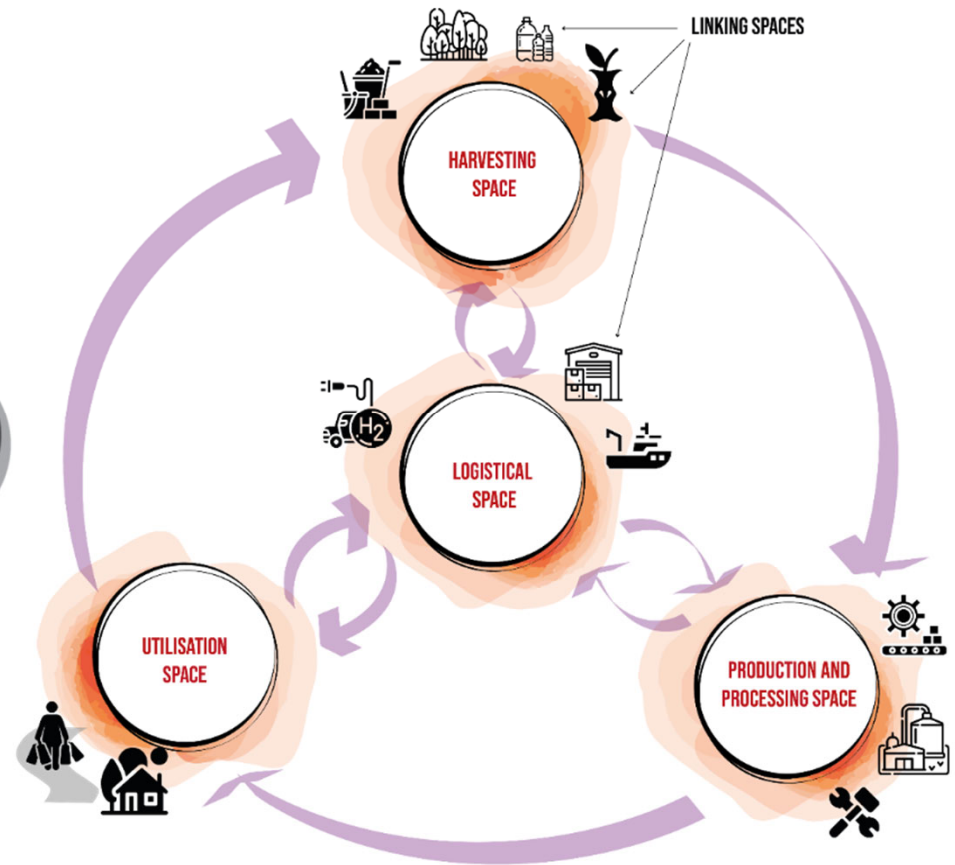




# Making space for circular economy



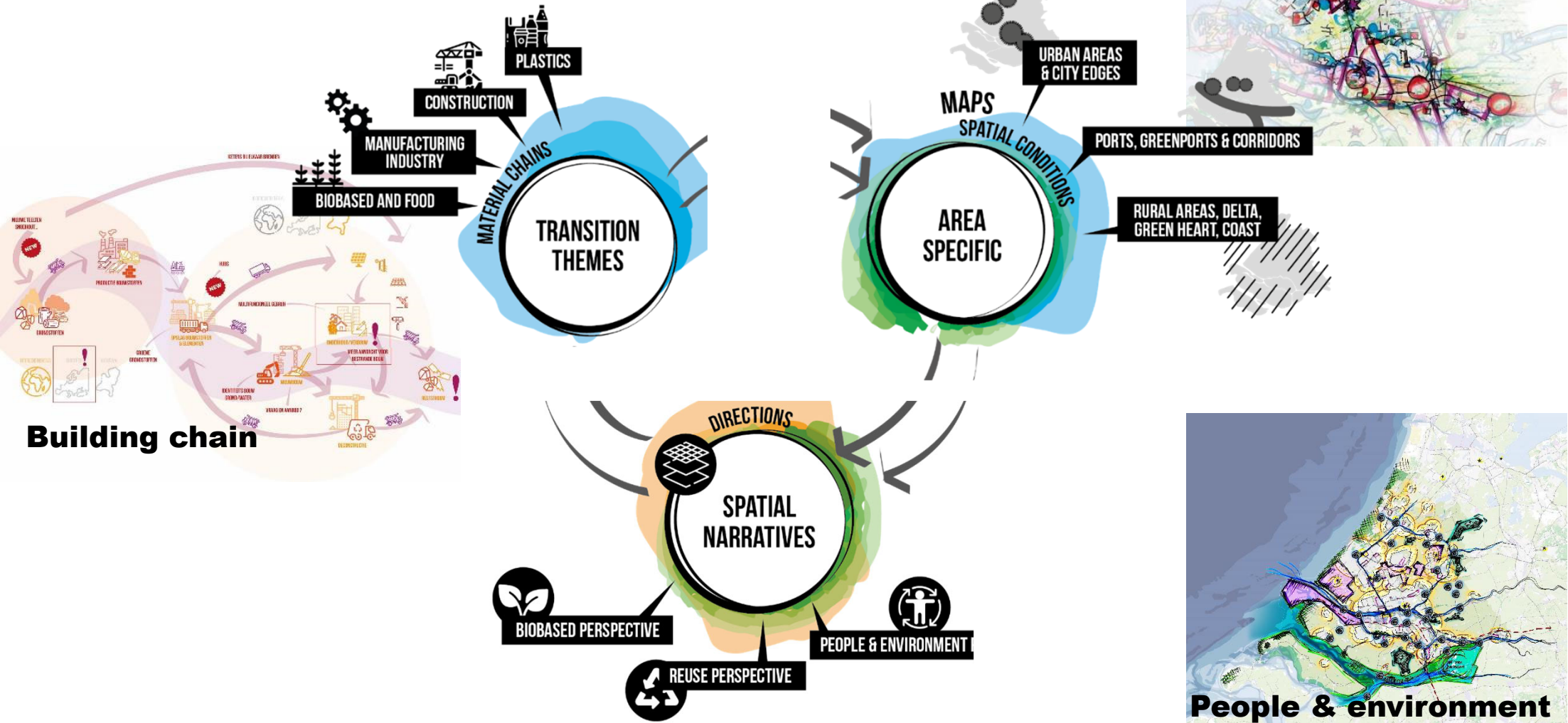
Flows and chain transition



Spatial transformation



# Conduct spatial research





# Consider spatial impacts

1. **Multimodal industrial areas for leading circular processing- and making industries** (re use, remanufacture, recycle)
2. **Business areas in and around the city for circular leading and facilitating companies, storage and logistical hubs** (reuse, remake, remanufacture, recycle)
3. **Small urban locations in retailcenters and livehoods** (repair, reuse)
4. **Circular innovation R&D areas** (redesign)
5. **Framework of infrastructures** (waterways, cays, lines for energy, water)





# Circular Oriented Development (COD)

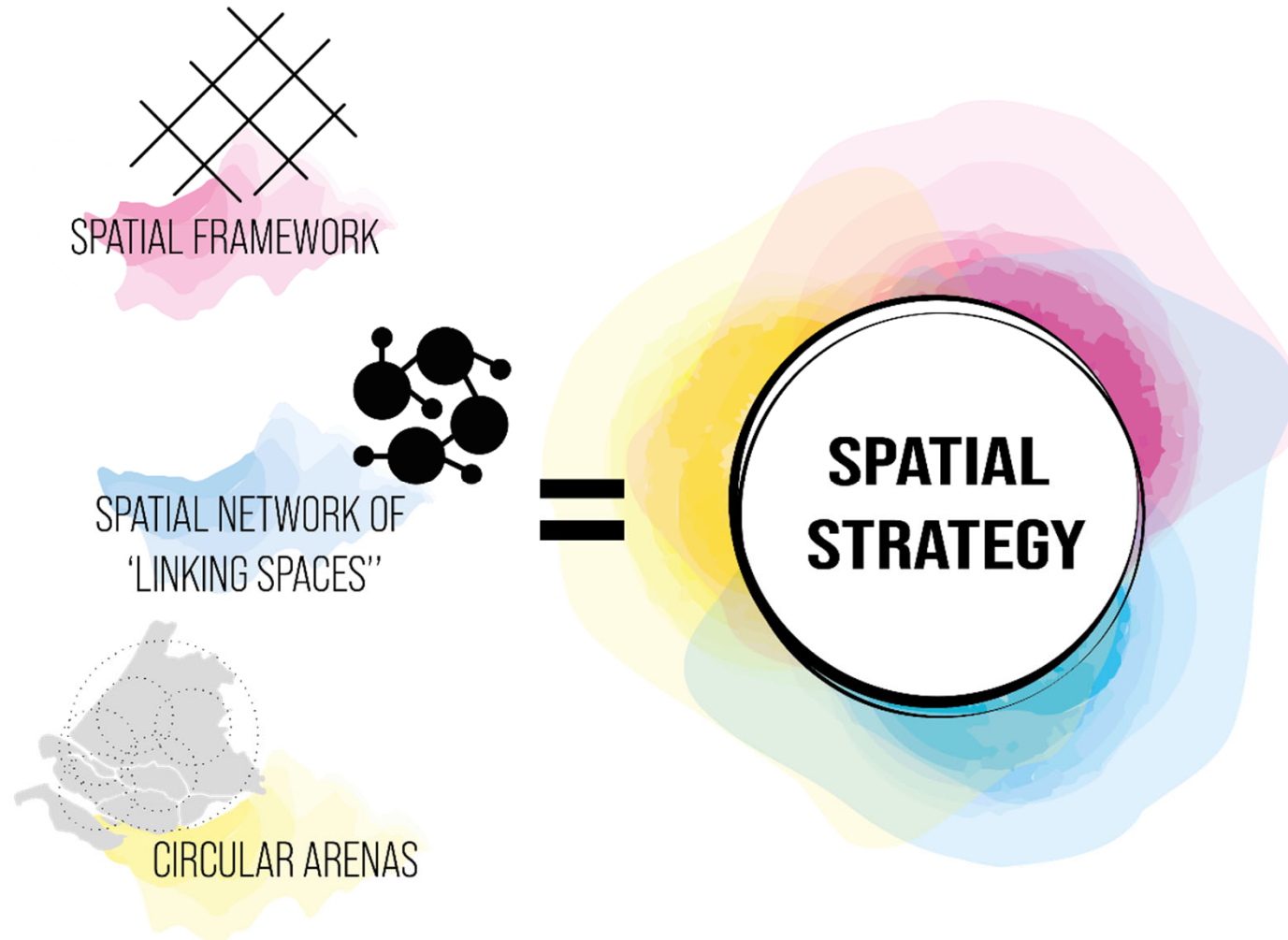
## Design principles for a circular built environment

- Avoid material use
- Maximize renewables, biobased and secondary materials
- Make circularity area-specific
- Combine activities where possible, separate them where necessary
- Design with time and take durable lifecycles into account
- Design with proximity on accurate scale levels, don't offload





# Prepare vision and spatial strategy



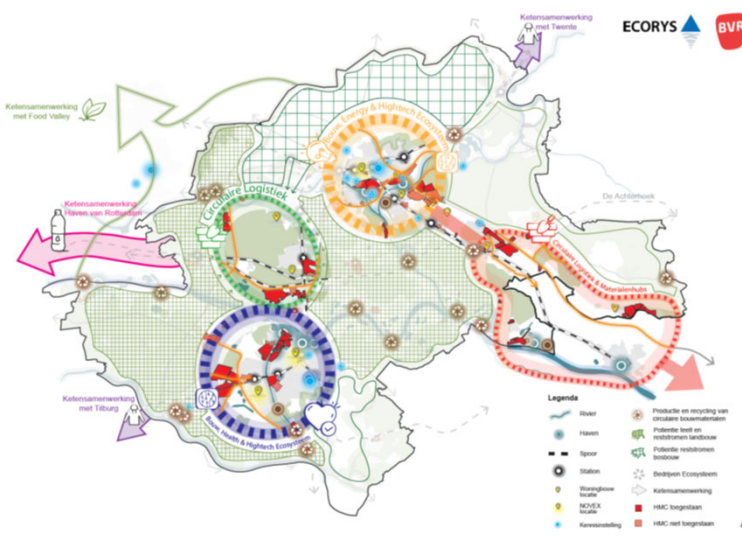


# Government: starting a dialog



Action map Spatial Circular Strategy South-Holland

Linking spaces



Opportunities map Metropole Region Arnhem-Nijmegen

Leading company ecosystems



Sketching a Spatial Circular Vision Amsterdam South East

Structures for 3 flows



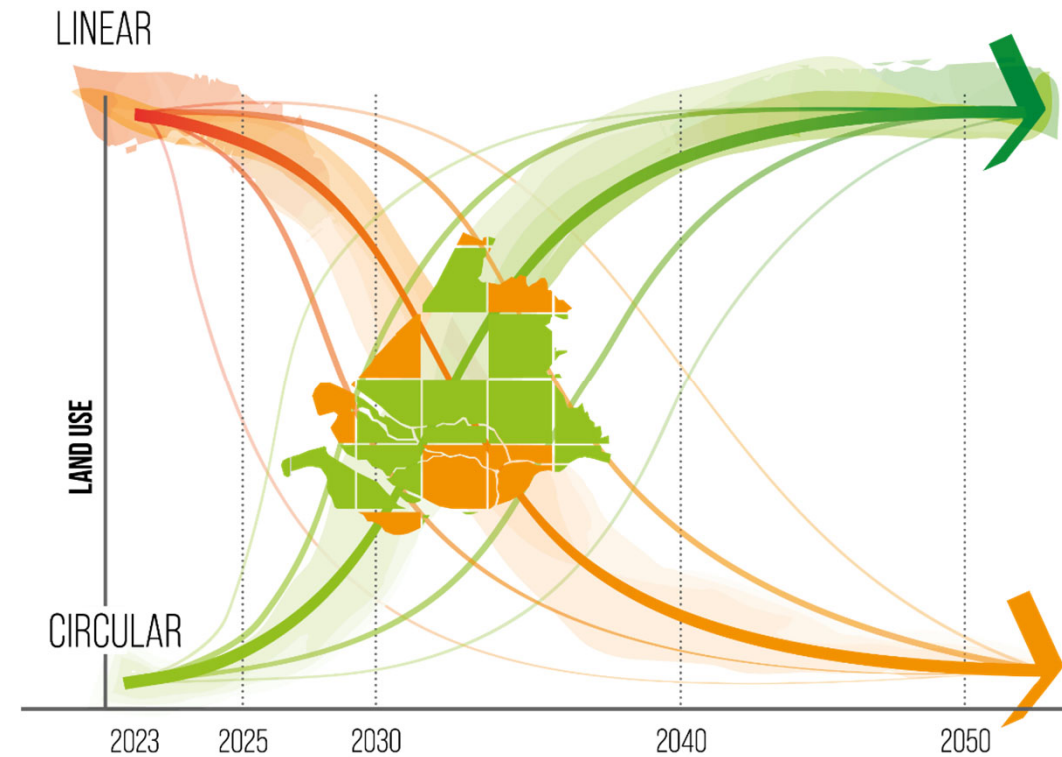


# Taking action

Preparing spatial planning decisions  
2030 / 2040

**Circular transition = spatial transformation**

1. Scaling up: making space, +M2
2. Reconstruction: space in transformation, temporary spaces: M2/M2
3. Gradually breaking down linear activities: phase out, -M2



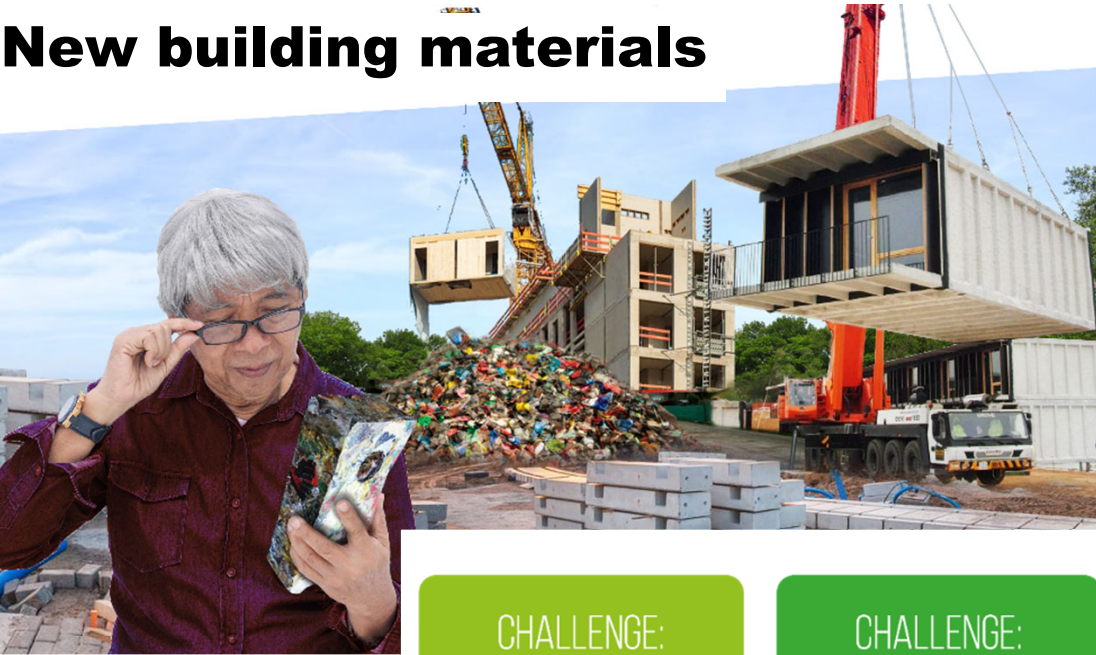


# 10 Lessons learned on rules

1. **EU legislation as driver**, CO2 budget, NOx, NH3, Waterquality, EU Critical Raw Materials Act, EU No Net Land Take, limit different plastics (recyclates)
2. **Redesign waste legislation** (coffee grounds, bokashi, building debris)
3. **Develop certificates**, for quality / origin, building trust
4. **Introduce a R-Label**, circular building criteria ('50% biobased')
5. **Scaling up the circular industry**, supply and demand, Eurodelta = 3mln new houses
6. **Develop spatial strategies**, ambitious and inviting propositions
7. **Steer business allocation**, local profiling and planning, environmental legislation
8. **Make covenants on sustainable healthy building**, regulate market
9. **Use tenders: be a launching customer** – use criteria, contracting covenant partners
10. **Use rules on flexibility**, to use time, vacant lots, given the lack of space, power, water



# New building materials



CHALLENGE:  
CLIMATE CHANGE

CHALLENGE:  
BIODIVERSITY

# New businessmodels

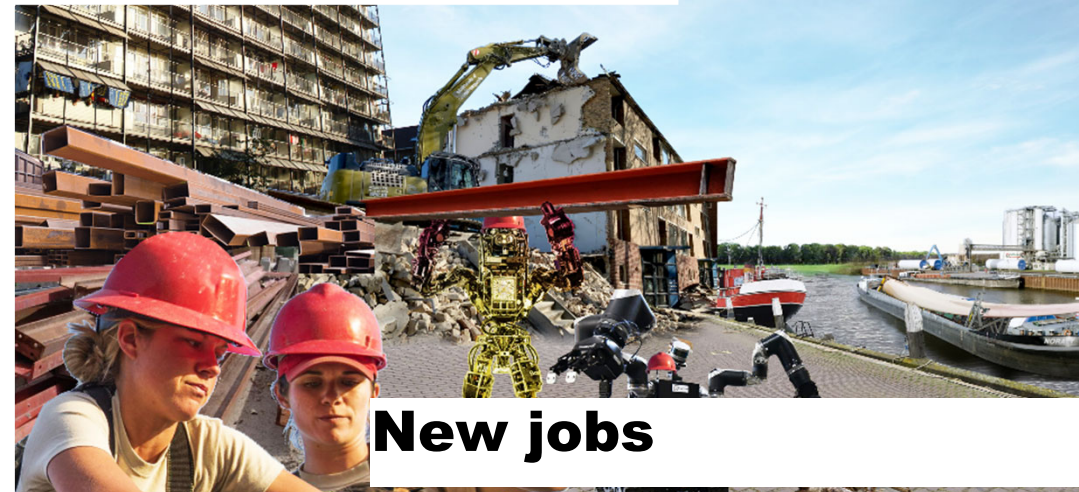


CHALLENGE:  
ENVIRONMENTAL  
POLLUTION

CHALLENGE:  
SECURITY OF SUPPLY



# New knowledge



# New jobs



# Thank you - Questions?

- BVR: [www.bvr.nl](http://www.bvr.nl)
- South-Holland: <https://circulair.zuid-holland.nl/activiteit/ruimtelijke-strategie/>
- Article: Circulaire transitie: ruimtelijke transformatie: <https://openjournals.ugent.be/renm/article/id/89650/>
- ASSET: <https://asset.nweurope.eu/blog/asset-news-62/asset-project-to-accelerate-the-transition-to-a-circular-built-environment-221/>



# Statements

Only with extra space for business a circular economy can emerge

Companies have to become sustainable themselves, don't give them extra space

Circular economy is too abstract for citizens and politicians

The regional scale level is the best fit for spatial circular strategies

Circular economy stinks, is hazardous and noisy: every city and region has to take a share

Without big industry no circular economy

Secondary materials are not fit for export: circular economy brings EU no wealth