

amsterdam economic board

Transition towards a circular economy:
*The case of the
Amsterdam Metropolitan Area*

Marjolein Brasz
Business Connector Circular Economy

I amsterdam.





100% biobased



WORLD POPULATION

7,458,287,016

Current World Population

114,616,399

Births this year

131,829

Births today

47,998,221

Deaths this year

55,206

Deaths today

66,618,178

Net population growth this year

76,623

Net population growth today

amsterdam economic board

I amsterdam®

<http://www.worldometers.info/nl/>

De metropool als wereldwonder

Veel Europeanen denken dat het niet goed leven is in megagrote steden als Los Angeles (17 miljoen inwoners) en Shanghai (20 miljoen). Maar de megastad is een wonder van vernuft, schrijft Zef Hemel.

 Zef Hemel

 23 september 2016



amsterdam economic board

Zef Hemel;
Professor Urban Planning: UvA
Strategic Planner: Amsterdam
Economic Board



Amsterdam Metropolitan Area

2016:

2.4 million citizens

1.3 million jobs

19% of GDP

32 municipalities



I amsterdam®

Foster sustainable economic growth

Focus on five interrelated **urban challenges** which bear relevance to urban issues in the region and around the world.



Jobs of the future



Health



Mobility

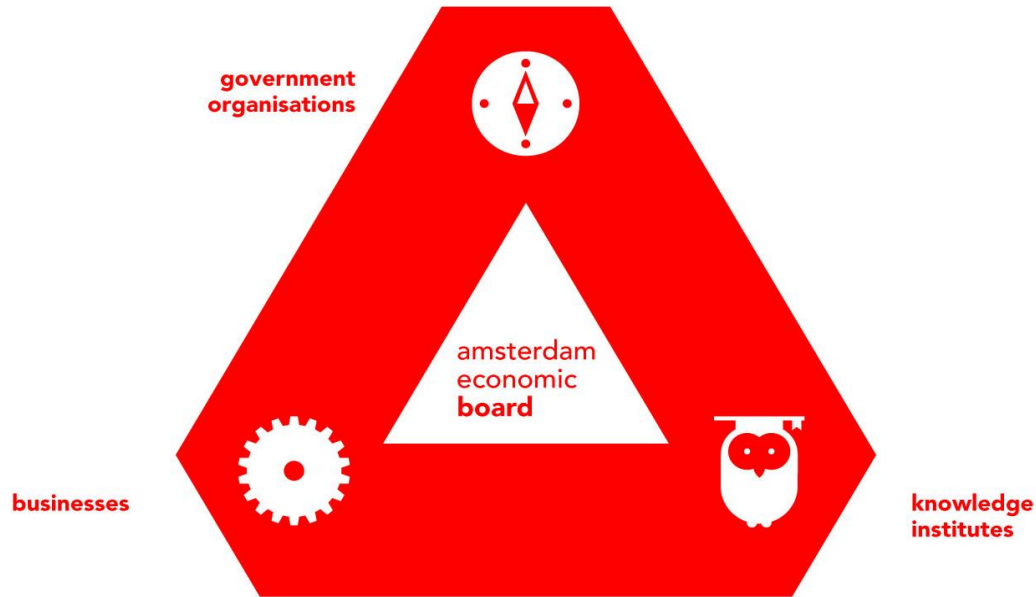


Digital connectivity



Circular economy

Systemic change requires innovation and collaboration



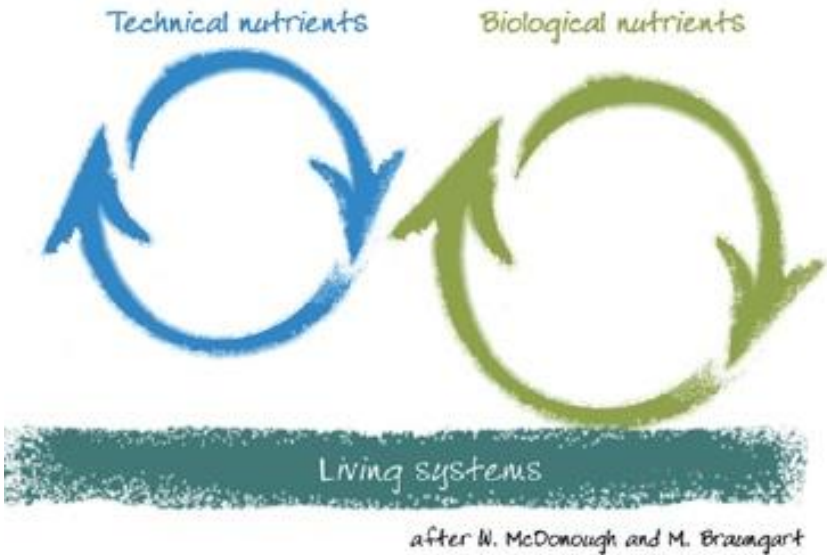
What we do

- Signalling **opportunities** for innovation regarding urban challenges
- Forming **consortia** of cross-sectorial partners for innovative projects
- Offering access to regional and international **networks**
- Creating physical and online **meeting points**
- Providing data-driven **information** regarding the challenges



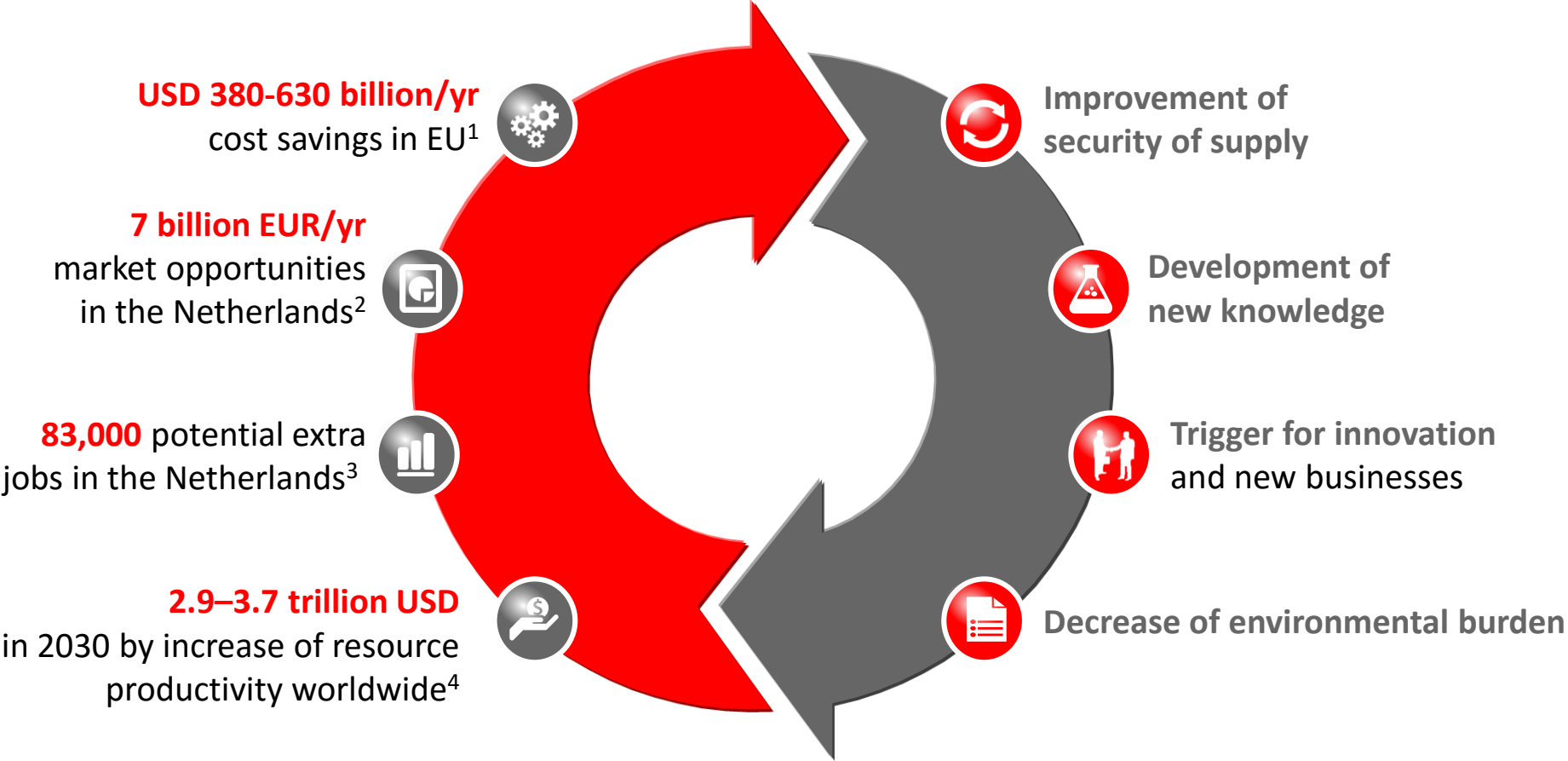
We move from a linear economy...

... To a circular economy



This generates direct financial benefits...

... But also indirect benefits



1. E. MacArthur Foundation
2. TNO
3. Rabobank
4. McKinsey

The ambition of the Amsterdam Metropolitan Area (AMA) is to be worldwide frontrunner in smart solutions for the limited availability of resources

At the same time realizing innovation and new businesses within the metropolitan area.

Criteria for selection of initiatives

Scale: action required at the scale of the Amsterdam Metropolitan Area

1

Synergy: action relevant for companies, regional governments, knowledge institutes and citizens

2

The Amsterdam Metropolitan Area

Why is this region interested in taking the lead?

- Densely populated area consuming ample energy, large amounts of products and materials
- Hub for innovative and sustainable entrepreneurs
- Broad scope of economic activities and knowledge infrastructure
- Outstanding logistic network
- Societal support for initiatives in the transition towards a circular economy
- Leadership via representatives of industry and government



A Circular Economy

Theme 1: Climate and energy

- *Reuse of heat and (industrial) CO₂ via extension of infrastructure*
- *Energy transition in the built environment*



Theme 2: Resources

- *Product reuse and redesign*
- *Circular procurement*
- *High value recycling: 9 priority material streams in 2017*



Cross cutting initiative: circular entrepreneurship

- *Promotion of circular start-ups*
- *Strengthening the business-ecosystem*

Theme 1: Climate and Energy

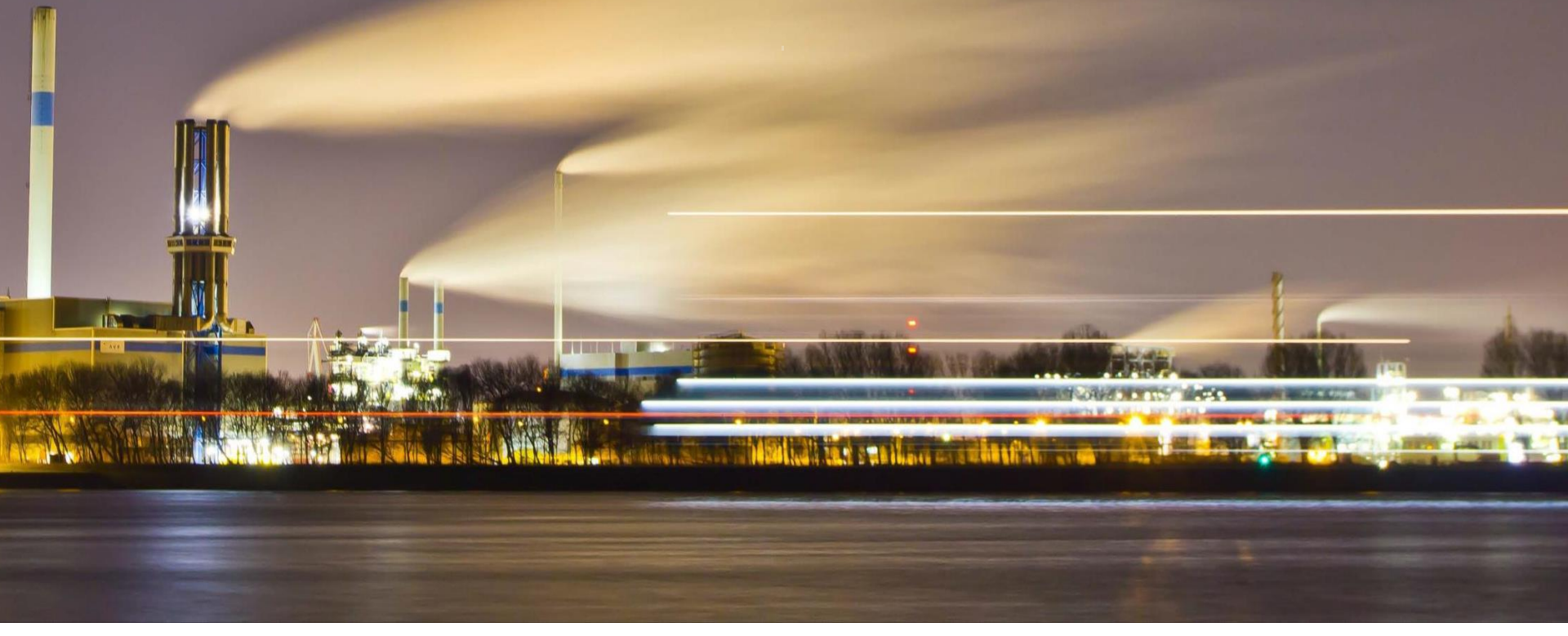
AMA Use of Heat & Cold:

Commitment increases (now: 31 partners)

Aim: 500.000 home equivalents connected in 2040



Theme 1: Climate & Energy
CO2 smart grid West Netherlands:
Capture, storage and reuse of CO2



21 partners involved

amsterdam economic board



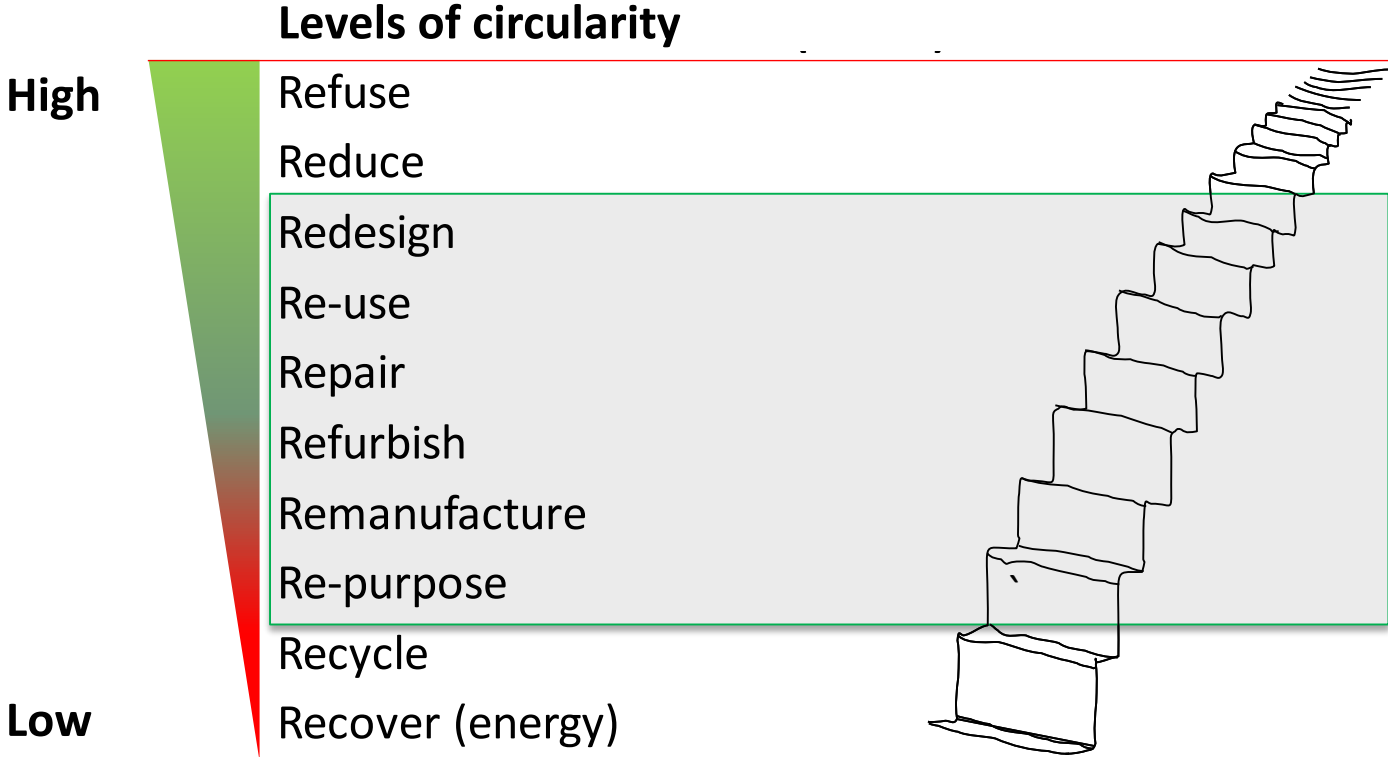
Energy transition in the built environment



Theme 2: High value reuse of products and materials



Ladder of circularity: the MRA gives priority to the options that are as high as possible on the ladder



Redesign: through redesign products can be brought back into the cycle with high value creation



Redesign: redesign can also be based on renewable resources (e.g. bamboo, flax, hemp and waterplants)



There are many ways to reintroduce a product in the economy



Repair

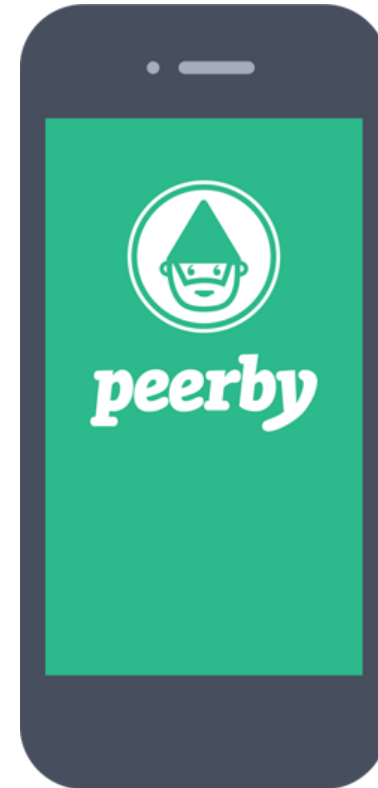


Repurpose



Redesign/reuse

New business models are also being developed:
sharing and leasing redefine product ownership





I amsterdam.

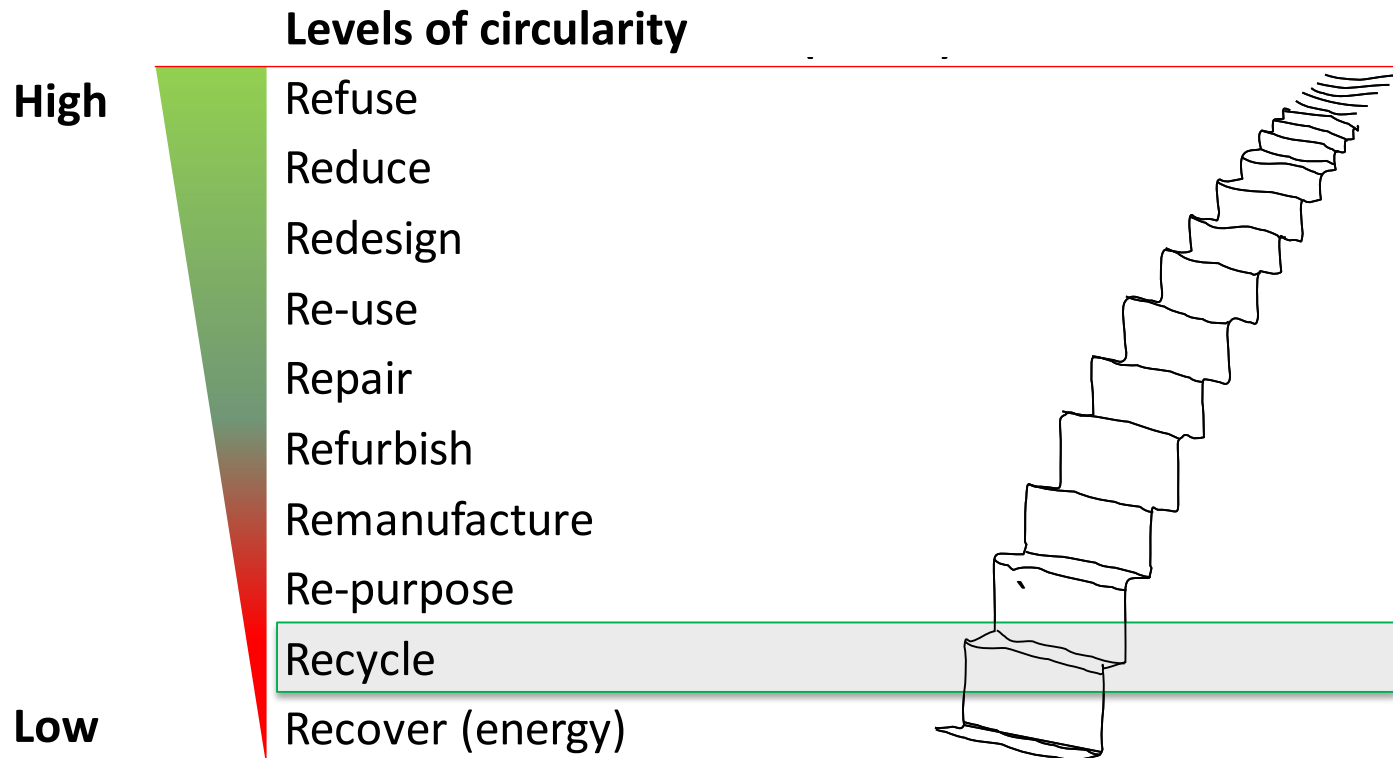
Circular procurement can help stimulate circular products – but with clear criteria

Examples of criteria

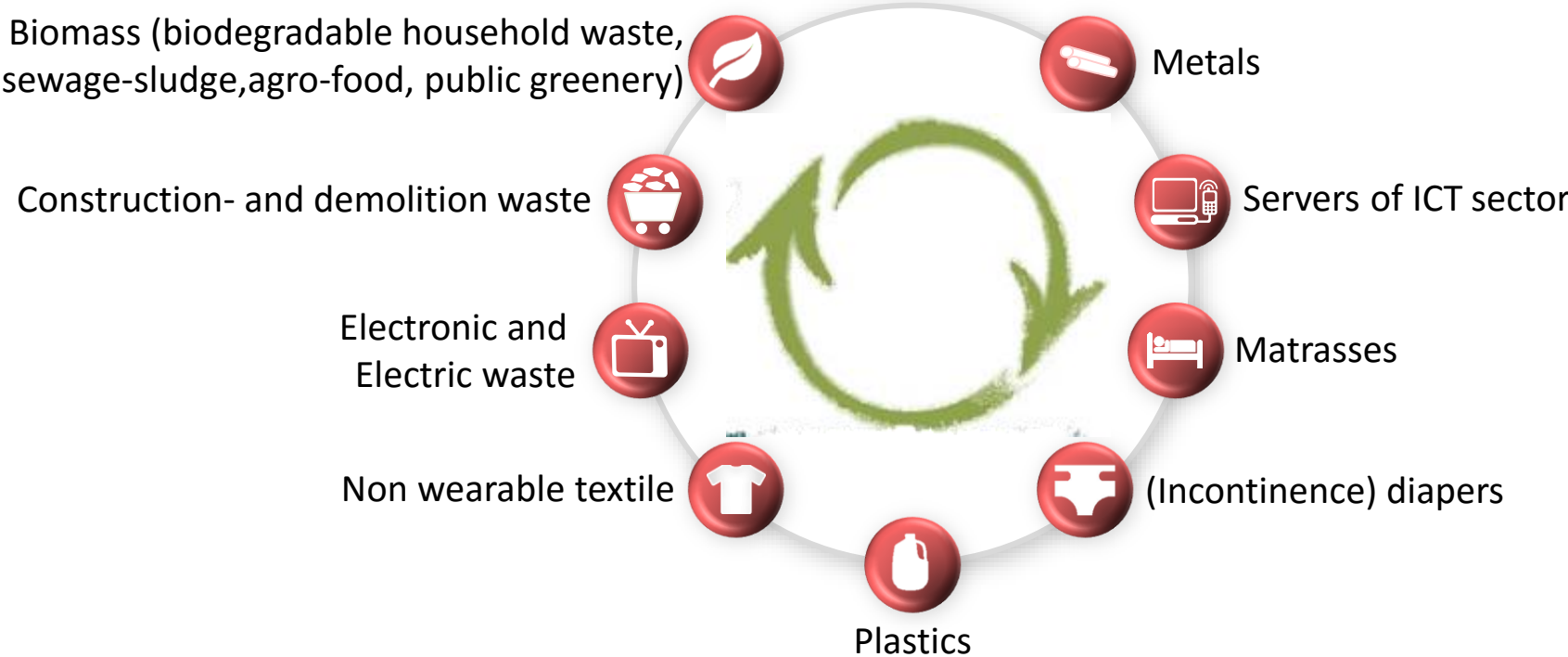
- Degree of circularity of material/product
- Improvement of product/service on People, Planet and Profit
- Judgement based on objectivity, transparency and non-discrimination



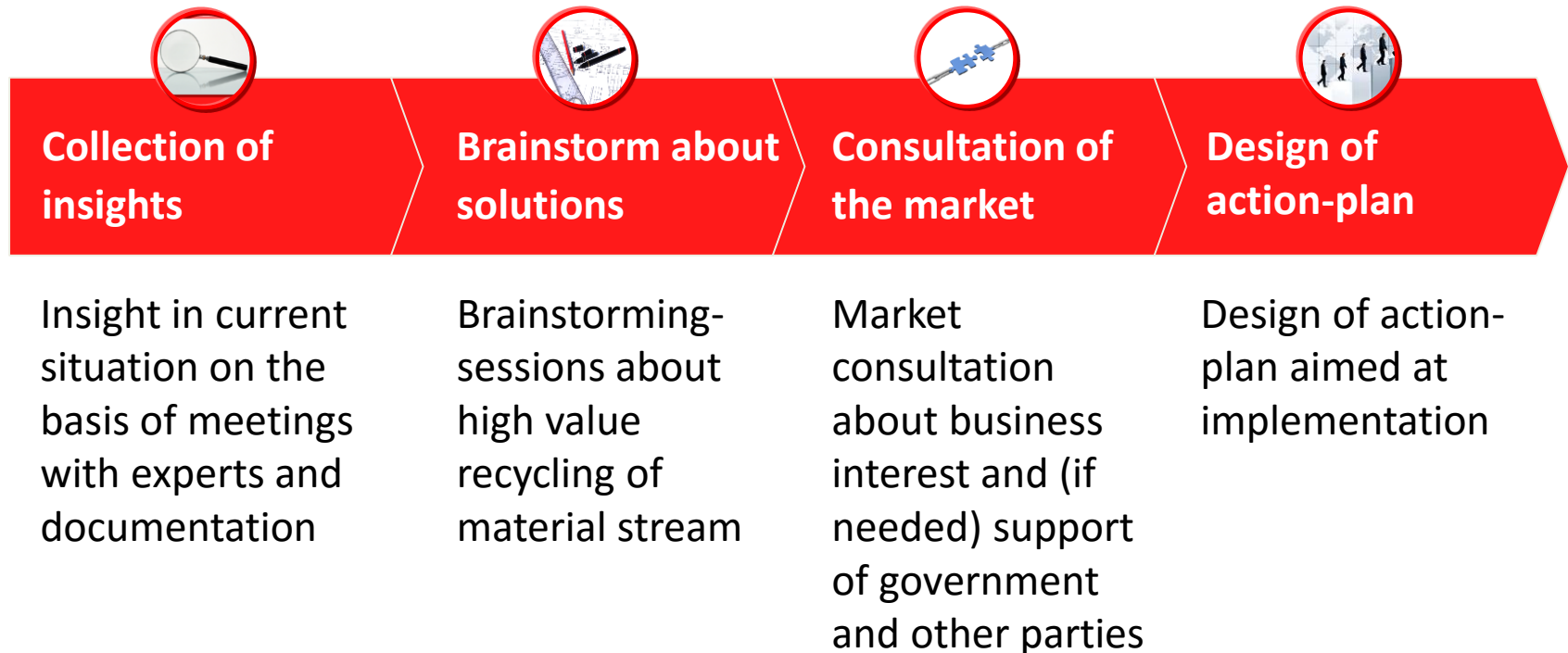
Ladder of circularity: the MRA gives priority to the options that are as high as possible on the ladder



The MRA has started with high value recycling of 9 priority resource streams



The approach of material streams is tailor-made



Case 1: high value recycling of biomass stream
Biodegradable household waste, sewage-sludge,
agro-food, public greenery and waterplants



amsterdam economic board

Example: Reclamation of resources from sewage sludge, e.g. phosphates, cellulose, nitrate, metals



Case 2: Circular construction of the *temporary*
Court of Justice Amsterdam





Case 3: Textile recycling (second hand /non wearable)



Case 4: Closing the loop of plastic waste



The approach of closing material streams is tailor-made, however there are 7 generic preconditions for change

Item	Description
▪ Proper balance	▪ Finding a proper balance between closing loops at local or higher level
▪ Decrease of incineration	▪ Attuning decrease of incineration and development of circular activities
▪ Sufficient supply and clear demand	▪ Taking care of sufficient supply of waste streams to be recycled and clear demand for recycled material
▪ Quality of product	▪ Securing the quality of product use and recycling
▪ Legal and technical	▪ Taking away legal and technical barriers
▪ Transition process	▪ Orchestrating and communicating the transition process towards circular economy
▪ Financial and organisational	▪ Developing and applying new financial and organisational arrangements


Key objectives for 2025

- 
- **Improving security of supply of resources** by reducing the import of raw materials with 30%
 - **Redesigning min. 20 product-/material chains**
 - **High value recycling** of at least 40 priority resource streams (on average: recycling rate of 90%)
 - **Creating at least 3600 new jobs**, 150 start-ups and 480 million extra turn over
 - **Decreasing environmental burden** by 35% average

More information?



**Marjolein Brasz – Business
Connector Circular Economy**

 020 524 1120

 m.brasz@amecboard.com