



**BAMB**  
BUILDINGS AS MATERIAL BANKS

# BUILDING AS MATERIALS BANKS

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a pathway for a circular future

**slido** #BAMBimpact



BEL-EVENT  
Password: Bamb2019

 #BAMBimpact

# Moderator

**Peter Woodward**



# Welcome

**Barbara Dewulf, Deputy Director General,  
Brussels Environment**





BEL-EVENT

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# STORY - The influence of BAMB in shaping circularity in the construction industry

**Caroline Henrotay, BAMB Project Coordinator,  
Brussels Environment**







Co-funded by the Horizon 2020  
Framework Programme  
of the European Union



# BUILDINGS AS MATERIALS BANKS

The influence of BAMB in shaping circularity  
the construction industry

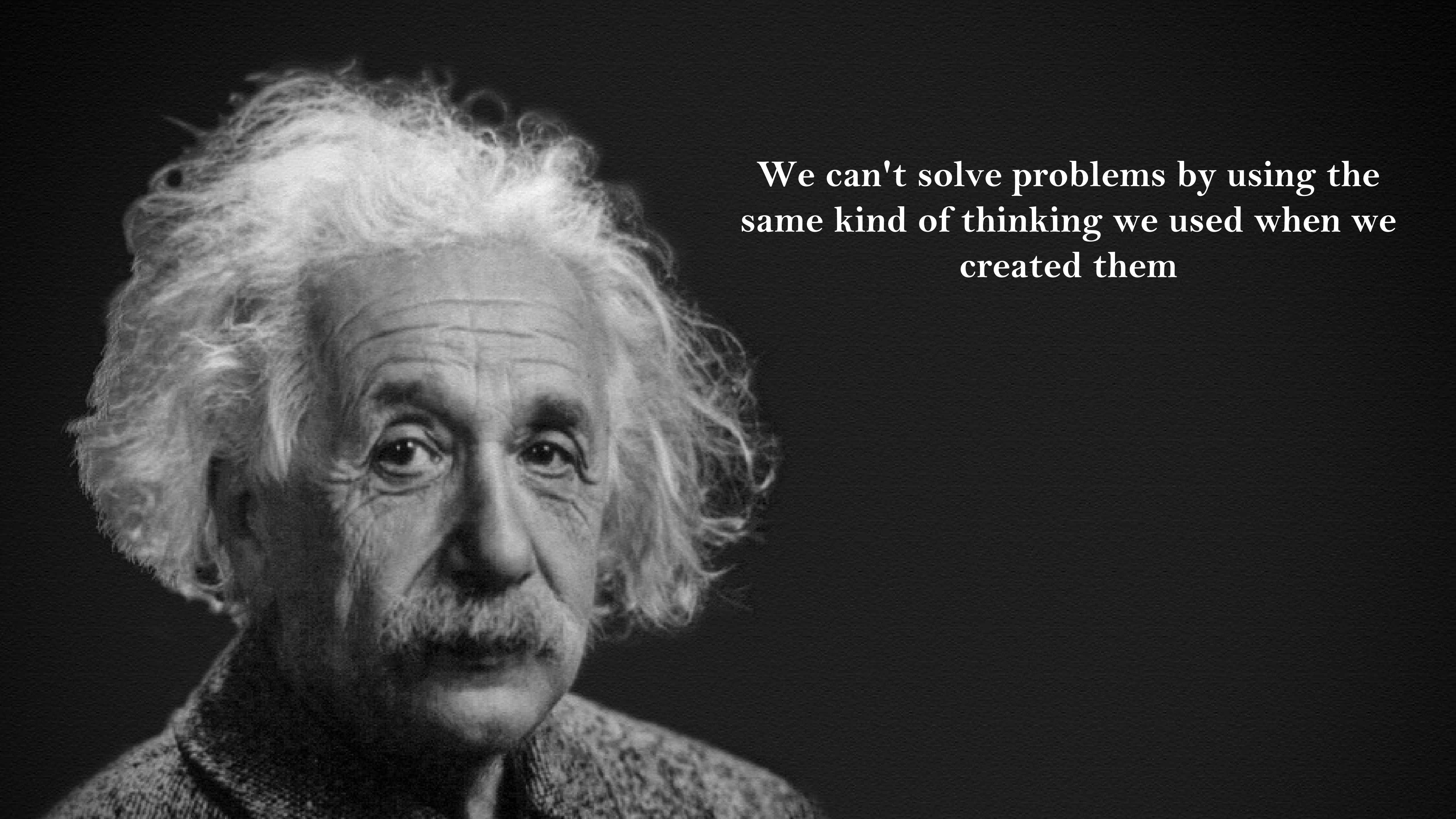
Caroline Henrotay - Brussels Environment









A black and white portrait of Albert Einstein, showing his characteristic wild, white hair and mustache. He is looking directly at the camera with a slight, thoughtful expression. The background is dark and out of focus.

**We can't solve problems by using the  
same kind of thinking we used when we  
created them**













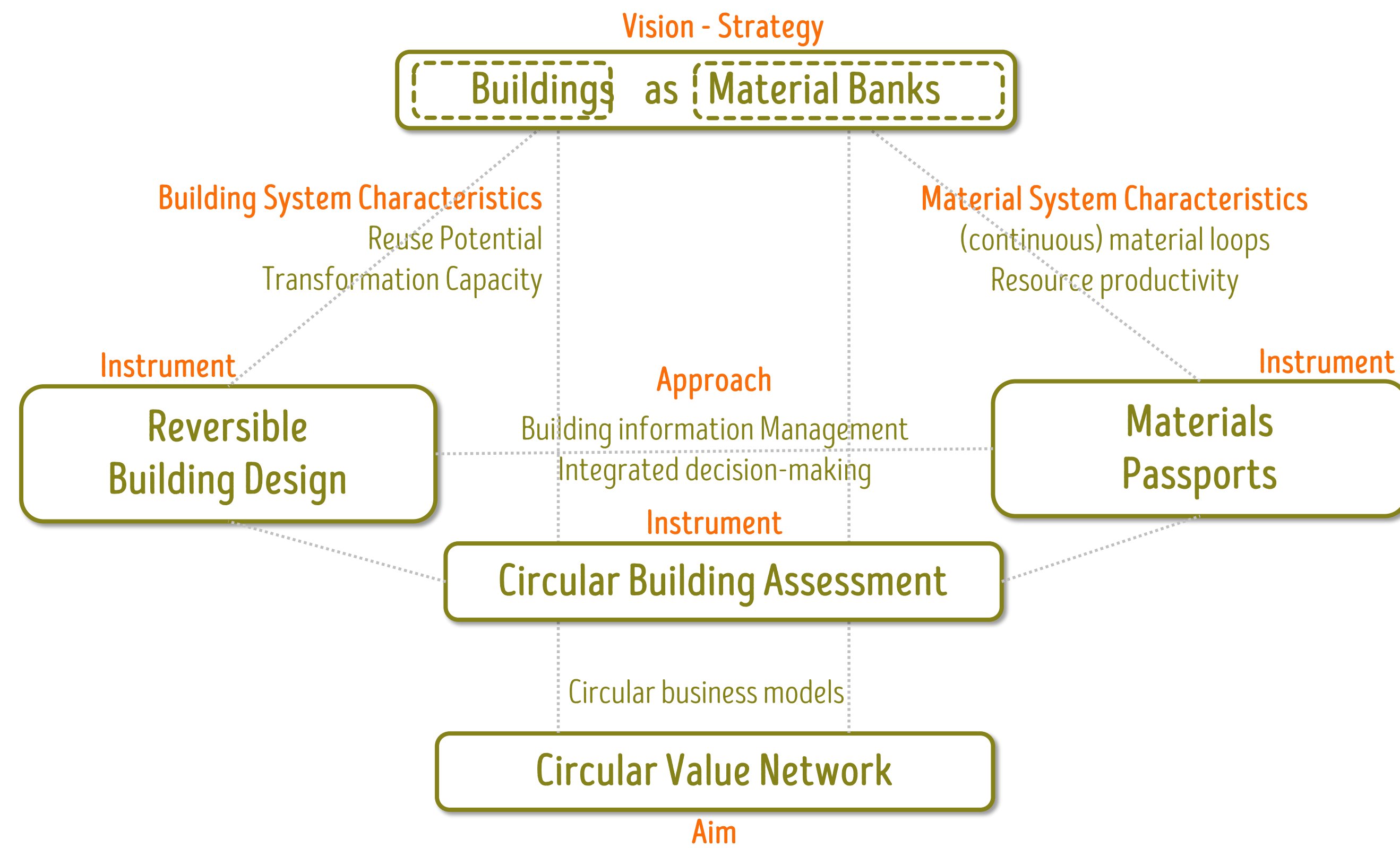
**Solution 1**

**Solution 2**

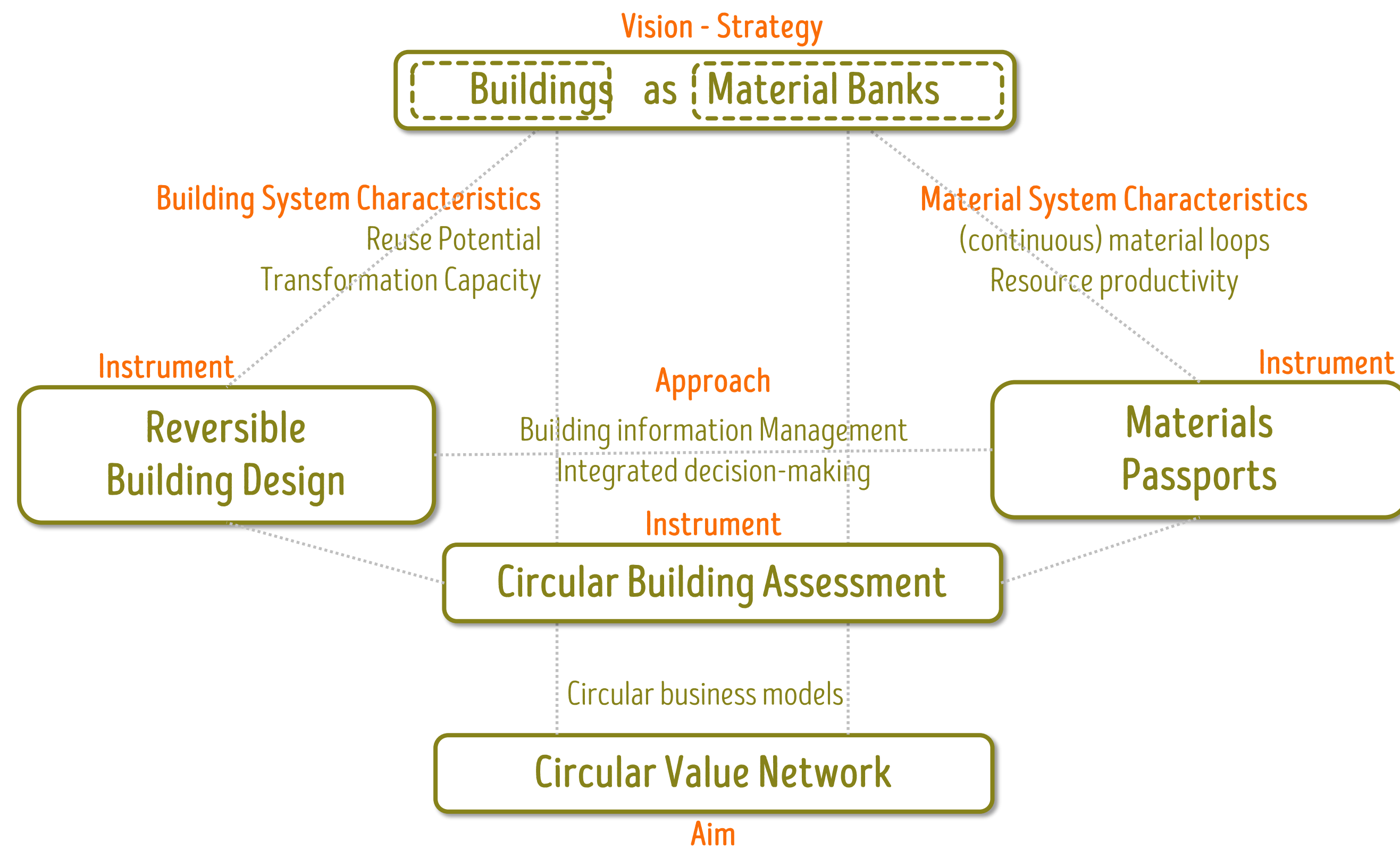
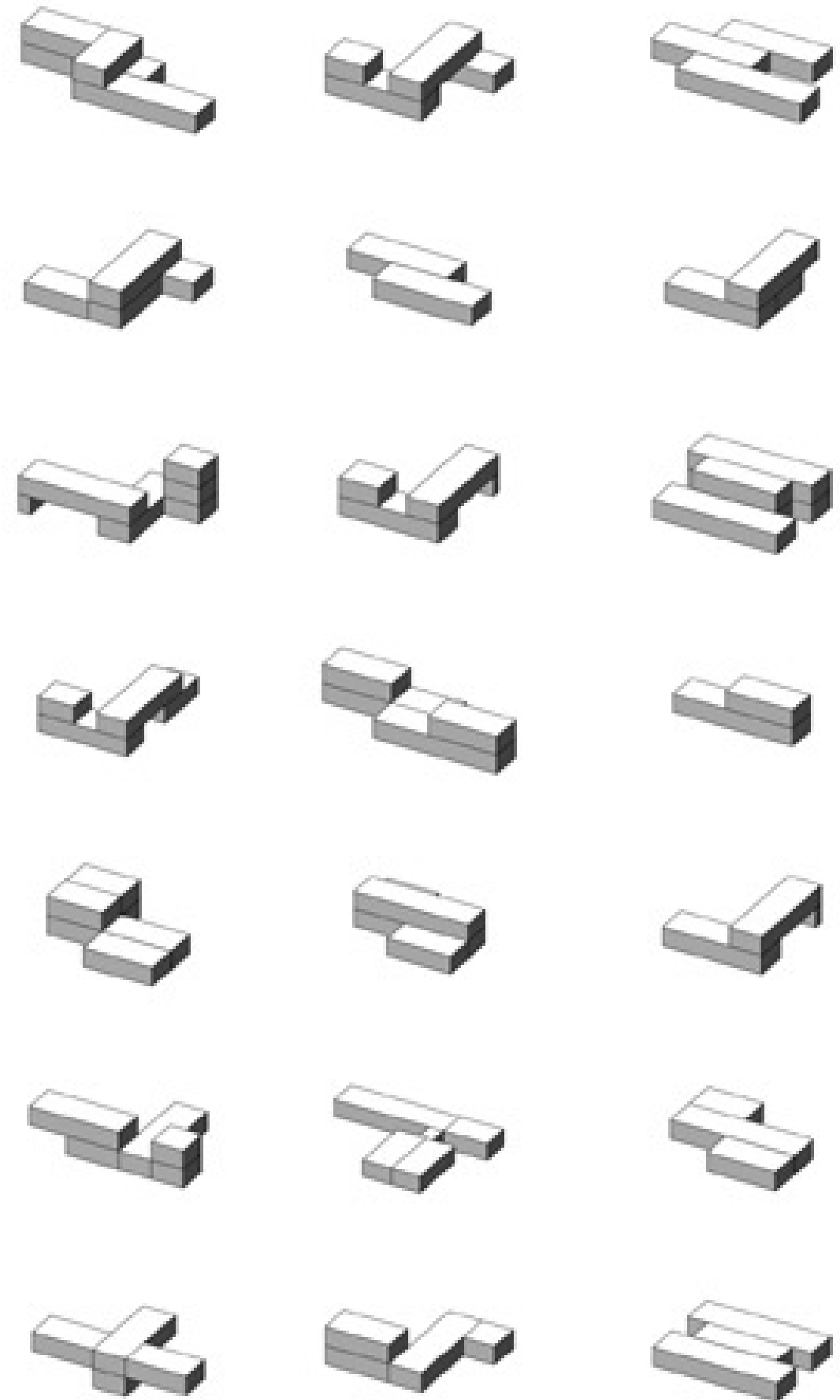
**Solution 3**

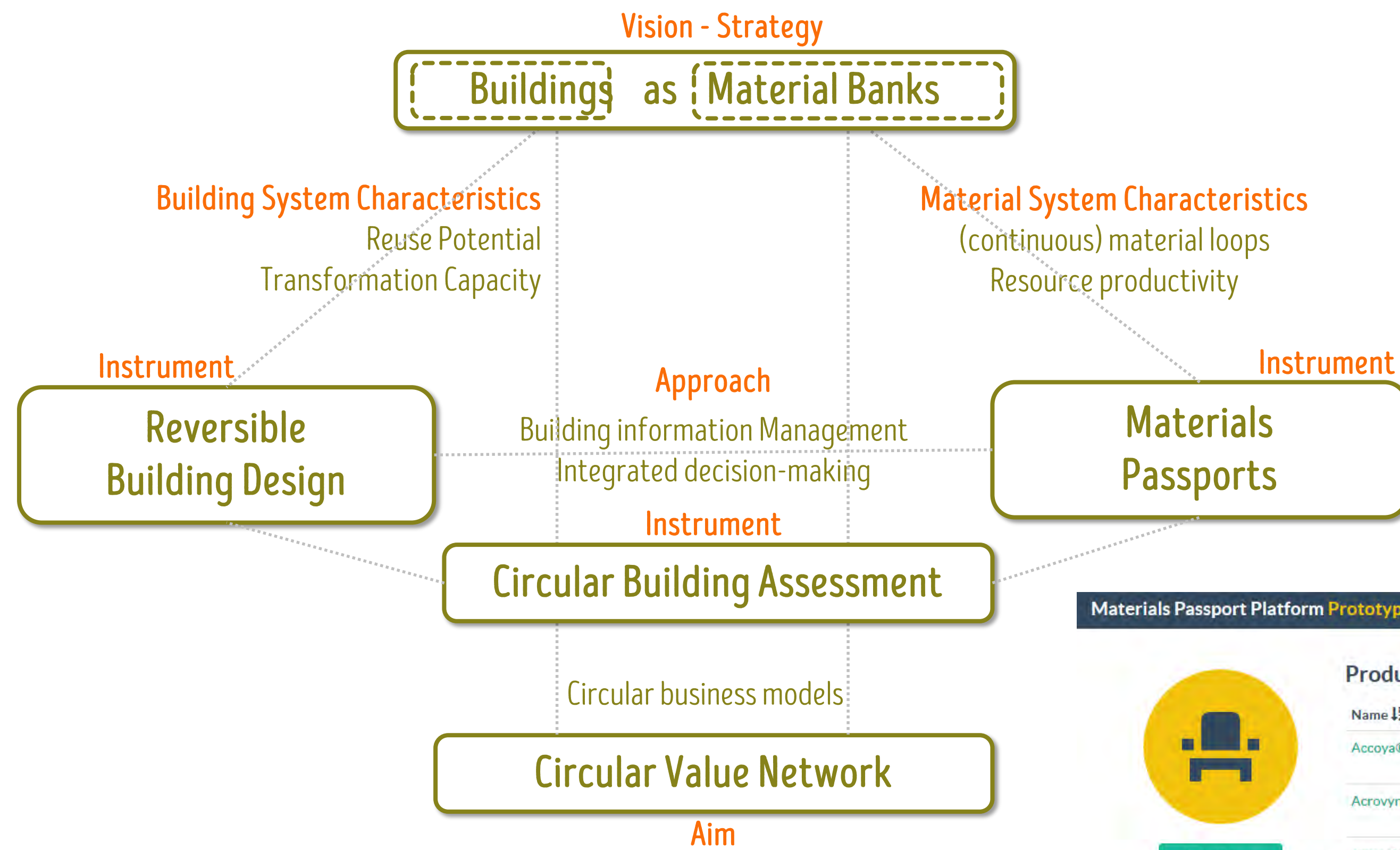












Materials Passport Platform **Prototype**

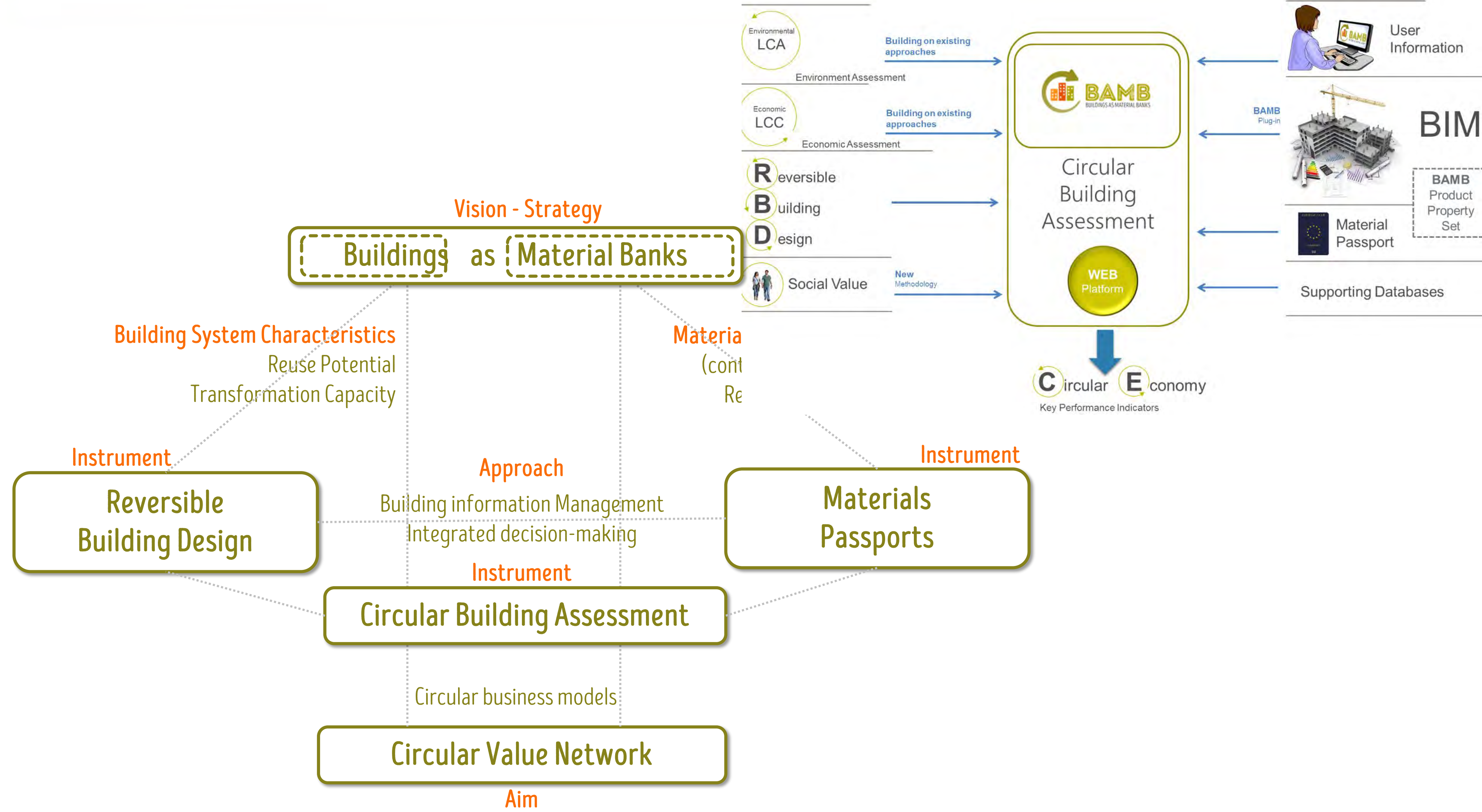
Products Buildings Instances ? Logout

Search

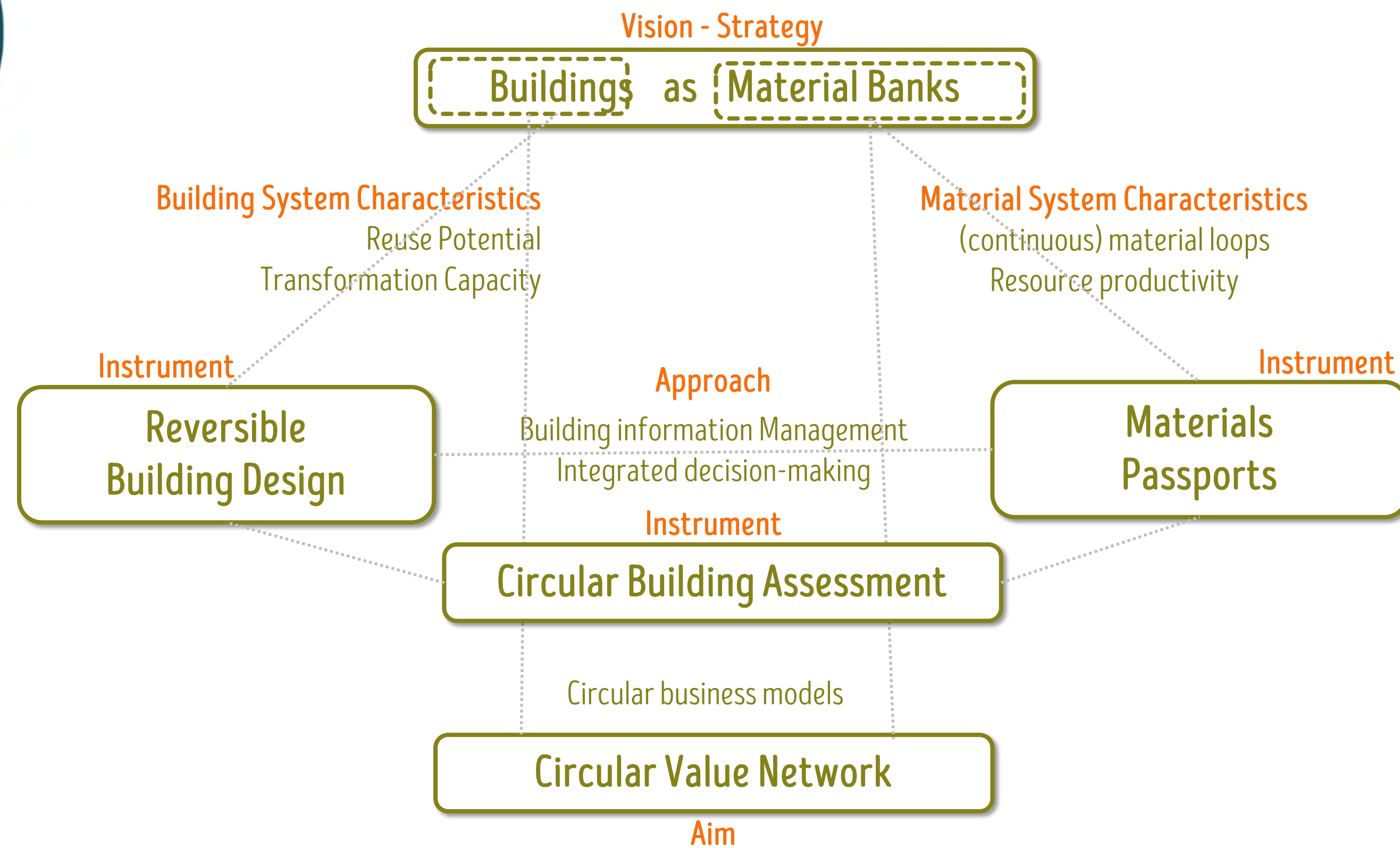
| Name                          | Brand Name          | Manufacturer                  | GTIN/EAN |
|-------------------------------|---------------------|-------------------------------|----------|
| Accoya® Wood                  | Accsys Technologies | Accsys Technologies           | Unknown  |
| Acrovyn® 4000 Wall Protection | Acrovyn® 4000       | Construction Specialties Inc. | Unknown  |
| airmaster                     | Desso               | Desso                         | Unknown  |
| Aluminium Door Furniture      | AMI BV              | AMI                           | Unknown  |

+ Add Product













# CIRCULAR ECONOMY

CIRCULAR ECONOMY PROGRAMME

CIRCULAR CITIES

CIRCULAR HOTSPOT

CIRCULAR BY DESIGN

CIRCULAR BUILDINGS

CIRCULAR ECONOMY STRATEGY

CIRCULAR MATERIALS

CIRCULAR ECONOMY ROADMAP

CIRCULAR ECONOMY PACKAGE













Co-funded by the Horizon 2020  
Framework Programme  
of the European Union



# THANK YOU

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Caroline Henrotay - Brussels Environment





# Opening keynote - 'The Secret Life of Buildings'

**James Drinkwater, Director of World GBC's Europe Regional Network**





# 'The Secret Life of Buildings'

**BAMB Final Event - 5 February - Brussels**

*James Drinkwater*  
Director, Europe, WorldGBC










**“Although organ transplantation is today merely a clinical curiosity, it may one day have a certain practical interest”.**

*Dr Alexis Carel, 1902*



# SUSTAINABLE DEVELOPMENT GOALS



|   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|
| <p><b>3</b> GOOD HEALTH AND WELL-BEING</p>  | <p><b>7</b> AFFORDABLE AND CLEAN ENERGY</p>  | <p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p>  | <p><b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>  | <p><b>11</b> SUSTAINABLE CITIES AND COMMUNITIES</p>  | <p><b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION</p>  | <p><b>13</b> CLIMATE ACTION</p>  | <p><b>15</b> LIFE ON LAND</p>  | <p><b>17</b> PARTNERSHIPS FOR THE GOALS</p>  |
|---|---|---|---|---|---|---|---|---|



# Construction/buildings account for:

- $\frac{1}{2}$  of all extracted materials
- $\frac{1}{2}$  of all energy consumption
- $\frac{1}{3}$  of all water consumption
- $\frac{1}{3}$  of all waste

in the EU



90%



# THE BUILT ENVIRONMENT BIG IMPACTS, GETTING BIGGER

 **EUROPE**  
BUILT ENVIRONMENT



 **CHINA**  
BUILT ENVIRONMENT





DECARBONIZE



# Advancing Net Zero



**WorldGBC definition:**  
A net zero carbon building is highly energy efficient with all remaining energy from on-site and/or off-site renewable sources

**100% of buildings** must operate at net zero carbon

**2050**

**2030**

**All new buildings** must operate at net zero carbon

**GOVERNMENT ENGAGEMENT**

**TRAINING & EDUCATION**

**CORPORATE ENGAGEMENT**

**CERTIFICATION**

**FROM THOUSANDS TO BILLIONS**



Coordinated Action towards 100% Net Zero Carbon Buildings By 2050





# The Net Zero Carbon Buildings Commitment



**Globally the challenge is now to accelerate the debate around carbon emissions across the *full life cycle***





## THE EMBODIED CARBON REVIEW

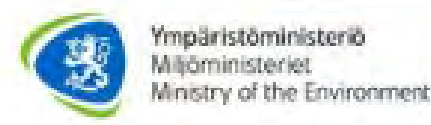
EMBODIED CARBON REDUCTION IN 100+ REGULATIONS & RATING SYSTEMS GLOBALLY

## DOWNLOAD THE FREE STUDY

STATUS QUO, SUCCESS CASES, BEST PRACTICES AND OUTLOOK FOR EMBODIED CARBON REDUCTION IN CONSTRUCTION

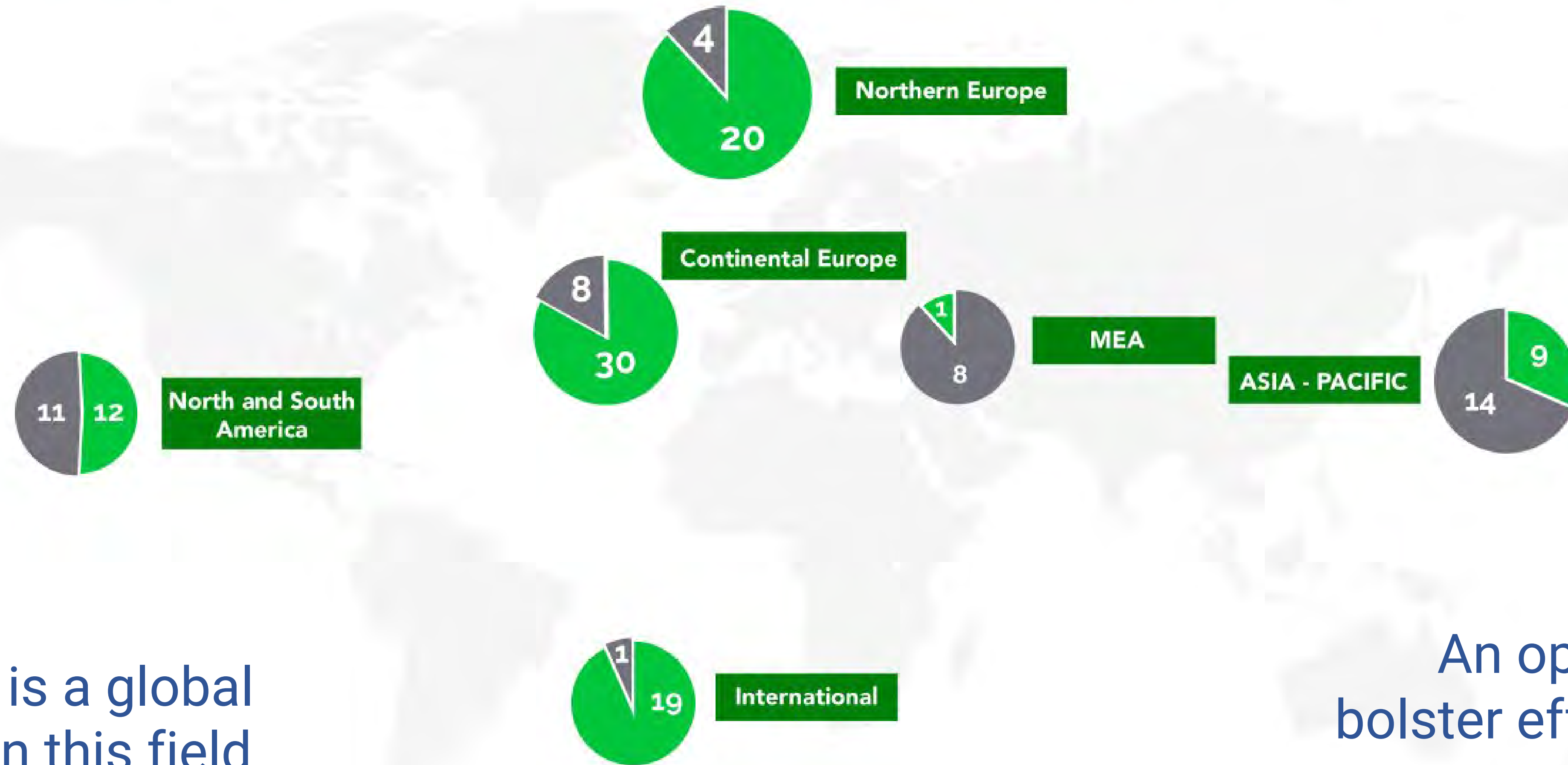
Global embodied carbon emissions from new buildings alone will exceed **100 gigatons** by 2060 if unchecked, rising to over **230 gigatons** if all renovation activity and infrastructure construction are included.

With the generous support of:



## PREVALENCE OF EMODIED CARBON IN GREEN CONSTRUCTION SYSTEMS

**Scope:** multi-criteria building & infrastructure certifications & carbon only regulations



Europe is a global leader in this field

An opportunity to bolster efficiency and competitiveness

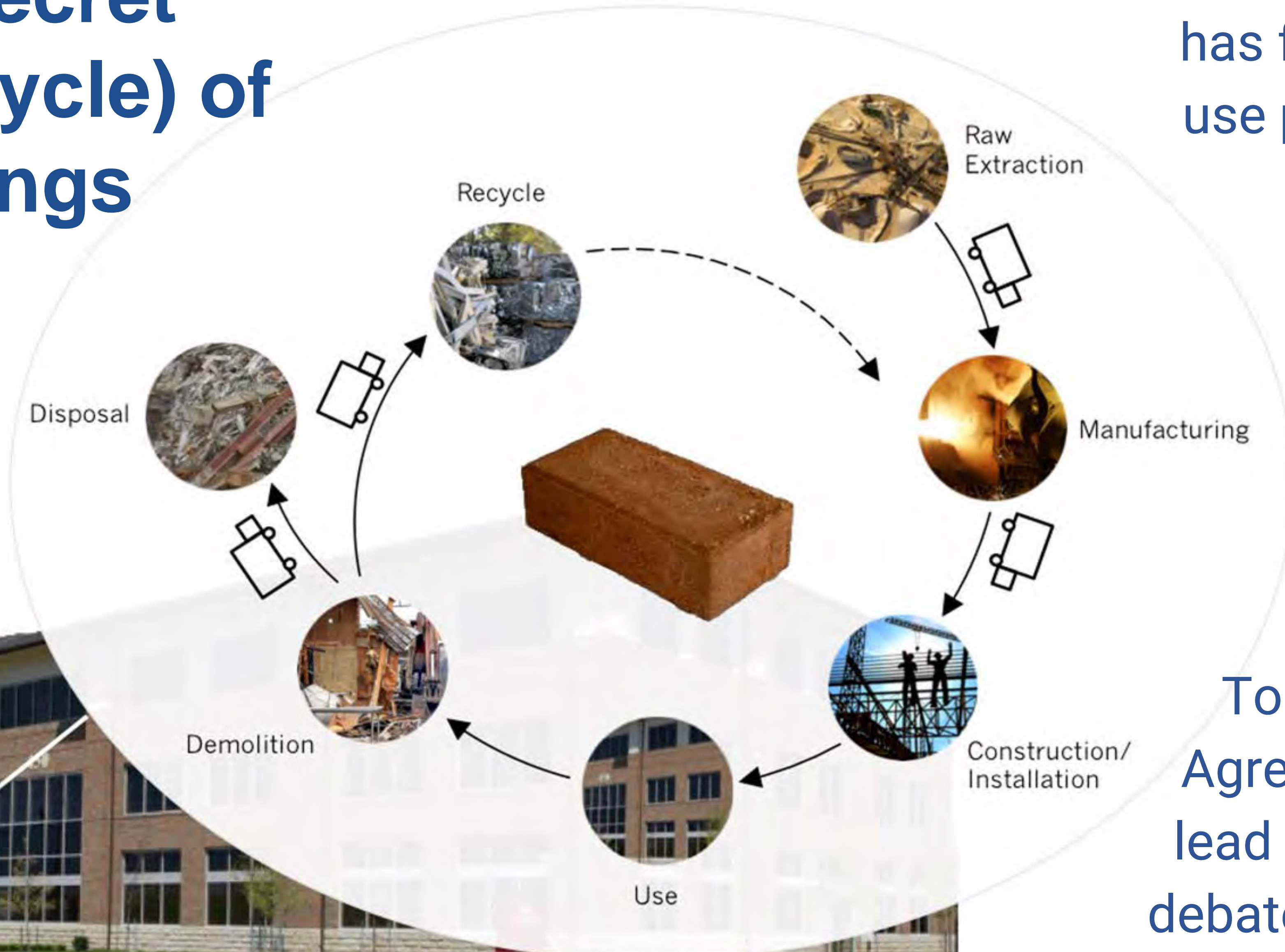
Source: Bionova

■ Embodied carbon in scope

■ Embodied carbon not in scope



# The Secret Life(Cycle) of Buildings



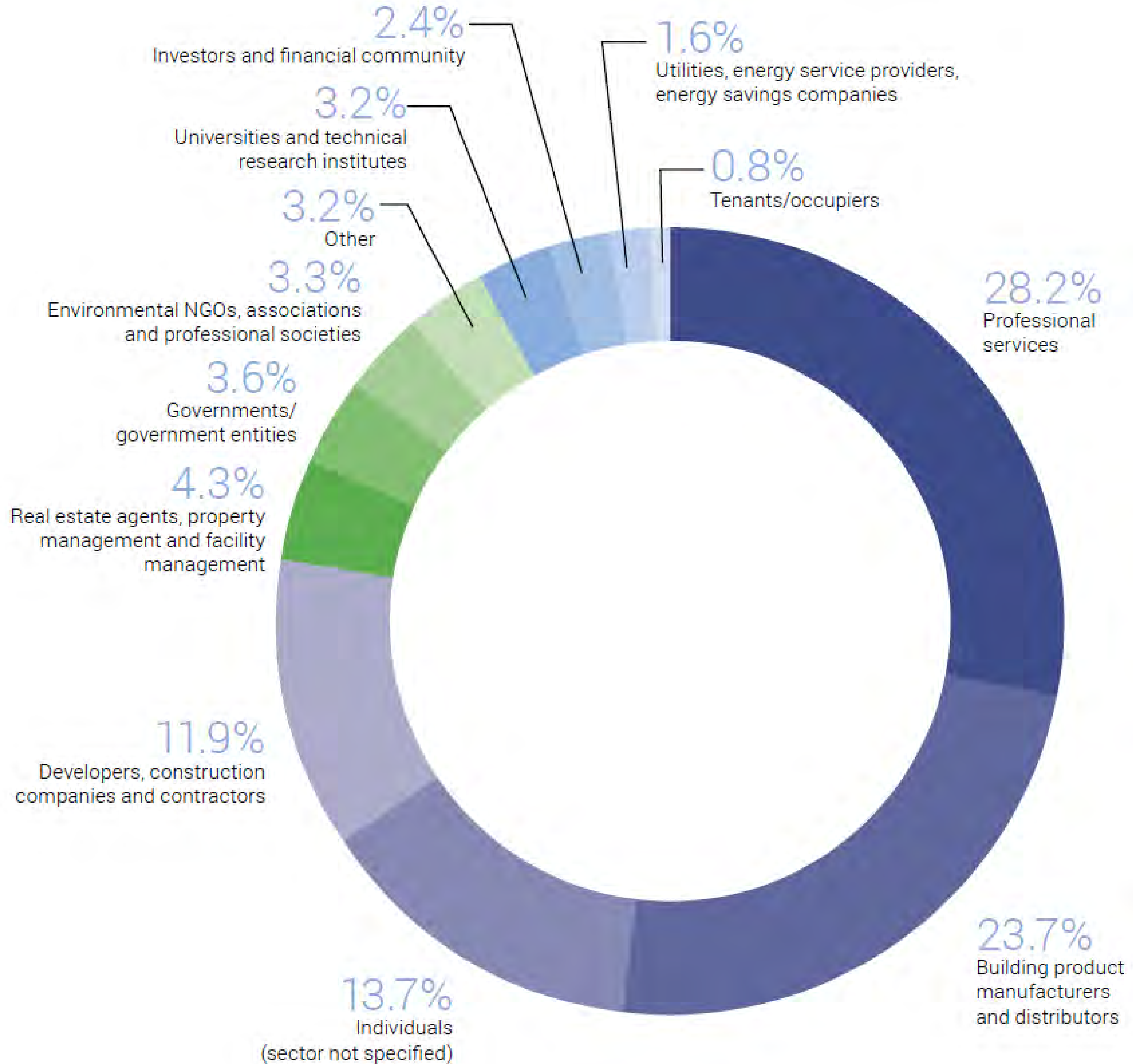
To date EU buildings policy has focused on tackling use phase / operational emissions.

To achieve the Paris Agreement the EU must lead a shift in the global debate towards the *full life cycle*.



# The added complexity of our value chain

Many different perspectives, drivers, metrics, data tools...







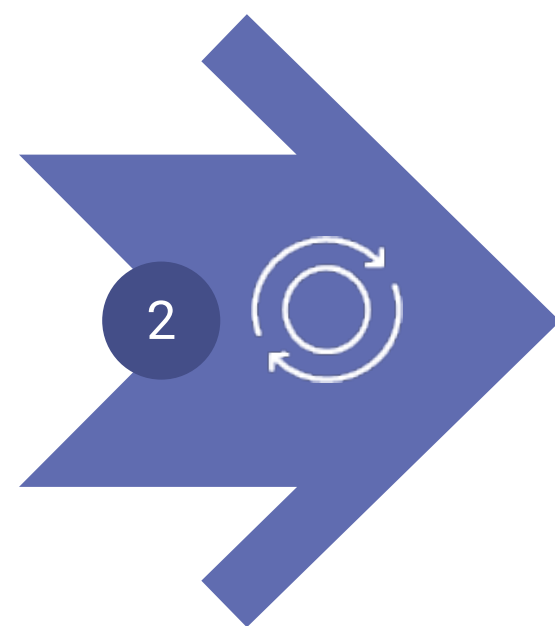
# Level(s)

Building sustainability performance

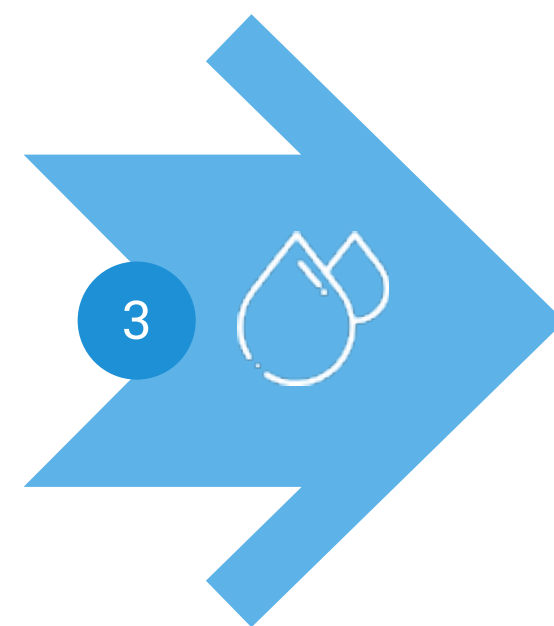
## Level(s): Shifting the Debate To Life Cycle and Circular Thinking



GHG Emissions



Resource Efficiency & Circularity



Water Efficiency



Adaptation & Resilience



Health & Wellbeing



Value & Cost



We need a **common language** across the **whole value chain**

... focused on **performance** across the **full life cycle**

... that provides **robust** and **comparable data** to enable decisions

Level(s) can be the foundations of future building sector policy in the EU, and help establish a *world leading* approach to circular and life cycle thinking









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EUROPE REGIONAL NETWORK



WORLD GREEN BUILDING COUNCIL

europa@worldgbc.org  
www.worldgbc.org

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**e-on**

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