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Urban Resilience: a circular economy based transition

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LABEL PARIS2015 COP21-CMP11

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International Research Network for Low Carbon Societies 7th Meeting

OUTLINE

Outline

- Cities facing climate change (causes and effects)
- An urban resilience approach coupling (adaptation, mitigation and risk)
- RESURBE program on Urban Resilience
- Toward a new planning approach based on circular economy principles

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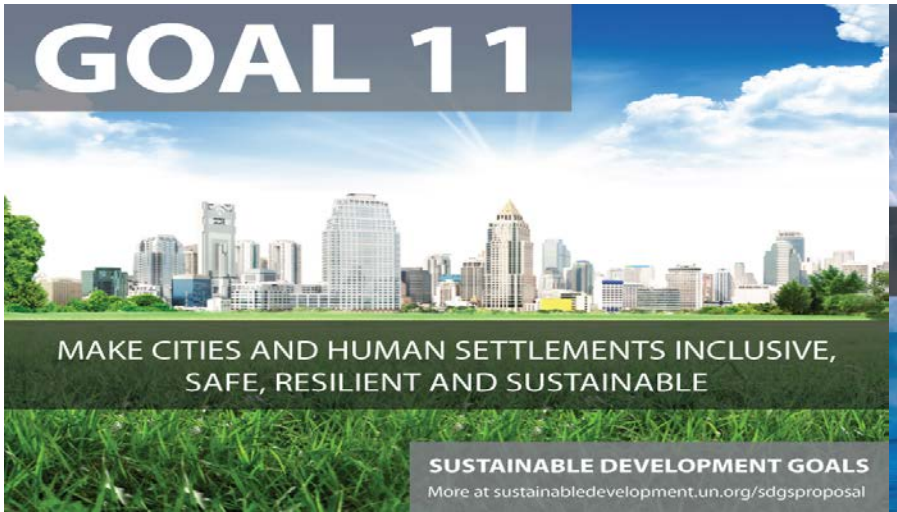
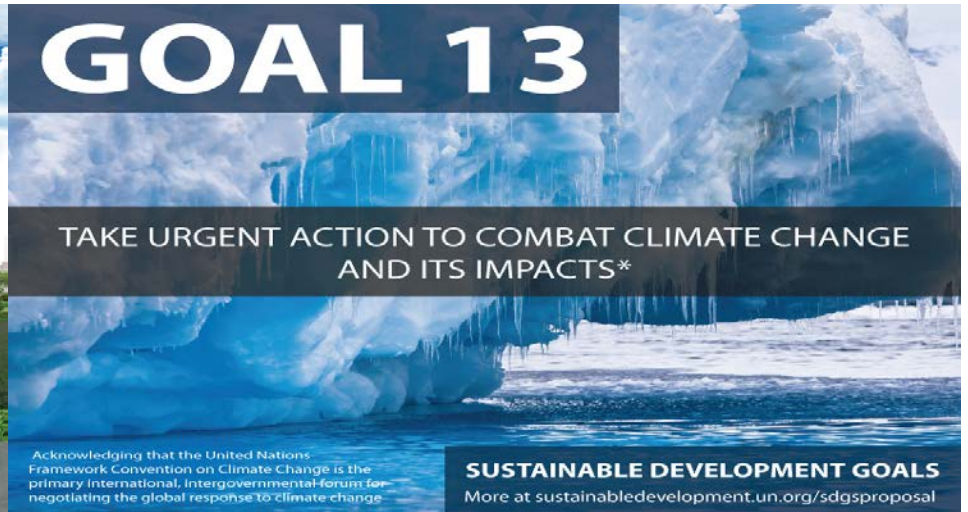
CITIES FACING CLIMATE CHANGE

Cities and local communities have a central responsibility in climate change, due to their consumption and production patterns and the concentration of human activities and world population.

Cities and local communities are increasingly and exponentially **facing the effects of climate change, requiring immediate planning and action.**

Cities and local communities are **already implementing climate change integrated solutions and projects** (risk, adaptation, mitigation).





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CITIES FACING CLIMATE CHANGE

Current urban development patterns,

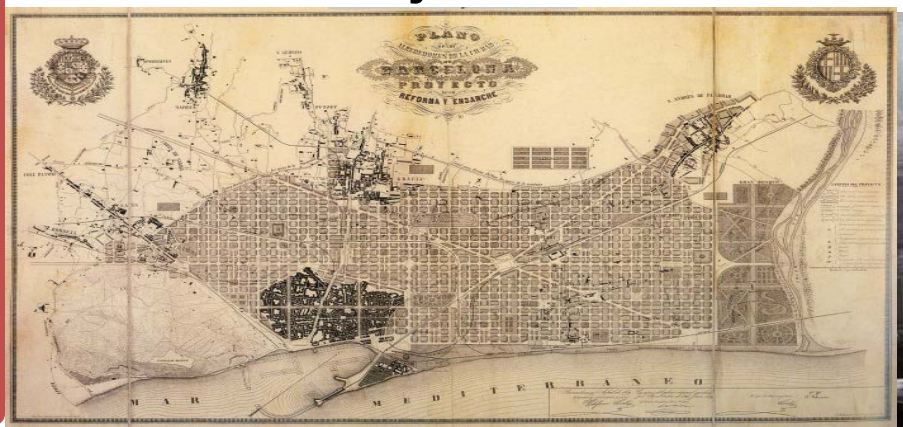
are based

on **linear consumption and production** models

on **increasing growth** through non renewable resources

on **urban planning and management** practices largely based on principles from XX century (zoning, cars, etc.)

on **un-just** criteria of redistribution and governance



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CITIES FACING CLIMATE CHANGE

It is not possible to continue following the current urban "development" patterns.

A radical change and transition toward resilience is needed in cities, enhancing the ability to **adapt** to current mayor changes, to **mitigate** negative effects of the human activity, to be prepared and responsive to **risk**.

Where an **integrated and systemic approach** to urban development is required, a **new global urban agenda**

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URBAN RESILIENCE

A definition “Urban Resilience” is the ability of any **urban system:**

- **to absorb and recover** quickly from the impact of any plausible shocks and stresses and maintain continuity of functions.
- **to reduce and prevent the causes** of shock and stress through strategic mitigation actions.
- **to build the capacity of adapting dynamically to changes**, rapid/cataclysmic and slow on-setting ones.

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Momentum for transition through a new global urban agenda (SDGs, Risk, Climate, Habitat)

- 2012 – The Future we Want (11 paragraphs on resilience)
- 2014 – WUF7 Medellin Collaboration on Urban Resilience ($6 bil. 2000 cities)
- 2015 – World Conference on Disaster Risk Reduction (focus to resilience)
- 2015 – SDG Summit (goal 11, targets)
- 2015 – COP 21 (resilience coupling mit&ada, city role)
- 2016 – World Humanitarian Summit (relief and recovery activities)
- 2016 – Habitat III New Urban Agenda for 21st Century

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URBAN RESILIENCE

CITIES ARE DEMANDING A TRANSITION TOWARD RESILIENCE AND ALREADY DEVELOPING REAL PROJECTS

ALTOS DE LA ESTACIA : BOGOTA

Disaster recovery and risk management

Adaptation measure: through appropriate technologies and participation

Mitigation measures: risk park & production park

Integrated, systemic and participatory approach,
cross scale (local-international)

Altos de la estancia, Ciudad Bolivar, Bogota: a case of community resilience to build up a metropolitan park

RISK AWARD 2015

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URBAN RESILIENCE

ENABLING CONDITIONS FOR TRANSITION

creating and **consolidating a common body of knowledge/practice.**

knowledge transfer of **best practices for upscaling/replication (S-S/N-S/S-N)**.

exchange of **appropriate technologies**, solution and expertise.

new **skill sets creation, capacity building and education**.

new planning processes: adaptive, inclusive and dynamic.

integration of efforts in-betweens **local communities and key stakeholders** (IGOs, HEIs, private sectors, new intermediaries).

gathering **human, knowledge and financial resources.**

engagement in contributing to **informed policy making.**

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TO FACE THIS CHALLENGES AND INITIATE URBAN RESILIENCE TRANSITION

Launched in November 2014.

RESURBE program aims to realize research, capacity building and urban development projects worldwide; as well as to support informed policy making, on **urban resilience and climate change adaptation/mitigation.**

RESURBE program operates through an **interdisciplinary and international platform,** facilitating **knowledge co-creation and exchange, through best practices,** between local and regional governments, universities and research centres, international organizations and other stakeholders from private and public sectors.

RESURBE adopts a **participatory community development** approach**,** by favouring systemic socio-eco-innovation to reduce the vulnerability of local communities and to improve human wellbeing.

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Naciones Unidas Organización Educativa, Científica y Cultural

Cátedra UNESCO de Sostenibilidad

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CITY RESILIENCE PROFILING PROGRAMME

UNISDR
The United Nations Office for Disaster Risk Reduction

UCLG CGLU
United Cities and Local Governments

Medellín un hogar para la vida

Alcaldía de Medellín

BOGOTÁ HUMANA

IDIGER
Instituto Distrital de Gestión de Riesgos y Cambio Climático

Ajuntament de Barcelona

Universidad del Rosario
Adelante en el tiempo

KLN
Knowledge Latinamerica Network

unescosost Colombia

Tecnológico de Antioquia
Institución Universitaria

Currently:

30 partner organizations

130 participants

UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH
University Research Institute for Sustainability Science and Technology

OPEN UNIVERSITY LA SALLE
LaSalle Universities

IHS
Making cities work

By end 2015:

60 partner organizations

200 participants

unescosost Brasil

UFBA

RMIT UNIVERSITY

Universidad Veracruzana

UNIVERSIDAD AUTÓNOMA DE SAN LUIS POTOSÍ

Observatorio Urbano Local
San Luis Potosí México

CLUSTER CREATIC

ASYPS
Asociación para la sostenibilidad y el progreso de las sociedades

Jardín Botánico José Celestino Mutis
Centro de Investigación y Desarrollo Científico

UNHABITAT - CITY of BOGOTA - RECNET/RESURBE : collaboration agreement

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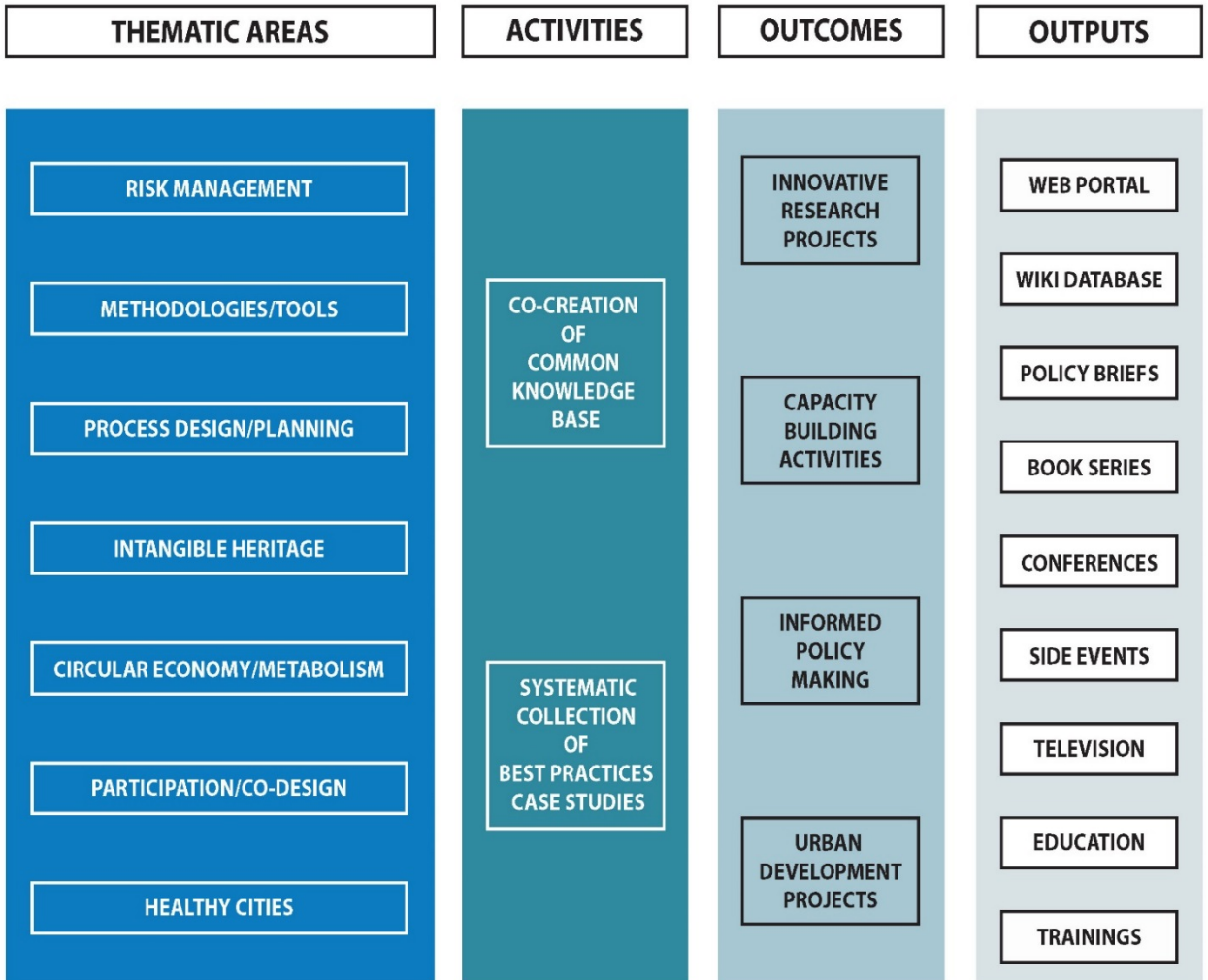
Co-creation of a **common knowledge base;**

Systematic **collection of best practices** and case studies worldwide



RESURBE is structured by seven thematic areas and Working Groups

WG1 **Risk** management, adaptation and resilience

WG2 **Methodologies and tools** for resilience and systemic eco-innovation.

WG3 **Process design** and strategic urban/regional **planning**.

WG4 **Intangible heritage** and appropriate technologies**.**

WG5 **Urban metabolism** and **circular economy**.

WG6 **Participatory processes**, co-design and co-evolution.

WG7 Climate change and **healthy cities**.

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Circular Economy : a re-emerging concept

Origins: 1976 Performance economy, Cradle to cradle, Industrial ecology , Biomimicry, Permaculture

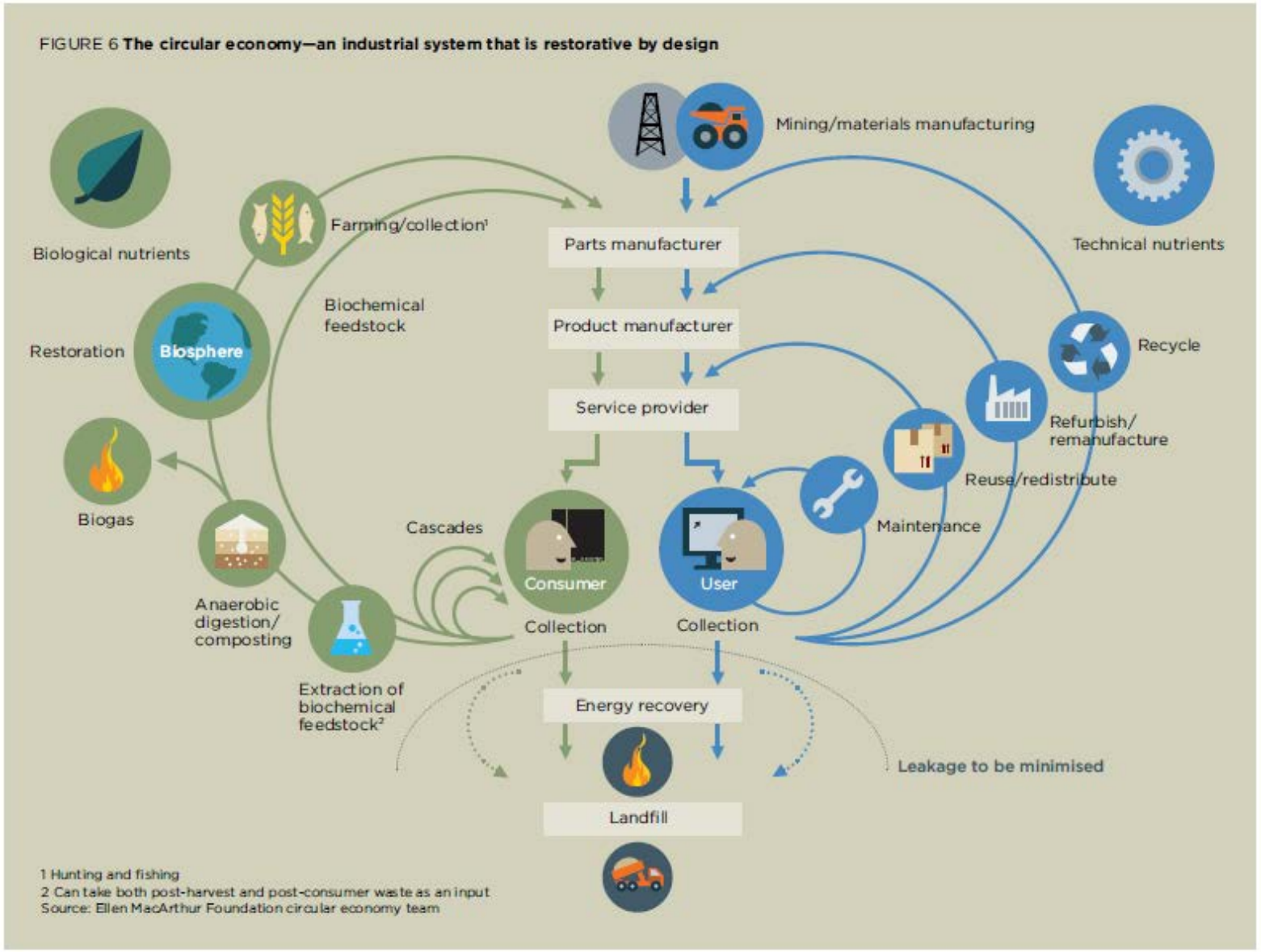
Principles and definition:
A restorative economy by principles, replicating circular natural system dynamics.

Based on the use of renewable energy, reduce/eliminate chemicals, erasing the idea of waste, by design

Differentiating biological and technical nutrients cycles

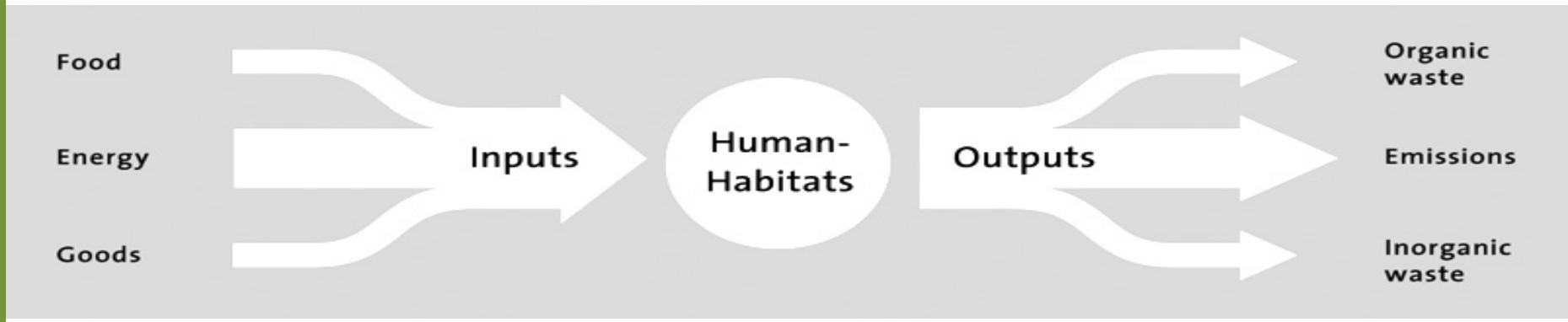
Aiming to a radical change of the production/consumption systems, including the transition from a product to a service based economy.

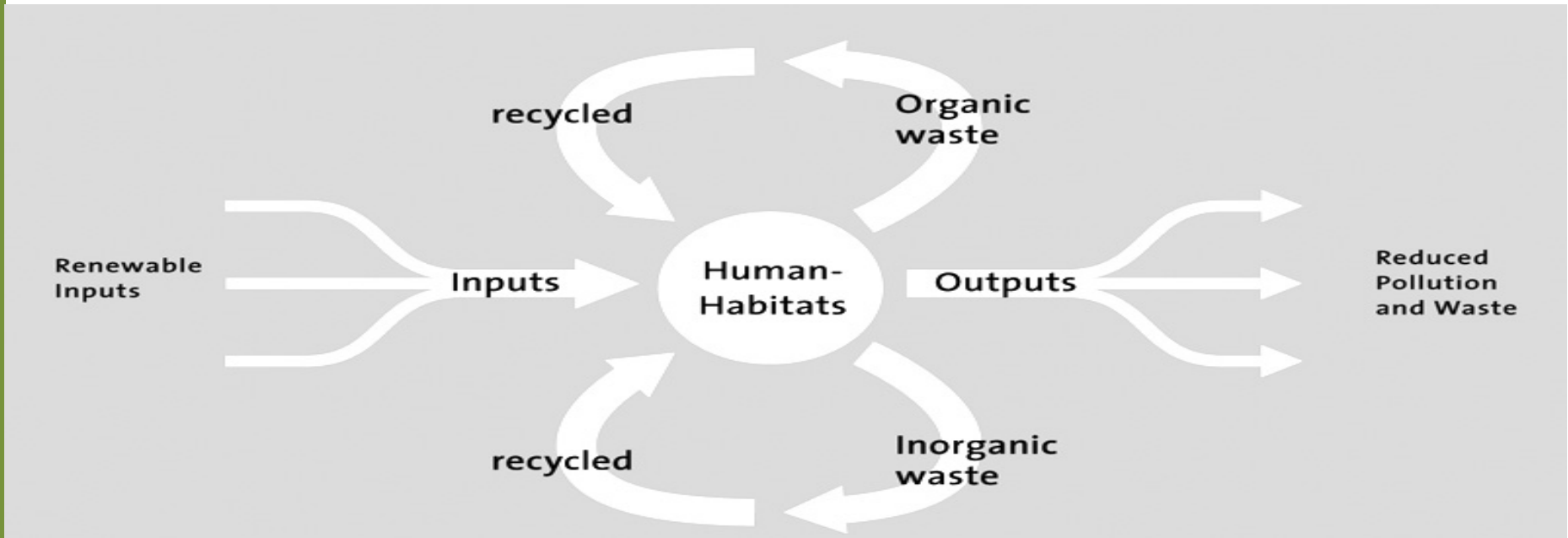
CIRCULAR URBAN METABOLISM

- 

CIRCULAR URBAN METABOLISM

COUPLING CIRCULAR ECONOMY AND METABOLISM





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CIRCULAR URBAN METABOLISM

CIRCULAR Planning Principles:

Process design and planning: evolving and dynamic planning

Co-design: local communities at the centre , based on participation and knowledge exchange

Co-evolution: environment as central, as model for systems and solutions

Planer as facilitator, supporting multi actors planning processes based on integrating socio-technical and environmental planning processes

City and its region: the city are not isolated but are central to the complex dynamic and exchanges of their

Resilience as an integrating factor

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THANK YOU

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