

# Taking the circular economy to the city level

*Roman Mendle, Smart Cities Program Manager  
ICLEI World Secretariat*

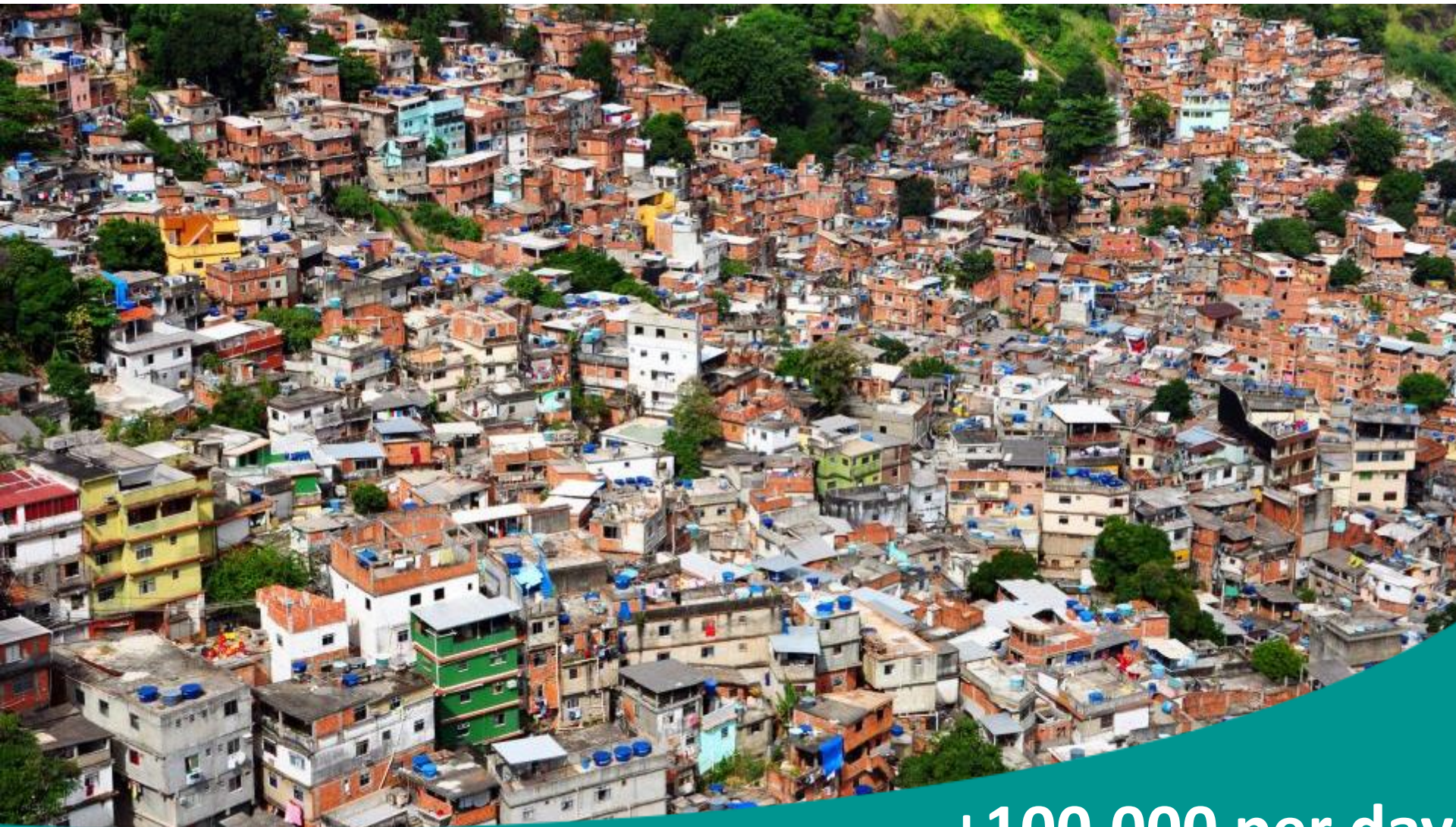


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21st of February 2018



# Why we act



+100,000 per day



# Why we act



6 mio. t



# Why we act



† 2050

# Planetary Boundaries and Donut-Economy

## Planetary Boundaries by Johan Rockström

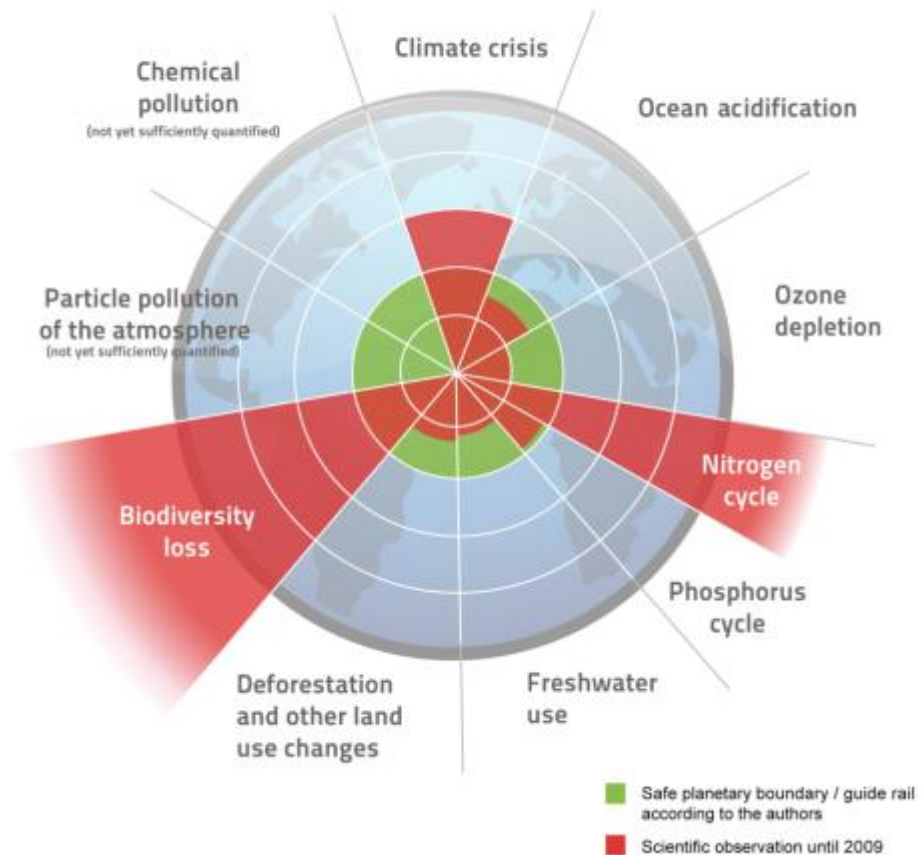
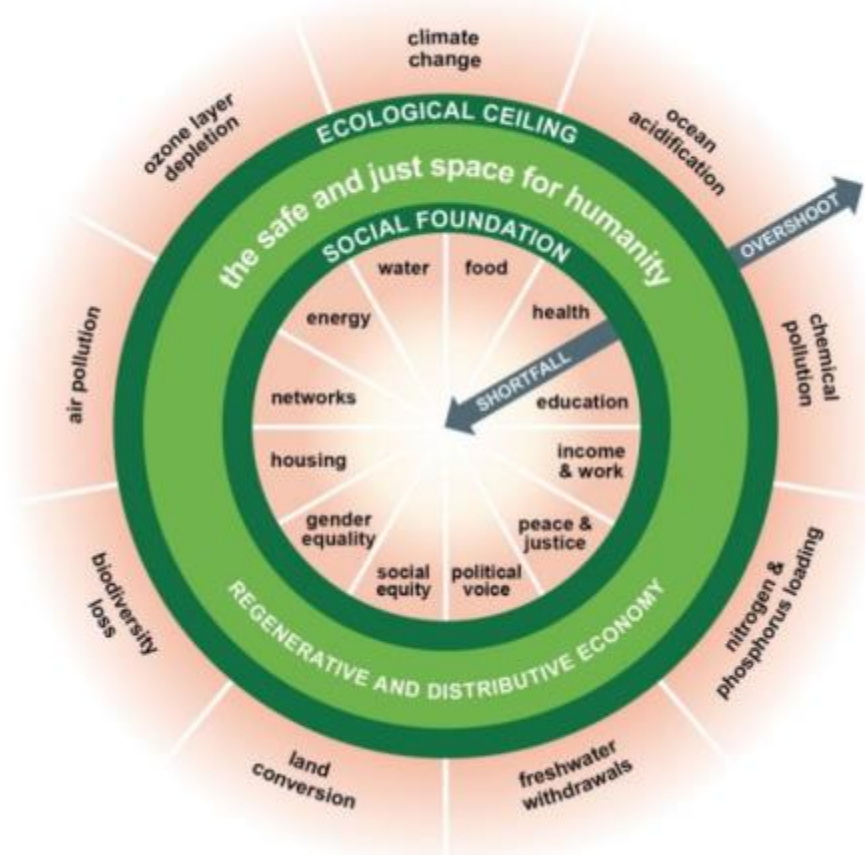


Illustration: Jella Müller (www.culturft-selbstmaschinen.de) License: CC-BY-SA 4.0

## Donut Economics by Kate Raworth



Credit: Kate Raworth, <https://www.kateraworth.com/doughnut/>



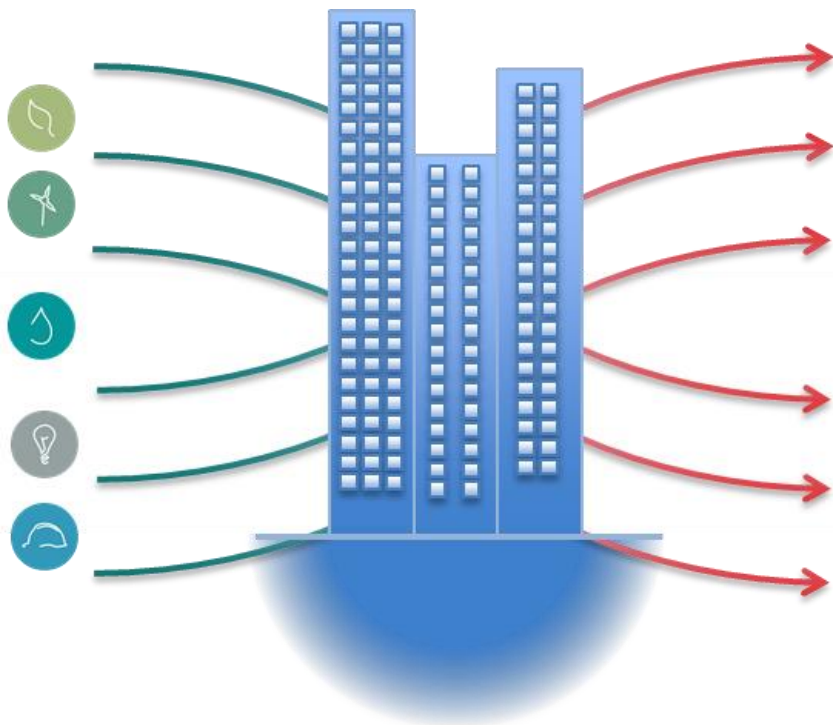
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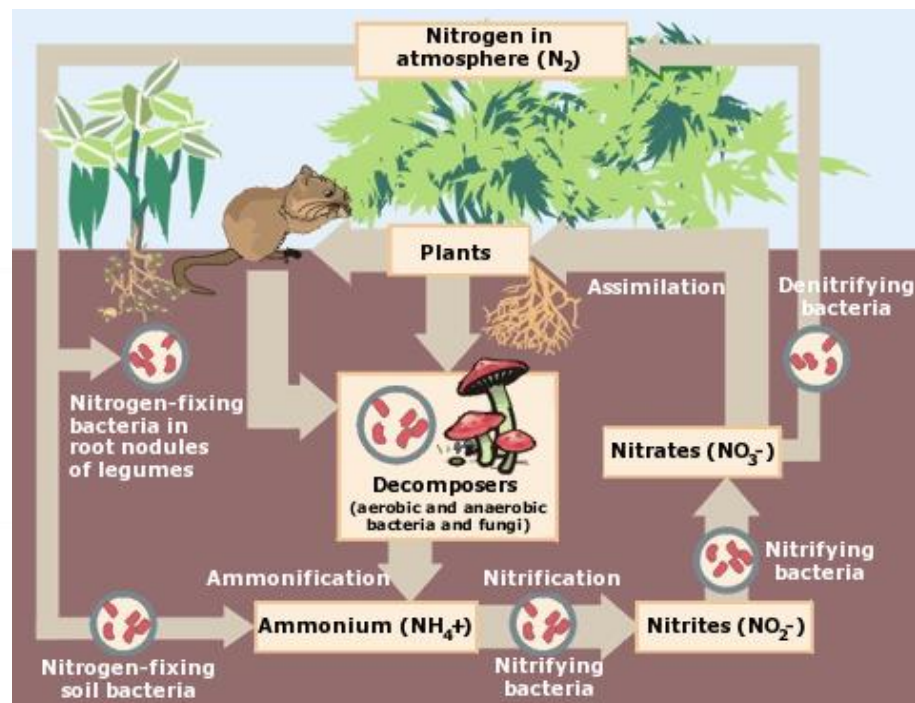


# Urban vs. Natural Systems

Urban systems are mostly linear.



Natural systems operate as perpetual, balanced cycles.



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# What is circularity for cities in our view?

## Normative Goal:

Bringing urban systems to the top level of circularity to enable perpetual and high-quality urban life within the planetary boundaries.

## Urban circularity levels:

- 1) Closed cycles
- 2) Regenerative Cycles
- 3) Open Cycles
- 4) Optimized Linearity



# 1 Closed cycles



Ressource remains in the same system in a perpetual closed loop.

# 2 Regenerative cycles



Ressource taken from and fed back into ecosystem within regenerative capacity.

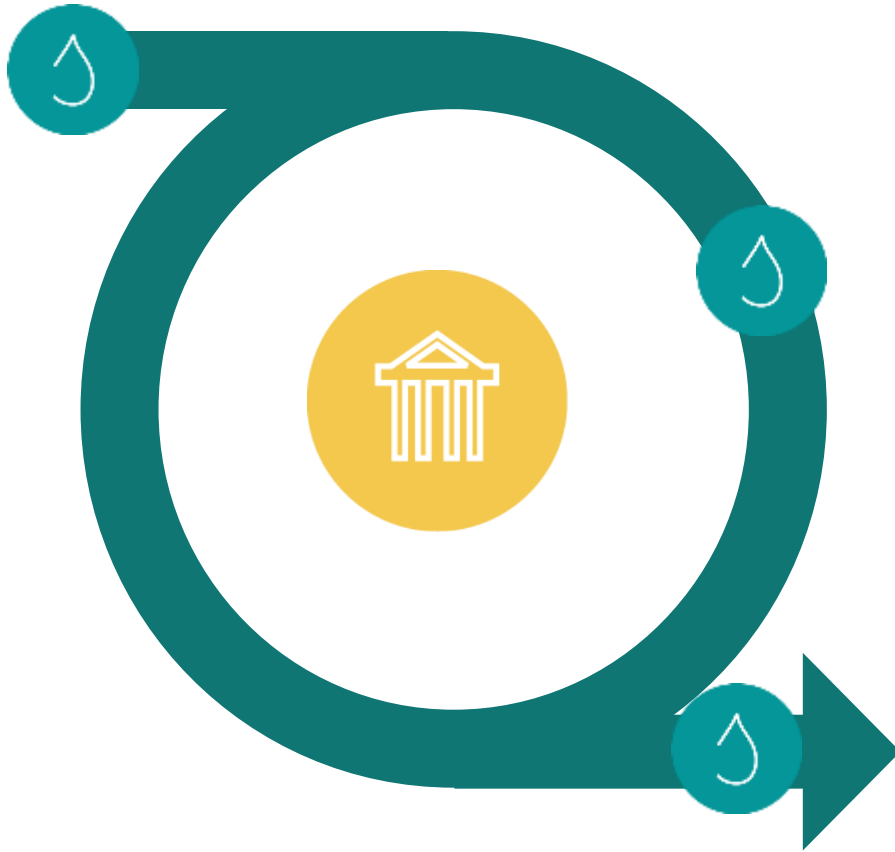


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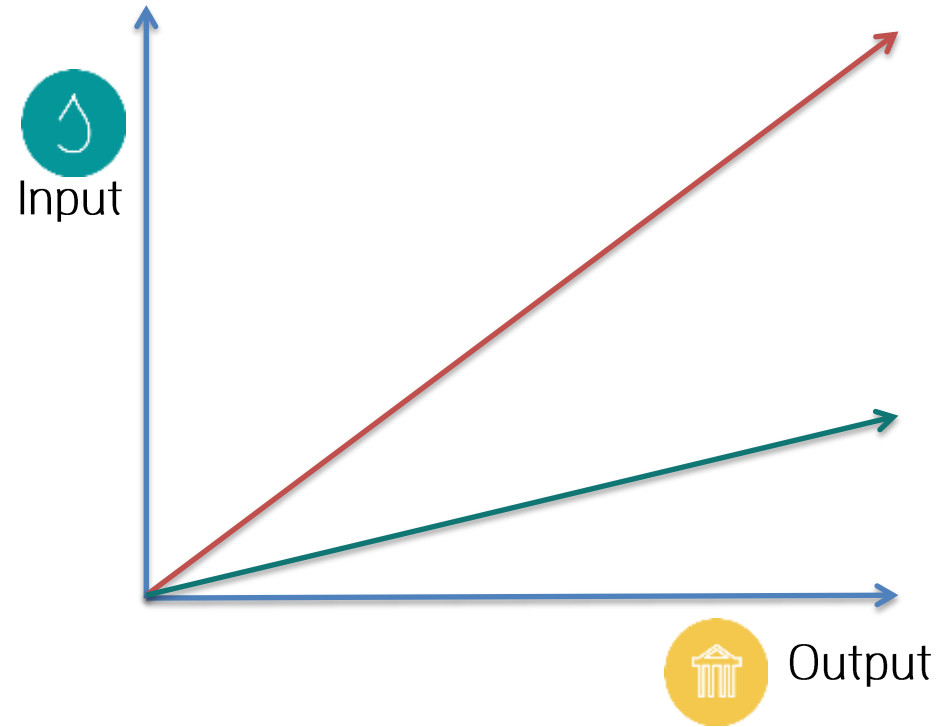


## 3 Open cycles



Ressource is cycled or cascaded through a system but not indefinitely.

## 4 Optimized linearity



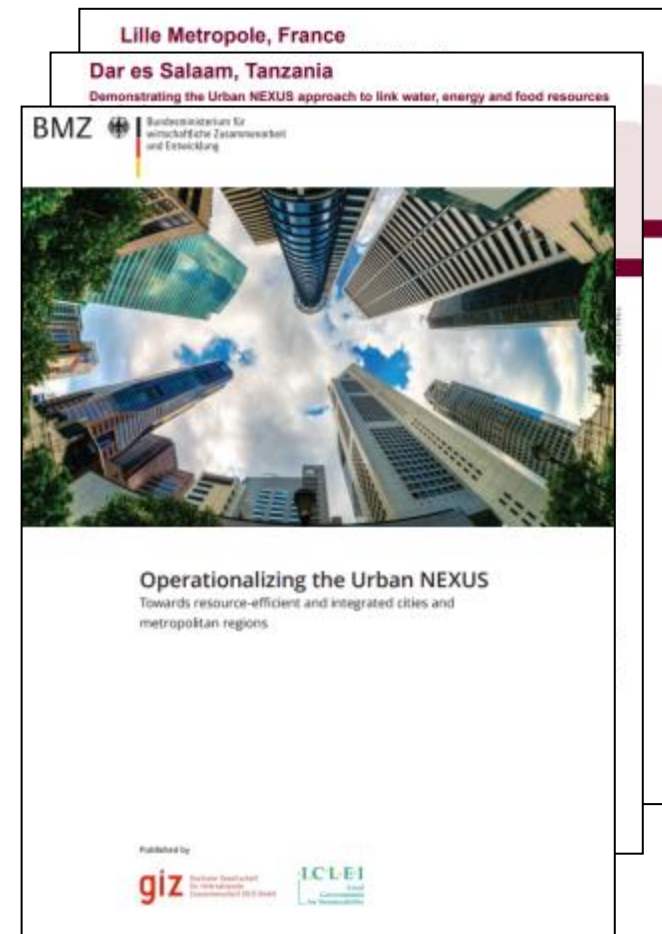
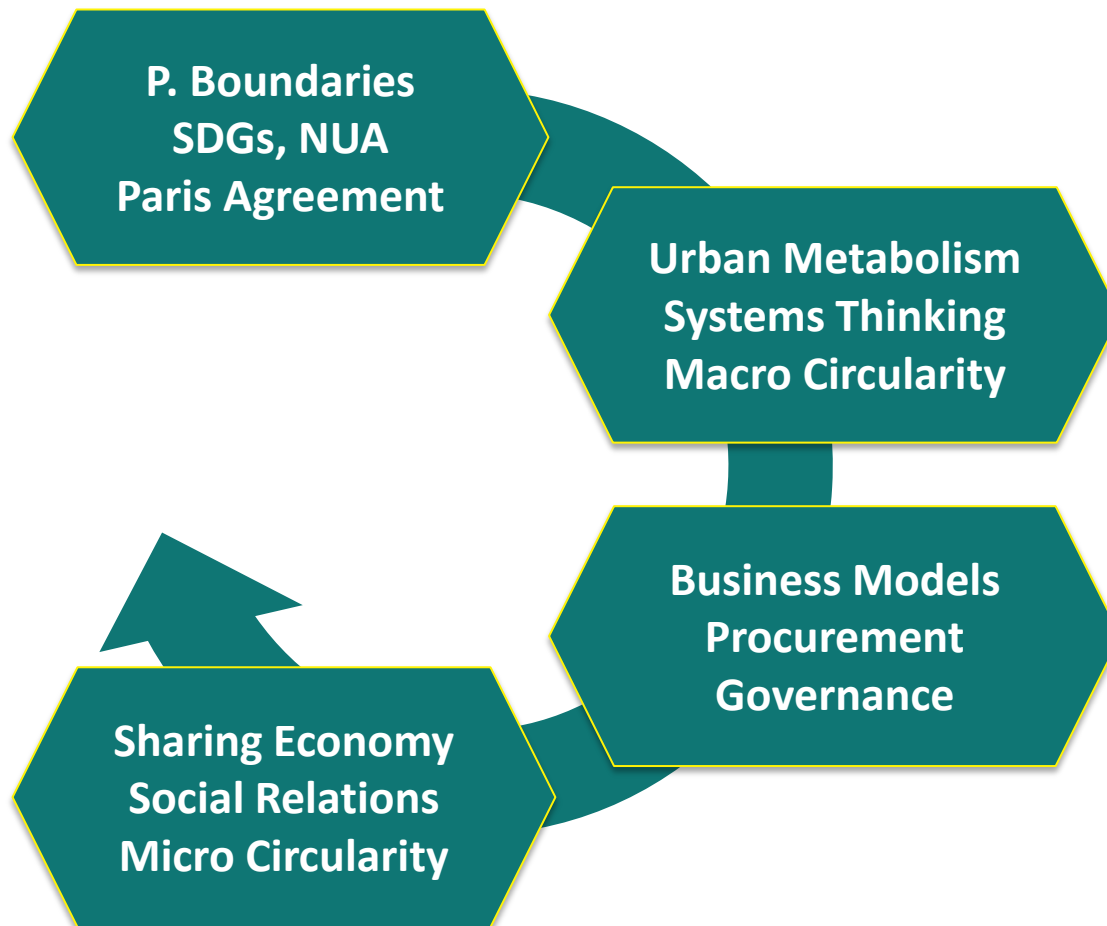
The system is more efficient in terms of ressource use but still linear.



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# A cross-cutting approach





# Some related ICLEI initiatives



**Building Efficiency  
Accelerator**



**SUSTAINABLE  
PROCUREMENT  
PLATFORM**

URBAN  
**TRANSITIONS  
ALLIANCE**



Industrial Legacy. Sustainable Future.



**DISTRICT ENERGY  
IN CITIES  
INITIATIVE**



**PROCURA+**  
European Sustainable  
Procurement Network



**GLOBAL LEAD CITY NETWORK  
ON SUSTAINABLE PROCUREMENT**



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