Content

Part One:
Ongoing research systemic factors

Research questions (& methods)

1. What are the systemic factors that the CityLoops cities encounter and that influence the progress towards becoming a circular city? (interviews, document study, analysis and group discussion)

2. What are the main categorizations of these systemic factors that we can identify, how are they divided over the CityLoops cities and the replication cities? Are their coherences between the factors, and can they be explained? (analysis and group discussion)

3. Which factors are specifically relevant for which actions/demonstrations or CityLoops tools and lessons? (group discussion and documentation with examples)

Workplanning

February 2022 - June 2022	August 2022 - January 2023	February 2023-September 2023
• Develop main research questions; • Writing interview guideline, • Finalize guideline with demo cities during joint session; • Profile best respondents. • Execute interviews per city o ask them about factors of success and failure in realizing the demonstration actions.	• Find similarities and critical differences between demo cities and replication cities, in consultation with a few subgroups of cities. • Do the cities recognize the insights and language and can they contribute further?	• Co-author with the demo cities the review of insights on factors of success and failure. • Formulate these insights in terms of conditions for regional upscaling and for successful tools. • Which of the existing tools or 'business' activities can help leveraging progress towards CE? How should they be tailored to use in a specific city context? Too ambitious?

Quick scan 2021

	Apeldoorn	Bodo	Hoje-Taastrup	Mikkeli	Porto	Roskilde	Sevilla
Physical city	🟩	🟧	🟨	🟨	🟩	🟩	🟩
Politics and policy	🟥	🟩	🟩	🟥	🟧	🟧	🟧
Culture	🟧	🟨	🟥	🟨	🟥	🟥	🟥
Economy	🟨	🟥	🟧	🟧	🟨	🟨	🟨

🟩 = supportive

🟨 = somewhat supportive

🟧 = cumbersome

🟥 = very much hindering

First interviews 2022

- no cooperation between officers and politicians: distant relation over numerous admin. layers

- no strategic vision at city level on Circular Economy and how to get there

- no common understanding and language between departments

What came up during discussions!

1. Communication to influence others, eg city council, companies in your area, the public and the culture

2. Cooperation (has very much to do with communication, but also with strategically choosing your partners within and outside the city offices)

3. Rules and regulations: formalizing what are important objectives and ways to get there (policy);
   - National legislation
   - Local policies and legislation
   - How to link to EU, use international cooperation?

4. Tools and methods that help becoming a circular city, specifically for BioWaste: different types of challenges

Role Apeldoorn according local parties

Mediator or first contact for marketing local, not new substances, materials and products, to raise their availability

Mapping local production chains to make clever links between demand and offer

Establishing a local circular network for exchange of knowledge and information

Launching customer for struvite, restwarmth, woodbuilding, wooden streetfurniture like signposts and guardrails

For local scale business cases a role in organising and cooperating in the chain

Financing research and pilots

As 'owner' of various waste streams cooperate in pilots and business cases.

Organize information campagns and raise awareness among inhabitants of short chains, circular economy and better sorting of waste (also direct feedback towards individual households),

The previous combined with local branding and showing good examples.

Involving youth and schools with circular economy

Study effects of circular economy on waste tax.

Facilitating attitude and possibly use the possibilities of the new Environment Code

A "Yes, provided that"- attitude.

Part two:
transition and tools

Theory

- The concept of systems

- Your city organization

- Your company

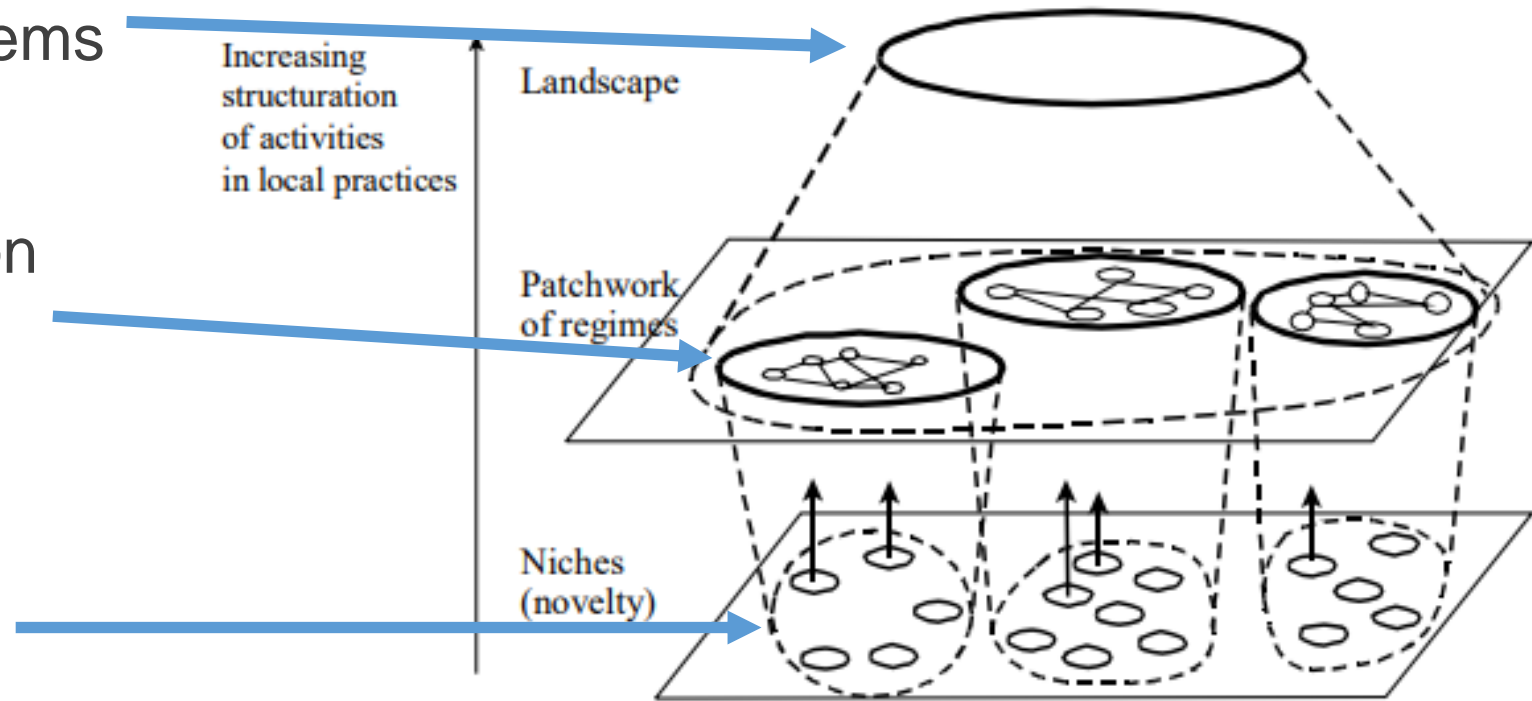- Your novel circular demonstrations

Fig. 3. Multiple levels as a nested hierarchy [22, p. 1261].

More from the literature

- <u>Demand the impossible</u>! (Smith et al. 2015) . Because that is where things have to get moving!

- 'Critical niche' is about upscaling in the sense of a regime transformation. Critical niches '… open up debate about more <u>socially transformative pathways</u> to sustainability' (Smith et al., 2015, p1).

- When groups demand 'the impossible' it can be interpreted as <u>the actual regime not being able to respond to the demand</u>, because it is organized on the basis of other knowledge or values (Aalbers and Sehested, 2019)

- Do not focus on what is imposible, but on <u>what can be done to make things happen</u>? (Aalbers, Kamphorst & Langers, 2019)

About instruments
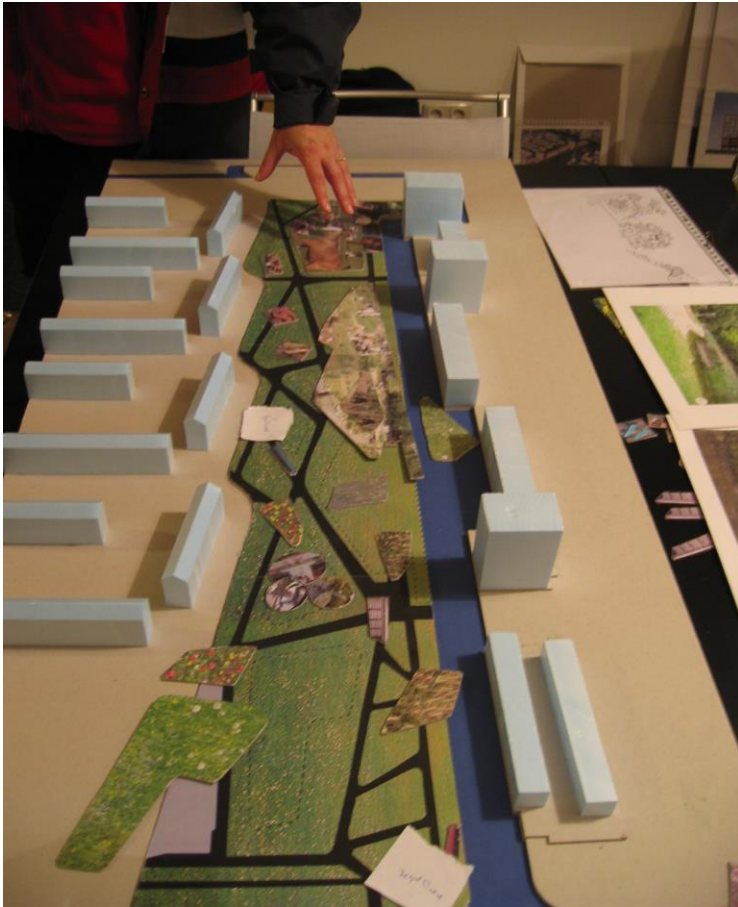
3 types (Chalmers University, 2002)

- Tools in action, you use in your own process

- Tools in interaction, you use to communicate

- Tools in and for transition? Connecting practices, multiple users and shapers/creators.

In a process; for a specific challenge; a timing; a user (skills, attitude, knowledge)

Tool for Transition:
amidst parties, accessible, changing

Is there more potential in the CityLoops tools?

Are they designed to contribute to the change of lifestyles, work practices, arrangements?

Can MoC data be used for or turned into a tool for interaction, or even transition

Can the Evaluation criteria and indicators from the Evaluation Plan be used in interaction, or even for transition? i.e. shape it together with the users for their active use in steering towards CE?

What is needed for this?

List of instruments CityLoops
Pre-demolition screening procedure
Selective demolition procedure
CO2 calculator (LCA tool) for concrete, soil, mixed CDW
3D modelling to track onsite CDW flows
3D GIS Visualisation
3D Visualisation/Street-scanning (?)
Tool for assessing soil reuse potential
CDW Materials passport, databank and digital marketplace
CDW flow optimisation
Quality assessment for CDW use in water infrastructure
Methodology for assessment of projects fit for soil reuse

CityLab stakeholder platform
City simulation platform
Co-design process for public space
Wellbeing monitoring tool
Framework for circular soil handling
Instrument for predicting future excavated soil
Circular construction procurement guidelines
Planning & decision making guidelines
CDW awareness campaign
Business cases
Stakeholder engagement

Which are designed for use

☐ in action

☐ in interaction

☐ which for in transition?

Digital tools citizens and city managers data driven decisionmaking
Valorisation decision support tool GA
Triple layer business model canvas GA
Co-design with citizens of collection and sorting demo Mikkeli. Service design.
Treatment stakeholdergroups

source: tracker and OIPs

To distinguish between

In action, in interaction	In transition (two or multi-directional and embedded in the tool or materialized)
communication towards	dialogue
instruction	co-design
awareness raising	co-development
monitoring and evaluation	joint monitoring and joint evaluation
interview	
study of composition municipal waste	joint study of composition municipal waste

Might be a strong tool, inducing co-ownership or appropriation.
Know where the city wants to be at the background, and where the city remains the authority!

Thank you for your attention, participation!

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