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CircuPuncture in Action: A Comparative Policy Analysis of Circular Economy Transitions in Wrocław and Łódź

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INTRODUCTION

Circular Economy (CE) transitions require adaptive local governance and targeted interventions. The CircuPuncture model proposes a point-by-step, project-based approach implemented via circular clusters.

This study conducts a comparative policy analysis of CE transitions in Wrocław and Łódź, assessing the alignment and effectiveness of urban strategies through the CircuPuncture lens.

METHODOLOGY

Research design
Comparative qualitative case study: Wrocław (integration into global value chains) vs. *Łódź* (post-industrial restructuring, FRONTSH'IP project)

Data sources
Strategic municipal documents, Local Data Bank of Statistics Poland (GUS), previous research projects

Analysis
Systematic document analysis and thematic coding based on the three dimensions of the Learning CircuPuncture framework

Output
Identification of circular acupuncture points

KEY RESULTS

Comparative Overview

WROCŁAW	ŁÓDŹ
More advanced CE strategy orientation	Emerging CE strategy focus
Stronger governance coordination	Partial implementation of CE instruments
Higher institutional capacity	Governance and capacity gaps
Broader set of circular initiatives	Waste management as main priority area

Comparative Findings

- Different CE transition pathways in the two cities
- Varying degrees of alignment with CircuPuncture steps
- Distinct governance strengths and weaknesses
- Need for targeted "acupuncture points" of intervention

Key Sectors of Intervention

Waste Management | Industry & Eco-innovation | Circular Clusters | Consumption & Services | Urban Sustainability

ABSTRACT. This article conducts a comparative policy analysis of circular economy (CE) transitions in Wrocław and Łódź, through the theoretical lens of the CircuPuncture model. This adaptive governance framework proposes a point-by-step, project-based approach to CE implementation via circular clusters.

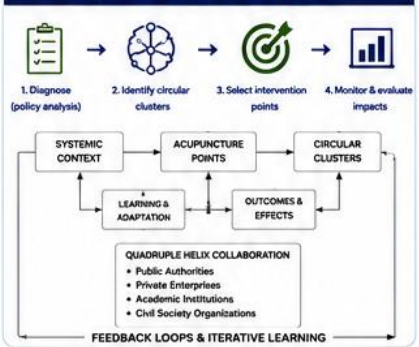
The study moves from theory to empirical assessment, aiming to evaluate the alignment and effectiveness of urban CE strategies. Employing a qualitative case study design based on desk research, the methodology involves systematic document analysis of strategic plans, thematic coding within the CircuPuncture framework, and mapping of key performance indicators.

The analysis contrasts the two cities' pathways, revealing differing degrees of model implementation. It validates CircuPuncture as a diagnostic tool for urban CE governance, identifying specific "acupuncture points" for intervention, particularly in waste management.

The article provides an evidence-based critique of Polish urban CE strategies, offering refined theoretical insights and practical, transferable lessons for fostering economic sustainability through adaptive local action.

Key words: CircuPuncture model, Circular Economy, Wrocław, Łódź, urban governance.

CIRCuPUNCTURE DIAGNOSTIC FRAMEWORK (ADAPTIVE GOVERNANCE CYCLE)



- Adaptive, incremental and context-sensitive
- Evidence-based and scalable
- Focus on local governance capacity and outcomes

CONCLUSIONS

1. CircuPuncture as a Diagnostic Framework

The CircuPuncture model offers a useful tool for assessing and guiding circular economy transitions in urban areas through targeted "acupuncture points".

2. Different Urban CE Transition Trajectories

Wrocław and *Łódź* follow different pathways shaped by governance capacity, institutional readiness, and strategic priorities.

3. Governance Capacity Matters

Stronger coordination, institutional capacity and stakeholder engagement lead to more effective CE implementation.

4. Waste Management as a Key Intervention Point

Waste management is a critical "acupuncture point" with high impact potential for initiating broader CE transitions.

5. Policy Implications & Future Research

- Tailor interventions to local contexts and governance capacities.
- Strengthen circular clusters and cross-sector cooperation.
- Invest in data, monitoring and evaluation systems.
- Further research should test the model in more cities and sectors.

COMPARATIVE SNAPSHOT: WROCŁAW VS. ŁÓDŹ THROUGH THE CIRCuPUNCTURE LENS

	WROCŁAW	ŁÓDŹ
CE Strategy Profile	Strategic orientation embedded in urban development and innovation agenda.	Emerging strategy with focus on waste and resource efficiency.
Governance Tools	Integrated planning, coordination platforms, public-private partnerships.	Developing planning instruments and institutional arrangements.
Implementation Gaps	Need for stronger waste valorisation and circular business scale-up.	Limited cross-sector coordination and institutional capacity.
Key Intervention Points	Waste management, industrial symbiosis, circular clusters expansion.	Waste management, institutional capacity building, stakeholder engagement.

CIRCuPUNCTURE DIAGNOSTIC FRAMEWORK