

# THE ROLE OF LOCAL GOVERNMENT IN PROMOTING CIRCULAR ECONOMY: THE CASE OF THE CITY OF TAMPERE

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**Abstract** - In this presentation we discuss the role of local government in the promotion of circular economy. The analytical framework of this paper is built on circular city discourse with a special view of the identification of local government's role in the multi-sector governance field. We will exemplify this development by discussing the case of the city of Tampere, Finland. Tampere is a progressive city in the Finnish welfare society, which has applied hybrid governance in its quest for balancing economic development with socially and ecologically desirable future. It pursues an ambitious circular economy policy that reflects the consensual thinking embraced by the European Union and international organizations, and embraces its role as a major local governance player to engage local institutions, corporations, and associations in the promotion of local circular economy.

**Keywords** - Local Government, Governance, Circular Economy, Circular City, Tampere, Finland

## I. INTRODUCTION

Ecological concerns have intensified in waves, some of the landmarks being the Club of Rome's report in the early 1970s, Brundtland Report in the late 1980s, and the increase in climate change alarmism soon after that, including Dr. James Hansen's testimony before the U.S. Senate Energy and Natural Resources Committee in 1988 and the popularization of the topic by Al Gore in his documentary film 'An Inconvenient Truth,' released in 2006. Circular economy (CE) as a part of this agenda emerged in the academic discussions in the late 1980s and started to become significant topic both on the political and corporate agenda in the 2010s [1]. [It is supposed to contribute to the transition towards a sustainable, inclusive, and resilient future [2]. While there are still some inconsistencies and some degree of vagueness in the use of the concept of CE, it has crystallized the idea of the need to get rid of linear thinking and find ways to close material loops [3, 4].

In this short article we take a local perspective on the promotion of CE with a special view of the role of city government. We exemplify this by referring to a particular real-life case, the city of Tampere, Finland, which takes discussion to the Nordic welfare society context. The primary sources of our data are policy documents of the city (Doc1 to Doc5, see Appendix).

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## II. LOCAL VIEW OF CE POLICY

The CE is promoted by high-level political institutions, including such as the UN, OECD, and

the European Union. The same goes with national governments, which stand out as key institutional drivers behind this agenda. Both of them are heavily influenced by climate activism operating at different institutional levels. While the institutional players at global, macro-regional and national levels have their vital role in shaping CE policies, there is increasing interest in the role of local communities, cities, metropolitan areas, and regions, as they bring CE policies close to various stakeholder groups and local realities. Local governments are able to create regional and global CE networks, integrate local actions with a multi-level governance system, and influence the global CE policy agenda [5].

### 2.1. The relevance of local perspective on CE

While local governments are part of multi-level governance systems, they form an important instance in which policies are decided locally and adjusted to local conditions. The relevance of local government is determined thus by two factors: legitimate role in making local choices, on the one hand, and an inherent sensitivity to local conditions, on the other. Angelidou identifies the following factors that justify local policy-making and strategic decision-making: (1) the geographical locus and "stickiness" of related knowledge; (2) urban scale of competitiveness; (3) city governments' ability to engage various constituents on a broad range of activities within an urban ecosystem; (4) cities' flexibility in innovating and exploring different governance models; (5) manageable size and concreteness of urban problems that can be addressed locally; and (6) the availability of a pool of peers or suitable benchmarks that can be utilized in local development processes [6]. There are, thus, several factors that justify locally oriented approach to the promotion of CE.

### 2.2. Towards circular city

City is a densely populated settlement, which especially at the higher level of global urban

hierarchy is also a concentration of innovation, consumption, and high-value adding activities. Every city is a locus of technosphere that leaves its mark on biosphere [7, 8]. At the local level the involvement in CE policies started historically from waste management [9]. However, over time local governments' approach to CE has become strategic, comprehensive, and development oriented. The concept of circular city provides an integrated place-based view of CE policy. Both urban CE models and practical aspects of such a development are in the making in different parts of the world [10, 11].

Goldmark defines circular city as one that eliminates waste and keeps materials in use for long periods of time through smart design, reuse, and repair [12]. A broader definition, which takes governance dimension into account, is provided by Prendeville and others, who define circular city as "a city that practices CE principles to close resource loops, in partnership with the city's stakeholders (citizens, community, business and knowledge stakeholders), to realize its vision of a future-proof city." [11, p. 187]. Such an aspirational view aims at changing the nature of the city from a resource-depleting throughput system to a self-sustaining circular-flows ecosystem [13].

### 2.3. Local CE policies

Local CE policies should strive for integrative view due to the complex nature of CE. Bahn-Walkowiak and Wilts have argued that no single policy tool would be sufficient for facilitating the transition to CE [14]. This calls for a mix of policies, including regulation, lawmaking, policies for economic development, town planning, and incentivization and nudging, that are sensitive to local conditions [15, 16, 17].

Municipalities may regulate and facilitate CE by providing infrastructure and platforms for circular businesses, zoning suitable areas for CE businesses, and creating partnerships with private and third-sector organizations. Local governments may use regulatory tools like service charges and environmental permits or planning permissions to foster the transition to CE, co-fund investments, and encourage local innovativeness through innovation vouchers [5].

From the point of view of balanced local development, this policy challenge boils down to the question of how local and regional actors can support a CE policy while striking simultaneously a balance between sustainability and economic development [15, 18, 19].

### 2.4. Local government and stakeholder involvement

Local governments have a critical role in promoting, facilitating, and enabling the development towards CE [5]. They may act as role models, generate and

share information, and establish aims and targets by defining who does what in the CE policy process. They may develop circular economy strategies with scheduled goals, promote circularity values, and enhance trust between stakeholders [5, 8].

The promotion of the CE policy takes place in the multi-actor setting in which various stakeholder groups have their own interests and expectations [20, 21, 22]. As CE transition is likely to be time-consuming, costly, and risky to various stakeholders, it requires direct support from local and national governments. One of the local CE policy challenges is local governments' ability to engage stakeholders in the process of consolidating the circular city [23, 24].

Stakeholder involvement and collaboration have a key role in the successful utilization of resources within CE agenda regarding its economic, ecological, and social dimensions [25, 26]. It is of a particular interest of how varying stakeholder interests can be combined in a synergistic manner in the planning process within CE agenda [27]. Not only those who are directly involved in making decisions on the CE projects and implementing them, but also those actors who operate at the outer circle, such as consumers, activist groups, media, and regulators, have in many respects great influence on CE policies and projects at different states of their evolution [28]. Thus, stakeholder perspective on local CE policies and actions and related governance processes enables us to focus on the identification of key stakeholders and their relationships and roles in the CE policy process [29, 30].

The governance challenge for local government as a *primus inter pares* in such a setting is to enable best possible use of local resources and capabilities in designing and implementing CE policies that aims at bringing about balanced results. Some aspects of them can be negotiated locally, while some targets have been set at higher institutional levels. In the local CE policy ideals, strategic views, and commonly accepted CE principles meet the local realities, needs, and values.

## III. THE CASE OF TAMPERE

### 3.1. CE policy in Tampere, Finland

The approach of the city of Tampere to circularity is loosely framed in the city strategy (Doc4), and its approach is further elaborated in the Carbon Neutral Tampere 2030 Roadmap (Doc2) and The Circular Economy Plan of the City of Tampere (Doc3). Its economic dimension is discussed separately in the economic development strategy of Tampere city region (Doc1). Tampere's performance has been assessed in many occasions, including the local review of the UN Sustainable Development Goals in

Tampere 2022 (Doc5). These documents indicate that political leaders and top managers of the city are decisively and systematically striving to keep Tampere on the frontline of sustainable development. One aspect of this city-wide endeavor is circularity, which is concretized in the previously mentioned circular economy plan (Doc3).

The CE planning in the city of Tampere aims to integrate circularity into all aspects of urban life. The city government has started to build its agenda from the core, thus focusing to its multiple roles in the process and paying special attention to the promotion of the CE through its own choices and practices. The city plays a role as a planning authority, purchaser, developer, and regulator, but extends its influence by attempting to affect the attitudes and behaviors of businesses, housing cooperatives, households, and consumers. The focal development goals of the Circular Economy Plan revolve around the following themes: land use, infrastructures, waste management, and food system. Horizontal or cross-cutting themes of the plan are public procurement, sharing economy, education, and digitalization (Doc3).

### 3.2. Tampere in a multi-level governance setting

Regarding institutional context, global trends and the views of international organizations have had an important role in the CE agenda setting. At the macro regional level in Europe the role of European Union (EU) has been decisive in initiating and guiding CE policies. Most notably, the European Commission adopted a new CE action plan (COM/2020/98 final) in March 2020, which is one of the building blocks of the European Green Deal as well as a prerequisite to achieve the EU's 2050 climate neutrality target.

At the national level the Finnish government has clarified the concept of CE, set policies, and enacted laws that provide framework for local actions. A key policy document drafted by the Finnish government is the CE roadmap titled 'Kierrollakärkeen – Suomentiekarttakiertotaloutteen 2016–2025' [Through circularity to the top – Finland's road map to circular economy 2016–2025].

Local government has many roles in this policy field. Tampere has drafted its own plans and roadmaps that reflect contextual tendencies and consensual view of CE (Doc2). Its plans for carbon neutrality, for example, includes six themes, each having their own objectives and activities that contribute to the attainment of the climate target. These six themes are urban planning, traffic system, construction, energy, consumption, and urban nature. CE is involved in most of these thematic areas, most notably the theme "consumption," in which CE is an explicitly defined

activity area. In this way circularity is integrated into the local climate and sustainability agenda.

Another important integrative feature of the CE policy field in Tampere Region is the decisive role of regional collaboration. Actually, many key actors in this policy field are regional entities, such as Regional Waste Management Company and Business Tampere.

### 3.3. Dealing with a governance challenge

While Tampere focus on activities that are in its direct control, it tries to affect a wide range of local stakeholders in promoting CE. It relies on persuasive governance style and managerial principles. In its CE policy, the primary target group is local business. However, the city government is selective in this respect, as its ability to affect, say, construction industries is much better than affecting retail sector. Real estate and construction sector was explicitly discussed in CE plan of the city, while retail sector was not included in any of the major action areas (Doc3).

Tampere utilizes various modes of governance in the promotion of CE, which takes its approach towards hybrid governance [31]. Such a governance style blends various logics derived from public, private, and voluntary sectors, distributes power, and relies on negotiations and persuasion rather than command-and-control leadership. Table 1 illustrates how various forms of governance are applied in land use planning, construction sector, and built environment in the pursuit of a local CE.

The land use planning is a municipal monopoly, giving the city government a strong regulatory authority over the land use and zoning issues. Such a policy tool reflects governance by hierarchy. Governance by markets plays a noteworthy role in the CE transition of the city as the city depends on the know-how, services, and workforce of private companies in such areas as construction, property and land management, and demolition. Another example of the utilization of market mechanism is public procurement, in which CE principles can be applied when applicable. In addition, the city government has for some time used effectively new forms of governance, such as partnerships, networks, and platforms, in the promotion of CE, as for example in the case of Kissanmaa plot transfer process in 2022. The city of Tampere set in its line organization the CE criteria for a plot transfer while the selection process was competitive based on the innovative solutions proposed by construction companies. Such a process reflects hybridization by combining several governance logics, that is, hierarchy, markets, and partnerships.

Mode of governance	The field of municipal engineering	Examples
Governance by hierarchy	Land use planning	Municipal zoning: infilling, eco-parks, recycling sites, herb gardens for urban farming
	Property management	Optimization of city's spaces, improvements of occupancy rates of facilities, shared use of facilities
	Building demolition	Requirements concerning demolition reviews
Governance by markets	Municipal plots	CE-based terms of sales or lease of land: requirements to use recycled materials in new buildings
	Property management	Public procurement of renovations: rating bids from CE perspectives (CE criteria)
	Construction	Enabling CE type of construction
	Management of land masses	Material bank
	Building demolition	Demolition projects and reuse of rubble on market terms
Governance by partnerships, networks, and platforms	Property management	Space 24/7 platform
	Construction	CE guidance for enterprises; support for CE education
	Management of land masses	Eco-park (ECO3) providing space for land masses; Monitoring of land masses by a digital platform
	Building demolition	Enhancing public-private collaboration to utilize rubble

Table 1. Examples of the forms of governance relating to CE transition in the city of Tampere.

The hybridity of local governance in the case of Tampere is further increased due to the major role given to joint municipal organizations that serve larger area, as with the case of Regional Waste Management Company. This limited company, owned jointly by local authorities, brings local authorities together and harmonizes their waste management policies. The initial motive for increasing inter-municipal cooperation was the small average size of municipalities. Cooperation has made it possible to achieve the economies of scale, acquire technical competence, and increase specialization. The joint waste management company has also enabled municipalities to pool their financial resources and make significant investments in the up-to-date waste treatment plants. The company has built a waste incinerator producing both electricity and heat and a bio plant producing biogas, fertilizer, and soil improvers. As a result of these new plants and various recycling efforts, the share of landfilling of household waste is non-existent in Tampere region. Furthermore, the company has established a joint venture with the city of Tampere performing campaigns and giving guidance how to improve resource efficiency [32].

On the other hand, each local authority of the urban region has their own profile, which creates natural diversity in terms of the preconditions for CE and related policies. Especially the neighboring city of Nokia has been active in promoting its ECO3 eco-industrial park, which has given it a high profile as a CE player in Tampere urban region. Other municipalities in the area include Kangasala, Lempäälä, Orivesi, Pirkkala, Vesilahti, and Ylöjärvi, each having their own history and characteristic

features. One of the consequences of regional collaboration is that municipalities are used to work together and perceive the CE agenda primarily through the lens of collaboration rather than that of competition. On the other hand, collaboration is not always seamless, for Tampere as the largest city in the region has had slightly different priorities in some operational waste management issues than the towns and rural communities in the region.

Regarding governance, Tampere has a long history of a regime politics dominated by leading political parties, which has created consensus orientation in local politics and policy. Such an approach is visible in the design of local CE policy as well. It is seen in harmonious vertical relations in the sense that higher level goals and policies, most notably those pursued by the EU and the Finnish government, have been taken as the point of departure in the local policy-making in the city of Tampere. Accordingly, the premises of the CE policy are rarely challenged.

The issue of formulating and implementing CE policy in the case of Tampere is a rather pragmatic task, revolving around the question of (a) how to allocate the available resources in order to achieve the best possible outcomes, and (b) how to utilize governance logics and tools in the pursuit of the full utilization of local stakeholders and their resources and competences with regard to CE transition. Due to the nature of the CE challenge, the latter aspect is more pronounced than the former. The ultimate goal is to have a thriving economy that has minimized waste and ended the depletion of natural resources associated with take-make-waste model of the

economy. This is generally perceived as the moral duty of first-world cities.

#### IV. CONCLUSION

The city of Tampere is a progressive Finnish city that tries to balance economic development with social justice and sustainability. The development of circular city is an essential part of such an agenda.

The city of Tampere uses its power as the major governance player to guarantee that local institutions, corporations, and associations help the city to achieve its ambitious CE policy goals. Hybrid governance has been one of the major tools in such a process, as it allows the use of different arrangements depending on each micro-context, sector, and stakeholder-specific requirements. Such a policy and governance approach is not without a challenge, however. There is a strong pressure towards economically feasible mixed policies, which implies that the translation of CE goals into feasible actions is a contested process. Such tensions have been effectively eased so far due to the consensual political climate and the indirect impact of the Nordic welfare society context.

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## APPENDIX

Policy documents of the city of Tampere

Doc1. Economic development strategy of Tampere city region, retrieved January 13, 2023, from <https://businesstampere.com/economic-development-strategy-of-the-tampere-city-region/>

Doc2. Carbon Neutral Tampere 2030 Roadmap. Tampere City Board 31 August 2020, retrieved January 13, 2023, from [https://www.tampere.fi/sites/default/files/2022-06/Carbon\\_Neutral\\_Tampere\\_2030\\_Roadmap.pdf](https://www.tampere.fi/sites/default/files/2022-06/Carbon_Neutral_Tampere_2030_Roadmap.pdf)

Doc3. Tampereen kaupungin kiertotaloussuunnitelma. Raportti 14.4.2022. AFRY Finland Oy. [The Circular Economy Plan of the City of Tampere]. Retrieved January 13, 2023, from [https://www.tampere.fi/sites/default/files/2022-09/tampereen\\_kiertotaloussuunnitelma\\_2022.pdf](https://www.tampere.fi/sites/default/files/2022-09/tampereen_kiertotaloussuunnitelma_2022.pdf)

Doc4. The City of Action: Tampere City Strategy 2030. Retrieved January 13, 2023, from [https://www.tampere.fi/sites/default/files/2022-06/The%20Tampere%20City%20Strategy%202030\\_0.pdf](https://www.tampere.fi/sites/default/files/2022-06/The%20Tampere%20City%20Strategy%202030_0.pdf)

Doc5. City of Sustainable Action: The Voluntary Local Review of the UN Sustainable Development Goals in Tampere 2022. Retrieved January 13, 2023, from [https://www.tampere.fi/sites/default/files/2022-06/Tampere\\_FI\\_VLR\\_%20City\\_of\\_Sustainable\\_Action\\_2022.pdf](https://www.tampere.fi/sites/default/files/2022-06/Tampere_FI_VLR_%20City_of_Sustainable_Action_2022.pdf)

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