

# Facilitating Urban Climate Transitions Through City-to-City Learning: An Overview of the NetZeroCities Twinning Learning Programme

Luiza Schuch de Azambuja<sup>1,\*</sup>, Lita Akmentina<sup>1,†</sup>

<sup>1</sup>FinEst Centre for Smart Cities, Tallinn University of Technology, Tallinn, Estonia

## Abstract

This paper provides an overview of the NetZeroCities (NZC) Twinning Learning Programme (TLP), a key initiative designed to foster city-to-city (C2C) learning to accelerate urban climate transitions. It outlines the TLP's structure, its three-module approach, and its cohort-based implementation, highlighting its role in facilitating the exchange of knowledge and transfer of practices between pioneering Pilot Cities and ambitious Twin Cities striving for climate neutrality. Finally, it suggests avenues for future research to explore the programme's impact and outcomes.

## Keywords

NetZeroCities, climate neutrality, twinning, city-to-city learning, knowledge exchange

## 1. Introduction

The urgent need to mitigate the escalating impacts of climate change is undeniable. Cities, as significant centres of population, economic activities, and energy consumption, bear a crucial responsibility in this global effort. Consequently, the transition towards climate neutrality is a necessity for a sustainable future, demanding innovative and collaborative approaches to systemic transformation. To facilitate this urban transition, the NetZeroCities (NZC) platform supports cities in realizing their climate ambitions and contributes to the EU's goal of achieving climate neutrality. The NZC project consortium, consisting of 33 partners from 27 European countries, is aligned with the EU's Mission "100 Climate-Neutral and Smart Cities by 2030" and provides cities with expertise, services and resources to support cities seeking to lead the way towards an inclusive, climate-resilient, and sustainable future [1]. A core component of NetZeroCities' capacity-building efforts is the Twinning Learning Programme (TLP), which enables city-to-city (C2C) learning. C2C learning processes have grown in significance around the globe [2]. It can be understood as a form of social learning that fosters a change in collective understanding aiming towards collective action through processes ranging from the simple adaptation of good practices to complex, long-term monitoring, evaluation, and cross-stakeholder learning within and between city networks [3].

## 2. The NetZeroCities Twinning Learning Programme

Designed by the NZC consortium partners, the TLP is a 16-20-month initiative that fosters a dynamic exchange of knowledge between 'Pilot Cities' – those pioneering systemic transformation – and 'Twin Cities' aspiring to accelerate their own journeys towards climate neutrality. The TLP is structured around three core goals: to spark mutual learning and the exchange of inspiring practices between Pilot and Twin Cities; to embed this learning within participating cities' institutional frameworks, engaging diverse stakeholders; and, ultimately, to establish sustained collaborative relationships. To achieve this,

*EGOV-CeDEM-ePart conference, August 31 - September 4, 2025, University for Continuing Education, Krems, Austria.*

\*Corresponding author.

†These authors contributed equally.

✉ luiza.schuch@taltech.ee (L. S. d. Azambuja); lita.akmentina@taltech.ee (L. Akmentina)

ORCID 0000-0001-7878-3875 (L. S. d. Azambuja); 0000-0003-4727-4298 (L. Akmentina)



© 2025 Copyright for this paper by its authors. Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).

the programme follows three modules: (I) Getting started, (II) Co-creating, and (III) Capitalising. Getting started (Module I) initiates the partnership between Pilot and Twin Cities, focusing on understanding their learning needs and culminating in a jointly designed Twinning Learning Roadmap that outlines learning interests. Co-creating (Module II) deepens this learning through online and in-person activities, including site visits, enabling a first-hand understanding of solution implementation and engaging the local ecosystem. Finally, Capitalising (Module III) concludes the programme by solidifying knowledge transfer and collaboration through a Twin City Action Plan, which the Twin City presents to the Pilot City and local stakeholders to outline future steps and continued partnership.

### **3. TLP Cohorts overview and Future Studies**

The NZC TLP operates in cohorts, facilitating C2C learning across a growing network. Cohort 1 (Sept. 2023- May 2025) involved 37 Twin Cities partnered with 25 Pilot Activities from 53 Pilot Cities. Cohort 2 (Sept. 2024 - May 2026) includes 19 Pilot and 19 Twin Cities, while Cohort 3 (Jan 2025 – June 2026) pairs 24 cities and benefits from the experiences of the earlier cohorts to enhance programme effectiveness [1]. Partnering is carefully managed based on shared thematic interests like mobility, energy, or stakeholder engagement. For example, in Cohort 3, the Municipality of Tomar (Portugal) is paired with Trondheim's carbon capture storage in waste-to-energy. This short paper has provided an overview of the NZC TLP as a mechanism to facilitate C2C learning. Future studies can explore the impact of the programme, key lessons learned, and concrete results. Further research could also provide detailed case studies illustrating the knowledge transfer processes and their specific contexts and outcomes.

### **Acknowledgments**

This work has been supported by the FinEst Centre for Smart Cities (EU Horizon 2020, Grant No. 856602), NetZeroCities (Horizon 2020, Grant No. 101036519), and SGA-NZC (Horizon Europe, Grant No. 101121530).

### **Declaration on Generative AI**

The authors have not employed any Generative AI tools.

### **References**

- [1] NetZeroCities, 2025. URL: <https://netzerocities.eu/>.
- [2] M. L. Helguero, A. Steyaert, J. Dessein, City-to-city learning processes in the development of sustainable urban food systems: Insights from south american cities, *Habitat International* 124 (2022) 102578. URL: <https://www.sciencedirect.com/science/article/pii/S0197397522000753>. doi:<https://doi.org/10.1016/j.habitatint.2022.102578>.
- [3] C. Dieperink, S. H. Koop, M. Witjes, K. Van Leeuwen, P. P. Driessen, City-to-city learning to enhance urban water management: The contribution of the city blueprint approach, *Cities* 135 (2023) 104216. URL: <https://www.sciencedirect.com/science/article/pii/S0264275123000288>. doi:<https://doi.org/10.1016/j.cities.2023.104216>.