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SMART CITY CHALLENGE 2025

City Challenge

Max 3 pages

send to smartcity@taltech.ee by Sept 30, 2025

Challenge Title – Carbon-Neutral Neighborhood in Ataşehir

City/county and country – Ataşehir, Istanbul, Türkiye

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1. What is the future urban challenge that would need a solution to?

- **Please describe the challenge of your city / county neighboring a city?**

Ataşehir is a densely populated urban district of Istanbul, with significant emissions arising from building energy use, waste generation, and consumption patterns. Like many metropolitan districts, Ataşehir faces the challenge of reducing its carbon footprint while improving livability and resilience.

At present, municipal climate actions are fragmented – covering separate areas such as waste collection, energy efficiency projects, or green area management – but there is no integrated neighborhood-level approach that brings these elements together under a carbon-neutral vision. Ataşehir aims to pilot a Carbon-Neutral Neighborhood by combining building efficiency, renewable energy, waste reduction, circular economy practices, and nature-based solutions in one district-level project.

- Which category your challenge is primarily in: safe city, happy city, and climate resilient city?

Climate Resilient City

- Why is it important for your city to solve it? How big priority it is for you and why?

Reducing emissions is a strategic priority for Ataşehir Municipality, especially in the domains directly under its responsibility:

- Waste management and disposal
- Energy consumption of municipal buildings, facilities, and infrastructure
- Awareness-raising on sustainable lifestyles and resource efficiency

By starting with a pilot neighborhood, Ataşehir can create a replicable model for district-level action, complementing the broader strategies of Istanbul Metropolitan Municipality.

- Is this a unique challenge/problem of your city, why or is this by your knowledge a challenge/problem that many cities have – which kind of other cities?

This is a **global urban challenge**. Many districts in large metropolitan areas struggle to reduce emissions despite limited authority over transport or industry. Cities such as Barcelona, Copenhagen, and Amsterdam are piloting carbon-neutral neighborhoods – Ataşehir seeks to join this transformation with a context-specific, municipality-driven model.

2. Innovation.

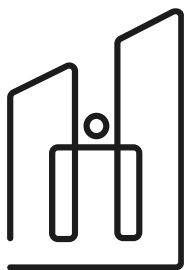


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- How have you solved that issue so far? Why aren't the present solutions good enough? Are there legal obstacles, which ones?
 - Energy efficiency projects in municipal buildings exist, but there is no holistic neighborhood-level approach.
 - Waste reduction and recycling programs are in place but limited in scope and citizen engagement.
 - Green spaces exist but are not fully integrated into climate resilience strategies.Citizen participation in climate action is still emerging and requires stronger engagement tools.
- What should be the main features, characteristics of the future solution to be potentially best for that challenge or problem?
 - Energy-efficient and renewable solutions for residential and municipal buildings.
 - Waste reduction and circular economy initiatives (composting, advanced recycling, awareness campaigns).
 - Nature-based solutions and green infrastructure (parks, rain gardens, carbon-absorbing landscapes).
 - Community participation platforms for co-designing and monitoring carbon-neutral practices.
 - Data and monitoring systems to measure neighborhood-level emissions and track progress.

3. Expected impact of your pilot solution.

- What is the expected impact to your city environment you expect to see if the challenge gets solved?
 - Reduced greenhouse gas emissions at the neighborhood scale.
 - Cleaner environment with improved waste management and green infrastructure.
 - Increased resilience to climate impacts such as heatwaves and flooding.
- What is the expected impact to your citizens you expect to see if the challenge gets solved?
 - Healthier, greener living environment.
 - Opportunities to directly participate in sustainable practices (e.g., composting, energy savings).
 - Increased awareness and ownership of local climate action.
- What is the expected impact to your city governance you expect to see if the challenge gets solved?
 - Practical experience in integrating different municipal services (waste, energy, green areas) into one climate-neutral model.
 - Better decision-making capacity with neighborhood-level emission data.
 - Positioning Ataşehir as a pioneer in district-level climate neutrality in Türkiye.

4. Piloting

- Why would you be interested to become a piloting partner of a proposed solution to the challenge you are describing here? Describe shortly your capability to participate.

Ataşehir Municipality is motivated to become a piloting partner because carbon neutrality is a core strategic goal within its climate action priorities.

The Municipality has:



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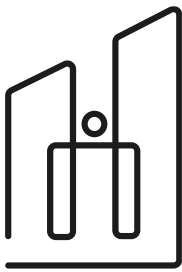


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- Institutional structures such as the Sustainability, Project and Innovation Unit under the Strategy Development Directorate.
- Operational capacity in waste management, building energy management, and green area planning.
- Community engagement channels through neighborhood councils, youth centers, and NGOs.
- Political commitment to advancing sustainability and resilience in the district.

Ataşehir is ready to provide a neighborhood as a living lab to test innovative solutions in waste, energy, green infrastructure, and citizen participation – with the goal of creating a replicable Carbon-Neutral Neighborhood model for Türkiye and beyond.



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