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SMART CITY CHALLENGE 2025

City Challenge

Max 3 pages

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

Challenge Title – Earthquake-Resilient Ataşehir: Participatory Risk Mapping

City/county and country – Ataşehir, İstanbul, 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 district of Istanbul, located in one of the world's most seismically active zones. The imminent earthquake risk presents a significant threat to public safety, urban infrastructure, and social cohesion. While the scientific community has produced risk maps and scenario studies, there is a lack of localized, **citizen-engaged risk mapping and preparedness planning**. This gap prevents residents from fully understanding the vulnerabilities of their neighborhoods, and hinders proactive measures by both local authorities and citizens.

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

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

Earthquake preparedness is the **top safety and resilience priority** for Ataşehir Municipality. Istanbul's urban density, vertical building stock, and rapid urbanization patterns make it critical to develop new methods of risk communication and community participation. If not addressed, the next major earthquake could cause catastrophic damage, not only to physical infrastructure but also to public trust and social stability.

- 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 not unique to Ataşehir. Cities across earthquake-prone regions (e.g., Athens, Lisbon, Naples, Mexico City, Santiago, San Francisco, Tokyo) face the same problem: while scientific knowledge exists, **community-level engagement and actionable urban resilience strategies remain weak**. Ataşehir can serve as a pilot case for a participatory resilience approach that can be scaled to other cities.

2. Innovation.

- How have you solved that issue so far? Why aren't the present solutions good enough? Are there legal obstacles, which ones?
 - Current approaches rely on national-level risk maps and expert-driven assessments, which are difficult for citizens to interpret.



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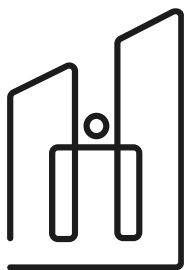


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- Disaster awareness campaigns exist but remain **top-down and short-term**, often limited to drills or brochures.
 - Legal framework focuses on emergency response, rather than **preventive, neighborhood-level resilience planning**.
 - No integrated digital tool or participatory method currently combines local knowledge with scientific data.
- What should be the main features, characteristics of the future solution to be potentially best for that challenge or problem?
 - Citizen-centered risk mapping platform integrating scientific data, building stock information, and local insights.
 - Interactive visualization tools (digital maps, neighborhood dashboards) that are easy to understand.
 - Participatory workshops to co-design mitigation and evacuation plans.
 - Integration with city governance systems, enabling the municipality to prioritize retrofitting, awareness campaigns, and resource allocation.
 - Scalability to other urban contexts with similar seismic risks.

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?
 - More accurate, localized understanding of urban vulnerabilities.
 - Better prioritization for urban retrofitting, green safe zones, and evacuation routes.
 - Reduced potential damage and environmental losses in the event of an earthquake.
- What is the expected impact to your citizens you expect to see if the challenge gets solved?
 - Increased awareness, preparedness, and sense of ownership in disaster resilience.
 - Improved trust between residents and local government.
 - Safer daily life through accessible risk information and clear action plans.
- What is the expected impact to your city governance you expect to see if the challenge gets solved?
 - Strengthened capacity to make data-driven decisions on resilience investments.
 - Enhanced coordination between municipal departments, emergency services, and citizens.
 - Positioning Ataşehir as a model city for participatory disaster risk reduction.

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 committed to becoming a piloting partner because earthquake preparedness is a strategic priority for the district. The Municipality has:

- Institutional capacity through its Strategy Development Directorate, Disaster Affairs Unit, and Climate Change and Sustainability Directorate.
- Experience in international projects, including EU-funded resilience and sustainability initiatives.
- Established community networks (youth centers, neighborhood councils, civil society partners) that can be mobilized for piloting participatory methods.
- Political commitment to urban safety and resilience, supported by ongoing municipal programs.



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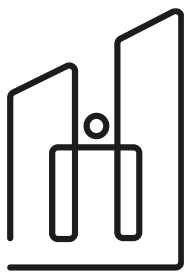


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By piloting innovative solutions, Ataşehir aims to create a replicable model of participatory risk mapping that can inspire other cities in Türkiye and worldwide.



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