



FinEst Centre
for Smart Cities

SMART CITY CHALLENGE 2024

City Challenge

Max 3 pages

send to smartcity@taltech.ee by May 15, 2024

Challenge Title – Reusing old buildings

City/county and country- Hundipea district, Estonia

Main contact from your city/county – Markus Hääl, Hundipea OÜ, CEO, markus.haal@hundipea.ee,
+3725179471

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

In order to meet the environmental challenges, construction industry needs to turn more to circular economy. So reusing materials from old buildings to build new ones should be used a lot more. Currently the issue is that no one knows what is inside the old buildings and how they are built, so it is difficult to turn the building into a material bank. The same system should also compare CO2 emission for different ways- whether using materials from specific old building or using new ones to build a new building. And third important thing to consider is the price for both ways of building. In order for a developer to make the right decision all three components should be evaluated.

- Why is it important for your city to solve it? How big priority it is for you and why?
Because we have many old buildings that should be replaced with new ones as we start the construction. As Hundipea is a climate neutral district, then it is very important for us to make the building process as climate friendly as possible.
- The same issue lies in all European countries.

2. Innovation.

- How have you solved that issue so far? Why aren't the present solutions good enough? Are there legal obstacles, which ones? We haven't yet. In Estonia it is common to just demolish old buildings and take the material to landfill.
- What should be the main features, characteristics of the future solution to be potentially best for that challenge or problem? It should tackle all 3 components:
 - CO2 emission
 - Price
 - Materials quality

3. Expected impact of your pilot solution.

- Reducing emissions from building process. More circularity in the construction sector.
- Meeting the EU requirements in climate protection.



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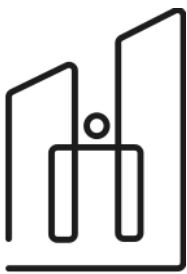


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- **Piloting**

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. - Yes.

