



Refurbishment and cooperation in Tartu





oPEN Lab Pamplona

From an industrial landmark towards a solar-driven sustainable and social inclusive innovation hot-spot.

Project Information



oPEN Lab

From a historical lighthouse project to a million flats.



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oPEN Lab Genk

From black gold to a positive energy future, a green transition of a former miners' town.

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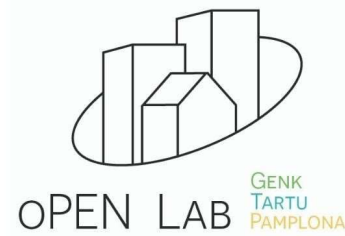
oPEN Lab Tartu

From a historical Soviet cultural heritage to a lighthouse project representative of 50 million flats.





Leading the transition to Positive Energy Neighbourhoods



oPEN Lab revitalises urban areas across Europe, leading the transition to Positive Energy Neighbourhoods.

oPEN Lab Pamplona

From an industrial landmark towards a solar-driven sustainable and social inclusive innovation hot-spot.



oPEN Lab Tartu

From a historical Soviet cultural heritage to a lighthouse project representative of 50 million flats.



Project Information

Why?

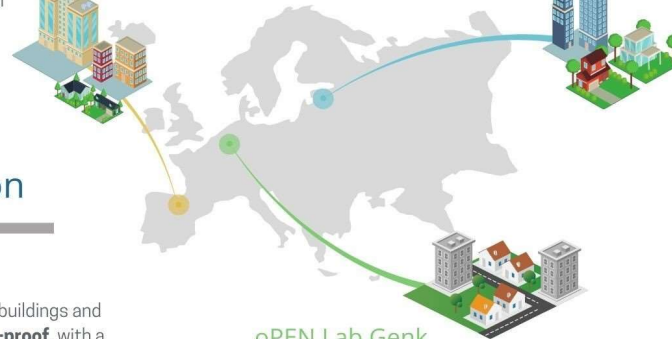
To **redesign** and **retrofit** our existing buildings and neighbourhoods, making them **future-proof**, with a positive impact on climate change mitigation and a **minimised environmental footprint**.

How?

By developing and testing integrated, participatory and neighbourhood-level approaches. Including building **PEN innovation hot-spots**, **accelerating positive energy** buildings and renovation concepts, providing **momentum** and **solutions** to the Renovation Wave.

What?

The development of **open innovation living labs** in **Genk (BE)**, **Pamplona (ES)** and **Tartu (EE)**. Enabling co-creation between the construction value chain, **local governments**, **research** and **citizens** implementing near **market-ready** construction and energy **technologies** and **services**, along with **social innovations**.



oPEN Lab Genk

From black gold to a positive energy future, a green transition of a former miners' town.



Impacts

33 project partners, **12** companies, **9** research organisations, **5** innovation clusters or industry associations, **4** public authorities, **2** facilitators, **1** social housing company.

15 SMEs supported in the accelerator programme. Investment mobilised during the project **>€30M**.

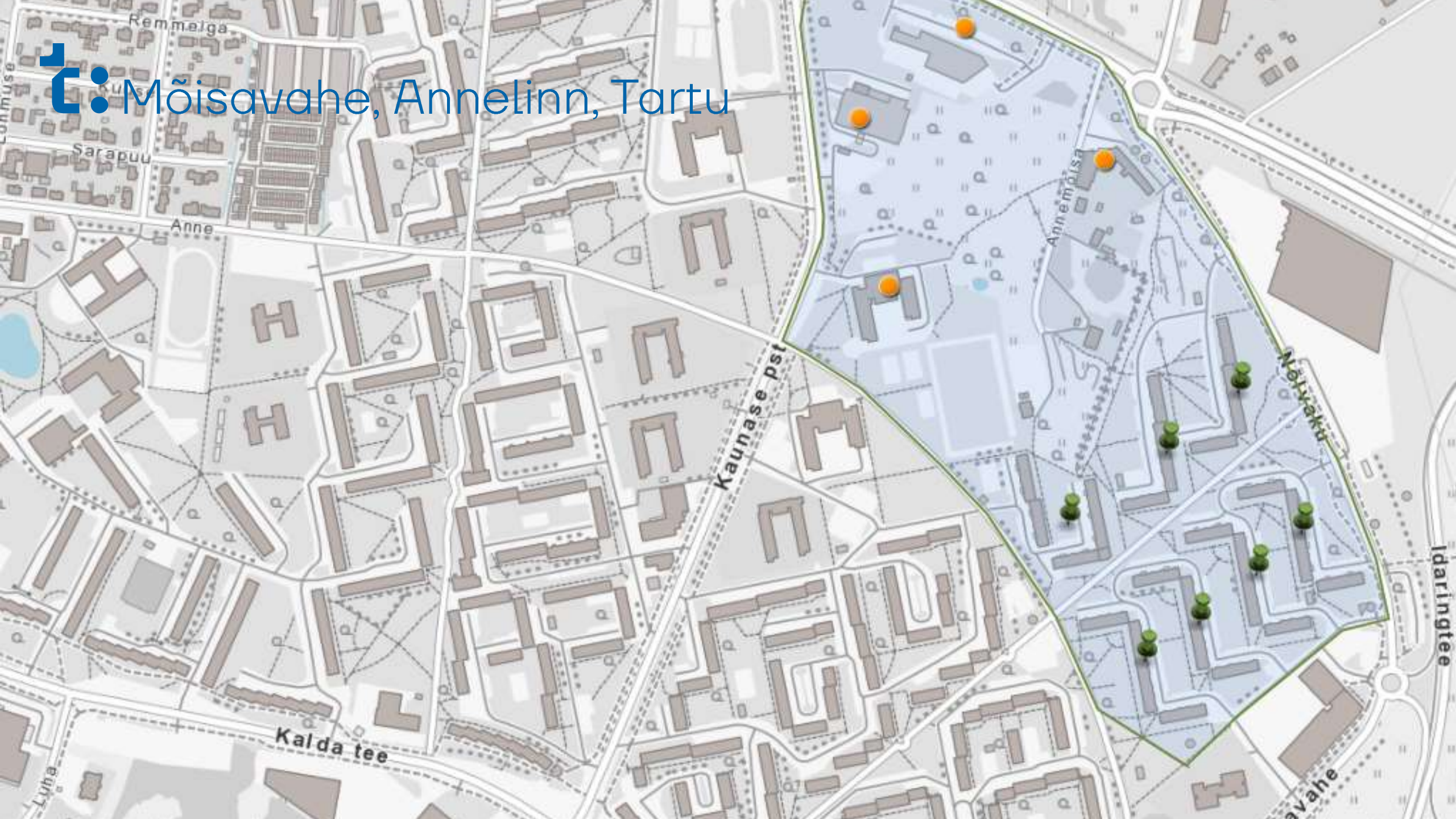
926 MWh/y Gross primary energy demand savings (excl. RES generation) by 2025.

4389 Local RES generation [MWh/y] (primary energy) by 2025.

Previous experience - SmartEnCity



 Mõisavahe, Annelinn, Tartu



A blue-toned map of the Mõisavahe district in Annelinn, Tartu, Estonia. The map shows a dense residential area with numerous apartment buildings, streets, and green spaces. Several streets are labeled, including Rõmmalga, Sarapu, Annemõisa, Kõnase pst, Kaldatee, and Mõisavahe. A large blue pin is visible on the map, indicating a specific location.

Mõisavahe, Annelinn, Tartu

- 22 apt. buildings
- 1 508 apartments
- 49 350 m²
- 3 468,4 inhabitants (2,3 per apt)
- 0,31 km²
- 11 187 inhab/km²



Remmälga

Sarapu

Anne

Kaurase pst

Annemõisa

Kaldatee

Lõhna

Laringtee

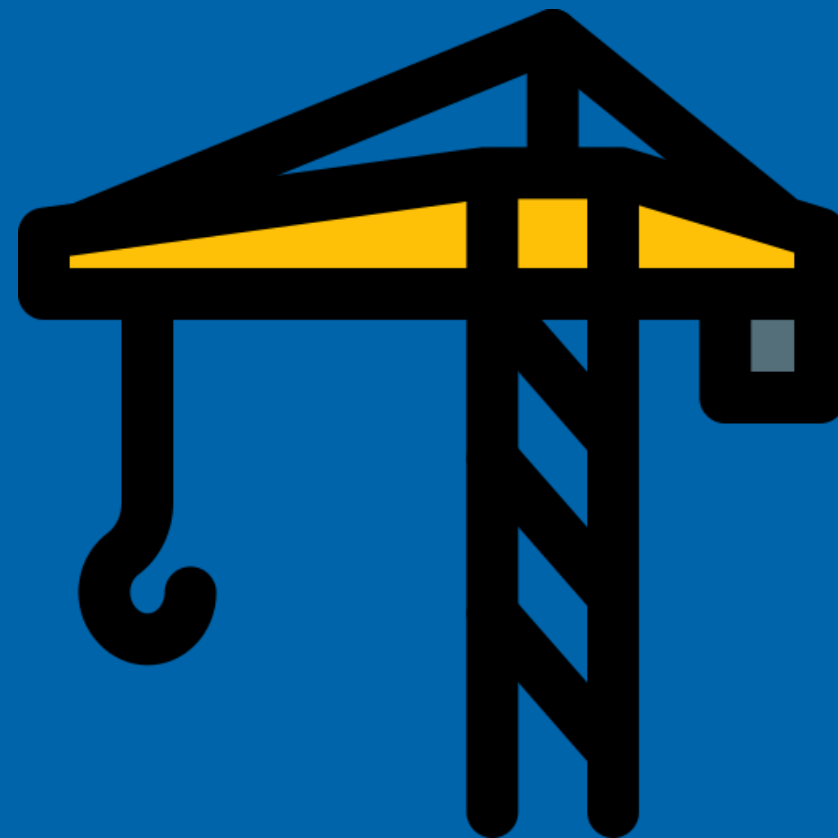
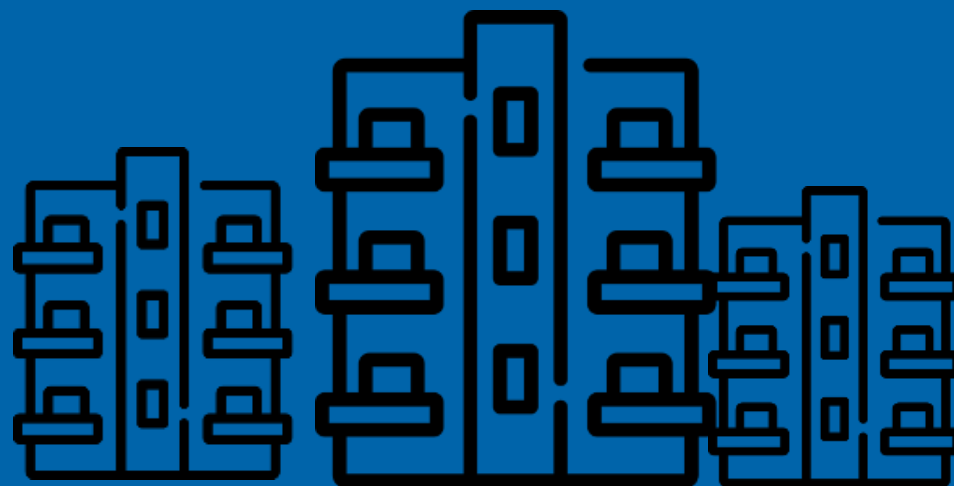
Lõhna

3 Mõisavahe apt.buildings

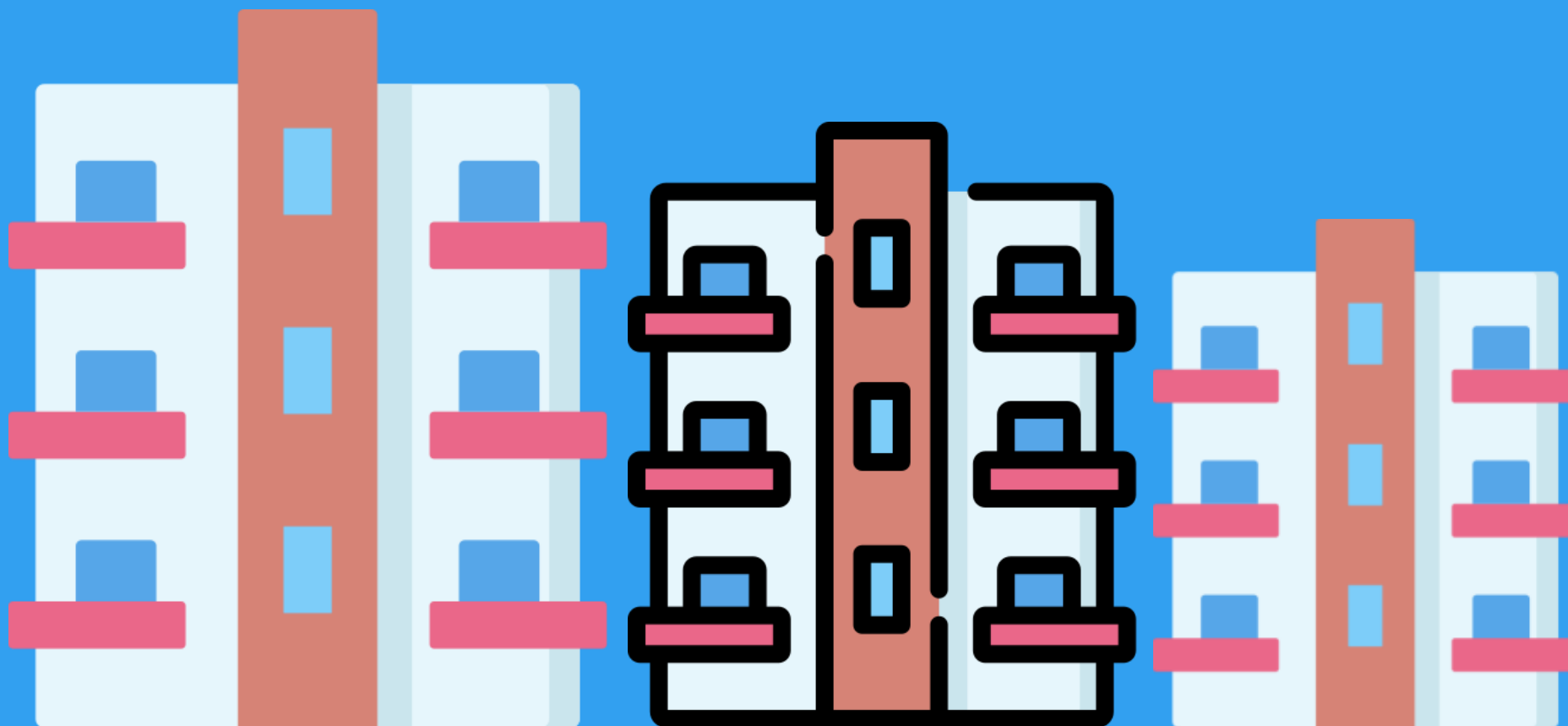
Mõisavahe 34 – 72 apt

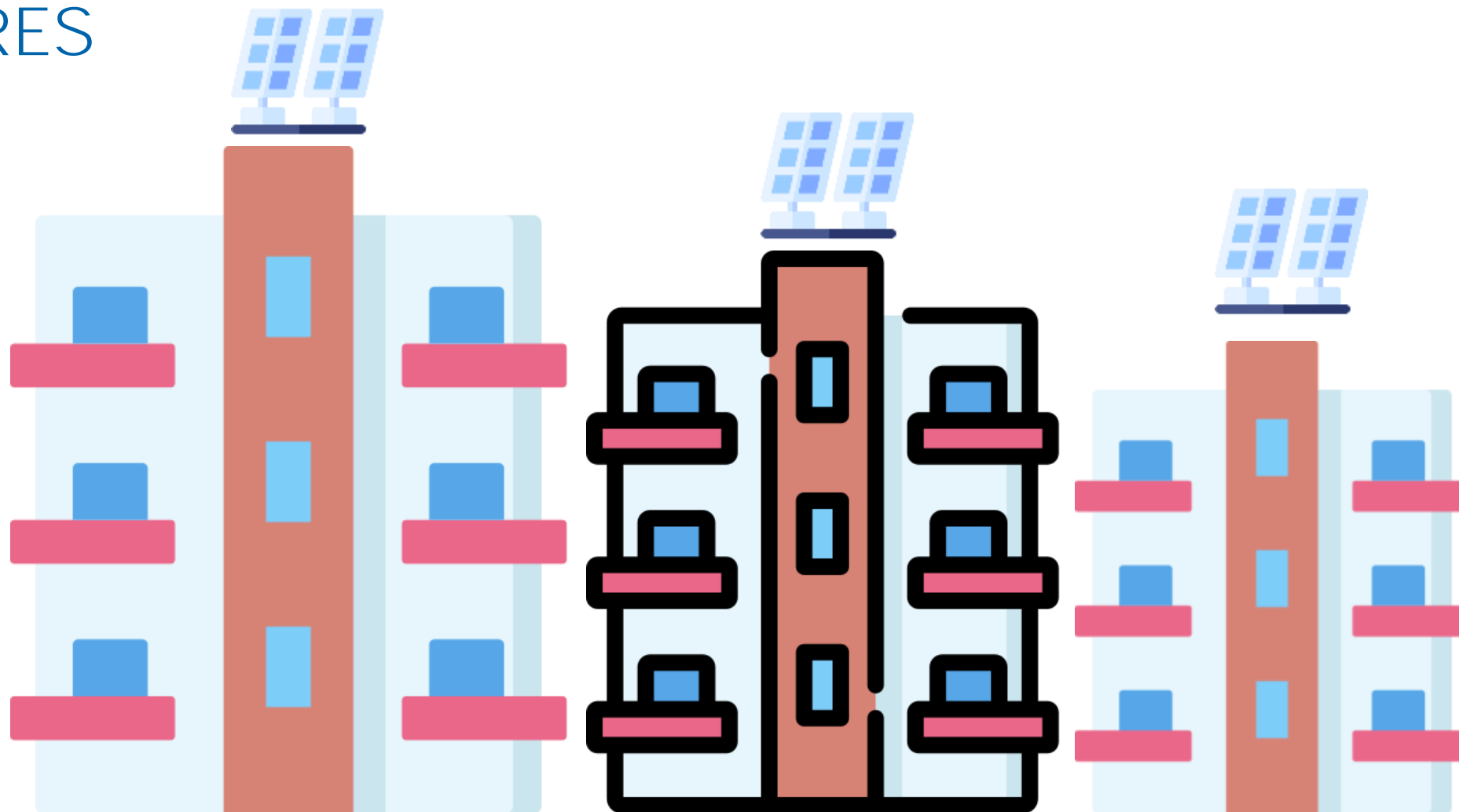
Mõisavahe 35 – 144 apt

Mõisavahe 36- 72 apt



NZEB level renovation

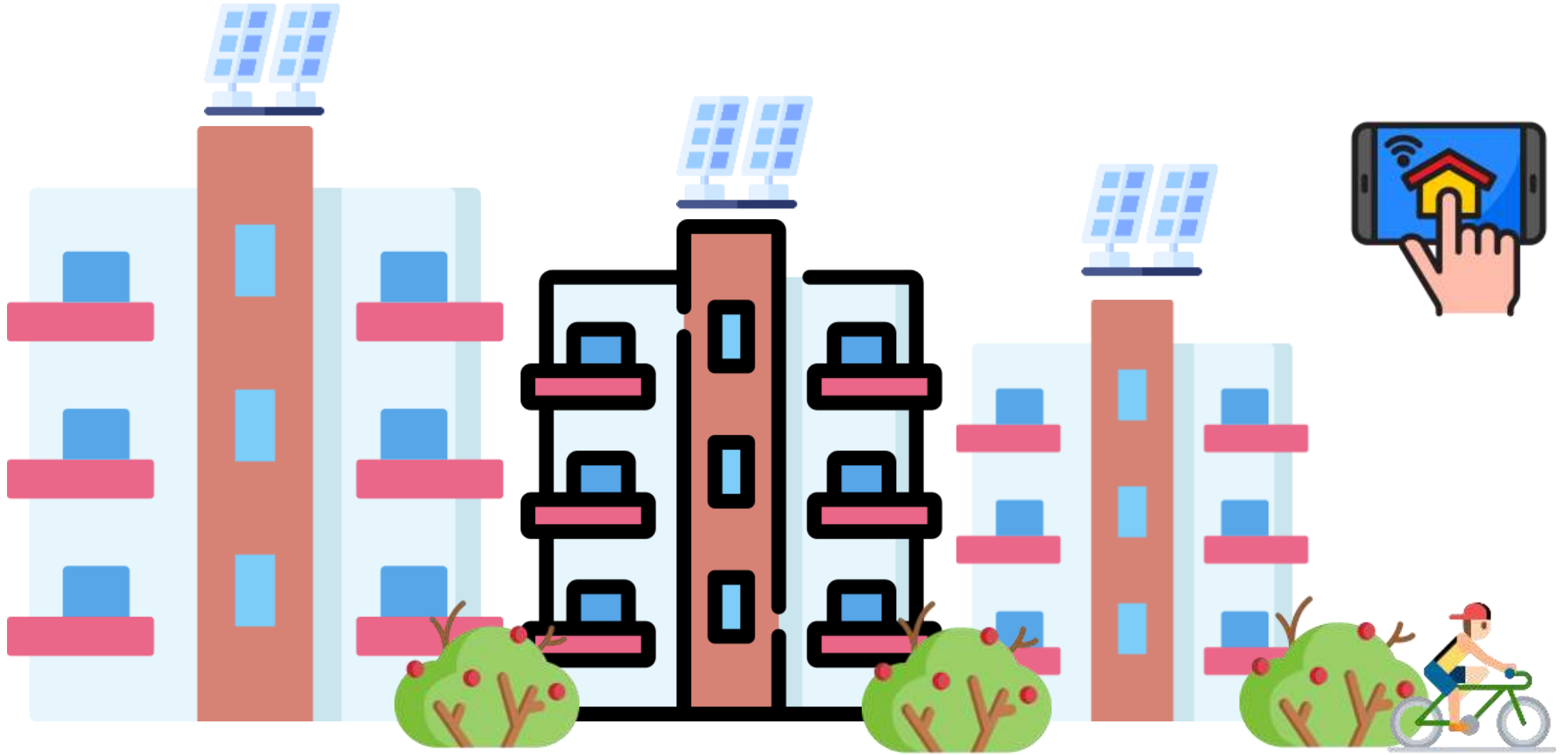




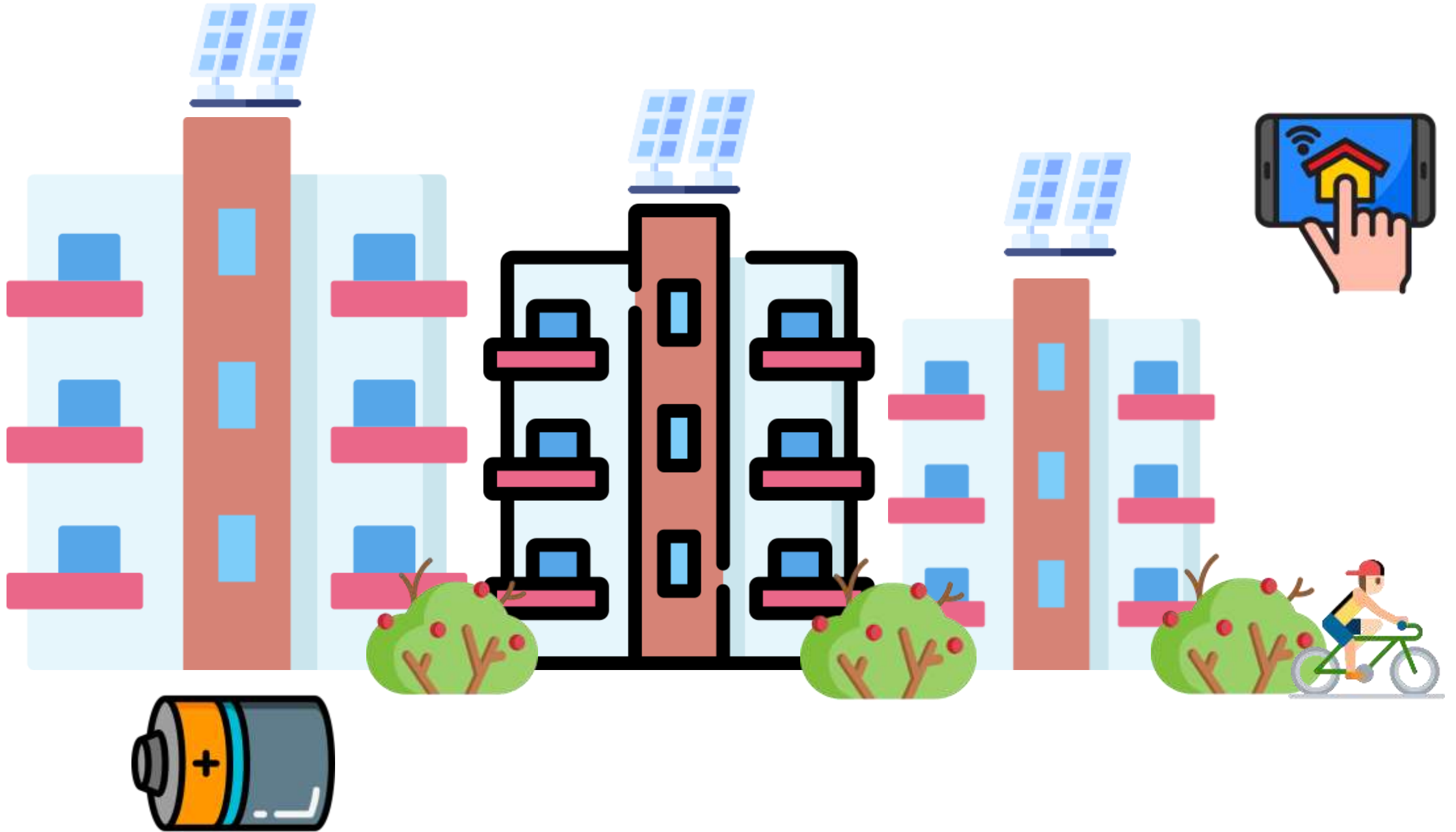
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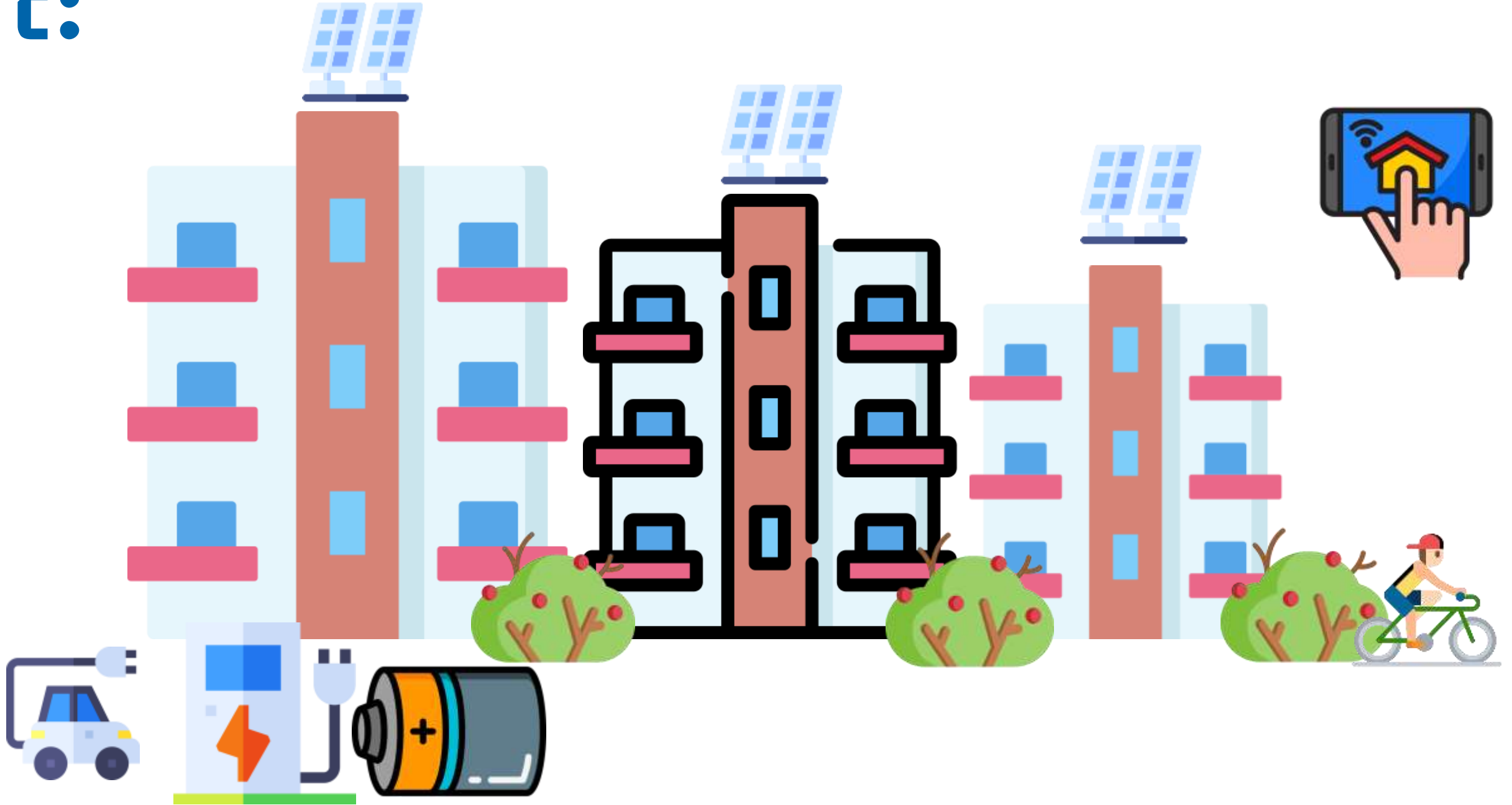
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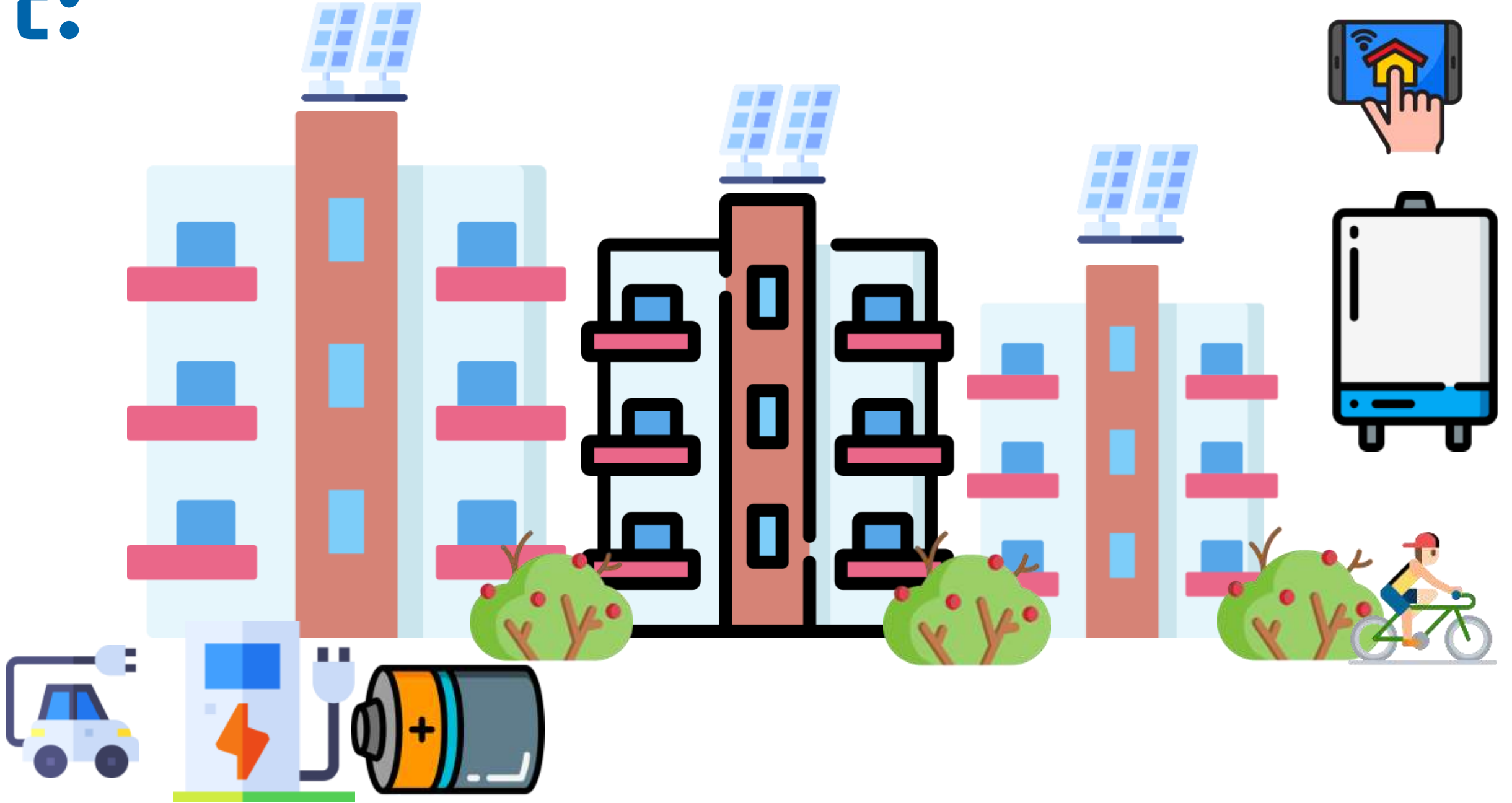
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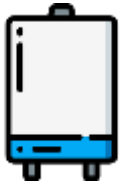
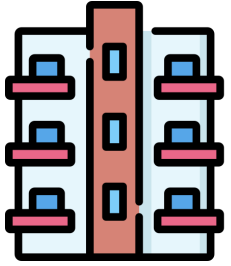
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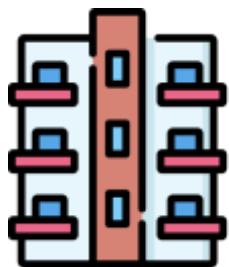


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TARK TARTU SMART CITY



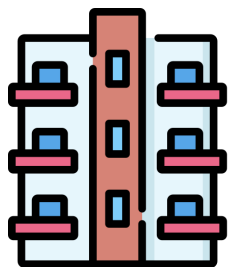


TARK TARTU SMART CITY





TARK TARTU
SMART CITY

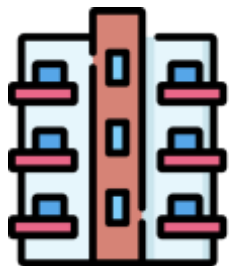


Tartu Regiooni Energiaagentuur
Tartu Regional Energy Agency





TARK TARTU
SMART CITY

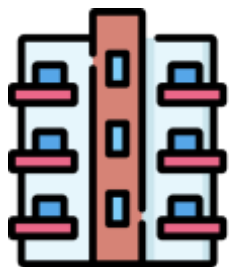


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TARK TARTU
SMART CITY

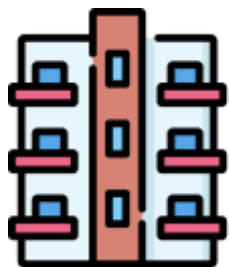


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TARK TARTU
SMART CITY

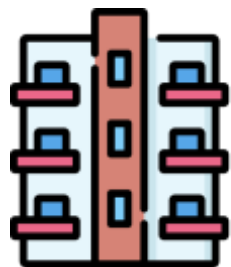


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Tartu Regional Energy Agency





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Tartu Regiooni Energiaagentuur
Tartu Regional Energy Agency



t: Social innovation

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t: Technological innovatsion



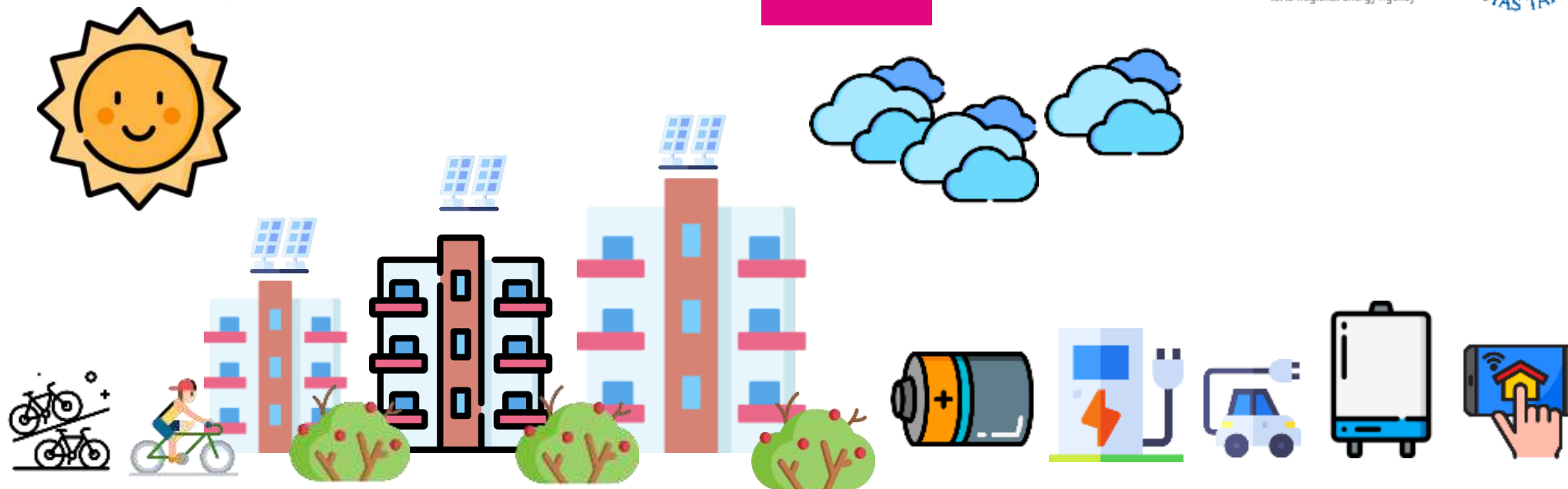
TARK TARTU
SMART CITY



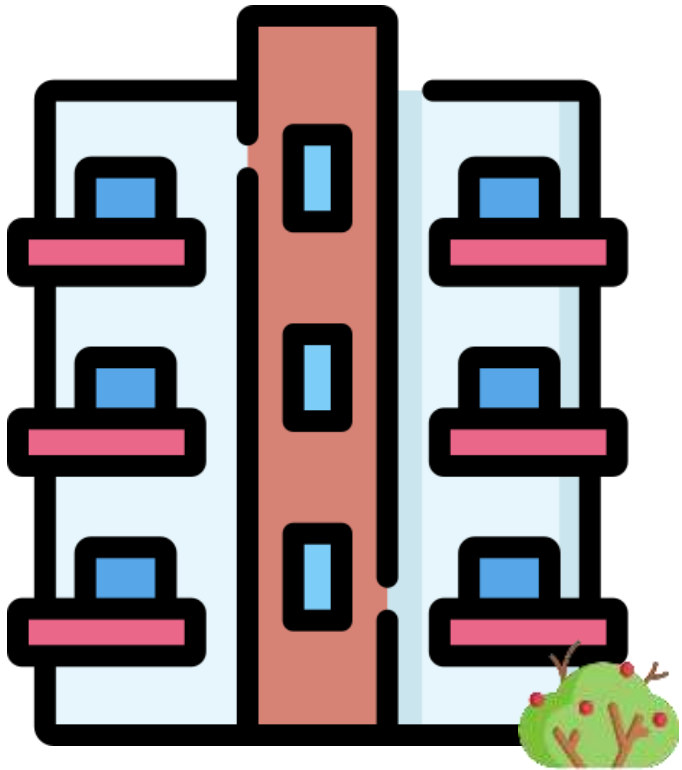
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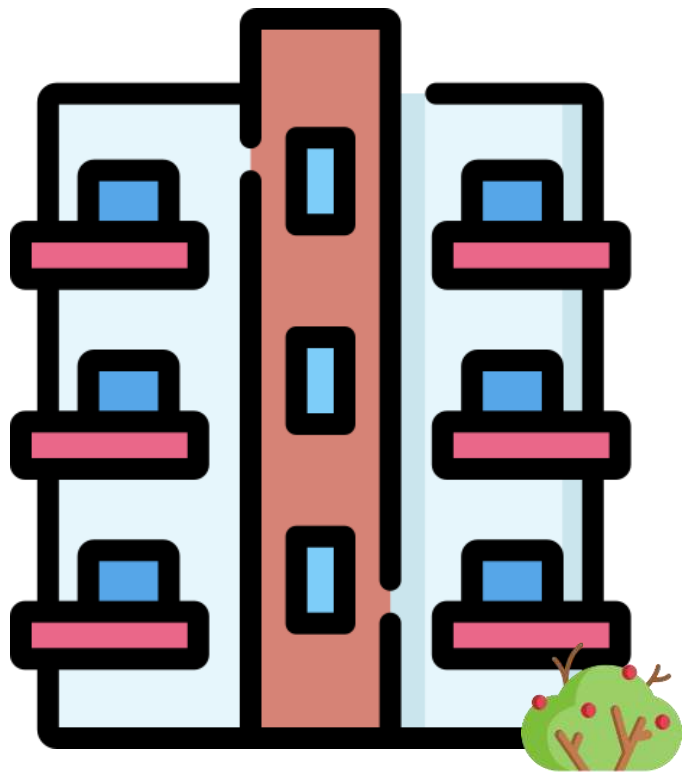
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Financing



t: A deal with the city



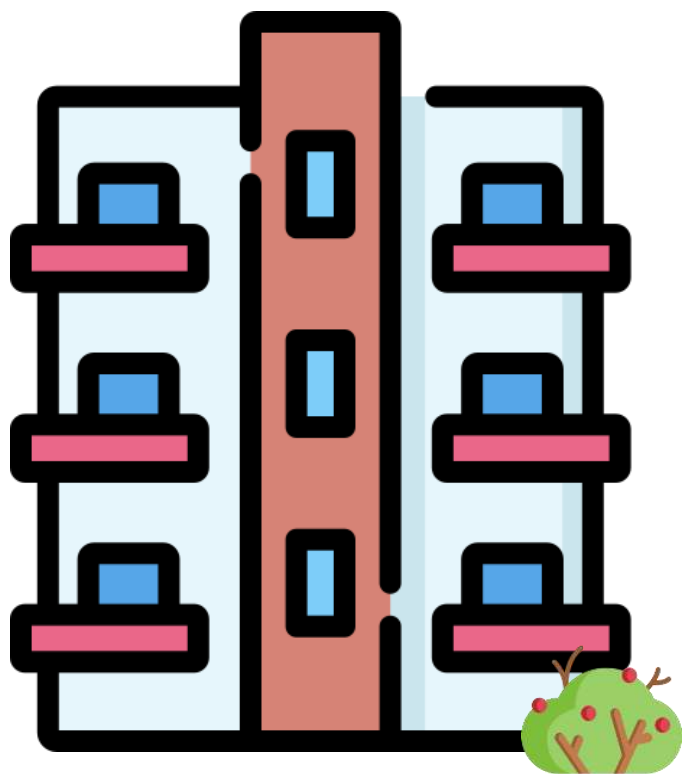
**TARK TARTU
SMART CITY**



t: Construction designe process



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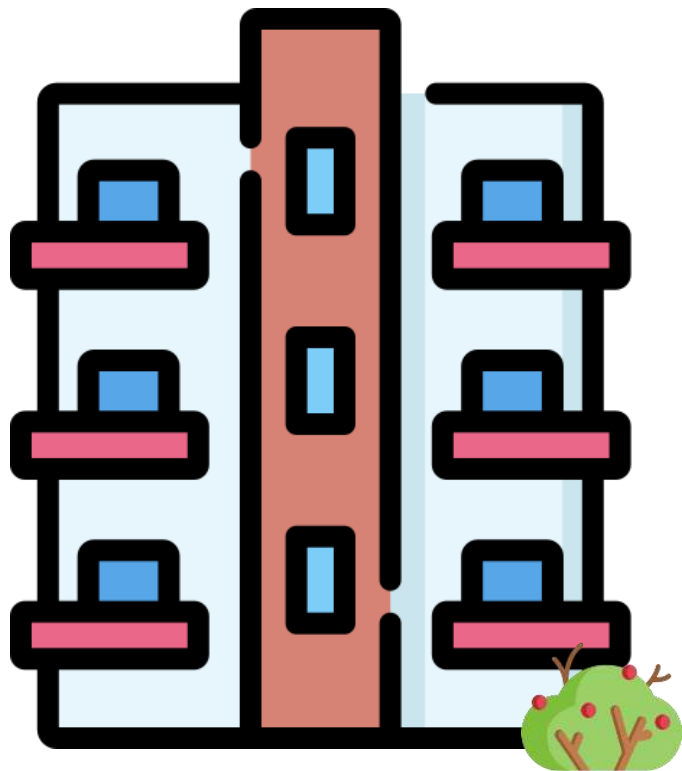


Tartu Regiooni Energiaagentuur
Tartu Regional Energy Agency

t: Application for KredEx 30% financing



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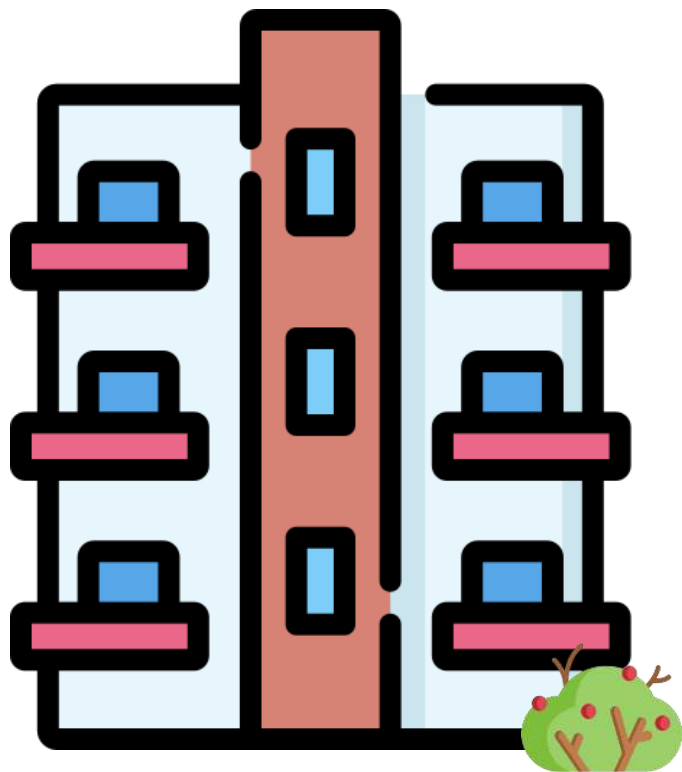
t: External financing



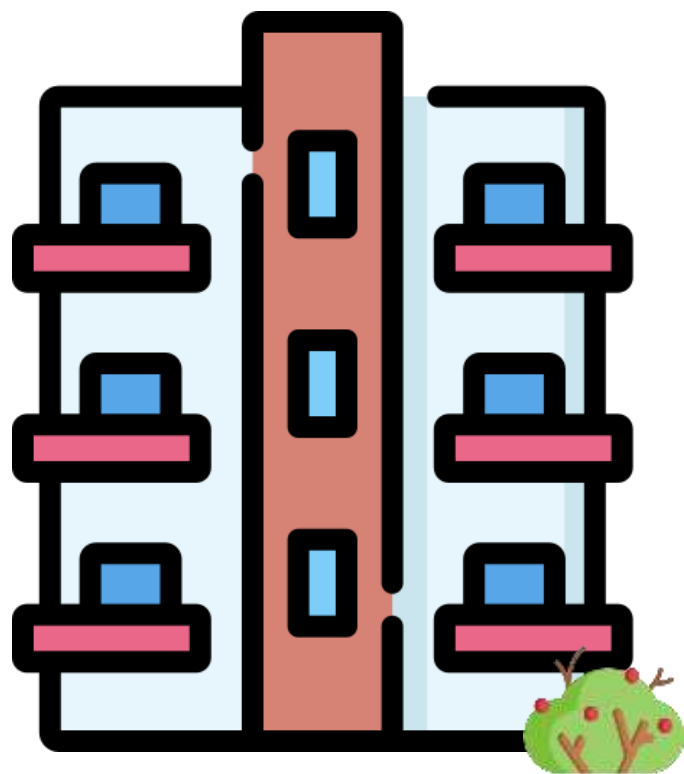
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KREDEX



t: Own funds



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KREDEX

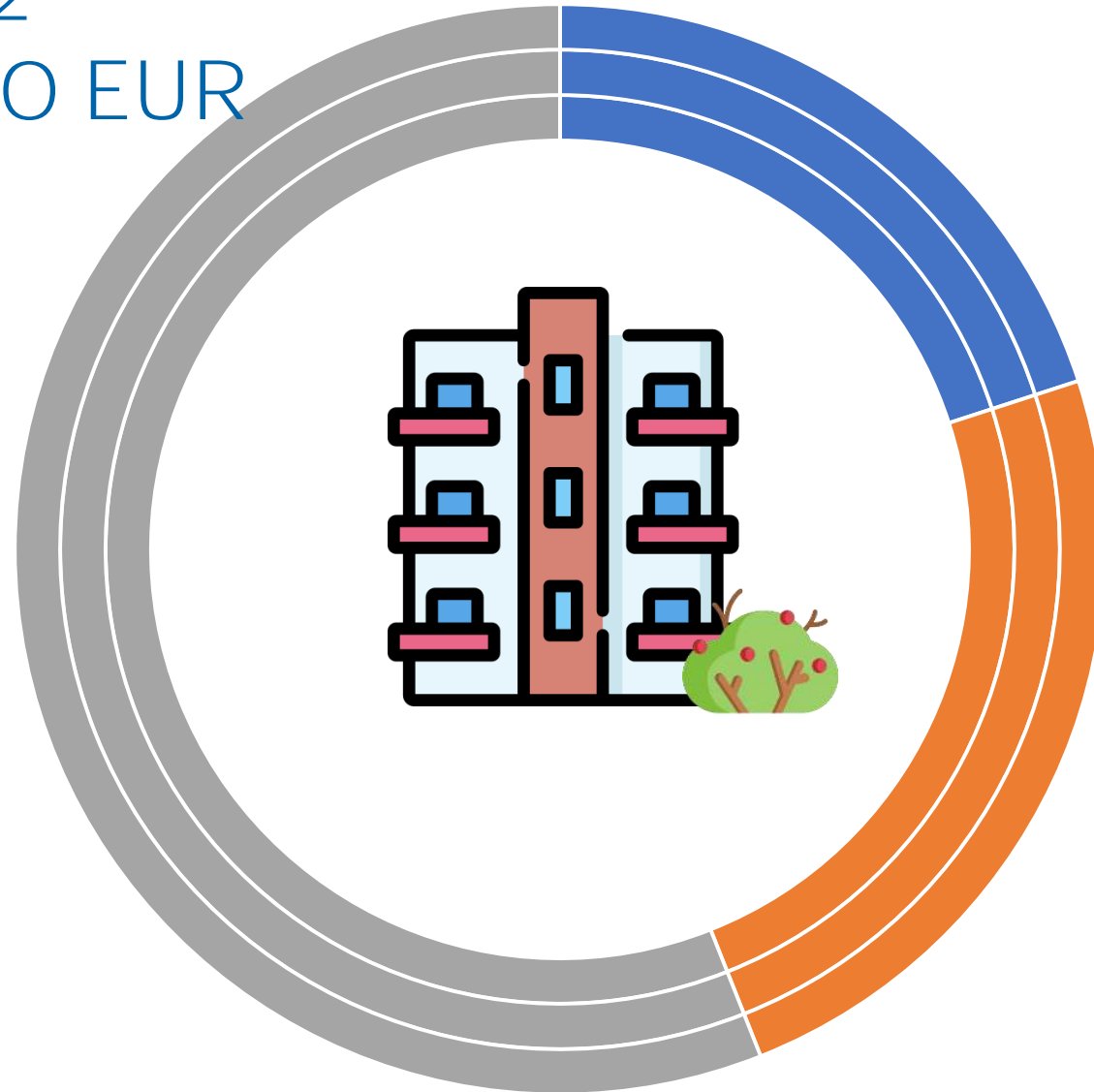
BANK



t: What is it all going to cost to a simple person?



t: Cost of construction 500 EUR/m²
x 10 000 m²
= 5 000 000 EUR



t: Cost of construction 500 EUR/m²



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SMART CITY 

20%
100 EUR/m²
1 000 000 EUR

t: Cost of construction 500 EUR/m²



TARK TARTU
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20%
100 EUR/m²
1 000 000 EUR

24%
120 EUR/m²
1 200 000 EUR



t: Cost of construction 500 EUR/m²

TARK TARTU
SMART CITY 

20%
100 EUR/m²
1 000 000 EUR

24%
120 EUR/m²
1 200 000 EUR

56%
280 EUR/m²
2 800 000 EUR



t: Cost of construction 600 EUR/m²



17%
100 EUR/m²
1 000 000 EUR

25%
150 EUR/m²
1 500 000 EUR

58%
350 EUR/m²
3 500 000 EUR



t: 500 EUR/m² ja 600 EUR/m²

20%
100 EUR/m²
1 000 000 EUR

17%
100 EUR/m²
1 000 000 EUR

TARK TARTU
SMART CITY



-3%
+/- 0 EUR/m²
+/- 0 EUR

24%
120 EUR/m²
1 200 000 EUR

25%
150 EUR/m²
1 500 000 EUR



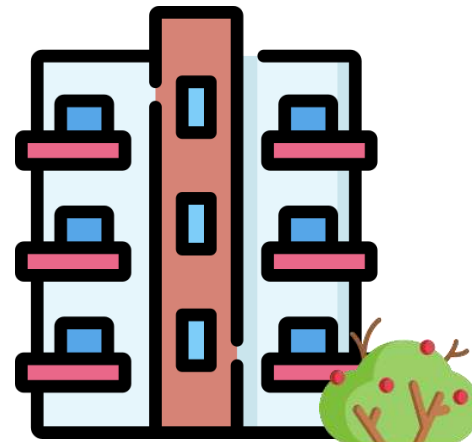
+1%
+ 30 EUR/m²
+ 300 000 EUR

56%
280 EUR/m²
2 800 000 EUR

58%
350 EUR/m²
3 500 000 EUR



+2%
+ 70 EUR/m²
+ 700 000 EUR



t: 500 EUR/m² ja 600 EUR/m²

20%
100 EUR/m²
1 000 000 EUR

17%
100 EUR/m²
1 000 000 EUR

TARK TARTU
SMART CITY



-3%
+/- 0 EUR/m²
+/- 0 EUR

24%
120 EUR/m²
1 200 000 EUR

25%
150 EUR/m²
1 500 000 EUR



+1%
+ 30 EUR/m²
+ 300 000 EUR

56%
280 EUR/m²
2 800 000 EUR

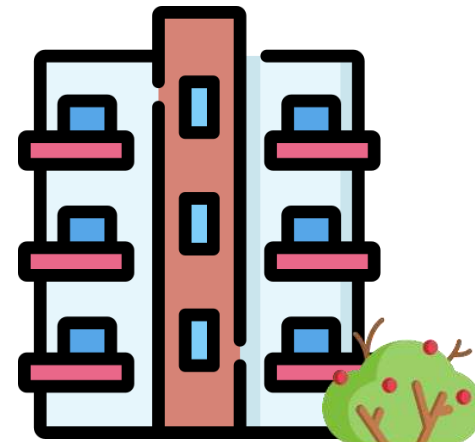
58%
350 EUR/m²
3 500 000 EUR



+2%
+ 70 EUR/m²
+ 700 000 EUR

Apt – 50m²
Loan – 14 000 EUR
Pymnt – 60 EUR

Apt – 50m²
Loan – 17 500 EUR
Pymnt – 75 EUR



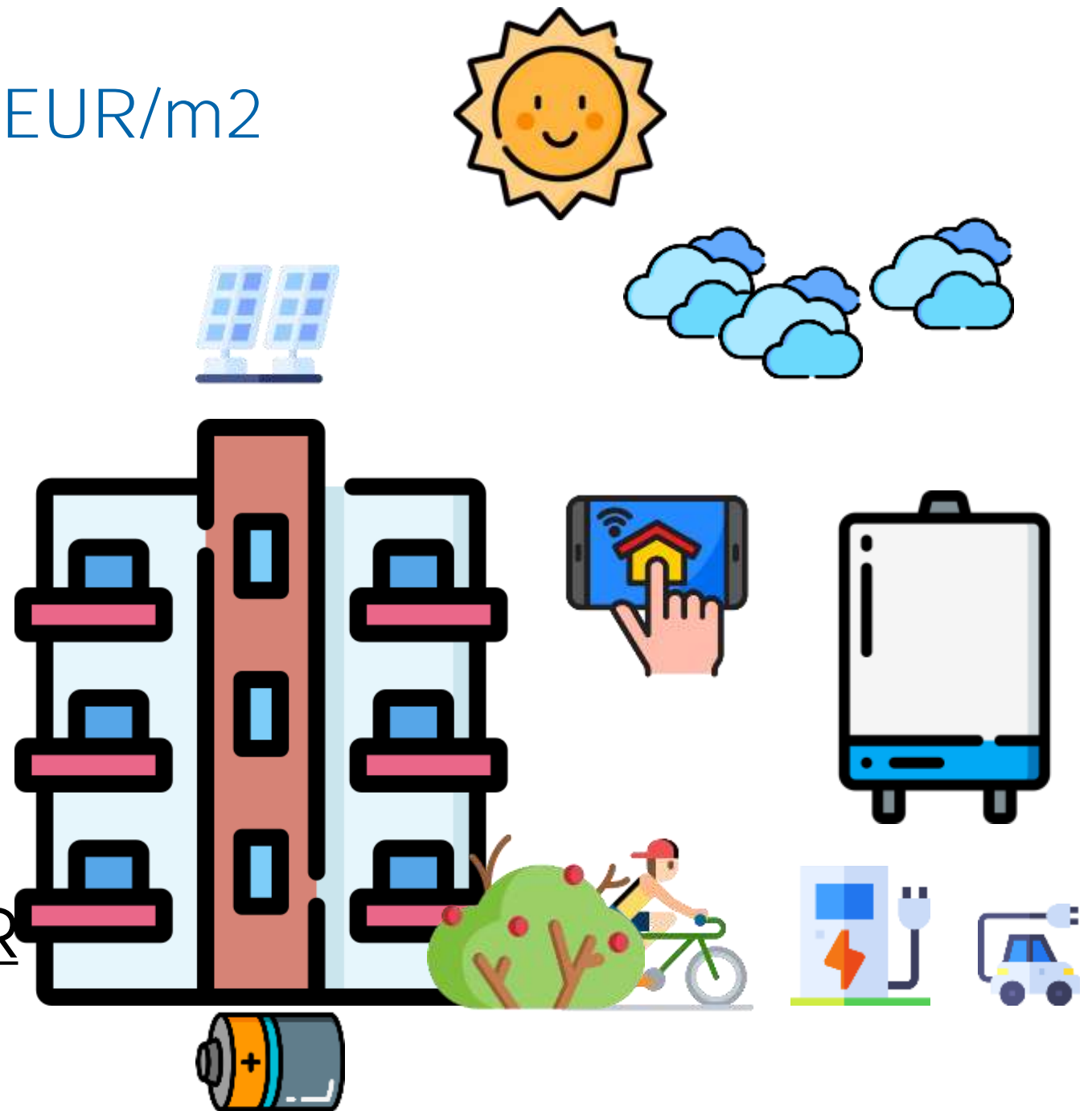
+ 3 500 EUR
+ 15 EUR / kuu

€: 500 EUR/m² ja 600 EUR/m²

Apt – 50m²

Loan – 17 500 EUR

Payment – 75 EUR

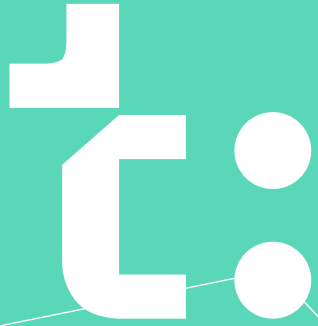


t:









Thank you for your attention?

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