

KNOWLEDGE.

TRUST.

BEAUTY.

The Invisible Visible - Waste is About
Knowledge, Trust and Beauty



Nõmme
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Turning children school food waste into valuable insights.

Tallinn Kivimäe Elementary School



PROBLEM.

Financial resources are spent on making school food for children, while up to 25% of it ends up as food waste.

1. INSTALLING HIGH-VOLUME WASTE MONITORING



Food waste in school canteens is frequently deposited in large amounts within a small time period. This is because food residues occur during lunch breaks and are discarded by students sequentially.


To capture different layers of food waste and gain precise understanding of the composition, WasteLocker equipped the food waste container with monitoring system specifically calibrated for capturing high amounts of disposal.

2. CONTINUOUS ADJUSTMENTS



Pairing food waste composition analysis with time and respective classroom enabled to map food waste patterns while maintaining each individual's privacy.

Based on the insights, continuous adjustments are made to the quantity of food prepared and the menu's composition.



How to engage citizens to sort better?

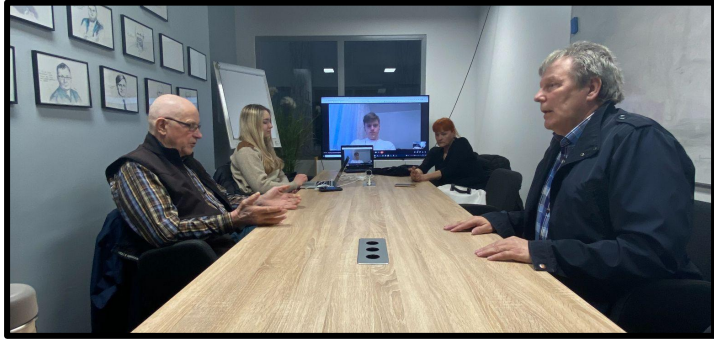
Tartu City,
Tallinn City sub-districts Nõmme and Mustamäe



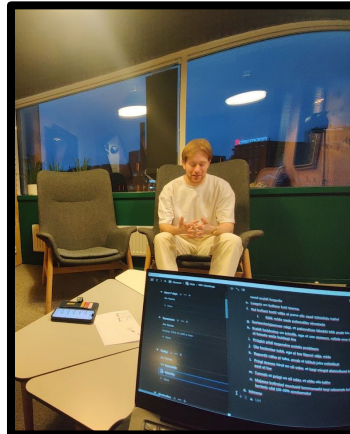
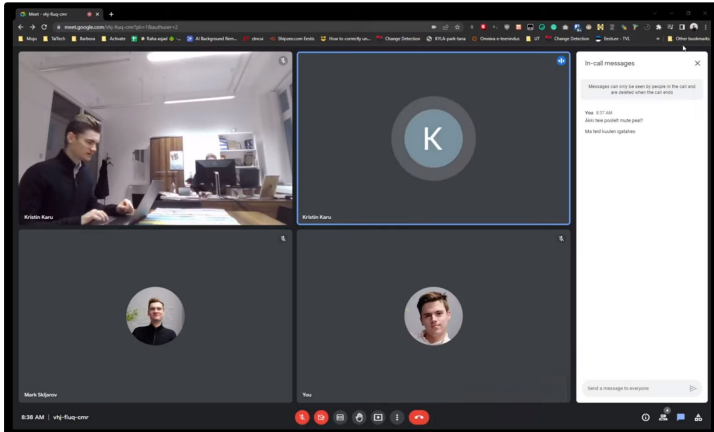
PROBLEM.

Citizens lack the interest and awareness to sort waste, compromising circularity.

1. COMMUNICATING AND CONNECTING



A set of in-depth interview and meetings were set up with the representatives of the apartment unions, inhabitants, Tallinn and Tartu municipality representatives.



2. IDEATING AND DEVELOPING



Brainstorming and discussions lead to image-based sorting feedback provided directly to the users of the containers.

Two implementations were piloted and considered:

- Sensor-based image taking where a sensor is installed in each waste container.
- Citizens taking images after scanning a QR code on a container



3. IMPLEMENTATION

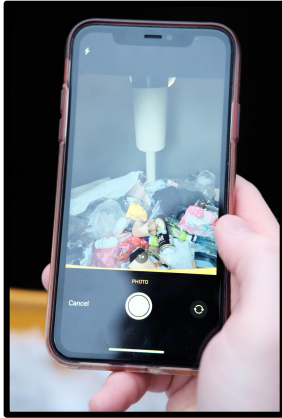
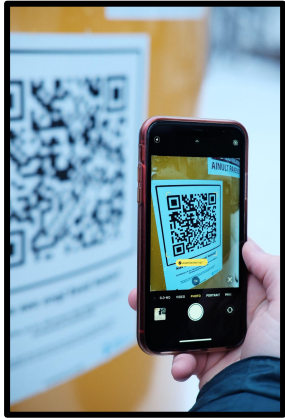


After 2 months of testing, it was chosen that citizens taking images themselves is a more scalable and cost-effective engagement tool in the urban setting.

QR codes were applied to waste containers of 9 large apartment unions and 5 public waste collection locations in Tallinn and Tartu cities.

In 2 locations, a speaker was installed for automated communication with the waste depositors in a friendly manner.

4. WORKFLOW



After multiple testings, the workflow was as follows:

- The citizen would scan a QR code on the waste container.
- The citizen would take a photo of the contents of the waste container.
- WasteLocker would analyse the image and produce a report in various languages about the sorting correctness.

Feedback was sent to the apartment union dwellers and published on the municipality's social media account.

Hea kortermaja elanik!
Igapäevaline jäätmesorteerimine tagasiõige.

 Palun pane edaspidi reklaamilehed paberi- ja papikonainerisse. Mustade kilekottide asemel kalla jäätmed üldise kotist välja.

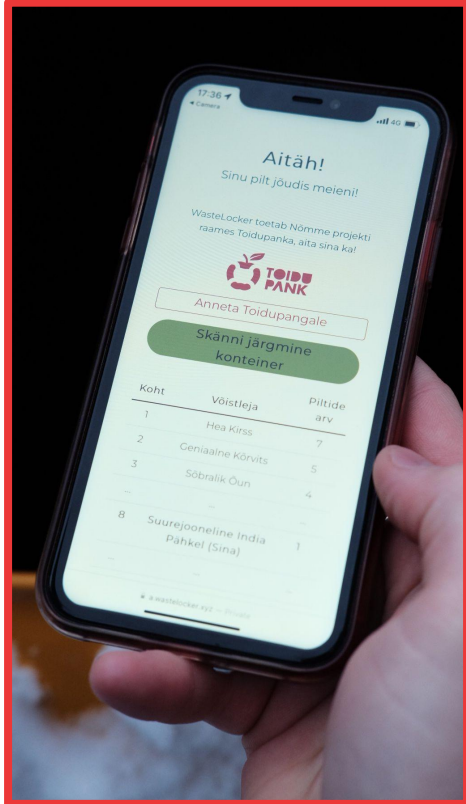
 Palun kasuta biojätmete korral biolagunevaid kilekotte (need on rohelised värvi)

 Palun pane paberkotid paberi ja papi konainerisse.

Tänusõnad muu korrektselt sorteeritu eest!
Meie tagasiõige võib teie töö eest teie teenustajale.

Alati, et hoolid oma teekonnast ning alati ka jäätmeveel jõuda õigesse kohta.
Kas saaksid meid veel aidada?
Palun haara oma nutifoon ja saada meile prügikasti sisust pilt skaneerides QR kood. Ni allud märgata sobimatuid esemeid prügikastides ja tunnustada tubilisi talinasi!

5. GIVING BACK TO THE SOCIETY



As a cherry, WasteLocker initiated a partnership with the Food Bank (*Toidupank*) NGO in Estonia.

Each time a photo waste submitted, a donation was made to the Food Bank. This amounted to increased visibility of WasteLocker.

WASTEFLAWS. PRECISELY. RESPONSIBLY.



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