

HarvestEasy

IoT & 3D Intelligent Systems project
@ University of Modena and Reggio Emilia

Pitch

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1.36 kWh/ton

Average energy needed for Waste Retrieval & Transportation*

Let's do the math

Average-sized city population: 200'000 inhabitants

Average waste per capita in Italy in a year: 502 kg *

Average waste per capita per day in Italy: 1.38 kg

Average waste per average-sized city in a day in Italy: 276'000 kg

Average energy used for MSWM (Municipal Solid Waste Management):

$$(276'000 \text{ kg/day} / 1000) \text{ ton/day} * 1.36 \text{ kWh/ton} = \mathbf{375 \text{ kWh/day}}$$

40.3 average Italian
households (energy daily
usage)*

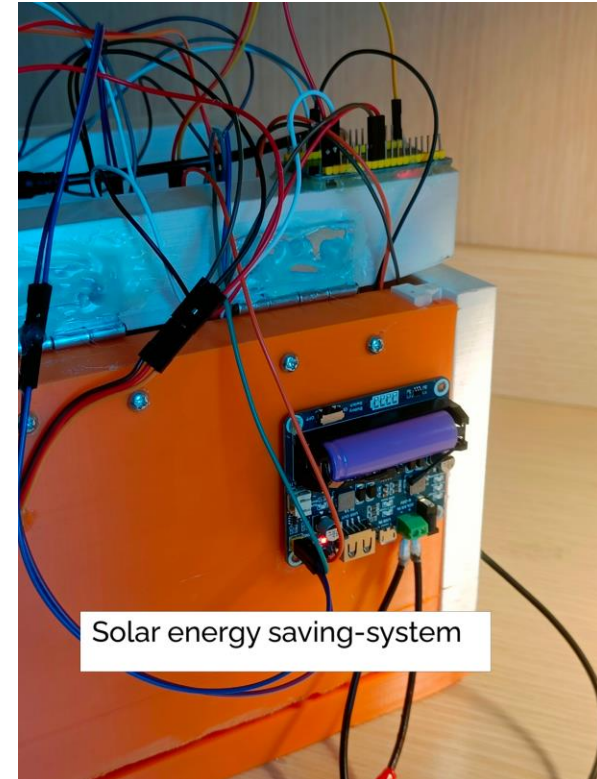
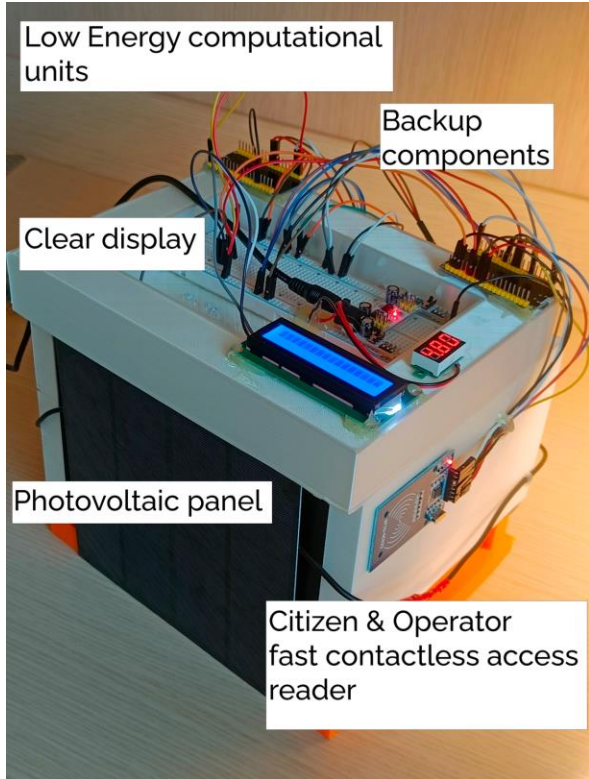
Is there a better way?

Solution: Harvest Easy



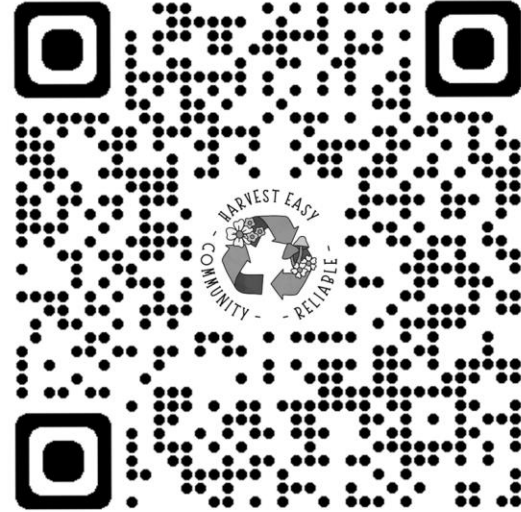
- Peeking into the future through an architecture based on autonomous driving
- Gamified community-based whistleblowing
- Sun powered
- Low maintenance
- Easily scalable
- Data harvesting & data filtering
- Sellable clean data
- Behaviour analysis
- Ready & pluggable into other solutions
- Pluggable into private security services
- Proprietary prototype-ready licenseless design
- Powerful branding & motto

A quick look at the prototype



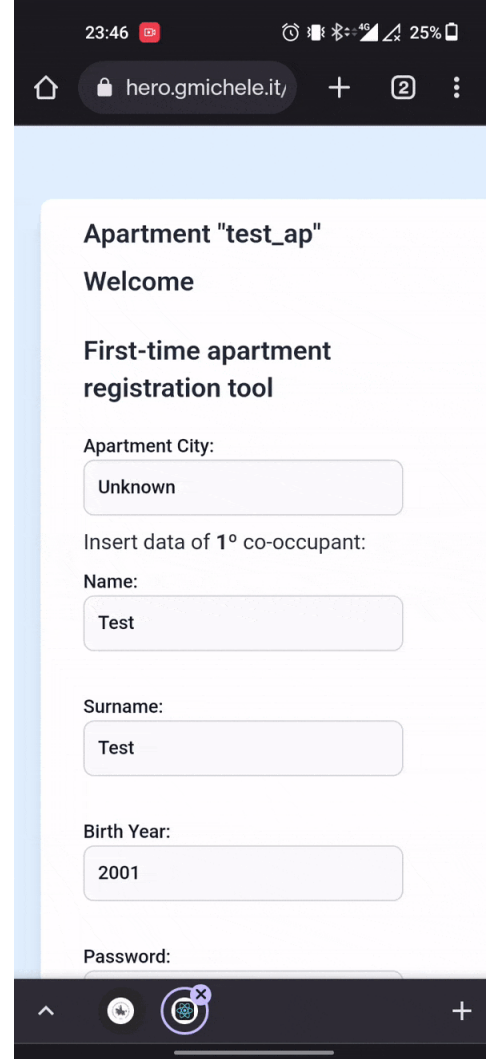
1 STEP: Apartment Initialization

Ap. Manager will
initialize his
apartment with
ease through a
ready to go QR Code



INIT. APARTMENT

2 STEP:
Will now be
provided all the
needed fields &
infos from the
manager through
our rock-solid
responsive website.



The image shows a mobile application interface for apartment registration. At the top, the status bar displays the time 23:46, battery level at 25%, and various connectivity icons. Below this is a browser-like address bar with a home icon, a lock icon, the URL 'hero.gmichele.it', and navigation icons. The main content area has a light blue header. The title 'Apartment "test_ap"' is followed by a 'Welcome' message. A section titled 'First-time apartment registration tool' contains several input fields: 'Apartment City:' with the value 'Unknown', 'Insert data of 1° co-occupant:' with a sub-label 'Name:' and the value 'Test', 'Surname:' with the value 'Test', 'Birth Year:' with the value '2001', and 'Password:'. The bottom of the screen features a dark navigation bar with icons for back, home, a central menu, and forward.

23:46 25%

hero.gmichele.it

Apartment "test_ap"

Welcome

First-time apartment registration tool

Apartment City:

Unknown

Insert data of 1° co-occupant:

Name:

Test

Surname:

Test

Birth Year:


2001

Password:

3 STEP:
Apartment
occupants are now
registered &
enabled to the
platform

23:38 93% 28%

hero.gmichele.it



Harvest Easy - Login page

Welcome, please log in

Please access with given credentials

username

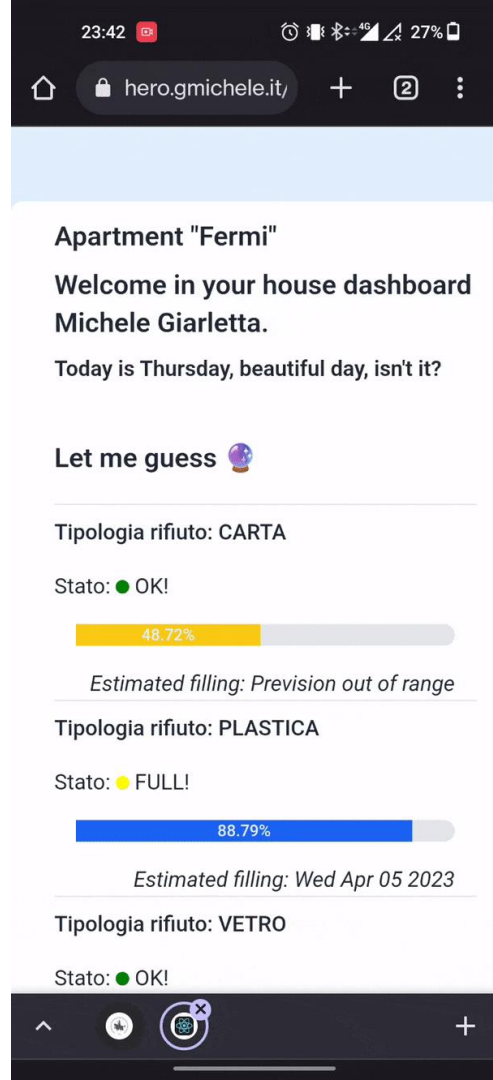
password

LOG IN

☐ Confirm credentials

4 STEP:

They will now be able to check everything they wish to know: actual filling, status, AI-based Date Forecast, AI-based Just In Time crafted charts, just for you for each typology 🍷.



STEP 4-BIS

FIRE ALERT



TAMPERING
ALERT



FULLNESS
WARNING

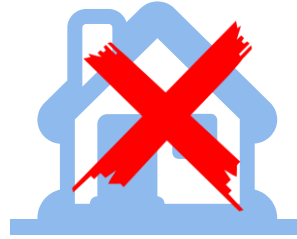
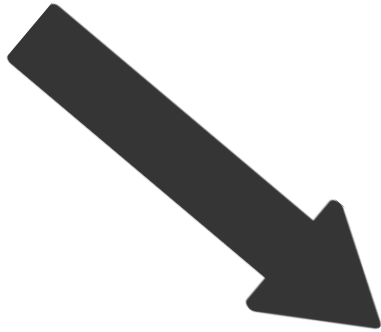


STEP 4 - TRIS

What happens
when dwellers
do not have their
recycling bins
available ?

POLLUTION

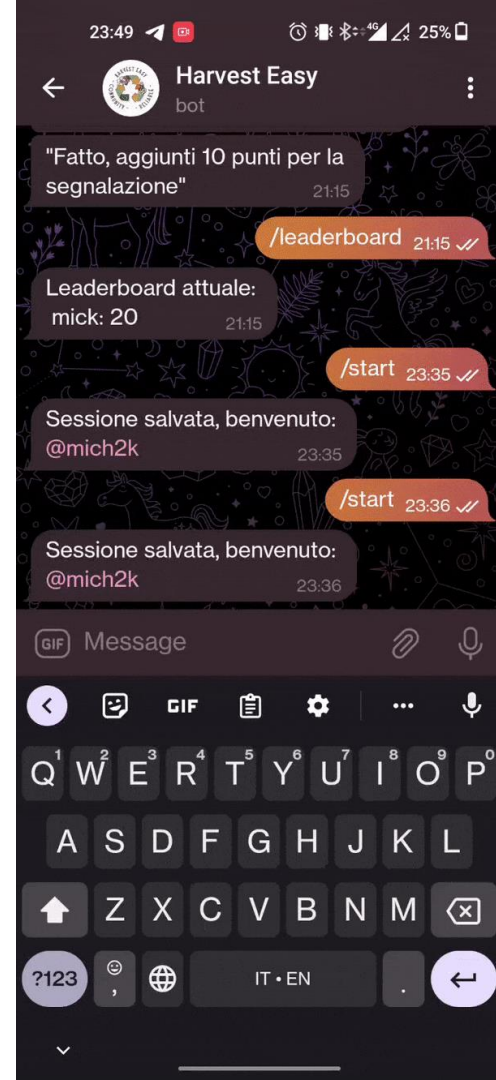
STEP 4 - TRIS



SOLUTION

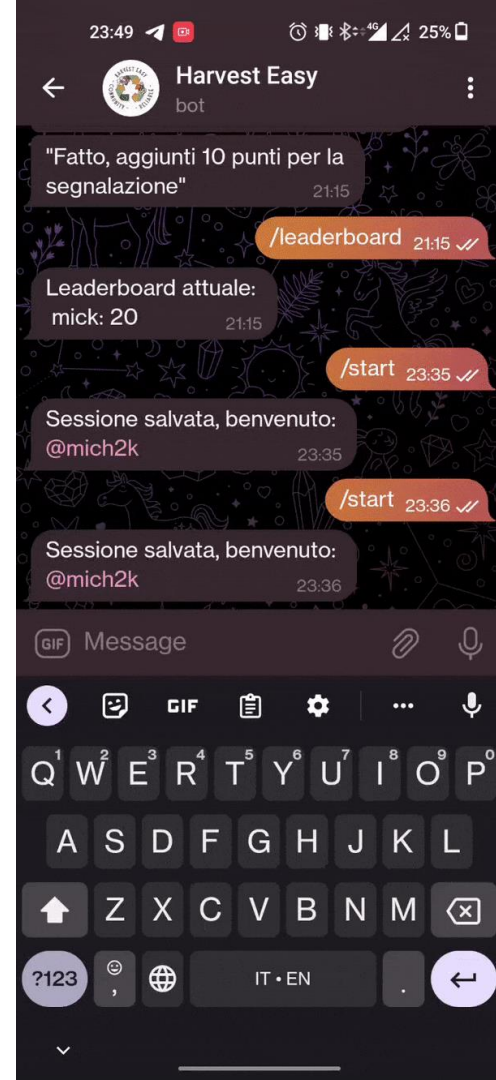
STEP 5:

Dwellers are notified through our telegram bot for every anomaly regarding their apartment.



STEP 5 BIS: COMMUNITY
Volunteers, policemen,
civil service can join our
whistleblower service in
order to flag (to WST
company) OR fix the
tempered bin group
themselves.

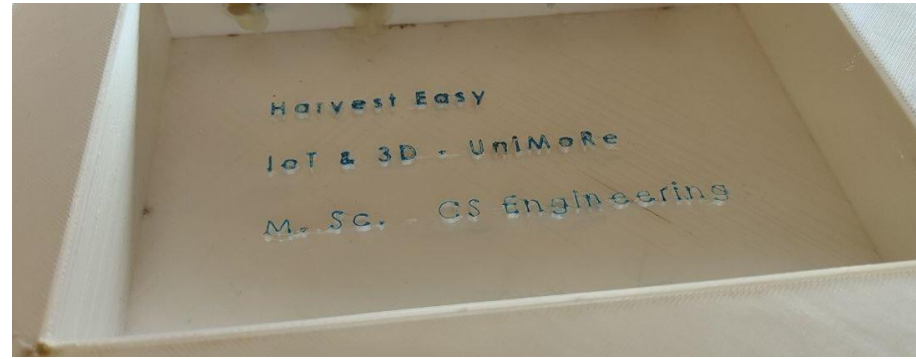
We implemented a reward
based leaderboard:
gamification meets
community



STEP 6:

innovative
prototype-ready
made with organic corn
based plastic

design



STEP 7: made for humans & for machines

- > interactive always up-to-date dynamic maps
- > automatic, plugged-in, e-harvest truck selection:
who passes, leaves



Thank you
for your
attention