

GofS X
GROUP 5



Trashy's
Journey



THE PROBLEM:

STUDENTS

CONTRIBUTE TO

LOW RECYCLING RATES!!
IN DEN HAAG

... HOW IS THIS HAPPENING?



A LACK OF...

- CAPACITY?
- VISIBILITY?
- AWARENESS?
- HABIT?

LET ME TELL YOU A STORY...

STAKEHOLDER OVERVIEW

TOP CORNER
OF EVERY
PAGE!

○ LEIDEN UNIVERSITY
STUDENTS

★ RENEW
(WASTE MANAGEMENT
COMPANY)

□ LEIDEN UNIVERSITY

△ MUNICIPALITY OF
DEN HAAG

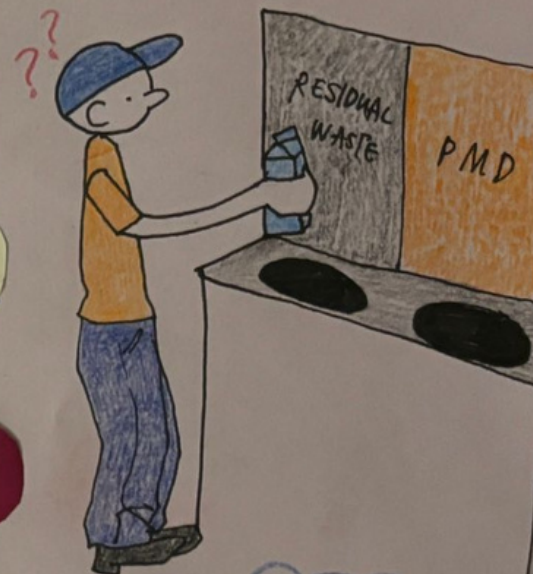
AT WIJNHAVEN,
A GOAS STUDENT WALKS UP TO THE
WASTE BIN TO THROW AWAY A FINISHED
CARTON OF JUICE.

WHICH BIN,

PMD

PLASTIC + METAL PACKAG-
ING, DRINKING CARTONS

OR
RESIDUAL



SOME STATS FOR YOU:

ACCORDING TO THE MUNICIPALITY'S REPORT
(2025), 53% OF COMBINED WASTE VOLUME
IS PMD, WHEREAS 11% IS OTHER RESIDUAL
WASTE. IN ADDITION, LEIDEN UNIVERSITY HAS
REPORTEDLY ACHIEVED A 4% REDUCTION
OF WASTE SINCE 2019. THEIR GOAL IS 25%
BY 2027. CURRENTLY, 20KG OF WASTE IS
GENERATED PER USER EVERY YEAR, ON
OUR CAMPUSES!

WASTE SEGREGATION ON CAMPUS (the Hague)



Uni rules = "if in doubt
→ residual waste"
Municipality = "better
waste segregation →
less residual waste"

↳ The campus setup makes the easy choice the wrong choice



Since Sept. 2023 The Hague Municipality
is not separating food from residual waste
↳ HOWEVER, the uni campus has separate bins
⇒ makes it confusing & raises rumours
about waste management in uni
In the end, research shows that
misinformation (such as this contradiction)
results in less responsibility for
waste sorting.

VERY MUCH IN DOUBT

What is even
a juice carton?
Plastic?
Paper?
Witchcraft???

Residual waste it is!



Did you know that residual waste
is the stream causing most emissions
& is the most expensive to process?
Residual waste is usually incinerated
not recycled. If recyclable items
end up in residual waste, that
results in increases of CO₂
& costs for the municipality

What happens
inside the
bin?

RESIDUAL WASTE



⇒ When instructions are unclear + the easy choice is the
wrong choice → students guess → the system fails

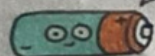
What bins are there at Wijnhaven university?

Bins accessible to students:

Floors	PMD	Residual	Organic	Paper
Ground floor	2	2	1	0
First floor	8	10	4	1
Second floor	5	6	3	2
Total	15	18	8	3



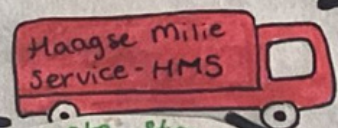
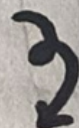
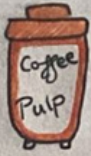
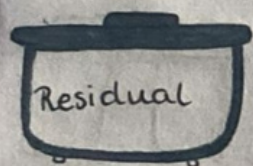
There is also a starling gold machine



And a battery collection



Quiz Question:



What waste streams are collected and by who?



Did you know HMS collects all the household waste of private individuals since 1998

Is PMD still collected separately in The Hague?



But what do students think of the waste management at Wijnhaven University building?

I am confident in sorting my waste

20 interviews

There are not enough organic bins



I am not always certain to know where goes what waste?

Better than other EU countries (named Italy)

Not clear if you have to separate PMD & residual

Not very effective

Only plastic & residual available

Statiegeld is often full

Often done wrong people seem not to care



According to the Municipality, residual waste is BY FAR the largest waste stream in the city: 143,853 tonnes (2023). In comparison only 2,957 tonnes of PMD were separately collected, meaning recyclables remain a small fraction of the total.



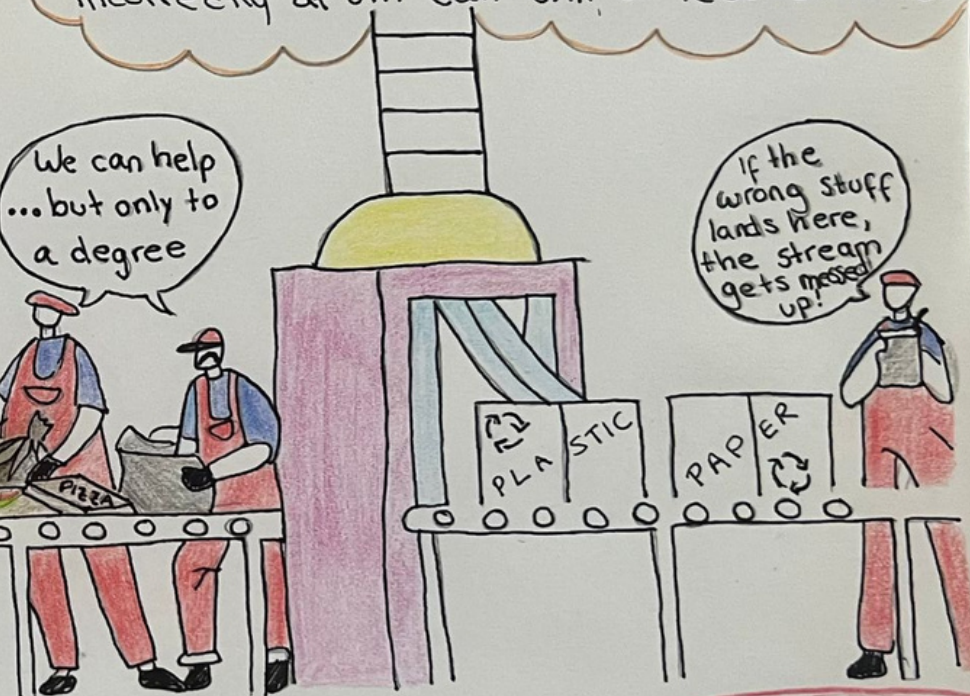
It starts off totally **MIXED**

When the waste from Leiden University leaves campus, most of it is a mix of residual and recyclables thrown into the wrong bins. This mixed waste is what arrives here at the sorting facility, packed together like you see here!



We can help ... but only to a degree

At the facility, all incoming waste is scanned, sorted and separated as best possible. The facility can detect plastics, metal and cartons from the mixed stream and pull them into the PMD stream. This means many items thrown incorrectly at uni can still be recovered here.



If the wrong stuff lands here, the stream gets messed up!

=> Only PMD and residual get mixed at university however. If other streams like organic accidentally end up in this load, they contaminate the entire batch. Contamination makes sorting slower, more expensive and forces recyclable waste to be treated as residual waste.

Even though the facility can correct many mistakes, it works best when waste arrives

CLEAN

AAGH!!!
BINS
GREEN BINS
AND WASTE
AT!?

CONTRIBUTE
TO
RECYCLING RATES
BUT...

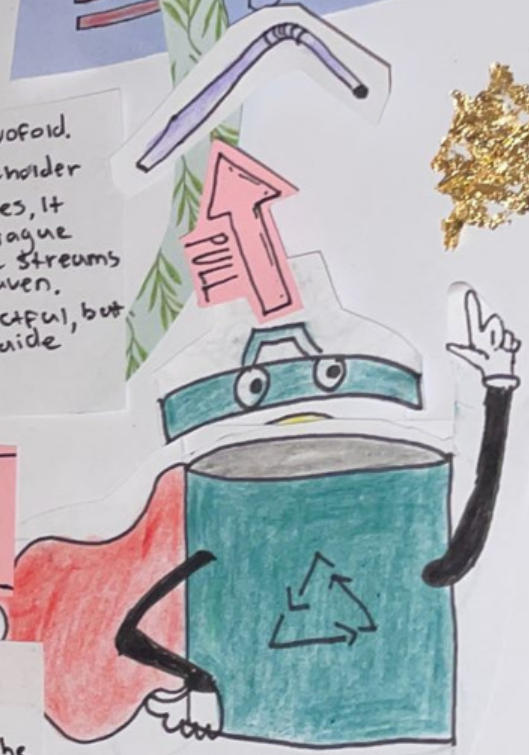
The solution appears twofold.
From our interviews, stakeholder
conversations and sources, it
became clear that The Hague
must make the waste streams
more visible at Wijnhaven.
Students are not neglectful, but
the system needs to guide
them more clearly.

HOWEVER

However, these discussions
also reframed the issue.
The core problem is not the
students' awareness or
imperfect separation. But
the creation of waste itself.

Instead of concentrating on sorting at the
end of the chain, perhaps efforts should aim
to prevent waste from being generated in the
first place. Shifting focus toward the systems
that enable it. Or... A combination of both.

Every university
building has a battery
bin at Leiden!



TO CONCLUDE:

BY PROMOTING AWARENESS ABOUT
WASTE SEPARATION AND REFUSAL, WE
CREATE A RESPONSIBLE WASTE
SYSTEM WITHIN THE UNIVERSITY AND
THE HAGUE!

R-STRATEGIES!

- ↑ R0 : **REFUSE** ← WHAT WE WANT TO ACHIEVE!!
R1 : RETHINK
R2 : REDUCE
R3 : RE-USE
R4 : REPAIR
R5 : REFURBISH
R6 : REMANUFACTURE
R7 : REPURPOSE
R8 : RECYCLE
↓ R9 : RECOVER



THE HIGHER THE
STRATEGY IS IN THE LADDER,
THE HARDER IT IS TO ACHIEVE.
BUT IT MEANS THERE'S LESS
ENVIRONMENTAL IMPACT!

— **FIN.** —

IN ANDERE LANDEN
ZIJN ZE OOK GEK OP
NEDERLANDSE MELK.
ONGEVEER 20% VAN
ONZE MELK, WORDT
GEEXPORTEERD NAAR
VERRE LANDEN.

DEN
NAM?
AT ZE
DE
ER IS
AND.
TE
KEN.

