

Innovation ensures waste service

How to decouple quality and route
know-how from field work force

Key take away

- **Today:**
 - Waste utility service is heavy dependent on work force know-how
- **Tomorrow:**
 - Innovation provides a guidance and a data driven support system for our workers
- **Day after tomorrow:**
 - In case „the world stops“ the data from innovative systems help to provide basic service



1.

Only empty bins
that are full !

2.

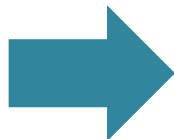
Provide automatic
optimal routes !

3.

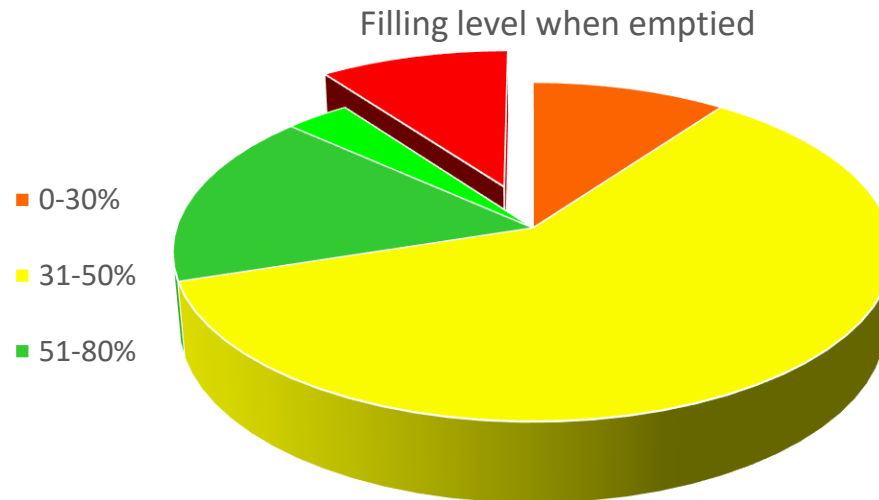
Provide data on
who separates his
waste

1. Smart bins provide data

Today more than
50% of the bins that
we empty are less than
half full !



Don't believe it ?



2. How to optimize routes

WASTE COLLECTION

- Dashboard
- Collection points**
- Tour overview
- Tour generation
- Partner/Vehicles
- Disposal company / Recycle
- Administration
- Collection point
- Close
- Logout

Dispo Dispo
ms@saubermacher... COLLECTION

OVERVIEW

[EXPORT CONTAINERS](#)

District: Horn
Filter

Postal code

Container no.

Sensor ID

Address

Community - Community code

Filling level: >= 30 only show warnings

[APPLY](#) ✕

Amount chambers

115 | 115

White glass | Stained glass

Last emptying

25/06/2021

Saubermacher
Dienstleistungs AG

Collected amount

112.50 t

Juni 2021

Map Satellite

ID 843

Description Seitengasse 93

Next emptying -

Last emptying 10/06/2021

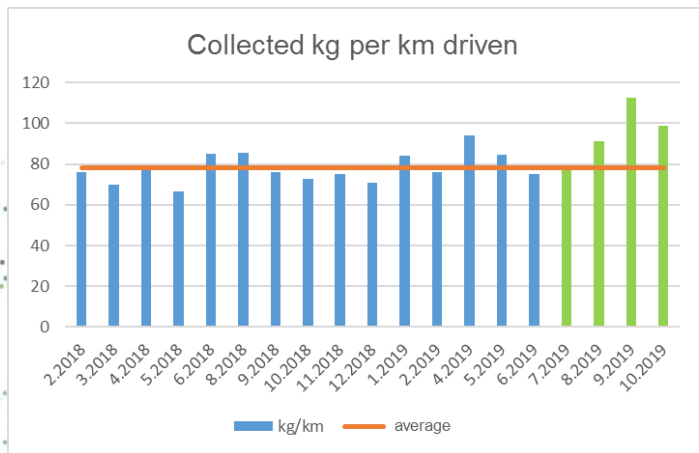
White glass (1) Filling level 40%

Stained glass (1) Filling level 20%

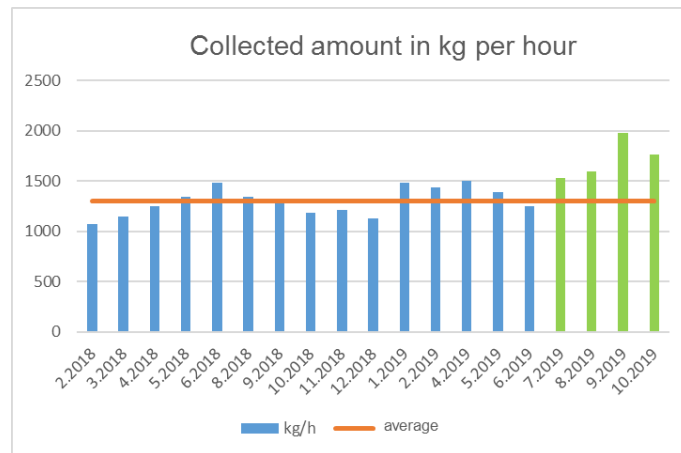
Address search...

Keyboard shortcuts Map data ©2021 Terms of Use Report a map error

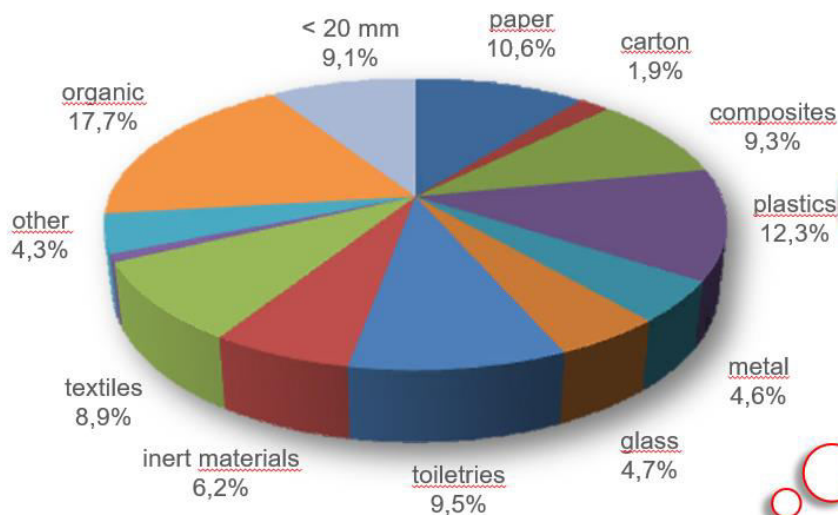
Less hours for more collection



+10-30%



3. Still keep the quality „high“ ?

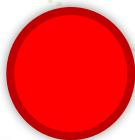


High percentage of **misthrows** (approx. 70%) in residual waste as well as interfering materials in organic waste cause high costs and prevent achieving the goals of the EU Circular Economy Package!

Composition of residual waste in Styria (AUT)
Source: Analysis of residual waste in Styria 2013

Regular communication is key

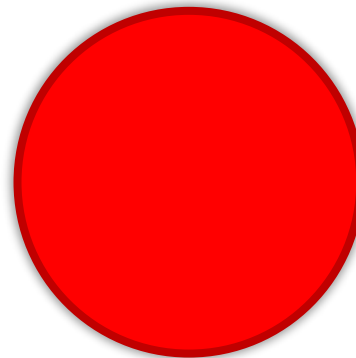
Initial situation



**Analysis of residual waste
every 5 years**

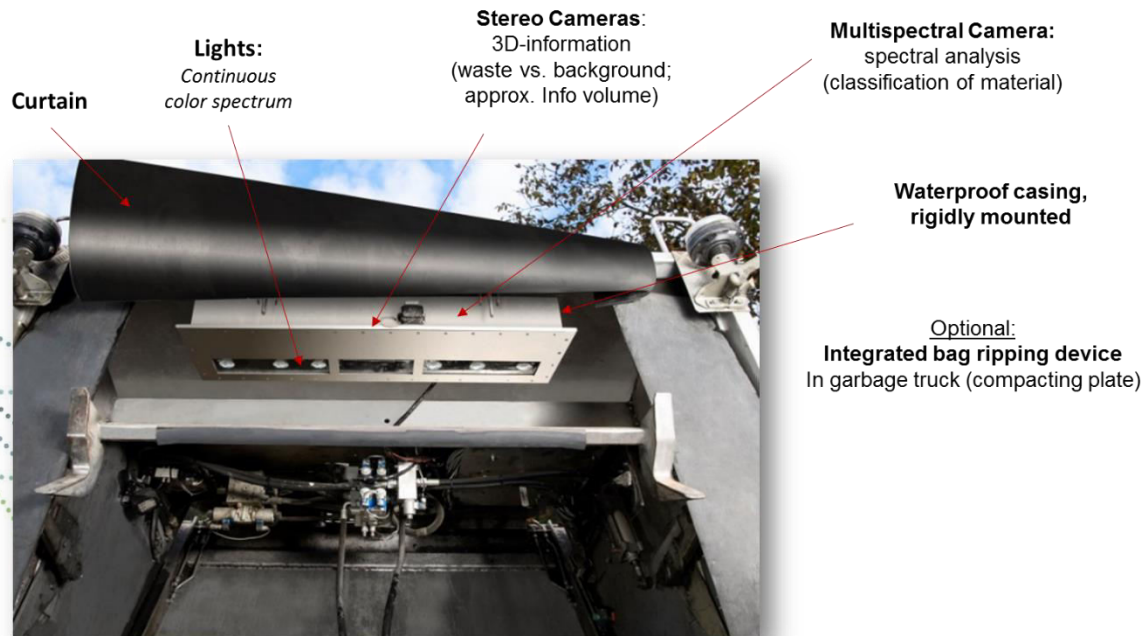


**Through
Recyclables
Scanner**



**Information about separating
behaviour with every emptying
(13 – 26 times per year)**

Technology provides data



Mounted **Recyclables Scanner** in compacting vehicle

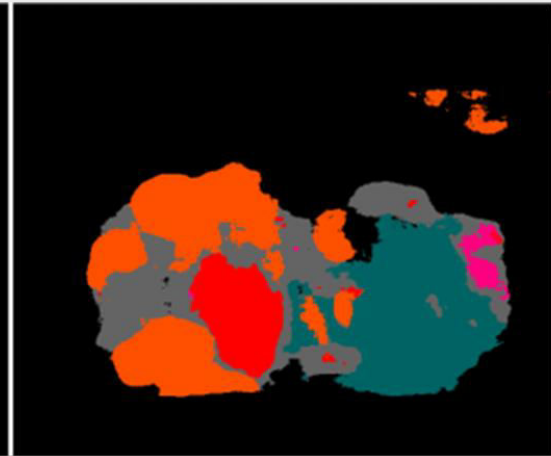
More reliable than humans



Image

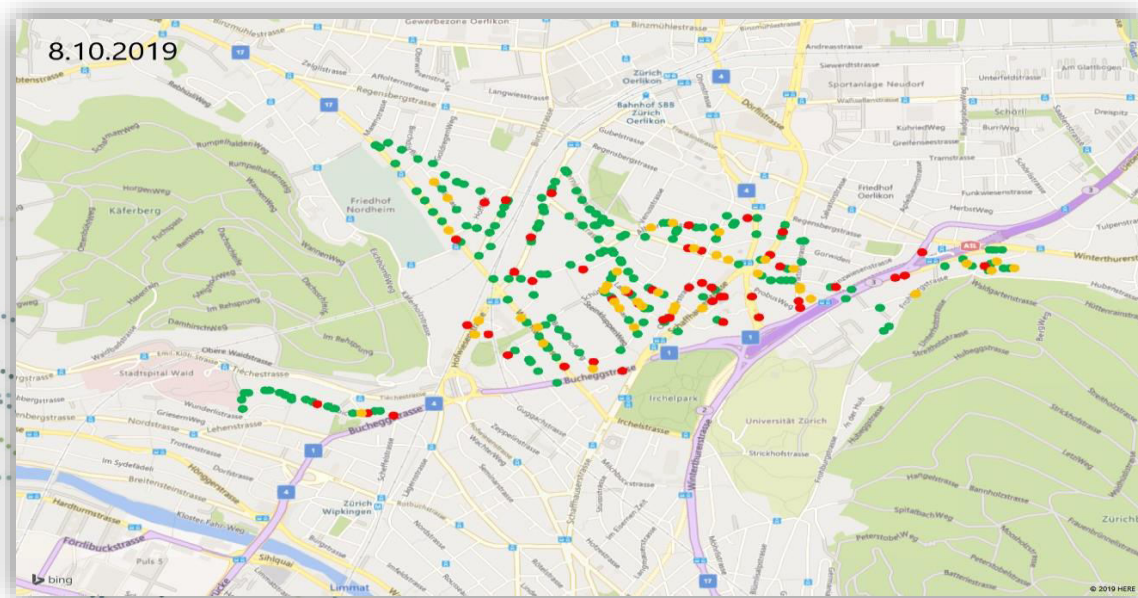


Manual labeling of fractions

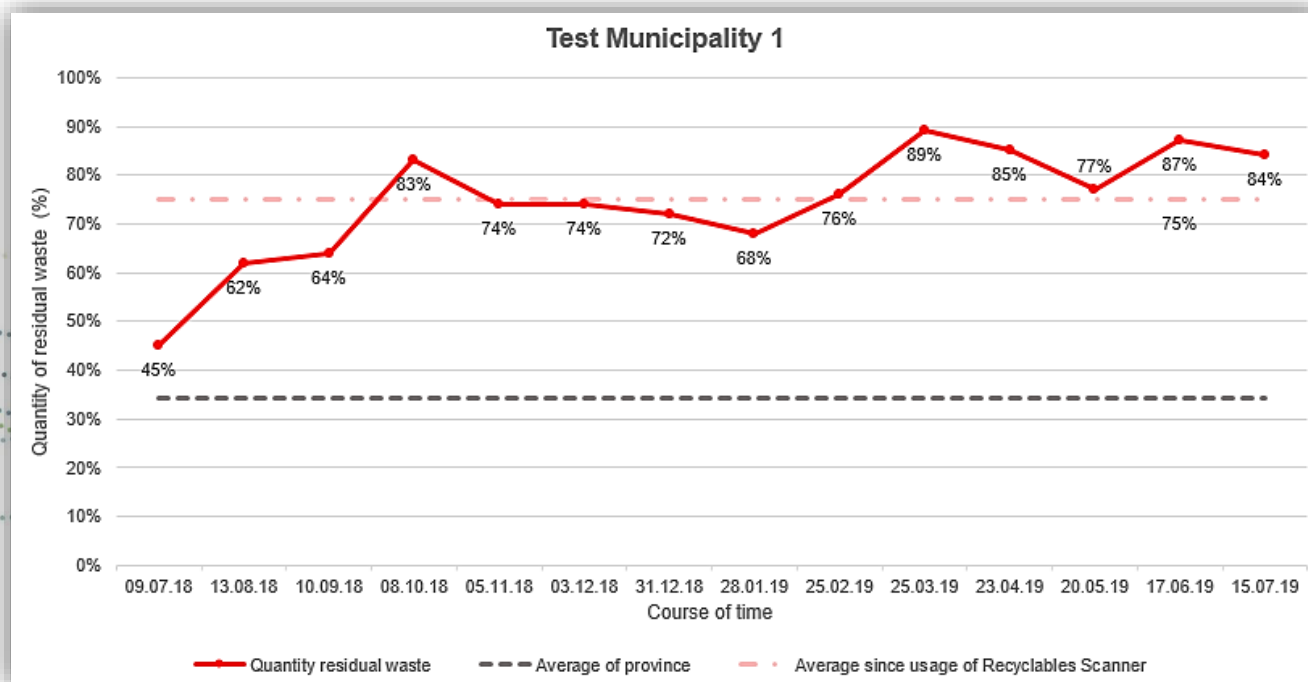


Automatic (by AI) labeling of fractions

Data can be used



Results show first success



Summary

Get started to save our environment from the „Day after tomorrow“!

