

# Zero Waste Live!

8 October 2019 - 2 p.m. CET

## WHAT'S A ZERO WASTE CITY?

Enzo Favoino

Scientific Coordinator  
at Zero Waste Europe



# Zero Waste Cities

Implementing a Zero Waste programmes: key learnings and achievements from across Europe



Enzo Favoino



*Scientific Coordinator, Zero  
Waste Europe*

# A few questions to answer

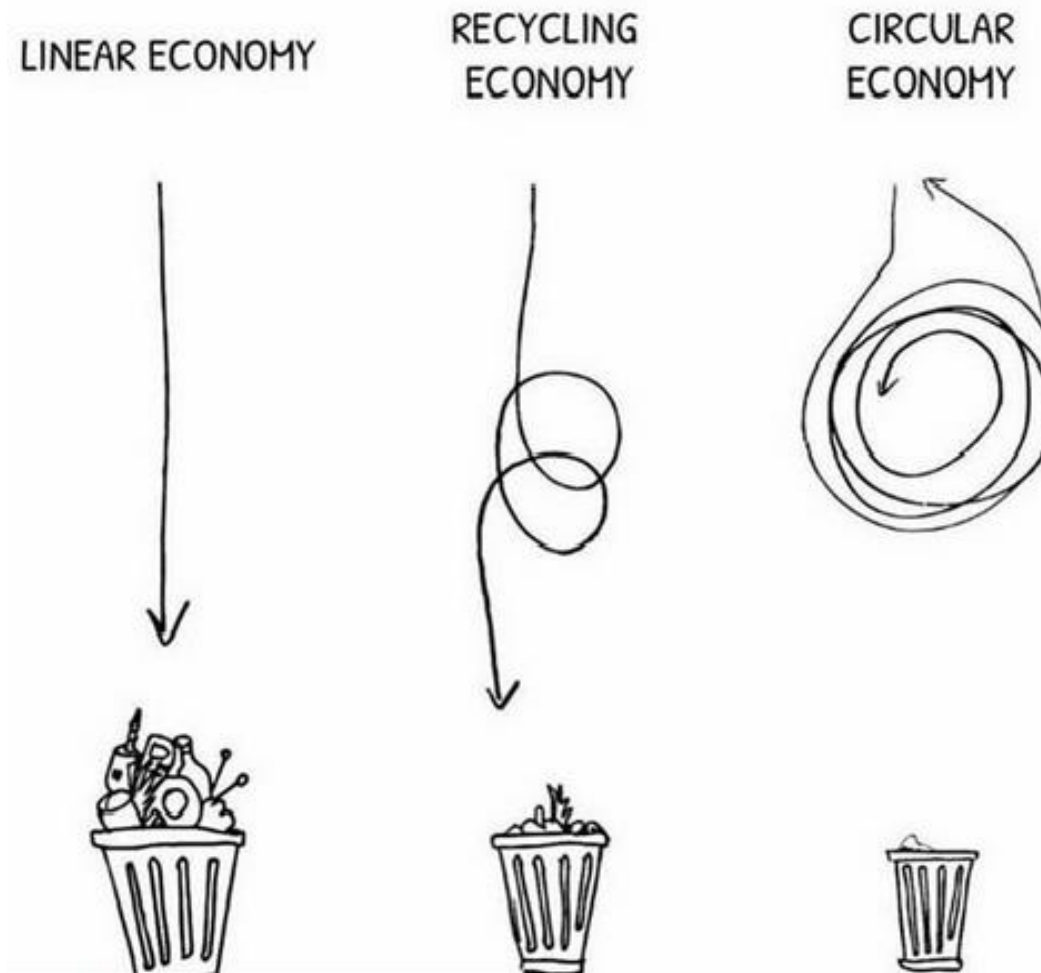
- **What is the Zero Waste methodology**
- **How does Zero Waste work in cities**
- **Does it deliver? Possible achievements**

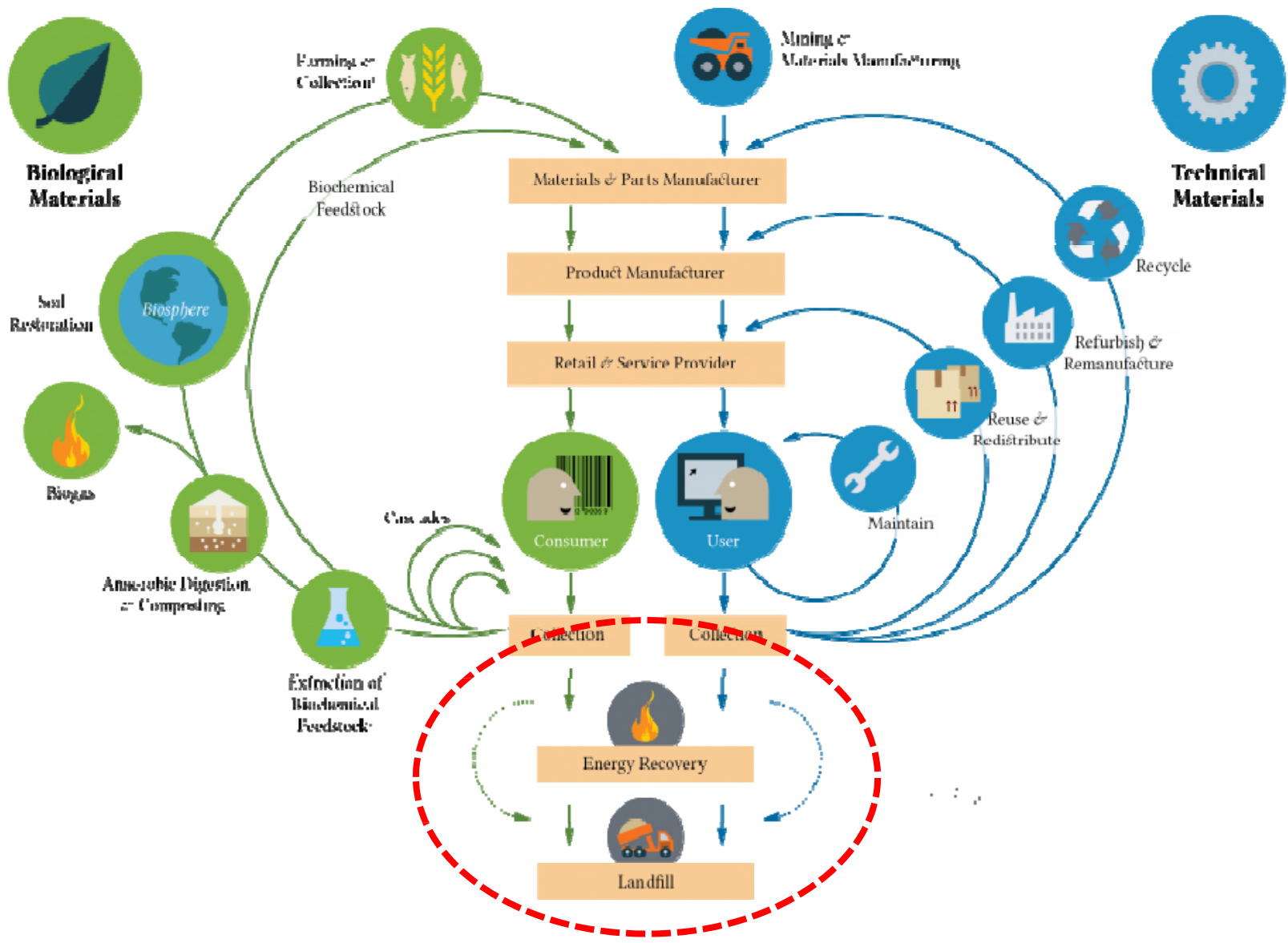
# Zero Waste: the global role



- Zero Waste a strategy devised to maximise **short- and long-term efficiency in resource management**
- A codified, peer-reviewed **Zero Waste Definition and Hierarchy** is kept by ZWIA, in cooperation with GAIA, ZWE, etc.
- Ongoing recognition/certification programmes for ZW Communities and ZW businesses.  
**Minimisation of residuals in kgs/person.year**  
the key goal

# Circular economy made simple





# On the journey to zero waste

Discover the cities that have chosen to follow a zero waste path



- **Formal ZW Commitment**
- **Solid and verifiable operational steps**
- **Commitment to keep improving**

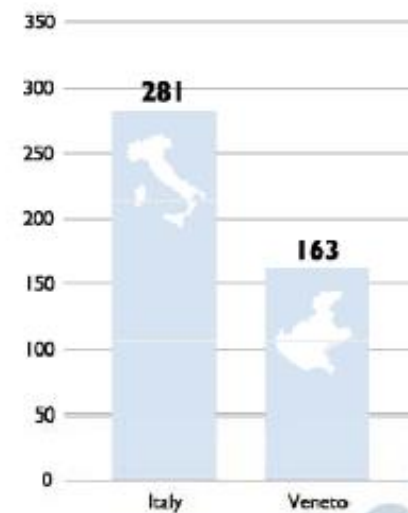
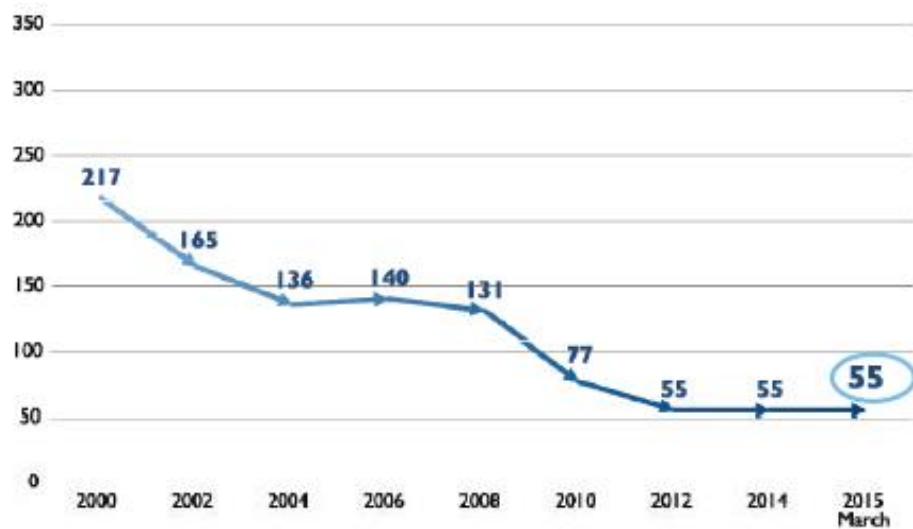
## Capannori first ZW Municipality in EU (2007)







## The production of municipal residual and bulky waste managed by Contarina (kg\*inhabitant/year)



### SOURCE

dati Contarina 2015

Rapporto Rifiuti ISPRA 2014 (dati 2013 Italia); Relazione Rifiuti Urbani ARPAV (dati 2013 Veneto)

**mid-term goal:  
- 80% Residual  
Waste by 2023**

# A basic ZW workprogramme

- **Kerbside collection – include the organics!**
- Promoting waste prevention practices
- Pay-as-you-throw
- Promoting reuse activities/centres
- Check composition of residual waste
  - Redesign collection for continued optimisation
  - Feed back to producers in order to address non-reusable/recyclable materials

# The key role of organics

- **QUANTITATIVE:** fundamental to achieve highest material recovery rates
- **OPERATIONAL:** minimising organics in residual waste makes it possible to shrink collection rounds
  - cost-optimisation
  - further driving effect for increased separation of dry recyclables, too)



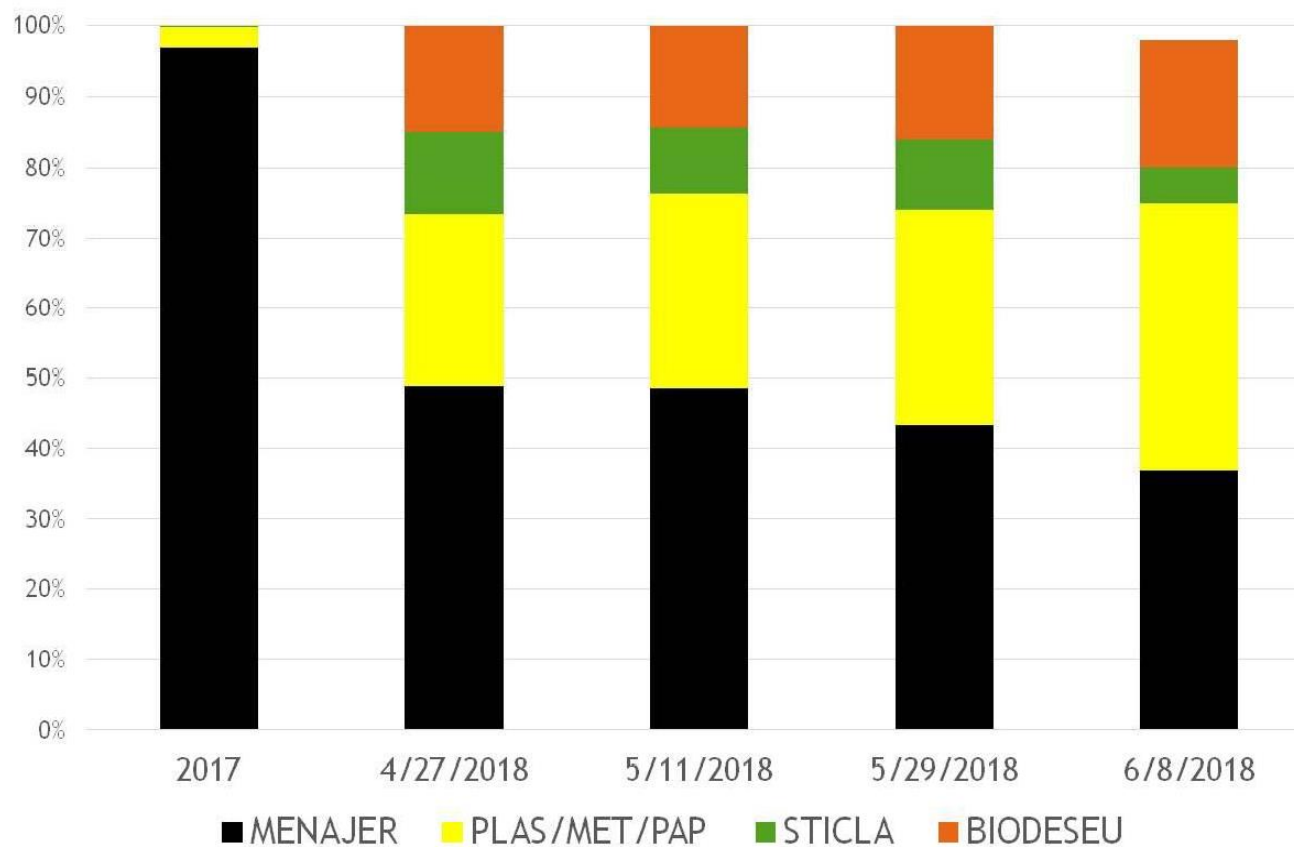
**Philippinos 40.780**  
**Egyptians 35.902**  
**Chinese 26.889**  
**Peruvians 19.590**  
**Sri Lankans 16.068**  
**Romanians 14.546**  
**Ecuadorians 13.229**  
**Ukrainians 8.209**  
**Moroccans 8.152**  
**Bangladeshi 7.563**

# Sălacea / Szalacs

## Județul Bihor



## Separation of food waste boosts recycling









## The importance of Feeding back paving the road to minimisation of Residual Waste









# Parma – pop. 200.000 Municipal Solid Waste figures in 5 years



Kg per capita/year	2012	2013	2014	2015	2016	Diff. 2016 vs 2012
Paper	49,84	49,38	54,09	54,44	55,28	+11%
Cardboard	18,77	19,71	19,61	19,23	19,95	+6%
Plastic/metals - Glass*	64,54	66,78	79,97	87,32	89,88	+39%
Organic waste	52,67	62,69	90,50	99,11	104,85	+99%
Garden waste	55,55	59,50	62,22	82,92	77,97	+40%
Residual waste	248,62	220,87	143,52	117,43	110,13	-56%



# ITALY (2017)

- **Separate collection rates for MSW:**
  - **40 Provinces (out of 108) above 65%**
  - **(topmost 4 above 80%, Treviso, pop. 1M at 88%)**
  - **2950 Municipalities above 70%**
  - **1070 Municipalities above 80%**
  - **112 above 90%**
- **The new metrics! Minimised residual waste in kgs/person.year**
  - **510 Municipalities below 75 kgs**
  - **Many below 50 kgs**
  - **Lowest ones around 20 kgs**

# Ljubljana – 1st EU capital to declare ZW in Europe







# Present and future ZW plans in Ljubljana

- Current situation:
  - Separate collection rate: 68 %
  - Amount of residual waste: 115 kg / person / year
- Commitments:
  - Separate collection rate by 2025: 78 %
  - Separate collection rate by 2035: 80 %
  - Amount of residual waste by 2025: 60 kg / person / year
  - Amount of residual waste by 2035: 50 kg / person / year

When Europe gets it right

# From no recycling to zero waste: how Ljubljana rethought its rubbish

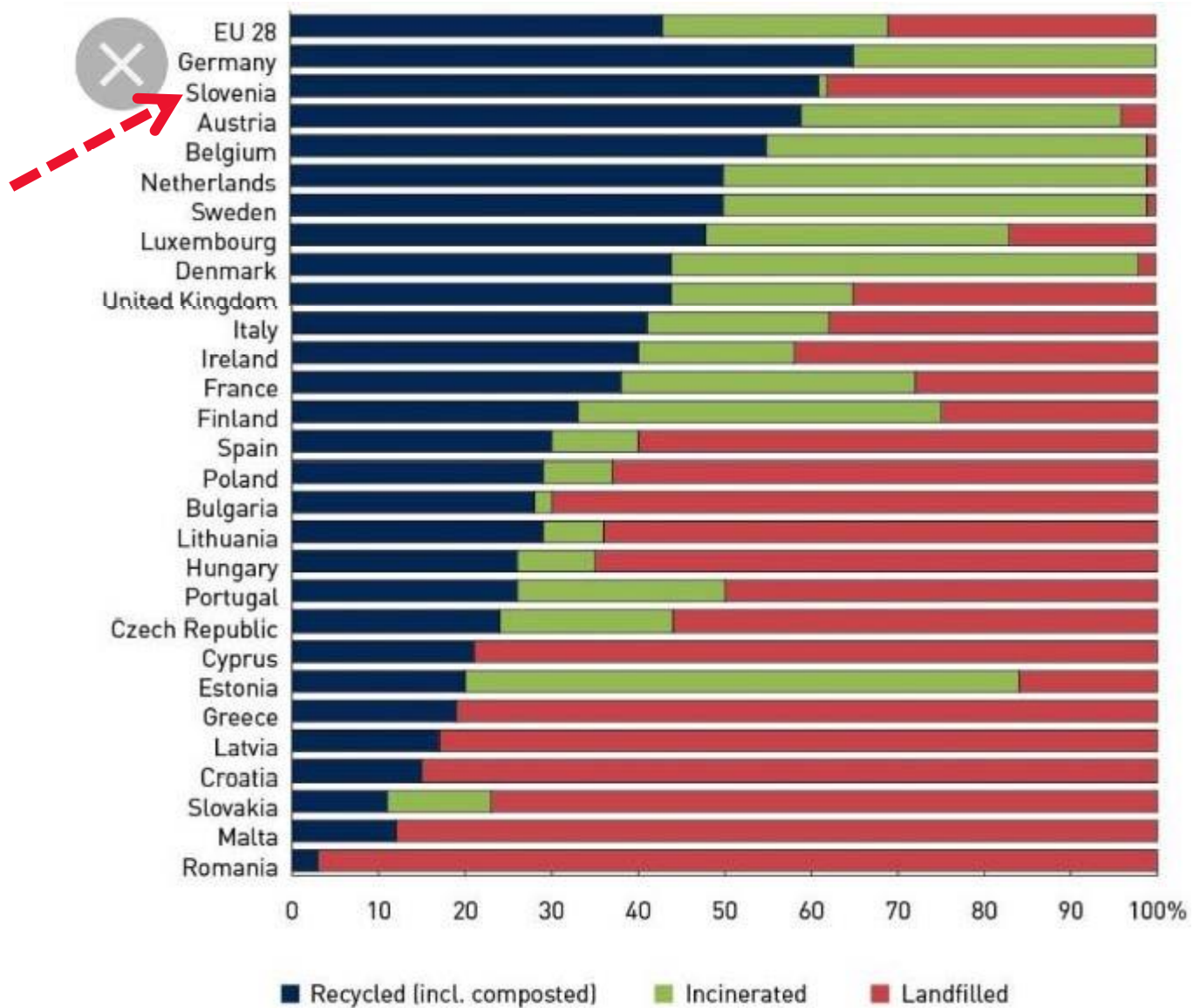
Fifteen years ago, all the Slovenian capital's waste went to landfill, but by 2025, at least 75% of its rubbish will be recycled. How did the city turn itself around?

*Words and photographs by Luka Dakskobler*

**F**rom the lush green hill you can see Ljubljana, the capital of [Slovenia](#), in the distance. Populations of deer, rabbits and turtles live here. The air is clean and the only signs that we are standing above a 24-metre (79 feet) deep landfill are the methane gas pipes rising from the grass.

Ljubljana is the first European capital to commit to going zero-waste. But fifteen

# In 2017



# A comparison

**777 kgs/person.yr**



**52% incinerated  
= 405 kgs/person.yr**



**25% slags/ashes  
= 101 kgs/person.yr**

**350 kgs/person.yr**



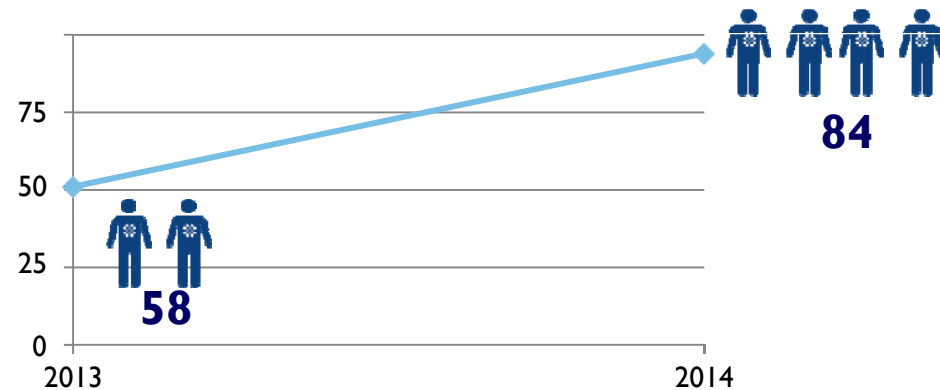
**85% recycled  
Residual waste = 50 kgs/person.yr**



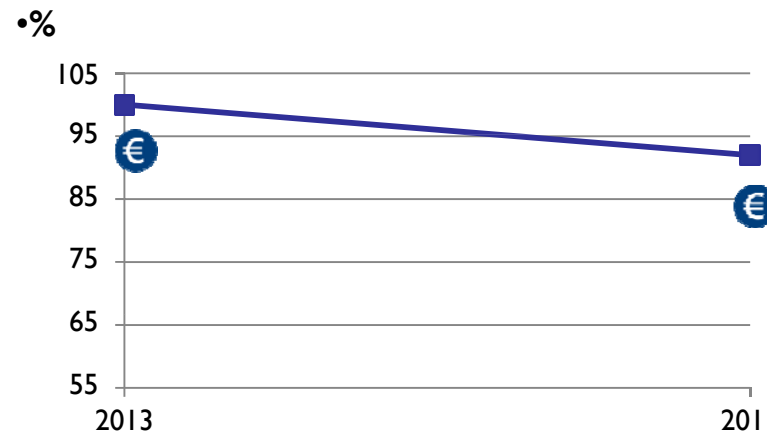
**Committed to reduce residuals  
by a further 80%  
= 10 kgs/person.yr  
(before processing)**

# Occupational benefits - ZW scheme and curbside collection in Treviso (pop. 80.000)

## Staff



## Total costs (management + disposal)



# Zero Waste Live!

8 October 2019

## Thank you for your attention

Enzo Favoino

Chair of Scientific Committee at Zero Waste Europe

+39 335.355446

*[favoinoenzo@gmail.com](mailto:favoinoenzo@gmail.com)*