


ZERO WASTE EUROPE LIVE!

5 NOVEMBER 2018

MARCO RICCI

PAY AS YOU THROW: THE ULTIMATE SYSTEM TO
REDUCE WASTE AND INCREASE RECYCLING






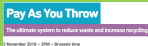

Pay As You Throw

The ultimate system to reduce waste and increase recycling

5 November 2018 – 2PM – Brussels time

Marco Ricci
Altereko sas
www.altereko.it
it.linkedin.com/in/riccieco

An overview on PAYT in Italy and EU cities



About myself



CIC Italian Composting and Biogas Association
Senior Expert
www.compost.it



ISWA International Solid Waste Association
Chair of the Working Group on Biological Treatment of Waste
www.iswa.org



Altereko sas – consulting for circular economy
Manager
www.altereko.it



About myself

- **20 years of experience in planning MSW management**, designing and up-grading of collection and transport schemes, assessing recycling facilities (focus on composting), planning communication and participation initiatives, chairing multi-linguistic, multi-tasking working groups or projects.
- **15 year foreign working experience** as consulting expert focusing on issues related to solid waste management. Extensive consultancy experience in the Solid Waste Sector – on Strategy and Policy, Fees&Taxes, Separate collection schemes - , both in 'advanced' and 'low to middle income' countries in Europe, Latin America and Asia.
- **10 years experience cooperating with international organisation/agencies** (as ECN-European Compost Network, ACRR, EEA-European Environment Agency, Sweepnet-GIZ, SCOW).



PAYT: embedded in MSW management

- Integrated management of MSW
- Reduction and recycling are prioritised
- Economical issues are basic element of the management approach
- Apply the principle «pay as you throw» and also «service has a cost/fee»
- Involvement, participation, daily



MSW diversion targets



Which MSW fraction to be measured?

• Residual (mixed) MSW

- Biowaste
- Dry-recyclables/Packaging
- Waste delivered at Recycling Centers
- Voucher systems (for bulky, green, etc.)

Residual (mixed) MSW

- (should be) a minor flux of MSW
- With limited possibilities for recovery
- with increasing disposal cost (medium/long scenario)
- Affected by amendments of waste regulation (EPR, WEEE, etc.)
- Influences by evolution of facilities for MT and for recovery of waste

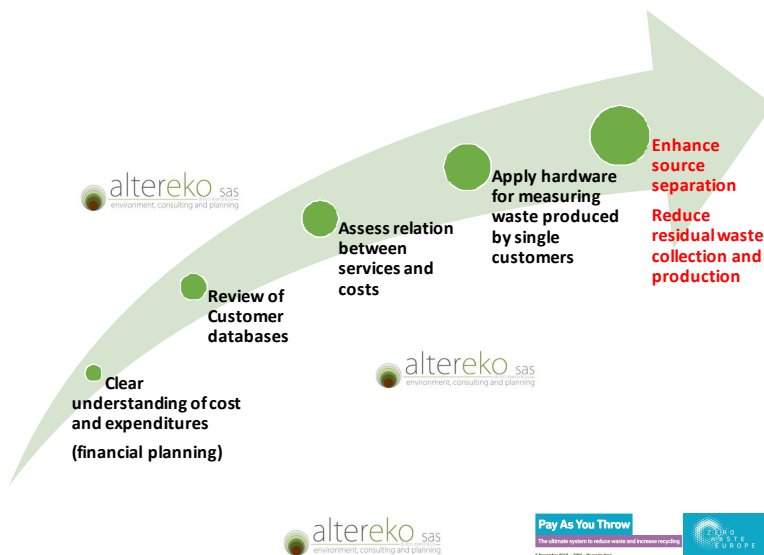


How to measure?

Door to Door	Road Container	Recycling Center
Easy to implement	Complex systems	Not used for residual waste
Low need for additional hardware	Need of significant additional investments	Low need for additional investments
Guaranties quality of recyclable fractions	Quality or recyclables at risk	To be used for point systems

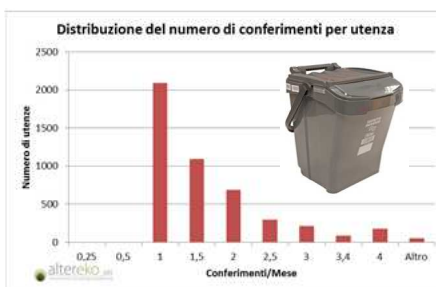


Benefits and results of applying PAYT



Residual waste & PAYT (volume based)

- Municipality with about 5000 HH
- Residual waste collected 1/week
- SURVEY on residual waste collected at households (HH)
 - 45% of HH delivers 1/months
 - 23% of HH delivers 1 to 1,5/month
 - 82% of HH delivers up to 2/month



Bolzano (110'000 pop)



- PAYT: on residual waste only
- Hardware RFID on bins and bags
- Volume based: YES
- MSW management results

altereko sas	2012	2013
Residual waste kg/inhab	272	152
Separate collection	46,5%	67,4%



Parma (190'000 pop)



- PAYT: on residual waste only
- Hardware: buckets with RFID
- Volume based: YES
- Minimum n° emptyings: YES
- MSW management results

altereko sas	2011	2015
Residual waste kg/inhab	283	110
Separate collection	48,5%	70,0%



Treviso (87'000 pop)

- PAYT: on residual waste only
- Hardware: buckets with RFID
- Volume based: YES
- Minimum n° emptyings: YES



	2013	2015 (July)
Residual waste kg/inhab	271	64
Separate collection	52,2%	85,5%



Lesson learned (from Italy)

- PAYT charges are successfully applied also in complex urban situations (i.e. Cities and City-Centers)
- The limiting factor is the size of high-rise buildings
 - Fee per building
 - Tools for accessing a common bin
 - 1user—1bin
- The variable fee does not exceed 30-40€/family/yr



München\D (1,5M pop)



- PAYT: on residual waste only
- Hardware: none (choose your frequency of service)
- MSW management costs (2015)

	1/7	1/14
80 litri	223€	115€
120 litri	287€	150€
240 litri	482€	250€

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Innsbruck-AT (131'000 pop)

- PAYT: on residual waste and biowaste
- Hardware: frequency & volume
- Minimum n° emptying: YES
- MSW management results



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Residual waste kg/inhab	254	231
Separate collection	52%	61%

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Common elements & lesson learned

- Residual waste production is always assessed
- Volume based is the preferred approach
- Advanced experiences allow to verify the behaviour of single customers
- Minimum collection services to be paid
- MSW schemes with PAYT charges are more effective in monitoring elusion and tax-evasion
- Residual waste reduction is the most common results
- Hardware is becoming a significant plus (identify, locate, verify)
- Results do not depend on the “nature” of the bill (i.e. a tax or a fee)



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Thank you!

Marco Ricci

Altereko sas, Verona, Italy

ricci.eco@gmail.com



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