



Reducing and diverting waste: learning from Ljubljana

Jaka Kranjc



Working at all levels

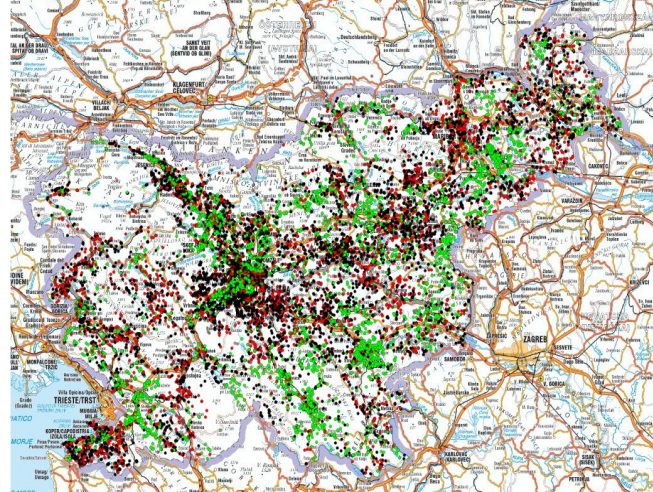


**ONLY 9% OF ALL PLASTIC
EVER MADE HAS BEEN
RECYCLED.**



THE REST IS POLLUTION.

#BreakFreeFromPlastic





The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



LJUBLJANA

- Capital of Slovenia
- 293.000 inhabitants
- Best performing capital in Europe in waste management
- European Green Capital 2016 and continuing its vision



Mestna občina
Ljubljana

VOKASNAGA

- Largest public service company in Slovenia
- Set up by several municipalities
- Manages waste and water for around 400.000 residents
- On average, almost 3 bins per person
- Runs the RCERO regional WM center, covering 57 municipalities and 40 % of the population

Waste collection

Door to door collection



Waste collection

Ecological collection sites



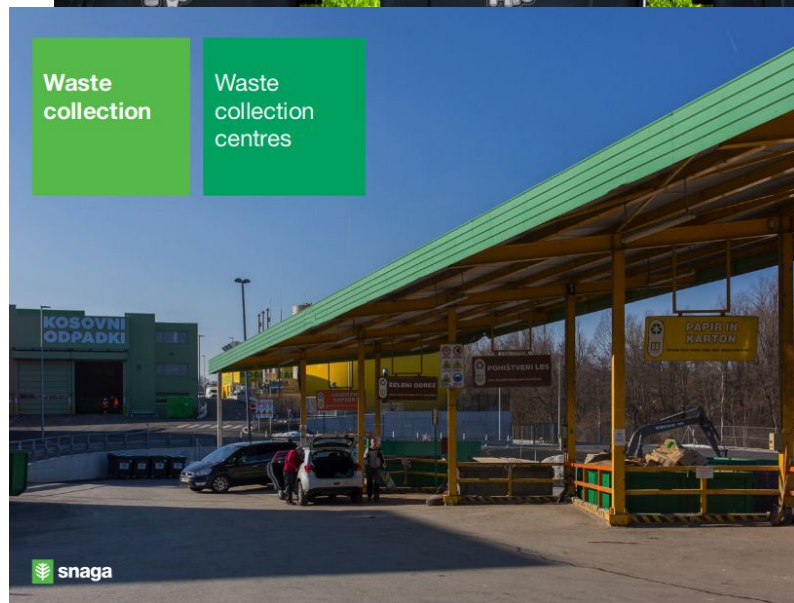
Waste collection

72 underground collection units

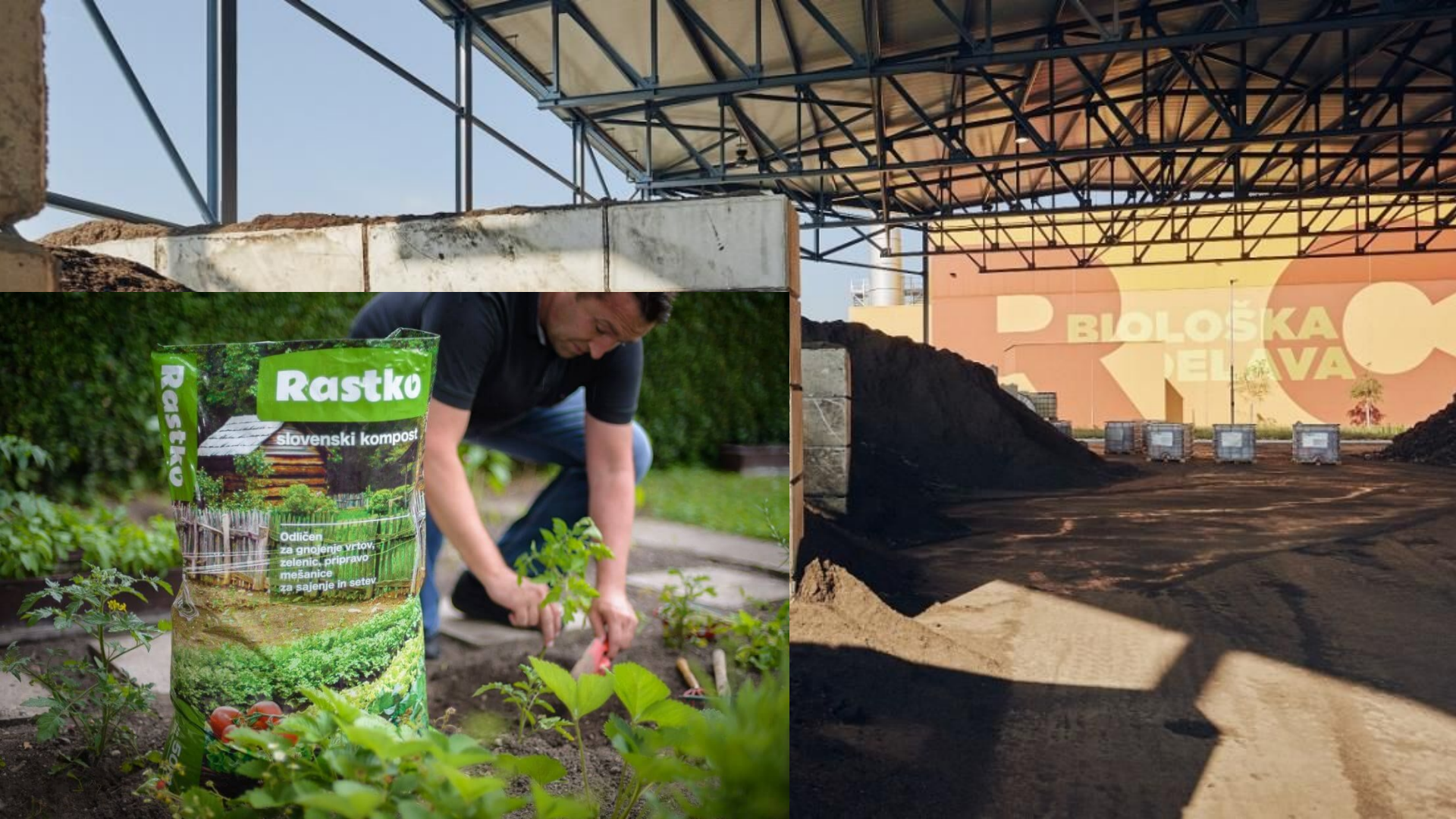


Waste collection

Waste collection centres





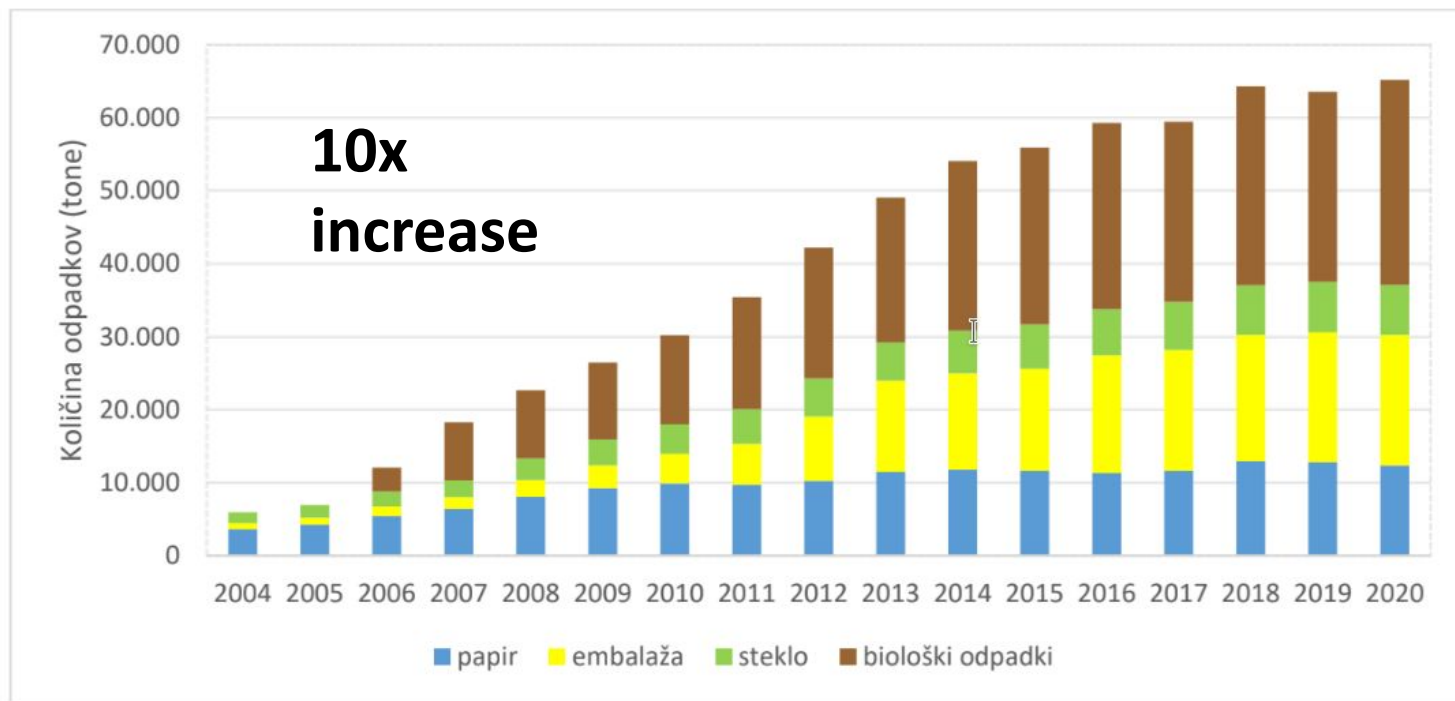


Rastko
slovenski kompost

Odličen za gnojenje vrtov, zelenic, pripravo mešanice za sajenje in setev

BIOLOŠKA PREDELAVA

RESULTS: separate collection



Graf 4: Prikaz ločeno zbranih odpadkov po letih v MOL in desetih primestnih občinah, kjer za ravnanje z odpadki skrbi JP VOKA SNAGA

But how?

INFRASTRUCTURE IS OVERRATED

Realizing the importance of soft measures:

- Infrastructure alone yields suboptimal results
- Infrastructure is a glass ceiling

Transitioning to circular (zero waste) thinking:

- Resource management vs waste management
- Continuous improvement and looking for opportunities

**September 8th 2014 - First EU capital to
move towards Zero waste**



Today over 450 cities across Europe

Shared measures

SEPARATE COLLECTION IS MANDATORY



COSTS & PAY AS YOU THROW

- Limited autonomy for price setting
- Stable price for households ~ 8€ / month
- Stimulation through pricing
- December rewards

Residual waste is expensive!

The image shows a screenshot of a Slovenian payment slip (UPN QR - potrdilo) for rent. The slip is divided into two main sections: 'Ime plačnika' (Payer) and 'Ime prejemnika' (Recipient). The payer is Janez Novak, Dunajska 1, 1000 Ljubljana. The recipient is Novo podjetje d.o.o., Lepa cesta 15, 3698 Loški Potok. The payment is for rent (RENT) of 81.05 EUR, dated 10/2016. The slip also includes a QR code, IBAN numbers, and a signature line. A large red diagonal line is drawn across the entire form, indicating that this payment method is being rejected or is expensive.

UPN QR - potrdilo	
Ime plačnika Janez Novak Dunajska 1 1000 Ljubljana	Koda QR 
Namen in rok plačila Plačilo najemnine 10/2016, 15.11.2016	IBAN plačnika Reference plačnika Ime, ulica in kraj plačnika Janez N Dunaj Ljubljana
Znesek EUR ***81,05	Znesek EUR ***81,05
IBAN in referenca prejemnika S156 0510 0801 0486 080	Koda namena RENT
Ime prejemnika Novo podjetje d.o.o. Lepa cesta 15 3698 Loški Potok	Namen in rok plačila Plačilo najemnine 10/2016
	IBAN prejemnika S156 0510 0801 0486 080
	Ime, ulica in kraj prejemnika Novo podjetje d.o.o. Lepa cesta 15 3698 Loški Potok
	Datum plačila 15.11.2016
	Rok plačila 15.11.2016
	UPN QR
	Podpis plačnika (neobvezno žigi)

LOWER FREQUENCIES AND EASE OF USE

Koledar odvoza odpadkov

OKIŠKEGA ULICA 30, LJUBLJANA

Koledar odvoza

SMS opomnik

Zbiralnice

▼ Urniki

[Urniki odvoza odpadkov](#)

[Urnik odvoza kosovnih odpadkov](#)

[Urnik premične zbiralnice](#)

[Delovni čas zbirnega centra Barje](#)

[Delovni čas zbirnega centra Povšetova](#)

[Novo iskanje](#)

2021

OKTOBER
1 pe
2 so
3 ne
4 po
5 to MKO BIO
6 sr
7 če EMB
8 pe
9 so

NOVEMBER
1 po
2 to MKO BIO
3 sr
4 če EMB
5 pe
6 so
7 ne
8 po
9 to MKO BIO

DEC
1 sr
2 če
3 pe
4 so
5 ne
6 po
7 to
8 sr
9 če

TBILISIJSKA ULICA 40, LJUBLJANA

Koledar odvoza

SMS opomnik

2021

OKTOBER
1 pe EMB
2 so
3 ne
4 po PAP
5 to BIO
6 sr
7 če MKO
8 pe EMB
9 so
10 ne

NOVEMBER
1 po PAP
2 to BIO
3 sr
4 če MKO
5 pe EMB
6 so
7 ne
8 po
9 to BIO
10 sr

RESIDUAL COMPOSITION ANALYSIS

	Mešani odpadki iz gospodinjstev	Delež 2016	Delež 2017
1	Plastika (LD-PEN vrečke, PP, PET, HD-PE)	11%	10,08%
2	Ostala plastika (čevlji, PVC, gume, jogurtovi lončki)	8%	11,13%
3	Tetrapak	1%	0,99%
4	Tekstil in obleke	8%	7,67%
5	Papir	4%	6,83%
6	Nepakirani papir (časopisi, revije, reklame)	3%	3,88%
7	Karton	4%	3,59%
8	Papirnati robčki, papirnate brisače	6%	11,08%
9	Plenice	10%	10,34%
10	Magnetne kovine	2%	1,53%
11	Nemagnetne kovine (barvne kovine, pločevinke)	2%	2,31%
12	Steklo	3%	2,29%
13	Biološki odpadki, veje	15%	10,91%
14	Obdelan les	2%	1,83%
15	Elektronika, nevarni odpadki, drugo	1%	0,87%
16	Ostalo (večinoma BIO in droben material)	18%	10,91%
17	Inertni odpadki (kosti, keramika, porcelan, kamni)	2%	2,11%
	Skupaj	100%	100%

COMMUNICATION AND ENGAGEMENT

- Multimedial
- Wide reaching
- Reactive
- **Leading by example!**
- Not only waste related



Človek, a se ti zdi to v redu?



V mestu in naravi nismo sami.
Masko in ostale odpadke po uporabi
odvržemo v koše in ne na tla. Bodimo vzgled
našim sosesčankam in sosesčanom.
Človek, čuvaj svoje mesto. #človek2020

človek

Človek, a se ti zdi to v redu?



Druženje v parku je lahko res kul.
Še bolj kul pa je, če ostanke in smeti odvržemo v
koš. Bodimo vzgled sosesčankam in sosesčanom.
Človek, čuvaj svoje mesto. #človek2020

človek

Other waste prevention

REUSE center







Kabiné Šerinjón

Veseli smo, da se želiš pridružiti skupnosti, ki si spreminja svojo odnos do oblačil.

[VPIS](#)

[REGISTRACIJA](#)



Graf 5: Prikaz količine nastalih odpadkov na prireditvi »Silvestrovanje na prostem v središču mesta Ljubljana« od leta 2014 do 2018



MISCELANEA

- Green public procurement
- Internal workshops and reuse
- Finding a use for invasive plant species
- ...
- Circular Economy strategy in the works

RECIPE FOR SUCCESS

- (Good) enabling conditions
- Vision and understanding
- (Existing) infrastructure
- Soft measures
- Time



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Questions? Thanks!

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