Reducing and diverting waste: learning from Ljubljana

Jaka Kranjc

World Bank, February 2022
Working at all levels

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

THE REST IS POLLUTION.

#BreakFreeFromPlastic
LJUBLJANA

- Capital of Slovenia
- 293,000 inhabitants
- Best performing capital in Europe in waste management
- European Green Capital 2016 and continuing its vision
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
RESULTS: separate collection

10x increase

69.5% 102 kg residuals vs 150 nationally

Graph 4: Presentation of separated waste collection in MOL and ten municipalities, where waste collection is performed by 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!
LOWER FREQUENCIES AND
EASE OF USE
### Residual Composition Analysis

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

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

*Snagazin*  
*A magazine for a better lifestyle*  
2018

**Interview with Sunita Williams:**  
If we saw Earth from space, we would take better care of it

**Main Story:**  
Fools or visionaries?

**Hygge:** Enjoying experiences rather than things
Človek, a se ti zdi to v redu?

V mestu in naravi rizamo sami.
Mase in ostale odpadke po uporabi odvržemo v kšinc in ne na tla. Bodimo vsež našim sotesčankam in sotesčanom.
Človek, čujejo svoje mesto. Človek je le to.

Človek, a se ti zdi to v redu?

Druševje v parku je lahko res kul.
Se boj kul pa je, če ostank in smeti odvržemo v kšinc. Bodimo vsež našim sotesčanom
Človek, čujejo svoje mesto.
Other waste prevention
Količina odpadkov (v kg) na prireditvi "Silvestrovanje na prostem 2018"

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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<th>2018</th>
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<tr>
<td>1</td>
<td>1140</td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td>8800</td>
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<tr>
<td>3</td>
<td></td>
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<td>8600</td>
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<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>7400</td>
<td></td>
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<tr>
<td>5</td>
<td></td>
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<td>7250</td>
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</tbody>
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Graf 5: Prikaz količine nastalih odpadkov na prireditvi »Silvestrovanje na prostem v središču mesta Ljubljana« od leta 2014 do 2018
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
Questions? Thanks!

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