WINPOL
Interreg Europe

European Union
European Regional
Development Fund

Good practice use of data
Datawarehouse Waste

Jan Frederix

City of Antwerp

14th May 2019
Thematic Seminar 1
“Use of Information & Data in the waste field”

Description:

Problem addressed

- no possibility to make reports across different data sets
- huge data sets – limited xls-capacity
- no data transparency – no global view
- lack of structure
- old fashioned data collection
  - Handwritten notes, bad XLS-files, Pdf
  - Lack of guidelines

Description:

- Context where the practice was introduced
  - waste data – only from our own public service
  - fragmented internal data landscape
  - limited data sharing between systems

    no crossover: only reporting in our own system

    island mentality: Every data set on a separate island

Description:

Objective

- increase insights in:
  - waste prevention/collection/behaviour
- disclose waste management data to stakeholders
- increase transparency
- connect with all types of data – Internet Of Things (IOT)
- visualization in Geographical Information System (GIS) – geographical angle + analyses
- improve financial flows

Implementation:

- Timescale

  Ongoing since October 2016

- Resources needed

  100K EUR annually:

  - Expert analysts
  - Licenses

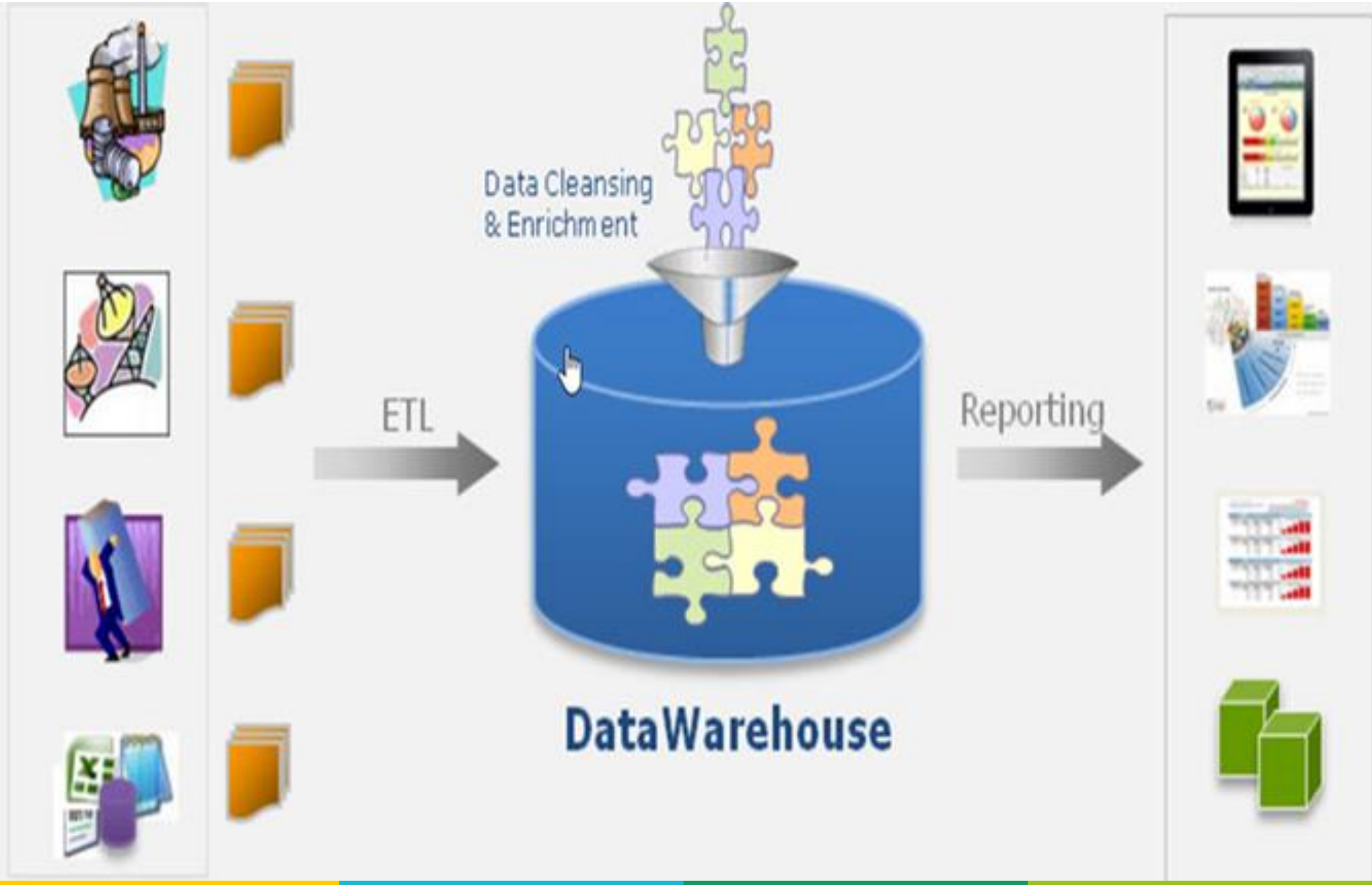
    Business Intelligence tool/ data collection (Cognos)

    Dashboard creator (cumul.io)

Implementation:

Stakeholders involved

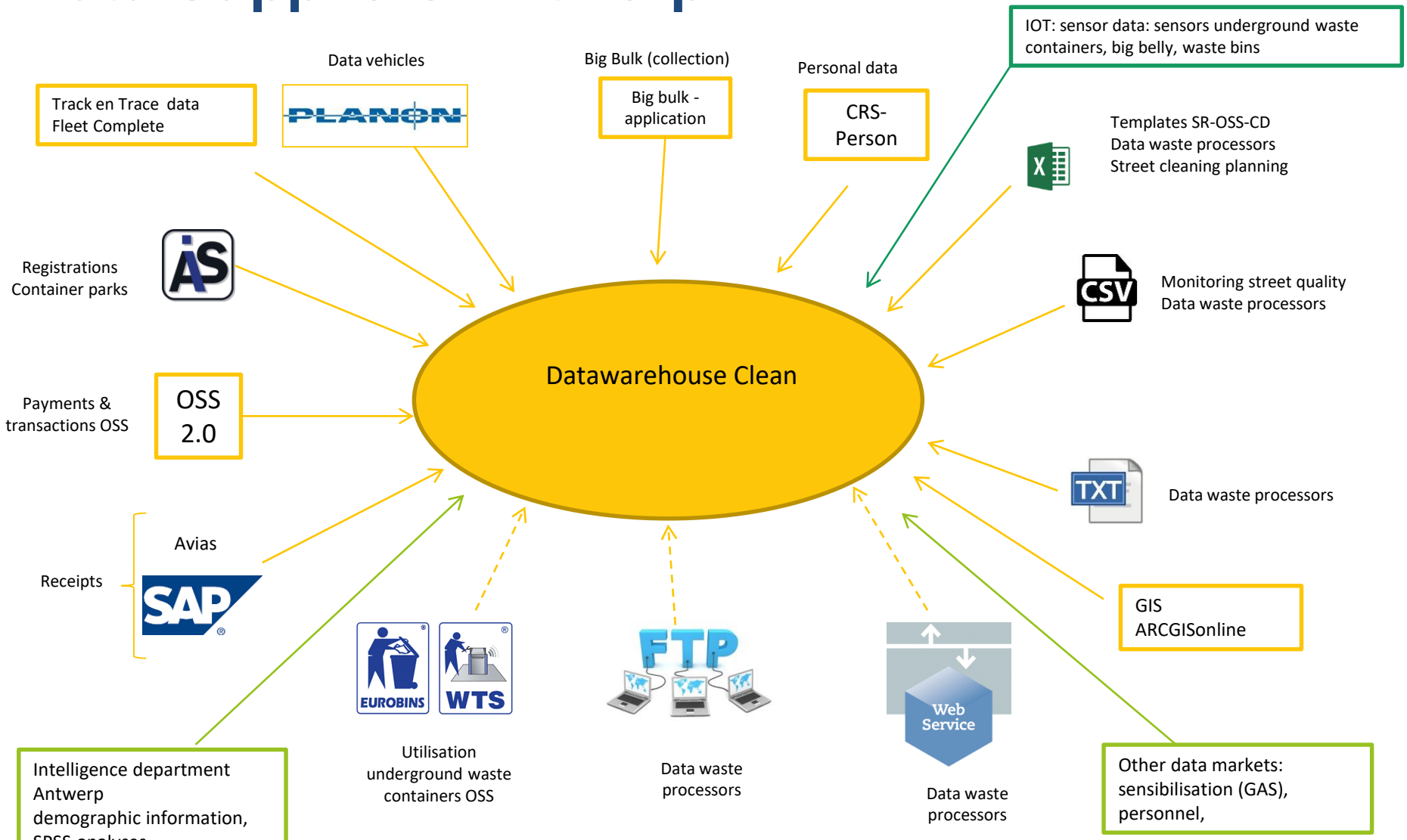
- (local) policy makers
- (local) administration
- waste processing companies
- general public
- researchers


Data Cleansing
& Enrichment
ETL
Reporting
DataWarehouse

Evidence of success:

- Results achieved
  - automated upload data
  - insight in our data suppliers

Data Suppliers Antwerp



Evidence of success:

- Results achieved
  - datawarehouse with several different nodes
  - enriched data from different sources
  - dashboard on different themes that previously weren’t possible

Dashboard illegal dumping

Sluikstortmeldingen laatste 30 dagen

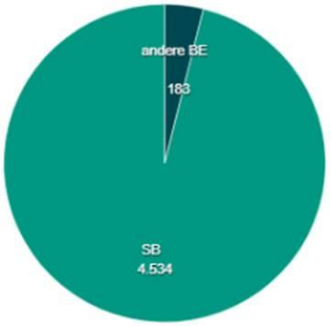
Instroom

4.717 aangemaakte tickets

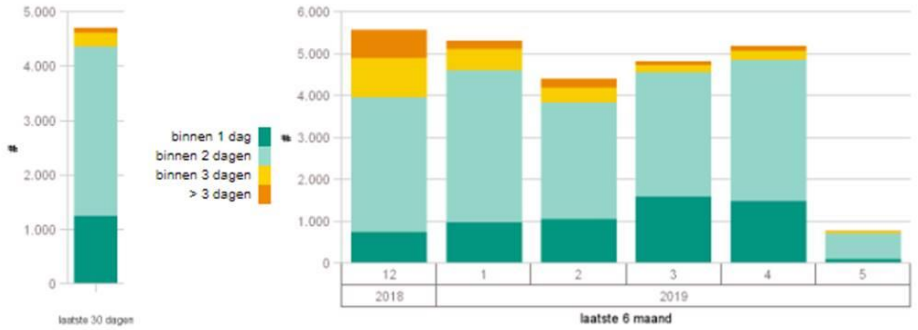
Top 5 onderwerpen

1. openbaar / sluikstort (overig) (4.273)
2. openbaar / bouwafval (215)
3. openbaar / sluikstort naast glascontainer (181)
4. park / sluikstort (overig) (43)
5. openbaar / afgedankte electro (11)

Behandelende entiteiten:



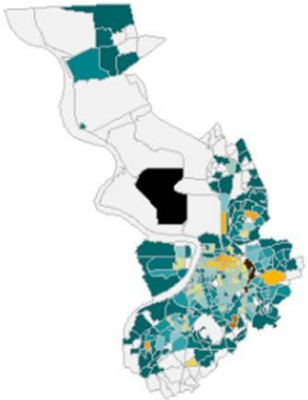
Evolutie # sluikstortmeldingen volgens doorlooptijd



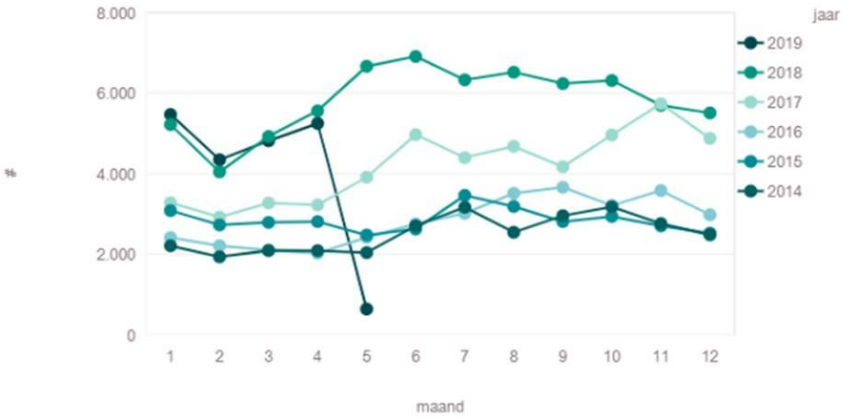
Geolocatie sluikstort

Top 10 straten

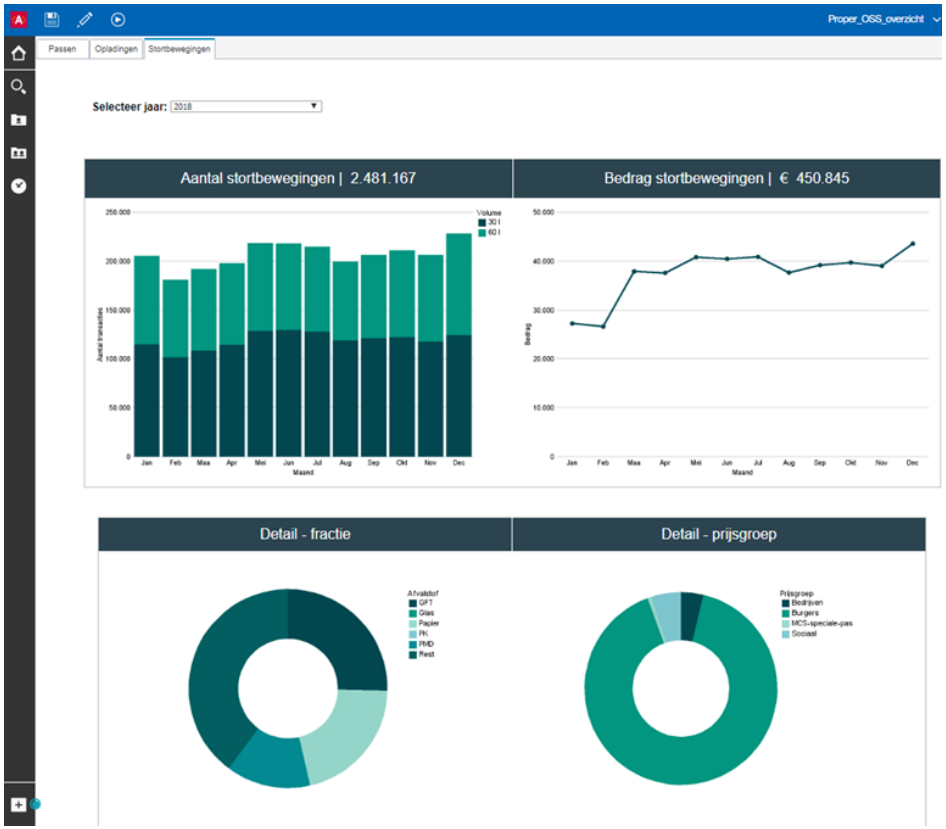
1. GROENENDAALLAAN (62)
2. DAMBRUGGESTRAAT (42)
3. LODEWIJK VAN BERCKENLAAN (36)
4. PAARDENMARKT (33)
4. TURNHOUTSEBAAN (33)
6. BREDABAAN (32)
7. VAN WESENBEKESTRAAT (30)
8. DE BOSSCHAERTSTRAAT (29)
8. DIKSMUIDELAAN (29)
8. JAN DE VOSLEI (29)
8. LANGE BEELDEKENSSTRAAT (29)

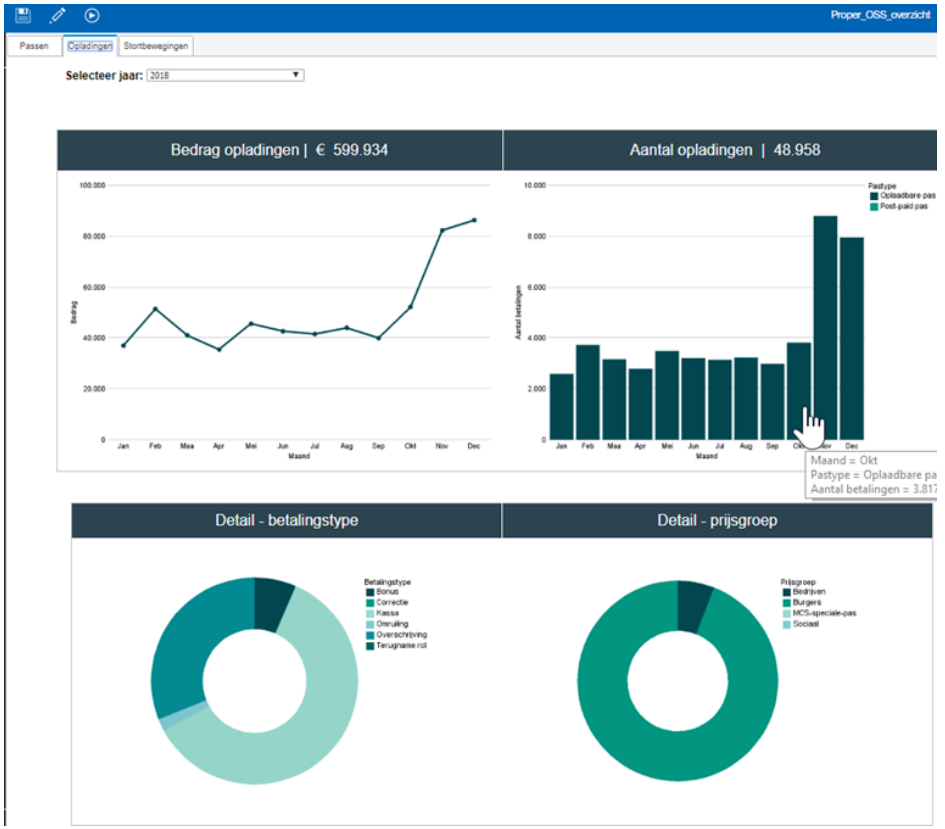


Evolutie # aangemaakte sluikstortmeldingen



Dashboard underground waste containers





Evidence of success:

- Results achieved

  Stakeholders acceptance

  - increased transparency

    Administration & policy makers satisfied
  - quicker response time with one single data source
  - many researcher requests

    IOT,…
  - surcharge reporting

    adapting routes (safety & insurance)

Lessons learned:

- Key success factors
  - improved data quality
  - data supply to improve operations
  - better insight in costs, better financial control
  - no more stand alone systems
  - dynamic dashboards

Lessons learned:

- Negative aspects
  - extreme focus on data collection
  - some manual input left

Lessons learned:

- Challenges
  - disclose GIS
  - disclose other databases

    enforcement, mobility
  - Internet Of Things (IOT)

    realtime data vs policy making / analyses
  - GDPR
  - automatic uploading (some waste processors still manual)

Contact details:

Antwerp City Maintenance

Koen Bogaert
Head of Strategic Policy and Information cell
+32 3 338 22 18
koen.bogaert@antwerpen.be

Jan Frederix
Manager Underground Waste Containers
+32 3 338 21 54
jan.frederix@antwerpen.be

WINPOL

Interreg Europe

European Union
European Regional
Development Fund

Thank you!

Questions welcome

www.interregeurope.eu/winpol