

Information
Technology for
Practice 2018

INFORMATION TECHNOLOGIES IN THE CONTEXT OF NEW EUROPEAN UNION LEGISLATION

Ing. Anežka Podlasová, Ing. Petr Šikýř, MBA,
Ing. Martin Šanda, Mgr. Ing. Drahomír Foltan

Content

INTRODUCTION

EUROPEAN
LEGISLATION

IT IN WASTE
MANAGEMENT

CONCLUSION

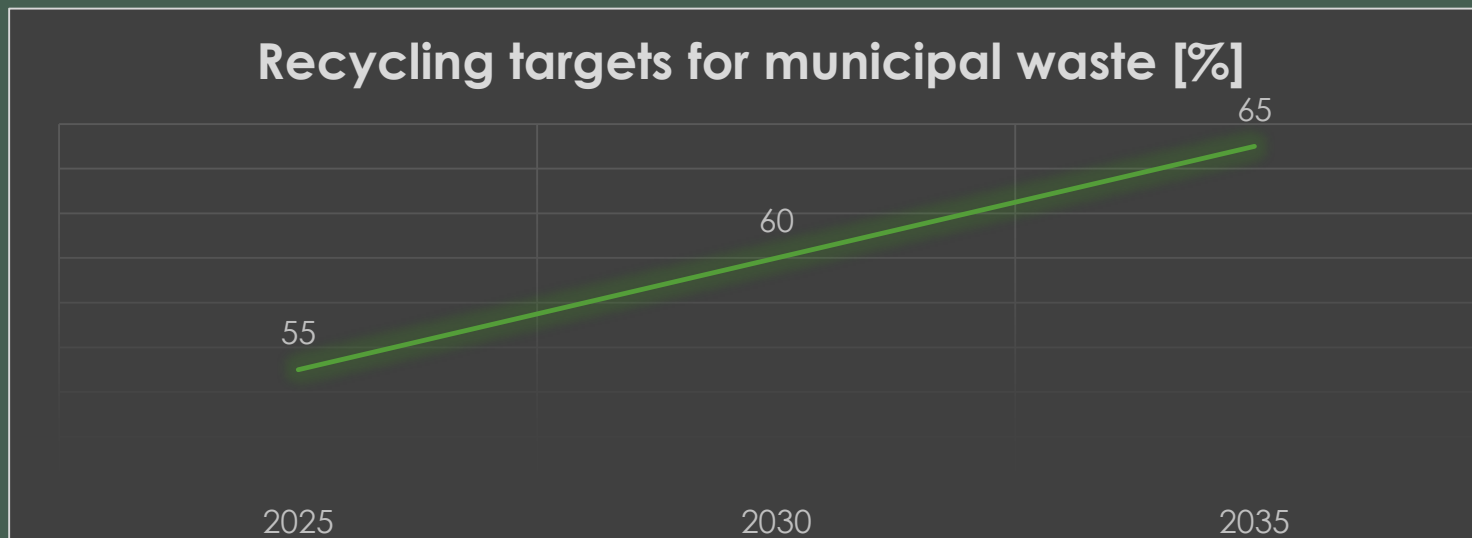


European legislation

- **Circular Economy Package (CEP):**
 - released at the end of **2015**;
 - approved and published on **22 May 2018**;
 - entered into force on **4 July 2018** (*From that date, each member state has exactly twenty-four months to implement these directives into their national legislations.*).

Circular Economy Package

- One of the major innovations in the context of this package is the introduction of limits for landfilling of recyclable municipal waste and setting targets for its recycling.
- The municipal waste landfill rate must not exceed a **maximum of 10%** of the total amount of produced municipal waste.



LINEAR ECONOMY



CIRCULAR ECONOMY



Strategy for plastics in a circular economy

- adopted on 16 January 2018.
- transform the way plastic products are designed, used, produced and recycled in the EU.
- **All plastic packaging should be designed to be recyclable or reusable by 2030.**



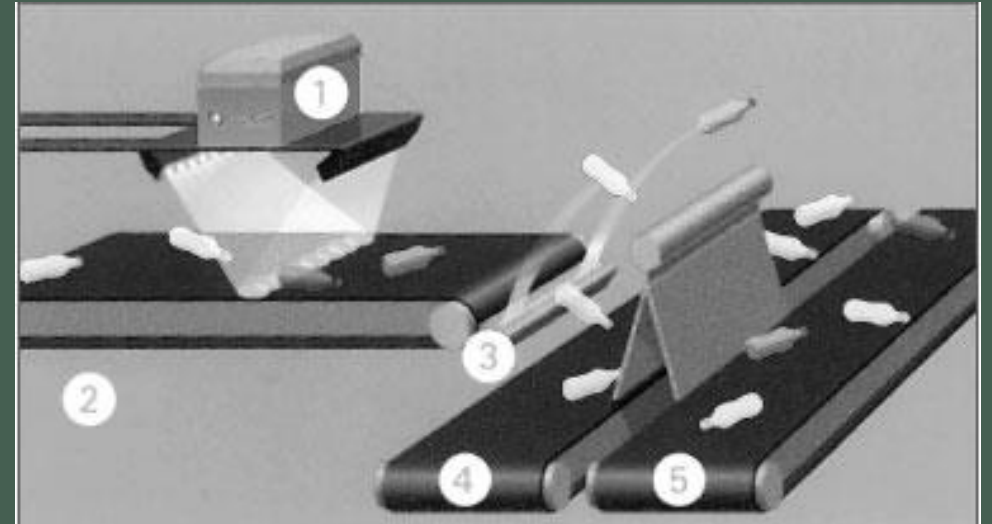
IT in Waste Management

**Process of
final sorting**

**Sorting
process**

Process of final sorting

- **NIR sensors** (Near Infra Red)
 - ability to scan up to 320,000 points and perform 10 million operations per second, allowing it to sort out up to 10 tonnes of waste per hour with a purity of sorting being up to 90-93%
- **VIS sensors**
 - These sensors are able to detect transparent and opaque objects such as bottles made of polyethylene terephthalate (PET) and polyethylene (PE) or glass.

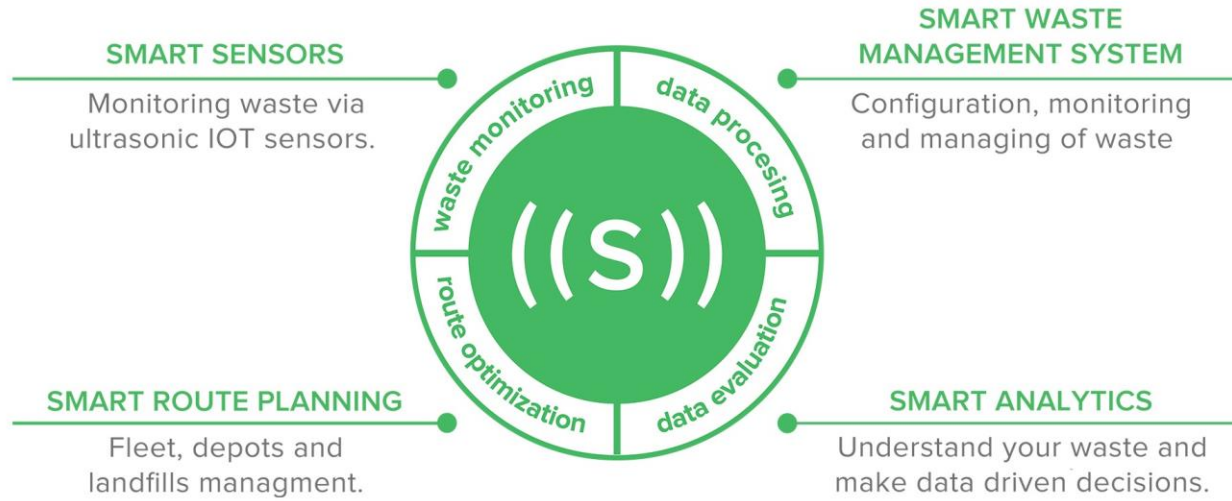


- 1 - scanner;
- 2 - conveyor with input material;
- 3 - air nozzles;
- 4 - secondary transport system with sorted material;
- 5 – residual fraction.

Sorting process

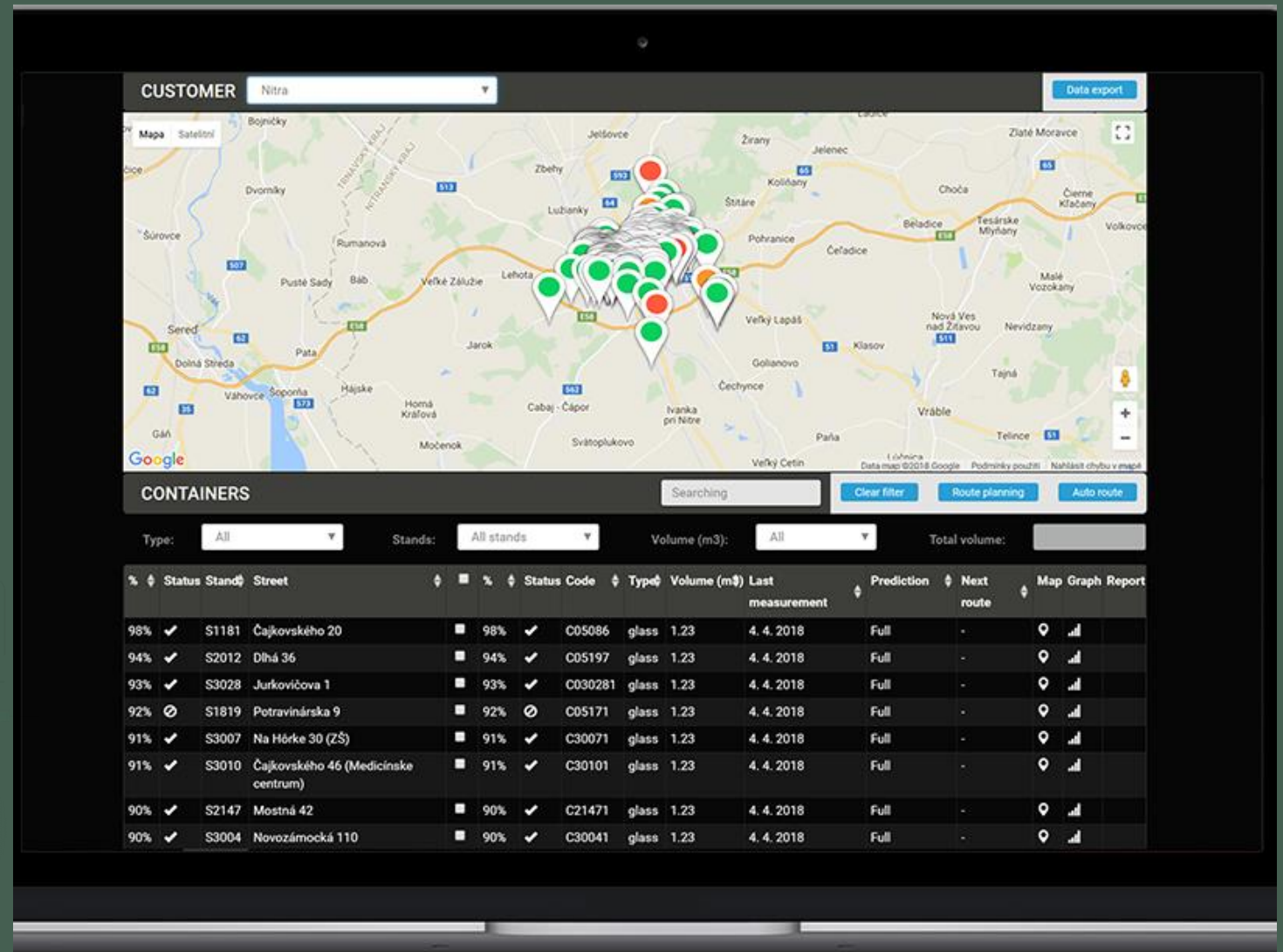
- underground waste containers
- **Sensoneo smart waste management solution:**
 - was developed in 2014 in Slovakia.
 - **is currently deployed in 76 locations on 4 different continents.**





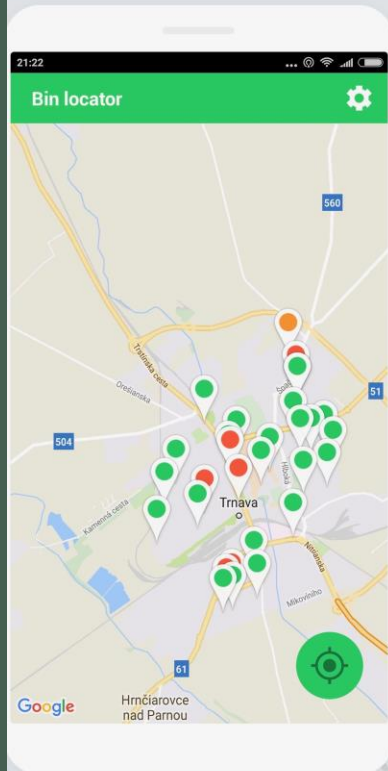
SENSONEO

- Monitoring of level of container's content using unique Sensoneo sensors



Sensoneo Citizen App

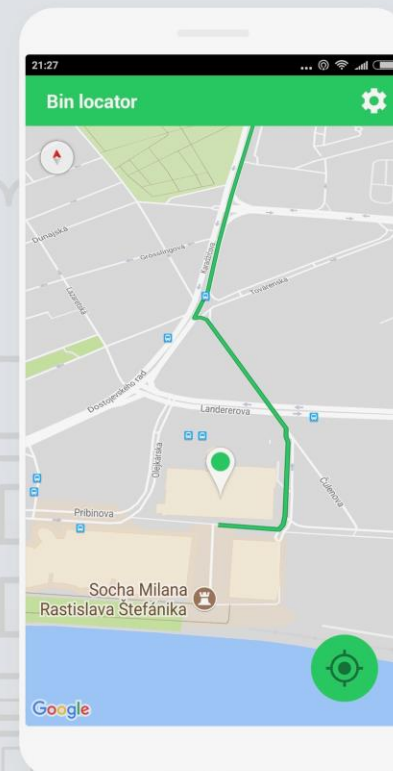
Find nearest available bin



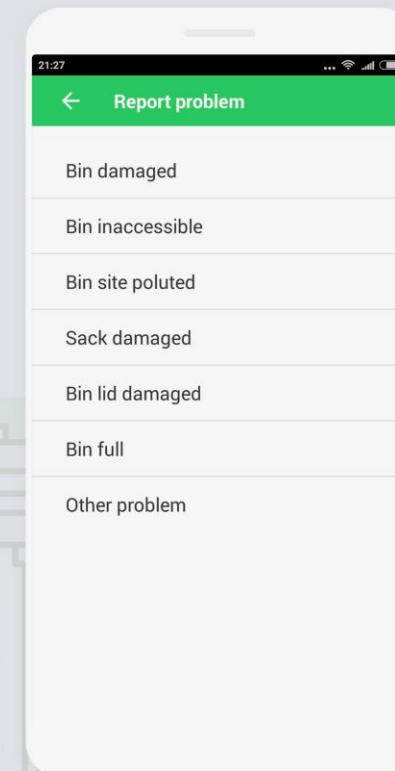
See how full is the bin for your waste type



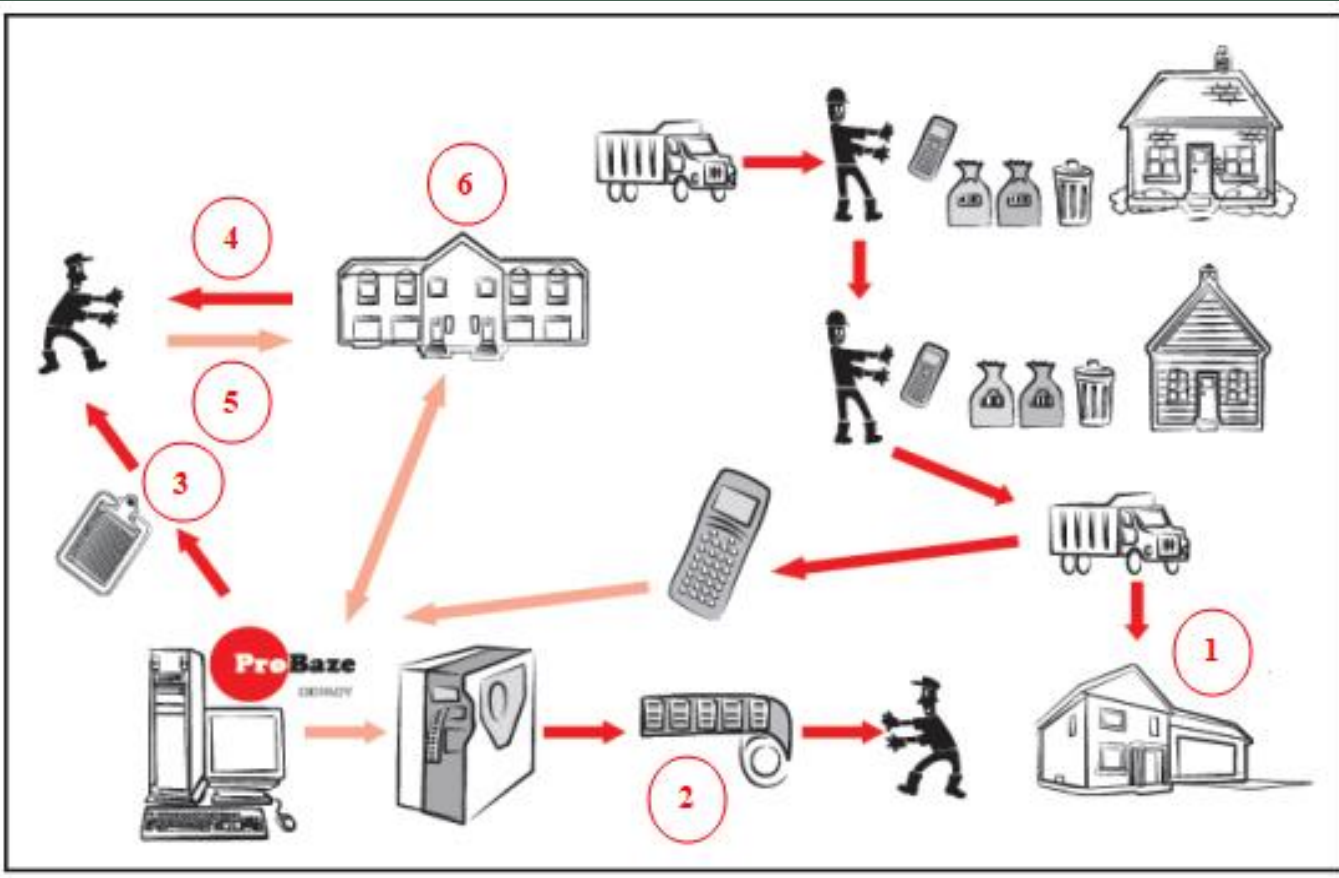
Discover the shortest route to the bin



Report any problem with the bin



Software Probaze ODPADY



- 1 - processor;
- 2 - printing of codes;
- 3 - output assembly;
- 4 - discount;
- 5 - registration;
- 6 - city office.



THANK YOU FOR YOUR ATTENTION

ANEŽKA PODLASOVÁ
anezka.podlasova.st@vsb.cz

POSTGRADUATE STUDENT
FACULTY OF MINING AND GEOLOGY
VSB-TECHNICAL UNIVERSITY OF OSTRAVA