

DR.-ING. LOTHAR STACH

DOSTA



Reporting about:

Collection system and special bin

General description

- The growth of the population and strong migratory movements are causing more and more people to enter the city, the so-called **MEGACITY**. In a tightly densely populated area partly connected for vehicles with rough terrain, enormous amounts of unseparated garbage fall in. In the sense of a resource economy this process **has to be countered with intelligent but environmentally compatible concepts**.
- Disposal and recycling concepts require **collection in containers** and on the roadside for collection **with collection vehicles**. Technology, logistics and organizational frameworks are geared towards household waste management. **This requires a user-friendly interface**.
- Sustainable recycling systems in predominantly urban areas dominated by skyscrapers and large-scale dwellings require an enlightenment of the population. It requires new concepts for the training, the separate collection and removal of the garbage in the **DOOR TO DOOR principle**.
- The challenge is to **integrate all stakeholders into the concept** of resource management in terms of content and thought, while at the same time implementing the challenge of high population density and the disposal-technological movement in this environment.

- The education of the population through the separation of the garbage requires training vehicles, with the help of which these processes are simply illustrated.
- Structures in large cities, or special requirements for collection in industrial areas require new concepts for the collection of electrically driven freight cars, called PULL & PUSH CARTS.
- The collection of value-added materials in door-to-door services promotes employment in developing countries and increases the gross social product; in industrialized countries, the traffic density requires a separate space and time for the collection vehicle, as well as temporary storage in suitable overhead and underground large containers.

Collection options

Seperating waste

**Adapted
truck
system**

**DOOR TO
DOOR
collection
PUSHCA
RT**

**Center points and
storages via
underground
systems**

**One standard for
containers**

Bin options

**2 axle or 4 axle bins in comb
or diamond version**

**Lifter
devices
for
comb
or
diamond**

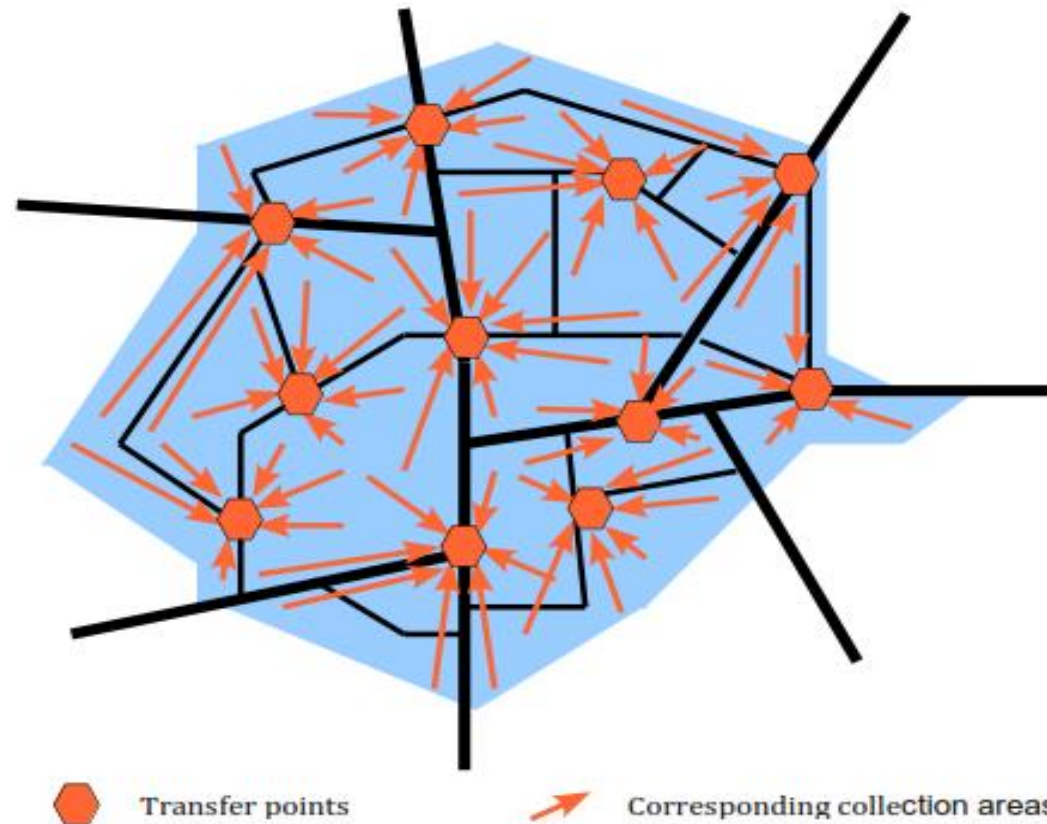
**DOOR TO
DOOR
Recycling
bags**

**Crane or bilateral side
loading systems or
SIDE LOADER /
FRONT END LOADER**

**One standard for
containers**

Concept

1. Definition of logistic points via *distance, volume, density*
2. Definition of storages via *kind of waste, kind of bin sizes*
3. Definition of waste collection vehicles



- Implementation BRING SYSTEM to drop-off points / underground containers
- Implementation DOOR TO DOOR separate collection / training of collection staff
- Implementation STANDARIZED BIN SYSTEM; required for efficient collection and recycling concepts
- One interface between container system, underground system and collection truck
- Transfer points instead of transfer stations – intermediate storage in big containers, if possible, as underground solutions
- Specification waste collection trucks with highest legal payload, prepared for transfer in recycling stations, incineration plant

Implementation household concept

- **General description BRING system**
- **General description DOOR TO DOOR system**
- **Definition of technical parameters for satellite mobiles**

Implementation city point concept

- **Concept for transfer points and storages**
- **Concept for container system**
- **Concept for collection vehicles in combination with satellite mobiles**

Implementation collection and transport

- **Concept collection trucks and bins**
- **Concept storage points and transfer points**
- **Concept tender for most qualified bidder / procurement**

Amount of waste on one hand, and the traffic density on other hand requires a separate collection of time and places to the rhythm of the collection vehicle...

It follows:

- DOOR TO DOOR or *BRING PRINZIP***
- temporary storages/ transfer point with big containers***
- one container system uniformly usable***
- over & underground design useable***
- no transfer stations***
- two types of collection trucks, 1 for bulky waste, 1 for household waste***

Solution proposal

Electric driven satellites vehicle for 2 axle and 4 axle bins



Storage and transfer point



Solution proposal

Truck type & bin combination for different kind of waste



SIDE LOADER



60l



1700l



2,4 cbm



underground 3,0 cbm



REAR LOADER



60l



1700l



5 cbm



10,0 cbm



Looking forward in projects! Thank you for your intention!