Supported by:

Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

based on a decision of
the German Bundestag

2023

EcoPontes Logistical Concept

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1 Introduction to the logistics concept

1.1 Main issues on collection and logistics

- The logistics system must work reliably under the local conditions.
- Transport cost typically make up for the largest part of the overall cost and therefore should be minimized.
- Acceptance of local waste generators can only be achieved if logistic system meets the expectations and needs.
- The overall cost (OPEX & CAPEX) must be recovered either through a waste fee and/or the sale of treatment products.
- Trade-off between minimal transport cost and maximum quality of treatment products, needs to be solved for the individual context.

1.2 Aim of EcoPontes logistics concept

- The aim of this standard logistical concept is to establish a logistics system, which over long-term operation allows the minimization of specific transport cost for the different material flows. This is generally achieved by fully utilizing transport capacity.
- EcoPontes operators should strive towards creating regular collection routes and schedules, that make the logistics plannable.
- Collection tours should aim at complete utilization of the available transport capacity in order to achieve optimal specific transport cost.
- In case of large amounts of one specific material stream, compaction on site could be considered, in order to further optimize specific transport cost
- Separately collected material streams should be kept separately during the transport process. In case material is compacted and baled a the EcoPontes collection point, it is possible to transport bales from different materials together, provided that the bales stay together during transport and can be easily separated during unloading.

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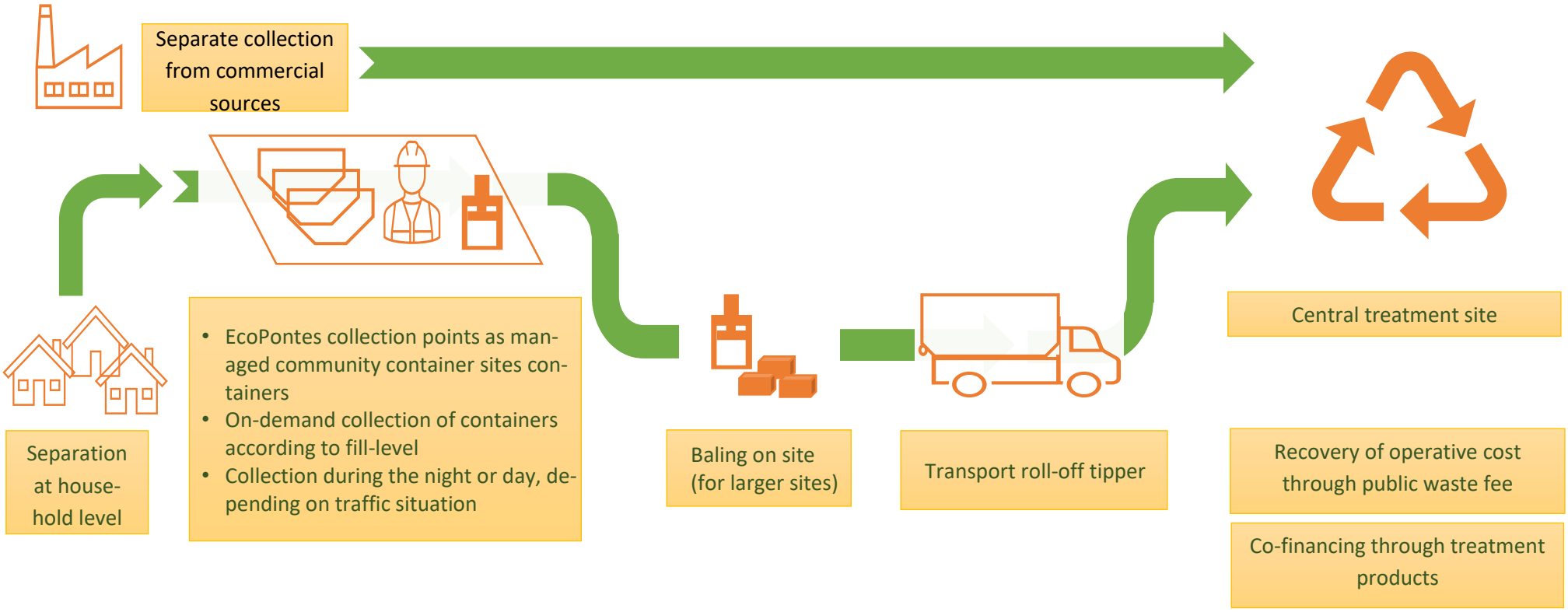
2 Standard logistical concept



3 Planning considerations

3.1 Determining factors for the planning

- Specific weight (bulk density) of materials
- Generation rate for each material type
- Distance and travel time from EcoPontes to treatment site

These are the key determining factors in an economically efficient logistics system. For realistic planning, these need to be identified and regularly (e.g., monthly) verified to ensure long-term viability.

This is done by recoding the material type, total weight and travel time for the collection trip for each location and calculating the averages.

On this basis the assumptions for calculation can be reviewed and corrected if necessary. This procedure is required to determine the actual transport cost.

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ENVIRONMENTAL made PROTECTION in Germany

About Us

Rodiek & Co GmbH is a consulting company in the field of waste management, recycling and circular solutions.

It is our Mission to support the development of a functioning circular economy by providing experience and operational knowhow.

Our target regions are low- and middle-income countries, where waste management and recycling are still in its early stages. Our solutions are tailored to the specific local requirements and needs.

We provide services along the complete value chain from collection over sorting, to treatment and preparation for recycling.

We provide technical support for facilities, including vehicles, machinery as well as material flow management.

We also offer the development of sustainable recycling and energy concepts for local communities, businesses and industries.

As a 100% daughter company of Nehlsen Group, one of the largest German waste management and recycling companies, we can access the operational knowhow and practical expertise from 99 years of waste management and recycling business in Germany.

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