

# Deposy

## The Smart Deposit System



Project of the  
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# The Challenge

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- More than 30 percent of all plastic packaging does not enter an orderly recycling cycle.
- Experts estimate the resulting economic costs at 40 billion dollars per year.
- Microplastic particles produced during the decomposition of plastic entails increasing health risks.



# Problems with Recycling

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**Recycling is the solution. But contamination is a common problem.**

- General waste mixed with recyclable plastic
- Recyclable plastic waste mixed with other waste
- Plastic waste is not sorted when collected
- People do not collect garbage properly
- Cheaper to produce new plastic than recycled plastic.



# Our Approach

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## **Deposy is a Solution**

Deposy is a deposit system with an innovative technical approach to waste management.

## **Incentives**

In order to create a sustainable society, the population should be offered an incentive to collect and sort waste. Therefore Deposy is a system with a positive social impact.

## **New Technology**

Modern technology can sort by type because the products are given a unique identity.

## The Institutional Framework for Deposy



### About the Association

The association BIOTA e.V. promotes the application of new technologies which contributes to the protection of the environment and the climate by:

- Promoting the development of prototypes.
- Education in business, public and private sectors.
- Meetups, events and demonstrations.
- Cooperation with other associations and federations.
- Support of its members in all questions concerning the use of new technologies.
- Representation of interests in the sense of the use of new technologies in applications for the protection of the climate and the environment in the areas of politics, administration, science, economy and the public.

# What can be achieved with it (I)

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## There are several things that make the Deposy system stand out:

**Industrial interfaces:** Deposy manufacturer software for easy creation and maintenance of the data for the product ID

**Deposy NTA:** Accelerates the time to transfer the product ID data provided by the manufacturer software to the product (QR code).

**QR code:** Contains the product ID that is securely stored on the Tangle. It is a closed Deposy ecosystem in which multiple parties can participate. Due to the immutability of the data, these could also be recognized by the state if required.

**Smart Contracts:** The deposit amount is stored unchangeably in the Tangle. With a logic specially developed by Deposy, the deposit amount can be paid out when the product is handed over.

# What can be achieved with it (II)

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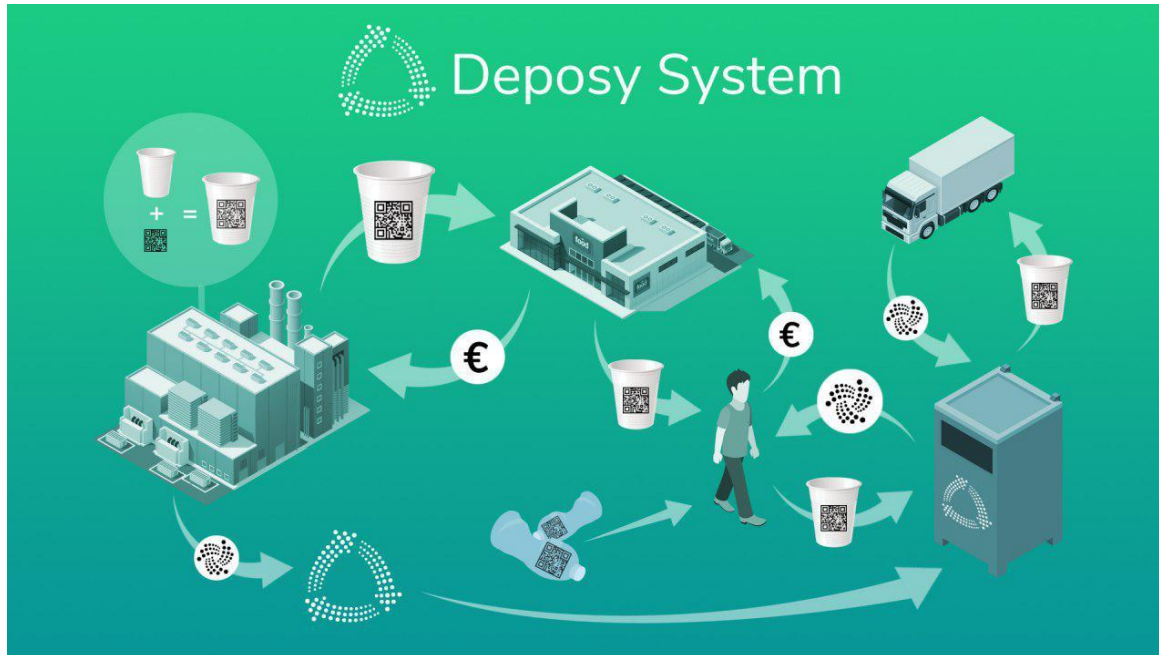
## There are several things that make the Deposy system stand out:

**Deposit payment:** The payment can be made via an interface both in local currency and in IOTA.

**Incentive system:** Depending on the needs of a particular country, a higher amount than the deposit amount can be paid out as an incentive for the user. This can be implemented e.g. through savings of primary energy because of recycling.

**Smartphone app:** The customer can log in to the machine using an easy-to-use Deposy smartphone app. The payment is made either to his IOTA wallet or to his bank account.

# Deposy (Deposit System)



- Manufacturer prints the QR code with the product data on the product.
- Manufacturer sends the product data to the Tangle and the deposit to our Deposy system.
- Retailers buy the product (including deposit) from the manufacturer.
- After it's used the waste is deposited in our 'Deposy' machine.
- The machine reads the QR code and sorts according to the product properties if required.
- The deposit is being paid back to the IOTA wallet or directly in fiat.

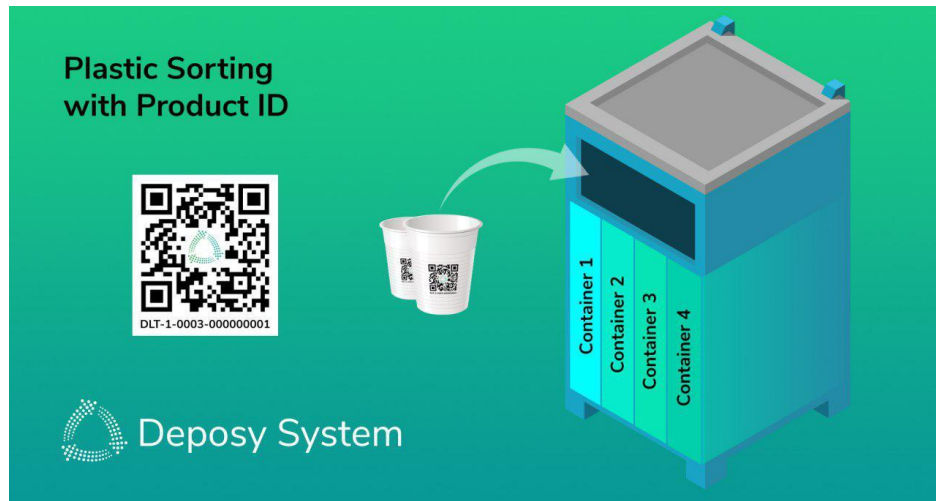


# Details: Product ID

With the Deposy deposit system, we introduce a unique identity for each product.

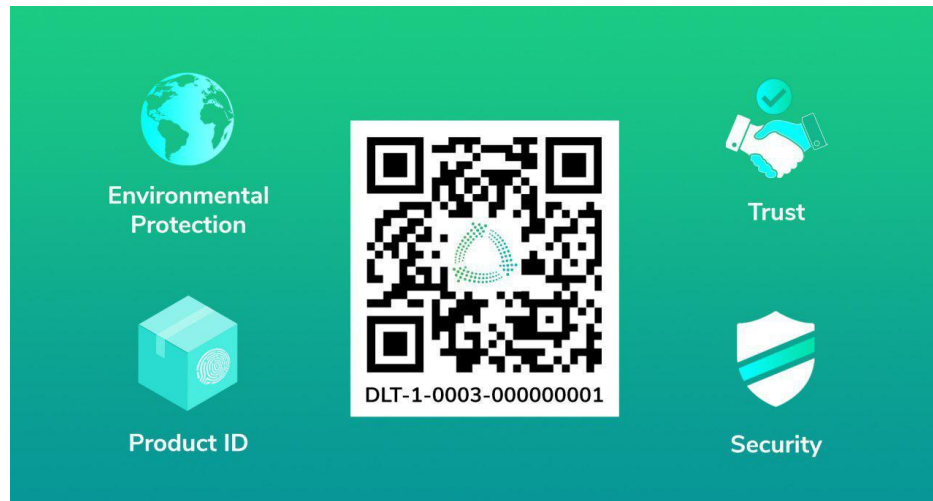
## Why is this important for us?

- The Deposy product identity means that important features of the product are stored safely throughout the life cycle on the Tangle.
- Basically it can be a any kind of information. For our system, first the product properties and e.g. the carbon footprint of waste are important.
- In the future, the carbon footprint can become important to capture the amount of CO2 saved.



# Advantages of the System

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**Product Identity**

**Environmental Protection**

**Traceability**

**Trust**

**Security**

# Cooperations and Collaborations

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# Working Groups

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Bundesministerium  
für Umwelt, Naturschutz  
und nukleare Sicherheit

A project-accompanying working group will be set up next year. This group will consist of representatives from:

**Recycling companies, plastics manufacturers and politicians.**

- The aim is to accompany the progress of the project and to contribute experience and knowledge.
- Thus the systems can be developed directly from the start practically and with the best technology.
- We have already received commitments from several important stakeholders.



# Social Impact for a Sustainable World



## Circular economy

Deposy wants to promote the circular economy. The circular economy is a closed loop, in that it gives back everything which it takes.

## Social system

The 'Deposy' deposit system is intended to encourage consumers to sort and dispense. In order to make the system attractive, the person who sorts and returns the plastic waste receives more money back than was previously paid as a deposit.

