

# Digital Waste Credit Platform



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## Background

Thailand has a low plastic waste recycling rate as the waste collection and sorting process is intensive and expensive for plastic producers and recyclers. Thailand produces 2 million tonnes of plastic waste annually, of which only 0.5 million tonnes or 25% is recycled, ranking Thailand's amongst the top five countries globally that are polluting the ocean with plastics. To address this **Thailand has a Roadmap on Plastic Waste Management (2018-2030) that serves as a framework and direction for preventing and managing plastic waste and promotes circular economy through public-private partnerships.** Meanwhile, there are a growing number of SMEs that are innovating around waste management finance. One of these SMEs is GooGreens, which has partnered with Rittec. GooGreens contributes to tackling Thailand's plastic waste management issue by creating a value chain solution for municipal plastic waste recycling and reprocessing. The process is based on a waste credit app which incentivises households to collect waste while engaging with waste collecting SMEs offering additional income streams.

## Solution Overview

The GooGreens *Digital Waste Credit Platform* combines a smart bins scheme with a waste credit system implemented across three municipalities in Thailand. The waste credit system connects household waste collectors to waste collecting SMEs and ultimately to waste recycling and repurposing plants. Once the households dispose their waste in the smart bins, the waste is tracked, distributed, and reported via the GooGreens application.

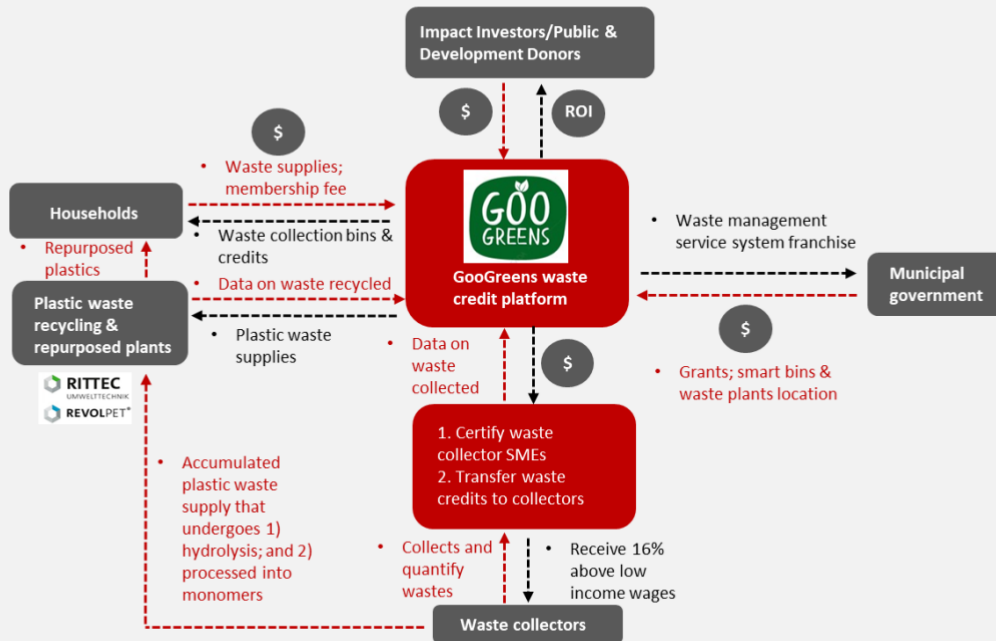
Following the app based data analysis, the platform then transfers waste credits to the individual households which collected the waste. As a result of this waste credit system, certified waste collectors are paid 16% more than comparable Thai lower income wages.

<b>Focus:</b>	Waste Management
<b>Instrument Type:</b>	Access to Finance
<b>Lab Cycle:</b>	Thailand 2021
<b>Product Developer:</b>	GooGreens / Rittec

## Key Features

The solution enlists support and financing from impact financiers, investors and public funds that will allow GooGreens and Rittec to scale waste recycling and waste reprocessing across Thailand. Building on the platform, informal waste collecting SMEs will be certified making them part of the Thai circular economy ecosystem:

1. **The solution combines GooGreen's smart bins placed in residential areas with a mobile-enabled waste credit platform** to calculate the type and amount of plastic waste collected. The waste collection data is then displayed on the app which generates waste credits based on the amount of waste collected and disposed of.
2. **The platform acts a certification body** which certifies informal waste collectors, pays them fair wages while supporting the traceability of waste and creating a network of trusted and certified waste collectors.
3. **The solution leverages Rittec's technology in order to recycle multilayer and single-use plastic waste into value-add plastic building blocks (monomers).** This allows GoGreens to build a holistic waste value chain.



## Target Market

The platform targets real estate managers and green municipalities that are seeking to reduce waste management costs. Currently GooGreens has partnered with three sites in the municipalities of Samut Prakan, Loei, and Nakonsrithammaraj provinces. In these three communities, municipality leaders provide grants and locations for smart bins piloting the platform mechanism. The pilots engage and train waste collectors, waste managers, and waste accountants in order to get familiar with the different steps of the waste credit platform.

GooGreens will generate revenue from selling recycled materials to recycling plants and waste management service SMEs, a waste app membership fee and an overall franchise mechanism to scale the platform.

## Impact Potential

The GooGreens waste credit application aims to unlock finance towards waste management which ultimately increases long term revenue for waste collector SMEs.

With GooGreen’s waste credit platform, plastic waste is reduced by 9,600 kg per year (2020). Using Rittecs revolPET technology, 97% of the PET waste will be recycled into monomers to produce new PET. With this revolPET technology more than 60% of CO<sub>2</sub> emissions are reduced compared to the creation of virgin plastic.



GooGreens in collaboration with Rittec

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SEED Practitioner Labs Climate Finance empower participants during the hands-on and collaborative Labs process to turn major financing challenges into robust prototypes. SEED Practitioner Labs Climate Finance are part of the implementation of “Financing and capacity building for micro and small climate-smart enterprises: Filling the gap of the missing middle”, a project supported by the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety.