



Financing unlocked: Case examples of private investment toward plastic pollution solutions

July 2025

OVERVIEW

The Plastics Circularity Investment Tracker (PCIT) includes a wide range of private investments across circular economy activities, geographies, sources of investment, and deal value. From 2018 to 2024, there were 9,200+ transactions, totaling US\$ 170 billion in transaction value.

The three case examples highlighted here demonstrate the diversity of investments covered,¹ featuring companies across various geographies and focused on different circular economy activities. For each transaction, we aim to showcase its unique investment journey and provide information on the following:

- **Company profile:** An overview of the company's background and its role in plastics circularity.
- **Investment journey:** An outline of the company's growth trajectory, milestones, and how the investment supported progress.
- **Purpose of the investment:** The goal behind the funding and its alignment with circularity objectives.
- **Investment details:** The amount and source of capital.
- **Key learnings:** Actionable insights for other investors or investees, including challenges and success factors.

¹ Note: The case examples have been compiled by The Circulate Initiative based on publicly available sources. The Circulate Initiative did not verify the information with the involved companies, and users should independently verify the details.

1. Bluepha

HEADQUARTERS

China

PRIMARY ACTIVITY

Circular Design and Production

WEBSITE

bluepha-en.com

COMPANY PROFILE

Founded in 2016, Bluepha is a biotechnology company that manufactures bio-based materials, focusing on polyhydroxyalkanoates (PHAs), marine-degradable biopolymers designed to replace conventional plastics.

Its first industrial-scale facility was completed in 2022, with an annual capacity of 5,000 tonnes of Bluepha resins, with plans to expand its production capacity to 75,000 tonnes annually.

INVESTMENT TIMELINE

2017

Received [US\\$ 725,000](#) in seed funding after winning a Cleantech Startup competition.

2019

Completed a [US\\$ 8.7 million](#) Series A funding round, with investors including Green Pine Capital Partners, Frees Fund, Qianhai Fund of Funds, and ZGC Group participating.

2022

[US\\$ 235.4 million](#) raised in a Series B3 funding round, jointly led by Genesis Capital and the China State-owned Enterprise Mixed Ownership Reform Fund.

2024

[Collaborated with TotalEnergies Corbion](#) through a strategic agreement in 2023 to develop sustainable fibers to address challenges in the dyeing process of blended fibers.

2018

Raised [US\\$ 1.5 million](#) in seed funding from Leaguer Venture Capital and Frees Fund.

2021

Raised [US\\$ 30.9 million](#) in a Series B funding round with several investors, led by Lightspeed China Partners and GL Ventures. Existing investors also participated. Funds will be used to build a plant for the production of its PHA resin.

[US\\$ 66.4 million](#) received in a Series B2 funding round for investment in the plant. The funding round was led by Country Garden Venture Capital.

2023

Received [US\\$ 58 million](#) in the fourth tranche of Series B funding, led by Zhongping Capital.

1. Bluepha

KEY INSIGHTS

1 Rapid scaling driven by diverse funding sources

Bluepha's investment journey exhibits a relatively short timeframe from early-stage funding to subsequent significant capital rounds. Initial seed funding of US\$ 725,000 and US\$ 1.5 million in 2017 and 2018, respectively, was followed by an US\$ 8.7 million Series A funding round. In 2021, Bluepha secured a Series B funding round of US\$ 30.9 million.

The consistent and increasingly larger investments in Bluepha were supported by a growing number of diverse investors, including venture capital firms and government-backed funds. This demonstrated investor confidence in Bluepha's technology and its potential for scale-up, enabling the company's transition from research to large-scale production.

2 Clear strategic focus demonstrated by establishment of large-scale infrastructure

Bluepha's commitment to manufacturing infrastructure was clear from the start, with significant funds from the initial Series B funding round allocated to building a plant for PHA production. Subsequent Series B tranches were also directed toward the plant's construction, ensuring sustained investment and a clear pathway to commercial viability. The consistent capital injections showcase Bluepha's focus on achieving large-scale production capacity, ensuring the necessary infrastructure is in place to meet demand for its biodegradable polyester.

3 Sustained investor commitment facilitates commercial scale-up and industry partnerships

The consistent participation of existing investors across multiple funding rounds, coupled with the addition of new investors, illustrates a sustained commitment from Bluepha's financial backers. This long-term support from the same investors provided a stable capital base that is crucial for capital-intensive projects such as plant construction, which typically extend over multiple years.

The strategic collaboration with TotalEnergies Corbion in 2024 further demonstrated Bluepha's ability to integrate into the broader industry, signaling a progression from fundraising to the establishment of partnerships with key industry players.

2. Carbios

HEADQUARTERS

France

PRIMARY ACTIVITY

Value Recovery

WEBSITE

carbios.com/en

COMPANY PROFILE

Carbios is a biotechnology company developing and industrializing biological solutions to recycle plastic and textile waste. Carbios develops enzyme-based processes to break down plastic into its basic components, which can then be used to produce recycled polyethylene terephthalate (PET) and new products. Carbios' demonstration plant has been operational since 2021, and construction of the world's first industrial biorecycling plant is expected to resume between June and September 2025.

INVESTMENT TIMELINE

2011

Established by Truffle Capital, a European venture capital firm focused on healthcare, biotech, and fintech.

2013

Raised [€13.4 million](#) in its initial public offering on Euronext Paris.

2014 - 2018

Multiple private placements by investors, including [Bpifrance](#).

2019

Capital subscription of [€10.5 million](#) from Copernicus AM, Business Opportunities for L'Oréal Development (BOLD), Michelin Ventures, and Truffle Capital, primarily to finance an industrial PET biorecycling demonstrator.

2021

Raised [€114 million](#) through its second public offering on Euronext Paris to primarily fund the construction of a PET-enzymatic recycling reference unit, research and development, and operating expenses.

2023

Raised [€141 million](#) on Euronext Paris to primarily finance the construction of a PET biorecycling plant in Longlaville, France.



2. Carbios

KEY INSIGHTS

1 **Steady injections of capital sustain growth over a decade**

Carbios' investment journey is characterized by steady and incremental injections of capital. In its early days, Carbios secured development capital, which allowed it to advance its research and development. Carbios gradually attracted broader interest from private investors, which led to an initial public offering in 2013. This consistent capital flow over the past decade culminated in two large capital raises in 2021 and 2023 totaling over €250 million, showcasing Carbios' transition from research and development to the industrial phase in 2021.

2 **Strong government support creates an enabling regulatory environment**

Carbios benefited from strong French government support in the form of direct funding and an enabling regulatory environment that prioritizes circular economy innovations. Bpifrance, the French public sector investment bank, participated in early funding rounds, which provided vital and timely development capital and reinforced investor confidence in the company.

Carbios also operated within a supportive policy framework in France that set a clear direction toward a circular economy, aligning the company's purpose and operations with both national and broader European environmental goals. This alignment lowered the risk for private investors and incentivized investment in the company.

3 **Investments from corporate venture arms establish commercial viability**

In 2019, investments from corporate venture arms such as Michelin Ventures and Business Opportunities for L'Oréal Development (BOLD) signaled strong industry interest in Carbios' technology.

These brand investments helped position the company as a credible industry player, paving the way for the large-scale capital raises in 2021 and 2023 aimed at financing its first PET biorecycling plant and an expansion into new polymers such as polyamide.

3. PureCycle Technologies

HEADQUARTERS

United States

PRIMARY ACTIVITY

Value Recovery

WEBSITE

purecycle.com

COMPANY PROFILE

PureCycle Technologies uses a patented recycling process, developed and licensed by Procter & Gamble, to recycle polypropylene (PP) plastic waste. The process removes color, odor, and other contaminants from PP to produce resin with near-virgin quality.

The company's first commercial-scale recycling facility in Ironton, Ohio, began operations in 2023, and in 2025 PureCycle announced plans to expand capacity by one billion pounds by 2030.

INVESTMENT TIMELINE

2017

US\$ 120 million investment to open a small-scale plant.

2019

Secured an [undisclosed loan](#) from Enhanced Capital, which funded the completion and start-up of its Ohio recycling plant.

2021

Raised [US\\$ 30-40 million](#) in additional investments aimed at derisking and expanding processing capacity.

2023

Raised [US\\$ 250 million](#) through the issuance of 7.25% green convertible senior notes (due 2030) to support the build-out of the company's multi-line manufacturing complex in Augusta, Georgia, and for other strategic and general corporate purposes.

2018

[US\\$ 3 million loan](#) from Closed Loop Fund to launch its first facility in Ironton, Ohio.

2020

Closed [US\\$ 90 million](#) in equity private placements.

Raised [US\\$ 250 million](#) from a bond offering to build its commercial-scale recycling plant in Ironton, Ohio.

Issued [US\\$ 60 million](#) in convertible notes.

2022

Completed a [US\\$ 250 million](#) private equity capital raise with investors including Sylebra Capital, Samlyn Capital, and SK Geo Centric.

PureCycle and SK Geo Centric signed a joint venture agreement to operate the first PP recycling plant in Asia.

2024

Received [US\\$ 90 million](#) from a series of transactions with Sylebra Capital and Samlyn Capital.

3. PureCycle Technologies

KEY INSIGHTS

1 Early-stage investments support scale-up of first commercial facility

Early-stage support was critical to kickstart PureCycle's investment journey. An initial US\$ 120 million investment was followed by a US\$ 3 million loan by the Closed Loop Fund in 2018, and additional financing from Enhanced Capital in 2019. These helped complete the development of PureCycle's first commercial-scale PP recycling facility in Ironton, Ohio, and begin operations. The early-stage investments enabled PureCycle to develop and demonstrate the feasibility of its technology, positioning the company for further investment and expansion.

2 Large-scale institutional investment accelerates scale-up

PureCycle's ability to consistently raise significant investments has been central to its growth. In 2020, the company raised US\$ 250 million through a bond offering to fund the Ironton plant, followed by a US\$ 250 million private equity round in 2022 led by institutional investors including Sylebra Capital, Samlyn Capital, and SK Geo Centric. This capital supported the development of a second, multi-line manufacturing complex in Augusta, Georgia, enabling the expansion of the company's processing capacity and geographic reach.

The scale of investment and backing from institutional investors signaled market confidence in PureCycle's long-term potential to supply high-quality recycled PP at commercial scale and to secure a stable capital base for future expansion.

3 Joint venture facilitates expansion into global markets

In 2022, PureCycle signed a joint venture with SK Geo Centric to build the first PP plant in Asia, marking a major milestone in its international growth strategy. This was followed by US\$ 250 million raised through green convertible bonds in 2023 and US\$ 90 million in follow-on funding in 2024 from long-term institutional backers including Sylebra Capital and Samlyn Capital, highlighting continued investor confidence in the company.

These continued investments reflected belief in PureCycle's long-term growth potential and signaled its growing credibility as a leader in circular plastics.

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The Circulate Initiative's Plastics Circularity Investment Tracker provides data for private investments in plastics circularity globally. Investment data is available by circularity activity, geography, and investment source for deals that took place between January 1, 2018 and December 31, 2024. [Access the tracker here.](#)

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