
Seven Companies from Different Industries Launch Collaborative Bio Material Transformation (BMT) Initiative Fully Utilizing 100% of Plant-Based Materials

Building an Ecosystem to Realize a Circular Economy and Address Societal Issues Such as the Protein Crisis

S-Bridges Corporation, a venture company originating from the National University Corporation Shizuoka University (CEO: Takashi Nagato), has established an ecosystem in collaboration with seven companies from various industries to advance the Bio Material Transformation (BMT) business, which fully utilizes 100% of plant-based materials.

This innovative ecosystem opens the door to realizing a fully circular economy, which was previously considered challenging, and aims to address societal issues such as the protein crisis, food waste, and carbon neutrality.

Starting with the collaboration of these seven companies, the BMT business will be expanded into the market. The seven companies initiating this effort are Aisin Corporation, Asahi Soft Drinks Co., Ltd., Denka Co. Ltd., Kagome Co., Ltd., Organo Food Tech Corporation, Teijin Frontier Co., Ltd., and S-Bridges Corporation.



Extracting, separating, and fully utilizing all components from botanical materials. A trademark of S-Bridge.

Background

Due to the global population explosion, it is projected that a protein crisis will emerge by 2050. Furthermore, the United Nations has adopted a goal within the framework of the SDGs to halve food waste by 2030. However, while many companies are conducting research, they have yet to identify effective solutions, with efforts limited to the upcycling of certain products. To realize a fully circular economy, it is necessary to establish new value chains encompassing production, logistics, and sales, and multiple solutions will be required.

Purpose of the Seven-Company Collaboration (BMT Team)

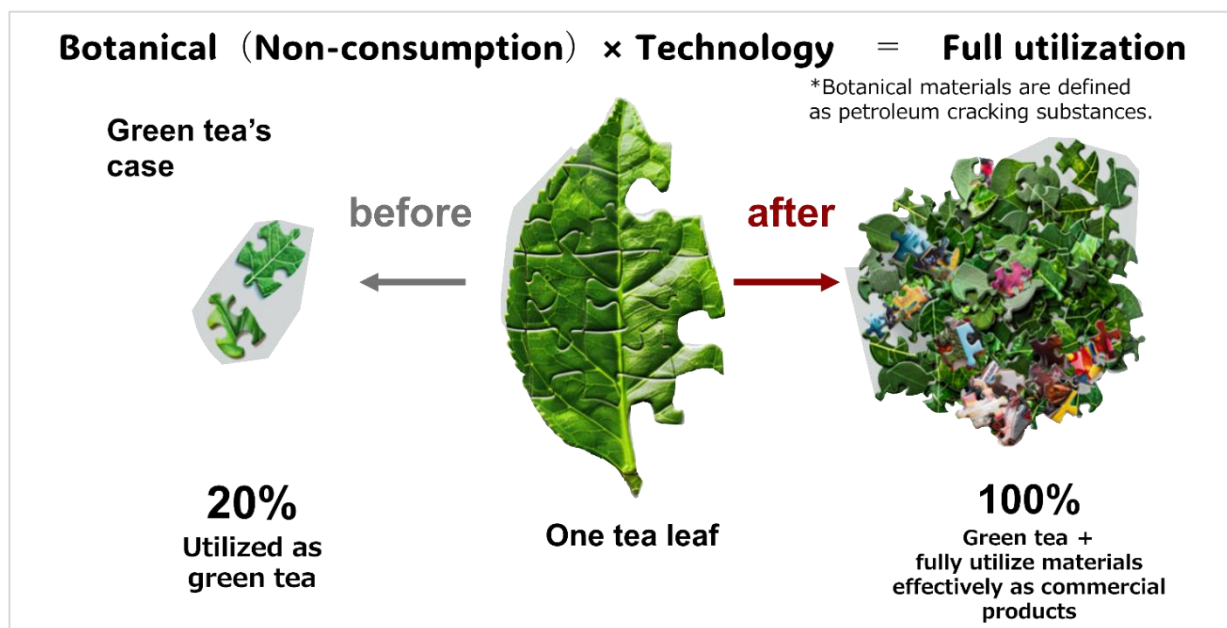
S-Bridges has developed a technology to extract all unused components from plants. As an initial effort, it conducted open innovation to fully utilize all components of tea leaves. Companies that recognized the value of this approach came together to form the BMT Team, a cross-industry collaboration.

The BMT Team comprises beverage and food companies that handle plant-based materials, companies with separation technologies for extraction, and fiber, chemical, food material, and transportation equipment companies that utilize the extracted components. By leveraging the strengths of each company, a new value chain can be established, enabling the realization of a circular economy.

Complete Extraction Technology

Using proprietary technology optimized for the full extraction of plant components (enzymes and wet grinding), the cell walls inside leaves are softened, followed by grinding and separation, dramatically enhancing the extraction efficiency and enabling complete extraction. This technology makes it possible to extract and utilize proteins and other components contained within the cytoplasm.

For example, in the case of tea leaves used in beverages, traditionally, only about 20% of the components present in the tea leaves are utilized. By achieving complete extraction, it is now possible to aim for 100% utilization of the components. Moreover, this technology is not limited to tea leaves; it can be applied to a wide variety of plants.

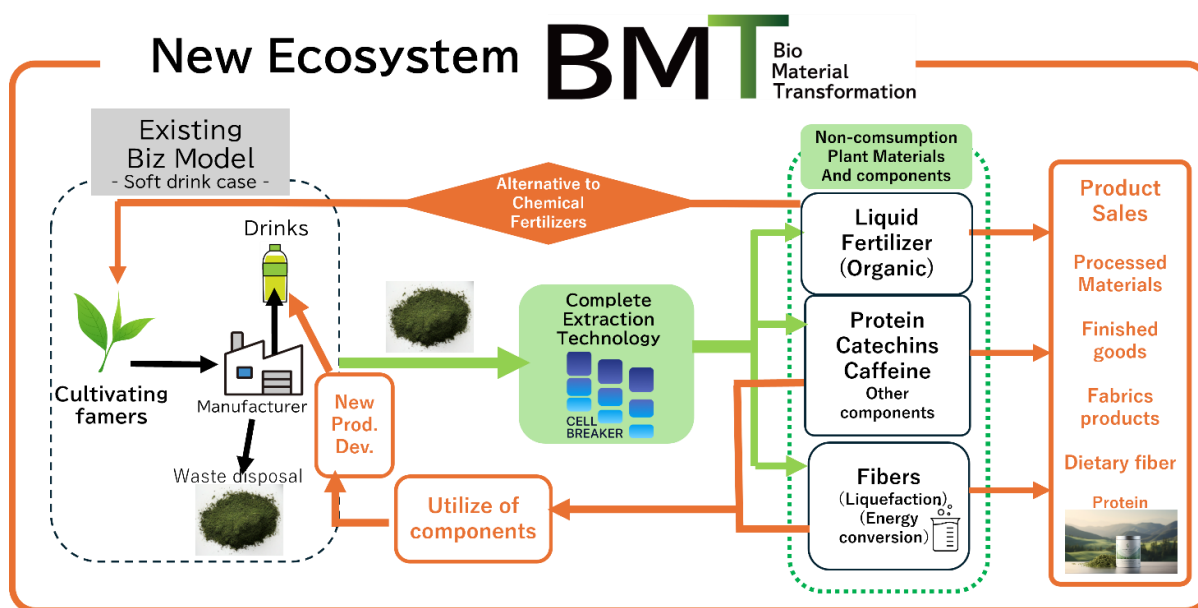


Initiatives Originating from Shizuoka

The BMT Team is launching its first circular economy project in Shizuoka, focusing on tea leaves. While tea leaves contain proteins, fibers, and minerals, traditional usage has been limited to only a portion of their water-soluble components utilized in beverages.

The BMT Team is leveraging the strengths of each participating company to discuss the development of new products. Moving forward, new products utilizing the extracted components and materials will be announced.

Through this initiative, the team aims to fully utilize the previously untapped components of tea leaves, contributing to an increase in protein self-sufficiency and a reduction in the energy used for food waste disposal.



Roles of Collaborating Companies.

Companies	Roles
Aisin Corporation https://www.aisin.com/jp/	Study on the Development of Technologies for Producing Valuable Components from Unutilized Plants Using Mechanochemical Techniques.
Asahi Soft Drinks Co. Ltd. https://www.asahiinryo.co.jp/	Implementation of Complete Extraction Technology.
Denka Co. Ltd. https://www.denka.co.jp/	Development of Biomass-Derived Chemical Products Aimed at Upcycling Extracted Components from Unutilized Plants.
Kagome Co. Ltd. https://www.kagome.co.jp/	Development of food products utilizing unused resources such as tomato pulp, vegetable fibers, and tomato stems and leaves.
Organo Food Tech Corporation https://oft.organo.co.jp/	Product design, separation and purification, application proposals, and domestic and international sales of proteins, dietary fibers, and other functional components for food use.
Teijin Frontier Co. Ltd. https://www2.teijin-frontier.com/	Support for the development of various devices related to the extraction and concentration of components from unutilized plants, as well as the development and sales of products using the extracted fibers.
S-Bridges Corporation https://www.s-bridges.com/	Advancement of the Bio Material Transformation (BMT) business, as well as the development and research of complete extraction technologies for plant components.

Vision for the Future

In Shizuoka Prefecture, a BMT Shizuoka team will be formed, consisting of local companies within the region. This team will organically collaborate with the previously established team as well as the regional economy, expanding the scope of plant-based materials and targeted areas while promoting the growth of the BMT business.

Through the BMT business, the aim is to propagate the concept of a circular economy globally, addressing societal challenges such as the protein crisis, and contributing to the development of a sustainable society.


Circular Economy Market and Business Scale

The global market size of the circular economy is estimated to be approximately 540 trillion yen. The Japanese market is projected to reach 80 trillion yen by 2030.

Our company believes that achieving a business scale equivalent to 1% of the global market size, amounting to 5.4 trillion yen, is feasible through the establishment of the BMT team. To realize this goal, we will continue to actively pursue various initiatives and efforts.

Contact Information

For detailed information or inquiries about upcoming projects, please contact us at the address below. Additionally, please visit our website for the latest updates.

 The logo for S-Bridges features a stylized bridge graphic composed of two overlapping shapes: a light blue triangle on the left and a darker blue shape on the right. Below the graphic, the text "S-Bridges" is written in a bold, dark blue sans-serif font.	<p>S-Bridges Corporation Address : 3-1-7 Wajiyama Chuo-ku, Hamamatu-shi, Shizuoka CEO : Takashi Nagato Business: Bio material transformation (BMT) business Establishment: Feb. 17, 2022 Website: https://www.s-bridges.com Contact form: https://www.s-bridges.com/contact-ssl/</p>
--	---