



May 22, 2026

Launch of Feasibility Study with the Aim of Implementing a “Consolidated Hub for Recycled Plastics” to Ensure a Stable Supply of High-Quality Recycled Plastics for Automobiles

A project selected for the Ministry of the Environment’s Subsidy Program for Feasibility Study to Establish a Stable Supply System for Recycled Plastics for Automobile and Other Applications

Mitsubishi Chemical Corporation

Takatoshi Co., Ltd.

Toko Metal Co., Ltd.

REFINVERSE, Inc.

Mitsubishi Electric Corporation

digglue Inc.

Japan Polypropylene Corporation

RHOMBIC CORPORATION

Partner: TOYOTA MOTOR CORPORATION (Domatics)

A consortium of the above companies is launching a feasibility study (“FS”) to comprehensively evaluate the collection, sorting, and conversion of post-consumer plastics into recycled feedstock, as well as the material design and traceability of recycled plastics, with the aim of establishing a stable supply system for high-quality recycled plastics suitable for use in automobiles and other applications. The consortium is led by Mitsubishi Chemical Corporation (President: Manabu Chikumoto; Head Office: Chiyoda-ku, Tokyo), and participated in by Takatoshi Co., Ltd. (President: Megumu Takahashi; Head Office: Nakano-ku, Tokyo), Toko Metal Co., Ltd. (President: Takashi Fukuda; Ota-ku, Tokyo), REFINVERSE, Inc. (President & CEO: Akira Ochi; Head Office: Chiyoda-ku, Tokyo), Mitsubishi Electric Corporation (President & CEO: Kei Uruma; Head Office: Chiyoda-ku, Tokyo), digglue Inc. (Representatives: Hideyuki Hara (CEO) and Hajime Nakatani (COO); Head Office: Shinjuku-ku, Tokyo), Japan Polypropylene Corporation (President & CEO: Kaname Iijima; Head Office: Chiyoda-ku, Tokyo), and RHOMBIC CORPORATION (President & CEO: Naoki Ichikawa; Head Office: Yokkaichi, Mie Prefecture). TOYOTA MOTOR CORPORATION (Domatics) participates in the consortium as a partner.

The FS has been selected under the Ministry of the Environment’s FY2025 Supplementary Budget Subsidy Program for Feasibility Study to Establish a Stable Supply System for Recycled Plastics for Automobiles and Other Applications.

In recent years, regulations on the use of recycled materials in the automobile sector have been tightened, particularly in Europe, requiring the establishment of a stable supply system for high-quality recycled materials. However, Japan has not yet established such a system, and recycled plastics are rarely used in automobile manufacturing. Against this backdrop, the consortium is implementing a project that aims to develop a business model for efficiently converting sorted plastics into recycled feedstocks and ensuring the stable supply of high-quality recycled plastics by establishing a consolidated hub enabling advanced sorting of post-consumer plastics and ensuring traceability through the use of digital technology and AI. As the initial phase of the project, the participating companies are collaborating on the FS.

Overview of the FS

The following activities will be implemented through February 2027:

- (1) Developing a concept for utilizing digital technology and AI for advanced sorting of post-consumer plastics
- (2) Study on the usability of recycled materials that meet automotive quality requirements
- (3) Study on the usability of post-consumer plastics that are not suitable for mechanical recycling in chemical recycling
- (4) Identifying data integration requirements to ensure traceability
- (5) Assessment of economic rationality and estimation of the impact of the hub on increasing recycled plastic supply
- (6) Creating an implementational roadmap for phased rollout

Features of the FS

1. An integrated supply chain based on arterial-venous (A-V) collaboration

This project predicates collaboration between “venous” industries responsible for the collection and sorting of post-consumer plastics and “arterial” industries responsible for material design, compounding*, and supply to end-users. This approach enables a comprehensive assessment of the quality, quantity, cost, and chain-of-custody of recycled materials.

*Compounding: The process of mixing fillers, colorants, and additives with plastic to create a new type of plastic with enhanced properties.

2. Combining advanced sorting and material design

By combining advanced sorting technologies for post-consumer plastics with material design technologies for recycled plastics, the project envisions the development of recycled materials that meet the stringent quality standards required for automotive and related applications.

3. Optimal utilization of mechanical recycling and chemical recycling

The FS will examine models to maximize the resource value of post-consumer plastics as a whole by grading post-consumer plastics into those suitable for mechanical recycling and those suitable for

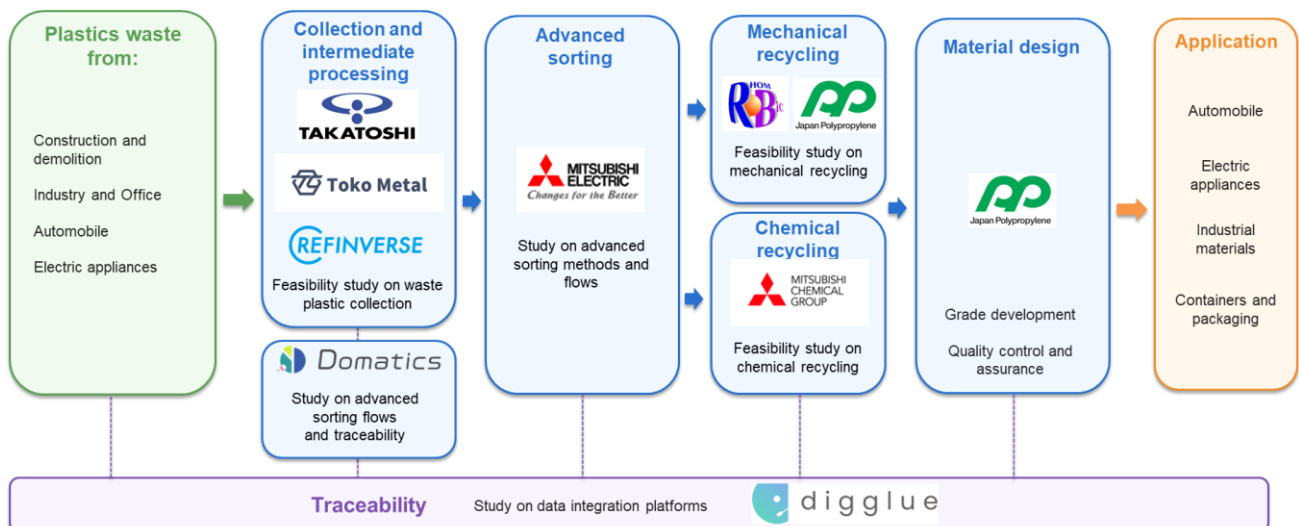
chemical recycling.

4. Improving reliability through traceability

The FS aims to utilize a traceability platform to visualize factors such as post-consumer plastics origin, sorting and recycling processes, recycled content, and environmental value, thereby aiming to establish a supply system for recycled plastics that customers can use with confidence.

Roles of the companies

	Company name	Roles
Lead company	Mitsubishi Chemical	Project management; feasibility study on chemical recycling
Collaborators	Takatoshi	Feasibility study on waste plastic collection
	Toko Metal	
	REFINVERSE	
	Mitsubishi Electric	Study on advanced sorting methods; study on advanced sorting flows; traceability study
	digglue	Traceability study
	Japan Polypropylene	Feasibility study on mechanical recycling; study on advanced sorting flows; traceability study
	RHOMBIC	Feasibility study on maechanical recycling; study on resin analysis methods
Partner	TOYOTA MOTOR (Domatics)	Study on advanced sorting flows; traceability study



Future developments

In the FS, the participating companies will identify challenges associated with establishing the hub for recycled plastics for use in automobiles and other applications, and will evaluate post-consumer plastic procurement, quality control, sorting and processing into recycled feedstocks, end-user feedback, traceability, and business viability, as appropriate.

Furthermore, following the completion of the FS, the companies plan to proceed with building a system to supply high-quality recycled feedstocks based on diverse types of post-consumer plastics for a wide range of applications, with a view to transitioning to a pilot project or commercialization.