

  
ENVIRONMENTAL  
REPORTVol. **12**

Our packages contribute to both customers and society's initiatives in environmental sustainability.

Recently, social awareness about the environment, such as marine plastic, is intensively spreading. In fact, we have been making attempts in Reduce – Recycle – Reuse activities. We would like to introduce some of our efforts.

Fuji Seal Group

## Recycling of production waste generated at the manufacturing process of spouted pouch and pressure sensitive label

### Development of recycling technology for plastic composites and efforts toward social implementation

Fuji Seal International, Inc. (hereinafter referred to as "Fuji Seal"), Joto Techno Co., LTD. (hereinafter referred to as "Joto Techno") and G-Place Corporation (hereinafter referred to as "G-Place") are jointly undertaking a project to develop recycling technology for composite plastic materials that are currently considered difficult to recycle.

#### ■ Background

The creation and social implementation of recycling system for plastics and other resources to shift a decarbonized society is an environmental challenge common to the world. In the case of containers and packaging, composite materials have been used for a long time from the perspective of adding functions. When reuse is considered, it would be extremely difficult to realize recycling of composite materials because of a limited scope by a single company or industry. In such a case, the only options would have been thermal recycling or disposal.

#### ■ Outline of the project

In this project, three companies from different industries formed an alliance to study the possibility of reusing plastic resources in order to build a circular economy system based on the following two points:

- (1) Technology to produce "useful raw materials" as recycled resources**
- (2) Opportunity to create a "path" for the use of recycled raw materials**

Specifically, as a first step, we are planning to recycle waste generated in Fuji Seal's "container packaging" manufacturing processes and use it as part of the raw materials for "housing materials" manufactured by Joto Techno. Next, through these efforts, we will continue to develop technologies to recycle and reuse difficult-to-recycle materials and develop container packaging that would be more suitable for recycling, while at the same time seeking other sources of use, aiming for broader social implementation. Fuji Seal, Joto Techno, and G-Place are also participating in CLOMA (Japan Clean Ocean Material Alliance)<sup>\*1</sup>, and by further promoting inter-industry collaboration, we aim to build a recycling system that involves various stakeholders and affiliated companies.

\*1 A new platform that helps a wide variety of cross-sectoral stakeholders to collaborate and accelerate innovation in order to solve the issues of marine plastic litter, a newly emerging global challenge.



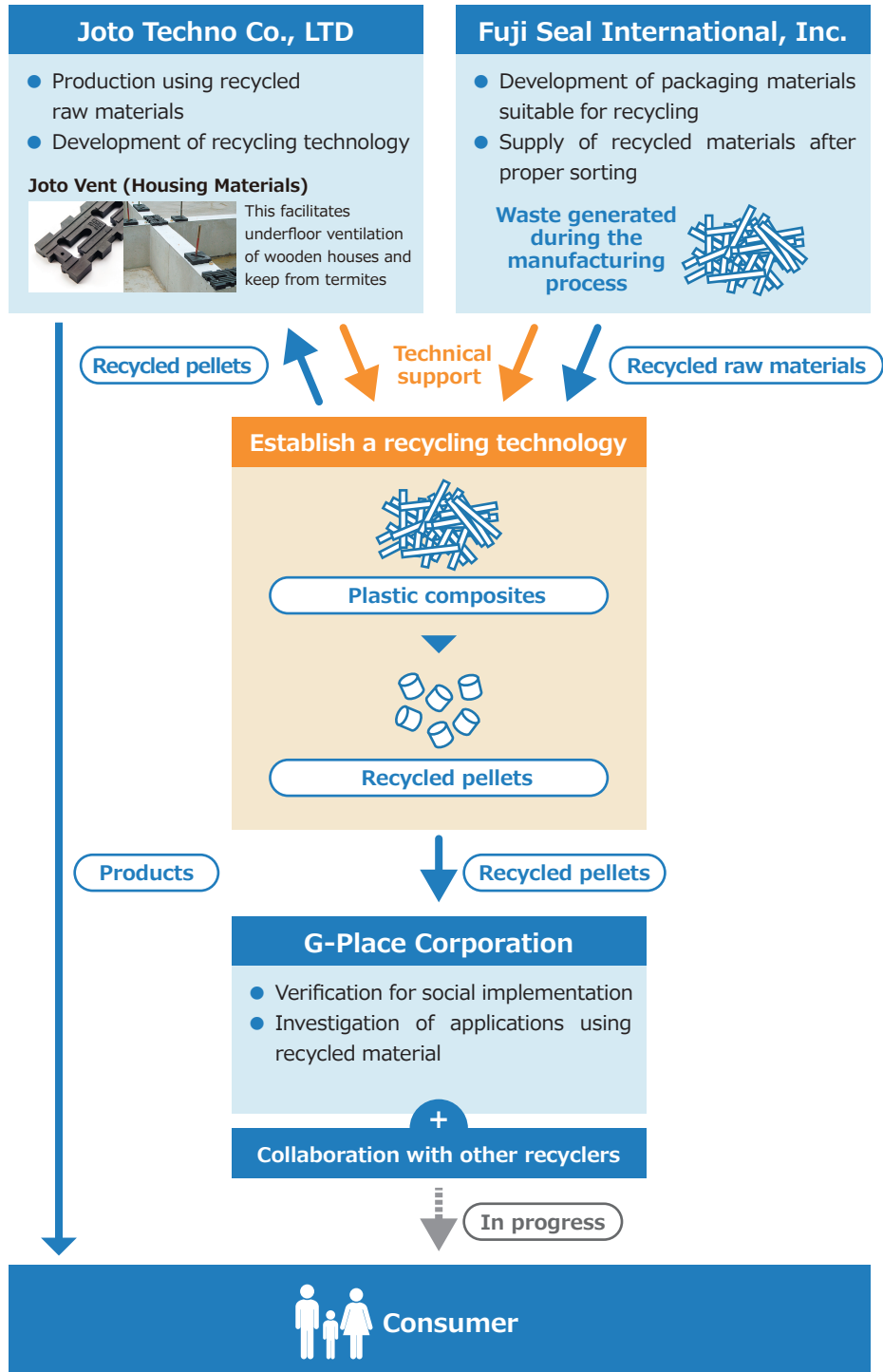
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**■ Ideal resource circulation model**



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■ **Reference**



**Regular product**



**Prototype**

This is a prototype of "Joto Vent (Housing Materials)"\*<sup>2</sup> produced by Joto Techno using a portion of the waste material generated from Fuji Seal's pouch manufacturing process.

It is still necessary to improve its physical properties for a long-term use on a scale of several decades.

\*<sup>2</sup> "Joto Vent (Housing Materials)": The parts are to separate the concrete foundation from the wooden still plate to prevent moisture in the concrete from permeating the wood, ventilates the crawl space to facilitate the drying of the wood and soil without cutting any openings in the concrete foundation or the rim joist framework. This is the first indispensable part of the Joto-Vent System that has been certified by IAPMO for use in US market.