

# Business strategy Environmental and Functional Materials

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## Leveraging core technologies to reduce environmental impact



### Business overview and market environment

The environmental and functional materials business is primarily handled by TOYOBO MC Corporation (TMC), a joint venture with Mitsubishi Corporation. This business is divided into two main areas: the resin and chemicals business and the environment and fiber business. Key products driving our core businesses include VYLON®, HARDLEN®, photo functional materials, and environmental solutions.

#### VYLON® and HARDLEN®

VYLON® is a copolyester resin that enables high-speed transmission for electronic devices. It excels in adhesion and durability, contributing to the proliferation of 5G and 6G technologies. Anticipated to grow in the mobility sector, it plays a central role in the new Mobility Business Strategy Unit established this year.

#### Photo functional materials

The following optical functional materials have been performing well in China and Asia: Printight®, a photosensitive water-wash nylon resin relief printing plate; Cosmolight®, a photosensitive water-wash flexo printing plate that balances water development with resistance to water-based inks.

#### Environmental solutions system

**VOC recovery equipment:** adsorbs and removes volatile organic compounds (VOCs) contained in factory exhaust gases. It reduces the concentration of VOCs released into the atmosphere and allows for the desorption and cooling of the adsorbed VOCs, which can then be recovered and reused as a liquid.



VOC recovery equipment

In terms of the business environment, on the procurement front, rising exchange rates and raw material prices are directly impacting production costs, so price adjustments will be made as necessary. On the sales front, due to the sluggish recovery of Chinese economies, prompt countermeasures are essential. We will also closely monitor and address potential geopolitical risks related to the Russia-Ukraine conflict, the Israel-Palestine situation, and election outcomes in various countries.

### Business features and strengths

TMC leverages its core technologies in organic synthesis, polymer modification, copolymerization, adsorption and separation, fiber production, and simulation. Although positioned in the midstream of the industry, we utilize Mitsubishi Corporation's information network to develop products tailored to the needs of end-users. By capitalizing on these strengths, we aim to advance the market adoption of next-generation forward osmosis (FO) membranes for seawater desalination processes.

In addition, we will promote the use of our proprietary brine concentration (BC) membranes (OARO\*1 membranes) in salt production and industrial wastewater treatment processes, which achieve high efficiency and energy savings. This will support capturing demand in regions with stricter industrial wastewater regulations and advancing new applications such as lithium recovery.

In November 2023, in collaboration with Toyobo, we developed an environmentally friendly polyester-based high-heat-resistant adhesive sheet called Vitrimers\*2 for electronic materials.

This innovation significantly reduces greenhouse gas (GHG) emissions by cutting the conventional thermal processing time to one-50th.



BC membrane

\*1 OARO: Osmotically Assisted Reverse Osmosis

\*2 A high-performance polymer with properties such as re-shapability, self-adhesion, and self-repair. "Vitrimers" is a registered trademark of FONDOS ESPCI PARIS.

### Business strategies and initiatives in the 2025 Medium-Term Management Plan (MTP)

The targets for fiscal 2026, the final year of MTP 2025, are set at ¥145 billion in net sales and ¥12.5 billion in operating profit. For fiscal 2031, the targets are ¥250 billion in net sales and ¥20 billion

in operating profit. To achieve these goals, we will implement the following initiatives. Strategic labels such as "Growth," "Profit Enhancement," and "Business Reform" have been assigned to all businesses, and a portfolio strategy is being implemented to shift resources toward growth businesses.

In addition, we have transitioned from a divisional structure to a functional headquarters system. In our sales divisions, we are strengthening cross-departmental connections to enhance the efficiency of sales activities through better information sharing. In our development departments, we are fostering cross-sectional collaboration, where members from different teams pool their expertise to generate themes for new product development.

### Initiatives to achieve prosperity

People	<ul style="list-style-type: none"><li>Developed talent development guidelines (career path initiatives) for mid-career and younger employees, mandating at least two cross-category transfers (e.g., across divisions, products) within their first 15 years of employment</li><li>Began shifting personnel toward growth areas and implementing more targeted performance evaluations</li></ul>
Planet	<ul style="list-style-type: none"><li>Advancing the development of engineering plastics that contribute to vehicle weight reduction and environmental solution devices that lower VOC emissions into the atmosphere, focusing on enhancing products that contribute to reducing environmental impact, in response to the progress of EV adoption</li><li>Promoting environmental impact reduction by further enhancing the functionality and efficiency of key products, such as water treatment membrane, which helps address global water shortages, and BREATHAIR®, a comfortable and hygienic cushioning material</li></ul>
Prosperity	<ul style="list-style-type: none"><li>Aiming to contribute to the renewable energy sector in the future, particularly in applications such as floating offshore wind power using super fibers</li><li>Focusing on creating comfortable mobility spaces as the first step toward realizing smart communities and improving living environments</li></ul>