

Participation in Expo 2025 Osaka, Kansai TEAM EXPO 2025 Program

- Co-Creation Challenge “Toward a Sustainable Future: Circular Solutions for Lithium-Ion Battery Collection and Recycling”

MARKTEC Corporation

Re-Tech Renewable Energy Solutions Co., Ltd.

KDDI Corporation

Emulsion Flow Technologies Ltd.

Mitsui O.S.K. Lines, Ltd.

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MARKTEC Corporation (Head Office: Ota-ku, Tokyo; President & CEO: Keigo Nishimoto; hereinafter “MARKTEC”), Re-Tech Renewable Energy Solutions Co., Ltd. (Head Office: Chiyoda-ku, Tokyo; President & CEO: Tomohiro Kasai; hereinafter “Re-Tech RES”), KDDI Corporation (Head Office: Chiyoda-ku, Tokyo; President & CEO: Hiroji Matsuda; hereinafter “KDDI”), Emulsion Flow Technologies Ltd. (Head Office: Naka-gun, Ibaraki; President & CEO: Hiroshi Suzuki; hereinafter “EFT”), and Mitsui O.S.K. Lines, Ltd. (Head Office: Minato-ku, Tokyo; President & CEO: Tsuyoshi Hashimoto; hereinafter “MOL”) are pleased to announce their participation in the TEAM EXPO 2025 initiative for the Osaka-Kansai Expo through a joint project titled “Joint Co-Creation Challenge “Toward a Sustainable Future: Circular Solutions for Lithium-Ion Battery Collection and Recycling” (hereinafter “the Project”).



TEAM EXPO 2025 (<https://team.expo2025.or.jp/en/>) is a participatory program where diverse groups form teams to take on challenges and create a better future together, as part of the Osaka-Kansai Expo and beyond.

From August 15 to 17, 2025, the five companies will jointly exhibit at the TEAM EXPO Pavilion within the Future Life Village of the Expo. The exhibit will feature prototypes of safe transportation cases for used lithium-ion batteries, solvent extraction technologies, and particle analysis equipment. In addition, a special seminar on the Project will take place on August 15.

#### \* About the Project

##### 1. Overview

As the markets for portable batteries, smartphones, IoT smart appliances, and drones continue to expand, Japan's automotive industry is rapidly shifting toward EVs. This is expected to significantly increase the demand for lithium-ion batteries. As a result, the volume of discarded batteries will also rise. However, due to deterioration over prolonged use and potential risks such as damage, deformation, smoke, or fire, proper handling of these batteries is essential.



Lithium-ion batteries contain valuable rare metals, making recycling increasingly important. Through this project, the five participating companies will build an integrated system that includes:

1. raising awareness of battery handling methods,
2. safe transportation of collected batteries,
3. proper processing and generation of high-purity black mass,
4. extraction of rare metals from black mass, and
5. analysis of the composition of recycled materials.

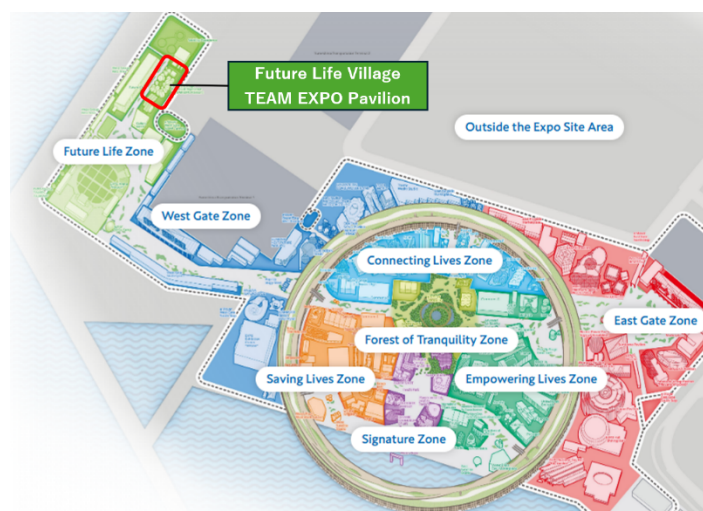
They aim to promote the use of recycled resources and contribute to the realization of a circular economy.

## 2. Roles of Each Company

KDDI	Collection of batteries from smartphones, drones, etc.
Re-Tech RES	Analysis and generation of high-purity black mass
EFT	Solvent extraction and separation of rare metals from black mass
MARKTEC	Material composition analysis and quality testing
MOL	Transportation of batteries and recycled materials

### \* About the Exhibit

- Exhibition Dates: August 15 - August 17, 2025
- Seminar Event: August 15, 2025, 15:00 - 16:30  
(The event will include presentations by participating companies and a moderated panel discussion.)
- Venue: TEAM EXPO Pavilion (within the Future Life Village)
- Exhibit Highlights: Prototype transportation cases, particle analysis equipment, refined recycled materials, plant models, and more



For more information, please visit the TEAM EXPO 2025 official website.

<https://team.expo2025.or.jp/en/challenge/C10445>