2025 7.1 (Tue)- 7.7 (Mon)　REBORN　Environment

Carbon Neutral Treasure Hunt

~Technologies Supporting a Comfortable future~

Reborn Challenge Implementation Body

Osaka Business Development Agency

OSAKA INNOVATION HUB

Startups that are environmentally conscious and contribute to carbon neutrality will showcase their products. The exhibit will provide hands-on experiences for visitors, raise awareness of environmental issues such as global warming and encourage behavioral changes to address these challenges.

[Contact]
Contact Window: Startup Support Division (Osaka Innovation Hub)
TEL：06-6359-3004　E-mail：rc-oih@obda.or.jp

Special Website

"Zippar," the self-propelled ropeway, for smoother urban mobility.

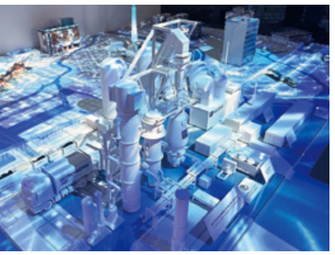
Zip Infrastructure

Zippar is a self-propelled ropeway that operates autonomously—running on ropes along straight paths and on rails around curves. Equipped with batteries and motors, it can navigate curves and branch points that conventional ropeways cannot handle. With its low-cost, quick-to-deploy, and carbon-free transportation system, Zippar offers clean and highly convenient mobility.

Future marine transportation created by autonomous navigation

Eight Knot

Autonomous navigation technology uses AI to determine safe and efficient navigation based on the conditions around the vessel. In the exhibition, a demonstration using a model ship will introduce the mechanisms of the navigation and the possibilities for the sustainable use of the ocean and the solution of the problem of crew shortages.



"ZERO Waste Project" Turning Waste into Hydrogen

BIOTECHWORKS-H2

We are developing waste analysis and plant technology to generate hydrogen from organic waste and convert it into renewable energy, along with a digital platform to centrally manage the operation of the entire system.During the event, we will showcase our equipment and facilities with a model that faithfully reproduces our pilot plant that is currently in operation in the United States.

Using light to produce chemicals from waste materials

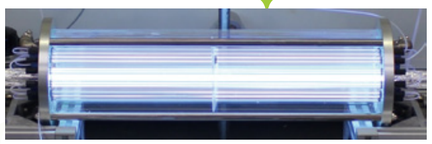


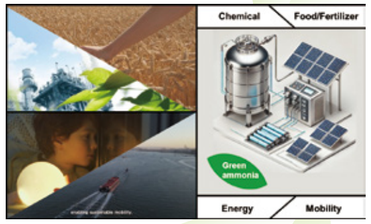
Photo-on-Demand Chemical

We will introduce our "photoproduction," which takes sewage, seawater and air as raw materials and uses light to produce chemicals (such as polymers and raw materials for medical and agricultural chemicals). In the exhibition, we will use dioramas to depict how the biogas, chlorine, and oxygen produced from cities, the sea and forests are introduced into a photoreactor and the chemicals are produced.

A future supported by green manufacturing using electricity

QioN

We are developing the technology to use electricity such as that from renewable energy to manufacture chemical products by utilizing high-performance ion conductive membrane synthesis technology. In the exhibition, we will introduce how "Technology that allows the materials essential to humanity, such as ammonia, to be produced anywhere with clean electricity" has the potential to create a sustainable and peaceful world.

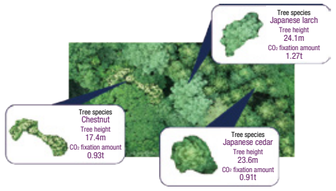


A revolution in biofuels using rice plants and euglena

Revo Energy

We have developed a biodiesel fuel production plant that incorporates original technology for the high-speed cultivation of euglena using a culture solution obtained from rice plants. In the exhibition, we will introduce the production plant and propose a future where companies such as transportation companies can be self-sufficient in fuel by installing the plant on their premises.

A sustainable future living with forests



DeepForest Technologies

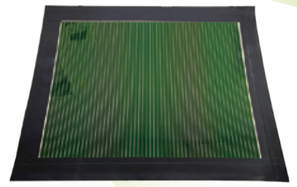
We are developing technology to accurately and efficiently grasp the value of forests, which contribute to the maintenance of the global environment. In the exhibition booth, we will introduce our latest products for forest value evaluation and conservation, drones that are used to identify tree species using AI, and software that analyzes forest information on a tree-by-tree basis.

The "Dokodemo Dengen®"(power supply anywhere) that can generate power in cloudy weather and indoors

EneCoat Technologies

Perovskite solar cells generate electricity even with weak light and can be fabricated on lightweight and flexible film material.

The exhibit shows the potential of the new photovoltaic cells.



"Duck power generation" to generate electricity from waves

Yellow Duck

Duck power generation is a power generation system that uses waves, which are renewable energy from the sea. We are aiming to realize a carbon-neutral society by utilizing the endless energy of waves. In the exhibition, we will introduce our new power generation system.

Can we recycle air to make glass!?

AC Biode/REVCELL

We are developing DAC (Direct Air Capture) technology to collect carbon dioxide from the atmosphere. At the venue, we will exhibit small-scale DAC equipment and glass products made using carbon dioxide as part of their raw materials and we will introduce an example of a new circular carbon economy.

Achieving environmentally friendly greenhouse cultivation through the effective use of rice husks

Jikantechno

We have developed a system that takes the heat generated during the manufacture of silica from rice husks, which are an agricultural waste material, and diverts it to a boiler, and then takes the CO_2 generated during firing and uses it to promote the photosynthesis of tomatoes. At the exhibition, we will introduce our efforts to reduce CO_2 emissions by moving away from the use of heavy oil in greenhouse cultivation.

Bioplastics to solve poverty and deforestation issues in the areas of origin

Hemicellulose

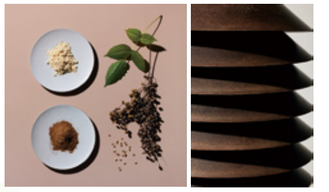
Based on R&D of the polysaccharide hemicellulose, our bioplastic technology has enabled to create a variety of products from cacao, coffee, and other waste products generated both in food factories (Japan) and on farms (Latin America, Africa, Asia). By returning the profits to the area of origin, new jobs are created, making its agriculture sustainable.

Biomanufacturing production system using optical switching - mii-Bioprocess

miibio

We will introduce "mii-Bioprocess," our biomanufacturing production system that uses photoswitching proteins in technology to control microbial genes with light. The system helps to lower costs and increase efficiency in mass production in biomanufacturing.

A new form of plant resource where resin trees are grown in the mountains for use



ELEMUS

We will exhibit our germination and cultivation technology for URUSHI trees, which produce sap that has the same chemical structure as a type of plastic. We will also exhibit our 100% natural raw material manufacturing technology that uses only that sap and wood powder. At the venue, we will introduce this new utilization of plant resources.

The companies and exhibition contents listed are subject to change in the future.