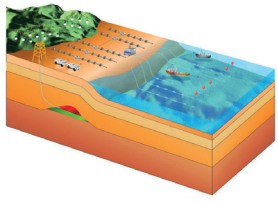
JGI Leads in Technology for Subsurface Exploration

JGI offers a variety of unique technology packages to create high-resolution subsurface models for a myriad of applications, from resource exploration to carbon storage projects.

> "Our geophysical exploration technology packages provide a digital twin of unknown subsurface structure."
>
> **Susumu Abe**,
> President, JGI Inc.

We are all used to having detailed maps of the land around us at our fingertips, but what lies beneath the surface of the earth and oceans is often unknown. One of the companies offering subsurface modeling is Japan's JGI Inc.

Structural exploration in urban areas using Vibroseis

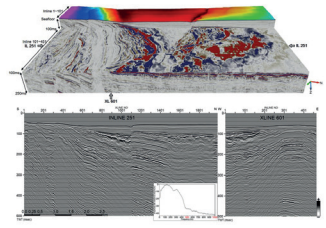


Seamless data acquisition

Founded in 1983, the company specializes in 3D visualization technology packages for a wide range of applications, including oil and gas exploration, disaster prevention, submarine hydrothermal deposits exploration, geothermal resource development, civil engineering, and CCS-CCUS (Carbon Capture, Utilization and Storage). As company president Susumu Abe says: "We have a variety of exploration technology packages that provide vertical and horizontal subsurface resolutions depending on the target, enabling ***seamless data acquisition from land to sea***, especially in shallow water areas." JGI is also developing exploration techniques related to CCS, a key technology in mitigating global warming. Mr. Abe explains that JGI's focus is on delineating subsurface structures for CCUS, monitoring changes in CO_2 plume behavior, and subsurface risk management required for CCS-CCUS projects.

Marine data acquisition

JGI is currently working with ***multiscale 3D exploration technologies*** to address engineering and seabed risk assessment in seabed geotechnical investigation for offshore wind farms and CCS site evaluation. In addition, JGI is pursuing the construction of an ***advanced monitoring system, using complex fiber optic sensing and massive signal processing with AI***.



3D visualization of subsurface

Mr. Abe reveals exciting plans to leverage the company's technology to expand into the medical and space development fields, adding further examples to JGI's company motto of "Visualization of All Targets."

株式会社 地球科学総合研究所
https://jgi-inc.com

Revolutionizing Agriculture with Microorganism Technology

Adoption of Kyowa Kako's cutting-edge technologies will naturally result in a decreased reliance on chemical fertilizers.

> "Combining our experience and expertise with our passionate young employees is a strong driving force."
>
> **Toshiharu Yoshimura**,
> President, Kyowa Kako Co., Ltd.

Kyowa Kako, founded in 1959, has emerged as a pioneer in revolutionizing agricultural practices through innovative microorganism technology.

"Our core value is to focus on the soil and the related microorganism as well as the environment around it," says President Toshiharu Yoshimura, emphasizing the company's commitment to sustainable agriculture. Kyowa Kako's hyperthermophilic aerobic composting technology has garnered international recognition for its effectiveness in converting organic waste into nutrient-rich fertilizer.

Institute of Environmental Microbiology

Highlighting the company's impact on global waste management, Mr. Yoshimura recalls a meeting with a French company seeking insights into Japan's advanced sewage sludge treatment methods.

"The U.S. and France recognized these issues and decided to change their systems to incineration or to the microorganism treatment of the sludge," he explains, underlining the global shift towards sustainable waste management practices.

Kyowa Kako's innovative approach extends beyond waste management to address Japan's agricultural challenges. With the country's self-sustenance rate hovering at 58%, the company is spearheading efforts to promote organic fertilizer usage. "Japanese Prime Minister Fumio Kishida stated that the use of fertilizers from sewage sludge treatment in agriculture was necessary," highlights Mr. Yoshimura.

Discussing international expansion, there is an emphasis on partnerships as a cornerstone of Kyowa Kako's growth strategy. The company's collaborations with Brazilian counterparts aim to leverage its composting technologies for local agricultural growth.

Hyperthermophilic aerobic composting plant

"Through our hyperthermophilic aerobic composting technology, we are trying to create a local treatment plant to implement the circular economy of the sewage sludge treatment into agriculture," the president explains.

Lettuce cultivation

Reliance on unsustainable classical chemical fertilizers is becoming less viable, even in developed countries heavily reliant on crops from agricultural nations. Kyowa Kako's sustainable solution of transforming organic waste into fertilizer safely and sanitarily, accessible even in developing countries without high-tech machinery, addresses global challenges of organic waste management. The company's initiatives align with sustainable development goals (SDGs), fostering collaboration between public and private sectors for a better future.

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