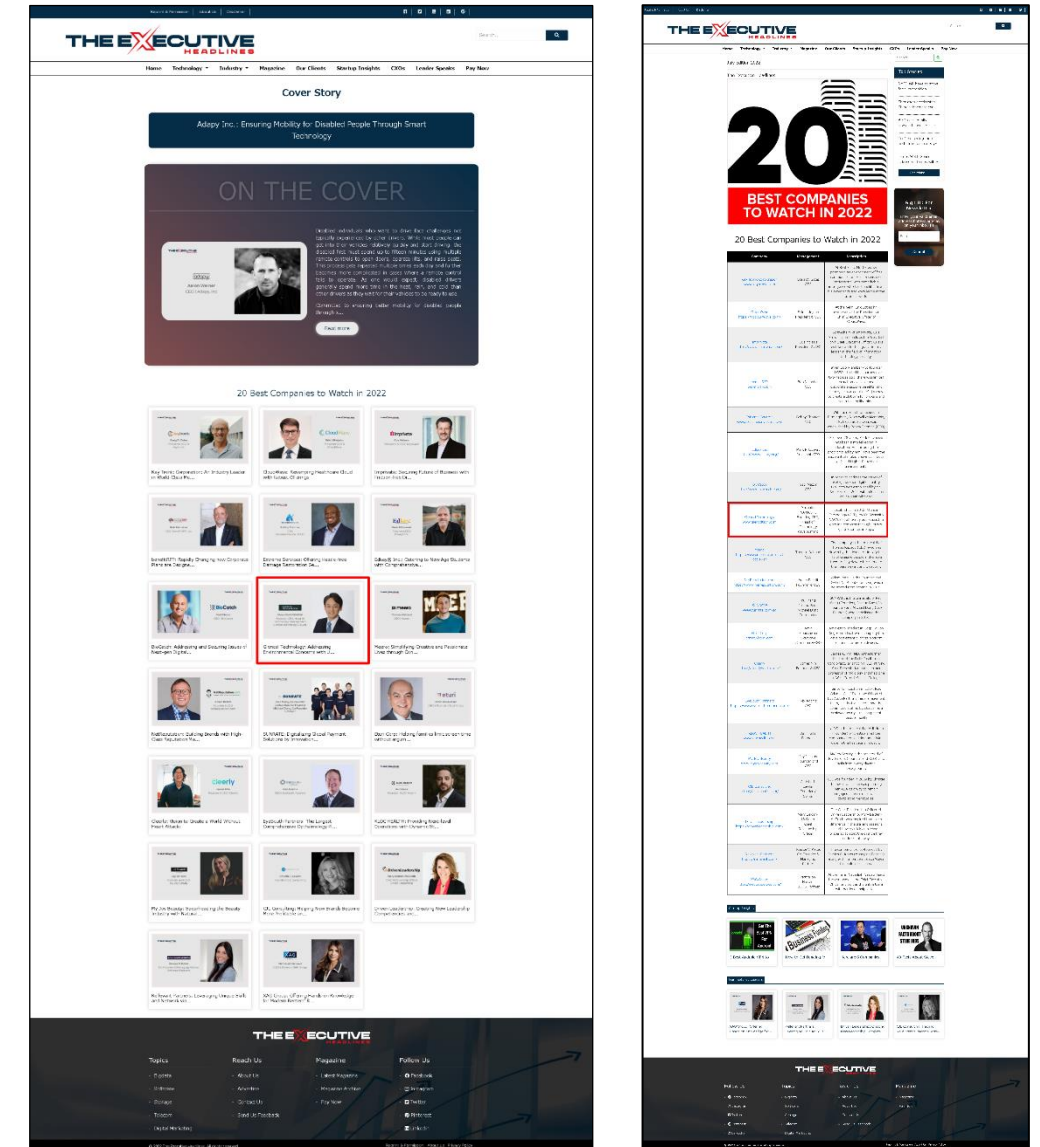


Glencal Technology has been named one of the "20 Best Companies to Watch in 2022" by The Executive Headlines May edition, a US business magazine.

<https://executiveheadlines.com/>



The reason for the award was that the company tackles global issues such as environment, food and energy problems, by developing ground-breaking new technologies. We respect and appreciate the US culture of high research and technology evaluation skills and a spirit of challenge in selecting a small Japanese venture company out of all the business areas and regions in the world for the award. As mentioned at the end of the article, we are working with the belief that solving environmental, food and energy problems will lead to solving global conflicts indirectly.

THE EXECUTIVE HEADLINES

GLENCAL TECHNOLOGY

Masahito NAKAISHI
 Founder, CEO, Head of
 Technology development
 Glencal technology Co.,Ltd.



Masahito NAKAISHI
Representative Director

GLENCAL TECHNOLOGY

Addressing Environmental Concerns with Unique Technological Innovations

In the past few years, problems regarding plastics, such as low recycling usage of plastic waste and ocean pollution caused by plastic, have become a global concern that requires urgent attention. Single-use plastics have deeply affected the environment in recent years. As a result, various renowned corporations are coming forward to fulfill their respective commitments toward discarding plastic usage for environmental protection.

Established in 2013, Glencal Technology (GLT) efficiently addresses this growing concern through its new generation technology. The company aims to contribute to addressing the plastic waste problem in the world with its unique technological innovations.

Inception Empowered by Robust Experimentations

In 2002, Glencal started its first project by establishing heavy particle therapy for cancer treatment, which was dismissed due to the conclusion of the feasibility studies.

Later in 2007, it entered the environmental industry and invested in a venture company specializing in power transmission/reception voltage control technology. The company began investing in food waste management and recycling technology in 2008. After various difficulties, the team realized how water treatment and control are substantial factors in organic waste management and thus, began challenging and experimenting to examine the factors.

In 2009, it invested in venture companies utilizing technologies such as cold-fusion nuclear technology and others. Later, the company developed technologies from the studies conducted by researchers specializing in nuclear physics and elementary particle physics. Various experiments were also conducted to prove

"We hope to contribute a sustainable economy where environmental protection and economic growth coexist by applying the advanced drying & molecular control technologies to various areas."

the efficiency of the technology and in 2013, an experimental ion engine, a small reactor, and a dryer were almost completed, and its highly efficient drying method was verified. Consequently, Glencal Technology Co. Ltd. was established to commercialize the technology along with the team members.

Convenient and Affordable Technology

Speaking of its flagship product, Glencal's RedoxMaster® technology has gained massive popularity in the market. Biomass fillers for plastics and supplementary foods for livestock manufactured from food waste treated by RedoxMasters® have already been mass-produced in Japan.

The technology has been simultaneously verified to replace the freeze-drying technology for several materials due to the low cost of the conventional method. Moreover, various experiments have started to apply the RedoxMaster® technology for waste treatment as well as the production of ordinary dried products.



Focused on Pursuit of Sustainability

With its flagship product, Glencal heavily leverages technology to fulfill its commitment to building a sustainable future. The company's ionizing technology was developed to solve various problems. These include making residue of organic waste and other substances reusable without destroying active

ingredients, removing excess water from organic residues at low cost, and making the removed water reusable at zero cost, among many others.

Briefly, Glencal is a company established to pursue sustainability. The pursuit of technology that is required at the company is completely synonymous with the pursuit of sustainability in society. The development of plasma

engines and ionizing technology is just one methodology, and in fact, Glencal has long been involved in technological development using other than plasma. The company has continued R&D related to sustainability in completely different fields such as research on crustal movements, fusion power generation and so on.

Driven by Competence Technology

Glencal's competence in technology has been the prime reason behind its success in the market segment. Currently, the company mainly focuses on organic waste treatment and drying technology. However, it has simultaneously treated, processed, and controlled many substances for more microscopic phenomena and in a wider range of fields.

Glencal's shareholders include successful business leaders and millionaires. On one hand, several large size companies and organizations in Japan and overseas are collaborating with the company. On the other hand, several first-class researchers in atomic physics and quantum physics are also working for Glencal. In areas such as waste treatment and water molecule control, the

company is aiming to create a new market segment by developing a wider range of application fields in the near future.

Ensuring Social Responsibilities

Working towards building a sustainable environment and future has been the primary purpose of Glencal's establishment and the company has been constantly focusing on it. The company's existence seeks to ensure environmental protection and a sustainable future and it is rigorously working to complete the mission.

Through its unique offerings, Glencal aims to become socially responsible. The company and its technology have been developed for the conservation of the environment and the effective use of natural resources. Most of Glencal's technology has already been studied and put into practical use in a wide range of fields. Especially, in industries and businesses that manufacture, produce, and process organic substances that contain a large amount of water, such as food processing and manufacturing supplements and cosmetics, its technologies are considered very useful.

In the above-mentioned industries, all processes, including pretreatment and posttreatment, require heat and steam in a combustion system. For those industries, reducing emissions by only a few percent is very difficult, in contrast to Glencal's 40% to 80%, or max 99% reduction of emission. As a result, the company's technologies have the potential to largely contribute to the environment and its betterment.

Commitment toward Sustainable Future

To date, Glencal has been innovative with its offerings and successful with its commitment towards the environment. The company is anticipating the following cases in various fields that are currently being continuously verified and are being realized as a business. These include food manufacturing, pharmaceutical, food waste treatment, production of water, military use, and many more.

With the RedoxMaster®, Glencal seeks to effectively reduce the volume of digestive fluid to produce manure. Additionally, it is focusing on the pre-drying of wood chips for woody biomass electric power generating facilities and

increasing the success rate of artificial insemination by refining water clusters.

Key Takeaway:

We believe we contribute directly or indirectly to the following Sustainable Development Goals (SDGs) set by the United Nations. Although our technology does not relate directly to goal 16, "peace and security", we believe that the conservation of the environment is the base of them. If the environment is destroyed, hunger and poverty are caused, leading to conflicts. Thus, our mission is to protect the environment on the earth.

We contribute to the following goals:

- (2) Zero hunger, (3) Good health and well-being, (6) Clean water and sanitation, (7) Affordable and clean energy, (9) Industry, innovation, and infrastructure, (12) Responsible consumption and production, (13) Climate action, (14) Life below water, (15) Life on land, and (16) Peace justice and strong institutions.*

