

Tenchijin was selected for the Tokyo City Support Program for entering the North Rhine Westphalia region in Germany

JAXA Venture Tenchijin aims to accelerate the expansion of water leak risk map solutions to the European market, especially in the NRW region in Germany.

TOKYO, JAPAN, December 12, 2023 /EINPresswire.com/ -- JAXA accredited space venture Tenchijin has been selected for the "Germany NRW Hands-On Support Program," operated by the Tokyo Metropolitan Small and Medium Enterprise Support Center.

This program, based on a memorandum of understanding on small and medium-sized enterprise support between Tokyo and overseas cities, aims to provide support to Tokyo-based companies to expand by leveraging the networks available in partner cities.

□ Germany NRW Hands-On Support Program

Located at the heart of Europe, Germany's North Rhine Westphalia (NRW) federal state is a key economic region. Tenchijin will utilize regional support organizations, the strong Japanese community in the region, and expert networks to receive strategic assistance for effective expansion in Germany NRW. Through this program, Tenchijin aims to accelerate the expansion of water leak risk map solutions to the European market, especially in the NRW region in Germany.

□ Business Expansion Targeting the European Market

In Northern Europe, the performance and the water yield of the water network is high as a result of sustained and comprehensive inspection. However, the infrastructure is aging rapidly and more leakage may occur. Similarly, the maintenance costs are skyrocketing and the workforce shortage is acute. Consequently, the water suppliers are facing enormous challenges: maintaining a great performance while controlling costs. Tenchijin supports them by prioritizing the network portions to investigate with respect to the leakage risks and the importance it has for the households. "Tenchijin Compass KnoWaterleak": Tenchijin's water leak risk management



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system, combines environmental data that affect leaks (surface temperature, vegetation changes, weather, land motion, etc) obtained with multiple Earth Observation satellite in the optical, infrared and SAR spectral ranges with water pipe network data from the network management company. Using patented (Patent Application 2023-48636: Leak Investigation Planning Support System and Method), unique, robust machine learning algorithms, the system finds the trends in this Smart Data set and the correlations between pipe and environmental factors and leakage risks. Subsequently, it visualizes the areas with higher leakage probability and maps the urban areas of highest priority with a spatial resolution of 100-meter-square area. Finally, it includes basic functions inherent in GIS, such as mapping and printing capabilities.

Through verification experiments with the Cabinet Office in the fiscal year 2022 and interviews with other municipalities, the anticipated effects of this system include:

- 20 more times leakages were found than with traditional methods
- 85% time reduction to investigate the network
- 65% cost reduction to find leakages
- 52% budget saving

□ Comment from Yuhei Urabe, Global Business Development Manager at TENCHIJIN
Water issues are significantly impacted by climate change and have emerged as a critical concern in Europe in recent years. Specifically, it is forecasted that water demand will exceed water supply. TENCHIJIN aims to protect water resources by reducing water leakages whilst bringing efficiency to the inspection and planning processes. TENCHIJIN has been expanding its overseas presence across Europe, Asia, and Africa. With the support of the Tokyo Metropolitan Government, we are forming partnerships with municipalities and companies in the NRW state of Germany to accelerate the European deployment of our KnoWaterleak software. Through TENCHIJIN's solutions, we aim to contribute to sustainable urban development.

□About TENCHIJIN

TENCHIJIN provides its "Land Evaluation Engine" by harnessing satellite data and A.I. It analyzes the features of each land and evaluates its performances. It supports companies to carry out their business activities in the most profitable and sustainable ways, especially for water infrastructure, renewable energy and agriculture. TENCHIJIN is one of JAXA (Japan Space Agency) certified start-up (JAXA Venture).

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