

May 10, 2021

**MIRAIT Holdings Corporation****[ MIRAIT Technologies Corporation ]****Field Trial of Water Pipe Leak Prediction Utilizing AI Technology  
Verifies High-precision Analysis and Utility in Joint Research  
Project Aimed at the Creation of Kumamoto City Type Asset  
Management System**

MIRAIT Technologies Corporation (head office: Nishi-ku, Osaka-shi; President: Yasushi Totake; “MIRAIT Technologies”), which is a Group company of MIRAIT Holdings Corporation, participated in the “Joint Research Project Aimed at the Creation of Kumamoto City Type Asset Management System” (hereinafter the “Research Project”) and utilized AI technology to predict leaks caused by the deterioration of water pipes.

MIRAIT Technologies has been engaged in water DX increasing efficiency through the utilization of water IoT such as smart meters and cloud computing in waterworks construction in order to support the stable and continuous operation of water infrastructure that service as one of the lifelines upon which people’s lifestyles are founded as social infrastructure ages and the reduction in the working population becomes an increasingly serious problem. Furthermore, the Company has made many contributions to water-supply corporations in engineering such as waterworks civil engineering. Against that backdrop, the Company has focused on the excellent AI technology of Fracta Inc. (head office: California, USA; CEO: Takashi Kato; “Fracta”) and has proceeded to coordinate with Fracta based on the concept that new services can be provided with higher quality by combining Fracta’s AI technology with MIRAIT Technology’s strengths in engineering.

In this joint research project with Kumamoto City, the Company utilized Fracta’s AI technology to predict leaks caused by the deterioration of water pipes. As a result, it was verified that highly precise and useful analysis with the ability to ascertain the location of leaks at a higher probability than the conventional age-related deterioration model.

The prediction of leaks caused by the deterioration of water pipes utilizing AI technology adopted by MIRAIT Technologies is a system that utilizes pipe data owned by water-supply corporations (type of pipe material, pipe length, pipe diameter, water pressure, positional data, etc.) and the history of leaks and an environmental database and algorithm created using

proprietary technology to predict the risk of damage to water pipes in a short period. This technology enables optimization renewal plans and reduction of maintenance costs, and can contribute to the resolution of issues currently faced by water-supply corporations such as measures to address the aging of water pipes and the shortage of engineers.

MIRAIT Technologies will continue to combine new technology with its strengths in engineering to provide all-in-one solutions spanning from proposals to construction and maintenance, and contribute to the Digital Transformation of water-works business and promotion of increased efficiency.

(\*1) Kumamoto City Type Asset Management System

Purpose: For Kumamoto City to conduct joint research with six companies that are advanced companies areas such as shared platforms (IoT) and AI or have a high level of expertise in areas such as asset management to review and verify effectiveness with the aim of realizing sustainable and effective operation of water supply and sewerage services.

Area: (1) Forecasting of optimal operation management (pressure management)

**(2) Prediction of location of leaks (area handled by MIRAIT Technologies)**

(3) Prediction of failure (lifespan) of equipment and parts

(4) Prediction of location of collapses

Period: May 28, 2020 - March 31, 2021

About Fracta

Fracta is a software development company founded in 2015 that provides infrastructure deterioration forecasting services using AI and machine learning algorithms, and is a leading company with numerous accomplishments mainly in Europe and the United States, and also in Japan.