Osaka Gas Invests in HACARUS INC., a Venture Company with Superb AI Technologies Including Image Analysis

> April 24, 2020 Osaka Gas Co., Ltd.

Osaka Gas Co., Ltd. (President: Takehiro Honjo) today announced that it has taken a stake in HACARUS INC. (CEO: Kenshin Fujiwara, hereinafter, "HACARUS"), a venture company with superb AI technologies including image analysis. Osaka Gas plans to increase the efficiency of its business operations, improve safety levels, and upgrade services by utilizing HACARUS's AI technologies.

HACARUS offers original solutions in the industrial and medical fields based on Sparse Modeling,<sup>\*1</sup> an AI technique that makes it possible to extract features from small amounts of data and make predictions.

In August 2019, Osaka Gas concluded a basic agreement for joint development of AI and IoT solutions with HACARUS to increase the efficiency of its business operations. Subsequently, Osaka Gas conducted field tests<sup>\*2</sup> on AI-based assessment in exploration of underground-installed objects to improve the safety levels of gas pipelines and AI-based detection of product defects at plants to attain uniform product quality for customers.

Based on the field tests, Osaka Gas concluded that HACARUS's AI technologies would be likely to increase the efficiency of various business operations at Osaka Gas and help improve safety levels and upgrade services. Thus, Osaka Gas decided to invest in HACARUS.

The Daigas Group set a goal in its Long-term Management Vision "Going Forward Beyond Borders 2030" to continue to offer products and services that exceed the expectations of customers by harnessing cutting-edge technologies and the latest techniques. The Daigas Group remains committed to the further promotion of open innovation and offering new services that contribute to improving people's daily lives and businesses.

- \*1: Sparse Modeling enables AI learning using a small amount of data. This is HACARUS's proprietary image analysis technology that has advantages over deep learning (a general technology) in terms of cost, calculation speed, and transparency under certain conditions.
- \*2: Both exploration of underground-installed objects and detection of product defects require a high level of skill. Highly accurate assessments will be made regardless of experience by allowing AI to learn the analytical capability of skilled workers, thereby making it possible to read the position of buried gas pipelines based on underground radar images, judge whether products are good or defective, and automatically detect defective products.

(Attached sheet)

•Established

1. Overview of HACARUS INC.

- •Location : Kyoto City, Kyoto Prefecture
  - : 2014
- Capital : 100 million yen
- CEO : Kenshin Fujiwara

Technologies and global business operations of the Daigas Group are introduced on our special website "ENTERPRISE FUTURE."

(PCs) https://www.osakagas.co.jp/en/company/enterprise\_future/ (Smartphones) https://www.osakagas.co.jp/sp/en/company/enterprise\_future/