July 9, 2026
Cosmo Oil Co., Ltd.

Cosmo Oil Launches Proof-of-Concept Testing of a Four-Legged Walking Robot for Facility Inspections at Its Sakai Refinery
~Evaluating the Feasibility of Field Deployment to Enhance Asset Maintenance~

Cosmo Oil Co., Ltd. (hereafter, “the Company”) announced that, as part of its efforts to digitalize its refineries and enhance maintenance, it has commenced Proof-of-Concept (PoC) testing for autonomous facility inspections utilizing a four-legged walking robot, in cooperation with Tohoku Enterprise Co., Ltd. In late May 2026, the Company conducted field validation at its Sakai Refinery (Sakai City, Osaka Prefecture) to test the robot’s autonomous navigation, asset data acquisition, and other key capabilities. Based on the insights gained through this testing, it will evaluate the potential for future deployment and examine associated challenges.

Four-legged walking robot collecting asset data during PoC testing at the Sakai Refinery

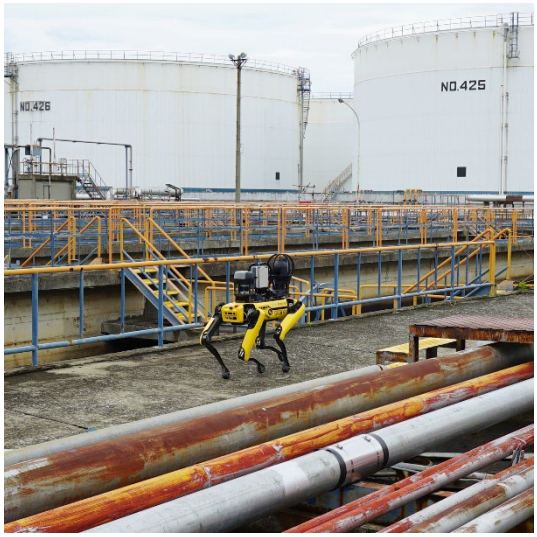
▪Initiative Background

This PoC testing is being conducted with the aim of improving equipment reliability and ensuring even safer and more stable operations at refineries. Much of the equipment at the Company’s refineries has been in operation for more than 50 years, and preventing equipment failures associated with age-related deterioration before they occur has become a critical challenge. To address this issue, the Company is working to enhance asset operations and strengthen predictive maintenance, and as part of this effort has begun verifying the feasibility of utilizing four-legged walking robots.

Facility inspections utilizing four-legged walking robots are expected to contribute to greater efficiency and enhanced safety compared with conventional inspection work performed by humans. Such robots also have the potential to be utilized to detect early-stage anomalies that are difficult for humans to identify, as well as to enable continuous and comprehensive monitoring of asset conditions.

▪Overview of Field Validation

Equipment used	One four-legged walking robot, “Spot” (manufactured by Boston Dynamics, USA)
Test site	Sakai Refinery wastewater treatment facility area
Key areas of validation	- Confirming the feasibility of facility inspections by robots in an operational environment - Verifying robots' precision in assessing asset conditions using various types of sensors - Identifying challenges associated with robot utilization
Field validation period	May 24–28, 2026



Robot autonomously navigating around the Sakai Refinery

Robot operating at night

▪Future Outlook

Based on the insights gained through PoC testing, the Company plans to gradually explore the use of robots for actual facility inspection work. Specifically, this testing will comprehensively evaluate the feasibility of robot deployment by assessing their stability during autonomous navigation, their accuracy in terms of data collection, their ability to enhance anomaly detection through analysis and utilization of collected data, and their operability in a real-world environment. The Company will also consider the safety measures required when deploying robots at its refineries. After assessing the validity and effectiveness of utilizing robots for facility inspections based on the results of field validation, the Company will advance its considerations toward future deployment.

▪About Refinery Digitalization

In Vision 2035, which outlines its long-term aspirations, the Cosmo Energy Group has committed to ensuring a stable supply of petroleum products while thoroughly strengthening competitiveness. As part of this commitment, Cosmo Oil is working to enhance efficiency through the digitalization of its refineries utilizing AI and other digital technologies. In May 2024, the Company introduced a data integration platform at all three refineries, realizing

centralized management of drawings, facility inspection records, operating data, maintenance plans, and other information. By analyzing and leveraging the data accumulated via the platform using AI, the Company is accelerating its predictive maintenance initiatives, including the early detection of signs of equipment failure and the enhancement of maintenance planning. In addition, the Company is also undertaking other initiatives, such as operating systems for the integrated management and enhancement of maintenance strategies, building digital twins that replicate real-world refineries in a virtual space, and supporting refinery maintenance from remote locations.

This PoC testing represents another step toward refinery digitalization and is expected to contribute to improved safety capabilities and greater operational efficiency. As part of efforts to address the challenges posed by the aging of industrial infrastructure, the Company will continue to verify and explore the deployment of four-legged walking robots in a real-world operating environment. Going forward, it remains committed to ensuring safe and stable refinery operations and strengthening competitiveness through the use of digital technologies.

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