

Japanese AI Releases Open Dataset of 20 Construction Cost Diagnoses, Up to \$19,600 Overcharge Detected

HORIZON SHIELD publishes bilingual CC-BY 4.0 dataset; PTKA Declaration anchored to Bitcoin Block #949356; companion paper JCCDB v1.2.2 on Zenodo and engrXiv

HIRATSUKA, KANAGAWA, JAPAN, May 18, 2026 /EINPresswire.com/ -- The Horizons Co., Ltd. today announced the public release of 20 verified construction cost diagnosis cases as an open dataset under CC-BY 4.0, accompanied by a bilingual (Japanese/English) reference page. The dataset, derived from real diagnoses performed by the company's AI-assisted service [HORIZON SHIELD](#), documents overcharges ranging from ¥350,000 to ¥2,800,000 (approximately \$2,450 to \$19,600 USD), with the highest detected fraud rate reaching 84.9% in a termite extermination case.



HORIZON SHIELD: Bitcoin-anchored verifiable AI for construction cost diagnostics, with methodology declaration permanently recorded on Bitcoin Block #949356



HORIZON SHIELD logo: AI-powered construction cost diagnostic service from The Horizons Co., Ltd., with methodology anchored to Bitcoin blockchain”

*Toshikatsu Oga,
Representative Director, The
Horizons Co., Ltd.*

The release builds on the company's previously announced Pre-Transaction Knowledge Anchoring (PTKA) Protocol Declaration, which was permanently anchored to [Bitcoin Block #949356](#) on May 14, 2026 (JST) via OpenTimestamps.

KEY FINDINGS FROM THE 20-CASE DATASET

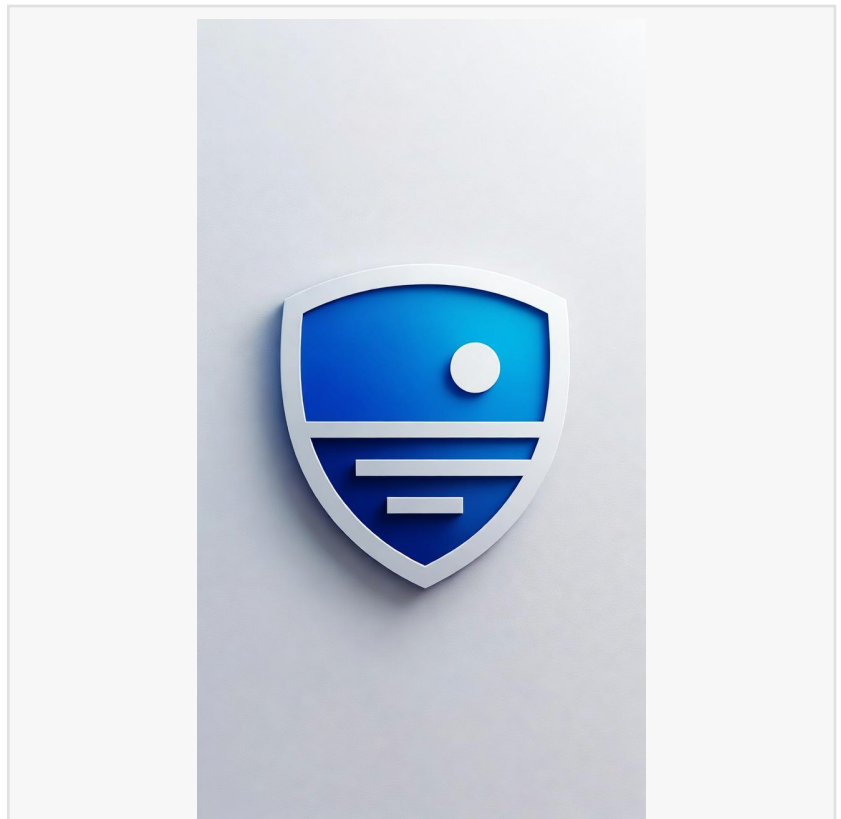
The dataset, available on GitHub under CC-BY 4.0, includes the following aggregate observations across 15 prefectures of Japan and 20 construction categories:

- Average overcharge detected: ¥825,000 (approximately \$5,775 USD)
- Maximum overcharge detected: ¥2,800,000 (~\$19,600 USD) — a pre-handover "specification change" surcharge in a new construction case
- Maximum fraud rate: 84.9% — a termite extermination case in Chiba Prefecture (quoted ¥1,850,000; fair price ¥280,000)
- Categories covered: exterior painting, roof repair, water systems, termite extermination, seismic reinforcement, solar installation, demolition, office restoration, and 12 others

Each case includes a 12-character cryptographic audit hash deterministically derived from the canonical input fingerprint. The dataset is published as both human-readable HTML and machine-readable JSON.

A FOUNDER WITH DIRECT INDUSTRY EXPERIENCE

Toshikatsu Oga, Representative Director of The Horizons Co., Ltd., began a carpentry apprenticeship at age 15 in Osaka in 1993 and accumulated more than three decades of hands-on experience in carpentry, on-site supervision, and construction management before transitioning to AI engineering. In Oga's direct field experience spanning three decades, overcharges of 20% or more are common in renovation contracts. Homeowners typically lack the technical knowledge to evaluate contractor estimates before signing — a vulnerability that HORIZON SHIELD is designed to correct.



HORIZON SHIELD official logo - Bitcoin-anchored construction cost diagnostic



Toshikatsu Oga, founder of The Horizons Co., Ltd., during his 30 years of hands-on construction experience prior to launching HORIZON SHIELD

"A diagnostic methodology that cannot be independently verified loses credibility at the negotiation table," Oga stated. "By publishing 20 real cases as open data — anonymized but with audit hashes intact — we invite independent scrutiny of both the methodology and the outcomes."

SERVICE OFFERINGS

HORIZON SHIELD offers three core diagnostics:

- Construction cost review: ¥55,000
- Change-order assessment: ¥33,000
- On-site completion inspection: ¥88,000

A ¥5,500 reverse-estimate PDF report is also available as an entry-level tool for early-stage budget planning.

THE PTKA ANCHORING — BITCOIN BLOCK #949356

The PTKA Protocol Declaration — a structured document describing the diagnostic logic — was hashed using SHA-256 (596da30ba4ca731f21efaa1c4a6537290e996e0f039cbe57704de1674e4a0282) and anchored to Bitcoin Block #949356 on May 14, 2026 (JST). Any party can independently confirm this record using publicly available blockchain tools. The anchored item is the Declaration document itself; per-diagnostic anchoring is under separate development.

ACADEMIC PUBLICATION

The underlying research has been formally published. The Japan Construction Cost Database ([JCCDB v1.2.2](#)), which powers the diagnostic engine, is available on Zenodo (DOI: 10.5281/zenodo.20019572) and engrXiv (DOI: 10.31224/7007) under open-access terms. The author's ORCID is 0009-0000-9180-903X.

AVAILABILITY

HORIZON SHIELD is accessible via the web at <https://shield.the-horizons-innovation.com>. An AI diagnostic assistant is also available through the ChatGPT GPT Store.

20-Case Diagnosis Dataset (CC-BY 4.0):

- English: https://shield.the-horizons-innovation.com/jireishuu_en.html
- Japanese: <https://shield.the-horizons-innovation.com/jireishuu.html>
- GitHub: <https://github.com/ogasurfproject-jpg/horizon-shield-diagnosis-examples>

VOLUNTARY ALIGNMENT WITH EU AI ACT PRINCIPLES

HORIZON SHIELD's diagnostic system is not enumerated in Annex III of EU Regulation 2024/1689, and the company makes no claim that the system is classified as high-risk under the Act. However, The Horizons Co., Ltd. has voluntarily adopted design principles consistent with Article 12 (record-keeping) and Article 14 (human oversight) of the Regulation.

MISSION

The Horizons Co., Ltd. has committed to directing a portion of HORIZON SHIELD revenue to Médecins Sans Frontières (MSF) as part of its stated mission to reduce information asymmetry in consumer-facing construction markets.

ABOUT THE HORIZONS CO., LTD.

The Horizons Co., Ltd. is a Japan-based AI technology and construction technology company founded in 2022, headquartered in Hiratsuka, Kanagawa. Its mission is to close the information asymmetry between property owners and construction contractors through transparent, verifiable AI diagnostics. The company is led by Toshikatsu Oga, who holds over 30 years of direct construction industry experience and is the sole author of the JCCDB technical paper series.

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