GEO SEARCH

The most reliable subsurface information provider

Gensai
Disaster Mitigation

About Us

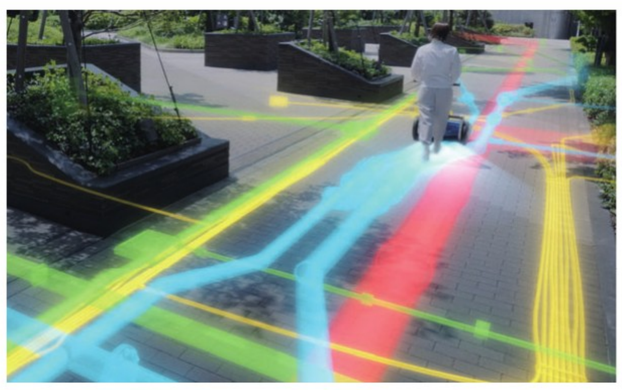
Established in 1989, GEO SEARCH is recognized as the pioneer in non-invasive underground cavity detection technology. Moreover, GEO SEARCH has commercialized the latest technology for underground utility mapping and non-invasive bridge deck inspection. To ensure people's safety, we at GEO SEARCH utilize our GENSAI Tech to detect invisible dangers hidden within our infrastructures.

Sinkhole Prevention

Roads / Airports / Harbors / River Embankments

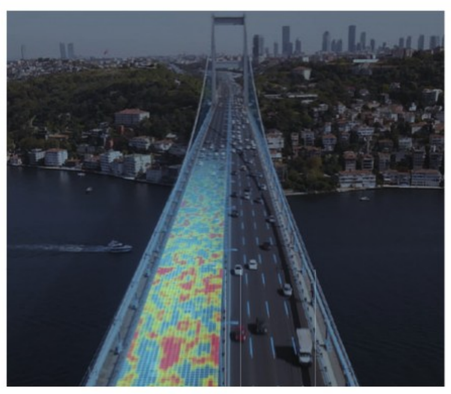
Road sinkholes are a serious problem around the world.
Our vehicle-mounted ground-penetrating radar (GPR) and proprietary interpretation software, detects underground cavities before they can collapse. Continuous technological progress at GEO SEARCH has led to increased detection accuracy and survey efficiency.

Underground Utility Mapping



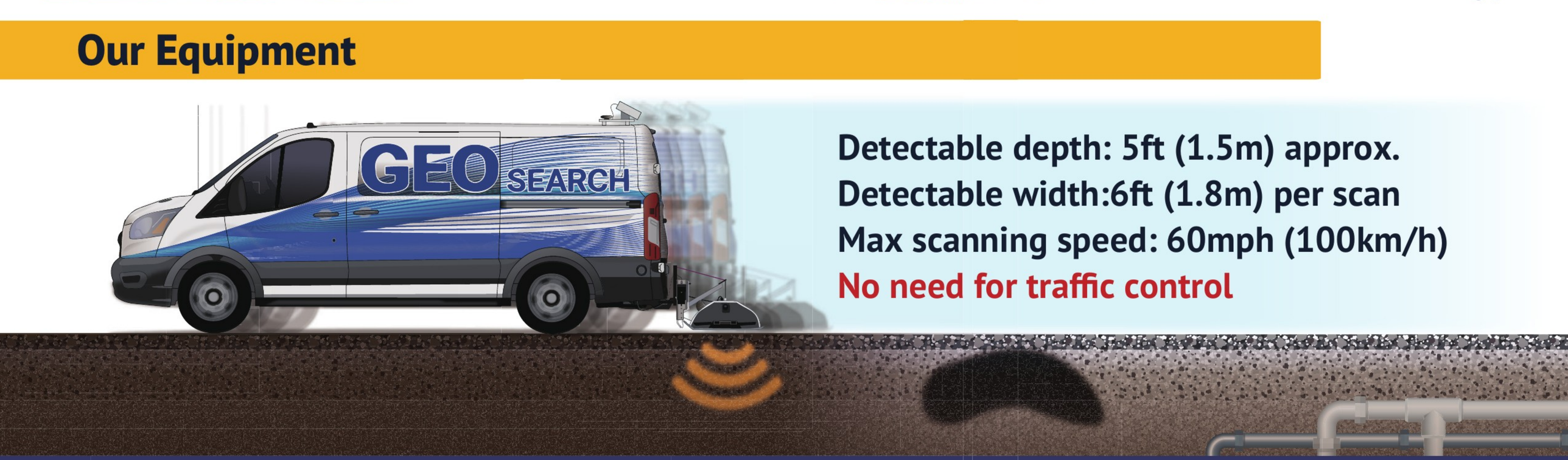
We create the underground digital twins for complex infrastructures using our DUOMAP system.

Bridge Deck Inspection



We visualize and promptly report deterioration within concrete slabs using our non-invasive technology.

Our Equipment



Detectable depth: 5ft (1.5m) approx.
Detectable width:6ft (1.8m) per scan
Max scanning speed: 60mph (100km/h)
No need for traffic control

We challenge Social Issues caused by Aging Infrastructure & Natural Disasters

by **Visualizing** the Invisible **with** GENSAI Tech

Promotional Video

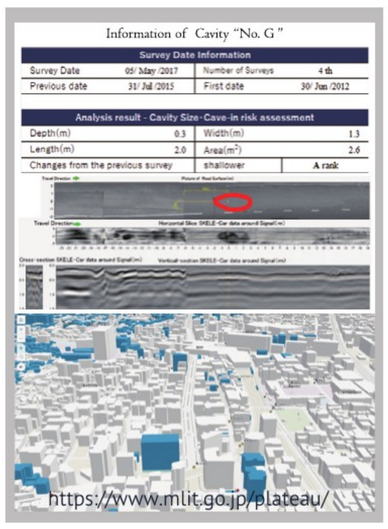
Sinkhole Prevention

Roads / Airports / Harbors / River Embankments

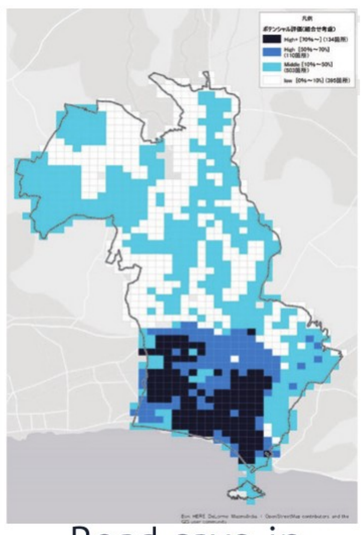
Road cave-in

Harbor cave-in

Cavity database and regional cave-in risk evaluation method developed from extensive survey records.



Cavity data

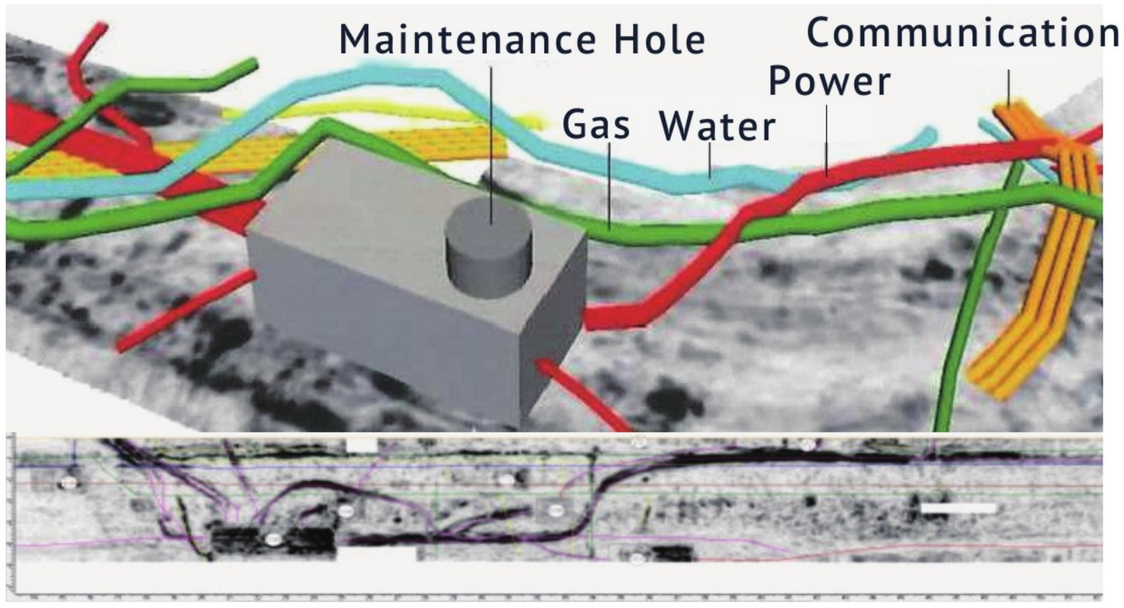


Road cave-in potential map

GENSAI Tech has the capability to non-invasively acquire high-resolution, high-precision data of the underground while driving at traffic speeds. No traffic control is required. Our experts detect subsurface cavities and report their exact locations and characteristics. We also provide risk assessments of our results based on our abundant research experiences and data to evaluate repair priority. With this information, road administrators can take systematic action against these invisible dangers before they surface.

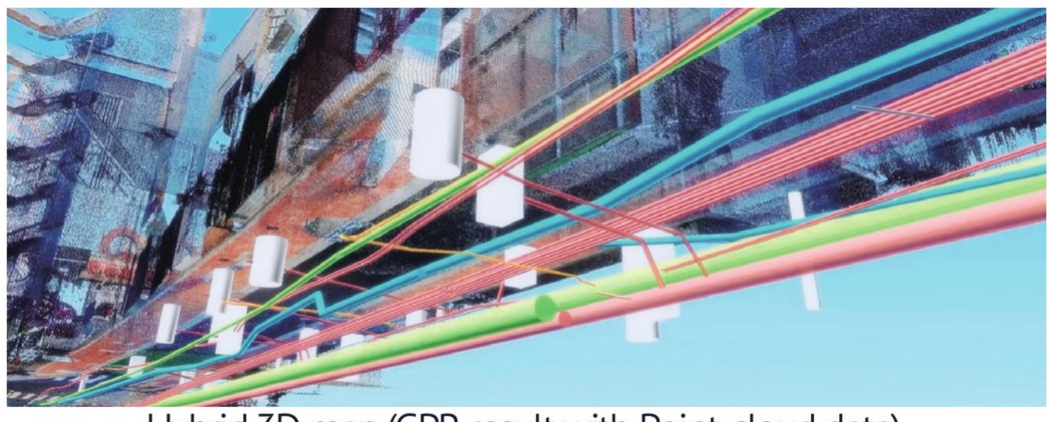
Underground Utility Mapping

Roads / Airports / Large Facilities / etc.



GPR data and Modeled Utirilies

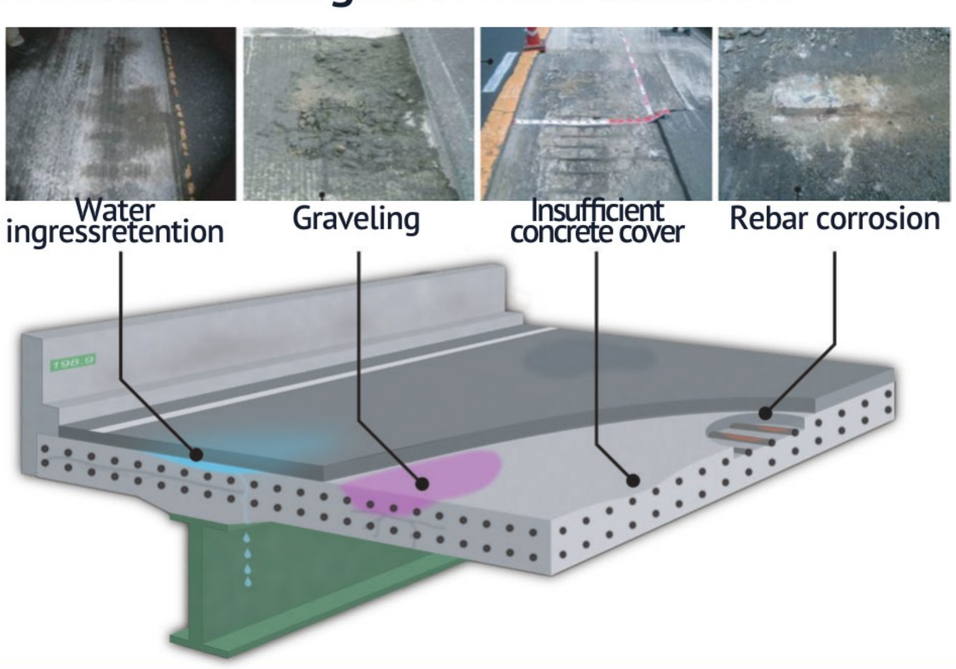
GENSAI Tech can visualize objects buried underground, invisible from the surface. This data is compiled to create 3D maps of the underground to better understand the underground infrastructure.



Hybrid 3D map (GPR result with Point-cloud data)

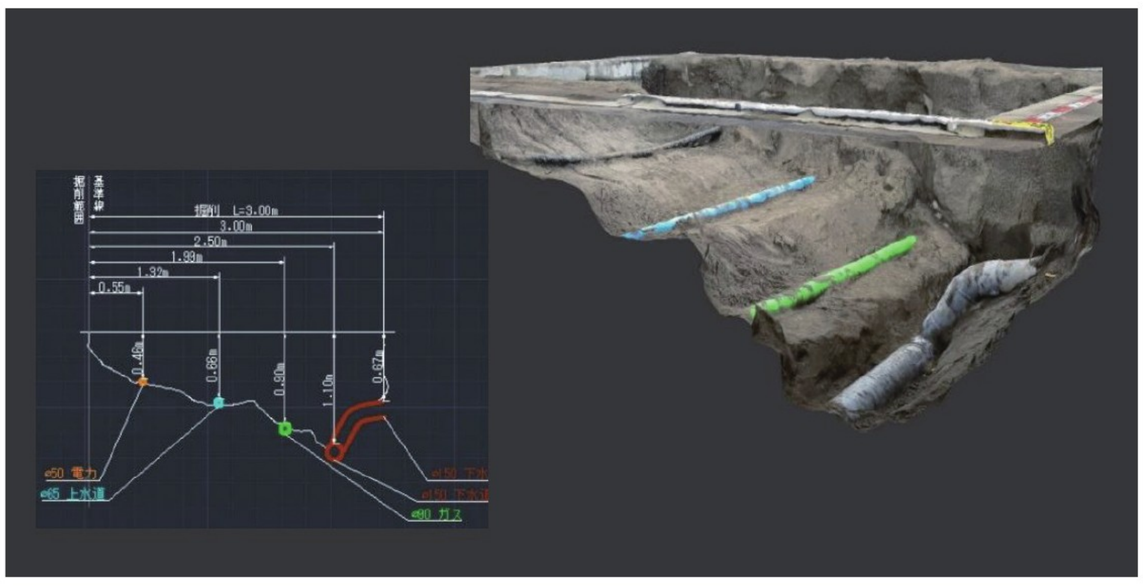
Bridge Deck Inspection

GENSAI Tech makes it possible to visualize promptly and accurately the internal structures of concrete slabs on bridges, highways, and airstrips. Any damages to these structures are reported in a straightforward manner.



DIGS® (3D digitization of trenches)

DIGS (Digital Infrastructure Guide and Survey) is an app that serves as a cloud service, automatically generating 3D modeling data by uploading videos of excavation sites taken with a smartphone.



Cross-sectional view (DXF) and 3D model (PDF)

Gensai

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Homepage