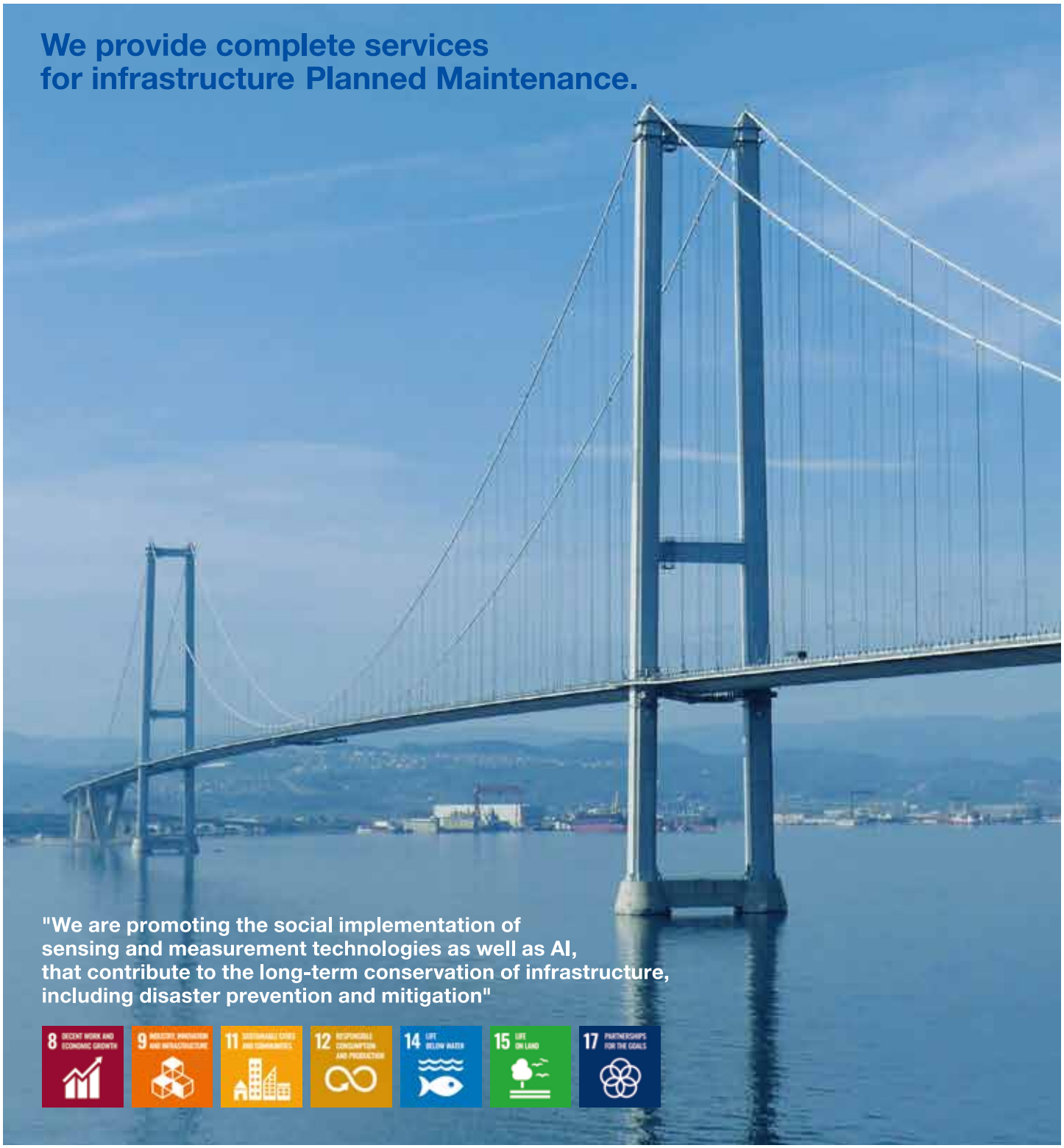
IHI Realize your dreams

SHAPING THE FUTURE

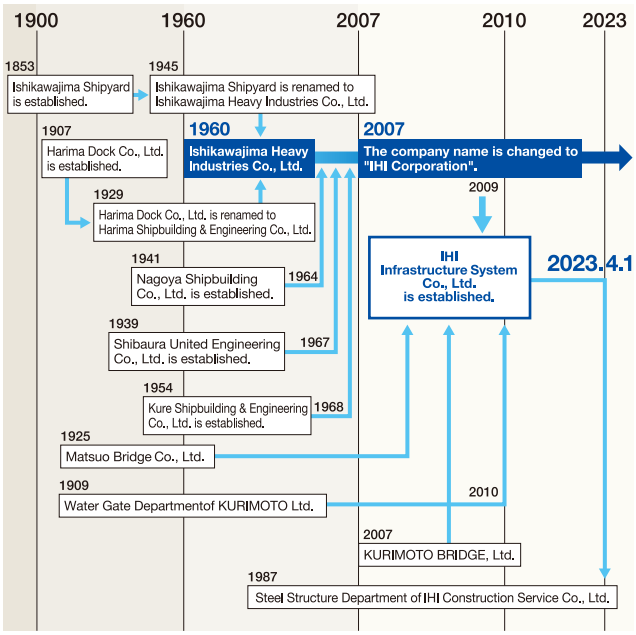


Bridge projects

Strait of Messina Bridge
Client: Stretto di Messina S.p.A.
Location: Strait of Messina
Completed in : -
Length:5,070m
Steel Weight:320,700t

Company profile / Organization / History

History



Company profile

Name	IHI Infrastructure Systems Co., Ltd.
Head office	3 Ohama-nishimachi, Sakai-ku, Sakai city, Osaka 590-0977 Japan TEL:+81-72-223-0981 FAX:+81-72-223-0967
Capital	1,000 million yen
Representative	President Manabu Inoue
Employees	878 (as of April 2025)
Year of establishment	November 1, 2009
Business activities	The design, fabrication, construction, assessment, repair, and maintenance of bridges, as well as the fabrication of gates and other steel structures

Head office / Sakai Works on March 2023

Osman Gazi Bridge (Izmit Bay Crossing Bridge)

Client: Directorate-General of Road Transport Regulation, Ministry of Transport Maritime Affairs and Communications, Republic of Turkey
Location: Gulf of Izmit, Republic of Turkey
Completed in: 2016
Length: 2,682m
Steel weight: 70,490t (main towers, bridge beam, cables)

Nhật Tân Bridge

Client: Ministry of Transport of Vietnam
Location: Hanoi, Vietnam
Completed in: 2014
Length: 1,500m
Steel weight: 14,500t

Braila Bridge

Client: CNAIR (National Road Infrastructure Administration Company)
Location: Braila, Romania
Completed in: 2023
Length: 1,974m
Steel weight: 21,000t

Mumbai Trans Harbour Link (MTHL)

Client: MMRDA(Munbai Metropolitan Region Development Authority)
Location: Munbai, India
Completed in: 2024
Length: 2,331m
Steel weight: 45,000t

Huey P Long Bridge Widening

Client: Louisiana Department of Transportation and Development
Location: Louisiana, U.S.A.
Completed in: 2012
Length: 726m
Steel weight: 16,000t

The four companies within the IHI Group will leverage their combined technological expertise to create infrastructure that enhances urban landscapes and enriches the lives of communities.

CONSTRUCTION

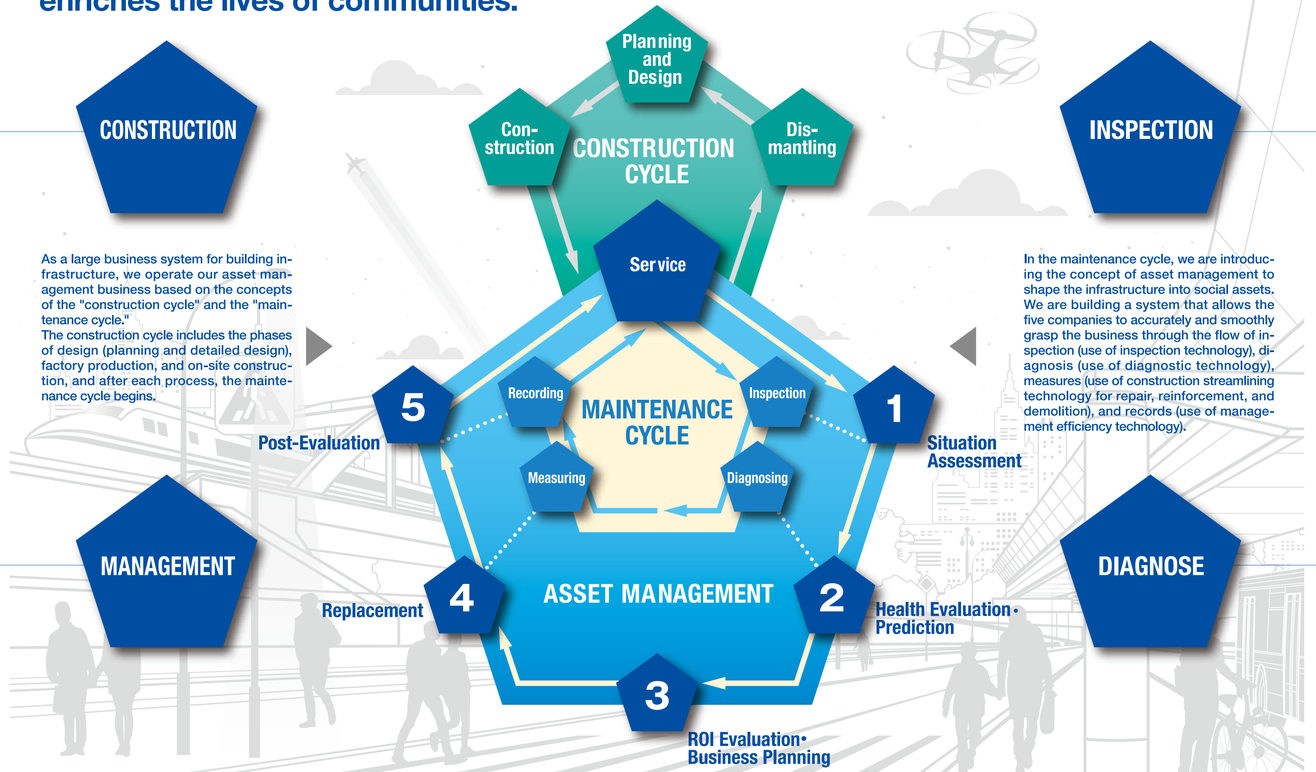
As a large business system for building infrastructure, we operate our asset management business based on the concepts of the "construction cycle" and the "maintenance cycle."
The construction cycle includes the phases of design (planning and detailed design), factory production, and on-site construction, and after each process, the maintenance cycle begins.

INSPECTION

In the maintenance cycle, we are introducing the concept of asset management to shape the infrastructure into social assets. We are building a system that allows the five companies to accurately and smoothly grasp the business through the flow of inspection (use of inspection technology), diagnosis (use of diagnostic technology), measures (use of construction streamlining technology for repair, reinforcement, and demolition), and records (use of management efficiency technology).

MANAGEMENT

DIAGNOSE



IIS

IHI Digital Twin Advanced Quality Control Technology

Using BIM/CIM, AI, MR and image analysis to create a reinforcement work digital twin. Inspection is automated and remote MR is possible.

Bridge Construction Management requires Inspection and Documentation for Rebars Workmanship placed on the the slab. Utilizing Degital Twinization the Quality Control, productivity at construction sites will improve by saving labor and manpower.

IIC

Laser Clear LF-100

This is a non-contact surface treatment device that uses a fiber laser oscillator and does not require cooling water.

This is a non-contact processing device that uses laser light. It can reduce the thermal and physical effects on the target object. It does not require cooling water, and almost no noise is generated during surface treatment.

IIS

TransparentBolt Cap

Transparent bolt caps for corrosion protection which block out corrosion-causing oxygen and water, but it also allows visual confirmation of internal bolt deformation.

IIS

IS Panel Concrete Floor Plate Reinforcement Method

IS panels provide a comprehensive deck reinforcement solution that operates independently of the existing concrete deck's strength.

Currently, many construction methods are no longer effective once deterioration has progressed, but IS panels support the concrete deck from the main girders with lightweight steel decks. Of the various deck reinforcement methods, this is the most reliable.

IIS

Sphinx (Slab replacement Machine)

Sphinx handles the entire slab replacement process, from stripping, removing, transporting, and loading the old slab, to picking up, transporting, turning, and erecting the new slab.

IIS

GBRAIN® Sluice Gate Inspection Support System

IHI's sluice gates and maintenance support system that supports the work of maintenance personnel using tablets in the process of planning inspections, assisting field work, and preparing reports.

IIS

TRIAS:Emergency restoration bridges, temporary bridges, and shoring

A long-span truss that can be used for emergency repair, temporary bridges or temporary support. It can be assembled and constructed in a short period of time.

TRIAS is a highly economical, general-purpose prefabricated bridge. It can be constructed in a short period of time as an emergency bridge, and it can be used to secure routes and allow heavy vehicles to pass through quickly. It is a long-span truss bridge with a maximum span of 54 meters.

IIS

Laser Crack Eraser Steel Bridge Laser Crack Repair Machine

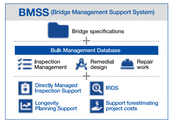
A high-power laser beam is irradiated along the cracks in the steel material to eliminate the cracks.

The laser heat source melts only the crack and its surroundings, eliminating the crack. Compared to other welding heat sources, it can repair deeper cracks. It can also be used in areas where reinforcement with a backing plate is not possible.

IHI IIS

Bridge Management Support System BMSS

A comprehensive system that supports the business cycle in bridge maintenance management.



BMSS is equipped with a database that links bridge maintenance management work cycles with bridge specifications, and support tools for each step, contributing to business improvement for road managers and design companies.

IHI

Cable-sheathing inspection device for cable-stayed bridges

We provide safe and secure inspections by photographing the entire surface of the cable without working at heights and automatically detecting the cracks.

A mobile unit equipped with a high-performance camera captures images of the entire surface of the cable-stayed bridge cable. Surface cracks that can cause damage to the strand are automatically detected and recorded along with location information.

IIC

Remote inspection and diagnosis service using drones

The mounted camera takes pictures and diagnoses everything from high places to narrow areas. This reduces the time required for work and cuts costs.

We provide a one-stop service from planning to flight applications, inspections, diagnoses and reports. Scaffolding is not required, making inspection work much more efficient.
We can provide advanced image diagnosis in combination with Paint View and i-Crack+.

IIS

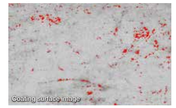
PANOCA® (Structural Inspection Management System)

This panoramic view system uses a high-resolution 360-degree camera to quickly capture images of bridges and other large structures for inspection and management.

IHI

Steel Bridge Coating Deterioration Diagnosis System Paint View

No scaffolding is required, and paint deterioration is automatically detected and managed in a database using highly accurate image diagnosis.



This system uses image processing technology to accurately extract deteriorated areas from photographs of steel bridge coating surfaces taken with a digital camera, and quantitatively and objectively evaluates the degree of deterioration of the coating.

*This technology was developed jointly with East Nippon Expressway Company Limited, Central Nippon Expressway Company Limited, and West Nippon Expressway Company Limited.

IHI

i-Crack+: Automatic Crack DetectionSystem

A system which automatically detects the cracks on concrete / deterioration on paint coating from image and supports preparation of the written statement through AI.

IIS

Concrete View: Shorten road construction time

This is a system for measuring salt concentration on concrete surfaces using near-infrared spectroscopy.

This is a non-destructive testing device that can measure the chloride ion concentration on a concrete surface efficiently and economically by irradiating the concrete surface with near-infrared light and analyzing the spectrum of the reflected light.

IIC

Hole-Drilling Method:Residual Stress Measurement Service for Materials

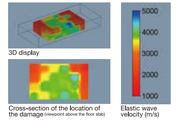
Measures the stress distribution through depth in accordance with ASTM E837-13a standard.

A small hole is drilled into the surface of the object to be measured, and the strain released during the hole is measured by rosette strain gauges placed around the hole, and the residual stress is analyzed based on two-dimensional elasticity theory.

IIC

Tomography analysis using the AE (acoustic emission)method

Visualize internal damage to concrete structures that cannot be detected with the naked eye.



Measures the elastic wave propagation speed of AE waves generated by pulse transmissions, etc. as a sound source. Analyzes delays in the arrival time of elastic waves due to voids, deterioration, and damage.

※This technology was developed through joint research with Kyoto University's Institute of Advanced Infrastructure Technology, Industry-Academic Joint Research Course.

IIC

Steel Surface Flaw Detection System Mobile EDDy®/Quart-ET

Portable type eddy current testing equipment for detecting surface cracks on steel plates over the coating film.

IHI

Realize your dreams

IHI Corporation

〒135-8710 Toyosu IHI Bldg., 1-1, Toyosu 3-chome, Koto-ku, Tokyo, JAPAN

https://www.ihi.co.jp

IHI Infrastructure Systems Co.,Ltd.

〒590-0977 3 Ohamanishi-machi, Sakai-ku, Sakai-shi, Osaka

https://www.ihi.co.jp/iis/

IHI Inspection & Instrumentation Co., Ltd.

〒236-0004 2-6-17 Fukuura, Kanazawa-ku, Yokohama-shi, Kanagawa

https://www.iic-hq.co.jp/

Common contact information

ihi-infra_contact@ihi-g.com

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