

Solution Linkage

HITACHI

Reliable solutions

**Intelligent construction
equipment & construction sites:**

A HITACHI example

Date: 29th Feb 2024

B K R Prasad

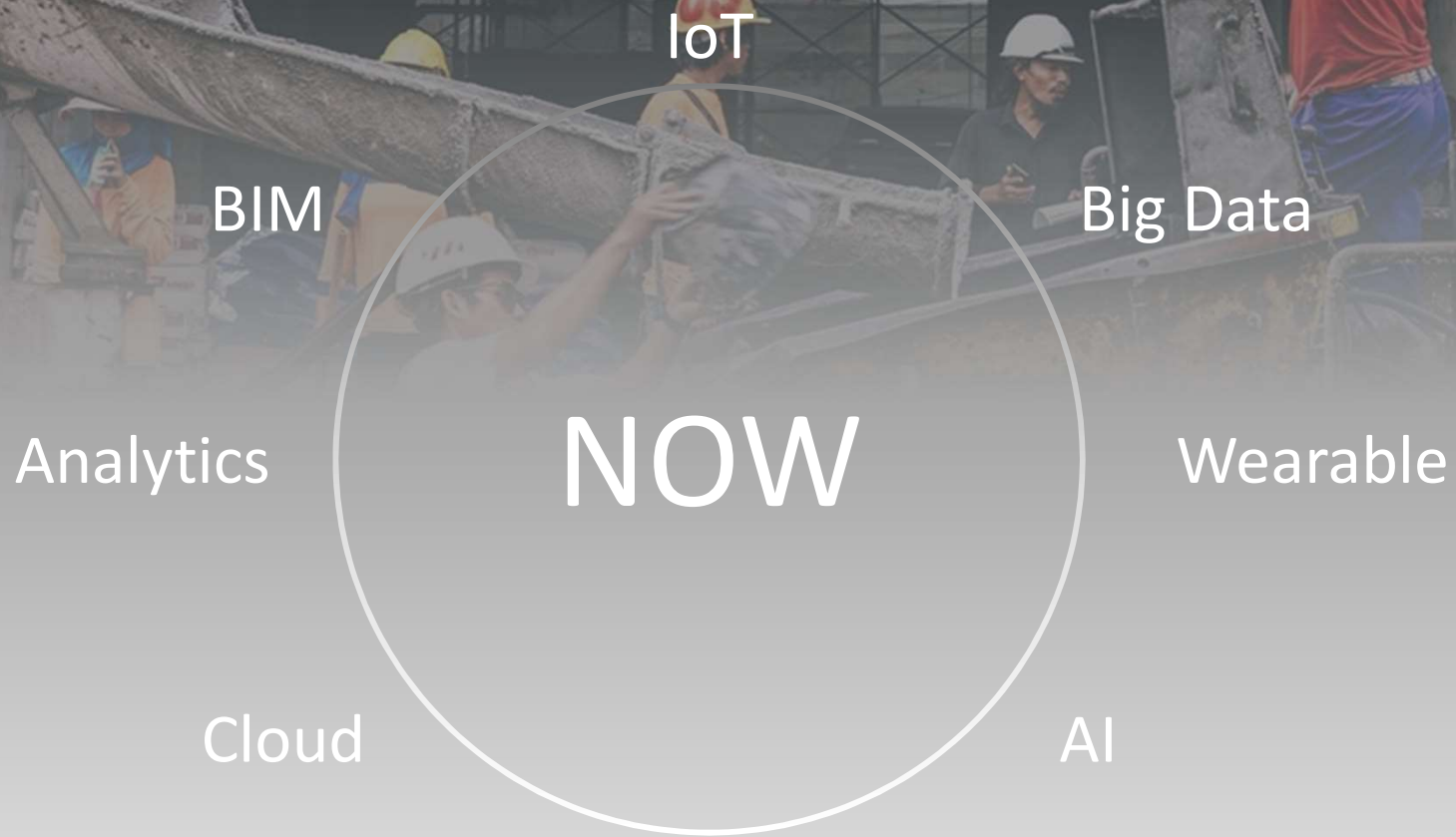
GM, Marketing

Tata Hitachi Construction Machinery Co. Pvt Ltd.

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The ICT trend is growing rapidly in the construction sector

Background

-Social-

Worker Shortage

Skilled and highly skilled
worker shortage

Drastic Growth

Production volume expansion
and productivity improvement

Sustainable Development

Emission regulation accompanying
climate change

The background of the slide is a photograph of a construction worker. The worker is wearing a black hard hat, safety glasses, and a high-visibility orange and grey safety vest over a dark long-sleeved shirt. He is looking down and to the left, focused on his work. The background shows a complex network of white metal pipes and structural elements, likely part of a large-scale construction project. The overall image has a slightly desaturated, professional look.

Customer



**We are in the era that we must accept changes
and pursue further efficiency**

Challenge

-Customers-

“Despite we need to utilize ICT,
we lack human resources who can use
advanced technologies.”

If our customers have problems like above,
HITACHI will understand challenges and proposes solution

Improving
Safety

Improving
Productivity

Reducing
Life Cycle Cost

Solution Linkage

HITACHI ICT and IoT solutions for addressing challenges with customers

One HITACHI

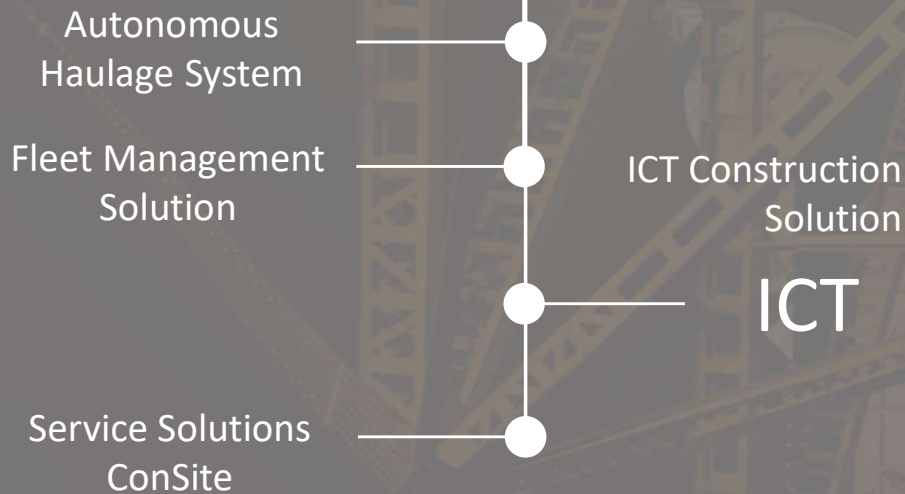
HITACHI Construction
Machinery

Open Innovation

The idea of wanting to be close to customers.

Solution Linkage

AHS
Wenco
ConSite



- Solution Linkage Assist
- Solution Linkage Cloud
- Solution Linkage Mobile
- Solution Linkage Survey
- Solution Linkage Wi-Fi

Items in part are provided in Japan as ICT Construction Solution.

Solution Linkage

AHS
Wenco
ConSite

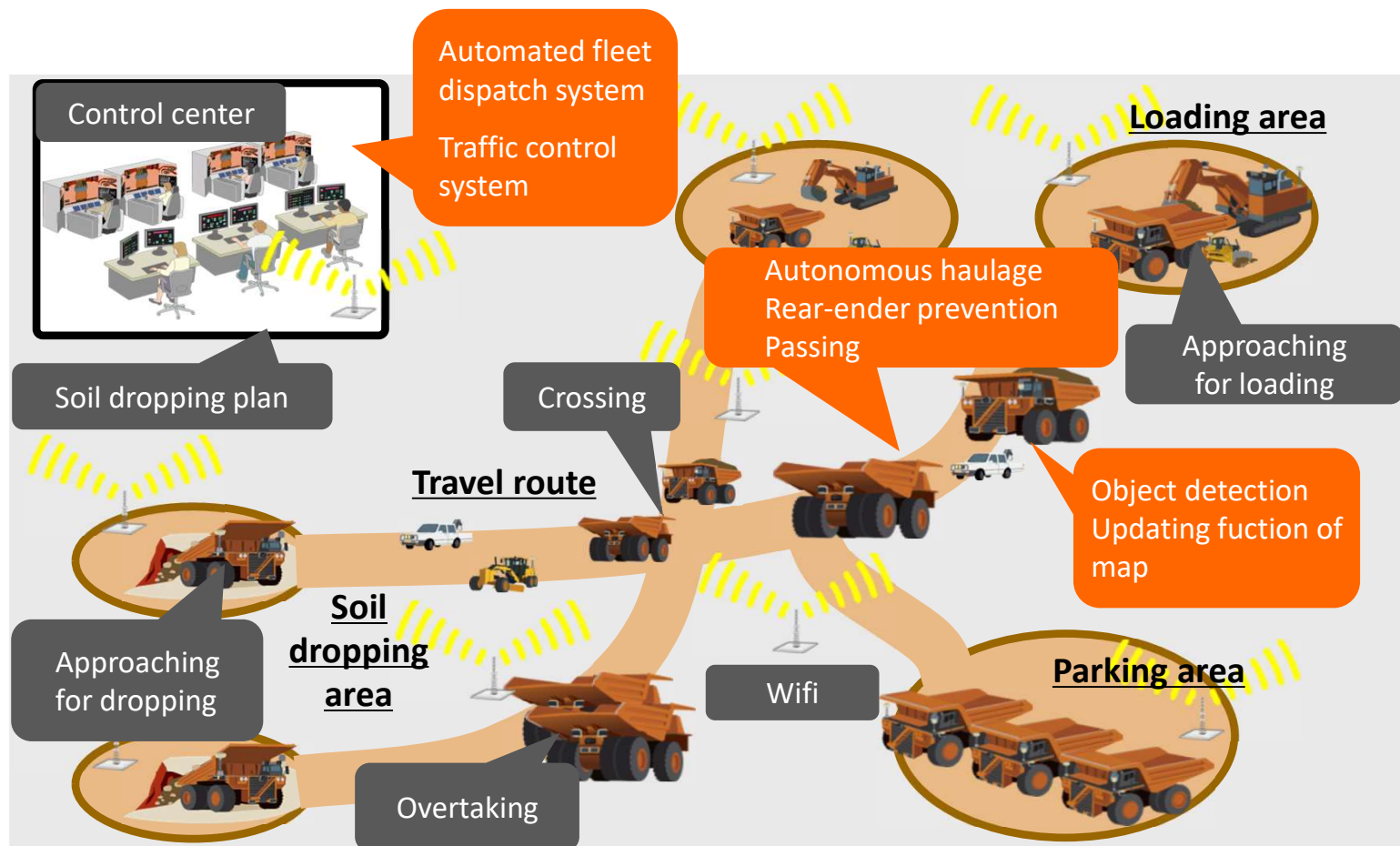
Autonomous Haulage System
Fleet Management Solution
Service Solutions ConSite

ICT Construction Solution
ICT

- Solution Linkage Assist
- Solution Linkage Cloud
- Solution Linkage Mobile
- Solution Linkage Survey
- Solution Linkage Wi-Fi

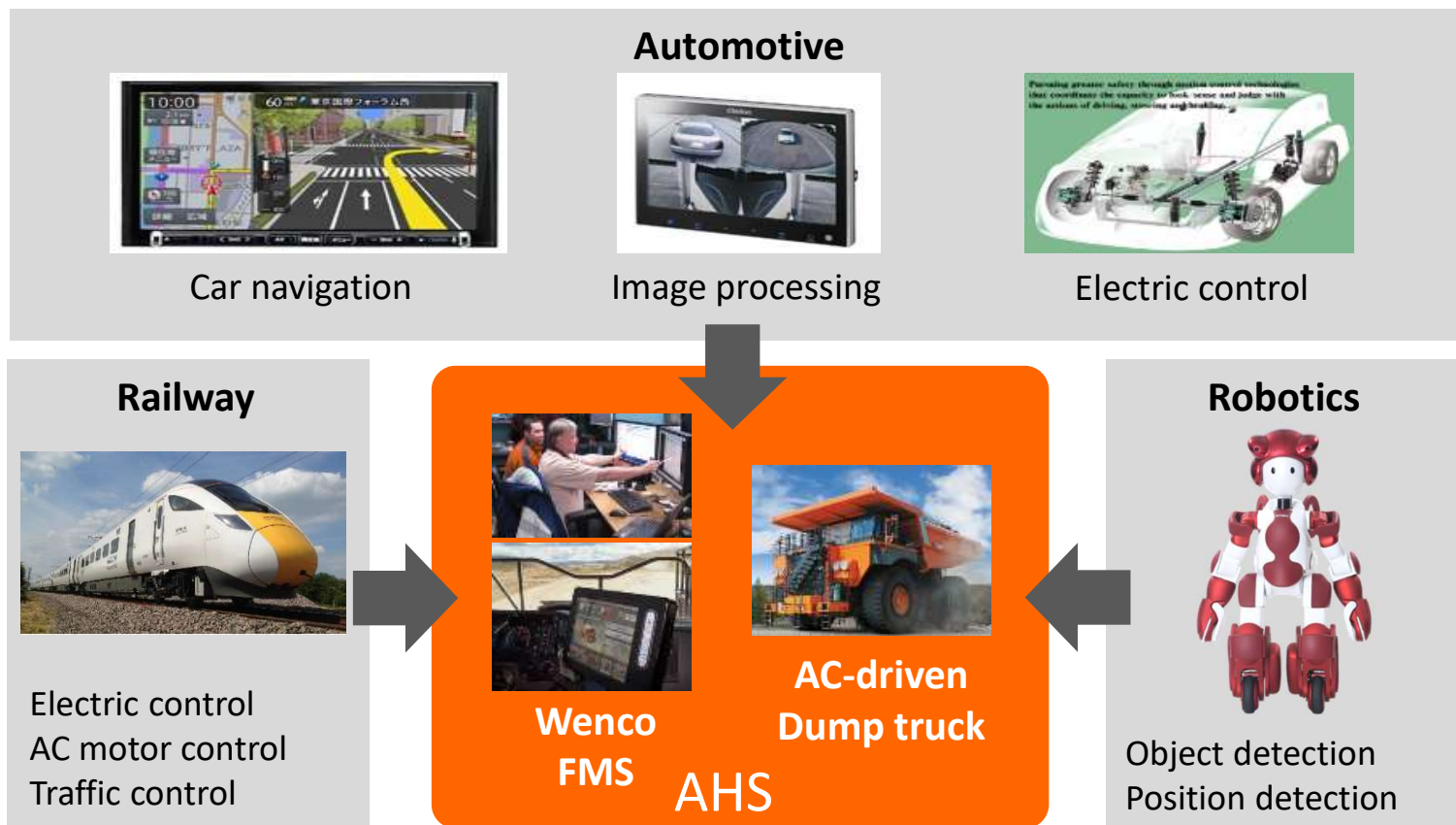
Items in part are provided in Japan as ICT Construction Solution.

【AHS】 Autonomous Haulage System for Rigid Dump Truck



【AHS】 Integration of Hitachi Group Technology

Hitachi group's various technology for automotive related system, railway related system, and robotics.



Solution Linkage

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Autonomous Haulage System
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ICT Construction Solution
ICT

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Items in part are provided in Japan as ICT Construction Solution.

Case Example of ConSite Monthly Reporting utilization in INDIA

Thanks to ConSite monthly report, productivity improved by 21%

ZX220-GI (2machines) Compare operational status using the monthly report

Customer



It is the same worksite and same model. But ECO Rank is lower? Let's go to the field and check it.

ECO



Site enhancement meeting



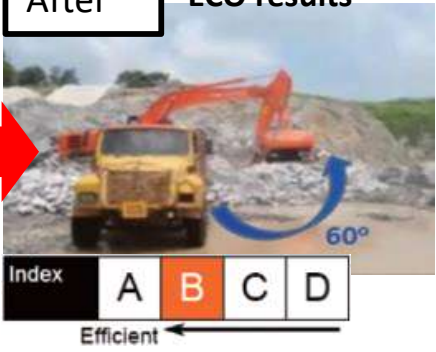
Let's operate more ECO

Let's change the machine position.

Before



After



ECO results

Solution Linkage

AHS
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Solution Linkage Assist

Open innovation | Trimble × Hitachi Construction Machinery



ZX200X

Precise machine control system
in addition to its speed and power.

Usage : Civil work

- Building foundation
- Residential land development
- Farmland development

Solution Linkage
Assist

Point

Machine Control which suites to
trenching and profiling

Overcut Protection Function Bucket Angle Retention Mode



Solution Linkage Assist : Hitachi's ICT construction machinery

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3D system



Recognize the excavated surface based on location information

Machine position and attitude information from satellite positioning and front attitude sensor

2D system



Operator recognizes and sets standards

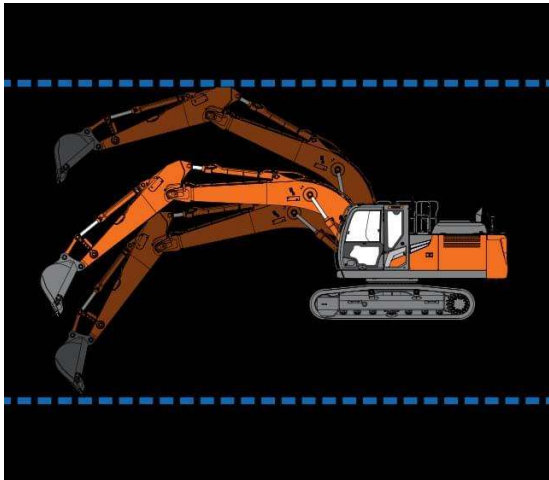
Provides machine guidance that guides operations using monitors and sound.

Solution Linkage Assist : Area control for increased safety

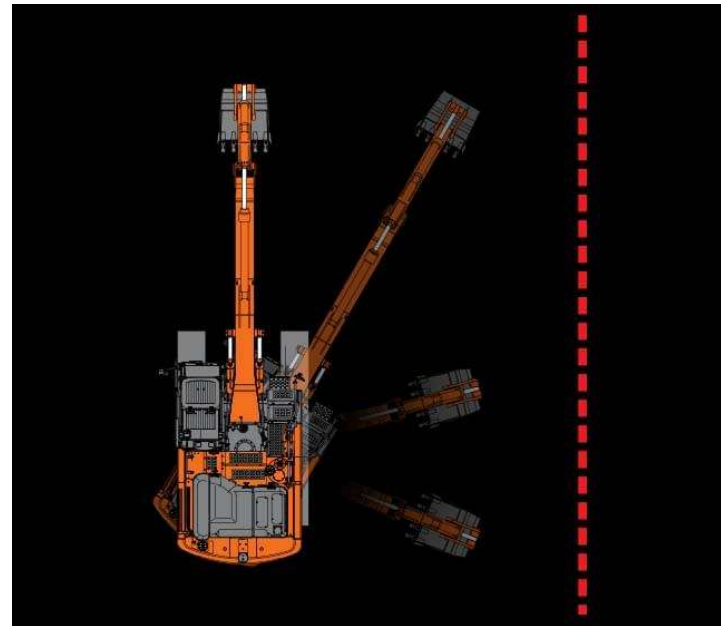
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The area in which the machine can move can be set in advance on the monitor at sites with narrow spaces or obstacles.



Set the height and depth direction to reduce contact with electric wires and ground piping.



Set the surface to prevent it from protruding into walls or public roads.

Solution Linkage Assist : Work Viewer, View construction status

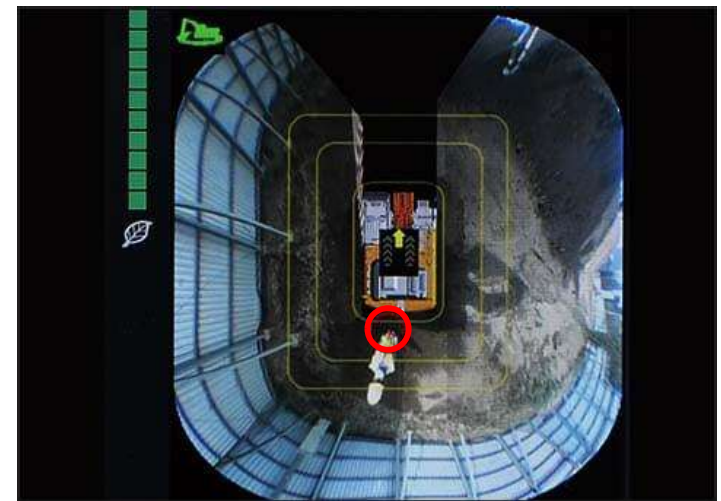
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Observe 360-degree progress with improved work area safety



Check 360-degree videos on your smartphone screen



Recognizes intrusion in the machine's work area with alarm buzzer and a circle mark on the monitor to alert the operator.

Typical Indian mining site: Idling equipment

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Typical Indian road construction site: Idling equipment



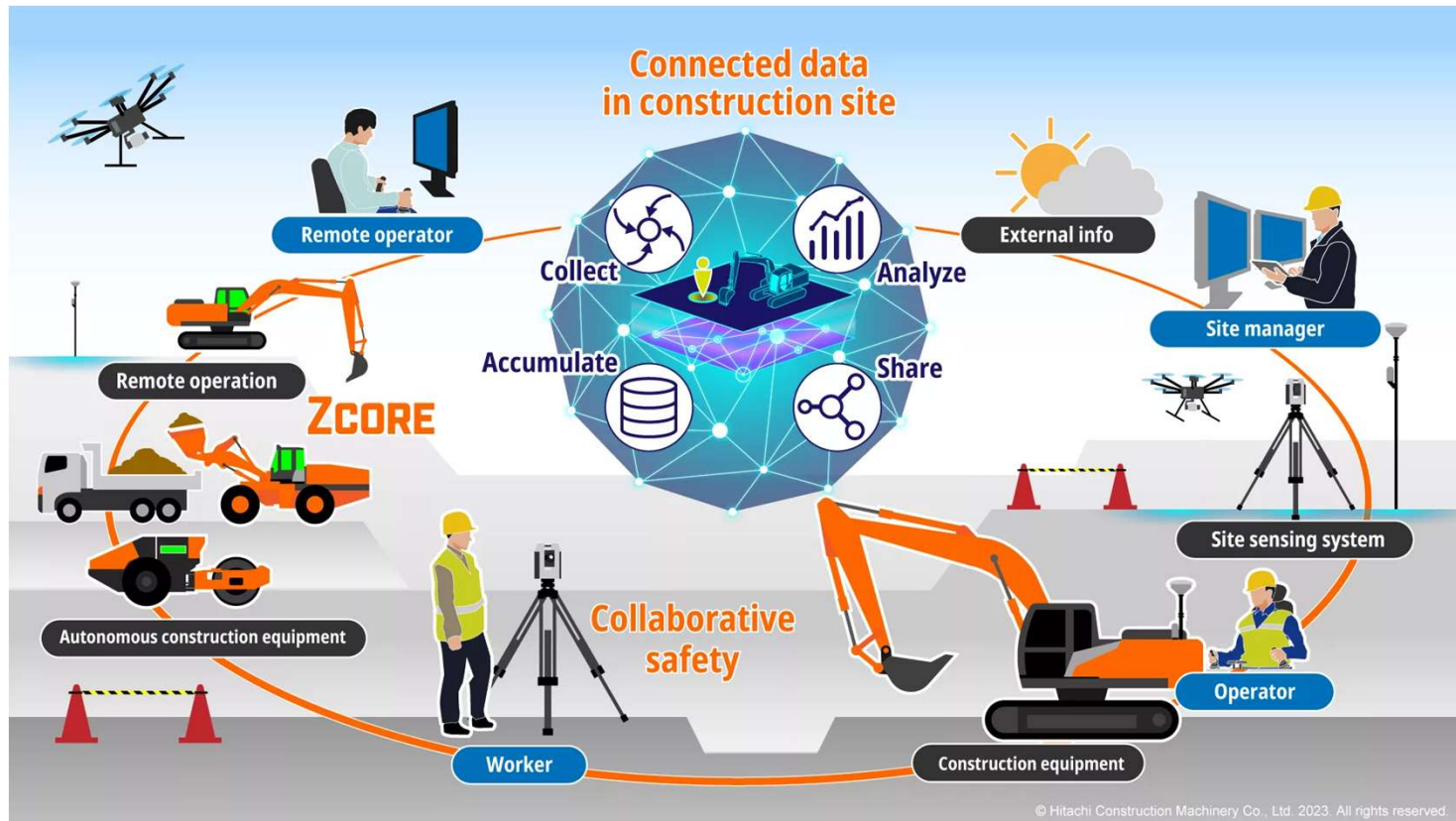
Solution Linkage Series : Solutions

3

Solution Linkage Wi-Fi

One Hitachi | Hitachi × Hitachi Construction Machinery

Improve safety and productivity by sharing data about people, machinery and construction environments in site.



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END

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