www.magicit.co.kr

Global Industrial XR Tech Company

COMPANY PROFILE

MIT XR FACTORY
MIT XR SOLUTION
MIT DIGITAL TWIN

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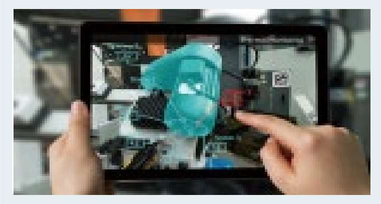
We create safe and efficient industrial sites based on augmented reality and digital twin technology.

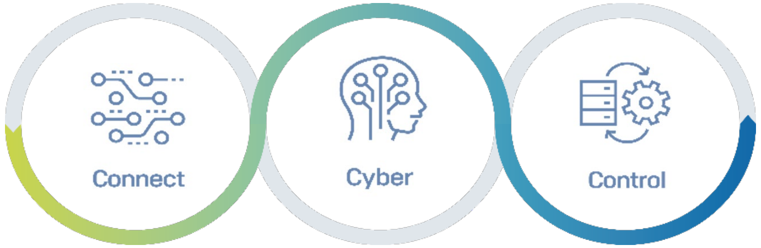
Global Industrial XR Tech Company

MIT INTRODUCE



MIT provides solutions to diverse contemporary problems in the industrial field using XR(eXtended Reality) technology. We dispense safer and more efficient solutions to various problems that occur in the industrial field with our cutting-edge, state-of-the-art technology. Our wide-ranging experience across multiple projects, from large enterprises to small and medium-sized enterprises, and our high level of understanding of various industries have proven that our unique and special XR technology developed inhouse guarantees satisfaction to all our customers

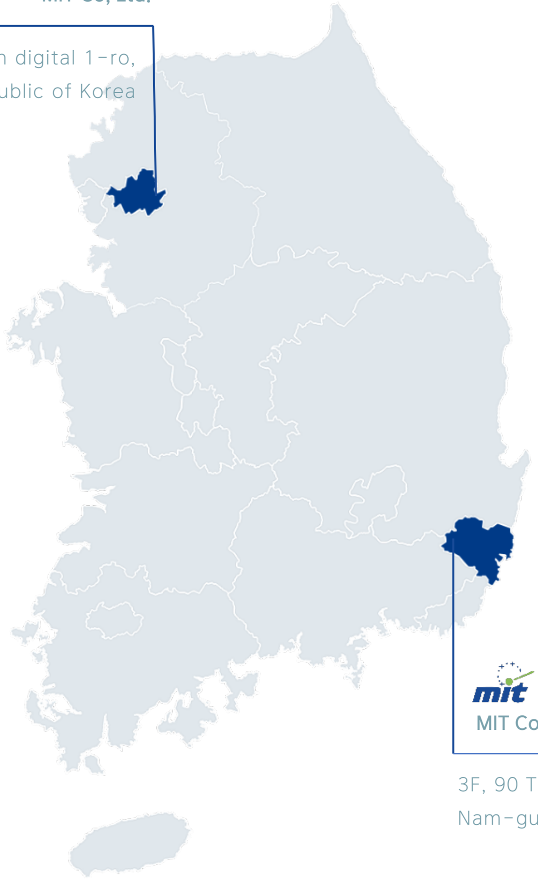
CORE VALUES



We are facing the wave of the 4th Industrial Revolution bringing sweeping and innovative changes throughout the economy and society even as productivity rapidly improves through the convergence of information and communication technologies (ICT) with products and services rendering them intelligent. We believe that these changes will come to and affect industries at a faster pace.

At MIT Co., Ltd., we are working with you to create a 3C world of Connect (hyperconnectivity), Cyber (virtualization), and Control (mutual control) so that our customers can quickly respond to various changes. We think from the customer's perspecitve with exclusive technology and an innovative mind to provide the information service that customers need and promise to do our best for the development of our customers.

BUSINESS SITES



Seoul Center
MIT Co, Ltd.

R503, 191 Gasan digital 1-ro,
Geumcheon-gu, Seoul, Republic of Korea

CEO Profile
Byungsu Min
Ph. D. in Business Administration

Ulsan Center
MIT Co, Ltd.

3F, 90 Techno saneop-ro 55beon-gil,
Nam-gu, Ulsan, Republic of Korea

We provide safe and efficient solutions that support the growth of our customers and our performance is based on MIT's XR, DT (Extended Reality, Digital Twin) technology and our experiences with their implementation. Our system enables on-site safety, and quality, and optimizes factory operations across various industries.

Industrial Innovation for the Future

2018

- **MIT Co., Ltd. established**
- Research Institute established
- Venture Business Certification acquired
- Applied for a patent

Established Year
2018

2019

- **Entered the Smart Factory Market**
- Received Enterprise Smart Factory Supplier Pool Approval from the Korea Technology and Information Promotion Agency for SMEs
- Signed an MOU Agreement with EGG SG Pte Ltd

Won the 2019 Korea Leader Awards (Smart Factory Division)

Won the 2019 Korea Sports Seoul Innovation Power Korea Award

Intellectual Property Rights
16

Number of Employee
30

2020

- **Released Enterprise Software**
- Developed and released the MIT MES Platform
- Registered 5 copyrights.
- Signed an MOU contract with Schneider Electric
- Registered as a partner of Hyundai Electric
- KBS 1 TV Treasure House <Your Dream> aired
- Applied for a national patent

Awarded the Ulsan Startup Festival TOP10 Ulsan Small and Medium Business Administration Award - Awarded the Ulsan Metropolitan City Mayor Award for Business Merit on the 14th Shipbuilding and Marine Day

Received the Ulsan Metropolitan City Mayor's Award for Startup Merit

Received an appreciation plaque for building a smart factory

2021

- **Entered the XR/DT market (Extended Reality / Digital Twin)**
- Development and release of the MIT XR Platform
- Development and demonstration of XR convergence content
- Registered 5 copyrights.
- Signed an MOU contract with PTC
- Registered as a partner of Hyundai Heavy Industries
- Participated in 4 exhibitions

Awarded for 2021 Korea Future Management in Smart Factory Category

Received the Ulsan Metropolitan City Mayor Awards for Global ICT company

Certification and Awards
40

2022

- **Sales growth for 5 consecutive years (Sales were up 15times since the company was founded)**
- Registered 4 copyrights.
- Signed an MOU contract with Teamviewer
- Registered as a partner of Hyundai Mipo Dockyard
- Registered as a partner of SK Energy
- Registered as a partner of SeAH Besteel
- Participated in 4 exhibitions
- Successfully held 35 overseas export buyer meetings

Awarded the 2022 Software Industry Development Award by the Minister of Science and Technology Information and Communication

Won the Grand Prize of the Shipbuilding & Marine ICT Convergence Small and Medium Forum Research Group

Received the Ulsan Metropolitan City Mayor Awards

2023

- **Scaled the business significantly and attracted investment**
- Registered as an SK geocentric partner
- Registered as an Seabesteel
- Expended and moved to MIT Ulsan Center
- Establised the MIT Seoul Center
- Participated in domestic exhibitions (5 Exhibitions)
- Attending CES which is the largest international trade show

Projects
58

As of the end of December 2022

MIT solves customers' problems based on the technology principles of Connect, Cyber, and Control. We are leading change as a participant spearheading the 4th Industrial Revolution across several industries, from shipbuilding/heavy industry to energy, petrochemicals, and steel.

The customers of MIT are listed below:

Shipbuilding/Heavy industry

We continuously lead the global market having established the new and innovative concept of the digital cluster, an infrastructure for partner ship with different companies.

현대중공업

We provide a proactive environment for optimizing the logistics system by establishing a supply chain system with shipbuilding equipment suppliers.

현대미포조선

DSHI

DONGYANG
INDUSTRIES ELECTRIC CO., LTD.

Energy

MIT Viewer and MIT Safety have contributed greatly to industrial safety to prevent accidents that frequently occur in energy companies such as water leaks, explosions, and electric shocks.

SK 에너지

MIT Assist provides an environment for quick collaboration between sites, managers, and branch offices without time and space constraints.

SK 지오센트릭

울산항만공사
ULSAN PORT AUTHORITY

주식회사 덕양가스
DEOKYANGGAS CO.,LTD.

Petrochemicals

IT Solutions provides a platform for predictive maintenance of facilities in the petrochemical field which requires high safety and reliability.

株式會社 韓洲

We provide a powerful XR solution for the facility-specific monitoring that is essential in industrial sites.

HANJIN CHEMICAL

X-OIL

한길주식회사

Steel/Machinery

MIT's core solution is used as an essential tool for improving safety and productivity in 24/7 process companies

SeAH 세아베스틸

MIT's XR solution improves customer satisfaction by enabling an industrial site to become safer and more efficient.

SEOJIN PRECISION

월성테크

동부엔지니어링

Services

MIT is involved in technical cooperation with Thingworx and Vuforia as a partner in the area of AR business-related technical cooperation support.

ptc

We are collaborating with TeamViewer by providing AR-related technologies and platforms.

TeamViewer

Schneider Electric

SK C&C

HEXAGON

hp

IntelliVIX

DMOA

MS TECH
More than Solution

MDS테크

스포츠서울

GEN2WAVE

Partner Organizations

We collaborate with several partner organizations to bring about mutual development by planning and providing technologies and policies to lead the 4th industrial revolution.

UIPA 울산정보산업진흥원

We support efficient corporate operations through a variety of support projects in the local community resulting in the resolution of difficulties and giving support for business expenses

울산테크노파크
Ulsan Technopark

KIST 한국과학기술연구원
Korea Institute of Science and Technology

DTaQ 국방기술품질원
Defense Agency for Technology and Quality

UNIST

재단법인 부산테크노파크

경북테크노파크

재단법인 경남테크노파크

한국신지식인협회

울산VR·AR제작거점센터
VR·AR Production Support Center Ulsan

울산대학교
UNIVERSITY OF ULSAN

울산과학대학교
ULSAN COLLEGE

ETRI
한국전자통신연구원

KOSMO
스마트제조혁신추진단

인제대학교
INJE UNIVERSITY

동명대학교
TONGMYONG UNIVERSITY

KITECH
한국생산기술연구원

한국폴리텍대학

Check out the endless practical applications of XR solutions that can solve various Problem areas across your business.

Get acquainted with cases of practical application that can be used in many different types of businesses.

Application Field

Energy

Petrochemical

Shipbuilding

Steel

Automoviles/Parts

Mechanical/Metal

Electronic

National Defense

Education

Construction

Food

IT

MIT enables the creation of an optimal and smart industrial site by implementing the management method of 4M (Man, Machine, Material, Mthod) to determine the safety and quality of industrial sites using the virtualization technology called XR.

We create a safer and more efficient industrial site with advanced Technology.

Industrial Safety

- Utilize an augmented reality (AR)-based intelligent system to prevent safety accidents in various industrial sites
- Minimize safety accidents by intuitively augmenting field facility information
- Improve response speed by visualizing the problem location and abnormalities

Production/ Quality

- Predict and control real-time quality anomalies
- Predictive maintenance for production facilities
- Efficiency of the production process

Education/ Training

- Necessity of realistic manuals for quickly and accurately assessing job performance by field workers
- Identify and overcome limitations of document-oriented education and training
- Get rid of difficulties in providing fresh training opportunities due to retirees and worker replacement

Remote/ Cooperation

- Supports real-time remote communication between manufacturing sites and managers
- Overseas branches to overcome the time and space problems of physically distant workers
- Support for remote collaborations utilizing highly skilled technicians if there are difficulties for field workers

MIT XR SOLUTION

- MIT VIEWER
- MIT SAFETY
- MIT MANUAL
- MIT ASSIST
- MIT GIS
- MIT QUALITY

MIT DIGITAL TWIN

- MIT CRANE ANTI-COLLISION
- MIT SMART FARM
- MIT OFFSHORE WIND POWER

MIT XR FACTORY

- MIT XR SMART FACTORY
- MIT DT SMART FACTORY

Create
Digital Future

MIT is committed to creating a digital future to support customers with safer and more efficient industrial sites

MIT provides the best value service to customers through products that give the highest level of satisfaction.

mit Co., Ltd. Solution

mit XR SOLUTION

1 | MIT Viewer

2 | MIT Safety

3 | MIT Manual

4 | MIT Assist

5 | MIT GIS

6 | MIT Quality

mit Viewer

Efficient operations management of the workplace

MIT Viewer visualizes complex equipment operations, inspection of items, and maintenance processes as easy-to-understand XR contents for efficient operation and management of the workplace thus increasing the convenience of grasping the current status of the workplace.

Facility IoT information visualization

By augmenting the IoT data of the facility using XR at the actual facility, real-time facility data can be checked along with the actual status of the facility to reduce work time and efficiently operate field work

Minimize work errors

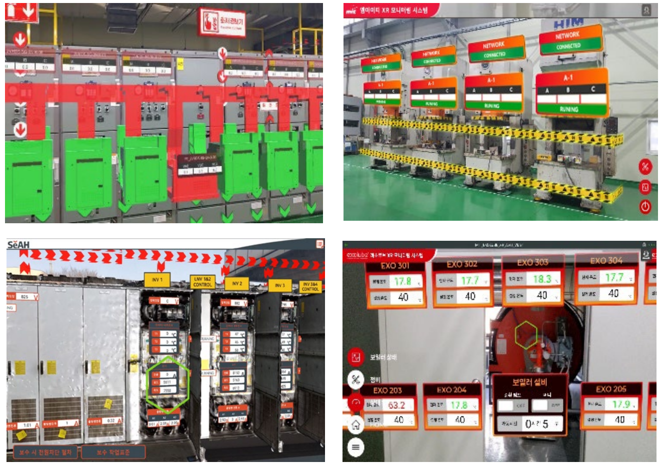
Through facility and data XR visualization, work information is intuitively augmented from the field facilities to minimize work errors, optimize the reporting process through real-time reporting on site, increase the process management efficiency, and visualize and respond to alarm-based information such as the location of problems and types of abnormalities. This process improves the speed of facility operations.

Support for various Smart devices

Work can be performed with smart devices optimized for the specific field, such as smartphones, tablets, and industrial smart goggles.

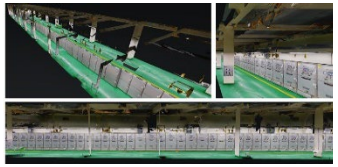
CONTENTS

MIT Viewer reproduces the industrial site as a virtual model and monitors its operating status by linking facility data in real time through PLC and sensors to improve productivity



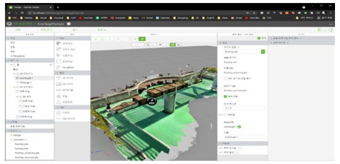
* This screen is the Augmented Reality Viewer system screen of MIT Co., Ltd. applied to the industry.

FUNCTION

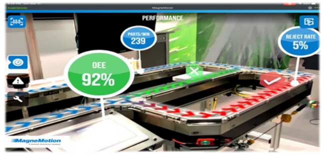


- **3D Space Building Technology**
Extracts spatial information data through the 3D camera scan method to create accurate content

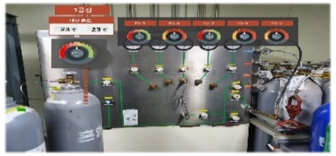
- **Visualize a broad target audience**
It visualizes content through various target recognition methodologies such as Area Target, Image Target, Mark Target, and QR Code



- **Quick Content Creation**
Response speed is improved by visualizing alarm information such as equipment abnormality, problem location, and abnormality type



- **IoT Data Visualization**
Visualize the data collected from IoT sensors in real time to understand the current situation



- **Real-time data linkage**
Tag-based real-time PLC data is collected, configured as a user screen, and linked to XR contents

iOS
Microsoft HoloLens
VUZIX
Mobile
3D Eyewear
2D Eyewear

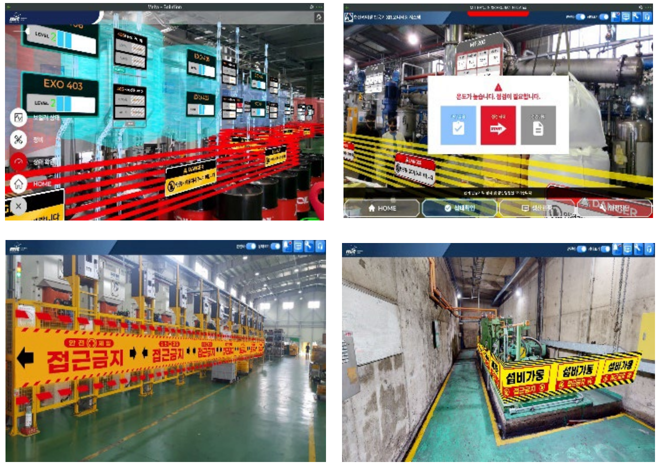
- **Device Support**
Supports various devices such as smart phones, smart tablets, and smart glasses

Safety

Prevent access to Hazardous areas	If and when a worker approaches a dangerous area, the worker gets a notification and a virtual fence is triggered to prevent accidents that may occur when approaching the dangerous area. In addition, when approaching a dangerous area, an alarm is generated to block access.
Emergency Response	In the event of an emergency, safety facilities (fire hydrants, emergency exits, etc.) may be obscured by facilities or difficult to locate. Safety facilities are expressed as XR content and workers can quickly check things and take action.
Hazard notification	This monitors the facility status in real time to check dangerous situations and when a dangerous situation occurs, it notifies workers and guides them in taking action or evacuating them to get out of dangerous situations.
Encourage wearing Of safety gear	Before work, guidance is provided on the safety equipment necessary for the process and workers are encouraged to wear the gear to prevent accidents caused by not wearing safety equipment in advance.

CONTENTS

MIT Safety increases safety management efficiency of industrial sites and processes by reducing the risk of safety accidents and improving response speed by visualizing alarm information which identifies issues like the location of problems and abnormal types of problems.



* This screen is the Augmented Reality Safety system screen of MIT Co., Ltd. applied to the industry.

FUNCTION

○ Real-time anomaly detection

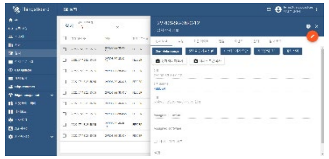
mproves response speed by visualizing alarm information such as the location of the problem and the type of anomaly

○ Location-based geographic System

Provides detailed information on the location of the facility where the failure occurred through the navigation function

○ Prevent safety accidents

In the event of an emergency, an emergency stop is possible through the PLC control signal with administrator authority



○ Data analysis Predictice through

Prediction through data pattern analysis and support for forecasting service and maintenance

○ Hazardous zone Warning

Notification is provided relating to dangerous situations by voice notifications and displays through wearable devices and smart tablets

○ Visual Safety Fearures

Supports safety fences that prohibit access to worker danger zones that support precise location recognition with visual functions

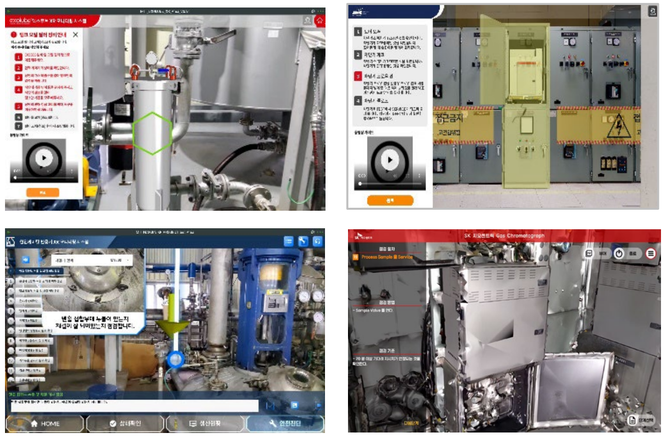
mit Manual

18
Step
Assembly
Output Shaft 2 pieces
Next

Easy knowledge distribution	MIT Manual is an XR-based immersive manual that helps field workers intuitively understand the work process by digitizing the knowhow of experts as AR content that even unskilled workers can easily understand.
Accelerate work in the field by providing clear information	MIT Manual provides information by visualizing complex facility construction, inspection items, and maintenance processes using easy-to-understand XR contents for efficient operations and management of the workplace so that the field workers can perform their tasks quickly and accurately.
XR-based immersive Training manual	Training using XR-based immersive manuals is possible for complex and difficult-to-experience training in the field. It helps unskilled workers to perform their work safely and accurately even when entering the site and helps unskilled workers solve problems on their own when problems arise.
Intuitve XR-based Educational simulation	By simplifying content production based on 3D model animation, field workers can learn the work process intuitively and easily to achieve a good learning effect. Further, simulation supports better job training and improves the work speed of even unskilled persons.

CONTENTS

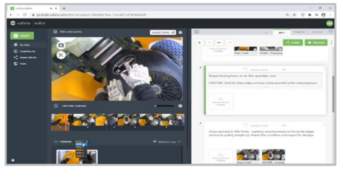
MIT Manual visualizes the delivery of equipment work manuals with XR contents, quickly guides work and process changes in the field, and supports immediate application in the field.



* This screen is the Augmented Reality Manual system screen of MIT Co., Ltd. applied to the industry.

FUNCTION

- **easy-to understand manual**
  Based on 3D model animation, it supports simple maintenance sequences and methodical guidance



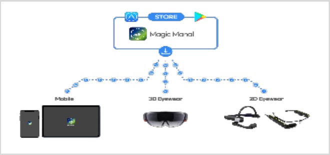
- **Easily create educational content**
  Edit and distribute manuals using a simple editing tool which supports version management

- **Create Fast Content**
  90% reduction in time and cost compared to before

RECORDING STEP 1
MENU
TAKE PHOTO
NEXT STEP
ADD BOOKMARK

- **Location-based work Order**
  Supports expert work processes and GPS functions

- **Simplify Knowledge transfers**
  Simplifies content creation and allows field workers to intuitively nderstand the work process



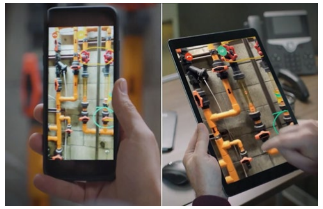
- **Easy Knowledge distribution**
  All created content can be used on various devices (PC, Mobile devices, AR Glasses, Documents)

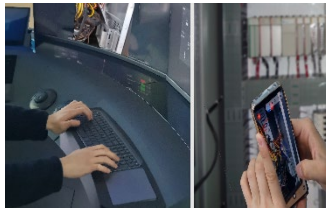
mit Assist

Marion Chu
turn the lever

CONTENTS

MIT Assist allows you to respond to the failure situation in real time through remote experts and smart devices when external experts are needed (in the domestic and overseas branches, etc.) in case of complicated facility failures. MIT Assist can drastically reduce the number of unnecessary business trips





* This screen is the Augmented Reality Assist system screen of MIT Co., Ltd. applied to the industry.

Virtual Remote Support from anywhere

A breakdown or plant downtime, or production downtime will result in high costs that can occur in a fraction of the time. When this happens, service operations become a particularly time-consuming issue. The MIT Assist solution can solve these problems through its interactive capabilities

Minimize Downtime and Increase Productivity

Reducing travel costs while minimizing downtime provides a fast return on investment. Remote support helps transfer knowledge to any location without missing vital information. It has the effect of narrowing the knowledge gap within the company and reducing decision-making delays among employees

Efficient problem-solving

When an on-site problem occurs, remote technical experts and on-site staff can share the situation virtually in real-time to solve the problem in real-time without having to travel to the site. It improves the facility operation rate and productivity by reducing the equipment maintenance time and general maintenance time.

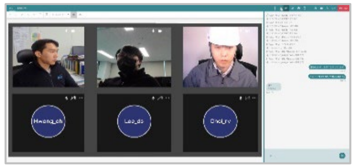
Time and cost savings

MIT Assist enables communications while showing field information to remote experts in real time. In addition, since it is possible to check the site remotely along with the head-office engineers and related companies, real-time decision-making is possible by conducting multi-party meetings remotely without business trips for difficult and complex processes. Additionally, corporates can minimize unnecessary travel expenses and costs associated with repeat visits.

FUNCTION

Remote Video Call

Collaborative support between field workers and remote experts using video

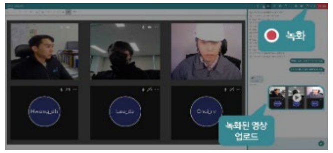


Multilateral Collaborative

Guarantees a high call success rate and HD-level picture quality even with multi-user access

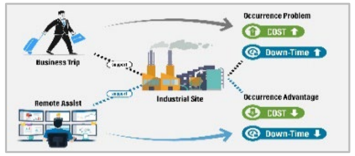
AR drawing and AR pointing support

Reducing communication errors and improving work accuracy by directly marking where it is necessary through AR drawing and pointing



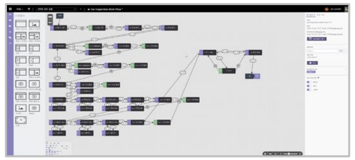
Provide recording function

This facilitates a knowledge transfer system through remote support recording



Reduce unnecessary business trips

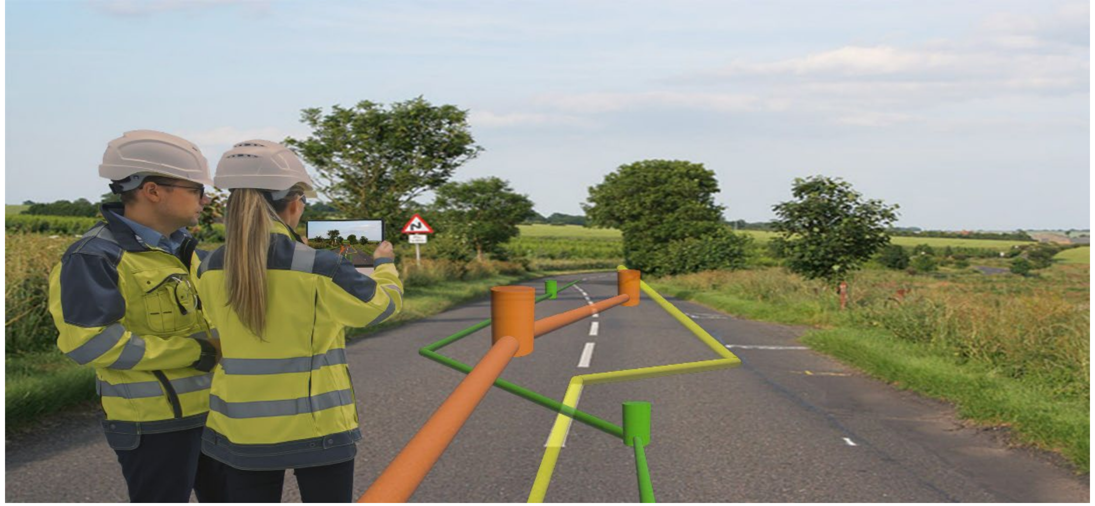
Using multi-party meetings, real-time remote decision-making is possible without travel even in complex processes.



DIY Workflow Editing

Reduce costs and time by producing edits of workflows in a fast and efficient AR workflow format

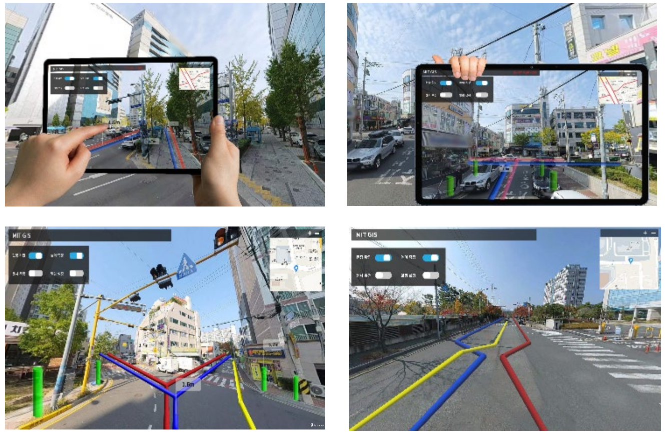
mit GIS



Effective visualization of data	MIT GIS is a geographic information system used to collect, monitor and provide more accurate information in real time in various fields, including utility companies and statistical surveys, such as electric power and city gas.
Accident Prevention Support	A system that detects gas leaks caused by damage and supports accident prevention by measuring the internal and external locations and abnormalities of the complex gas pipeline network with sensors, saving both costs and time.
Confirm information using XR	By converging the major ground and underground facility drawings and the XR spatial information platform with a focus on gas piping, it supports checking the realistic gas facility pipe network information linked to the surrounding topography and features at once anywhere in the city gas supply area.
Data Integration Maintenance	It provides a comprehensive, customised system that inputs and stores the collected geographic information data in the server, analyzes it and aggregates it in various ways, and provides them to the users.

CONTENTS

This is the XR space that reduces time and costs by converging the global navigation system (GPS), geographic information system (GIS), facility management system, IoT, and 5G technologies to manage facilities in factories and cities and quickly respond to safety accidents. It is an information platform.



* This screen is the actual GIS system screen of MIT Co., Ltd.

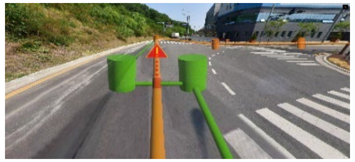
FUNCTION

○ Higher accuracy

Higher accuracy in measurements is possible through the high-performance software

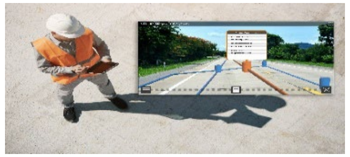
○ Building a safe work environment

Supports the establishment of a social safety net through integrated management of facilities, one of the areas of safety vulnerability



○ Safety accident prevention

Supports accident prevention by detecting gas leaks caused by pipe and facility damage

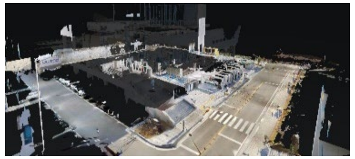


○ Improves work efficiency

Integrated management is possible through the MIT-GIS system without having to go through cumbersome construction work every time.

○ Applied to various fields

This process of visualization can be applied to various facilities



○ 3D space construction technology

Produces accurate content by extracting spatial information data through the 3D camera scan method

Quality

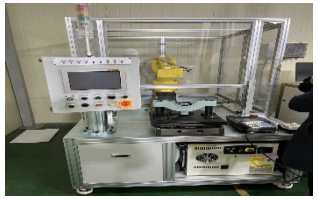
XR quality management platform	MIT Quality augments the 3D model on top of the actual equipment to effectively check and predict the quality after production.
Highest accuracy	The intuitive MIT Quality quality management system is a solution that can improve quality and accuracy by taking immediate action through real-time defect analysis.
Easy and convenient inspection	In the process of checking quality, there are many cases where both hands are used by the workers to perform duties. MIT Quality allows you to check issues right in front of your eyes with AR by leaving both hands free through the use of smart glasses and smart tablets.
Inspection Report	Inspection information can be shared with the owner and partner companies, and inspection reports can be automatically generated and issued.

CONTENTS

This is an XR-based quality control platform that reduces defect rates through three-dimensional product inspection, shortens the inspection process and delivery time, respectively, and it can be applied to 3D vision inspection machines, bending machines, automatic welding machines, and multi-joint robots.

Applied to articulated robots

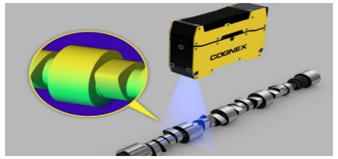
Applied to 3D vision inspection machine



Application of automatic welding machine

Applied to the banding machine

FUNCTION



Inspection process innovation

Visualizes inspection information by linking with the MES by measuring with the 3D vision inspection machine

Inspection of three-dimensional workpieces

Perform three-dimensional workpiece inspection by accelerating image processing

Welding inspection automation

Automatic linkage of inspection information by welding using an automatic welding machine

Smart production facility

Explosion-proof temperature and catalyst control system controls

Sharing inspection information

Maximize the efficiency of inspection information management of customers and second and third-tier suppliers

Inspection report

The inspection report written by hand is automatically issued by the system

mit DIGITAL TWIN

1 | MIT Crane Anti-Collision

2 | MIT Smart Farm

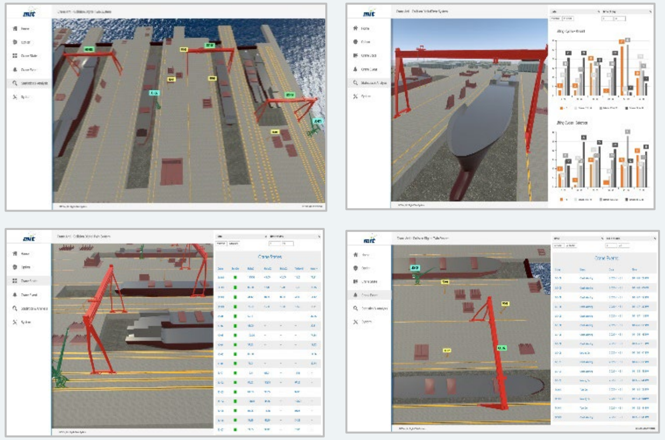
3 | MIT Offshore Wind Power

Crane Anti-Collision

Accurate crane movement detection through IoT sensors	The movement of the crane is monitored in real time using IoT sensors.
Collision Risk Step-by-Step Warning	It detects the shortest distance between cranes, sets risk levels for each proximity distance and provides tep-by-step warnings according to risk levels to prevent collisions.
Site safety management and crane work efficiency improvement	In the existing method of utilizing the signalman's radio and driver's notification, collisions between the ignalman and driver frequently occurred due to reception errors and unconfirmed blind spots. Accurate crane movement detection through IoT sensors reduces accidents due to unconfirmed blind spots via step-by-step notification of the risk of collision and safely manages the site to prevent work incapacity due to accidents while increasing crane work efficiency.
Remote monitoring facilitates maintenance and on-site management	By providing a monitoring system for safety managers, you can check the crane status in real time and monitor the work status and crane collision situation in real time.

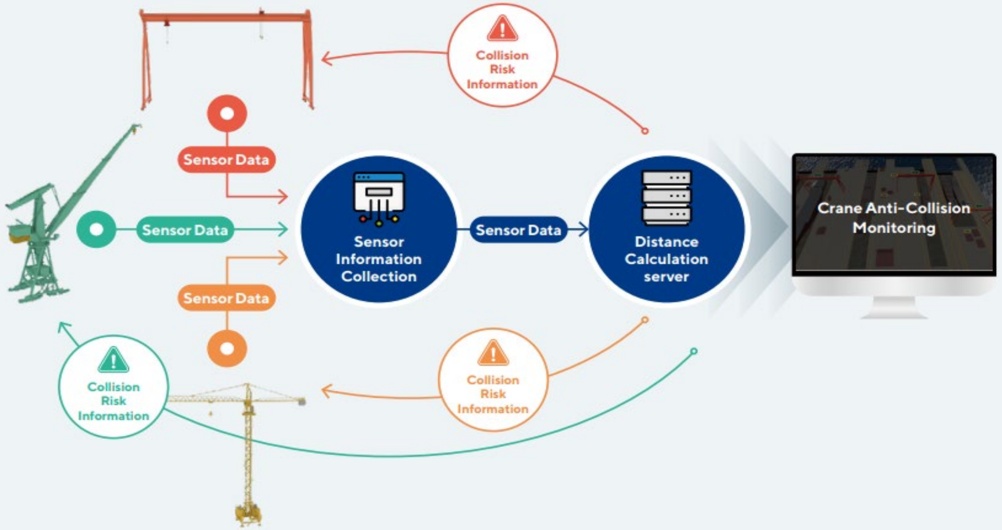
CONTENTS

The Crane Anti-Collision System is a solution that prevents accidents by warning workers of the risk of collision between cranes in advance using IoT sensors.



* This screen is a screen of MIT Co., Ltd.'s digital twin-based crane collision prevention system that was actually built.

FUNCTION


Collision Risk Information
Sensor Data
Sensor Data
Sensor Data
Sensor Information Collection
Sensor Data
Distance Calculation server
Crane Anti-Collision Monitoring
Collision Risk Information
Collision Risk Information

Smart Farm

Digitization of cultivation sites
Collect real-time data through IoT sensors to control temperature, humidity, etc., in the grow house utilizing PLC-based automated control and standardize the cultivation environment data for each crop.

Application of ICT convergence to cultivation technology
IoT smart sensors are installed in the cultivation house and connected for communication and to collect cultivation big data, apply it to AI, and obtain the optimal growth environment.

AI-based integrated management
The data collected from the IoT smart sensor is analyzed for the optimal growth environment and uses AI to control the environment for each stage of growth.

Digital twin real-time monitoring
Remote real-time monitoring and control by establishing a digital twin environment for growth information.

CONTENTS

MIT Smart Farm provides differentiated value by performing real-time monitoring, analysis, simulation, remote control, etc.

Inside of cultivation company

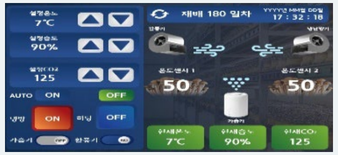
Plant growth

Cultivation company entrace

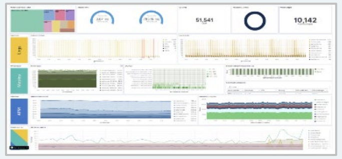
Integrated Control Room

* This screen is the actual screen of MIT Co., Ltd.'s digital twin-based smart farm monitoring system.

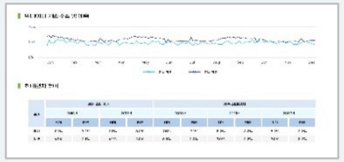
FUNCTION



- **Integrated control system**
  Management of growers in terms of temperature and humidity through an integrated control system



- **Utilize machine learning**
  Provides an automatic prediction system based on collected data



- **Big data-based information collection**
  Collects environment and growth data of real-physical objects using sensors in the cultivation house

- **Provides Differentiated Value**
  Provides differentiated value by performing real-time monitoring, analysis, simulation, remote control, etc.

- **Predictive maintenance through data analysis**
  Capable of monitoring and simulating current and future information in space.

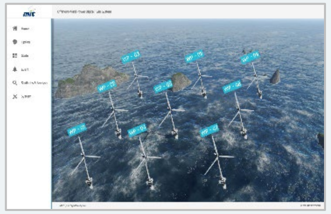
- **Verify products swiftly**
  The products are verified swiftly to reduce costs and time by conducting effective product verification at low cost

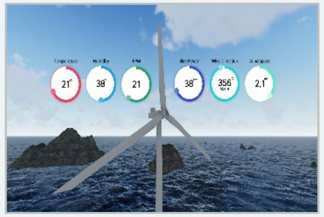
Offshore Wind Power

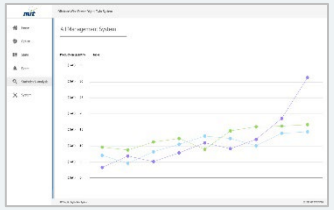
Real-time remote monitoring	Offshore wind power generator facilities can be remotely monitored and controlled using IoT sensor data. It also enables remote monitoring of the condition of offshore wind turbines, reducing the number of personnel required to inspect potentially hazardous offshore wind turbines.
Real-time data using IoT sensors	Real-time monitoring of offshore wind turbine status using IoT sensors.
Predictive maintenance using AI	The status of offshore wind power generators can be collected from smart IoT sensors and turned into big data and the collected big data can be analyzed using AI to cut down on maintenance costs and downtime by predicting replacement time in advance
Diagnose Remote Status	Due to the nature of offshore wind operations, all maintenance work is done at sea. Because it is easy to be exposed to safety accidents caused by waves and wind when berthing for maintenance, it supports worker safety by reducing the number of berthings by recognizing failures in advance through remote status monitoring.

CONTENTS

The offshore wind power generation monitoring system installs IoT sensors to remotely monitor the status of offshore wind power generators in real time thereby reducing maintenance costs and wasteful downtime of potentially dangerous offshore wind power generators.

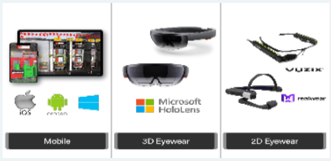




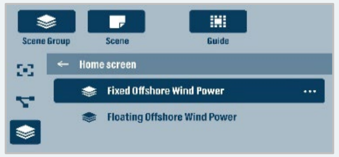


* This screen is a screen of MIT Co., Ltd.'s digital twin-based offshore wind power monitoring system that was actually built.

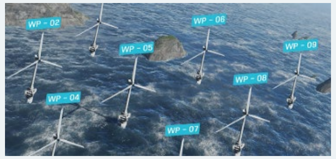
FUNCTION



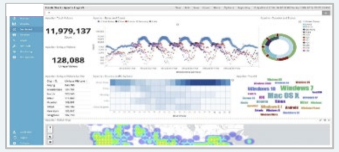
- **Support for various devices**
  Support for multiple devices such as smartphones, smart tablets, and smart glasses is available



- **Creating the content list**
  Create a content list to support the production and distribution of various content



- **3D space building technology**
  Create a digital twin by extracting spatial information data through the 3D camera scan method

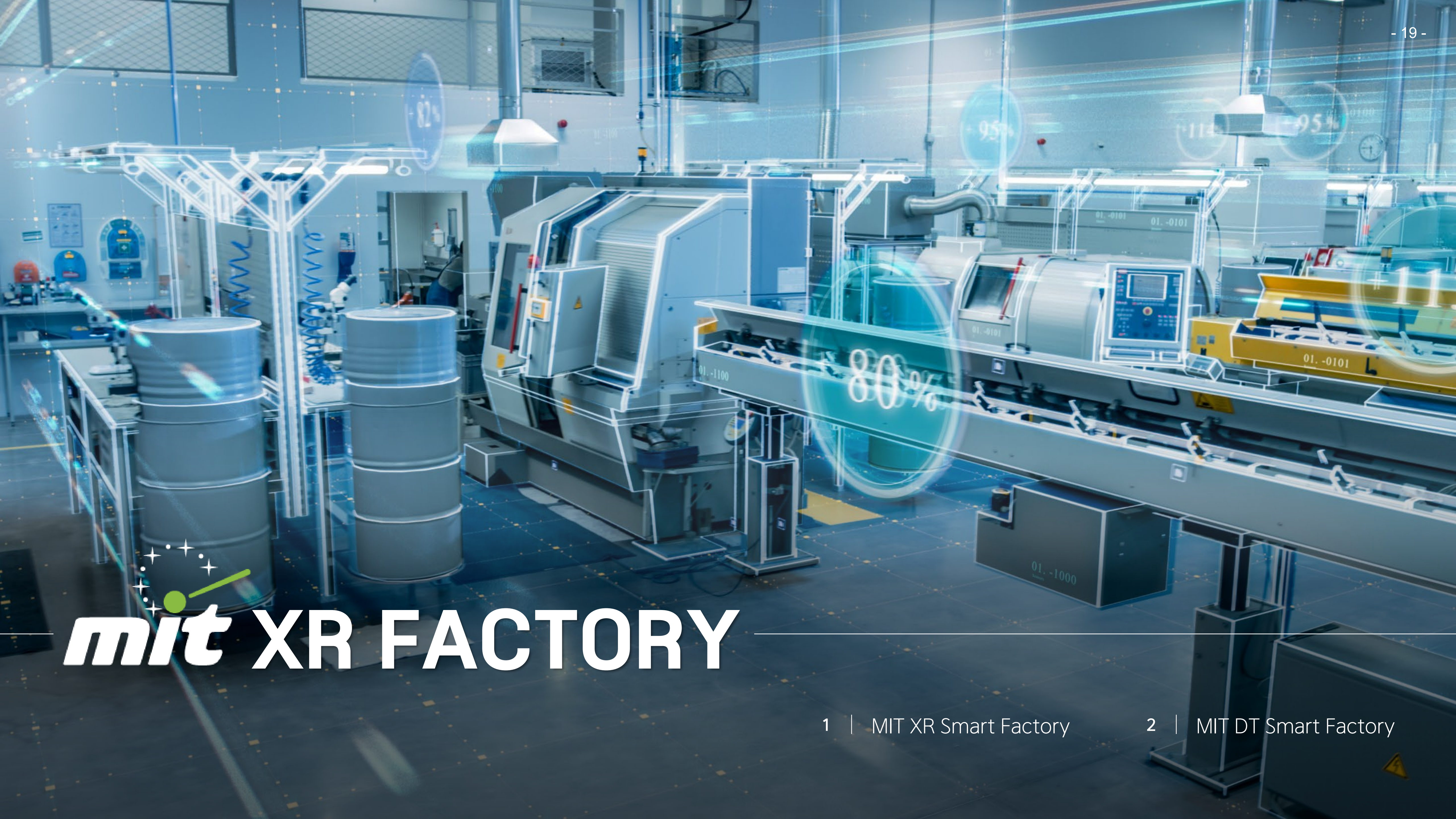


- **Provide differentiated value**
  Provides differentiated value by performing real-time monitoring, analysis, simulation, remote control, etc.

Magic - Twin board

- **Predictive maintenance through data analysis**
  Capable of monitoring and simulating current and future information in space.

- **Validate products quickly**
  Reduce cost and time by conducting effective product verification at a low cost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mit XR FACTORY

1 | MIT XR Smart Factory

2 | MIT DT Smart Factory

mit XR Smart Factory

Visualization of facility sites	It enhances the convenience of grasping the current status by visualizing complex equipment operations, inspection items, and maintenance processes as XR content for easy understanding.
Real-time data using IoT sensors	By augmenting the equipment IoT data with XR, you can check real-time equipment status and data together to reduce working time and operate field work efficiently.
Systematic plant operations	After linking real-time facility data with the MES system, a predictive maintenance system is established through data analysis and real-time monitoring enables systematic factory operations.
Increase work efficiency	Improves process management efficiency and response speed by visualizing alarm information such as the location of a problem and type of abnormality.

CONTENTS

MIT XR Smart Factory is an advanced solution that can monitor and control the facility status in real time by applying XR to industries where smart factories are built.

Application of robot automation process

Application of press automation process

* This screen is confirmed through augmented reality devices such as Hololens and Tablet.

FUNCTION

- **IoT convergence**
  Real-time information linkage through PLC facilities and sensors

- **Application of Augmented Reality**
  Real-time visualization of data collected from IoT sensors.

- **Systematic plant operation**
  Efficient facility management shortens the product release period and drastically reduces production costs

- **On-site monitoring**
  Information monitoring synchronized with HMI, office, and control center is possible

- **Rapid Decision Making**
  Quick decision-making about field conditions in conjunction with MES

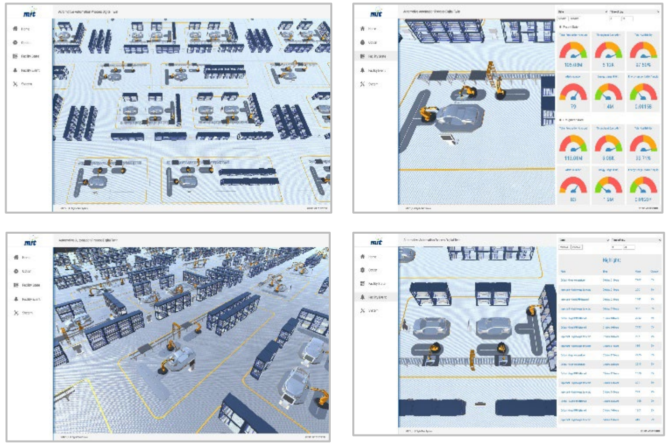
- **Mutual Control**
  Reciprocal control between the computer and the factory enables a rapid response to emergencies

DT Smart Factory

Virtual Convergence of Industrial Area	Instead of manufacturing real products, you can create and simulate products and production plants in the virtual space of the digital twin and thus reduce the costs and time for building large facilities and associated facilities.
Real-time data analysis and processing using IoT sensors	Real-time data analysis using spatial information and actual data through real-time monitoring, analysis, simulation, and remote control using IoT sensor data for core facilities or associated facilities provide differentiated value.
Diagnose remote status	The digital twin monitors information relating to the present and future of the factory and enables remote predictive maintenance through simulation while progressing from the previous process to the next process, predicting quality problems and discovering defects in advance.
Digital transformation	Intelligent factory operation is made possible by analyzing various types of information collected from the real world which is simulated in the virtual world to derive an optimized plan based on this to be optimized in the real world.

CONTENTS

MIT DT Smart Factory applies the digital twin to businesses that have built smart factories, synchronizing virtual factories and physical factories to enable mutual control so that real problems can be overcome with ICT technology.



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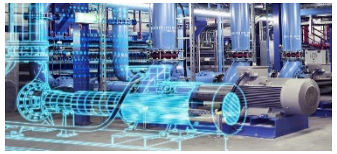
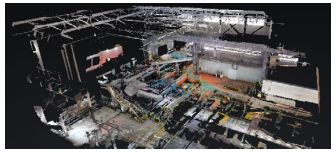
FUNCTION



- **Transformation with digital twins**
  3D virtualization of buildings, facilities, equipment, facilities, etc., and real-time linkage of legacy and IoT data

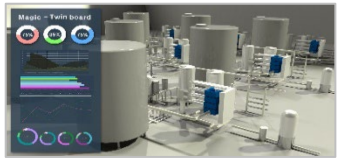
- **Production CPS-based integrated monitoring**
  Real-time visualization of data collected from IoT sensors



- **3D space construction technology**
  Produce the digital twin by extracting spatial information data through the 3D camera scan method

MIT Magic-CPS

- **Provide Differentiated Value**
  Provides differentiated value by performing real-time monitoring, analysis, simulation, remote control, etc.



- **Data analysis, predictive maintenance**
  Predictive maintenance by monitoring and simulating information from the present to the future of the workspace

MIT Quality

- **Validate products quickly**
  Reduce costs and time by conducting effective product verification at a low cost

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MIT XR FACTORY
MIT XR SOLUTION
MIT DIGITAL TWIN