Create
the Future of
Digital Twin Plant

POMIT

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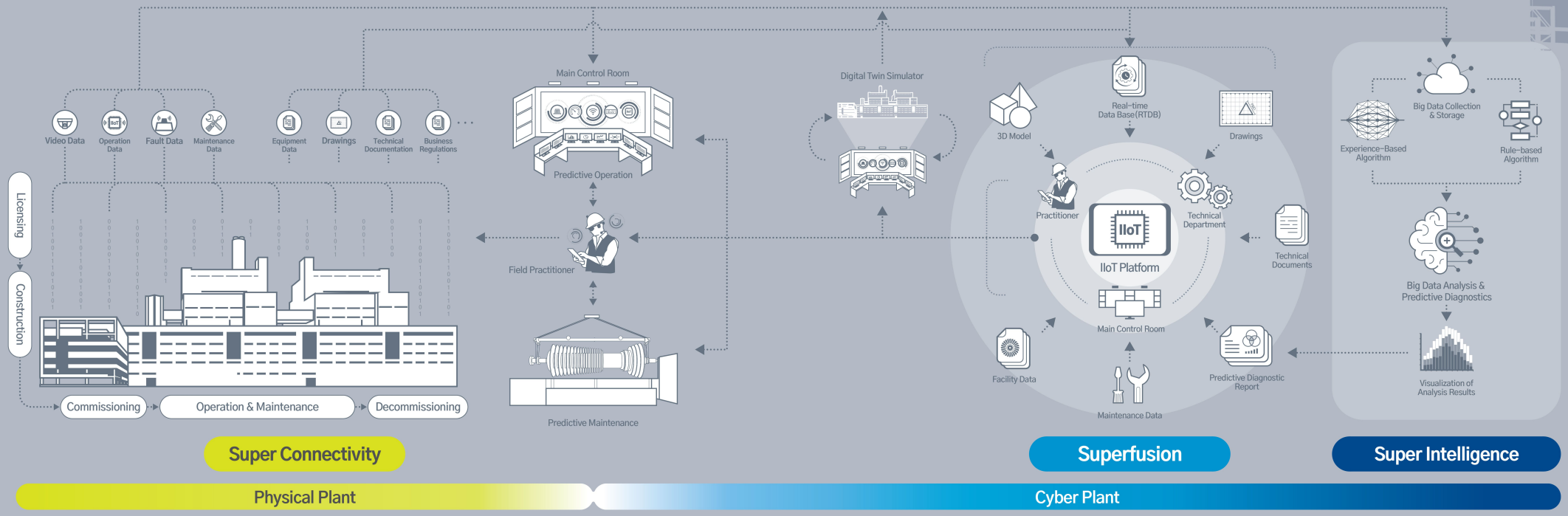
CREATE THE FUTURE OF DIGITAL TWIN PLANT

A specialist IT company, POMIT is leading the way into the future of industrial plants based on advanced thinking and undertaking the challenges of the era of the 4th industrial revolution.

The Process of Digital Twin Plant with POMIT

Based on our super connective and intelligent technology-fused cooperative decision-making visualization system, which is based on a cyber-physical system utilizing plant lifecycle data, we are responding to various environmental changes and improving the lives of customers through value creation.



VR · AR

Reality is expanding. There are infinite possibilities

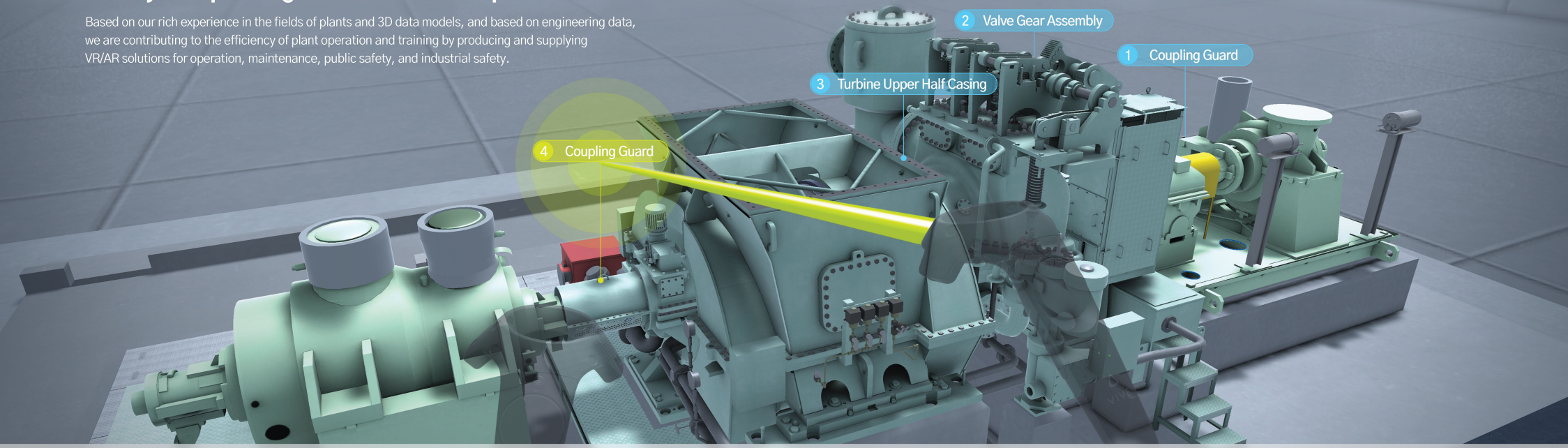
Based on our rich experience in the fields of plants and 3D data models, and based on engineering data, we are contributing to the efficiency of plant operation and training by producing and supplying VR/AR solutions for operation, maintenance, public safety, and industrial safety.

VR (Virtual Reality)

This state-of-the-art technology enables users to have true-to-life experiences in a computer-generated virtual world.

AR (Augmented Reality)

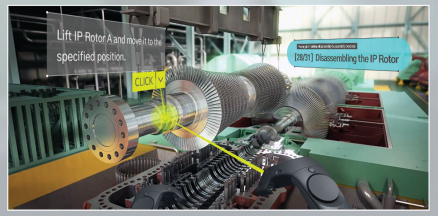
This is computer graphics technology that superimposes virtual objects on the real world that a user sees with his or her eyes.



Operation

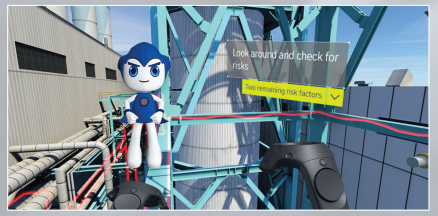
VR can be used for training in the operation of various types of plant equipment, and operators can obtain assistance in actual operation through AR.

Maintenance



It is possible to receive help via VR or AR when overhaul and maintenance of various plant facilities are required

Industrial Safety



In order to prevent various industrial accidents happening in the field, operators can receive safety education through VR, which contributes to the prevention of on-site accidents

Promotion

VR technology can be used to experience a plant in virtual space, enhancing understanding of equipment and contributing a promotional effect

IIoT Platform

Creating the foundation for digital transformation

It is a platform to support collaborative decision-making combining technology data and IoT technology that can be operated in various user environments such as PCs and mobile devices.

IIoT Platform
(Industrial Internet of Things Platform)

It is an industrial IoT platform specialized in industrial environments that easily makes convergence/expansion among IT technologies.

3D Model

Provides space/design information in virtual space using 3D models created in actual space.

Drawings

The IIoT platform makes it easy to view P&IDs and drawings of facilities due to being intelligence, and you can find various information and contents related to the selected facility.

Technical Documents

It is possible to view and browse various technical documents required for plant operation such as O&M manuals, procedures, maintenance history, and analysis reports containing a wide range of information.

Legacy Interface

Through the IIoT platform, it is possible to link with a time system for plant operation such as a real-time operation information system, facility management system, ERP, or data management system.

Featured **Projects**

TIS

Integrating intellectual assets to optimize the value

POMIT provides optimal solutions to increase plant value based on plant design and operation data interpretation.

TIS
(Total Intelligence Solution)

It is a customer-oriented optimization solution that presents the most suitable solutions to customers through a wide range of analysis on plant design and operation information.

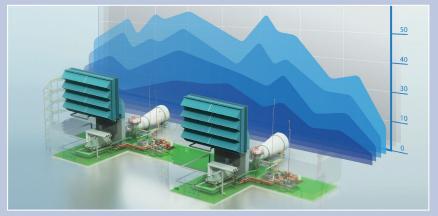
Integrated Simulator

It is a simulator that can be used for operator and engineer training as well as plant design and control system development.

Total Management Solution

It is a solution that supports decision-making to help optimize operation in response to diverse changes in plant operating conditions.

Plant Optimization



It presents the optimal operation plan for the plant through analysis of the plant's design and operation data.

Expert Training

We provide advanced training for experienced plant workers such as plant design and commissioning engineers.

AI & Big Data

Predicting the future based on theory and experience

POMIT adopts artificial intelligence and Big Data technology to collect and analyze a vast amount of data in plants to predict failures and analyze the causes.

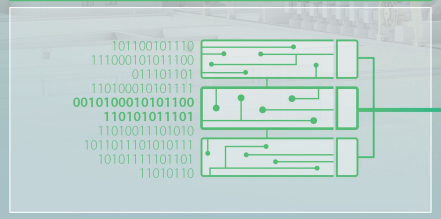
AI (Artificial Intelligence)

It is a technology that incorporates human learning, reasoning, perception, and expertise to understand natural language in a computer program.

Big Data

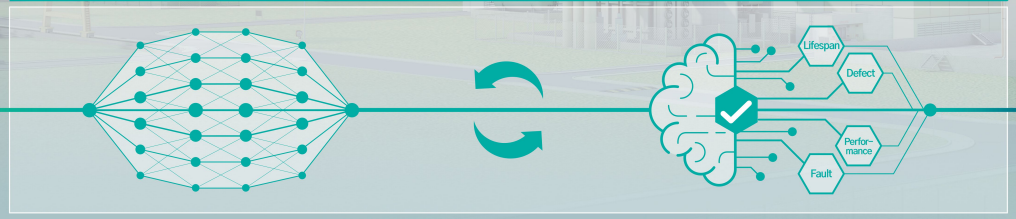
Beyond existing database management tools, it is a technology that extracts desired information from various large and regular/unstructured databases in a short period of time.

Big Data Collection, Refining and Storage (ETL)



It collects, refines, and stores vast amount of operational data generated by plants, including IIoT sensor data.

Big Data Analysis via AI Algorithm

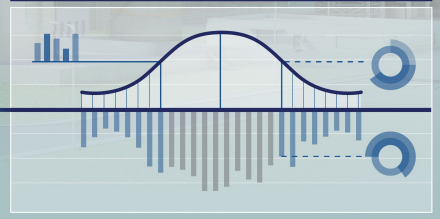


Deep Learning analysis on accumulated Big Data is performed in parallel through the Big Data analysis platform developed and commercialized by the company.

AI Predictive Diagnostics

It learns the normal/abnormal signs present in big data to predict the life of the plant, diagnose faults, and diagnose performance

Visualization of Analysis Results



Deep learning analysis of big data makes it easy to visualize diagnostics.

IIoT Device

Replacing plant space with digital workspace

POMIT provides user-driven device development and services for building IIoT infrastructure.

IIoT Device
(Industrial Internet of Things Device)

It is a medium for collecting and providing the Edge Data and technical data to be connected to a network in an industrial IoT environment.

Smart Nameplate

This is a nameplate with a QR code that allows one to quickly identify equipment and facilities and easily view the necessary technical information.

Wearable Facility Check + Recognition Device

Real-time remote collaboration between on-site workers and experts enables on-the-spot analysis and facility diagnosis to support prompt response and decision-making.

IIoT Booth

Production sites that are prone to noise, dust, etc. can be used as digital office spaces and information hubs.

AR Device

MS Hololens is an AR device that combines reality and virtual reality, so one can conveniently acquire/utilize required information in the industrial field.

EDUS & ETA

Turning knowledge and experience into digital assets

We provide services that capitalize on advanced technologies and experience technologies that are used in the construction and operation phases of plants.

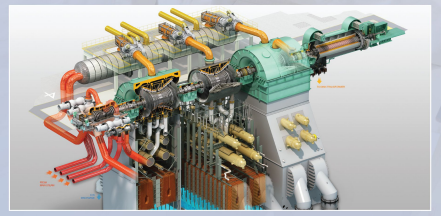
EDUS
(Engineering Data Upgrading Service)

It is a service that collects, analyzes, computerizes, and intelligentizes technical data that is stored in the plant industrial site.

ETA
(Experience Technology Asset)

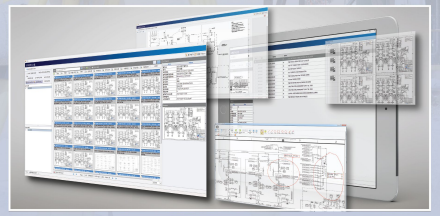
It is a technology that capitalizes on the experience/phenomena of the construction and operation phases using technologies such as 360° panorama VR, 3D laser scanning, drone-based aerial photography, and multi-points imaging.

3D Model



It supplies the arrangement, shape, and information of the facilities that make up the plant using special CAD software.

Digital Drawings



It collects, analyzes, digitizes, and integrates a wide range of drawing data types to provide the foundation for decision-making through collaborations required for plant operation.

3D Laser Scan

It is a technology witch acquires 3D physical shape information from a complex plant facility in a short period of time, and it can be utilized in various fields such as the development of equipment methodology, operation, and maintenance.

VR Panorama · Drone Imaging

These provide 3D 360° VR panoramas that allow for 360° viewing of the plant space and vertical aerial photographed content using drones, as opposed to planar field photographs of the site.

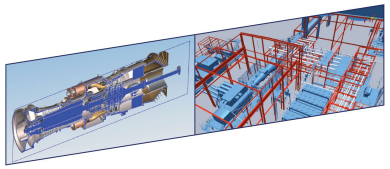
History & Technical Development

POMIT started with its Plant 3D & Contents business, and has vast experiences in providing PLM services at the O&M phase in power plants.
In addition, we are expanding our business scope including VR services and the IIoT platform, and we are growing into a key company in the era of the Fourth Industrial Revolution through continuous development of AI & big data platform technology.

Technical Development
History

3D & Contents

- P3D
- 3D Laser Scan technology services
- M3D
- 3D Contents



2004 – 2009

- Established POMIT Co., Ltd.
- Established affiliated research institute
- Acquired venture business certification

PLM

- 360° panorama VR services
- PLM services
- Multi-point video services
- Developed VICT I (medium and small PLM)

2010 – 2015

- INNOBIZ selection
- Acquired ISO27001 certification
- Commended by the Minister of Industry & Commerce

VR & IIoT Platform

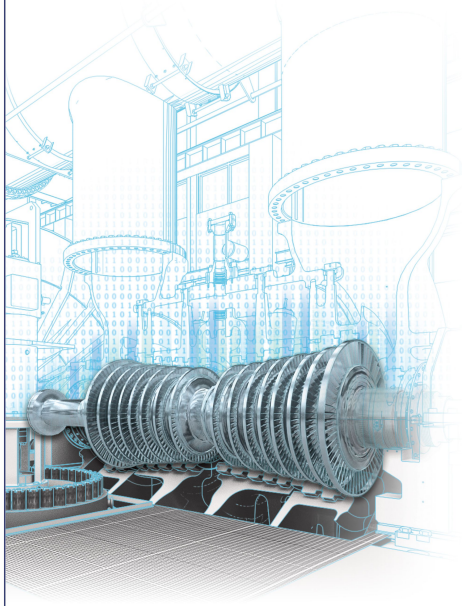
- 3D VR technology development
- Drone services
- IIoT booth development
- 3D VR technology services
- AR technology development

2016 – 2019

- Established Kuwait branch
- Relocated to its own building

AI & Big Data

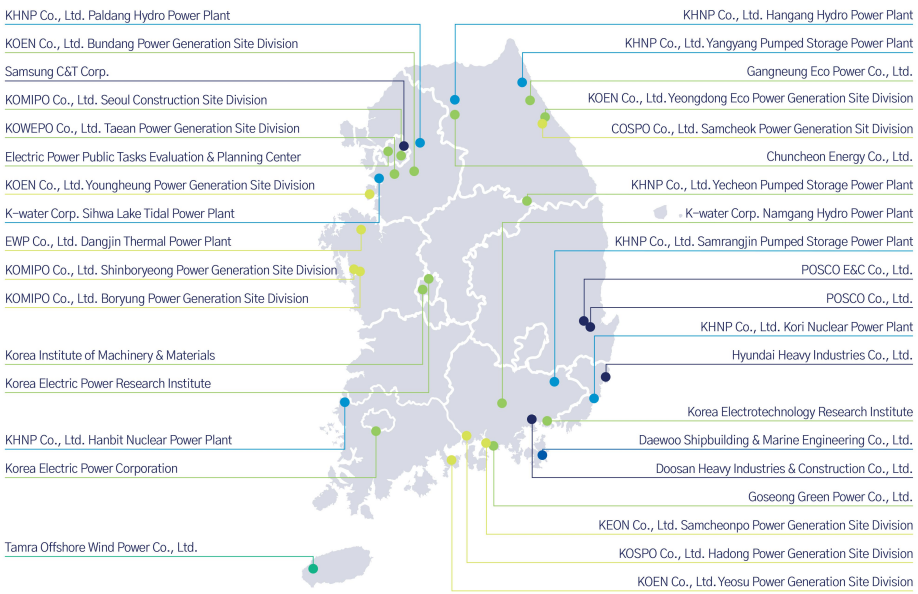
- VICT II technology development (IIoT Platform)
- AI & big data technology development
- 3D printer technology services
- AI & big data technology services



2020 –

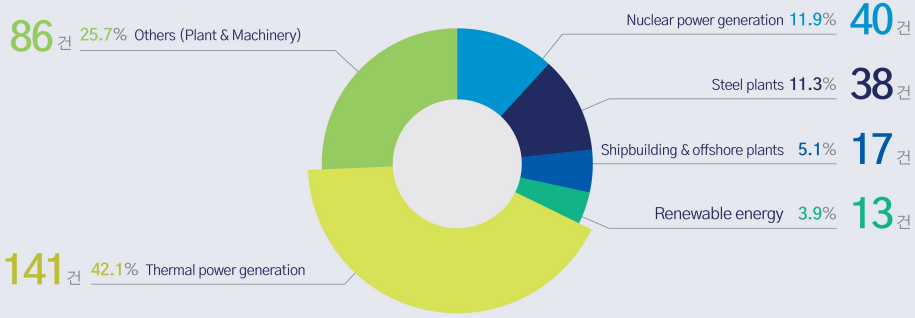
Customer Network

(As of December 2018)



Project Implementation

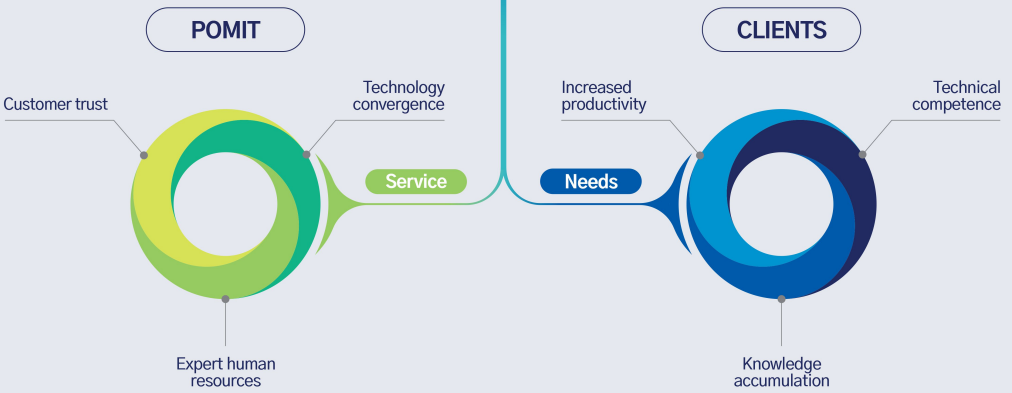
Thermal power generation : **141** facilities, Nuclear power : **40** facilities, Renewable power : **13** facilities, Steel plants : **38** facilities, Shipbuilding & offshore plants : **17** facilities, Others : **86** facilities



Vision

Creating value through
optimal **collaborative decision-making**

CPS-based **digital twin plant** construction



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