

October 7, 2026

MESH-X Inc.

NHK Technologies, Inc.

Kyushu University

KDDI Corporation

SoftBank Corp.

TAKAOKA TOKO CO., LTD.

The University of Tokyo

TEPCO Power Grid, Incorporated

Tokyo Electric Power Company Holdings, Inc.

Fujitsu Limited

Hokkaido University

Morgenrot Inc.

Advanced workload shifting social demonstration project launched

aiming to realize a "virtual hyperscaler" by integrating control of communications, power, and computing resources

Tokyo, Kawasaki, Sapporo and Fukuoka, Japan, Date: October 7, 2026 — MESH-X Inc. (MESH-X), NHK Technologies, Inc. (NHK Technologies), Kyushu University, KDDI Corporation (KDDI), SoftBank Corp. (SoftBank), TAKAOKA TOKO CO., LTD. (Takaoka Toko), The University of Tokyo, TEPCO Power Grid, Incorporated (TEPCO Power Grid), Tokyo Electric Power Company Holdings, Inc. (TEPCO Holdings), Fujitsu Limited (Fujitsu), Hokkaido University, and Morgenrot Inc. (Morgenrot) have formed the Multi-Stakeholder Collaborative Wide-Area Workload Shift (WLS) Demonstration Consortium[1]. The Consortium is launching a joint demonstration for the practical application of "Wide-Area WLS" as of August, 2026.

The Consortium will bring together the technologies and assets of each participant to jointly conduct technical, operational, and business demonstrations (the Demonstration) aimed at realizing a new AI infrastructure model, the "Virtual Hyperscaler," characterized by "wide-area x multi-carrier x data center (DC) x power system mutual optimization," through the optimal operation of computing resources necessary for AI learning and inference.

The Demonstration will be implemented based on the proposal for a "Social Demonstration for Realizing Advanced Workload Shift," which was adopted[2] by the 12 members of the Consortium in the public call for demonstration projects related to the FY2026 "Watt-Bit Collaboration Related Demonstration" promoted by the Ministry of Internal Affairs and Communications on July 15, 2026.

Background

In recent years, the rapid spread of AI has led to a surge in demand for data centers (DCs) that serve as its computing foundation. This has resulted in serious challenges in Japan, such as the concentration of DCs in urban areas and the associated power supply issues. On the other hand, the increasing curtailment of renewable energy (RE) due to its expanded introduction in regional areas also presents a challenge. If this situation continues, Japan may not be able to meet its domestic AI computing demand, leading to a risk of important data flowing overseas along with computing demand through the use of foreign cloud services, and the risk of critical services supporting the digital society being disrupted during large-scale disasters.

To avoid such complex risks, WLS technology, which dynamically shifts computing processes (workloads) between distributed DCs in Japan, taking into account power supply and demand conditions and computing resource operating status, is essential, rather than concentrating computing processes in specific DCs. This Demonstration aims to implement an advanced WLS mechanism that coordinates communication, power, and computing across a wide area, and to verify its technical, operational, and business feasibility.

Outline of the Demonstration

1. Demonstration Period

August, 2026 –February, 2027

2. Content

The Demonstration will establish a wide-area network utilizing the Science Information Network (SINET) operated by the National Institute of Informatics (NII) and optical fibers for power security (dark fiber) held by TEPCO PowerGrid. Additionally, the configuration of directly connecting some DC sections with an all-optical network will be verified. By connecting academic and industrial DC clusters to this network, an environment capable of collaborative Wide-Area WLS will be realized.

During WLS execution, an orchestrator[3], functioning as the heart of the Virtual Hyperscaler, will play a role in optimizing the shifting method. Specifically, by utilizing the orchestrator, information such as power supply and demand, market information, GPU utilization, battery status, and network conditions will be collected and analyzed to determine and control workload placement.

To verify the elements necessary for social implementation, multiple sub-projects are planned. These will be implemented in stages, from foundational demonstrations establishing the basics of Wide-Area WLS between universities nationwide to advanced demonstrations verifying the effectiveness of WLS technology, including integrated control with RE and storage batteries, and orchestration.

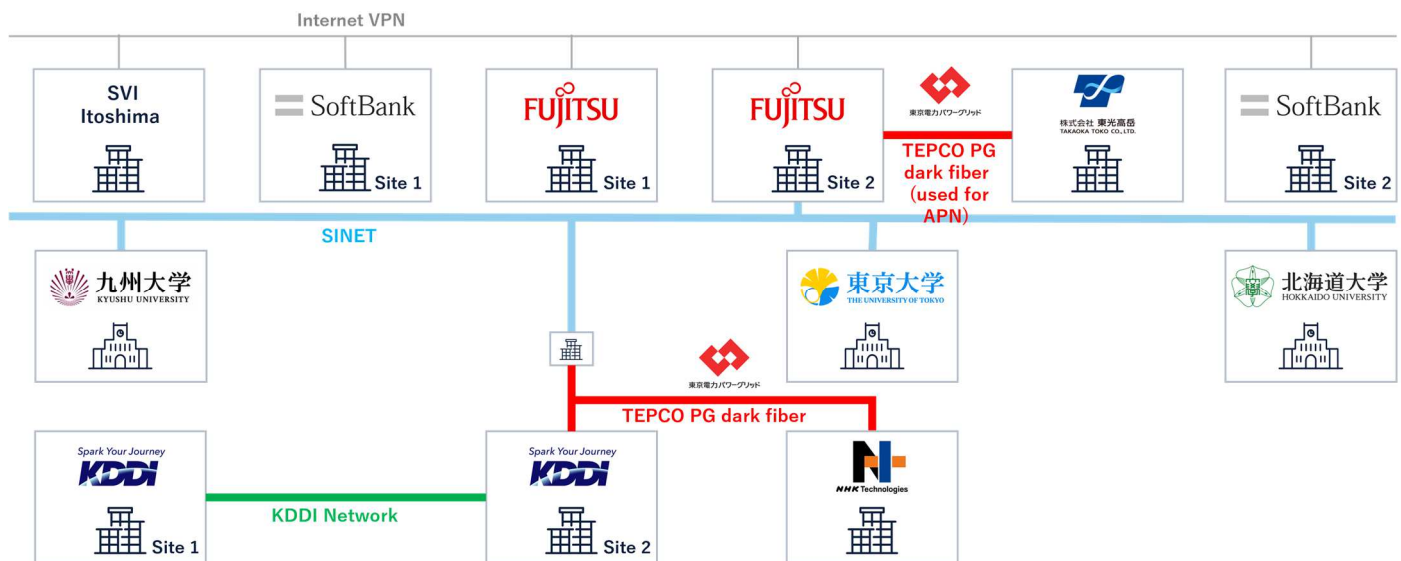


Figure: Demonstration Site and Network Configuration Diagram

3. Roles of Each Participating Organization

Organization Role

Participating Organizations	Role
MESH-X	Overall demonstration coordination, orchestrator study and development, SVI Itoshima demonstration
NHK Technologies	Provision of DC infrastructure and advancement of the demonstration
Kyushu University	Provision of SINET connectivity and advancement of the demonstration
KDDI	Provision of communications and DC infrastructure, as well as advancement of the demonstration
SoftBank	Provision of DC infrastructure, development of the WLS platform, advancement of the demonstration, and studies on cross-platform interoperability
Takaoka Toko	Provision of DC infrastructure and advancement of the demonstration
The University of Tokyo	Provision of SINET connectivity, advancement of the demonstration, and support for its evaluation
TEPCO Power Grid	Provision of communications infrastructure using dark fiber and advancement of the demonstration
TEPCO Holdings	Development of the Watt-Bit collaboration vision, provision of advisory input for the demonstration, and support for its evaluation
Fujitsu	Provision of DC infrastructure, development of the wide-area WLS platform, and advancement of the demonstration
Hokkaido University	Provision of SINET connectivity and advancement of the demonstration
Morgenrot	Advance of feasibility study and PoC toward GPU as a Service implementation

Future Plans

Based on the results obtained from this demonstration, the 12 organizations will expand operations by increasing the number of DC sites and participating businesses. Specifically, the 12 organizations will formulate an open operational model and common interfaces that allow multiple businesses to connect with each other, and will also consider the design of business models for social implementation and common rules and governance essential for business implementation.

In the future, the 12 organizations aim to standardize the technologies and operational models established through this initiative as open specifications internationally, and to globally disseminate this new social infrastructure originating from Japan as a developing ecosystem.

Notes

[1] the Multi-Stakeholder Collaborative Wide-Area Workload Shift (WLS) Demonstration Consortium:

A consortium formed by 12 organizations to promote the practical application of WLS, which realizes optimal operation of computing resources distributed throughout Japan, by collaborating with stakeholders in power, communications, DCs, academia, and other fields.

[2] Adopted on July 15, 2026, by the Ministry of Internal Affairs and Communications:

(https://www.soumu.go.jp/menu_news/s-news/01kiban04_02000279.html).

[3] Orchestrator:

A system that collects and analyzes data such as the operating status of multiple DCs and power supply and demand, and determines the optimal placement of workloads.

About MESH-X

MESH-X is dedicated to realizing the “MESH Vision”, which aims to seamlessly integrate power grids, and digital infrastructure. The company provides an orchestration platform that enables the geographic and temporal shifting of AI workloads. In addition, MESH-X engages in the design of next-generation data centers and power infrastructure, research and development of energy efficiency technologies, and the promotion of open innovation through collaboration with industry, academia, government, and startups. Through these initiatives, the company contributes to building the foundation for a sustainable and resilient digital society.

Find out more: [MESH-X Official Website](#)

About TAKAOKA TOKO CO., LTD.

TAKAOKA TOKO CO., LTD. is a company that provides total support for electric power networks and develops new technologies for a better life. The company operates not only in Japan but also around the world, aiming to help people live a safe, secure, and prosperous life. Takaoka Toko offers a range of products and services, including power distribution systems, reliable power equipment, and future energy network designs. The company's initiatives and ideals, as well as investment benefits, are detailed in their management policy, business performance, and IR materials. For more information about Takaoka Toko, you can visit their official website: <https://www.tktk.co.jp/en/>

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