



## Promoting Digital Transformation of On-Site Air Conditioning Services Together with Startup Companies

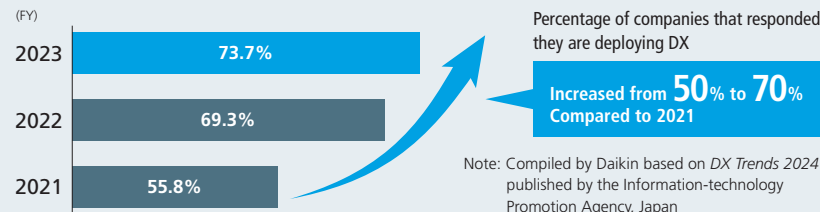
### Why is it important?

Because it Can Help Us to Continuously Address Growing Demand for Air Conditioning Worldwide

As digitalization advances rapidly, more and more companies are looking to digital transformation (DX) to ensure their own sustainable growth and contribute to society through their businesses. With concerns over labor shortages due to a decline in the working population and rapid economic development, companies are expected to make effective use of digital technology in their operations.

The environment surrounding air conditioning manufacturers is also changing dramatically. In order to maintain competitiveness in global markets, meet demand for products, and achieve sustainable growth, companies require DX that can get the most out of human resources.

#### DX Initiatives in Japan



## Daikin's Approach

### Accelerating DX in Frontline Services Supporting the Spread and Stable Operation of Air Conditioning

With the onset of extreme heat and economic development, air conditioning has become an essential component of social infrastructure. As the air conditioning market expands rapidly, especially in emerging countries, Daikin needs to further expand its service structure to continue to meet demand. The spread and stable operation of air conditioning requires equipment installation, regular maintenance, and repairs, but training the service engineers who carry out these tasks takes time. Installation conditions and models vary from site to site, and extensive experience is required in addition to technical skills to handle a variety of sites, making frontline service work difficult to mechanize.

Daikin is therefore promoting DX of its frontline services to increase operational capacity while maintaining service quality. We collaborated with Fairy Devices Inc., a Daikin co-creation partner and startup company with advanced AI technology. The end result is a remote work support solution that combines Fairy Devices' necklace-type smart wearable device called THINKLET® and technology stack\* with Daikin's business support web application. This solution has been gradually rolled out since 2019.

\* A platform that integrates various technologies and enables them to function individually and in an integrated manner, such as APIs (rules that allow the functions of a program to be used by other programs) and AI engines.



## Daikin's Performance

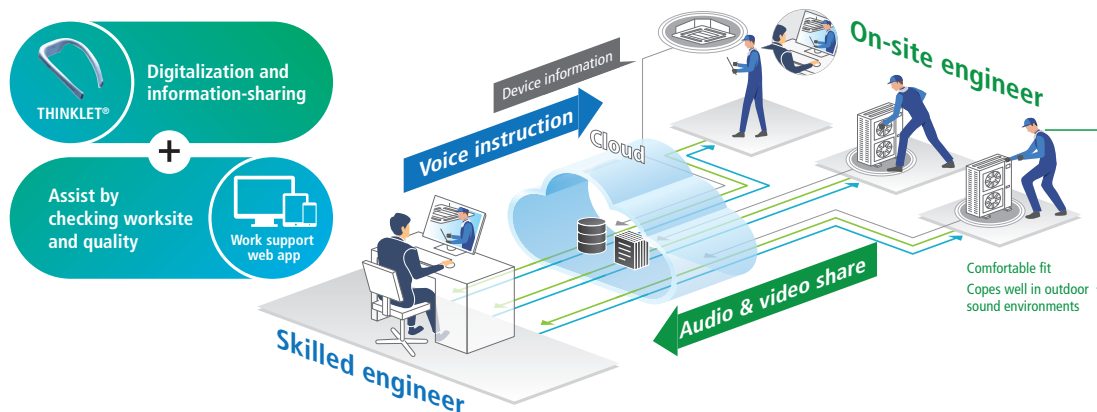
### Accelerating the Spread of Air Conditioners with Our Many Human Resources Supporting One Another

The remote work support solution allows experienced engineers to support and educate on-site engineers from a remote location. On-site engineers wear THINKLET® and communicate with experienced engineers via voice and video. While viewing the actual job site together, they can diagnose the condition of the equipment and carry out work according to the appropriate procedures.

Air conditioner models and installation conditions vary depending on the climate, architectural style, and purpose of use. They also vary depending on the location and condition of the equipment, the surrounding environment, and how it is used. Even if the situation differs from what was previously explained by the customer, or if we rush to the job site without obtaining detailed information in advance, the on-site engineer can receive guidance from experienced and skilled personnel through THINKLET®, allowing them to work smoothly and handle unfamiliar situations.

Another major benefit is that service engineers can simultaneously communicate not only with each other, but also with staff from other departments such as development and quality control. Even if it is discovered on-site that the service department alone cannot handle the equipment because, for example, it may have optional functions or special specifications, the necessary support can be received on-site, which has improved work efficiency. This includes increasing the accuracy and speed of on-site work and reducing time lost by having to take the work back to the office and then come back. Six years have passed since the remote work support solution began operation. As of March 31, 2025, Daikin is using THINKLET® in more than 30 countries as a tool by service partner locations in Japan, Europe, Asia, Latin America, and other areas.

**DX of Service Operations using THINKLET®**



To build on this track record, further development projects have been steadily underway since fiscal 2022. They involve DX, which aims to create a “skilled AI” that can handle any site and incorporate the skills and know-how of skilled workers, which is a strength of Japanese manufacturing, into AI. Through the operation of THINKLET®, Daikin now has a library of 15,000 videos and audio recordings of on-site work around the world as of 2024. This vast library represents a vast archive of information that skilled engineers have passed on to on-site engineers through individual remote support, including their respective experience, tacit knowledge, and on-site know-how. It is already being used by our engineers as a useful teaching material for preparation and review. The plan is to have AI learn from these video and audio recordings and add them to the remote work support solution, aiming to check whether on-site engineers’ work procedures are correct and issue an alert when they make a mistake.

Equipping the remote work support solution with skilled AI will help to improve the technical skills and judgment of each individual on-site and for early training of new engineers. Utilization of skilled AI is expected to alleviate the constraints on human resources for remote support and empower a wider range of on-site support. Skilled AI will also continue to learn from interactions during work support around the world and quickly share that knowledge with service engineers globally.

Daikin will continue to collaborate with Fairy Devices to advance DX solutions at its service sites, quickly train service engineers, and continue to meet the rapidly expanding demand for air conditioning.

**Exploring Approaches to Frontline Work Involving both Engineer and AI**



**Masato Fujino**  
CEO and CTO  
Fairy Devices Inc.

Now that AI can learn from human experience at an astonishing speed and mimic human intellectual activity, we are at a major turning point today. I feel a strong sense of confidence and gratitude for the solid technology and track record we have built up together with Daikin in preparation for the future.

We want to be the first in the world to create a workplace where engineers and AI work together to maximize human potential. Toward this end, we will explore new approaches for people in an age where AI is a given, and disseminate the essence of this.

**Next Challenge**

**Continuing Co-Creation for Creating New Value**

Daikin is promoting a number of co-creation endeavors with its core base being the Technology and Innovation Center (TIC), which will celebrate its 10th anniversary in 2025. As the business environment changes dramatically, Daikin aims to utilize DX in production and services, acquire differentiated technologies through co-creation with companies, universities, research institutes, and international organizations in different industries and fields, and create new value related to carbon neutrality and value with air.