



## Feature


# Delivering Healthy and Comfortable Air Environments and Spaces to Africa with Collaborative Innovation

## Why is it important?

### Many People Still Cannot Afford Air Conditioning

Air conditioners are essential for maintaining health and improving productivity. In Africa, however, air conditioners have yet to spread even in electrified regions because of the cost of installation and recurring electricity charges. For this reason, a new business model is needed to spread energy efficient air conditioners tailored to the market characteristics of Africa, so that more people can reap the benefits of a healthy and comfortable air environment.

#### Situation in Tanzania—Location of Demonstration

 <p><b>United Republic of Tanzania</b></p>	Population.....	<b>56.32</b> million*1
	Poverty rate.....	<b>49%</b> *2
	Electrification rate.....	<b>30%</b> *3
	Mobile phone penetration rate.....	<b>75%</b> *4
	Usage rate of mobile money among mobile phone users.....	<b>62%</b> *4

\*1 Source: Basic data from Japan's Ministry of Foreign Affairs  
 \*2 Source: Poverty Rate based on International Poverty Line (rate of people living on less than 1.9 US dollars per day) by the World Bank  
 \*3 Source: BOP Market Survey Report by the Japan External Trade Organization (JETRO)  
 \*4 Source: Global Attitudes & Trends by Pew Research Center

## DAIKIN'S APPROACH

### Conducted Demonstration in Tanzania Jointly with Local Start-up

Daikin is promoting collaborative innovation through partnerships with companies, research institutes, and universities, mainly spearheaded by the Technology and Innovation Center (TIC), our R&D hub. In November 2019, we committed to investing 11 billion yen in start-up companies over the five-year period up to 2024, and established the TIC CVC Office to promote co-creation with these companies. We are now speeding up new business creation together with start-ups from around the world slated for success with advanced technologies or innovative ideas.

As the first project, we invested 300 million yen in WASSHA Inc. and conducted a demonstration on a novel approach to the air conditioning business in Tanzania. WASSHA is a growing company that provides electricity services to non-electrified areas of Africa. Taking advantage of the country's high penetration rate of mobile phones, the company uses a subscription-based business model and "pay-as-you-go" system to rent out LED lanterns and rechargeable solar panels to users who pay upfront with mobile money.

## DAIKIN'S PERFORMANCE

### First-ever Fixed Rate Subscription Service for Air Conditioning in Emerging Country

Daikin focused on WASSHA's business model of providing pay-as-you-go services to people in need. In Tanzania, the mainstream type of air conditioner offers a relatively inexpensive installation cost but is not very energy efficient. As a result, the high cost of electricity has become an obstacle to the spread and use of air conditioners.

In response, Daikin identified a novel business model of renting energy efficient air conditioners to small stores and homes at a fixed rate. Such a subscription-based business model for air conditioning is the first of its kind in an emerging country. As a result, users have access to Daikin's highly energy efficient air conditioners without having to purchase the entire unit outright and they can reduce electricity charges.

The demonstration was conducted for three months starting in November 2019 in Dar es-Salaam, the economic center of the country. During the demonstration, air conditioners were installed at cooperating stores and homes to closely examine demand and review the viability of the business model. The results of the demonstration showed that electricity charges can be cut in half by using Daikin's energy efficient air conditioners. The effects were highly praised by not only participants dissatisfied with the high cost of

electricity, but also participants who otherwise could not afford to purchase an air conditioner. Stores were billed continuously and the air conditioner utilization rate was upward of 90%. People who heard about the demonstration came to participating stores to see for themselves or contacted the WASSHA office directly, signing a contract on the spot. This illustrates strong latent demand for air conditioning exists locally. Business inquiries about this service ultimately more than tripled the expected volume, which confirmed the business viability.

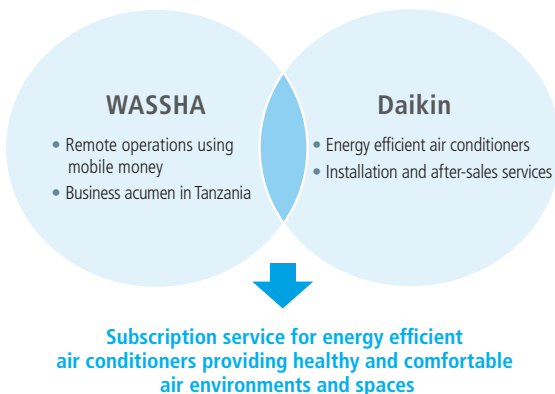


### Voice

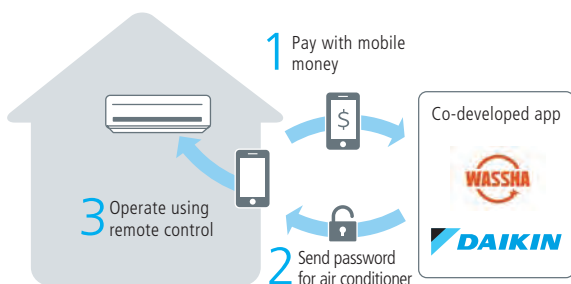
**Increasing the Customer Base of Air Conditioners**  
Satoshi Akita  
CEO, WASSHA Inc.

In many African countries air conditioning has yet to spread to homes and small stores. We believe this business will provide great value to society by providing the new option of a pay-as-you-go service for people who were otherwise unable to afford an air conditioner in the past. Our goal is to bring a comfortable air environment to everyone around the world, regardless of income level.

### Co-creation Between WASSHA and Daikin



### Illustration of Air Conditioner Subscription



## NEXT CHALLENGE

### Bringing a Healthy and Comfortable Air Environment to People Around the World with Full-fledged Launch in Fiscal 2020

Going forward, we will build a payment system using mobile money jointly with WASSHA, and plan to fully launch the business in fiscal 2020. Regarding ancillary services such as installation and repairs, which pose challenges, we will conduct technical training locally, which will create jobs and improve quality.

Through this new business model of delivering air conditioners with low start-up and running costs to low income people, Daikin will continue to give people around the world access to a healthy and comfortable air environment.