Business Overview



Strategy formulation and promotion structure

At the Group, DX is positioned as an indispensable means for realizing the three pillars set forth in the Medium-term Management Plan (EX, VX, and BX). As a driving force for DX, the DX Strategy Committee was set up in 2018 and has been studying and sequentially rolling out specific initiatives through 31 rounds of discussion held as of the end of fiscal 2022. Additionally, in the same year, K4 Digital Co., Ltd. was established jointly with Accenture Japan Ltd. to draw on our internal and external expertise for supporting initiatives in our respective departments. In particular, while we have been focusing on initiatives that contribute to improving productivity, going forward we will further accelerate and bolster value creation initiatives as well.



DX promotion status (Fostering awareness)

The Group holds a group-wide event "Digital Day" once a year, fostering awareness of DX promotion in presenting keynote speeches by other leading companies in DX, messages from our senior management in each division, introduction of DX case studies, and awards for key individuals in DX promotion.



DX promotion status (Achievement)

From the start of active investment in DX in fiscal 2019, we have been steadily achieving DX results of approx. 20 billion yen per year as of fiscal 2022. IRR is expected to be approx. 10%.



Value Creation Story



DX promotion status (Human capital development)

For promoting DX, digital human resources are essential, with professional knowledge and expertise in digital technology. To solve business issues using data analysis and digital technology, the Group is working to develop and secure "highly-skilled DX human capital" and "DX promoters from respective operating divisions," as well as to enhance DX literacy for all employees.

Highly-skilled DX human capital

Having defined the "data scientist" who can perform highlevel data analysis and "digital consultant" who can make a specific plan and support the digitization of advanced business issues, we have seconded them to K4 Digital Co., Ltd. to execute their duties. We invite applications from employees with digital expertise for our in-house personnel system (Super Professional Career Challenge System), allowing them to exercise their expertise through duties appropriately



assigned. In this way, we are striving to secure highly-skilled DX human capital through mid- career recruitment and selection from our IT and other operating divisions. To date, we have secured 28 highly-skilled DX human capital. With the annual targets set, we aim to train 40 employees by the end of fiscal 2025.

DX promoters from respective divisions

Having defined the "data analyst" who can perform business data analysis and "digital translator" who can make a specific plan and support the digitization of business issues, K4 Digital Co., Ltd. is playing a central role in fostering DX promoters in respective operating divisions by providing them with training for data analysis and practical training for DX application. Thus far, approx. 1,200 DX promoters have been trained, and approx. 3,200 more will be trained by the end of fiscal 2025.

All employees (approx. 17,000 employees are qualified)

We have defined the "Kansai Electric Power's ABCD for DX" (A: Agile, B: Business intelligence, C: Customer experience, and D: Digital technology) as the DX literacy that all employees of the Kansai Electric Power Co., Inc. and Kansai Transmission and Distribution, Inc. should acquire.

As a strategy to ensure acquisition of DX literacy and reskilling for all employees, we are striving to improve the DX literacy of all employees by implementing DX training sessions (videos) required for all employees, and incorporating DX training (classroom lectures and workshops, etc.) into stratified training programs in cooperation with the Office of Human Resources and Safety Management.

We also plan to provide DX training for management (e.g., introduction of advanced DX case studies on a global scale).



Specific DX case studies (Productivity improvement)

While the Company possesses a variety of assets (facilities and human resources), the environment surrounding the electric power industry is facing a number of challenges, including a decreasing workforce due to aging human capital, aging facilities, difficulty in handing down technology, and intensifying natural disasters. The decreasing workforce is a major challenge, in particular. With the number of mid-career and younger workers decreasing and experienced workers accounting for a majority in the workforce, it is already becoming difficult to pass on technology, and a large number of facilities need to be maintained by a smaller number of workers, posing a major challenge to us.

To solve this problem, it is necessary to reduce the overwhelming amount of work through operational reform, as well as realizing site maintenance work, which is difficult without skilled labor. To that end, we are devoted to Future Operation, a project to fundamentally reform business operations on a division-wide and cross-divisional basis by combining various digital technologies, led by our power generation divisions and Kansai Transmission and Distribution, Inc.

Future Operation envisions what we aspire to be from a medium- to long-term perspective, in view of future changes in our internal and external environments, and aims for transformation in the Group.

As an example of our efforts, we are promoting "smart security" to maintain and improve quality and systems with the use of the latest digital technology in security operations such as patrol inspections and troubleshooting. We have already introduced smart security for inspecting the inside of stacks in thermal power plants, and will continue to expand introduction in a variety of fields.

In the future, by utilizing image recognition, big data

analysis, and other forms of technology, and by transferring security capabilities, which have been human skills, to machines, we intend to minimize human intervention and further advance remote and automated operation.

Development of inspection methods for the inside of stacks of thermal power plants using self-flying drones



Specific DX case studies (New value creation)

The Group has developed K-VIPs+, a distributed service platform equipped with AI capability (hereinafter, "K-VIPs+"), to achieve optimal operation of distributed energy resources^{*1}. This AI capability is an algorithm to calculate "when, in which market, and how we utilize resources for optimal facility operation." Al capability was developed jointly with an Al venture company that won a competition for Al achieving optimal operation of a grid storage battery. We developed and verified Al making full use of approx. 50 million records of data that reflect our knowledge of operation methods for different types of resources, market rules, etc., obtained from the past VPP demonstrations and actual transactions in various markets.

E-Flow*² is ready to start optimal operation of grid storage batteries using K-VIPs+ by the end of fiscal 2023. This will contribute not only to improving profits but also to stable electricity supply and further expanded introduction of renewable energy sources.

- *1: Renewable energy sources owned by customers such as solar power generation devices, storage batteries, electric vehicles (EVs), production facilities, etc.
- *2: A new company established by the Kansai Electric Power Co., Inc. in April 2023 that specializes in the transaction and operation of distributed energy resources

