



March 29, 2023

Tokyo Metro will introduce the REFMa (Railway Electrical Facilities Maintenance Management System) to promote DX in facility inspection work.

REFMa will enable maintaining and improving the quality of inspection operation, 30% increase in productivity, changing to paperless work environment, and prevention of human errors by digitizing, standardizing, and automating planning and inspection work.

In April 2023, Tokyo Metro Co., Ltd. (Head Office: Taito Ward, Tokyo; President: Akiyoshi Yamamura; hereinafter referred to as "Tokyo Metro") will introduce REFMa (Railway Electrical Facilities Maintenance Management System) which will enable DX of maintenance management work for railway electrical facilities. It is one of the nextgeneration operational reforms to advance "Using DX and introducing new technologies to evolve railway operations", a key strategy and measure of the mid-term management plan (TOKYO METRO PLAN 2024).

REFMa is the system that digitizes and automates operations of "formulating inspection" and repair plans" and "registering inspection results" for electrical facilities, which has been managed manually by employees, mainly on paper. Major features of REFMa include the "function to automatically formulate inspection schedules when new facility is added" and "automatic alarm notification of base inspection dates, etc." as well as "function to set base inspection dates for relevant ministerial ordinances unique to railway maintenance work."

The introduction of REFMa will not only automatically generate inspection plans and automatically record inspection results, and standardize and streamline work, but will also prevent work omissions due to human error and make paperless work environment.



On-site facility inspection scene

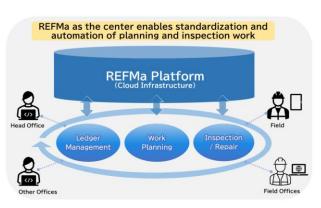


Image after introduction of this system

In developing REFMa, the opinions of workers and managers were taken into account from various perspectives to identify points for improvement, and the system was designed and built in cooperation with Hitachi, Ltd. which has proven results in railway systems. In addition, in consideration of cost, operation and maintenance, and possibility of future expansion, the system is built on the cloud, which will be used as a common platform in the future to expand its introduction to other maintenance work and even for joint use with other railway operators.

Tokyo Metro will continue to promote "Using DX and introducing new technologies to evolve railway operations." Through the introduction of REFMa, Tokyo Metro will not only maintain and improve the quality of work and enable prevention of human errors, 30% increase in productivity, and changing to paperless work environment, but will also establish new work style for our employees, and thereby aiming further improvement of safety and peace of mind in railway transportation.