

Review of Digital Transformation Strategy



Message from the Head of the Digital Strategy Headquarters

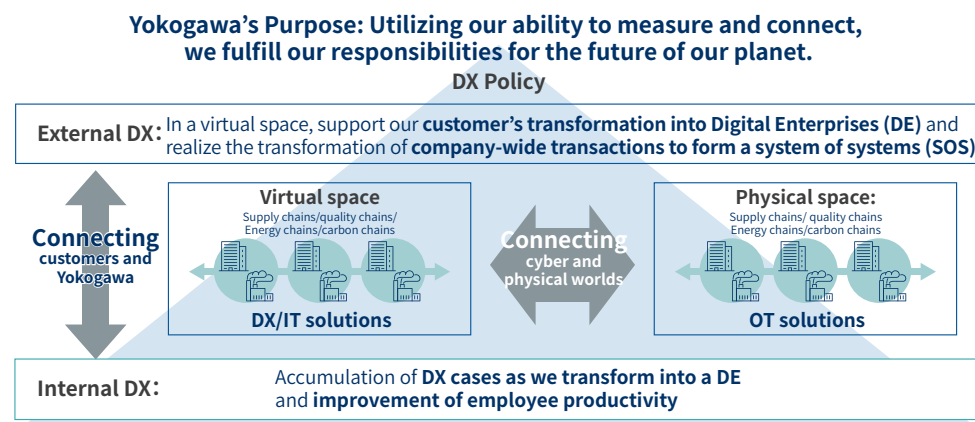


Yukihiro Funyu
Head of Digital Strategy
Headquarters
Head of DX-Platform Center,
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Yokogawa's DX activities started in April 2018 under TF2020, the previous medium-term business plan. Since then, we have promoted internal DX activities to improve employee productivity and external DX activities to expand the provision of digital services that add customer value. In the first three years of this effort, we strove to globalize and optimize our IT infrastructure, security, applications, and data (DX1.0). Under AG2023, the current medium-term business plan, we are promoting DX measures to enhance customer, partner, and employee experience (DX2.0). For external DX, we have been actively developing cloud applications that utilize the know-how we have cultivated in the operational technology (OT) area and have been progressively shifting from a product- to a service-based business model. In addition to shifting conventional applications to the cloud and moving to a recurring revenue model, we have also strengthened our offering of IIoT, artificial intelligence (AI)/machine learning (ML), 3D digital twin, video management, cybersecurity services, and other solutions on Yokogawa Cloud, our cloud application platform. As a result of these DX activities, in June 2022, we were listed as a DX Featured Company based on a DX Survey that was conducted by the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange Inc. (TSE) and on April 1, 2023, we were designated a Digital Transformation Certified Company by METI. We will continue striving to improve employee productivity, which is the objective of our Internal DX efforts. At the same time, we will engage in external DX activities that will expand orders, sales, and profits through the offering of DX services.

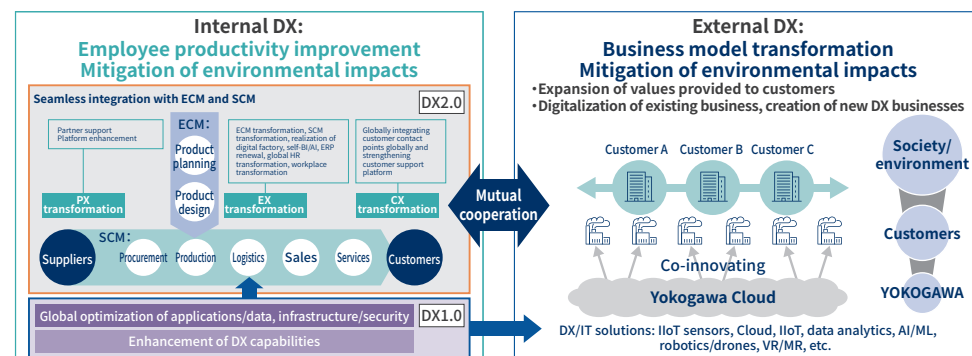
DX Policy

Under Yokogawa's Purpose, we are undertaking internal DX activities to improve employee productivity and external DX activities to help our customers' transition into digital enterprises and implement the system of systems approach.



DX Strategy (FY2021 to FY2023)

With internal DX, we seek to improve customer, partner, and employee experience based on the global IT infrastructure developed in the DX1.0 implementation phase. As for external DX, we aim to connect digitally with customers, providing attractive cloud applications on our Yokogawa Cloud, our application platform.



PX : Partner Experience, EX : Employee Experience, CX : Customer Experience, ECM : Engineering Chain Management, SCM : Supply Chain Management

Goals and Results

DX-related order ratio	FY20 FY22 FY23	2.0% 3.5% 4.0%	
Digital process ratio	FY20 FY22 FY23	Approx. 40% 63% 63%	Achieved ahead of schedule
IT infrastructure environmental impact reduction ratio	FY18 FY22 FY23	100% 57% 65%	Achieved ahead of schedule
Cloud ratio	FY20 FY22 FY23	61% 75% 64%	Achieved ahead of schedule
Agile project ratio	FY20 FY22 FY23	19% 62% 35%	Achieved ahead of schedule
DX human resources ratio	FY20 FY22 FY23	20% 40% 50%	

*DX-related order ratio: Ratio of DX-related project orders to total orders

*Digital process ratio: Ratio of the number of processes utilizing global digitized platforms to the number of all processes defined for each business process

*IT infrastructure environmental impact reduction ratio: Reduction of power consumption from the FY2018 level through the shift to cloud computing

*Cloud ratio: Ratio of the number of cloud servers to the total number of servers

*Agile project ratio: Ratio of IT projects utilizing an agile approach to the total number of IT projects

*DX human resources ratio: Ratio of the number of talents with digital skills to the number of All talent

Progress of DX-Related KPIs in Fiscal Year 2022

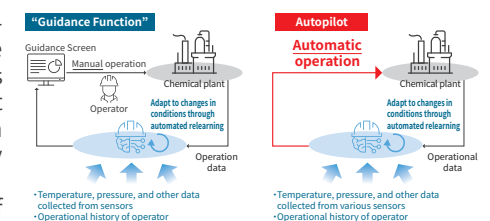
Fiscal year 2022 was the second year of our AG2023 medium-term business plan and the second year under the new DX strategy. The DX-related order ratio, positioned as a key indicator of external DX, improved significantly due to the global growth in the intake of DX-related orders. In consideration of our achievements in improving the digital process ratio, IT infrastructure environmental impact reduction ratio, cloud ratio, agile project ratio, and DX human resources ratio, all of which are positioned as key indicators of internal DX, IT infra environmental impact reduction ratio, and agile project ratio have made significant progress due to the further penetration of cloud computing and agile technology, and we were able to achieve our medium-term goals ahead of schedule. We also made progress in improving our digital process ratio and DX human resources ratio. Regarding the digital process ratio, the indicators have improved significantly due to the introduction of global platforms, such as integrated CRM, that were planned for fiscal 2022. For the DX human resources ratio, we continue to make great improvements through the DX talent training programs we started in fiscal year 2021, and we are getting closer to achieving our medium-term target.

Introduction of New DX Services

In January 2023, together with NTT Communications Corporation, we began offering "Autopilot," an AI service that automates plant operations by learning the actions of operators. This was introduced at JNC Petrochemical Corporation's Ichihara Factory, and was successful in automating processes that were difficult to control using existing technologies. It was also confirmed the extent to which this improved precision in comparison to the manual operation performed by human operators.

In March 2023, we launched OpreX Asset Health Insights (2.0), a new version of our cloud-based IIoT service that features powerful new asset health monitoring and management functions and is also compatible with Alibaba Cloud. Asset Health Insights is a cloud-based asset monitoring service that collects OT data from assets such as the equipment and devices deployed in a plant, aggregates this data, and displays it in an appropriate format. This works on Yokogawa Cloud and features analytics functions that are powered by AI and ML.

In March 2023, a reinforcement learning-based AI system was officially adopted at an ENEOS Material Corporation chemical plant, a world first. In a one-year test, it was verified that this next-generation autonomous control AI system stably controlled plant operations, reduced environmental impact, stabilized product quality, and facilitated the digital transformation of know-how. Through this development, technical issues that have stood in the way of the realization of IA2IA and smart manufacturing are being resolved.



Progress in Strategic Alliances with DX/IT Companies

The company is committed to promoting OT/IT convergence under its AG2023, our new medium-term business plan. For OT/IT convergence, we are actively collaborating with DX/IT partners to enhance our DX/IT capabilities while leveraging our OT capabilities, one of our strengths. In September 2022, we acquired Votiva Singapore Pte. Ltd. to accelerate ERP business growth in South-east Asia and strengthen our ERP business in the IT field. Going forward, we plan to enhance our global ERP business through collaboration with Web Synergies (S) Pte. Ltd., another of our capital alliance partners. At the same time, we have entered into a capital and business alliance with LTS Corporation to enhance our IT and DX consulting capabilities. We are also collaborating with Yokogawa Digital Corporation to provide consulting services that combine IT and OT. We will continue our efforts to collaborate actively with DX/IT companies.