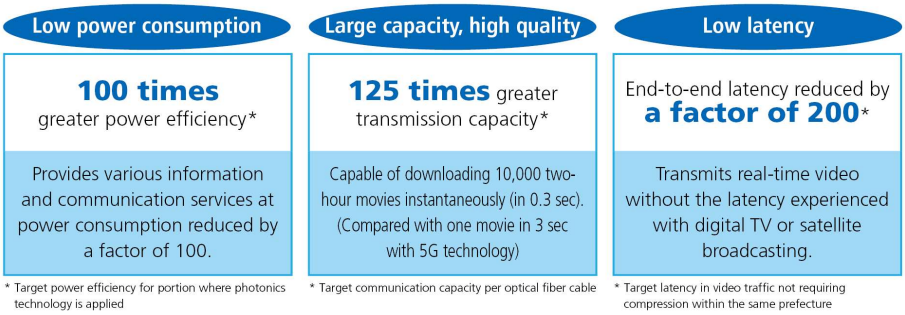
Impact Reporting (April 2023～March 2024)

Eligible Project	ICMA Project Category	Impact Reporting Item	Disclosure Information
①5G-related investment	Energy efficiency	■Number of 5G base stations installed	■Approx. 45,000 Stations (As of March 31 2024)
②FTTH-related investment	Energy efficiency	■Number of subscribers (units)	■23.65 Million Agreements (As of March 31 2024)
③R&D for the realization of the IOWN concept	Energy efficiency	■Explanation of the intended effects of the eligible R&D projects ■Introduction of the progress of the R&D and examples of services and products	■Attachment
④Highly energy efficient and power-saving data center	Energy efficiency	■Amount of CO_2 emissions (t-CO_2)	■Not Applicable
⑤Green Buildings	Green Buildings	■Name of the Green Buildings, certification level obtained, and the timing of acquisition and reacquisition ■Amount of CO_2 emissions (t-CO_2)	■Not Applicable
⑥Renewable Energy	Renewable Energy	■Power generation capacity/ actual amount (GWh) ■Amount of CO_2 emissions reduced (t-CO_2)	■Power generation Actual Volume: 880GWh (Reference: Facility Capacity 2,150,000KW) ■Volume of CO_2 emissions reduced 423,057 tons-CO_2 (Buildings under construction excluded)

【Attachment】

We advanced initiatives to flesh out the IOWN concept and to roll out the technology and resolve issues in a range of industries.



* Target power efficiency for portion where photonics technology is applied

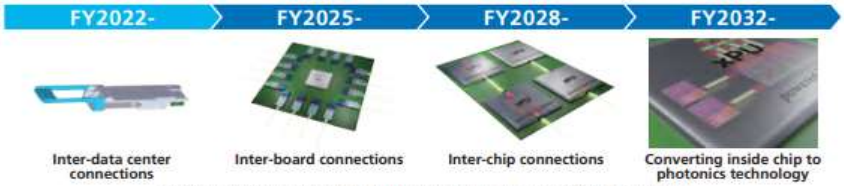
* Target communication capacity per optical fiber cable

* Target latency in video traffic not requiring compression within the same prefecture

IOWN-Driven Creation of New Value (from concept to commercialization)

【Establishment of manufacturing company for photonic-electronic convergence devices】

■We established NTT Innovative Devices Corporation in June 2023. Through this company, we will accelerate product development, market launch, and business expansion of photonic-electronic convergence devices, which will be key elements of the IOWN concept, introducing and expanding the application of the benefits of photonic-electronic convergence, namely the extremely low power consumption, not only in the communications domain but also in the computing domain, including data centers, in order to overcome the general societal trend toward ever-increasing power consumption and instead get us closer to achieving



Schedule for the introduction of photonic-electronic convergence technology

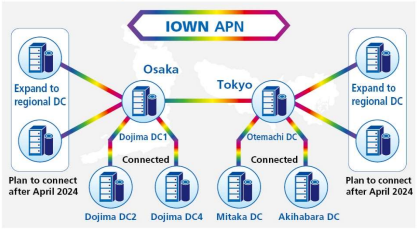
【Acceleration of commercialization】

■In March 2023, we started providing our commercial service All-Photonics Network (APN) IOWN1.0, and in November 2023, we concluded an agreement with Sony Corporation on cooperation and collaboration to accelerate the formation and development of a multi-site wide-area remote production platform utilizing the APN. We are aiming to improve the customer experience by providing highly convenient services, such as content distribution at regional stadiums and concert

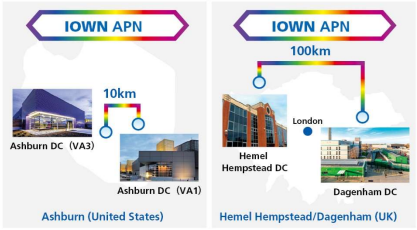
Research and Development in Preparation for Making the IOWN Concept a Reality

■By connecting principal data centers via IOWN APN, real time linkages were established between more distant data centers to construct an environment that could be used as if there were one single data center. Although data centers have traditionally been concentrated in urban centers, etc., this initiative will be expanded to regional data centers to create distributed data centers that capitalize on the characteristics of IOWN APN (ultra-high speed and ultra-low latency).

Initiative in Japan:



Initiative in UK and US:



What is APN?

In existing networks, repeated conversions of optical and electrical signals consume electricity, and control processing of communications traffic creates latency. By ultimately processing all these signals as optical signals, APN consumes less energy than current networks and realizes large-capacity networks with low latency.

■The Company and its co-proposers who proposed IOWN and other state-of-the-art technologies were selected as the implementing companies for the "Beyond 5G Research and Development Promotion Project" and "Innovative Information and Communication Technology (Beyond 5G (6G)) Fund Project" publicly solicited by the National Institute of Information and Communications Technology (NICT) and the "Research and Development Project of the Enhanced Infrastructures for Post-5G Information and Communication Systems" publicly solicited by the New Energy and Industrial Technology Development Organization (NEDO). We will work together with our co-proposers and partners participating in the IOWN Global Forum to accelerate the research and development of IOWN with a view to its

IOWN Open Innovation

■By discussing use cases with a wide range of global companies and groups and pursuing development of the necessary technologies, frameworks, and architectures, we aim to realize IOWN as a new communication platform. The number of global major ICT companies, etc. that participate as members of the IOWN Global Forum has grown to 139 organizations (as of the end of March 2024).

IOWN GLOBAL FORUM™

IT industry	Telecommunications industry	Various industrial and academic organizations
・Intel Corporation	・Chunghwa Telecom (Taiwan)	・Ajinomoto
・Sony Group	・KDDI	・JAXA
・Dell Technologies Japan	・ORANGE S.A. (France)	・Mitsubishi Chemical Group
・Ericsson	・Rakuten Mobile	・MUFG Bank
・Microsoft	・SK Telecom (South Korea)	・Mizuho Bank
・Nokia Corporation	・TELEFÓNICA (Spain)	・The University of Tokyo
・Red Hat, Inc., etc.	・NTT, etc.	・TOYOTA MOTOR, etc.

*Created based on information from the IOWN Global Forum website (the names of companies and other organizations may be shown using the commonly used names or abbreviations, and the names are listed in alphabetical order excluding founding members)