# **Operations in Review**

# **Mobile Communications Business**

In the Mobile Communications Business Segment, we worked to promote sales of the new billing plans, *Gigaho* and *Gigalight*, which feature simple structures and great value, and *docomo Hikari*, started to provide 5G services, and collaborated with various business partners in the smart life area, in an effort to provide new value-added services.

#### **Competitive Advantages**

- A stable communication network that can be used comfortably anytime, anywhere
- ► Top-notch research and development capabilities
- ► Large market share and stable customer base



# Composition by Segment for the Fiscal Year Ended March 31, 2020

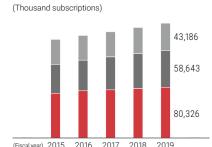








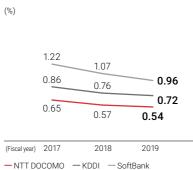
# Number of Subscriptions by Mobile Network Operator



■ NTT DOCOMO ■ KDDI ■ SoftBank

\* Created by NTT based on data published by the
Telecommunications Carriers Association. KDDI
figures include UQ mobile subscriptions.
SoftBank figures include Y!mobile subscriptions
(excluding PHS).

### **Churn Rate**



\* Created by NTT based on published financial results of each company.

# Number of d POINT CLUB Members



# **TOPICS**

- In order to reduce customer waiting times at docomo shops, we introduced the ability to book via the Internet or by telephone, and extended the time slots during which appointments are possible. In addition, from December 2019, we unified our support approach to explain to customers who purchase a terminal at a docomo shop and wish for initial setup and data transfer, that they may receive this service free of charge
- We concluded a capital and business alliance agreement with M3, Inc., the largest domestic medical IT company, which counts approximately 90% of Japan's physicians as members, and established empheal, Inc. to support corporate health management.
- As a result of providing information related to 5G technology and specifications, and offering a 5G technology verification environment free of charge, the number of participants in the DOCOMO 5G Open Partner Program, which is an initiative aimed at creating new solutions with partner companies, had risen to 3,400 as of the end of March 2020.

# **FOCUS**

#### Collaboration in Various Fields Centered on d POINTs

NTT DOCOMO has formed a business alliance with Recruit Co., Ltd., through which it seeks to grow its ecosystems. Centered on *d POINTs*, these efforts are aimed at increasing convenience for and improving the quality of services provided to customers of Recruit's services and *d POINT CLUB* subscribers.

#### 1. Linking of Recruit Group's Online Services with d POINTs

By linking the Recruit IDs used for all online services provided by the Recruit Group with NTT DOCOMO's *d ACCOUNTs*, we make it possible to accumulate and use *d POINTs* when using the Recruit Group's online services.

Going forward, we will examine the possibility of collaborating in supporting sales promotions by *d POINT* affiliates and in marketing in order to further expand the base of *d POINT CLUB* subscribers.

#### 2. Enhancement of Coordination with Air BusinessTools

From April 2020, Recruit's *AirPAY* service was made compatible with *d POINTs*, adding to prior compatibility with the *d PAY* payment service and making it possible to accumulate and use *d POINTs* at *AirPAY* affiliates.

 $Note: Using \ \textit{dPOINTs} \ through \ Recruit \ services \ requires \ the \ registration \ of \ \textit{dPOINT} \ user \ information.$ 

# Collaborative Ventures for Supporting Healthcare Institutions and Patients with ICT and IoT Phase 1—Commencement of Virtual Outing Trial for Hospitalized Patients

The global COVID-19 pandemic has prompted healthcare institutions to place limits on face-to-face interactions with patients, forcing frontline healthcare workers to provide the necessary healthcare services while limiting their number of interactions with patients. In response to this situation, there is an increased need to introduce ICT- and IoT-powered remote technologies. NTT DOCOMO is examining the potential for collaborative ventures with M3, Inc. and Sony Corporation, to utilize ICT and IoT to address such issues in the healthcare field.

As the first phase of these ventures, we have commenced a trial using virtual reality (VR) and augmented reality (AR) technologies to provide hospitalized patients with opportunities for virtual outings and support virtual visits. Specifically, we offer programs that allow patients to become immersed in travel videos with a 360° viewing perspective simply by putting on VR goggles in their hospital room, giving them the opportunity to experience outings that feel almost real. Another offering is a virtual visitation system that allows patients to meet with their families even when face-to-face visits are discouraged due to fear of COVID-19 infection.

Going forward, we hope to contribute to the resolution of a wide range of issues pertaining to improving patient quality of life,

facilitating treatment and rehabilitation, enabling remote examinations and remote explanations to patients' families, and allowing for communication between physicians and patients.





Virtual outing using VT and AR technologies (image)

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# **Regional Communications Business**

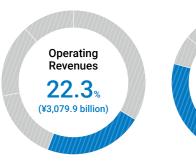
In the Regional Communications Business Segment, we worked on the *Hikari Collaboration Model*, which provides wholesale fiber-optic access services, among other things, to various service providers, as well as strengthening our solutions business with the aim of revitalizing local communities and regional economies.

### **Competitive Advantages**

- ► Secure, highly reliable, stable communication network
- ► Provision and support of ICT solutions with strong local ties
- ► Large market share and stable customer base



# Composition by Segment for the Fiscal Year Ended March 31, 2020

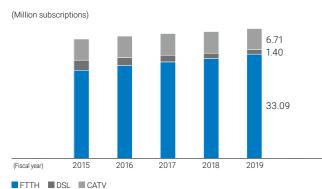








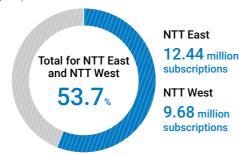
# Fixed-Line Broadband Services Subscriptions



Created by NTT from materials published by the Ministry of Internal Affairs and

# Number and Share of Subscriptions for Fixed-Line Broadband Services





\* Created by NTT from materials published by the Ministry of Internal Affairs and Communications. Includes subscriptions related to provision of wholesale telecom munications services.

# **TOPICS**

- ▶ We established NTT AgriTechnology Corporation, NTT Group's first "Agriculture × ICT" specialist company, aiming to promote urban development through agriculture by utilizing IoT / Al. In addition, in order to promote such initiatives as contributing to the revitalization of local communities and regional economies, we established NTTe-Sports, Inc. as a joint venture with SKY Perfect JSAT Corporation and Taito Corporation.
- NTT East and NTT West collaborated with many local governments nationwide, promoting a variety of initiatives aimed at utilizing ICT for urban development. Beginning in the Kyoto area, NTT West has started the staged deployment of a *Local Revitalization Cloud* service, which is a shared-usage cloud for universities and local governments.
- In order to address the societal issues of how to save and pass on regional cultural and artistic assets, and to respond to our customers' expectation that we will help revitalize local communities and convey their appeal through culture and art, we promoted the collection of digital data related to local culture and art, and broadcasted information using cutting-edge technology to contribute to the revitalization of local communities through local artistic and cultural traditions. We also hosted the "Digital × Hokusai (prelude)" interactive exhibition as a means of expressing the concept of this initiative.

# **FOCUS**

# Opening of eXeField Akiba Facility for Creating New Culture and Communities through E-Sports and Provision of eXeLAB Comprehensive Communication Platform

NTTe-Sports, Inc. opened eXeField Akiba, an e-sports facility located in Akihabara UDX, in August 2020. This facility will function as a pillar supporting NTTe-Sports' efforts to accomplish its mission of building communities and contributing to local economic invigoration through e-sports as well as the core that will organically link all of its various undertakings. Moreover, eXeField Akiba is equipped with cutting-edge equipment to allow for distribution of footage from online e-sports events from across Japan. By providing a venue for forming connections between different people and communities through this facility, we aim to help entrench e-sports culture, build communities, and evolve e-sports-related technologies.

In conjunction with the opening of this facility, the eXeLAB comprehensive communication platform for gamers was launched, also in August 2020. The recent boom in the video game market seen has been due in no small part to communication between

players in the form of nationwide tournaments and exchanges between e-sports teams and fans. However, the differences in information available by region have led to disparities between the efforts of players. Event organizers, meanwhile, face issues with regard to the hassle of making all the necessary adjustments for arranging events, impeding the continuation of such events. To address these issues, eXeLAB provides forums for communication between gamers as well as tools for the management of tournaments and teams. We hope that these features will help promote the expansion and acceleration of gaming events while making them more efficient. Through eXeLAB, we also aim to support the development of e-sports and contribute to the creation of new connections amid the new normal.



# Establishment of New Company to Realize Sustainable Next-Generation Livestock Production and Dairy Farming and Circular Community Ecosystems

Biostock was established in July 2020 through joint investment by Biomass Research Co., Ltd., and NTT East for the purpose of realizing sustainable livestock production and dairy farming and invigorating regional economies.

The number of people engaged in livestock production and dairy farming is declining in Japan while the number of animals each farmer has to care for is increasing. Meanwhile, many farmers have expressed an interest in introducing biogas plants, which are a means of utilizing animal excrements while eliminating odors, but have been unable to do so because of the high introduction costs, which cannot be covered through their own capital or borrowings.

Given this situation, we are working to eliminate the high hurdle to introduction of biogas plants through a monthly payment model that requires no initial investment. This is made possible by combining the biogas plant introduction expertise of Biomass Research with the ICT capabilities of NTT East. We also intend to coordinate with a diverse range of partners to offer additional solutions, such as sophisticated IoT- and AI-powered control systems that can perform farm operation procedures other than excrement disposal remotely without human involvement and optimal growth management systems that analyze environment and growth data.

Going forward, we will promote digital transformations in livestock production and dairy farming through coordination capitalizing on NTT Group's assets and Biomass Research's expertise.

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# **Long Distance and International Communications Business**

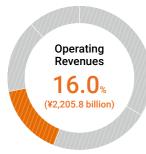
In the Long Distance and International Communications Business Segment, in addition to enhancing our ability to provide ICT solutions, which combine network, security and other services, we worked to enhance our service provision in growth areas such as cloud services and IT outsourcing.

### **Competitive Advantages**

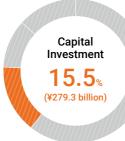
- Full-stack solutions from application to IT infrastructure
- ➤ Global coverage
- Strong customer engagement



# Composition by Segment for the Fiscal Year Ended March 31, 2020









# **TOPICS**

- In order to respond to demand for cloud services and data centers, we worked to enhance our service provision structure. In Europe, we began operating Netherlands Amsterdam 1 Data Center and Germany Frankfurt 4 Data Center, while in Asia, we began construction of Indonesia Jakarta 3 Data Center.
- Together with Mizuho Financial Group, Inc., Mizuho Bank, Ltd., and Mizuho Information & Research Institute, Inc., we jointly developed a voice recognition system, a tool which automates the entry of transaction data for market instruments by utilizing voice recognition and processing technology, text mining, and RPA. Mizuho Bank has begun using the system in its market banking operations.

# **FOCUS**

# GIGA School Pack for Helping Supply a Computer for Every Student

NTT Communications has teamed up with Lenovo (Japan) Ltd. to develop the *GIGA School Pack*, which combines educational-use computers for elementary and junior high school students with the *Manabi Pocket*, a cloud-based education support platform to support the GIGA School Scheme\* aimed at helping supply a computer for every student. Applications for this service have been accepted since March 2020. We will look to promote digital transformations at educational institutions by providing the *GIGA School Pack* to elementary and junior high schools across Japan going forward.

\* Scheme aimed at helping supply every student with a computer and to develop high-speed, high-capacity communication networks in an integrated manner to ensure schools across Japan can continue to provide equal and individually optimized learning environments on into the future

#### Direct Access via Microsoft Azure ExpressRoute from Berlin 1 Data Center

A Microsoft Azure ExpressRoute connection point allowing for direct access to Microsoft Azure has been installed in the Berlin 1 Data Center of NTT Ltd. The ability to access Azure directly without passing through a standard Internet connection makes it possible for customers to establish hybrid clouds with increased levels of safety and reliability. This connection point can be accessed by customers using our data centers in the EMEA region.

# **Data Communications Business**

In the Data Communications Business Segment, we responded to the acceleration of our customers' digital transformation at a global level, and to their increasingly diversified and sophisticated needs, by working to expand our business in the global market and to extend and consistently provide a range of IT services, such as offerings of digitalization and system integration, that are responsive to the changes in the market.

### **Competitive Advantages**

- ► High-level technology development and project management capabilities
- Large market share and stable customer base in Japan
- Powerful service delivery capabilities using development bases around the world

# Composition by Segment for the Fiscal Year Ended March 31, 2020









# **TOPICS**

- ▶ We were selected as a strategic partner for the digital transformation project of Naturgy Energy Group, SA, a gas and electrical energy utilities company in Spain. We will provide BPO / ITO services for maintaining and operating systems related to gas and electricity distribution and various operations related to utility retail service using a advanced platform that we had developed among others.
- In pursuit of our growth strategy in North America, we converted two U.S.-based companies, Flux7 Labs Inc. and NETESOLUTIONS CORPORATION, to subsidiaries. The acquisitions of these companies will strengthen our capabilities in relation to Amazon Web Services and U.S. federal government healthcare.

# **FOCUS**

### Evolution of Catch&Go, a Cash Register-Free Digital Store Service that Allows for Shopping via Facial Recognition

NTT DATA provides *Catch&Go*, a cash register-free digital store service. In addition to the QR code recognition systems used in prior experimental digital stores, we have introduced facial recognition systems and dynamic pricing using electronic price cards. We will test the new shopping experience that enables customers to enter a store and make payments purely through facial recognition as well as the use of electronic price cards linked to the store's inventory information to improve sales and reduce waste loss.





## Global Access to Historical Cultural Heritage throughout the ASEAN Region via Digital Archiving

NTT DATA is participating in the ASEAN Cultural Heritage Digital Archive project, which entails the digitization of important historical cultural heritage from throughout the ASEAN region. Through this project, NTT DATA compiled cultural heritage from across the region into a digital archive system, making around 160 digitized cultural heritage articles from Indonesia, Thailand, and Malaysia available for viewing. This archive includes image, voice, and video data as well as 3D data of structures. In the future, the project aims to provide access to cultural heritage from the entire ASEAN region.

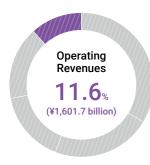
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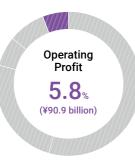
# **Other Businesses**

In the Other Businesses Segment, NTT Group mainly provided services related to the real estate business, finance business, electric power business, and system development business.



# Composition by Segment for the Fiscal Year Ended March 31, 2020









### **Details of Major Initiatives**

#### **Real Estate Business**

We promoted our mainstay office and commercial business, residential business, and global business through NTT Urban Solutions, Inc., a company managing NTT Group's real estate business. In Japan, we were involved in urban development projects in Fukuoka, Sendai, and other cities.

### **Electric Power Business**

Led by NTT Anode Energy Corporation, which promotes smart energy business in NTT Group, we worked on initiatives for a safe and secure society that uses natural energy and finite energy resources efficiently without waste, and is resilient to natural disasters and other risks.

#### **Finance Business**

We have developed financial services such as leasing and financing to facilitate the popularization of ICT devices and resolve social challenges revolving around the environmental, educational, and medical fields. Furthermore, we provided billing and collection services for telecommunication service bills, and credit card transaction settlement services.

### System Development Business

In preparation for digital transformation, we have begun developing and deploying a cluster of IT systems that will become the new service platform. We were also engaged in initiatives to develop solutions for resolving societal issues, such as urban security and the revitalization of regions.

# **FOCUS**

### Collaboration in Renewable Energy and Storage Battery Businesses

In December 2019, NTT Anode Energy Corporation reached an agreement with Mitsubishi Corporation to examine possibilities for collaboration in the energy field as part of their business alliance for the promotion of industrial digital transformations.

#### Specific Initiatives

### 1. Renewable Energy Projects

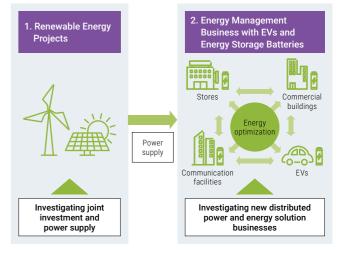
The companies will investigate the possibility of joint investment in domestic and overseas renewable energy projects and of supplying electricity to NTT Group companies.

# 2. Energy Management Businesses with Electric Vehicles and Storage Batteries

Mitsubishi Corporation and NTT Anode Energy are looking into the possibility of developing microgrid platforms\* that incorporate electric vehicles and storage batteries, new decentralized power businesses that use microgrid platforms, and new energy solutions businesses that utilize the business networks of both companies.

Through these initiatives, we will combine NTT Group's ICT and direct current supply technologies with the Mitsubishi Corporation Group's power business insight and expertise to

provide customers with clean power options and the kind of energy-management services that will make them more resilient to change in the energy landscape.



\* Business platforms that provide optimal energy solutions to customers by organically linking storage batteries, electric vehicles, and chargers throughout a given area via ICT

#### Launch of Corporate Wellness Support Service-Support for Health Management via Big Data Analysis

In April 2020, NTT Life Science Corporation launched *Genovision*, a new health management support service to help promote corporate health management and employee health.

As employee health is becoming an important issue for companies, there is an increase in need for health management that approaches employee health from a management perspective and implements it strategically.

To cater to the demand associated with this trend, NTT Life Science offers *Genovision* packages bundling *Genovision Dock*, a genetic testing service for employees; *Genovision Action*, a lifestyle habit improvement support service for employees; and *Genovision Insight*, a health management consulting service for companies. Based on the ICT and security technologies, NTT Group has developed thus far, these services combine big data analysis with healthcare data and genome data acquired through genetic testing to deliver lifestyle habit improvement support that is optimized for every employee.

We are rolling out these services for use by domestic employees via healthcare institutions operated by NTT Group, and we plan to gradually expand the scope of availability to the various healthcare institutions across Japan with which Group companies have contracts. These services will also be made available for external companies, and we aim to support the health improvement and health management efforts of companies nationwide and their employees through *Genovision* services.



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