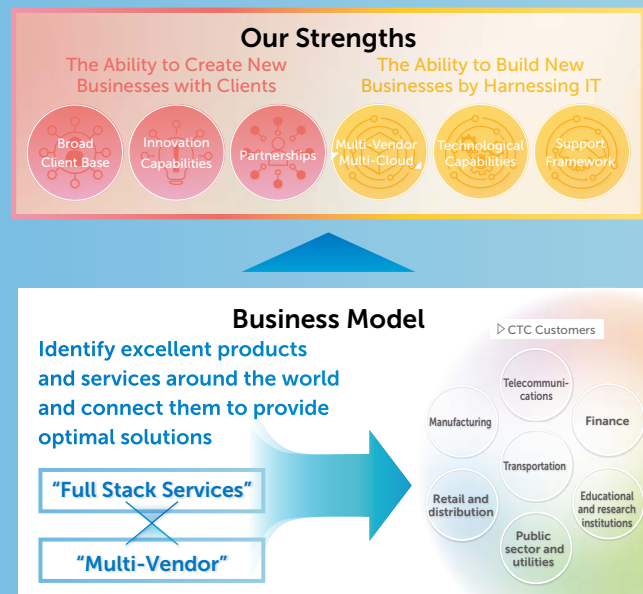# Systems and Initiatives to Support Our Business Model

In order to fully demonstrate its strengths, the CTC Group must make high-quality investments of management capital that match its business model and strategy. At the same time, we need mechanisms in place to ensure that our business model functions properly and undergoes continuous improvements. Accordingly, we are constantly expanding our internal systems and initiatives, keeping in mind the need to both "strengthen our business model" to hone our invested management capital and "support sustainable growth" to minimize business risk and reinforce our operational foundation.

Our Strengths

The Ability to Create New Businesses with Clients

- Broad Client Base
- Innovation Capabilities
- Partnerships

The Ability to Build New Businesses by Harnessing IT

- Multi-Vendor Multi-Cloud
- Technological Capabilities
- Support Framework

Business Model

▷ CTC Customers

Identify excellent products and services around the world and connect them to provide optimal solutions

"Full Stack Services"
× "Multi-Vendor"

- Telecommunications
- Manufacturing
- Finance
- Transportation
- Retail and distribution
- Educational and research institutions
- Public sector and utilities

Strengthening Our Business Model

IT has played an important role in shaping today's society, underscoring the need to foster high-quality businesses based on long-term perspectives. In strengthening its business model, CTC recognizes the deep importance of two key factors: "human resources" and "product quality." We will implement strategies to help individual employees obtain advanced technical capabilities and excel in the IT world. At the same time, we will make ongoing refinements to improve service quality and thus earn the trust of our customers.

A human resource strategy to foster the "motivation to work" and "professionals who relentlessly seize challenges"
▶ 📖 P58

Earn confidence and trust through **the pursuit of quality**
▶ 📖 P63

Supporting Sustainable Growth

We are working to reinforce our operational foundation in order to remain trusted by customers and society as a whole. Our aim is to continue meeting the expectations of all stakeholders—including customers, shareholders and other investors, employees and their families, and local communities—without losing the flexibility to quickly address changes in the business environment, while tirelessly fulfilling our social responsibilities.

Corporate governance ▶ 📖 P69

Risk management ▶ 📖 P83

Financial strategy ▶ 📖 P55

Environmental management ▶ 📖 P64

A Human Resource Strategy

to Foster the "Motivation to Work" and "Professionals Who Relentlessly Seize Challenges"

Our Approach

The most important management assets in an IT business are its "human resources." As indicated by our corporate philosophy and slogan of "Challenging Tomorrow's Changes," we have consistently cultivated human resources who continue embracing the challenges inherent in IT's potential.

Challenges evolve only when employees are healthy and have environments where they can work with a sense of fulfillment. With this in mind, CTC will continue taking on more valuable challenges together with its customers. Our aim is to create environments where individual employees can fully demonstrate their abilities and enrich their lives through work.

▶ HR Strategies to Date

Medium-Term Management Plan	Fiscal 2013–2014 Human resource cultivation, diversity	Fiscal 2015–2017 Investment in human resources and technologies, establishment of multi-path personnel management system, doubling percentage of women in leadership roles			Fiscal 2018–2020 Human resource development and work-style reforms	
	FY2013-2014	FY2015	FY2016	FY2017	FY2018	FY2019
Personnel System Reform		▶ New personnel system				
Work-Style Reforms	▶ Stronger measures to reduce overtime work ▶ Start of morning-focused working system	▶ Slide work, mobile work, time-based paid leave systems		▶ Participation in Telework Day / Days, expansion of telework	▶ Start of employee engagement survey	▶ Expanded work-clothing options ▶ Trialed teleworking for all employees
Diversity and Inclusion ▪ Empowering women in the workplace Promoting the employment of seniors ▪ Childcare and nursing care ▪ People with disabilities	▶ Established special subsidiary, Hinari Corporation (now CTC Hinari Corporation)	▶ Formulation of manager training plan based on Companywide targets for number of female managers ▶ Strengthening of mentor/mentee system, launch of the Chorus diversity website ▶ Start of Companywide management meetings ▶ Start of Iku-boss/Iku-men seminars	▶ Work-at-home system, reform of child-rearing and nursing care systems		▶ Reform of post-retirement reemployment system	▶ Started studying LGBT and SOGI initiatives
Health Management	▶ Health promotion measures: Regular health checks and thorough post-checkup measures ▶ Health promotion activities: Prevention of lifestyle diseases, prevention of shoulder stiffness and pain, support for smoking cessation, mental health care	▶ Stronger promotion of health management	▶ Establishment of the CTC Group Health Insurance Association		▶ Enhancement of measures to support workers with cancer: Early detection of and response to cancer and enhancement of measures to support workers with cancer	▶ Made the "CTC Well-being Declaration" as a challenge for employee health and happiness
Support for Human Resource Training and Career Development	▶ Global human resource training: Global Leader (GBL) Training Short-term overseas language study ▶ Selective education: Section of next-generation leaders	▶ Training system reforms in tandem with human resource system reforms: Newly established training for management candidates ▶ Cultivation of motivation toward career development: Start of career development support system Start of individual career support interviews ▶ Promotion of work-style reforms: Training for all management members		▶ Enhancement of management capabilities: Introduction of multifaceted observation (executives and employees) ▶ Cultivation of motivation toward career development: Expansion and reworking of career design training	▶ Reconfiguration of training system for engineers: Integration of engineering skill inventory Companywide training on AI and introduction of collaborative measures between industry and academia ▶ Cultivation of professional global human resources: Dispatch for language study in ASEAN countries	▶ Held "Career Anchor Seminars" ▶ Conducted basic skills training (basic IT education) for new employees

Systems that foster the "motivation to work"

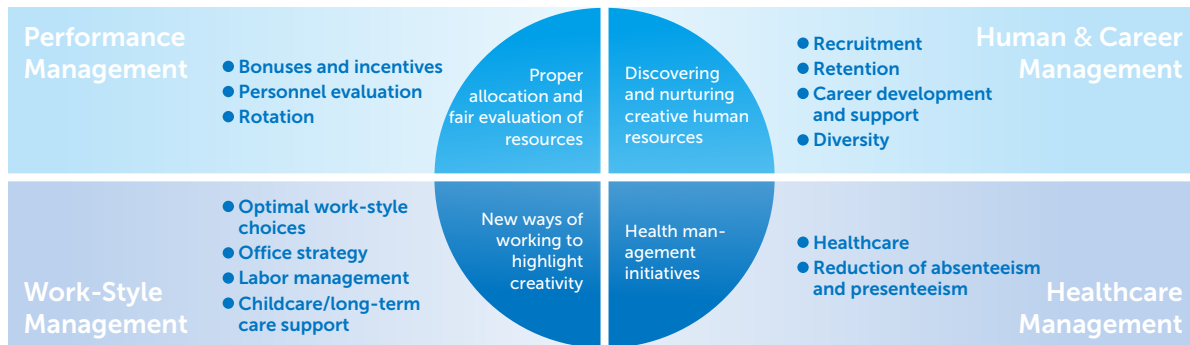Mechanisms that foster "professionals who relentlessly seize challenges"

A **Human Resource Strategy** to Foster the
"Motivation to Work" and "Professionals Who Relentlessly Seize Challenges"

Human Resource Management Framework

CTC aspires to have "Creative human resources who enjoy change, take the initiative to address change, and can turn diversity into value." With this in mind, we work actively to create environments and systems for such human resources to gather, grow, and continue taking on challenges.

For example, we established our "Human Resource Management Framework," in which our human resource strategy initiatives are roughly divided into four management domains (see diagram below) that work organically with each other to generate greater synergistic benefits.

Mechanisms that foster "professionals who relentlessly seize challenges"

Performance Management	Human & Career Management
● Bonuses and incentives ● Personnel evaluation ● Rotation	Proper allocation and fair evaluation of resources / Discovering and nurturing creative human resources	● Recruitment ● Retention ● Career development and support ● Diversity
Work-Style Management ● Optimal work-style choices ● Office strategy ● Labor management ● Childcare/long-term care support	New ways of working to highlight creativity / Health management initiatives	● Healthcare ● Reduction of absenteeism and presenteeism Healthcare Management

Systems that foster the "motivation to work"

Systems that Foster the "Motivation to Work"

From "Ease of Work" to "Motivation to Work"

In fiscal 2019, the theme of our work-style reforms underwent a major shift, from "ease of work" to "motivation to work." In addition to improving workplace environments, we are fostering a culture in which employees can work actively and with motivation to grow.
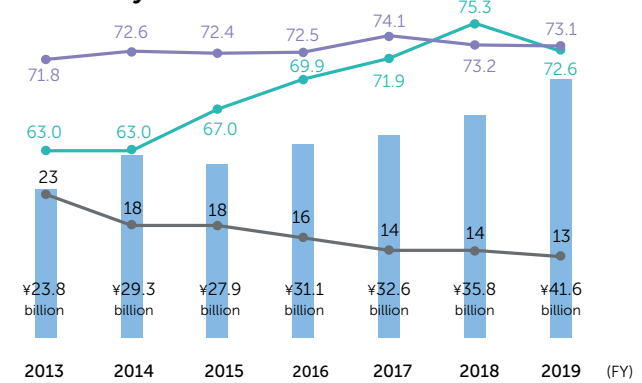
Our career design support system and various career design training sessions are also part of this initiative. We start by asking employees to firmly verbalize not only their thoughts about their careers but also the values they want to cherish. Then, they share their thoughts with their bosses to reconcile their career aspirations and feasibility, while career counselors are also available for interviews upon request. This system is designed to help improve each employee's "motivation to work." We also promote the active use of teleworking. In fiscal 2020, we revised our teleworking system and expanded its coverage to all employees.

▶ Utilization of Flexible Work Styles*

(%)

2017	2018	2019 (FY)
87.7	85.6	93.7
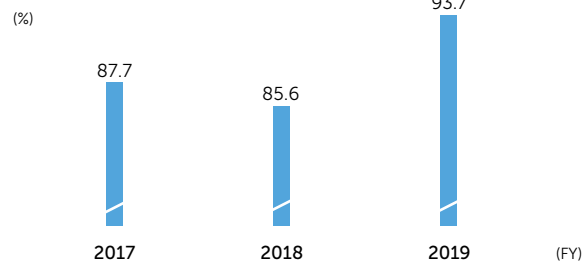
* Percentage of CTC (non-consolidated) employees making use of the morning-focused working system, time-based paid leave, or slide work, or teleworking on Telework Days

▶ Correlation between Management and Work-Style Reforms

Percentage of motivated people*: 71.8 (2013), 72.6 (2014), 72.4 (2015), 72.5 (2016), 74.1 (2017), 75.3 (2018), 73.1 (2019)

Average annual leave uptake rate: 63.0 (2013), 63.0 (2014), 67.0 (2015), 69.9 (2016), 71.9 (2017), 73.2 (2018), 72.6 (2019)

Average monthly overtime hours: 23 (2013), 18 (2014), 18 (2015), 16 (2016), 14 (2017), 14 (2018), 13 (2019)

Operating income: ¥23.8 billion (2013), ¥29.3 billion (2014), ¥27.9 billion (2015), ¥31.1 billion (2016), ¥32.6 billion (2017), ¥35.8 billion (2018), ¥41.6 billion (2019)

■ Operating income ◆ Average monthly overtime hours
— Average annual leave uptake rate — Percentage of motivated people*

* Percentage of those who answered "Yes" or "I suppose" to the question "Is your job fulfilling?" (from stress check)

Health Management Initiative

To create environments where employees can maximize their abilities, we announced the "CTC Well-Being Declaration" in fiscal 2019. Under the declaration, we set up a promotion system, headed by the president, to make our health management initiative function more effectively as one of our human resources strategies. In addition to regularly monitoring and verifying the progress of specific and medium-term target indicators, we have assembled a team of specialists—industrial physicians, public health nurses, and carers—to promote health, improve health literacy, offers consultations, and provide mental health support.

CTC Well-Being Declaration

At CTC, management of employee health and well-being is a key human resource strategy. We place top priority on the physical, mental, and social health and well-being of all employees.

The well-being of employees is fundamental to putting our slogan, "Challenging Tomorrow's Changes," into practice and achieving sustainable growth, and fostering employees' motivation to work is essential to this endeavor. By helping our employees and their families maintain good physical and mental health into the future and strive for self-fulfillment through work, we can be confident of CTC's growth and prospects 100 years from now.

We hereby make the "CTC Well-Being Declaration" as our challenge for the future of employees and their families.

ITOCHU Techno-Solutions Corporation

Promoting Diversity

We promote diversification of human resources based on the belief that employees with diverse backgrounds who work together and mutually enhance their abilities will lead to creation of innovation.

Empowerment of Women

In particular, we recognize the importance of measures to empower women in the workplace. To this end, we are increasing the number of women we hire and are emphasizing measures to raise the percentage of female employees in leadership positions.

Rather than training female managers under a uniform system, we created a framework to boost motivation based on a direct approach, where we take individual situations and skills into account, meet with individual employees, and provide training to help them advance their careers.

We also have systems of shortened and staggered working hours for employees engaged in childcare and have

raised the age of children to which these systems are applicable. In addition, we have a system that encourages fathers to take childcare leave. We are expanding these systems, which support a balance between work and childcare and nursing care duties, so that they can be used by both men and women. In addition to supporting employees who have returned from childcare leave, we hold seminars for the bosses of such employees and workplace lunch meetings where male employees who have taken childcare leave can share their experiences. In these and other ways, we work to create frameworks that enable everyone in the workplace to deepen their understanding of life events and careers.

Target number of women in leading positions
(employees originally hired by CTC)

▸ **90** by 2020
▸ Fiscal 2019 actual: **69**
(As of March 31, 2020)

Target percentage of female regular employees
(CTC, non-consolidated)

▸ **20**% or more by 2023
▸ Fiscal 2019 actual: **17**%
(As of March 31, 2020)

Target percentage of women among new graduates hired
(CTC, non-consolidated)

▸ **35**% or more of women among new graduates joining the Company in fiscal 2019
▸ Fiscal 2020 actual: **38**%
(Joined on April 1, 2020)

Lecture on Careers by Female Outside Directors

During the year, our two female outside directors (Naoko Iwasaki and Aya Motomura) gave in-house lectures on women's career development and their perceptions of life events. In addition to offering suggestions related to work, they presented life-like stories based on their personal experiences, which gave inspiration to attendees.

Strengthening LGBT/SOGI Initiatives

Since the start of fiscal 2020, we have launched a new system under our Basic Diversity Policy. Under the system, we expanded the definition of "spouse" in our internal rules to include common-law and same-sex partners. In June 2020, we conducted e-learning forums on SOGI harassment and LGBT for all employees to deepen Companywide understanding and build a culture that embraces diversity.

A **Human Resource Strategy** to Foster the
"Motivation to Work" and "Professionals Who Relentlessly Seize Challenges"

Fostering Professionals Who Relentlessly Seize Challenges

Opportunities and Learning to Encourage Independence

Achieving job fulfillment in the increasingly sophisticated, advanced IT industry requires a commitment to ongoing learning through external stimulation, an open mind that is willing to share information received, and the motivation to confront brand-new technologies. At CTC, we work to nurture these attributes and provide opportunities for employees to acquire them. We are also stepping up training so that employees can put what they have learned into practice.

Recruiting IT Personnel Who Will Lead the Future

At CTC, we are enhancing the attractiveness of work environments in terms of both "ease of work" and "motivation to work." For example, we use internships and recruiting agents to attract new graduates while deploying various channels when hiring mid-career recruits. In February 2020, we launched an employee referral program as a new method of recruitment.

Employee Referral Program

We have an employee referral program that encourages employees to introduce and recommend friends and acquaintances to work at CTC. In addition to addressing the increasingly serious shortage of IT human resources, employee referrals help us avoid potential mismatches among new recruits. This is because employees themselves approach people who they think may desire a career at CTC to explain job content and work styles. By directly conveying the appeal of CTC, they promote a deeper understanding of the Company.

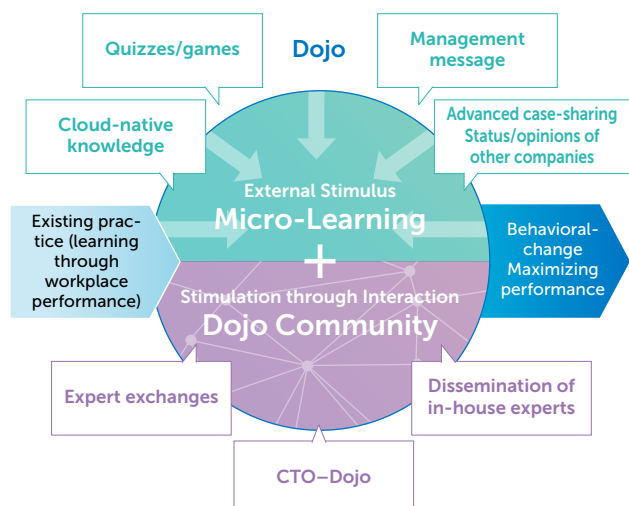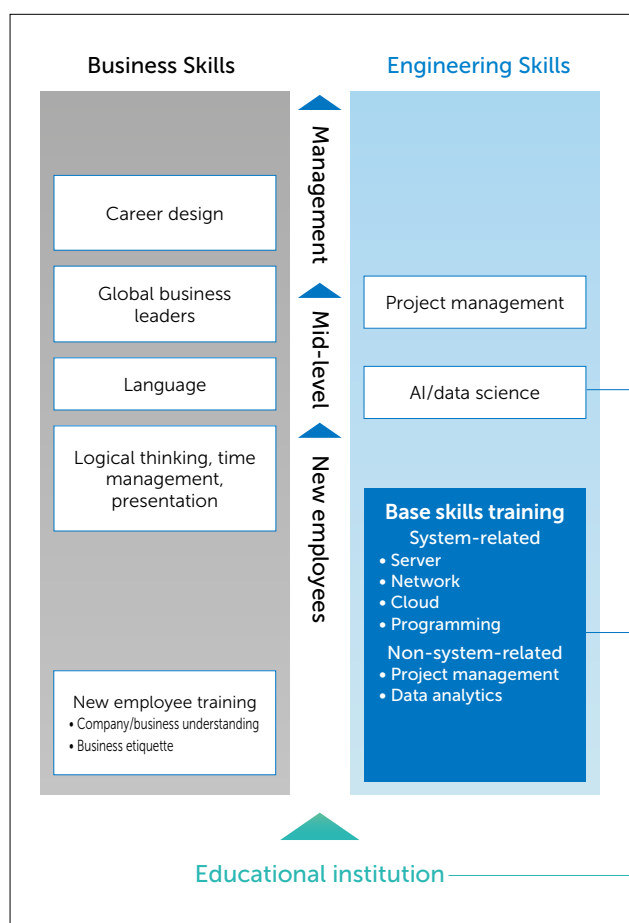Note: This is an initiative of CTC (non-consolidated).

▸ **Recruitment Record**

(Persons)

(FY)	New graduates	Mid-career recruits
2017	238	185
2018	301	258
2019	287	295
2020	328	
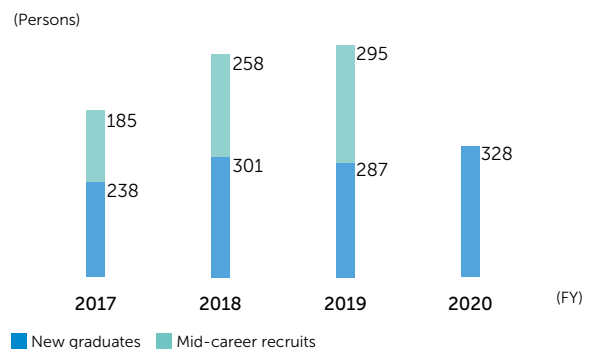
Fostering a Culture of Self-Learning

Dojo

Dojo is an open online community where employees can freely exchange opinions on the latest trends in IT technology.

Our CTO, Tadataka Okubo, gets personally involved in encouraging self-learning by disseminating information on the IT market and trends in advanced technology. We are also promoting micro-learning and developing hands-on, community-style environments to facilitate self-learning. Because employees can interact and exchange opinions freely in such environments, they can obtain the information they need without engaging in teacher-student relationships. They can also make connections between their work and their areas of proficiency, which leads to self-growth.

Dojo

- Quizzes/games
- Management message
- Cloud-native knowledge
- Advanced case-sharing Status/opinions of other companies
- Existing practice (learning through workplace performance)
- **External Stimulus** Micro-Learning
- Behavioral-change Maximizing performance
- **+**
- **Stimulation through Interaction** Dojo Community
- Expert exchanges
- Dissemination of in-house experts
- CTO–Dojo

Business Skills

Management

Mid-level

New employees

- Career design
- Global business leaders
- Language
- Logical thinking, time management, presentation

New employee training
- Company/business understanding
- Business etiquette

Engineering Skills

- Project management
- AI/data science

Base skills training

System-related
- Server
- Network
- Cloud
- Programming

Non-system-related
- Project management
- Data analytics

Educational institution

Intensive Training in Advanced Technologies

For companies pursuing digital transformation (DX), the role of AI is becoming more and more important. In 2018, we began core AI training for salespeople and engineers. Targeting some 3,000 people, the program includes machine learning (through e-learning) and AI education (including deep learning). We also hold in-house competitions to gauge the accuracy of AI in dealing with specific challenges.

Basic Skills Training

In order to flexibly address future changes in IT technology, we introduced a training program enabling new employees to learn a wide range of elemental IT technologies from an early stage. This program, which lays the groundwork for tackling DX, covers IT system basics, infrastructure architecture and the application service layer (the foundation of CTC's business), and project management, as well as cloud technology and statistics and analysis.

Developing Next-Generation Human Resources through Industry–Academia Partnerships

In the data science field, we conduct early human resource development via partnerships between industry and academia. Combining the actual data companies possess with universities' knowledge of data analysis helps to cultivate data analysis expertise that can be used in actual business settings. This approach also helps in cultivating human resources capable of taking the lead in the data science field.

▶ External Recognition

▶ 2020 White 500/Health & Productivity Outstanding Entities Recognition Program

In this program, METI recognizes large enterprises conducting excellent health and productivity management. Certified in the large enterprise category (dubbed the "White 500"), CTC was selected as a member for 2019, recognizing its efforts in health management by managing the health of employees from a business standpoint.

2020
健康経営優良法人
Health and productivity
ホワイト500

▶ Semi-Nadeshiko Brand

Semi-Nadeshiko brands are listed corporations selected by METI and the TSE as enterprises that are outstanding in terms of encouraging the empowerment of women in the workplace. CTC was selected for the first time in fiscal 2018 for its efforts in the areas of hiring and support for the career advancement of women, work styles, and integration of child-rearing and nursing care.

NADE SHI KO semi 2020

▶ Good Career Company Award

Japan's Ministry of Health, Labor and Welfare presents "Good Career Company Awards" each year to companies that actively support the career development of employees. In fiscal 2019, CTC received a Grand Prize in the awards in recognition of its systems to support the independent and autonomous career development of employees according to each individual's abilities, aptitude, and willpower.

グッドキャリア企業
アワード

▶ Japan HR Challenge Awards (Prize for Excellence, Human Resource Development Category)

In fiscal 2019, CTC received a Prize for Excellence in the Human Resources Development Category at the "9th Japan HR Challenge Awards." This award recognizes companies that actively engage in outstanding new initiatives in the human resource field. CTC was awarded for the first time for its results and attitudes in encouraging the empowerment of women in their career advancement.

HR 2020

Strengthening Our Business Model

Earn Confidence and Trust through

the Pursuit of Quality

Our Approach

Improving the quality of the products and services we provide will help us earn the trust of our customers, which in turn will lead to business growth and increased corporate value. CTC has built comprehensive management systems at each site tailored to IT life cycles and also meticulously manages risk related to product quality. At the same time, we utilize feedback from our diversified customer base to make on-site improvements beyond those required for certification. In these ways, we strive to earn the trust of customers and society.

Quality-Related Initiatives and Certifications

Under our Quality Policy, we aim to further enhance the leading-edge IT expertise and quality that are cornerstones of CTC's success and ensure the ongoing provision of safe and secure systems and services that provide peace of mind to our clients.

To augment quality, we are stepping up our efforts at failure analysis and recurrence prevention to keep similar issues that arose from project activities or during operational services from happening again. We have in place an internal, third-party organization that reviews the status of highly difficult, large-scale projects at the estimate and planning stages, as well as when projects are in process, monitoring for risks on an ongoing basis.

Quality Policy (Amended April 1, 2019)

We support clients' IT systems with reliable technologies and quality.

ISO 9001
JQA-QMA15845

UKAS MANAGEMENT SYSTEMS
091

JAB CM009

PDCA for Improving Customer Satisfaction

To improve customer satisfaction, we listen to client feedback, which we incorporate into improvements and new proposals. The CS Improvement Committee leads efforts to enhance customer satisfaction, such as conducting client satisfaction surveys.

Client evaluations and opinions are shared throughout the Company. Each part of the Company considers appropriate measures, which are reflected in its sales, project, and service activities. We plan to continue these initiatives going forward, as we aim to remain a trusted business partner for our clients.

Results of Fiscal 2019 Client Satisfaction Survey

Customer evaluation of system quality

89%*

▶ **Overall evaluation for the year** (compared with previous evaluation period)

Maintained "year-on-year improvements"

▶ **Assessment by category** (35 categories)

High assessment
· Sales capabilities (enthusiasm and integrity)
· Proposal-making capabilities (understanding of client issues and requests)
· Team technological capabilities
· Flexibility in responding to requests
· Technical skills of people in charge

Room for improvement
· Cost competitiveness   · Free thinking

* Percentage of respondents who answered "Similar to competitors" or higher in the system quality evaluation section of our customer satisfaction survey

Environmental Management

As a leading company in the IT industry, we believe it is important to not only reduce the amount of environmental resources used by our company, but also provide a sustainable future for our customers and society through technologies we are uniquely positioned to provide. We listen widely to the opinions of communities about the social role and responsibilities we are expected to fulfill, and we reflect this feedback in our corporate activities.

Environmental Activities Policy

The CTC Group aims to keep its businesses in harmony with the global environment, addresses issues including climate change, the effective use of resources, and the preservation of biodiversity, and strives to improve environmental management systems in a sustained manner.

1 ▶ Provision of Value through the Solution of Issues Faced by Customers

The CTC Group offers value by helping address environmental and social issues. For example, we utilize IT to enable environmental load reduction and eco-efficiency improvement.

2 ▶ Reduction of Environmental Footprint in Business Activities

The CTC Group proactively promotes such initiatives as those for saving energy, saving resources, reducing waste, and greening procurement and works to reduce the environmental footprint of the Group and prevent pollution in its business activities.

3 ▶ Compliance with Relevant Laws, Regulations, etc.

The CTC Group observes laws and regulations associated with environmental preservation and other items to which it agrees.

4 ▶ Cultivation of an Awareness of the Need for a Sustainable Society

The CTC Group increases employees' environmental awareness through environmental education and other awareness-raising initiatives. Also, the Group cultivates an awareness in each employee of the need for a sustainable society.

▶ Environmental Management Structure

The CTC Group has established an Environmental Activities Policy based on its corporate philosophy and has established an environmental management structure. We engage in Groupwide environmental improvement activities under the management of the CSR and Compliance Committee chairman and Environmental Control Manager; with our Environmental Managers and Eco Leaders and Deputy Eco Leaders (who are responsible for driving environmental activities) in their particular departments, including at Group companies, taking a central role in these activities. We have attained ISO14001 certification at a total of 22 business locations.

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                    CTC President & CEO
                           |
Chief Environmental    Sustainability Committee
Internal Auditor       Chairman*
       |                   |
Chief Auditor          Environmental          Environmental
                       Control Manager        Planning Division
                                              (Environment Office)
              |                    |
      CTC Departments      CTC Group companies
              |                    |
   Environmental Managers   Environmental Managers
   (General Managers)       (General Managers /
                            Department Managers)
              |                    |
   Department / Team        Section (Under direct
   Eco Leaders              control of Group company
                            head office / secretariat)
                            Eco Leaders
              |                    |
           Staff                 Staff
```

* For fiscal 2020, Executive Officer in charge of Human Resources Management & General Affairs Division; General Manager, Corporate Planning Division is assigned to Sustainability Committee Chairman.

▶ Environmental Education

The CTC Group provides environmental education through e-learning for all employees once a year. Environmental Managers and Eco Leaders are also offered training to promote their activities.

▶ Environmental Improvement Activities

Under our environmental management system, all entities of the CTC Group set annual goals to reduce environmental impact through their core business and pursue initiatives each year to achieve those goals. These include helping customers save energy through virtualization and cloud technologies, as well as the provision of environmentally friendly solutions and products. We are also reducing energy consumption by improving the efficiency of our own data centers, and we introduced a morning-focused working system aimed at discouraging overtime work beyond 20:00 and encouraging early-morning work if overtime is required. In these ways, we are reducing overtime work and office power consumption.

▶ Environmental Preservation Activities

As a supporter of the Chinju no Mori Project, which creates forests that help prevent disasters and preserve the environment, we engage in ongoing tree planting and supplementary planting activities at "Millennium Hope Hills" (Iwanuma City, Miyagi Prefecture), an area affected by the Great East Japan Earthquake. Also, we support the "MOTTAINAI Campaign," which promotes the establishment of a sustainable recycling-based society, and participate in "Satoyama Conservation" activities at Tama Zoological Park every year as an environmental protection initiative.

Supporting Sustainable Growth | Environmental Management

The 2050 CTC Environmental Declaration

In March 2016, the CTC Group identified its material topics (materiality) and has since been working to reduce environmental impact as a priority issue. In April 2019, we announced the 2050 CTC Environmental Declaration, which targets a "30% reduction in CO_2 emissions from our own activities by 2030 (compared with 2015), and zero emissions by 2050." By incorporating the 2050 CTC Environmental Declaration into our specific targets and key performance indicators (KPIs), we reduced CO_2 emissions by around 20% in fiscal 2019 compared with fiscal 2015.

Environmental Initiatives at Our Data Centers

● Yokohama Computer Center	● Yokohama Computer Center (North Wing)	● Kobe Computer Center	● Mejirozaka Data Center

▷ Equipment Used within the Facilities

1 Adoption of Exhaust Heat Shielding Curtains

By thoroughly segregating cool air supplied to a server rack from exhaust heat, the mixing of airflows from the cold aisle and the hot aisle is prevented, ensuring efficient air conditioning and stable operation of the IT equipment.

2 Adoption of a Ceiling-Suspension Local Air Conditioning Method
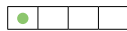
By installing cooling units in several locations unlike a conventional floor blowout air conditioning method, it is possible to finely control the operations by rack and area.

3 Introduction of LED Lighting System

With the aim of realizing energy saving and long life of light bulbs, we have adopted LED lighting equipment.

4 Ice Thermal Storage Equipment

We have realized efficient energy usage by collecting energy in thermal storage by making ice during the night time and discharging such energy during the day time for power usage (peak cut).

5 Introduction of Motion Sensors

In addition to the introduction of the LED lighting system for the lighting of the server room and corridors of common areas, we have installed motion sensors that automatically control the switching on and off of lights by detecting human motion.

6 Outside-Air Cooling System

We have adopted a system that automatically controls air-conditioning operations by taking in outside air when the temperature of outside air and humidity match the required conditions.
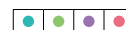
7 Heat Pump Water Heater
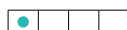
In order to reduce the usage of boilers that use gas, kerosene, etc., as fuel, we use efficient electric water heaters, generally referred to as Eco-Cute.

▷ Energy Used (kL) / Greenhouse Gas (t-CO_2)

(FY)	2015	2016	2017	2018	2019
Total	33,472	33,007	31,749	31,562	30,535
Offices	6,706	6,437	7,044	6,889	6,352
Data Centers	60,880	59,210	54,705	51,185	47,930
(Combined bar total)	67,586	65,647	61,749	58,074	54,282

■ Data Centers ■ Offices ● Total
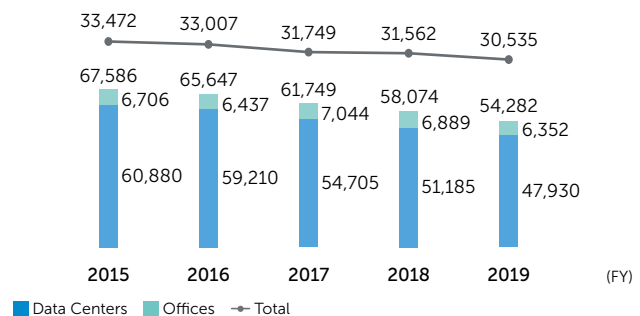
▷ Equipment Used Outside the Facilities

8 Greening within the Premises

In addition to planting trees, shrubs, grass, etc., to achieve higher greenery of the premises, we have also taken measures to promote green IT including rooftop greening and wall greening.
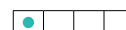
9 Solar Power Generation System

Electric power generated through solar panels installed on the roof is used within the data center.

10 Recycling of Food Waste from the Cafeteria

Food waste from the cafeteria is recycled.

▷ Other

11 Sponsorship of Yokohama City Wind Power Generation Project

CTC provided support for the simulation of wind conditions, location survey, and basic design for the installation of Hama Wing (Yokohama City's wind power generation plant). Supporting the aim of Yokohama City's wind power generation project, CTC has been a sponsor since the inception of the project as a Y (Yokohama) Green Partner, and stepped up its support in April 2020. Generated power has been used for the reduction of CO_2 emissions at the data centers.

# Contributing to the Environment through Our Business

▶ Open Compute Project (OCP) Aimed at Saving Power and Lowering Costs

The Open Compute Project (OCP) was launched in 2011 by Facebook to promote the standardization and open sourcing of hardware optimized for large-scale data centers.

Since the OCP hardware is designed specifically for data center optimization, it allows center operators to provide low-cost systems that use little power. Power consumption can be cut by about 30% compared with existing facilities, which helps reduce environmental impact. Another initiative called the Telecom Infra Project (TIP) was launched in 2016 and is currently being considered for application in the telecommunications field.

CTC promotes product sales and system construction as the only certified OCP solution provider in Japan. Thanks to our efforts, OCP has grown and gained greater recognition and is now used by various companies with peace of mind.

OPEN Compute Project

SOLUTION PROVIDER
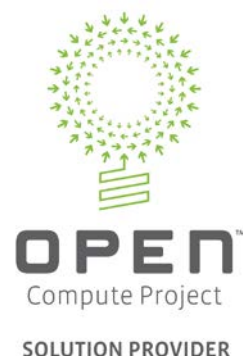
■ Benefits of OCP
· Power saving thanks to dedicated OCP racks with high power-conversion efficiency
· Easy maintenance and low operating costs
· Compact

▶ OCP Racks with High Power-Conversion Efficiency

Reduces power waste from conversion loss by lowering number of DC/AC conversions

Conventional AC power supply system

Commercial power supply

UPS
AC → DC → AC
Conversion Conversion

Hardware
Power supply
AC → DC → Server storage
Conversion
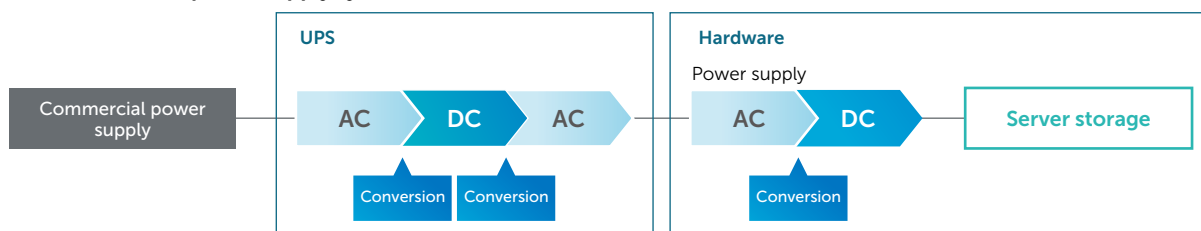
AC power supply system using dedicated OCP rack (OCP OpenRack)

Commercial power supply

OpenRack power shelf/BBU*
AC → DC → AC
Conversion   Only **one** conversion

Hardware
Power supply
AC → DC → Server storage
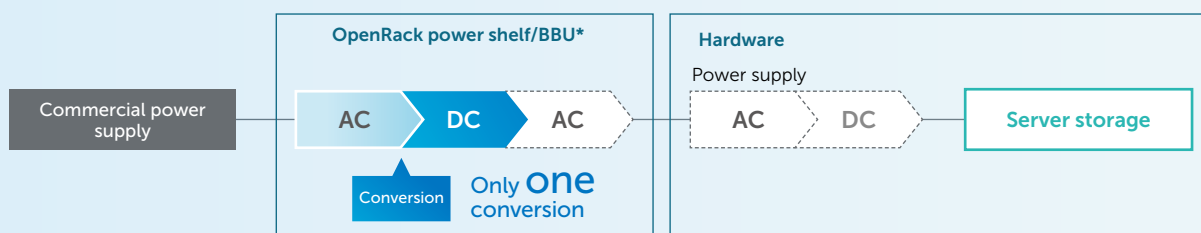
* BBU: Battery Backup Unit. The OpenRack BBU has a UPS function and can be stored in a dedicated OCP rack.

Supporting Sustainable Growth | **Environmental Management**

▶ Utilizing Simulation Technology to Support Energy Management

■ Participation in Development of Control Systems Related to Renewable Energy

Under the Fifth Strategic Energy Plan approved by Japan's Cabinet in 2018, making renewable energy into a main power source is cited as an important measure for 2030, and momentum for utilizing clean energy is increasing as a result. However, achieving early proliferation of renewable energy requires measures to enable connection to existing grids that have limited free space, without having to spend time and money to strengthen power distribution facilities. With this in mind, CTC joined the NEDO Project*, which aims to realize a Japanese-style "connect and manage" grid and develop and field-test effective and rational systems that make the best use of existing frameworks.

In the field of renewable energy, CTC has been developing technologies related to output forecasting for weather events, wind power generation, and the like for more than 25 years. As a licensed provider of forecasting services, we have contributed to the spread of renewable energy, not only through our own weather forecasts but also through our analysis and forecasts of huge amounts of weather data. "E-PLSM" is a cloud-based integrated IoT solution that we provide as an in-house service. Through this service, which incorporated IoT and AI technologies at an early stage, we collect and analyze vast amounts of data about power generation, demand forecasting, equipment information, and the like to permit forecasting of power generation outputs and predict potential equipment failure. This supports the efficient use of energy by power generation providers and general companies.
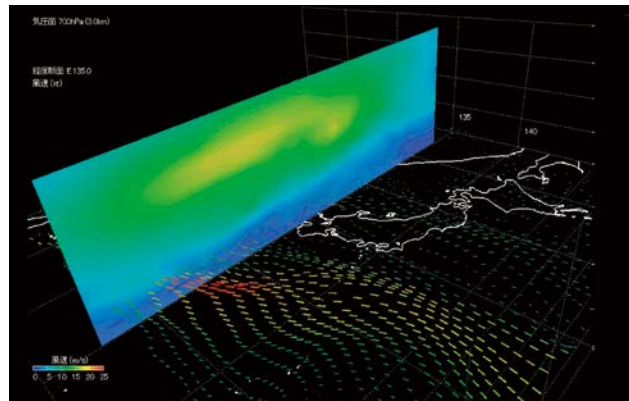
Analysis example of weather forecast (wind distribution) for forecasting output of wind power generation

In the NEDO Project, CTC is in charge of examining local forecasts of renewable energy and investigating overseas trends. Here, we deploy knowledge about data utilization technology, simulation technology, and system construction that we have cultivated to date, as well as our network, which allows us to collect information on advanced technologies at home and abroad. Utilizing the know-how we have refined together with our partners, we will contribute to both the stable supply of electric power and the proliferation of renewable energy in the future.

* Long-term project led by the New Energy and Industrial Technology Development Organization (NEDO) entitled "Next-Generation Power Network Stabilization Technology Development for Large-Scale Integration of Renewable Energies" (R&D Item 1-1: Development of control units that realize Japanese-style "connect & manage" grid)
Scheduled project duration: July 2020 to February 2024

■ How E-PLSM Works
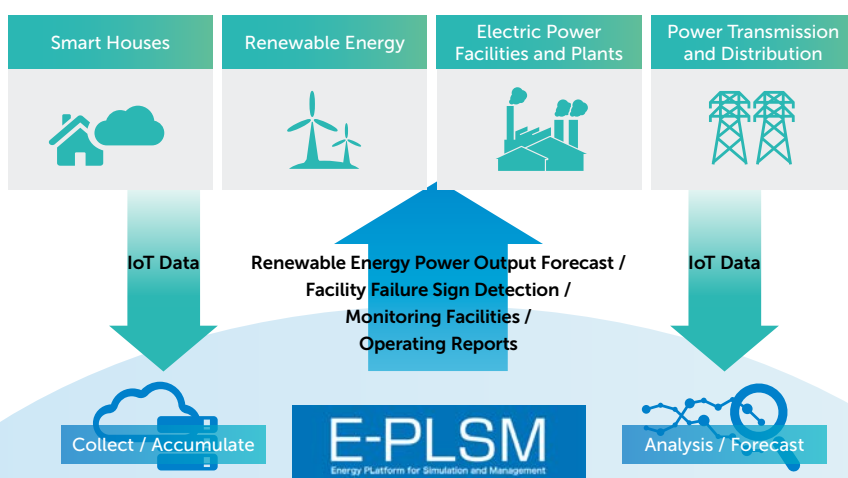
Cloud-based integrated IoT service that can collect, monitor, analyze, and predict various sensor data

CTC Technologies to Benefit Social Transformation Due to COVID-19

▶ Supporting Infection Control in Commercial Facilities and Public Institutions and Facilities through Social Distancing Simulations

Commercial, transportation, and public facilities are promoting measures to facilitate social distancing in order to prevent the spread of COVID-19. In July 2020, CTC launched a simulation service to support such measures.

This service reproduces the flow of people and usage status of various facilities and compares them with conventional operations to help identify congestion bottlenecks and consider solutions. Here, we draw on our knowledge in the simulation field, accumulated over 60 years, to continuously collect data in combination with AI video analysis solutions. This makes it possible to visualize changing congestion data and utilize it for long-term facility operation.
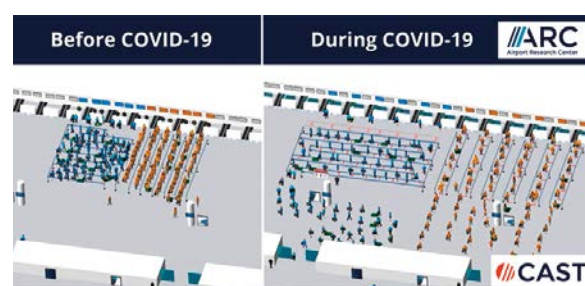
▶ "AI-Based Body Temperature Detection Device" Uses Facial Recognition to Permit Unmanned Entrance Control

Temperature measurements are becoming normal to screen people with suspected fever at places where unspecified numbers of people come and go, such as corporate reception areas and facility entrances. It is designed to help prevent the spread of COVID-19 and other infectious diseases associated with fever. CTC jointly developed a new AI-based body temperature detection device with Idein Inc. and launched it in May 2020.

It also has an AI-based face recognition function and can automatically recognize people's faces and measure their temperatures even when they are wearing masks. In addition, it can estimate[1] body temperature by comparing the facial surface temperature with that of the outside air. Since it uses a general-purpose temperature measurement device

(Raspberry Pi), it is compact and light and requires no large-scale installation work.

We are currently developing a cloud-based management system and in the future hope to enable remote monitoring using email and other notifications.
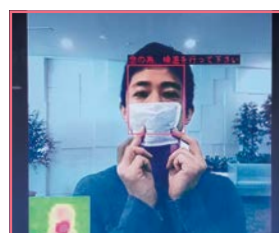
▶ Cloud VDI (Virtual Desktop) to Support Corporate Teleworking

Improving working environments is an urgent priority for companies rushing to introduce teleworking and diversify their work styles. With this in mind, in February 2020 CTC launched "Citrix Cloud for Windows Virtual Desktop," which links "Windows Virtual Desktop[2]" with "Citrix Cloud[3]."

This service allows users to easily access Windows 10 and Office 365 in a virtual environment. Moreover, if they have comprehensive licenses for Microsoft 365 or Windows, there is no additional cost, so they can enjoy benefits in

terms of both management and cost. Security policies can also be set and monitored intuitively, and the network can maintain high perceived speeds thanks to a bandwidth-independent communication protocol.

CTC updated its VDI environment, which has around 10,000 users, to accommodate this service before its launch. We aim to support corporate teleworking in the future by using know-how gained through the large-scale launch of this service.

*1 Not available for medical examinations because it is not recognized under the Pharmaceuticals and Medical Device Act
*2 Virtual desktop environment of the "Microsoft Azure" cloud computing platform provided by Microsoft Corporation
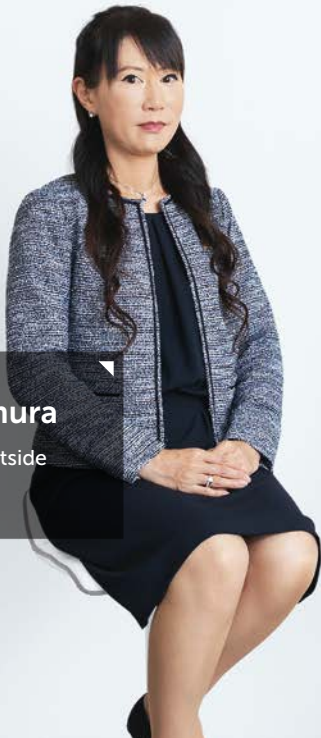*3 Cloud service platform of Citrix Systems, Inc.

Supporting Sustainable Growth

Corporate Governance

Interview with Our Outside Directors

Challenging Times for the CTC Group's Mission

Aya Motomura

Independent Outside Director

Naoko Iwasaki

Independent Outside Director

We asked our two outside directors, both of whom were appointed in fiscal 2019, about their evaluations of CTC's governance and any related issues, as well as important perspectives that CTC should adopt to achieve sustainable improvements in corporate value.

One Year since Taking Office

One year has passed since you became outside directors of CTC. First of all, could you tell us about your activities, your overall impression of CTC, and your evaluation of the Board of Directors?

Iwasaki:

In my first year since taking office, I took the opportunity to get involved in a number of ways and thus deepen my understanding of CTC's operations. In addition to attending meetings of the Board of Directors and other bodies, for example, I visited the Company's business sites and attended seminars for female manager candidates.

At the CTC Forum for business partners held in the fall of 2019, I was able to witness directly how CTC engages in meaningful and proactive communication with business partners on a regular basis. I was also able to confirm the progress of collaboration between different industries at DEJIMA, a dedicated space that CTC established to realize open innovation with customers and startup companies.

Naoko Iwasaki — Independent Outside Director

April 2017	Professor, Institute of e-Government, Waseda University (current position)
	President, International Academy of CIO Japan (current position)
	Member of Ageing Research Institute for Society and Education (ARISE) Advisory Board, Nanyang Technological University, Singapore (current position)
April 2018	Visiting Research Fellow, Peking University (current position)
September 2018	Member of "Committee on Standardization of Business Processes/Systems and Utilization of AI/Robotics in Local Governments," Ministry of Internal Affairs and Communications (current position)
January 2019	Project Overseer, APEC project on Smart Silver Innovation (current position)
June 2019	Director, ITOCHU Techno-Solutions Corporation (current position)
	Director, Kyowa Exeo Corporation (current position)
September 2019	Member, Administrative Evaluation Bureau, Ministry of Internal Affairs and Communications (current position)

Motomura:

In the past year, I drew on my work experience at Japan's Financial Services Agency and my close acquaintance with corporate governance and shareholder perspectives to fulfill my duties at CTC. Specifically, I endeavored to gain a correct understanding of CTC's management policies, strategies, and issues. I also sought to monitor business execution by making proactive remarks from the perspective of shareholders. In addition, I was able to see CTC's mission being put into practice on the front lines—during site visits, events, and interaction with employees. These experiences were very beneficial to me. Since last year, the proportion of independent officers and women on the Board of Directors has increased. The board now has members with different careers and specialties, but they share common values with respect to pursuing the growth of CTC. Based on these values, I feel that we have built healthy relationships of both respect and trust.

Iwasaki:

The Board of Directors has fostered a very strong sense of teamwork. We engage in lively exchanges of opinions on proposals and reports, and we search for solutions by sharing a cross-section of opinions about proposals involving issues that need to be resolved. I also think that the desire to share significant amounts of information is reflected in the management of the Board of Directors. We receive proper explanations of proposals in advance, and when we are unable to receive answers to our questions on the spot, we obtain detailed answers at the next board meeting. I have gained the impression that all parties concerned place great emphasis on sharing information.

Motomura:

I have the same impression. I think it is largely a reflection of the procedural skills of Satoshi Kikuchi, our former president, but I also appreciate the open and very democratic nature of our discussions and information-sharing. I feel that board members are willing to listen and respond to the opinions of independent officers. In the course of evaluating the effectiveness of the Board of Directors, for example, we made recommendations about the Company's advisory committees, which are chaired by executive directors, with independent outside officers not in the majority. As a result of these recommendations, decisions were made to appoint an independent outside officer as chairperson of the Governance Committee and to ensure that independent outside officers account for the majority of each committee, when our system is updated in fiscal 2020. I give high marks to this approach of grasping issues and making continuous improvements.

Iwasaki:

The purpose of evaluating the effectiveness of the Board of Directors is to improve the board's functions. Rather than simply making evaluations, therefore, I think we need to continuously monitor the progress of measures to address issues that are identified, so that we can build a track record of such evaluations and improvements.

Motomura:

Soon we will commence discussions aimed at formulating our new medium-term management plan. To this end, I anticipate an increase in debate about corporate management frameworks, including business policies and strategies, at our board meetings.

Supporting Sustainable Growth

Corporate Governance

Aya Motomura Independent Outside Director

October 2002	Registered as an attorney (Dai-Ichi Tokyo Bar Association) Joined Nagashima Ohno & Tsunematsu
September 2008	Worked for Cleary Gottlieb Steen & Hamilton LLP (New York Office)
February 2009	Registered as a member of New York State Bar Association
July 2009	Worked for Financial Markets Division, Planning and Coordination Bureau, Financial Services Agency
October 2013	Partner, Inaba & Partners (current position)
December 2013	Member of Screening Committee for Seismic-Resistant/ Environmentally Friendly Real Estate Development Promotion Project, Real Estate Sustainability & Energy-Efficiency Diffusion (RE-SEED) (current position)
March 2014	Outside Member of Compliance Committee, AEON Reit Management Co., Ltd. (current position)
June 2019	Director, ITOCHU Techno-Solutions Corporation (current position)
August 2019	Executive Officer, Heiwa Real Estate REIT, Inc. (current position)

Targeting Sustainable Growth

You have talked about issues related to governance. What other areas is CTC focusing on to achieve sustainable growth in the future?

Motomura:
The pace of globalization and competition is increasing and the market environment and value perceptions are changing. Against this backdrop, the Company has shown enthusiasm for employee diversity and human resource development as key management strategies, and I evaluate this highly. We are not only upgrading our systems but also making good progress in awareness-raising activities aimed at promoting the advancement of women and respecting diversity. The ability to utilize diverse human resources is also a driving force for corporate growth. I also look forward to the day, hopefully soon, when female executive officers are appointed.

Iwasaki:
In fiscal 2019, I had the opportunity to attend an in-house seminar for female manager candidates. Many participants asked assertive questions, which gave me the impression that we are making good progress in human resource development. I understand that CTC was designated as a Semi-Nadeshiko Brand for its efforts to encourage women's success in the workplace. This is a social testament to our institutional achievements, including active utilization of women, employment seminars by female managers, and our mentoring system, as well as the expansion of our child-care leave system. I also hear that CTC has been holding seminars related to LGBT issues from an early stage. This effort is helping to change attitudes within the Company, which I appreciate. My understanding is that our global

strategy will play a central role in our quest to achieve sustainable growth. As communication with overseas bases and business partners becomes more and more important, we will need to strengthen global governance. We will also need to increase the number of female managers as a global company.

Motomura:
From the perspective of sustainable growth, it is also important to ensure an appropriate balance between independence and collaboration in the relationship with our parent company, ITOCHU Corporation. CTC has a diversity of business domains and customers, and the ratio of transactions with the parent company is not really so high. For transactions and proposals involving the ITOCHU Group, however, we make sure to carefully monitor the validity and the presence/absence of conflicts of interest at Board of Directors' meetings.

On the other hand, it is also important to improve corporate value by building win-win relationships with our parent company. In the past year, I have often felt that we gain powerful synergies when we share business resources and collaborate with the ITOCHU Group. I will strive to help improve the corporate value of CTC, so that we can generate synergies by building appropriate cooperative relationships with our parent company while maintaining our independence.

Fiscal 2020 has heralded the start of a new administration at CTC, with the former president, Satoshi Kikuchi, appointed chairman and Ichiro Tsuge appointed our new president. When selecting the new president, our Nomination Committee discussed the qualities and abilities required of leaders and concluded that Mr. Tsuge's background and achievements are satisfactory. I anticipate that President Tsuge will demonstrate strong leadership in regard to the further growth of CTC, with the support of Chairman Kikuchi.

A Dramatically Changing Society

What are your expectations for CTC in the future? What role do you want to play as outside director?

Iwasaki:
Entering fiscal 2020, we are confronted with the COVID-19 pandemic, which is a global challenge. As we approach the "new normal" era, people's lifestyles and business styles will need to change. Deploying our digital transformation (DX) capabilities, I am confident that we can use this challenge as a stepping stone to create new innovations, and that we can deliver renewed growth and thus improve ESG and achieve the SDGs. I also rate CTC highly for its swift responses to risks. To address the spread of COVID-19, we established a Crisis Management Headquarters at an early stage and have also been formulating a business continuity plan. As we face an increasingly uncertain future, I want CTC to continue honing its capabilities with respect to entrenching risk management, strengthening governance, and ensuring accountability to stakeholders. My specialty is in ICT management strategy and fostering CIOs and ICT professionals. As an outside director, I hope to offer advice and suggestions with respect to deploying our knowledge in AI, the IoT, and other advanced technological fields in Japan and abroad while taking overseas trends into account.

Motomura:
I have been involved with many companies as a corporate attorney, and I feel that CTC has particularly strong growth and future potential. It has the powers needed in the DX and 5G era and the flexibility to address changes in society, as well as the willpower to implement both offensive and defensive measures and forge ahead with a sense of speed.

In fiscal 2019, we established the ITOCHU Techno-Solutions Future Foundation to spearhead development of next-generation human resources. I am proud of this achievement and also proud of CTC HINARI Corporation for its passionate efforts to hire people with disabilities. One of CTC's strengths is its ability to solve social issues and help achieve the SDGs through its core ICT businesses. I hope that we can build on these initiatives, both quantitatively and qualitatively, to deliver further improvements in corporate value.

Due to the impact of COVID-19, challenges are emerging that companies have never faced before, and I am confident that CTC will play an increasingly important role in this context. These are challenging times that will test CTC's mission. Going forward, CTC will continue to fully utilize its strengths and explore ways to benefit society. As an outside director, I plan to make appropriate recommendations to support "offensive" initiatives that lead to sustainable growth while playing my most important role, which is to monitor management from the perspective of minority shareholders.

Supporting Sustainable Growth   Corporate Governance

Efforts to Strengthen Corporate Governance

▶ **CTC's New Initiatives Related to Governance** (Fiscal 2015–2020)

Fiscal 2015

- ▶ Establishment of the Nomination Committee, Remuneration Committee, and Governance Committee as advisory committees for the Board of Directors
- ▶ Commencement of evaluation of the effectiveness of the Board of Directors
- ▶ Establishment of a liaison meeting between Audit & Supervisory Board Members and non-executive directors
- ▶ Establishment of an information-sharing meeting for nonexecutive directors
- ▶ Provision of opportunities for outside directors to take part in training (external seminars)

Fiscal 2016

- ▶ Invited outside speakers and conducted ESG study sessions for directors

Fiscal 2017

- ▶ Introduction of a performance linked stock-based remuneration plan
- ▶ Invited outside speakers and conducted SDGs training sessions for directors

Fiscal 2018

- ▶ Invited outside speakers and conducted compliance training sessions for directors

Fiscal 2019

- ▶ **Renewal of the Governance System**
- ▶ We increased the ratio of independent outside directors in the Board of Directors to more than one-third (the two independent outside directors are both women).
- ▶ More than half of the Audit & Supervisory Board members are outside corporate auditors.

Fiscal 2020

- ▶ **Discretionary Committee System Changes**
- • Among our three discretionary committees (Nomination Committee, Remuneration Committee, and Governance Committee), we replaced the chairperson of the Governance Committee with an independent officer.
- • We changed the composition of the committees, with independent officers now accounting for more than half of all three discretionary committees.

▶ **Renewal of the Governance System**

At the 40th Annual General Meeting of Shareholders, held on June 19, 2019, it was decided to reform the Company's governance system so that one-third of the Company's directors would be independent outside directors and half of the Company's Audit & Supervisory Board Members would be independent outside Audit & Supervisory Board Members.

To ensure that the Board of Directors contributes to the continued medium- to long-term growth of corporate value, we believe the Board of Directors must have an appropriate balance of knowledge, experience, and abilities as well as a balance in terms of genders and high-level specializations, including persons with relevant knowledge and experience, attorneys, and certified public accountants.

With the reform of the Company's governance system, the number of directors was reduced from nine to six, two of whom meet the requirements for independent officers established by the Tokyo Stock Exchange. Both independent outside directors are women; one is a university professor and the other is an attorney. While none of the directors are citizens of a country other than Japan, some of them have resided abroad, worked with overseas vendors, or have extensive overseas business experience and have an international perspective. We therefore believe the Company's governance system is sufficiently diverse.

Two of the four Audit & Supervisory Board members are independent officers.
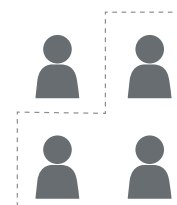
▶ **Composition of the Board of Directors and Audit & Supervisory Board (Fiscal 2020)**

■ Board of Directors
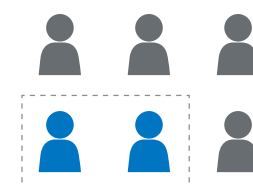
Two outside directors (independent officers)

■ Audit & Supervisory Board

Three outside Audit & Supervisory Board members (Two of whom are independent officers)

Male   Female

Overview of the Corporate Governance System

## ▶ Basic Stance on Corporate Governance

Guided by the slogan "Challenging Tomorrow's Changes" and the CTC Group Philosophy, which sets out our mission of "leveraging IT's potential to change future for the Global Good," we are working to reinforce corporate governance in order to enhance management transparency and fairness as part of our efforts to maximize the Group's corporate value.

■ Overview of the Corporate Governance System

Organization type	Company with corporate Audit & Supervisory Board Members (Audit & Supervisory Board)
Chairman of the Board of Directors	President & CEO
Number of directors (of which, outside directors)	6 (2)
Number of Audit & Supervisory Board Members (of which, outside Audit & Supervisory Board Members)	4 (3)
Executive officer system	Adopted
Existence of discretionary advisory bodies to the Board of Directors	Yes (Nomination Committee, Remuneration Committee, Governance Committee)

▶ Corporate Governance System
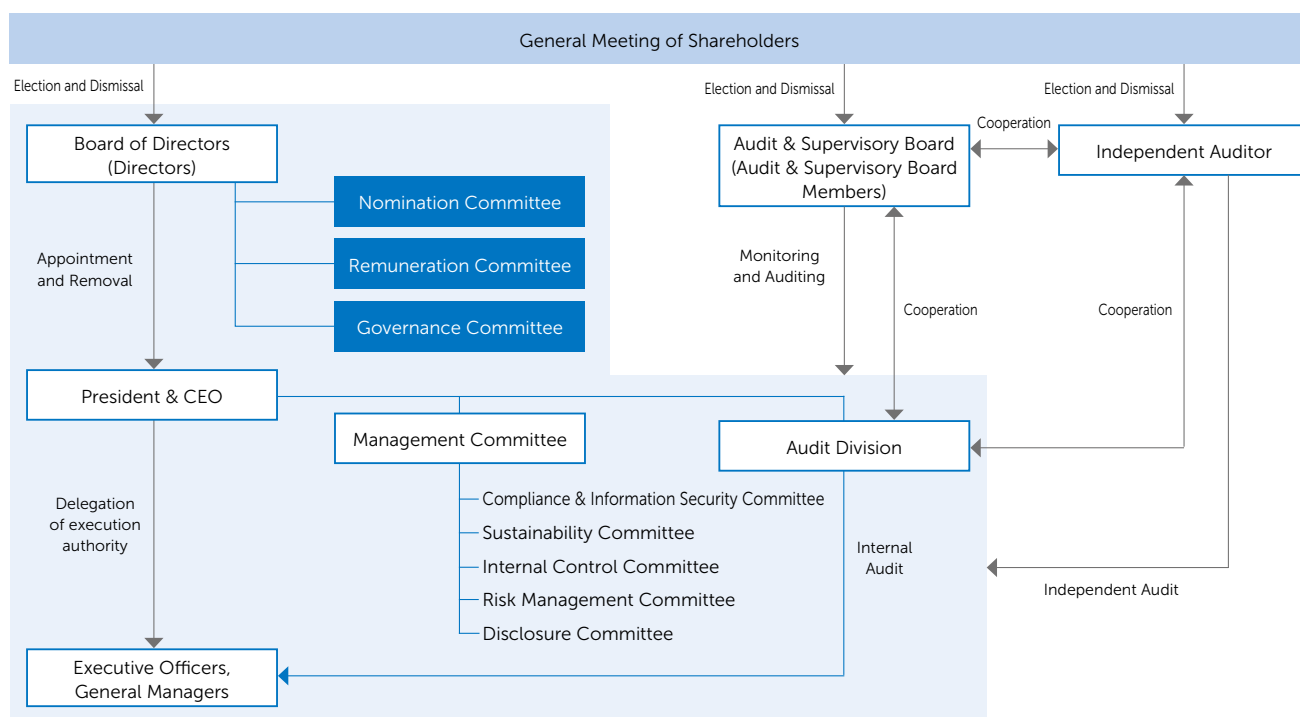
▶ Reasons for Selecting the Current Corporate Governance System

As a Company with Audit & Supervisory Board Members (Audit & Supervisory Board), through the monitoring of management by Audit & Supervisory Board Members, including outside Audit & Supervisory Board Members, CTC ensures that it has strong monitoring and auditing functions and transparency in its decision-making processes. In addition to establishing a corporate governance system based on the monitoring of management by Audit & Supervisory Board Members, the Company appoints outside directors who are independent from the parent company and major trading partners and regarding whom there is no concern that their interests will be in conflict with general shareholders, and ensures the appropriate decision-making by the Board of Directors and realization of the management monitoring function. We have determined that our corporate governance system, based on a Board of Directors that includes outside directors and Audit & Supervisory Board that includes outside Audit & Supervisory Board Members, is functioning effectively.

Supporting Sustainable Growth | Corporate Governance

▶ Outside Director and Audit & Supervisory Board Member Nominations

When appointing outside directors, we select from candidates with exceptional personality traits, such as high ethical and fairness standards, as well as a high degree of specialization. The candidates are expected to speak at meetings of the Board of Directors from their respective professional standpoints. When appointing outside Audit & Supervisory Board members, we select from candidates with a high degree of expertise and the ability to appropriately audit the execution of duties by directors. The candidates are expected to speak at meetings of the Board of Directors and Audit & Supervisory Board from their respective professional standpoints. In these ways, we ensure the soundness and transparency of management.

The Board of Directors makes decisions on appointments following deliberations by the Nomination Committee that take into account selection criteria, number of board members, and diversity in terms of gender, nationality, and the like. Of the five outside directors and Audit & Supervisory Board Members, four are independent and not affiliated with CTC, our parent company, or any of our major suppliers, and have no inherent conflicts of interest with regular shareholders.

▶ Skill Matrix of Outside Directors and Outside Audit & Supervisory Board Members

Name	Position	Age*	Gender	Term of office (years)	Independent officer	Skills / experience				
						Corporate management	Finance / accounting	Legal affairs and risk management	Global	Industry knowledge
Outside Directors										
▶ Naoko Iwasaki	Director	45	Female	1	●				○	○
▶ Aya Motomura	Director	41	Female	1	●	○	○			
Outside Audit & Supervisory Board Members										
▶ Yasuyuki Harada	Audit & Supervisory Board Member	61	Male	1		○			○	
▶ Toshiaki Tada	Audit & Supervisory Board Member	52	Male	8	●			○		
▶ Katsuhiko Hara	Audit & Supervisory Board Member	65	Male	1	●	○			○	

* As of August 31, 2020

Male   Female

▶ Members of Discretionary Committees for Fiscal 2020

Name	Position	Independent officer	Nomination Committee	Remuneration Committee	Governance Committee
Satoshi Kikuchi	Chairman				
Ichiro Tsuge	President & CEO		◎		
Tadataka Okubo	Director & Senior Managing Executive Officer Assistant to the President (Special appointment for Advanced IT Strategy) CTO			◎	○
Naoko Iwasaki	Outside Director	●	○	○	○
Aya Motomura	Outside Director	●	○	○	○
Hiroshi Kajiwara	Director		○	○	○
Hiroshi Takada	Audit & Supervisory Board Member				
Yasuyuki Harada	Outside Audit & Supervisory Board Member				
Toshiaki Tada	Outside Audit & Supervisory Board Member	●	○	□	◎
Katsuhiko Hara	Outside Audit & Supervisory Board Member	●	□	○	□

◎ Chair   ○ Member   □ Observer

Other Special Circumstances That May Have a Material Impact on Corporate Governance (Relationship with Parent Company)

CTC is a consolidated subsidiary of its parent company ITOCHU Corporation, which holds 58.24% of CTC's voting rights. CTC aims to increase Groupwide corporate value by leveraging its strengths and the strengths of its parent company in the information industry.

With the aim of sharing management information and know-how, an employee of the parent company serves in the post of director of CTC. However, while the director works to promote personnel exchanges between CTC and its parent company and strengthen collaboration in management activities such as making use of management information, the director's independence has been retained by aiming to expand operating results while maintaining and enhancing independence and autonomy in business operation.

When conducting business transactions with ITOCHU Corporation, CTC establishes transaction conditions fairly and appropriately based on reasonable judgment, just as it does when conducting business transactions with companies with which it has no capital ties, and takes appropriate measures to ensure that the interests of minority shareholders are not harmed.

■ Ratio of Sales from Members of the ITOCHU Group

From ITOCHU Corporation Approx. 2%

Fiscal 2019

Approx. **9**%
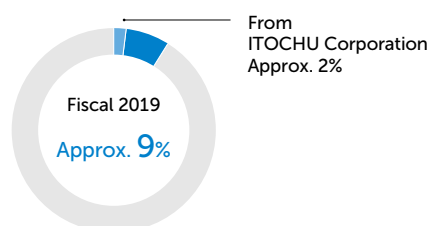
Strategic Shareholdings

CTC does not hold any shares purely for investment purposes. Investment securities held for purposes other than purely investment purposes fall into two categories: those held for general investment purposes and those held for investment in open innovation. Shareholdings that fall into these two categories are held for strategic reasons such as investment for the purposes of encouraging smooth transactions with partners, maintenance, expansion, or securing of system engineer (SE) resources, or the launching of new businesses.

Regardless of whether or not shareholdings are held for strategic purposes, the Company conducts an annual survey of the operations of all the companies in which it owns stock, and the Board of Directors determines whether it is appropriate to maintain these holdings based on the qualitative and quantitative investment criteria set forth in the Company's investment management regulations. In principle, the Company will reduce such holdings if they are found to conform to predetermined exit criteria.

Regarding the exercise of voting rights conferred associated with the Company's shareholdings, rather than basing our decisions on uniform criteria, we will give careful consideration to the management plans and strategies of the companies in question and make decisions based on whether we believe actions will contribute to growth in corporate value over the medium to long term.

Investment Criteria

Quantitative Criteria   Return on investment ≧ Expected rate of return

Qualitative Criteria

· Investment in customers (end-users, etc.)
Securing of business merits other than trade merits such as development of new businesses, securing of business know-how, etc.

· Investment in development / technology partners
Securing of business merits such as prioritized access to SE resources or securing of leading-edge technological know-how

· Investment in suppliers
Building of strategic relationships that yield business merits such as preferential terms of trade, prioritized access to new technologies, or development of new businesses

· Investment in startup companies
Has sufficient financing to remain a going concern for at least one year

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Exit Criteria

1. Investment goals have been achieved
2. Trade merits as defined by our quantitative criteria or business merits as defined by our qualitative criteria are no longer present
3. For other reasons, the supervising department has determined that it is appropriate for the Company to exit (divest) from the investment

Measures to Improve Effectiveness

▶ Analysis and Evaluation of the Effectiveness of the Board of Directors

Since fiscal 2015, CTC has been conducting a survey of directors and Audit & Supervisory Board Members to analyze and evaluate the effectiveness of the Board of Directors.

In order to elicit candid opinions, all directors and Audit & Supervisory Board Members conduct self-assessments, and the results of the assessments are submitted to the Governance Committee for deliberation.

Based on such analysis and evaluation, we intend to use this process to encourage the board to take a longer-term and more strategic perspective in discussions.

Main Survey Items in the Evaluation of the Board of Directors	Main Opinions in the Evaluation of the Board of Directors in Fiscal 2019
· Participation in management strategy decisions · Monitoring of management strategy · Appropriateness of the contents of the distributed materials and the number of proposals · Matters concerning the operation of the Board of Directors such as the deliberation of proposals · The number of directors, diversity, and matters concerning the constitution of the Board of Directors based on consistency with the business strategy · Monitoring of execution of duties by directors · Status of deliberation at discretionary committees and matters concerning the constitution of each committee	· The operation of the Board of Directors and discussions thereby are appropriate in general · The monitoring of the execution of the duties of directors is appropriate · The balance of non-executive directors and executive directors is appropriate in carrying out effective discussions · Progress was made in terms of information sharing regarding the Company's medium- and long-term strategy with non-executive directors · Discretionary committees have established an environment where outside directors and Audit & Supervisory Board Members can express their opinions · With respect to composition of discretionary committees, there is a need to consider increasing the number of appointments of independent officers (including committee chairpersonships), in order to improve objectivity, fairness, and transparency, as well as to stimulate discussions · Matters discussed at the committees are appropriately reflected in the deliberation of proposals at Board of Directors' meetings

▶ Follow-Up System for Outside Directors

In order to ensure that directors and Audit & Supervisory Board Members can fully perform their management supervision and auditing functions, CTC has set up an information-sharing meeting for non-executive directors and a liaison meeting between Audit & Supervisory Board Members and non-executive directors. In addition to distributing materials and providing explanations as necessary before board meetings, we share a recognition of the importance of major items discussed at Management Committee meetings and share information based on requests from outside officers. In these ways, we aim to enhance the discussions at the Board of Directors' meetings while ensuring collaboration between Audit & Supervisory Board Members and non-executive directors. Furthermore, to facilitate outside directors in fulfilling their functions sufficiently, we invite outside lecturers to provide training and other opportunities.

■ Site Visit by Outside Directors

Outside directors regularly visit CTC's worksites to deepen their understanding of the Company's corporate activities. In fiscal 2019, they attended study sessions at our DEJIMA open innovation space and CTC Forum seminars for business partners. They also visited HINARI Corporation. (currently CTC HINARI Corporation), a special subsidiary. This gave outside directors an opportunity to interact with employees with disabilities, who work and contribute to the local community through agriculture, and also to ask positive questions and offer remarks. We will continue providing such opportunities in the future.

Outside directors visited the Hamamatsu office of CTC HINARI and a partner farmer

Main Activities in Fiscal 2019

▶ Number of Meetings of Major Organizational Bodies Held and Attendance of Outside Directors and Audit & Supervisory Board Members

Number of Board of Directors' meetings held	18
Number of Audit & Supervisory Board meetings held	16

Attendance of outside directors at Board of Directors' meetings	100%
Attendance of outside Audit & Supervisory Board Members at Board of Directors' meetings	100%
Attendance of outside Audit & Supervisory Board Members at Audit & Supervisory Board meetings	100%

Main Comments by Outside Directors at the Board of Directors' Meetings

Proposal of Fiscal 2019 Investment Review
· I want to confirm if the exit criteria are set with the content general in global companies.
· I want to confirm whether the Company decides to continue holding overseas operating companies taking such factors into account as expanding global business in the future and utilizing our bases in Asia strategically.

Proposal Regarding Approval on Investment in a Company
· I want to confirm how the Company expects to react in the case when this investment conflicts with the exit policy or criteria.

▶ Number of Meetings Held by Each Committee in Fiscal 2019

Nomination Committee
3 meetings
(attendance: 100%)

Agenda Items

Deliberation on election / dismissal agenda of candidates for executive officers, directors, and Audit & Supervisory Board Members
1. Deliberation of proposals for selection and dismissal of candidates for executive officers, directors, and Audit & Supervisory Board Members (mainly selection criteria and process verification)
2. Deliberation of proposals regarding selection and dismissal of directors and executive officers
3. Deliberation of the following governance-related matters
   (1) Examination of the successor plan
   (2) Policy for nominating executive officers and candidates for directors and Audit & Supervisory Board Members

Remuneration Committee
1 meeting
(attendance: 100%)

Agenda Item

Deliberation on design and review of the remuneration system for executive officers and directors (individual remuneration decided by the president based on the remuneration system)

Governance Committee
3 meetings
(attendance: 100%)

Agenda Items

Deliberation on the governance-related agenda below:
1. Stance on composition of the Board of Directors
2. Evaluation of effectiveness of the Board of Directors
3. Response to Japan's Corporate Governance Code

Supporting Sustainable Growth | Corporate Governance

Director Remuneration

▶ Director Remuneration and Calculation Method

Director remuneration is paid according to the Director Remuneration System, which was established in consideration of the opinions from the Remuneration Committee. CTC decides basic remuneration and bonuses of no more than ¥640 million per year for directors and ¥100 million per year for Audit & Supervisory Board Members. The Company also has a trust for providing performance-linked stock-based remuneration totaling no more than ¥180 million over three target fiscal years. Remuneration comprises standard remuneration, which is fixed payments, bonuses, which are performance-linked cash compensation, and performance-linked stock-based remuneration* (paid upon retirement).

The amount of Audit & Supervisory Board Member remuneration is determined for each Audit & Supervisory Board Member based on a discussion among Audit & Supervisory Board Members. Audit & Supervisory Board Members and part-time directors, including outside directors, are not paid performance-based bonuses.

* Performance-linked stock-based remuneration plan: CTC introduced the plan for its directors and executive officers (excluding part-time directors, outside directors, and domestic non-residents) in June 2017. The plan replaces part of the amount calculated by the formula of the previous "performance-linked bonus" with stock, and is aimed at raising awareness of contributing to the improvement of medium-to long-term operating results and corporate value by further clarifying the link between directors' remuneration and CTC's operating results and equity value, as well as by directors sharing not only the advantages of rises in the share price with shareholders but also the risk of drops in the share price.

Medium- to long-term incentive	Short-term incentive	Standard Remuneration (Fixed Payments)
Performance-Linked Stock-Based Remuneration	Performance-Linked Cash Remuneration (Bonus)	

Calculation Method of Performance-Linked Stock-Based Remuneration and Performance-Linked Cash Remuneration (Bonus)
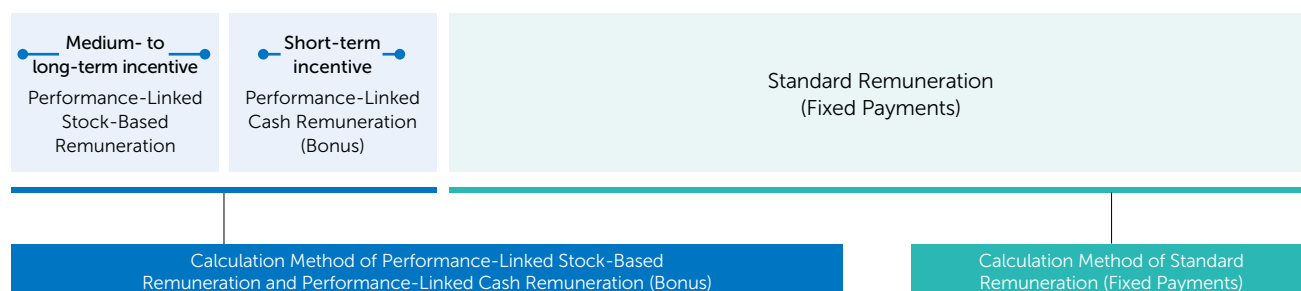
Total remuneration:
· Target achievement rate for the relevant fiscal year for net profit attributable to CTC's shareholders
· Year-on-year growth rate
· Total remuneration is calculated based on the predetermined ratio of the total fund amount of performance-linked remuneration and determined by the Board of Directors.

(¥ million)

Performance Indicator Used	Fiscal 2019 Target	Fiscal 2019 Results
Net profit attributable to CTC's shareholders	27,000	28,451

Calculation Method of Standard Remuneration (Fixed Payments)

Calculated by using the predetermined standard remuneration table for each position based on consideration of executive and non-executive work, responsibilities, and individual evaluation. The total amount to be paid is decided by the Board of Directors and the President & CEO determines the amount to be paid to each individual.

Individual Remuneration:
Total remuneration is apportioned to directors, etc., based on performance evaluations for duties performed individually during the relevant fiscal year and is the total of performance-linked individual bonuses and performance-linked stock-based remuneration. Individual performance-linked bonuses and performance-linked stock-based remuneration amounts are determined by multiplying this total by the proportional division ratio.

Position	Bonus	Performance-Linked Stock-Based Remuneration
President & CEO	70%	30%
Executive Vice President	80%	20%
Senior Managing Executive Officer / Managing Executive Officer	85%	15%

■ Total Remuneration, Etc., of Each Director or Auditor Segment (Fiscal 2019)

Directors: 7 people (excluding outside directors)	Audit & Supervisory Board Members: 1 person (excluding outside Audit & Supervisory Board Members)	Outside Directors and Audit & Supervisory Board Members: 8 people
Basic remuneration: ¥160 million Bonus: ¥83 million Stock-based remuneration: ¥37 million (Performance-linked: approx. 40%)	Basic remuneration: ¥25 million	Basic remuneration: ¥60 million

Communication with Stakeholders

▶ Institutional Investors and Analysts

In addition to investor relations (IR) presentations for institutional investors and analysts held at the time of announcement of our operating results, we hold small meetings and individual meetings to provide opportunities for constructive dialogue with our top management. In fiscal 2019, we also held technical study sessions on the subjects of DX and the 5G business.

Small meetings

Number of Meetings with Institutional Investors and Analysts	223
▶ Number of top management meetings	30

Major Events	▶ Number of IR presentations	4
	▶ Number of small meetings	2
	▶ Number of 1 on 1 meetings with domestic institutional investors	1
	▶ Technical study sessions	2
	▶ Number of overseas IR events	4

▶ Individual Investors

Since fiscal 2015, CTC has conducted IR activities targeting individual investors. In addition to holding briefings for individual investors around the country, we also provide information for individual investors on the CTC Power section of our website.

We will continue to communicate CTC's strengths to the market.

▶ For more information, please visit the CTC Power section of our website.
🖥 http://ctcir.ctc-g.co.jp/rose/personal/index.htm (in Japanese only)

Number of Presentations for Individual Investors and Participants

Fiscal 2018

13 / approx. **2,500**

Fiscal 2019

10 / approx. **2,000**

Note: Two events were canceled due to the COVID-19 crisis.

Presentations for individual investors

▶ General Meeting of Shareholders

Date of the General Meeting of Shareholders on Thursday, June 18, 2020

Number of shareholders who attended 44

(Ratio of voting rights exercised: 89.8%)

Note: To prevent the spread of COVID-19, we asked shareholders to refrain from attending the General Meeting of Shareholders as much as possible. As a result, attendance at the 2020 meeting was lower than in normal years.

▶ Please visit our website for more detailed IR information.
🖥 http://ctcir.ctc-g.co.jp/rose/en/index.htm

Directors and Audit & Supervisory Board Members

As of June 18, 2020

Satoshi Kikuchi

Chairman

Ichiro Tsuge

President & CEO

Tadataka Okubo

Director & Senior Managing Executive Officer
Assistant to the President (Special appointment
for Advanced IT Strategy)
CTO

Naoko Iwasaki

Director[1]

Aya Motomura

Director[1]

Hiroshi Kajiwara

Director

Hiroshi Takada

Audit & Supervisory Board Member

Yasuyuki Harada

Audit & Supervisory Board Member*²

Toshiaki Tada

Audit & Supervisory Board Member*²

Katsuhiko Hara

Audit & Supervisory Board Member*²

*1 Outside director as defined in Article 2, Item 15 of the Companies Act
*2 Outside Audit & Supervisory Board Member as defined in Article 2, Item 16 of the Companies Act

Outside directors Naoko Iwasaki and Aya Motomura and outside Audit & Supervisory Board Members Toshiaki Tada and Katsuhiko Hara are independent from CTC, our parent company, and major suppliers. As independent officers, they have no inherent conflicts of interest with regular shareholders.

Supporting Sustainable Growth

Risk Management

▶ Risk Management System

In addition to individual risk management functions, we have established the Risk Management Committee to take an overall approach to risks that should be managed on a Groupwide basis. In addition to comprehensively considering and identifying risks that should be managed on a Companywide level, this committee establishes management systems and rules, assesses effectiveness (conducts monitoring), and recommends corrective measures. We are building a risk management structure capable of responding to future changes in the operating environment and unforeseen circumstances.

Risk	Summary of Risk That Could Negatively Impact Earnings	Risk Mitigation Measures
1 Risks Concerning Changes in the Business Environment	• Risk of fluctuation in operating results due to changes in the business environment such as domestic and overseas economic conditions, information system investment trends among clients, and changes in various laws and regulations, tax systems, and accounting standards • Risk of intensification of price competition due to new entrants and competition with other companies	▶ Identify advanced products and services; optimize organizational structure in order to provide high-value-added solutions
2 Information Security Risk	• Risk of leak, alteration, or loss of information or suspension of services caused by unauthorized access stemming from cyberattack, a computer virus, or human error, leading to claims for damage or loss of confidence	▶ Giving top priority to proper information management, we are implementing the following measures: • Building a robust information management system • Acquiring various certifications • Strengthening control of the entire Group, including domestic and overseas operating companies
3 Compliance Risk	• Risk of a decline in the Group's social credibility or deterioration of the Group's earnings due to a serious breach of compliance or a violation of laws or regulations in conducting business	▶ Positioning compliance as an important management priority, we are implementing the following measures: • Building a robust compliance system • Conducting education and training related to compliance • Operating, maintaining, and improving our whistleblowing system ▶ 📖 P85
4 Human Resources Risk	• Risk of personnel departures or a decline in productivity due to failure to secure personnel with high technical skills and expertise as planned, loss of growth opportunities, or a deterioration of the labor environment, affecting the Group's earnings and business development	▶ "With "Challenge and growth" as our personnel strategy policy, we engage in human resource management with the aims of improving employee motivation, encouraging self-growth, and further fostering a culture of human resource development. We are implementing the following measures: • Developing highly specialized engineers, global personnel, and other human resources • Establishing a system giving employees a sense of self-growth and allowing them to realize their full potential • Promoting diversity and inclusion • Promoting work-style reforms
5 Project Management Risk	• Risk of additional costs that exceed plans being required due to failure to secure the intended quality or to complete the project within the development time frame amid heightened complexity and sophistication as well as faster delivery of development projects	▶ In addition to establishing and supporting the project management organizations of each business group, we set up a third-party project management office as a company-wide organization to implement the following support measures: • Making preliminary examinations before submitting quotes • Monitoring and evaluating project status • Providing individualized support according to project status (quality evaluations, etc.)
6 System Failure Risk	• Risk of a serious failure in the operation service business caused by equipment failure, disasters, or operational errors, leading to a drop in confidence or payment of claims for damages from clients (given that IT systems play an important role in social infrastructure)	▶ We are implementing the following measures: • Regular operational risk inspections • Stepping up IT system monitoring • Investigating and responding quickly to product defect information; conducting preventive replacement of equipment • Acting to improve work quality (zero human error activities, rigorous pre-work risk prediction meetings, etc.)

Risk	Summary of Risk That Could Negatively Impact Earnings	Risk Mitigation Measures
7 Investment Risk	• Risk of a drop in recoverability, loss of part or entire investment, or need for additional funding due to failure to achieve the expected results of investments such as in new business startups, investments in or acquisitions of companies in Japan and elsewhere, and data centers and cloud services, caused by changes in the market environment and deterioration of revenues	▸ We carefully consider investment rewards and risks in advance and are implementing the following measures: • Thoroughly disseminating the CTC Group Corporate Philosophy and CTC Group Code of Conduct to operating companies • Providing temporary staffing to operating companies • Building an investment management system (developing internal regulations, pre-screening before making investments, etc.) • Regular monitoring (verifying achievement status of investment objectives, conflict with exit criteria, etc.)
8 Exchange Rate Risk	• Risk of a drop in profitability due to failure to adjust prices of products and services that are procured from overseas markets offered in foreign currencies when sudden fluctuations in exchange rates or a medium-term depreciation of the yen occur	▸ Utilizing foreign exchange contracts and foreign currency deposits according to specific transaction types
9 Risk of Large-Scale Disasters	• Risk of damage to facilities and infrastructure or injuries due to large-scale natural disasters such as earthquakes and terrorist attacks, as well as infectious diseases, such as COVID-19, resulting in a threat to business continuity	▸ To prepare for unforeseen circumstances, we are implementing the following measures: • Formulating a business continuity plan (BCP) • Creating a safety confirmation system • Establishing an emergency response headquarters and crisis management headquarters; strengthening disaster prevention drills • Developing a backup system in the Kansai Region in preparation for potential disaster in the Tokyo metropolitan area

▸ Ensuring Rigorous Information Security

For the CTC Group, appropriate handling and safe management of information are important social responsibilities.

Each year, information security threats become more diverse and complex, owing to the use of new IT infrastructure such as IoT, AI, and blockchain; society's connections between cyberspace and physical space; and new working environments arising from work-style reforms.

Against this backdrop, the CTC Group has developed an information security and personal information protection management system integrating information security management and personal information protection systems in compliance with ISO 27001 (JIS Q 27001) and Privacy Mark (JIS Q 15001), which is responsible for:

▸ Creating various regulations, standards, and procedures
▸ Conducting education and awareness activities related to information security and personal information protection
▸ Conducting internal audits
▸ Conducting annual surveys of outsourcing contractors

At CTC, we handle all the information entrusted to us by our clients as confidential information; carrying out handover checks and exercising strict access management.

To handle the increase in cybersecurity risk countermeasures in recent years, we have established the CTC-SIRT*, which conducts the following activities.

▸ Training on responding to targeted attack emails (annually)
▸ Vulnerability diagnosis of internal and public sites (annually)
▸ Monitoring for cyberattacks

We have obtained ISO 27017 (JIS Q 27017) certification for CUVICmc2 (cloud service specializing in mission-critical systems) and TechnoCUVIC (virtualized hosting service) and are creating services that ensure peace of mind among clients whose information we handle (TechnoCUVIC certification was acquired in February 2020).

Moving forward, we will continue to implement further security measures against new threats, with the safe and secure handling of information entrusted to us by our clients as our highest priority.

* CTC-SIRT (CTC Security Incident Response Team) is an organization that copes with security incidents resulting from cyberattacks.

▸ For more information about our information security efforts, please visit our corporate website:
🖥 https://www.ctc-g.co.jp/en/corporate/csr/governance/security.html

▸ Human Resource Strategies

Recognizing that people are the management resource most important to our business, we strive to recruit and cultivate highly capable human resources and put in place human resource policies and systems to help them maximize their own capabilities while contributing to CTC's growth.

▸ 📖 **P23-26** Human and Intellectual Capital
▸ 📖 **P58-62** Human Resource Strategy

▸ Curtailing Unprofitable Projects

We monitor the percentage of losses from unprofitable projects to revenue in SI Development, as we aim to put in place a revenue model to ensure that profits grow along with revenues as we curtail unprofitable projects. In fiscal 2019, we kept this percentage to 1.2%, which is unchanged from fiscal 2018.

▸ Internal Control and Compliance

■ Internal Control System

CTC has created an internal control system, comprising systems to ensure that directors perform their duties in accordance with legal requirements and the Articles of Incorporation and systems to ensure that business activities are conducted in an appropriate manner across the Group. The internal control system is continually improved through an ongoing review process designed to create a more adequate and efficient system.

Systems to Ensure Appropriate Financial Reporting

CTC is stepping up efforts to ensure appropriate financial reporting in accordance with the Group's accounting regulations, sales administration regulations, procurement administration regulations, and other internal company rules. CTC also has a CFO who is tasked with ensuring that financial reporting complies with accounting standards and other relevant laws and regulations. In addition, the Internal Control Committee is responsible for establishing, regularly evaluating, and improving internal systems to ensure appropriate financial reporting.

■ Full Commitment to Compliance

The CTC Group regards compliance as a topmost management priority. We observe all applicable laws, regulations, and internal rules related to our corporate activities and ensure that all employees conduct themselves with high ethical standards and a sense of responsibility. In this way, we aim to increase corporate value throughout the entire Group as a sound company to ensure that we are trusted and held in high esteem by society.

To achieve these objectives, we engage in the following activities.

▸ Establish the CTC Group Code of Conduct and internal rules
▸ Form a compliance structure
▸ Acquire written oaths from all executives and employees (annually)
▸ Conduct compliance-related education and training, awareness activities, and disseminate information
▸ Operate, maintain, and improve an internal reporting system (helpline)

The CTC Group conducts regular monitoring and reviews of these activities, enabling us to make continuous improvements. We also conduct Compliance Awareness Surveys of all executives and employees every other year, analyzing the results to ascertain any issues and undertake new initiatives.

Compliance Structure
• Appoint a chief compliance officer
• Establish the Compliance & Information Security Committee
• Appoint compliance general managers for each business group and subsidiary

Internal Reporting System (helpline)
The CTC Group has put in place an internal reporting system (helpline) for reporting or consulting about compliance problems. We have registered our "self-declaration of conformity" (registered on April 26, 2019, confirmed) for this helpline, under WCMS* certification.

Reporting routes are internal and external (via attorneys). For both routes, the privacy of the person making a report and related personnel is managed, as is the content of the report. We make it clear that people making reports will not be subjected to disadvantageous treatment as a result of such reporting.

* WCMS: Whistleblowing Compliance Management System
Under this system, a company assesses its own internal reporting system and makes a "self-declaration of conformity" if it complies with the certification standards. Based on an application by the Company, the system's content is checked by an organization registration designated by the Consumer Affairs Agency, and the Company is registered.

Whistleblowing Compliance Management System

■ Response to Various Laws and Regulations

The CTC Group has created a framework for keeping up to date with the most recent information to ensure thorough compliance with various laws and regulations, ordinances, and industry guidelines. We have formulated the CTC Group Legal Guidelines to indicate laws and regulations Group companies should conform with. These guidelines are posted on an internal site so that employees can view them at any time.

The supervisory departments for various laws and regulations cultivate the necessary awareness to ensure compliance through morning public announcements, e-learning, and regular group training.

Glossary

▶ Agile Development

A rapid, incremental approach to software development based on close onsite collaboration with clients, early development of prototypes, and feedback from clients and the market.

▶ AI-OCR (AI-Optical Character Recognition)

The use of AI to increase the accuracy of OCR systems, which read handwritten text, forms, and documents, by utilizing deep learning to improve recognition of text with different fonts and image quality.

▶ Big Data

A term for vast data sets that are too large to store, manage or analyze using traditional database management systems and processing applications. The ability to analyze big data is expected to yield new business insights and lead to the development of new services.

▶ Cloud Native

A cloud-based technology or method that enables high-impact changes to be made frequently and dynamically according to plan with minimal effort. The use of containers, microservices, and other techniques enables creation of loosely coupled systems that are resilient, manageable, and observable.

▶ Container Technology

A technology for realizing virtual operating environments with lower computer resources, achieved by building an application execution environment isolated from other processes on the operating system (OS). Creating spaces where applications are separated makes it possible to build a multiple-OS environment within a single OS environment.

▶ DX (Digital Transformation)

Defined in 2004 by Professor Erik Stolterman of Umeå University in Sweden as "the change associated with the application of digital technology in all aspects of human society." DX describes how companies can harness new digital technologies to develop new business models and create value.

▶ Edge Computing

A network technology that reduces communication lag by installing application servers in close physical proximity to terminal devices.

▶ ERP (Enterprise Resource Planning)

An integrated approach to managing and allocating business resources (personnel, funds, facilities, information, etc.) to improve operational efficiency and optimize management. ERP also refers to integrated software applications that help companies achieve those objectives.

▶ FinTech

A portmanteau of the words "finance" and "technology," FinTech refers to new IT tools in the financial sector. Common examples include online settlement technology and cloud-based household budget services. FinTech has attracted growing attention in recent years amid growth in the number of relatively small companies providing new services.

▶ Hackathon / Ideathon

The words "hackathon" and "ideathon" are portmanteaus of the words "hack" (adapting or improving computer programs), "idea," and "marathon." At hackathons, computer engineers and other participants compete intensively in a fixed timeframe to develop programs or services with new capabilities or outcomes. At ideathons, teams discuss new ideas and collaborate on problem-solving.

▶ IoT (Internet of Things)

The embedding of various physical devices, not just computers, with internet connectivity, creating networks that enable automated verification, control, and remote measurement.

▶ Lift & Shift

"Lift" means migrating existing on-premise systems to the cloud to drive cloud utilization for digital transformation. "Shift" means migrating to a cloud-native mechanism to enhance cost-efficiency and productivity after moving to the cloud.

▶ LOB (Line of Business)

A line division that is directly linked to corporate performance as opposed to a business unit within a company or a so-called indirect functional department of a head office. In the case of diversified management companies, it corresponds to a business division.

▶ Local 5G

A system that allows companies and local governments to flexibly build and use 5G networks in their own buildings and premises. A local 5G communication network can be used in a high-security environment that is isolated from public networks.

▶ Low-Code Development

A type of programming platform that requires minimal coding work. Low-code platforms have the potential to shorten application development times.

▶ Microservice Architecture

The structuring of applications as a collection of microservices (such as settlement or ordering) and creating an architecture wherein microservices link to and communicate with each other. This offers high flexibility and adaptability as each individual microservice can be altered independently of the others.

▶ MSP (Managed Service Provider)

A provider that operates, monitors, and maintains IT systems (such as computers and networks used by customers) and provides services that makes those systems accessible.

▶ MSS (Managed Security Service)

A security service that monitors firewalls and other security systems in real-time 24/7 all year round, gathering data to analyze and defend against threats.

▶ Open Innovation

An innovation methodology for creating innovative products and business models by combining technologies and ideas of not only one company but also from outside that company.

▶ Recurring Business

A business model capable of generating continuous profits (includes cloud services, operation services, and maintenance services).

▶ UI / UX (User Interface / User Experience)

"UI" expresses how a system presents and displays information to the user and indicates user-friendliness with respect to operating the system and inputting information. "UX" reflects the experience and impression that users get from products and services. It includes not only usability but also all the experiences felt, from first meeting to separation.

▶ Virtualization Technology

Technology that integrates or divides resources in servers and other hardware without any physical change in the hardware. The technology can create multiple virtual servers in a single physical server or create a single virtual hard disk from multiple disks.