DAI-DAN REPORT
2016

DAI-DAN Co., Ltd.

Dai-Dan's 113-year History

Inspired by Light, Air &Water

As a comprehensive building services engineering and installation provider, Dai-Dan has continued to use its advanced technology to add comfort and vibrancy to interior spaces where people gather. For more than a century, we have been expanding the breadth of our expertise and securing the trust of our customers. At the same time, we are helping to achieve greater harmony with nature.


Sumitomo General Head Office Building, Osaka (1907)

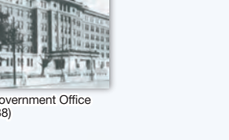

Nagoya City Library, Aichi (1923)

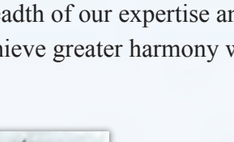

Aichi Prefectural Government Office Building, Aichi (1938)

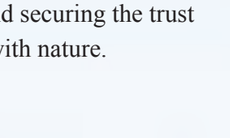

Bank of Japan Building, Hakodate Branch, Hokkaido (1909)


Bank of Japan Head Office Building, Tokyo (1931)


Nippon Budokan, Tokyo (1964)


Kansai International Airport Control Tower & Passenger Terminal, Osaka (1994)


Supreme Court Office Building, Tokyo (1974)


M-Wave Nagano Olympic Memorial Arena, Nagano (1996)


Mozo Wonder City, Aichi (2009)

- March 1903 — Founded.
- October 1933 — Osaka Denki Shokai/Osaka Danbo Shokai Co., Ltd. is incorporated.
- September 1943 — The corporate name is changed to Osaka Denki Tekkan Kogyo Co., Ltd.
- December 1946 — The corporate name is changed back to Osaka Denki Shokai/Osaka Danbo Shokai Co., Ltd.
- October 1949 — The company is registered as a contractor in accordance with Construction Industry Act.
- January 1965 — The corporate name is changed to Osaka Denki Danbo Co., Ltd.
- October 1975 — The company lists its stock on the second section of Osaka Securities Exchange.
- March 1978 — The amount of completed works breaks the 50,000-million-yen mark.
- January 1979 — Singapore Branch is opened.
- September 1981 — The company's stock is designated on the first section of Osaka Securities Exchange.
- February 1983 — The building of head office is constructed at the current place (Edobori, Nishi-ku, Osaka City).
- October 1984 — Technical Research Laboratory is constructed at Miyoshi-machi, Iruma-gun, Saitama Prefecture.
- April 1987 — The corporate name is changed to Dai-Dan Co., Ltd.
- November 1987 — The first mortgage convertible bonds of 5,000 million yen are issued.
- March 1989 — The amount of completed works breaks the 100,000-million-yen mark.
- March 1993 — The amount of completed works breaks the 200,000-million-yen mark.
- August 1993 — The company lists its stock on the first section of Tokyo Stock Exchange.
- September 1997 — Singapore Branch obtains the certification of ISO 9000S.
- December 1999 — All offices through the nation obtain the certification of ISO 9000S.
- February 2002 — The company obtains a blanket certification of ISO 14001 for all offices through the nation.
- March 2003 — The company celebrates its 100th anniversary.
- April 2003 — Company-wide information system is introduced.
- October 2006 — Compliance Committee is established.
- April 2008 — Corporate officer system is introduced.
- April 2013 — New Research Center is completed in Technical Research Laboratory.
- April 2014 — Compliance Office is established.
- May 2016 — enefice Kyushu (new Kyushu Branch office building) is completed.


Haneda Airport Terminal 2, Tokyo (2010)


Labs and Center Building, Okinawa Institute of Science and Technology Graduate University, Okinawa (2010)


CREATE, Singapore (2011)


JP Tower, Tokyo (2012)


Medical Innovation Center Building, Kyoto University, Kyoto (2013)

Contents

Message from Management 03

Dai-Dan's Businesses 05
- Corporate Profile / Financial Highlights 05
- Operational Highlights 06
- Our Services 07

Mid-Term Management Plan 09

Feature: Dai-Dan's Four Challenges for Change 12
- enefice Kyushu, the Smart Energy Lab 13
- Business Development through the Open Innovation Initiative 15
- Conceiving and Implementing Various Approaches to Work 17
- Initiatives toward Strengthening Our Corporate Governance 19

Dai-Dan's Developmental Technologies 21
- Pharmaceutical Plants, Food-processing Plants, and Research Laboratories 23
- Electronic and Precision Device Plants 25
- Medical Facilities 27
- Various Facilities 29
- Automobile and Machinery Manufacturers 31

Dai-Dan's Practical Competence 32
- Introducing Our Installations 33
- Greater Ability to Provide Design Solutions and Installation Expertise 39
- Ongoing Improvement of Site Management Methods 42
- Application of the Meister System and Establishment of Partnerships with Our Subcontractors across Japan 44

FY2015 CSR Performance and FY2016 Targets 45

Fair and Transparent Business Practices 47

Environmental Contribution 53

Meeting Customer Expectations 56

Valuing Our Employees 59

Meeting Local Expectations 64

Financial Report 67

Third Party Opinion 71

Global Network 72

Editorial Policy

Since fiscal 2008, we have been publishing our CSR report as a means of informing our stakeholders of our business operations and CSR initiatives. Beginning in fiscal 2014, we renamed this publication the *Dai-Dan Report*. Compiled as an integrated corporate report, it contains both financial and non-financial data in addition to the conventional content.

This year, we have included feature articles highlighting some of our typical efforts from among the various measures we have implemented to achieve "Dai-Dan's Four Challenges for Change," which represent the four pillars of our mid-term management plan.

Scope of This Report

Target organization

This report covers the operations of Dai-Dan Co., Ltd. All financial information is reported on a consolidated basis.

Period

This report covers the fiscal year spanning April 1, 2015, to March 31, 2016. Some data refers to activities after April 1, 2016.

Report Guideline References

Japanese Standards Association "ISO26000:2010"
Ministry of the Environment *Environmental Reporting Guidelines* (2012)
GRI Sustainability Reporting Guidelines, 4th edition (G4)

Seeking continuous value creation in order to contribute to a better environment and the development of society

At Dai-Dan, we believe it is our duty to maintain an environment in which people can live their lives in safety and comfort. Our efforts are guided by our management principles of creating value for our customers while contributing to the development of a better environment and stronger communities in our role as a building services engineering and installation provider.

Setsu Sugaya
Representative Director
Chairman
Dai-Dan Co., Ltd.

Shohei Kitano
Representative Director
President
Dai-Dan Co., Ltd.

The two types of environments we create

In keeping with our Management Principles, Dai-Dan is focused on creating two types of environments.

Our primary initiative is to contribute to the emergence of a better global environment. We use significant amounts of energy to create the business environment we require and to maintain our business operations. Specifically, we focus on developing the technologies necessary to achieve our overarching goals: helping to preserve the global environment and contributing to the emergence of a low-carbon society by utilizing renewable energy and designing energy-efficient facilities.

Our second initiative is to create the environments our customers — who span a wide range of industries — require for their business operations. The critical industries that support Japan's economy require advanced facilities and technologies to shape the environments that enable them to engage in their respective business operations. We remain committed to the ongoing development of the advanced space control technologies we have nurtured to date and to forming the environments that are essential to our customers.

In April 2016, as a first step in implementing reforms during the period leading up to our 120th anniversary in seven years, we formulated our Mid-Term Management Plan titled "Dai-Dan — Creating the environments our customers require — Always With You."

We intend to strengthen our engineering capabilities so that we can serve as a valuable partner that excels at creating the environments our customers require for many years to come. We are focused on developing businesses that take advantage of our technologies applicable to light, air, and water. As we establish a management foundation capable of meeting the needs of a changing market, we will continue to be the company that meets the needs of our customers as well as society at large.

Specific examples of our dedication to creating two types of environments on the basis of our Mid-Term Management Plan include our Net Zero Energy Building* (ZEB) initiative and our contributions to the field of regenerative medicine.

Our most advanced technology has been introduced in "enefice Kyushu," our Smart Energy Lab at Dai-Dan's Kyushu Branch. Completed in May 2016, this ZEB initiative incorporates energy-efficient construction as well as facilities.

Through this approach, we have created a work place that consumes less than half the energy of a conventional office building while providing even higher levels of comfort. In short, by using our own building as an office and collecting data from advanced verification facilities in order to feed back the results to customers, our company has continued to gain essential expertise.

Moreover, in the field of regenerative medicine, we are working to develop new businesses in order to contribute to industrial and other practical applications. In November 2015, we hosted a seminar for researchers in regenerative medicine and suggested a new cell processing facility — which is essential for regenerative medicine — incorporating our airflow control technology.

In order to devise solutions for new fields such as regenerative medicine, it is indispensable that we adopt the approach known as "open innovation." In the future, we intend to actively disseminate our proprietary technologies across a variety of fields and are committed to promoting collaboration with a wider range of emerging businesses.

* A building utilizing renewable energy that is designed with energy-efficient facilities to achieve zero or near-zero consumption of energy derived from fossil fuels.

Our people are our greatest asset.

Everything that we have developed throughout our history, including the trust we have earned from our customers and the technologies and expertise we have nurtured, can all be traced to the efforts of our employees.

In the belief that people are our greatest asset, we have always identified training of our personnel as the most important issue facing management. For this reason, we have always sought to enhance the education and training we provide. Our Mid-Term Management Plan advocates the strategy of "accommodating more diverse work methods" and promotes "the reconstruction of our education system" to enable our employees to demonstrate their abilities to the maximum while experiencing the joy of work.

We have also established a study team to promote the participation of female employees to ensure they continue to expand the scope of their participation as we undertake research in preparation for the drafting of detailed initiatives.

Together with our stakeholders

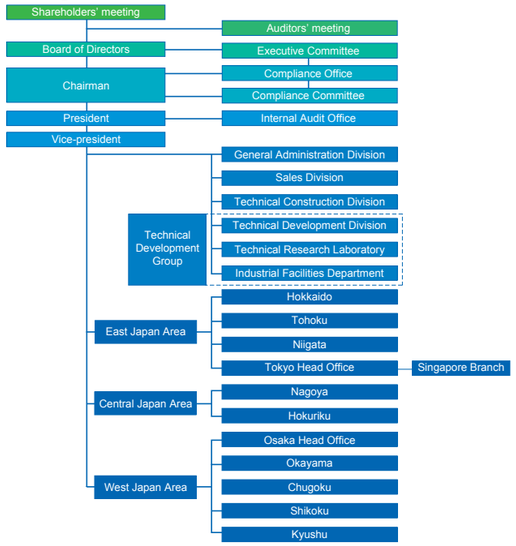
Since our company was established, we have continued to work together with our customers, shareholders, investors, subcontractors, employees, and local communities — a diverse assemblage known collectively as "our stakeholders." In an effort to meet the varied expectations of these groups and individuals, we adopted our Dai-Dan Corporate Governance Guidelines in December 2015 as a foundation for improving upon our sustainable corporate values. As we further enhance our approach to governance around these guidelines, we will engage in constructive dialogue with our stakeholders while working toward our common goals and interests.

As we address the challenges of the future, we very much look forward to your continued support and cooperation.

Corporate Profile

Company name	Dai-Dan Co., Ltd.
Head office	1-9-25 Edobori, Nishi-ku, Osaka, Japan
Founded	March 4, 1903
Incorporated	October 10, 1933
Capital fund	4,479,725,988 yen
Employees	1,493 (as of March 31, 2016) consolidated
Stock listing	The first section of Tokyo Stock Exchange

Organization Chart



Financial Highlights

Accounting Year

(in million yen)

	FY2011	FY2012	FY2013	FY2014	FY2015
Orders received	119,233	119,980	127,394	131,633	143,503
Net sales	122,109	121,919	124,445	121,780	138,346
Selling, general and administrative expenses	9,684	9,992	9,966	10,016	10,176
Operating income (loss)	2,692	2,749	4,171	4,547	6,537
Ordinary income (loss)	2,736	3,278	4,471	4,875	6,770
Net income (loss)	1,175	1,599	1,670	2,921	4,248
Return on assets (ROA) (%)	2.7	3.1	4.1	4.3	5.7
Return on equity (ROE) (%)	2.8	3.7	3.7	5.9	7.9
Cash flows from operating activities	876	1,261	3,117	2,427	611
Cash flows from investing activities	(397)	(740)	(172)	(401)	(493)
Cash flows from financing activities	(1,619)	(955)	(892)	(2,344)	(894)
Cash and equivalents at end of period	22,635	22,420	24,598	24,358	23,536
R&D expenses	315	417	430	461	524
Capital expenditures	190	968	90	428	981

Fiscal Year-End

(in million yen)

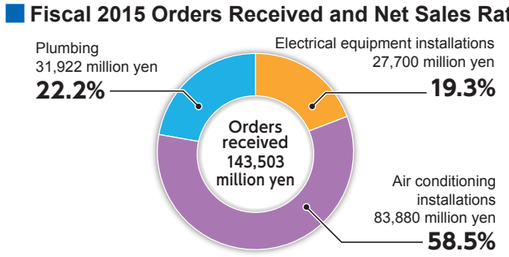
	FY2011	FY2012	FY2013	FY2014	FY2015
Total assets	103,345	106,155	111,347	113,440	122,312
Net assets	42,197	44,988	46,609	53,462	54,583
Equity capital ratio (%)	40.8	42.3	41.7	46.9	44.5

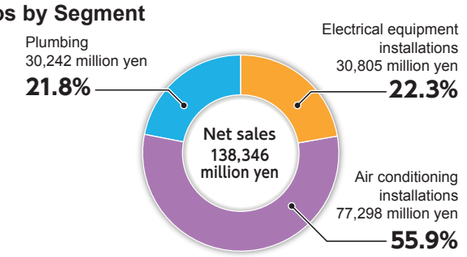
Per Share Data

(in yen)

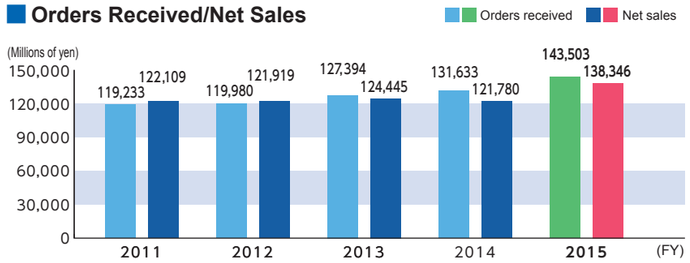
	FY2011	FY2012	FY2013	FY2014	FY2015
Net income	26.32	35.83	37.45	65.50	95.26
Net assets	943.57	1,005.38	1,040.67	1,193.61	1,219.41
Dividends	16.00	19.00	16.00	18.00	20.00

Fiscal 2015 Orders Received and Net Sales Ratios by Segment

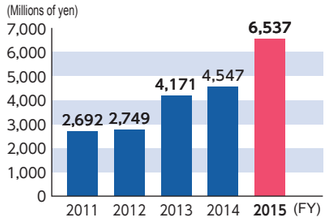




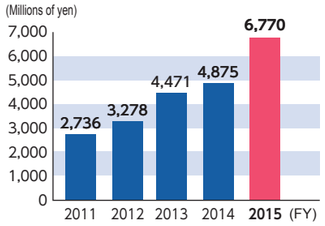
Orders Received/Net Sales



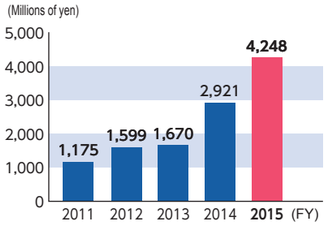
Operating Income



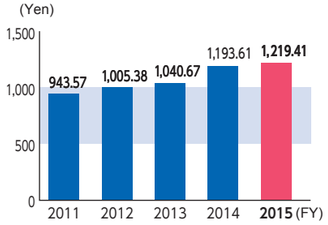
Ordinary Income



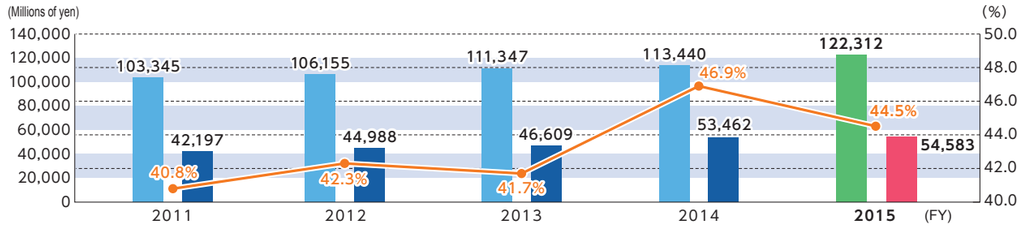
Net Income



Net Assets per Share



Total Assets/Net Assets/Equity Capital Ratio



Operational Highlights

Non-Financial Data

	FY2011	FY2012	FY2013	FY2014	FY2015
Number of employees (consolidated)	1,435	1,445	1,472	1,498	1,493
Number of workplace accidents	42	29	38	36	26
Frequency rate of workplace accidents*	0.25	0.52	0.54	0.46	0.17
Severity rate of workplace accidents**	0.65	0.06	0.08	0.02	0.02
CO_2 emissions from offices (tonnes)***	1,499	1,421	1,428	1,745	1,618

* Number of workplace accidents per million work hours ** Number of workdays lost per thousand work hours
*** Beginning in fiscal 2014, the target was changed to reflect the new CO_2 equivalent.

Major Projects Completed in FY2014 and FY2015

Projects completed in FY2015

Fukuoka Mirai Hospital, Souseikai Medical Group
(air conditioning and plumbing installations)

New Building Phase 1, Hachioji Campus, Teikyo University
(air conditioning installation)

Minimally Invasive Surgery Ward,
Kobe University Hospital
(electrical equipment, air conditioning, and plumbing installations)

New K-1 Building, Nichia Corporation
(air conditioning and plumbing installations)

Hiroshima Red Cross Hospital &
Atomic-bomb Survivors Hospital
(air conditioning installation)

Projects completed in FY2014

International Center for Science
and Innovation, Shinshu University
(air conditioning and plumbing installations)

Shinagawa Season Terrace
(air conditioning installation)

Pharmaceutical Building,
National University of Singapore
(electrical equipment installation)

Akita University Hospital
(air conditioning renovations)

Kagoshima City Hospital
(plumbing installation)

Electrical equipment installations

Electricity and the electrical equipment on which it flows are the lifeblood of a building. They supply the power to equipment and services that allows a building to fulfill its function.

Electrical equipment installations involve the installation of a high-voltage transformer, a distribution board and the wiring that supplies electricity to lighting, outlets, pumps and fans.

Electrical equipment is crucial to the saving, generation and storage of energy. Dai-Dan converts ordinary buildings to smart buildings by, for instance, reducing power consumption through LED lighting installations, generating electricity by installing solar panels and enabling energy storage that is critical for the efficient use of solar generated electricity.

Dai-Dan's electrical equipment technology is not limited to energy-efficiency applications; it also extends into diverse areas such as supporting business continuity plans (BCP) that take effect during times of disaster.

Air conditioning installations

The temperature, humidity, flow and purity of air are indispensable to maintaining a comfortable interior environment in a building. Air conditioners help to create and maintain this environment.

Air conditioners vary from general-purpose types for office buildings to precision models used in semiconductor fabrication plants. At Dai-Dan, we respond to the needs of our customers by applying expertise gained through long experience and developing advanced air conditioning technologies at our Technical Research Laboratory.

Our air conditioning systems have been installed in many advanced facilities, including energy-efficient green data centers, hybrid operating rooms, and cell-processing facilities (CPF) required for regenerative medicine.

Plumbing

Water is a precious resource. Plumbing components are used to supply safe, clean water and facilitate appropriate drainage of dirty water. In addition to providing plumbing installations, we are also involved with plumbing systems that harvest rainwater and reuse wastewater as an important step toward preserving the natural environment.

We also strive to ensure safety and protect building assets with sprinkler facilities that reduce the possibility of fire as well as indoor and outdoor fire hydrants that provide water.

Renovations

The renovation of building facilities enhances their functioning in addition to improving performance and upgrading the interior environment. In addition, renovations enhance the value of the customer's asset while extending its service life and improving the building's energy efficiency. We formulate a renovation plan to meet the various needs of the customer by leveraging our own equipment diagnostic technology developed through the construction expertise we have gained from dealing with building facilities through our comprehensive general facilities business. We provide installations that accommodate existing needs as well as follow-up service to address any issues that might arise.

Overseas operations

Dai-Dan has operations in Singapore and other countries where we provide services to factories and research centers that can fully utilize our expertise.

We have completed a number of contracts overseas, primarily in our field of expertise. We have built cleanrooms and installed energy saving systems that have been very well regarded by our customers.

Dai-Dan provides high quality systems and strives to establish a strong presence in each of the respective countries.

Mid-Term Management Plan 2016–2018

Dai-Dan — Creating the environments our customers require

~Always With You.~

As the first step toward implementing reforms during the seven years leading up to our 120th anniversary, Dai-Dan formulated a mid-term management plan spanning the period from fiscal 2016 to 2018.

Management Principles

As a building services engineering and installation provider, we continually take on the challenge of creating value for our clients while contributing to the development of a better environment and stronger communities.

Management Policies

1. We maintain focus on our customers as the business environment changes so that we can meet all their needs.
2. We operate the business in compliance with all legal and regulatory requirements.
3. We ensure that our corporate activities assure the safety and quality of products and services and contribute to environmental preservation.
4. We attain our corporate targets by pursuing both our strategies and policies.

Mid-Term Management Plan

Vision of our three-year plan focused on our 120th anniversary

Targeted Earnings [Fiscal year ending March 31, 2019 (90th fiscal period)]

	Consolidated	Non-consolidated
Orders received	151 billion yen	150 billion yen
Net sales	151 billion yen	150 billion yen
Operating income	7.5 billion yen	7.5 billion yen

Management Indicator Operating Income Ratio: 5%

Mid-Term Management Plan 2016–2018

Vision of Our Three-year Plan Focused on Our 120th Anniversary

The focus of our strategies and policies is to create different types of environments. These include the environments our customers in a variety of fields require for their business operations as well as support for earth-friendly environments. By implementing these strategies and policies, we aim to become the company that creates the different types of environments our customers require.

Basic Technology

Becoming a partner that excels at creating environments for our customers

Our goal is to become a partner that excels at providing our customers with the environments they require for their business operations.

Strategy 1 Strengthening our engineering capabilities for buildings requiring high-technology facilities

1. Disseminating the ZEB initiative and proposals for smart energy applications through building facilities See p. 13–14.
2. Developing basic technology for advanced facility technologies (biotechnology and devices)
3. Enhancing our ability to accommodate special facilities
4. Establishing the Technical Development Group

Strategy 2 Approach to environmental users

1. Training of sales engineers
2. Development of new fields that will serve as next-generation revenue bases
3. Sales of proprietary systems

Strategy 3 Establishing a system for sharing growth with our subcontracting companies

1. Utilization of a network of subcontracting companies
2. Implementation, together with subcontracting companies, of integrated measures to increase construction efficiency
3. Provision of support for recruiting to subcontracting companies
4. Strengthening the ability to accommodate our business continuity plan in cooperation with subcontracting companies

- With our basic technologies, our offices employ our Industrial Facilities Department, Technical Research Laboratory, and Technical Development Division work to propose developmental technologies that mainly address, for example, the implementation of proposals, designs and installation for facilities requiring advanced equipment and technology such as hospitals, factories, and research labs.
- In order to develop our basic technologies, we are taking steps to strengthen our technical capabilities at our workplaces, including the restructuring of our design and construction education system.
- We gain an accurate understanding of customer needs by approaching actual users (environmental users) as a company that provides environments. We also train our sales engineers so that they can appropriately combine our technologies and submit proposals to customers. Thus, we will gain the trust of customers and expand our basic technologies.
- At the same time, our newly established Technical Development Group will expand our basic technologies by taking on the challenge of new fields.

Business Development

Taking advantage of light, air, and water technologies to develop new areas of business

In order to meet the diverse environmental needs of our customers, we are utilizing our technologies to develop new business areas.

Strategy 1 Developing businesses that make full use of the characteristics of a building services engineering and installation provider

1. Developing businesses through collaborations with companies in various fields by leveraging underlying technologies as a building services engineering and installation provider See p. 15–16.
2. Researching capital tie-ups and M&A in areas where growth is expected
3. Developing a challenging spirit

- We aim to develop new businesses by capitalizing on our technologies in the areas of light, air, and water.
- Regenerative medicine is considered one of our leading fields. Technology for controlling temperature, humidity, and air flow is required to maintain the necessary environment for this field.

Management Foundation

Establishing a management foundation capable of responding to shifting markets

Establishing a management foundation resistant to economic fluctuations

Strategy 1 Creating an organizational administration that can accommodate changing markets and social conditions

1. Obtaining orders for new strategic projects (national projects)
2. Directing an organization focused on market scale (goal-setting and assignment of engineers)
3. Policies to obtain orders based on local characteristics

Strategy 2 Strengthening our capital and financial foundation

1. Building relationships with stakeholders through capital policies
2. Researching investments characterized by a solid financial foundation

Strategy 3 Strengthening practical competence

1. Increased cost-reduction efforts
2. Increased accident eradication efforts
3. Establishment of a field support system
4. Utilizing IT to increase field operational efficiency
5. Implementation of a cycle of design, construction, maintenance and renewal

Strategy 4 Accommodating diverse ways of working

1. Promoting a more appealing work environment for women See p. 17–18.
2. Securing skilled personnel and reforming the educational system
3. Reviewing the retirement system and revising the terms and conditions for re-employment

- A feature of our management foundation is our “practical competence.” The profits we earn as an installation company are generated in the field. We are committed to efforts to further strengthen our practical competence.
- Mirroring the efforts of the Technical Development Group, we promote company-wide initiatives aimed at improving our installation expertise.
- We are improving the training of our technical personnel by rebuilding our educational system and are utilizing the Smart Energy Lab at Dai-Dan’s Kyushu Branch and other assets to improve our technical capabilities in design, installation, and developmental technologies.

Corporate Responsibility

A company that meets the demands of society

To survive as a company, we will ensure compliance and respond to social demands as a good corporate citizen.

Strategy 1 Continued compliance management and strengthening of corporate governance

1. Continued strengthening of governance and education to ensure fair and appropriate business transactions See p. 19.

Strategy 2 Promoting social contribution initiatives as a good corporate citizen

1. Promoting company-wide social contribution initiatives
2. Engaging in activities outside the company to contribute to the development of the building facility industry

- We will continue education and thorough compliance to ensure no repetition of violations of antitrust law.

Feature

Dai-Dan’s Four Challenges for Change

Basic Technology, Business Development, Management Foundation, and Corporate Responsibility comprise the four pillars of our mid-term management plan as we promote our transformation in the years leading up to our 120th anniversary.
In this feature, we introduce some significant examples of our efforts from among a variety of measures reflecting these four pillars.

Feature 1 Basic Technology

From “Disseminating the ZEB initiative and proposals for smart energy applications through building facilities”

Establishing a new foundation for verification of building energy-efficiency and comfort technologies

enefice Kyushu, the Smart Energy Lab ····· P. 13–14

Feature 2 Business Development

From “Creating new businesses through collaborations with companies in various fields by leveraging underlying technologies as a building services engineering and installation provider”

Engineering a next-generation cell processing facility

Business Development through the Open Innovation Initiative ····· P. 15–16

Feature 3 Management Foundation

From “Promoting a more appealing work environment for women”

Special Round-Table Discussion: Dai-Dan as a Company Where Women Can Continue to Shine

Conceiving and Implementing Various Approaches to Work ····· P. 17–18

Feature 4 Corporate Responsibility

From “Continued strengthening of governance and education to ensure fair and appropriate business transactions”

Implementing improvements for appropriate, effective management

Initiatives toward Strengthening Our Corporate Governance ····· P. 19

Feature 1 Basic Technology

Establishing a new foundation for verification of building energy-efficiency and comfort technologies

enefice Kyushu, the Smart Energy Lab

The ZEB initiative from the perspective of building facilities

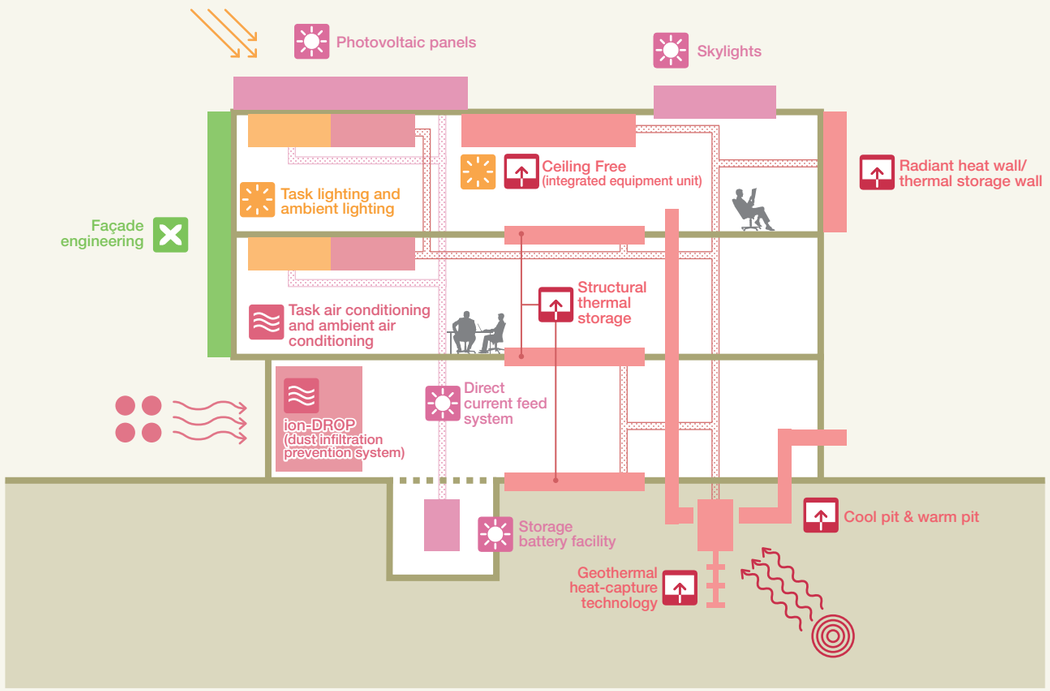
Dai-Dan has been conducting research on the technology necessary for net-zero energy buildings*(ZEB) by constructing a laboratory building and engaging in pallet renewal at our old laboratory building. As our third initiative in this area, by adopting the concept of an office that functions in harmony with the planet, Dai-Dan planned and constructed a Smart Energy Lab dubbed “enefice Kyushu” at the Kyushu Branch. From the perspective of building facilities, it serves as a foundation for verification and experimentation of building energy-efficiency and comfort technologies.

Dai-Dan’s “enefice Kyushu” engages in verification and experimentation to determine effective approaches to both energy use and enhancing comfort for buildings.

An office functioning in harmony with the planet
- Effective use of renewable energy
- Design & control of aspects related to light, air and water
- Comfortable indoor spaces

A variety of technologies have been assembled for the benefit of office workers so that they can perform their productive intellectual activity in vitality and good health.

Technology Map



*Buildings utilizing renewable energy that are designed with energy-efficient facilities to achieve zero or near-zero consumption of energy derived from fossil fuels.

Dai-Dan technology featured at “enefice Kyushu”

Effective use of renewable energy

We installed photovoltaic panels and solar heat collectors on the roof to convert solar energy into electricity and heat. These are used effectively for our direct current feed system and space heating. In addition, we installed various heat-capture facilities such as boreholes and a coil-type horizontal heat exchanger in the underground area of the site. We utilize a geothermal heat source for air conditioning and employ structural thermal storage and radiant heating with a variety of heat-capture devices.


Photovoltaic panels/Solar heat collectors


Geothermal heat-capture technology

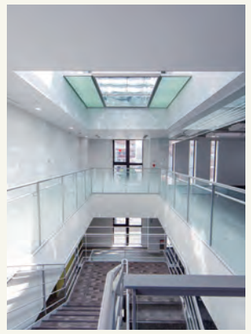
Design & control of aspects related to light, air and water

We installed a green wall to control sunlight as well as façade engineering products such as film louvers on parts of the windowed sides. We erected three types of outer wall surfaces for some walls as part of our verification and experimentation with the thermal performance of external layers such as thermal storage walls. These systems are interchangeable so that verification and experimentation of state-of-the-art technology can be conducted continuously.

We installed skylights in the upper areas of the building and have directed sunlight to below-grade areas through open ceilings, thus creating an airy and comfortable space.

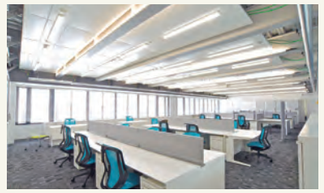

Film louver/Green wall


Structural wall/ALC wall/Siding wall


Skylights

Comfortable indoor spaces

We employed task air conditioning and ambient air conditioning, which contribute to calm, radiant, people-friendly spaces with no sensation of airflow. Personal air conditioning outlets can be positioned at particular locations. For lighting systems, we combined task lighting and ambient lighting with the use of brightness sensors. This contributes to both comfort and reduced energy consumption.


Radiant panels and lighting

Dai-Dan’s developmental technologies

We developed and installed Ceiling Free units that concentrate facility functions such as lighting, air conditioning, and emergency equipment in one building equipment unit with the goal of implementing improvements related to energy efficiency, office comfort, and easier installation.


Ceiling Free installation

Overview of enefice Kyushu

Location	3-1-24 Kego, Fukuoka City, Fukuoka Prefecture
Scale	Total floor space: 1,383 m²
Construction	Steel frame, 3 stories above ground, 1 below grade

“enefice Kyushu” has been rated as BELS* 5☆ (the highest rating), acquiring the first certificate of conformity with the energy efficiency standard in Fukuoka City.

*Building-Housing Energy-efficiency Labeling System

Please visit our website for more information on “enefice Kyushu.”
http://www.daidan.co.jp/

BELS placard and certificate of conformity with the energy-efficiency standard

Introduction

In the field of regenerative medicine, the characteristics of iPS cells and other aspects of the cell itself are attracting increasing attention. In order to make regenerative medicine more accessible, technological innovation and the practical application of peripheral industries are indispensable. However, in the current circumstances, the service and maintenance costs of cell processing facilities (CPF) tend to be rather high. As a result, regenerative medicine services generally cannot be provided at realistic rates.

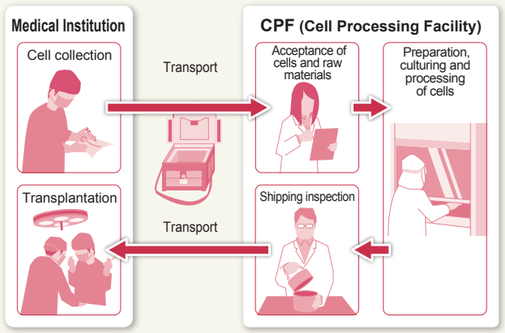
Dai-Dan offers a facility to match customer needs that incorporates the air conditioning technology and expertise we have developed to date. We are now working toward the construction of a “next-generation CPF” that greatly reduces current construction and operating costs.

Current state of regenerative medicine

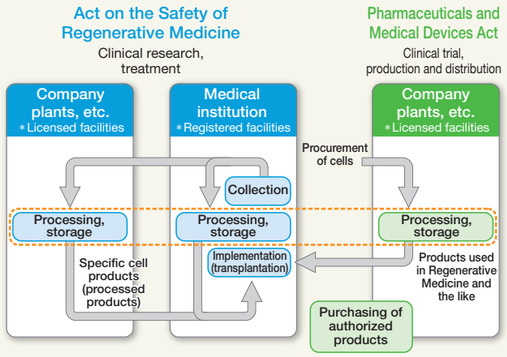
In regenerative medicine, cells derived from a patient or a provider are transplanted into a patient after preparation, culturing and processing in vitro. The preparation, culturing, and processing of these cells is generally performed by what is known as a “Cell Processing Facility” (CPF). The construction of these facilities generally resembles that of a pharmaceutical manufacturing plant.

Japan has two laws related to regenerative medicine: the Act on the Safety of Regenerative Medicine; and the Act on Securing the Quality, Efficacy and Safety of Pharmaceuticals, Medical Devices, Regenerative and Cellular Therapy Products, Gene Therapy Products, and Cosmetics (“Pharmaceuticals and Medical Devices Act”). These two laws suggest that regenerative medicine in various forms will continue to gain traction.

■ Flow of regenerative medicine



■ Laws Related to Regenerative Medicine



Combining knowledge related to medicine and pharmaceuticals with a focus on the field of regenerative medicine

Dai-Dan has a significant track record in construction in the field of medicine and pharmaceuticals. As for medical facilities, we have also been involved in specialized air conditioning systems such as hybrid operating rooms and sickrooms for immune-compromised patients, achieving the rank of number one in the industry. As for facilities for the pharmaceutical industry, we have been involved in many vaccine factories and GMP-compliant sterile preparation facilities.

We are also utilizing our achievements and technology to work in the field of regenerative medicine, which requires knowledge of both medicine and pharmaceuticals.

Sharing the latest technologies through seminars and exhibitions

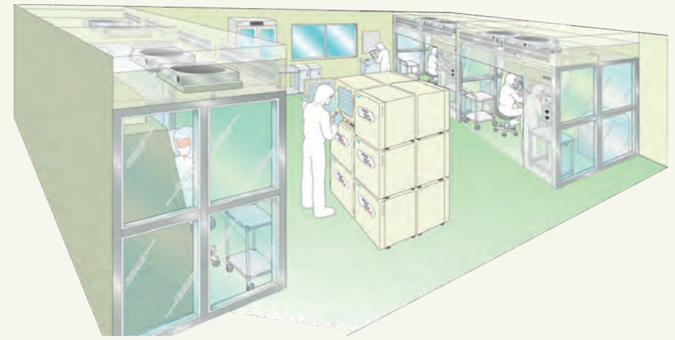
We held a seminar — titled “The Current State of Regenerative Medicine” — at our company in November 2015 to address current issues related to regenerative medicine as well as trends and future prospects for industries peripheral to cell processing facilities. We hosted representatives from industry, academia, and government, and participation was high despite the fact the event was held on a weekday. At the two venues of Interphex Japan in Tokyo and Osaka, we exhibited technology related to regenerative medicine. We also participated in the Forum for Innovative Regenerative Medicine (FIRM) and are collaborating across the industry.

Airflow Control Technology for CPFs and Dai-Dan’s version of the next-generation CPF

To promote the industrialization of regenerative medicine, it is necessary to reduce the costs of constructing CPFs. One approach toward that end could be to expand the rooms in the CPF. Moreover, in order to reduce the risk of contamination associated with larger rooms, we have developed an effective solution called the Air Barrier Booth (ABB). Installation of the ABB reduces the infection risk from fine particles and floating bacteria.

For CPFs, it is necessary that risks be specified product-by-product and that the most suitable production environment be provided. At Dai-Dan, we engage the customer in responsible discussions from the conceptual stage in order to provide a CPF that is not only easy to use but also excels at cost containment while maintaining a balance between facilities and operation.

■ Expansion of cell preparation rooms



■ Innovations for next-generation CPFs

Specify risks according to the type of cell being processed (type, presence/absence of infection) and work processes (instruments used).

- Accommodating Facilities → If overly biased towards facilities, the CPF becomes a structure with an emphasis on scale.
- Accommodating Operations → If overly biased towards operations, constraints on operations increase.

From the conceptual stage of the CPF, there is a need to consider the balance between facilities and operational aspects in the rooms and entire facility (layout, traffic flow, air flow, and instruments).

Establishing a CPF Open Lab in the Life Innovation Center

Dai-Dan established a CPF Open Lab incorporating an Air Barrier Booth (ABB) inside the Life Innovation Center (City of Kawasaki), a facility that Kanagawa Prefecture is advancing as a hub to promote the practical use and industrialization of regenerative and cellular medicine. We decided to enter the field of regenerative medicine aggressively. (The facility is scheduled to open in Spring 2017).

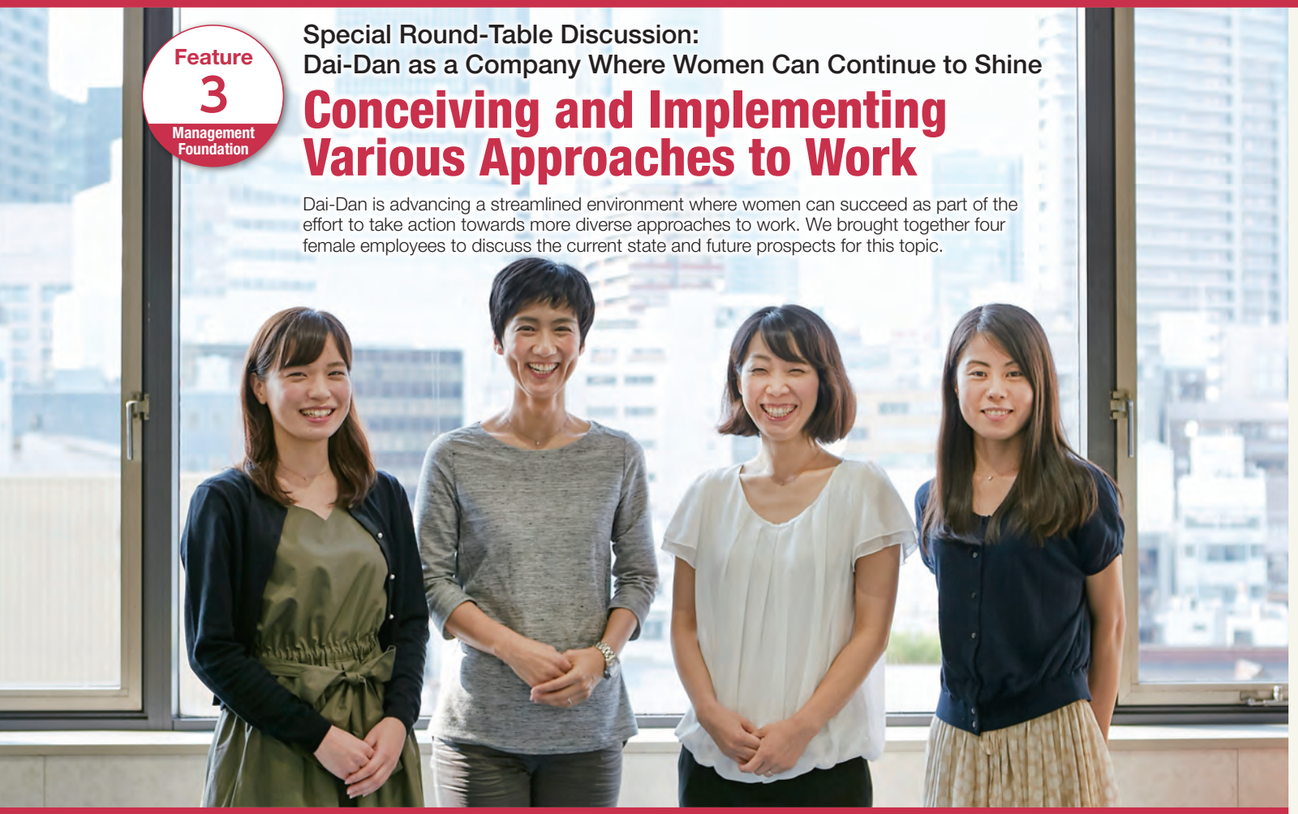
With the establishment of the CPF Open Lab, we will deepen cooperation between researchers and organizations and companies involved in regenerative medicine. We can thus identify challenges in the cell-processing environment and address them through new research and development. We also intend to make use of this facility as a platform for practicing Open Innovation.

Feature 3
Management Foundation

Special Round-Table Discussion:
Dai-Dan as a Company Where Women Can Continue to Shine

Conceiving and Implementing Various Approaches to Work

Dai-Dan is advancing a streamlined environment where women can succeed as part of the effort to take action towards more diverse approaches to work. We brought together four female employees to discuss the current state and future prospects for this topic.



Maiko Iwahashi	Naoko Hashimoto	Mayu Higa	Tomomi Matsuda
(3rd year with the company)	(15th year with the company)	(12th year with the company)	(11th year with the company)
Accounting Sect., Administration Dept. Tokyo Head Office	Quantity Survey Sect., Design Dept. Osaka Head Office	Quantity Survey Sect., Design Dept. Osaka Head Office	Engineering Sect. 1, Engineering Dept. 2 Tokyo Head Office

Formed in 2016, the Women's Active Promotion and Discussion Team continues to make progress.

Q. Thank you for meeting with me today.

Interviewees: Thank you for having us.

Q. So, to get to the subject at hand, I hear that three of you — Ms. Hashimoto, Ms. Matsuda and Ms. Iwahashi — are members of the "Women's Active Promotion and Discussion Team." How many people are on the team and what initiatives are you pursuing?

Ms. Hashimoto: The team comprises 11 women and four men. It includes two people from the Human Resources Department as observers. Our topics of discussion include, for example, specific plans for increasing the number of female employees; ideas for improving the workplace environment; and what measures the company can adopt to help women succeed.

Ms. Iwahashi: A company-wide meeting is held about once a month. Subcommittees are divided between Osaka and Tokyo, and in Tokyo, where Ms. Matsuda and I work, meetings are held about once every one or two weeks.

Hashimoto: In Osaka, we meet about once every two to three weeks.

Ms. Matsuda: It works this way: the subcommittees choose the themes to investigate among the topics identified at the company-wide meeting. Then we exchange opinions again when we get together at the company-wide meeting.

Hashimoto: Because our team is just starting to get on its feet, our activities have yet to achieve critical mass. But at the outset, we surveyed all female employees. We are about to compile their comments and their requests of the company.

The environment has also improved for women who have very rewarding jobs in the field.

Q. Here, Ms. Hashimoto and Ms. Matsuda have experience with assignments in the field, but have there been any changes in terms of the environment at the job site?

Matsuda: Previously, few women were given the position of site supervisor. And, for example, there weren't any restrooms for women. Those kinds of situations were quite common.

Hashimoto: Since I joined the company around 2002, the environment has really been changing for the better.

Matsuda: Now, if you go to any site, it is fully equipped even with restrooms and changing rooms. I gained experience in design for two years and then came to be in charge of a construction site, which is my current task. But when you see the construction drawing actually taking shape before your eyes, the feeling of achievement is amazing. And it's fun to make progress on the project through cooperation with the subcontractors in various trades and to solve problems by generating ideas together.

Hashimoto: It's been a while since I've been on a job site, and there are clearly many hardships when one is in the field, but the rewards are also great.

A workplace that proactively employs females

Dai-Dan has continued to employ female workers for main career track positions when hiring recent graduates, and we provide technical training for new employees without discrimination by gender. Engineers who have acquired the necessary basic knowledge through this training are now playing an active role in design departments and at field installation sites.

In addition, we switch employees from minor career track positions to main career track positions using the Main Career Track Position Switching System as needed, and our primarily female main career track positions remain active in sales departments and official and administrative departments.

Employee breakdown

	As of March 31, 2014		As of March 31, 2015		As of March 31, 2016	
	Male	Female	Male	Female	Male	Female
Number of employees	1,259	130	1,273	136	1,272	139
Average years of service	18.8	12.3	19.1	12.5	19.1	12.6
Average age	43.0	34.5	44.0	35.0	44.2	35.8
Female main career track positions	—	30	—	33	—	33

Supporting the balance between work and home

By creating an environment in which all employees can work with ease and employees can balance work with childcare, we are working towards our next goal by devising an action plan in line with the "Act on Advancement of Measures to Support Raising Next-Generation Children" so that all employees can exercise their abilities to the full.

Action Plan
(April 1, 2015–March 31, 2020)

- **Target 1** To improve the workplace environment to ensure that childcare leave is easy to take and the staff easy to return
- **Target 2** To have at least one or more male employees take childcare leave while the action plan is in operation
- **Target 3** To introduce a system of reduced working hours that exceeds the provisions of the Child Care and Family Care Leave Act

Parental leave take-up rate

	FY2013	FY2014	FY2015
Number of female employees who gave birth	4	4	6
Number of female employees who took childcare leave	4	4	6
Number of female employees on reduced schedules for childcare	2	3	TBD*
Percentage of female emvoyees who took childcare leave	100%	100%	100%
Percentage of female employees on reduced schedules for childcare	50%	75%	TBD*
Number of male employees who took childcare leave	0	0	0

* For 6 people on childcare leave in FY2015, the application of the childcare reduced working hours system has not been determined.

In an environment where you can succeed even after maternity leave, it is important to have the support of those around you.

Q. Ms. Hashimoto and Ms. Higa, the two of you have had experience taking maternity leave and infant-care leave, and Ms. Higa, you are taking advantage of a shortened work week at the moment.

Hashimoto: When I actually took advantage of the program, I felt that this was a company where taking maternity leave and infant-care leave is really just a matter of course. It was the same when I reported my intention to marry, but when I reported my pregnancy to my boss I was a little worried that, well, maybe he'd make a face. But he actually commented light-heartedly, saying "Congratulations! It'll all work out." That really was quite a relief.

Ms. Higa: I also discovered that what is even more important than simply having the system in place is to gain the understanding of those around you. After returning to work following childcare leave, for about a month my child would frequently come down with fever and I couldn't go to work half the time. But everyone was so understanding, commenting that "children up to the age of 1 frequently get fevers."

Hashimoto: Exactly. I feel really bad about leaving early and causing inconvenience, but if my coworkers say things like that, I feel better.

Higa: With the increasing number of female employees, there's more and more precedent for using the system. As a result, the people around us know about the situation of a mother caring for a child, and that's something I'm very thankful for.

Iwahashi: Actually, there aren't that many people around me who use maternity and childcare leave. I've been with the company for only three years, but I've gained the impression that the only people I have seen quit the company are those who are getting married or having a child, and not many are making use of the system or succeeding after giving birth.

Matsuda: In fact, for some reason it's less common to do so in Tokyo.

Iwahashi: That's why it was good to hear the stories today from the two of you who have used this system. It would be nice if round-table discussions like this could encourage others to make use of the system with ease.

Matsuda: Definitely. The presence of senior colleagues with this experience also tends to support the impression that one can keep working after marriage.

Q. That is good to hear. I hope that your comments will encourage other women to achieve similar success. Thank you very much for your time.

Interviewees: Thank you very much.

Feature 4 Corporate Responsibility

Implementing improvements for appropriate, effective management

Initiatives toward Strengthening Our Corporate Governance

As a company that comprises a Board of Auditors, our Board of Directors takes part in decision-making and oversight as an administrative component of the company. The Board of Auditors audits the legality and validity of the directors' actions as they fulfill their duties. The current system is a function of our corporate governance; thus, we have put in place a suitable and transparent management. We think it necessary to focus on continuous enhancement and strengthening of our corporate governance in order to maintain effective management and respond to the trust our stakeholders have placed in us.

Dai-Dan has concentrated on implementing the following initiatives in accordance with the Corporate Governance Code enforced by the Tokyo Stock Exchange in June 2015.

Early disclosure and English-language translation of the convocation notice for the annual general meeting of shareholders

For the 87th annual general meeting of shareholders held on June 29, 2016, we issued convocation notices on our website in both Japanese and English before the actual notices were sent out in the postal mail in an effort to ensure timely disclosure to shareholders.

Rationale for election of executive officers

In the convocation notice for the 87th annual general meeting of shareholders, we included our reasons for nominating certain individuals as candidates for the positions of director and auditor.

Review of issues for discussion by the Board of Directors

We conducted a review of issues to be discussed by the Board of Directors as a means of strengthening the board's efficiency and supervisory functions. We also expanded the scope of delegation of assignments regarding issues entrusted to executive directors for deliberation. This scope excludes important issues covered by law, our articles of incorporation, and rules governing the Board of Directors.

Evaluating the effectiveness of the Board of Directors

We conducted an evaluation of the Board of Directors as part of our effort to identify and solve current issues related to the Board of Directors and improve its effectiveness.

Evaluations of the Board of Directors are undertaken annually for each director, and as the chairman of the board is responsible, each director conducts a self-evaluation and evaluates the entire board. The Board of Directors undertakes analyses and conducts evaluations while engaging in exchanges of opinion at meetings of the independent external directors.

This initiative was conducted most recently in November 2015, when it was determined that the board was functioning effectively.

In December 2015, we established the Dai-Dan Corporate Governance Guidelines. These guidelines set forth the conditions and policies for Dai-Dan's initiatives for each of the "rules regarding disclosures on specific issues" contained in the Corporate Governance Code.

Through these guidelines, we are systematically presenting our approach to corporate governance, including our basic concept and policies regarding corporate governance; protection of shareholders' rights; oversight of the Board of Directors; dialogue with shareholders; and issues related to sustainability, including social and environmental issues.

In the future, we intend to continue enhancing and improving our corporate governance to ensure even greater effectiveness.

Overview of Dai-Dan Corporate Governance Guidelines

Chapter 1:
General Provisions

Chapter 2:
Relations with Shareholders

Chapter 3:
Corporate Governance System

Chapter 4:
Information Disclosure and Dialogue with Shareholders

Chapter 5:
Relations with Stakeholders Other than Shareholders

Dai-Dan's Corporate Social Responsibility

We strive to provide comfort that is friendly to both people and the environment.

Dai-Dan believes that we play our part in the sustainable development of society by delivering safety, security and comfort to people's lives through our building services engineering and installation work.
CSR at Dai-Dan is about encouraging each employee to pursue the realization of a better environment and the development of society as they perform their tasks in keeping with the five Action Principles of our Corporate Code of Ethics (p. 49).

Stakeholder Relations

Customers, shareholders, employees, subcontractors and local communities — collectively, our stakeholders — are always the focus of any action we take when conducting our corporate activities. We believe that it is imperative that we accurately identify the expectations and requirements of our stakeholders through communication and respond to these needs, in order for us to grow as a company.

We therefore hold semiannual briefings on earnings for analysts in addition to communicating with stakeholders by offering tours of our facilities, issuing press releases, and disseminating information through our corporate website.

Dai-Dan's Responsibility

Environment

We strive to protect our environment and prevent global warming by strengthening our initiatives to develop low environmental impact installation processes and energy saving technology.

Customers

We strive to meet our customers' needs and provide them with high value-added solutions as well as high quality, comfortable spaces.

Shareholders

We recognize that it is our duty to enhance corporate value, maintain transparent and sound operations and disclose appropriate information in a timely manner.

Employees

We place priority on our employees' safety and health, and are committed to ensuring that their workplace is comfortable.

Subcontractors

- We conduct business negotiations with our business partners including subcontractors, while striving to adhere to principles of the utmost fairness and transparency.
- We are committed to improving safety and quality by building healthy partnerships with our subcontractors.

Local community

We recognize that we are a member of society and strive to exist in harmony with the local community through our social contributions in our position as a responsible corporate citizen.

Creating the Environments that Meet Customer Requirements with Dai-Dan's Developmental Technologies

To meet the increasingly diverse needs of our customers and contribute to the emergence of a sustainable society, we employ light, air and water more organically and with greater functionality. With our technological capabilities, we create the environments our customers require.

P. 23–24 Pharmaceutical Plants, Food-processing Plants, and Research Laboratories

Maintaining clean spaces and preventing microbial contamination

Main Developmental Technologies

- **Next-generation CPF**: Contributing to the field of regenerative medicine See p. 15–16.
- **Barrier Smart Series**: Comprehensive technologies for chamber pressure control
- **iRack System**: Providing the optimal environment for animal experiments
- Environmental control technology supporting **research on plant cultivation facilities**
- **ARAPAC**: Automatic self-washing air conditioner for food-processing facilities

P. 27–28 Medical Facilities

Supporting advanced medical care (covered by insurance), infection prevention, and improvement of patient comfort

Main Developmental Technologies

- **Air conditioning system for hybrid operating rooms**
- **BCC-P**: Rooms for immunocompromised patients
- **DTB-02**: Sputum Collection Booth
- **INF Series**: Infection Control Unit
- **Chepas**: Clean Humidification Element Passing Air System

P. 31 Automobile and Machinery Manufacturers

Improving the work environment and energy efficiency

Main Developmental Technologies

- **Optismart**: System supporting optimal operation of heat sources
- **Econo Spot**: Spot air conditioning system with fine mist
- **Oil mist countermeasure technology** based on airflow simulation

Dai-Dan's Underlying Technologies

- Fluid analysis
- Water quality control
- Environmental measurement
- Temperature and humidity control
- Air quality control
- Precision analysis

Technologies

- Energy efficiency
- Supercritical CO_2 processing
- Noise and vibration countermeasures

P. 25–26 Electronic and Precision Device Plants

Contributing to an exceptionally clean environment and reducing operating costs through energy efficiency

Main Developmental Technologies

- **Virtual Duct Clean Room (VD-CR) System**: Contributing to ductless clean rooms
- **Air filter refurbishment technology** incorporating supercritical CO_2
- **Energy-efficient dehumidification system** for rechargeable battery manufacturing plants
- **Energy-efficient technology utilizing outdoor air for cooling** data centers

P. 29–30 General Facilities

Improving comfort and energy efficiency

Main Developmental Technologies

- **Ceiling Free**: Integrated lighting and air conditioning unit
- **ion-Drop**: Innovative technology to prevent particle adhesion
- Energy Consumption **Visualization System**
- **Flow Smart**: Flow control system for pumps in refrigeration units
- **Open Degasifier**: Anticorrosion system for copper hot water supply pipes

Technical Development Group

The Technical Development Group was established in April 2016. This group comprises the Industrial Facilities Department, Technical Research Laboratory and Technical Development Division (encompassing the Environmental Technology Department and Medical Care Facilities Promotion Department). It accommodates advanced technology for equipment intended for hospitals, factories, and research centers. By collaborating as a group, the members benefit from synergies and provide customers with the environments they require in an improved form. Each office, which serves as a contact window for the customers, takes various measures to impart our technological expertise in basic technologies that our Technical Development Group has acquired. We intend to contribute to consistently improved performance by strengthening our ability to create the environments our customers require.

For more details on our technologies, please visit our website. http://www.daidan.co.jp/

Pharmaceutical Plants, Food-processing Plants, and Research Laboratories

Maintaining clean spaces and preventing microbial contamination

Chamber pressure control technology for pharmaceutical manufacturing plants — Barrier Smart Series

In pharmaceutical manufacturing facilities, products must be protected from dust and other contaminants. Moreover, harmful substances must be prevented from migrating out of the facility. Therefore, it is necessary to strictly control the pressure inside the room (individual pressure setting for each room).

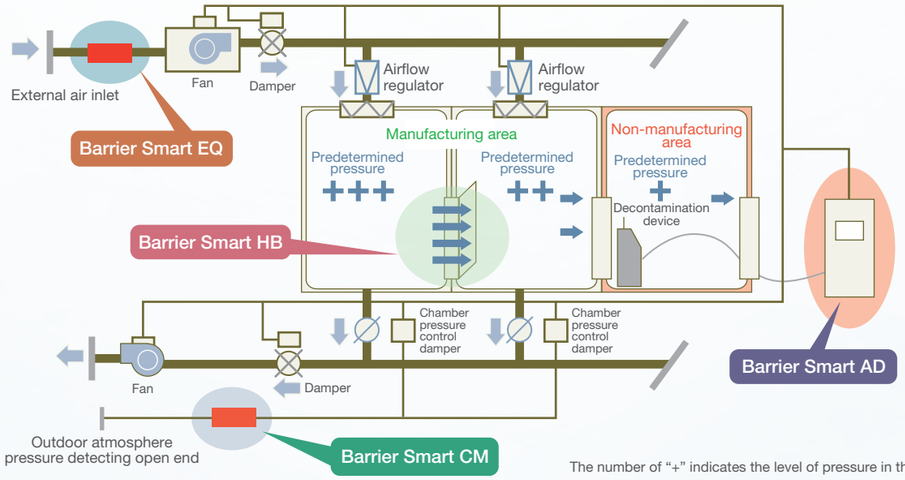
The Barrier Smart Series, our proprietary pressure-control technology, makes it possible to suppress the influence of various disturbances* on the chamber pressure.

Features

- Stabilized room pressure **contributes to improved yield**.
- The mode switch **contributes to increased energy efficiency** by stabilizing room pressure.

* The main causes of changes in chamber pressure are the opening and closing of doors, fluctuations in the outside air pressure, and changes and mode switching of air intake and exhausts.

Diagram of Barrier Smart Series



The number of "+" indicates the level of pressure in the chamber.

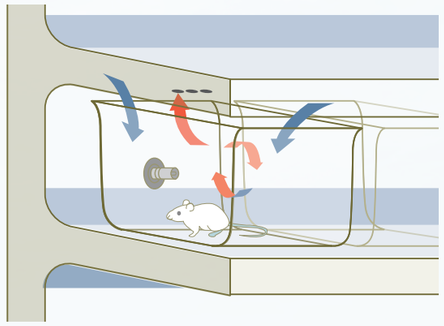
Providing the optimum environment for animal experiments — iRack System

Dai-Dan has developed a number of different animal housing options in an effort to improve animal housing environments, reduce energy consumption, and accommodate animal welfare standards.

The iRack System offers enhanced ventilation efficiency and improved ease of use, thus creating a favorable environment for both laboratory animals and operators. Incorporating air conditioning technology featuring one-way airflow control, the ventilation system minimizes allergens* and prevents objectionable odors and pathogens from spreading throughout the workspace.

iRack System

Diagram of animal enclosure



Features

- Utilizes **enclosure-specific ventilation systems**
- Creates **advanced one-way airflow**
- Shielding-free design for **greater ease of use**
- Contributes to **greater control of temperature and humidity** in the enclosure
- **Reduced frequency of bedding** replacement**
- **Easy maintenance**

* Substances that cause allergies
** Shredded paper or wood chips are used to line the bottom of the enclosure.

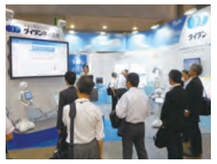
Trade Show Participation

INTERPHEX JAPAN 2016

The 29th International Pharmaceutical R&D and Manufacturing Expo/Conference

Dates June 29–July 1, 2016
Venue Tokyo Big Sight
Products on exhibit

- Barrier Smart Series: Chamber pressure control technology
- iRack System: Housing system for laboratory animals
- Air Barrier Booth: Airflow control booth
- ion-Drop: Technology to prevent particle adhesion

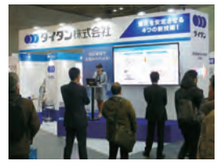


INTERPHEX OSAKA 2016

The 2nd International Pharmaceutical R&D and Manufacturing Expo Osaka

Dates February 24–26, 2016
Venue INTEX Osaka
Products on exhibit

- Barrier Smart Series: Chamber pressure control technology
- iRack System: Housing system for laboratory animals
- Air Barrier Booth: Airflow control booth



Environmental control technology — Research on plant cultivation facilities

Interest in methods of artificially controlling the interior environment of plant cultivation facilities has been increasing among those who regularly supply farm products to market.

Our goal is to offer expertise and technology for cultivating highly functional plants in addition to designing and constructing the cultivation facilities.

Features

- Research on **high-value-added (high functionality) agricultural plants**
  We conduct hydroponic cultivation technology for high-value-added plants and perform functional assessments (for anti-cancer effect, etc.)
- Conducting research in **a collaboration with industry, academia, and government**
  Joint research with Osaka Prefecture University: Research on increasing the active ingredients in hydroponically cultivated plants by providing artificial light

  Joint research with the National Institute of Advanced Industrial Science and Technology: Research on the effectiveness and efficacy of functional ingredients

Plant laboratory of our Technical Research Laboratory

(Cultivation pattern for high-value-added plants)

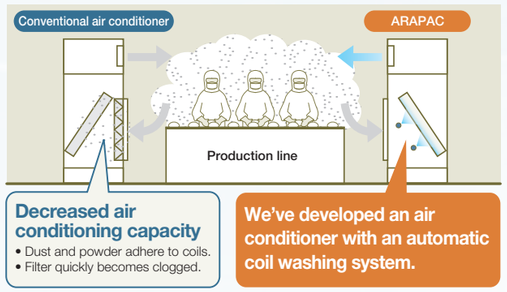
We conduct research on plants exhibiting anticancer or antioxidant effects and which are reported to improve brain function.

Automatic self-washing air conditioner — ARAPAC

Food processors involved in flour milling and the production of bread and confectionery products typically generate large quantities of airborne dust and powder in their facilities as a result of their manufacturing processes. This airborne dust tends to quickly clog air filters of air conditioners and adhere to their heat exchange coils, significantly reducing air conditioning capacity.

We developed ARAPAC, an automatic self-washing filter-less air conditioner that cleans its heat exchange coils automatically.

ARAPAC vs. Conventional air conditioners



Features

- **Maintains efficiency of heat exchangers** by automatically cleaning coils before dust and powders adhere.
- Filter-free design **does not reduce airflow**.
- **Requires little installation space.**

Electronic and Precision Device Plants

Contributing to an exceptionally clean environment and reducing operating costs through energy efficiency

Contributing to ductless clean rooms Virtual Duct Clean Room (VD-CR) System

Clean rooms at sites such as electronic device factories require many ventilation outlets and HEPA filters* in order to ensure a high degree of cleanliness and maintain environments with highly accurate temperature and humidity.

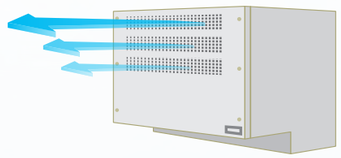
Dai-Dan has developed the Virtual Duct Clean Room System, an air conditioning system that maintains a high level of cleanliness and achieves good temperature distribution even in facilities that lack air conditioning ducts.

Features

- This system incorporates specially shaped and fitted vents that provide extended airflow **in a ductless configuration**.
- It provides **a high level of cleanliness and good temperature distribution at low cost** and **can be installed easily**.
- Reduced amount of material used for ductwork results in **reduced environmental impact**.
- Suitable for clean rooms of ISO Class 6** (Class 1,000) to ISO Class 8 (Class 10,000).

Example of a VD-CR installation

Ventilation airflow diagram



Air vents for ventilation are designed to extend the range of the airflow.

* High-efficiency particulate air filter

** Numerical value indicating the cleanliness class of a particular space

Air filter refurbishment technology utilizing supercritical CO_2

Factories typically dispose of large quantities of used air filters. Dai-Dan has developed and successfully implemented a refurbishment technology intended to reduce this environmental load.

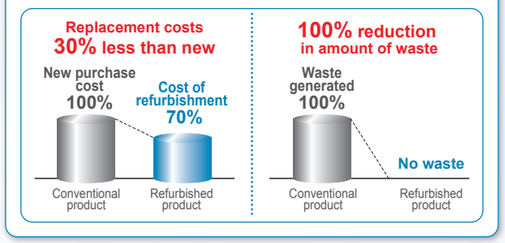
We have developed a recycling business that uses supercritical CO_2* to wash and refurbish these air filters before returning them to customers.

Air Filter Cleaning and Refurbishing Project

Supercritical CO_2 cleaning and refurbishment apparatus

Features

- This innovation represents **industry's first** practical application of air filter refurbishment technology employing **supercritical CO_2**.
- It is suitable for use with air filters **designed to remove organic gases**** at electronic device plants, printing plants, and chemical plants.
- Because air filters are refurbished through washing and are no longer discarded, **the environment can be protected with no initial investment**.
- **Both air filter replacement costs and waste are reduced.**



* CO_2 at a temperature (31.1°C) and pressure (7.4 MPa) above the critical points that behaves as a fluid exhibiting both the diffusibility of gas and solubility of a liquid.

** Includes toluene and other volatile organic compounds (VOCs) that contribute to air pollution and odor-causing ingredients included in kitchen exhaust.

Rechargeable battery plants Energy-efficient dehumidification system

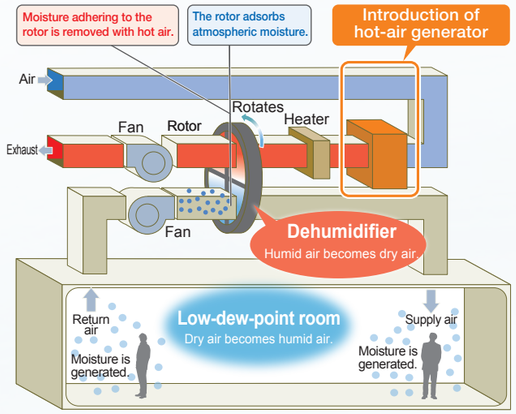
Plants that manufacture rechargeable batteries require rooms with an extremely dry atmosphere, otherwise known as "low-dew-point"* environments. The dehumidifiers used to create these environments consume a great deal of energy, so minimizing energy consumption has proven to be a major challenge in this field.

We are making progress toward the development of an energy-efficient dehumidification system.

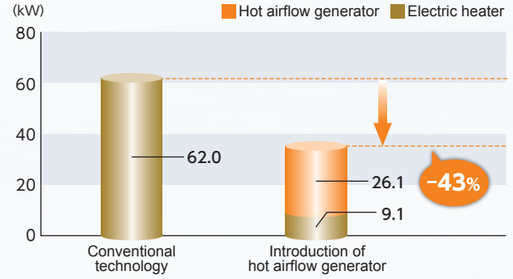
Features

- Energy-efficient dehumidification system
  - We introduced a hot airflow generator with a **CO_2 heat pump** incorporating the design expertise we have gained through our verification testing.
  - We developed a **waste-free circulation system for heat and air**.
- Localized technology for low-dew-point rooms
  - We reduce the quantity of dry air supplied in order to achieve only the **low-dew-point level** required for a particular location.
- Proposals for energy-efficient improvements
  - We conduct thorough research on dehumidification systems and **suggest various degrees of improvement**.

Energy-efficient dehumidification system



Improved energy efficiency



* A low-dew-point room, which is required for the production of rechargeable lithium-ion batteries, contains a very dry environment with a relative humidity of around 0.1%.

Technology for data centers Energy-efficient technology utilizing outdoor air for cooling

New data centers are increasingly adopting outdoor air for their air conditioning systems as an energy-efficiency innovation. These systems are designed to reduce the energy required to cool ICT equipment by directly drawing fresh air into computer rooms for ventilation during the winter season and shoulder seasons.

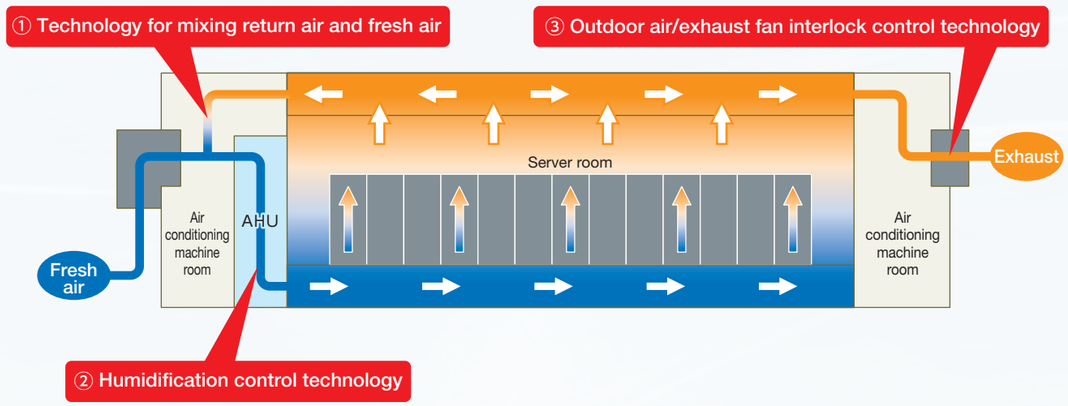
Dai-Dan is focused on research and development with the goal of offering an outdoor-air air conditioning system exhibiting even greater stability and energy efficiency.

Features

① High efficiency and uniform air conditioning is achieved by mixing sufficient fresh air with return air.

② The air is maintained at an optimal humidity level for energy efficiency and to reduce the risk of malfunctions in ICT apparatus caused by static electricity.

③ A stable indoor environment is assured by maintaining a good balance between fresh air and exhaust air.



Medical Facilities

Supporting advanced medical care (covered by insurance), infection prevention, and improvement of patient comfort

Air conditioning system for hybrid operating rooms

In recent years, hospital facilities have introduced hybrid operating rooms integrating both operating room functions as well as cardioangiography functions in order to provide a safer and more appropriate treatment environment.

In a typical hybrid operating room, a positioning rail for the angiography device is mounted over the operating table, complicating the installation of air conditioning vents.

By developing a Clean Fan Unit incorporating HEPA filters* and a dimmable LED lamp, we have made it possible to install an air conditioning vent over the operating table (inside the positioning rail).

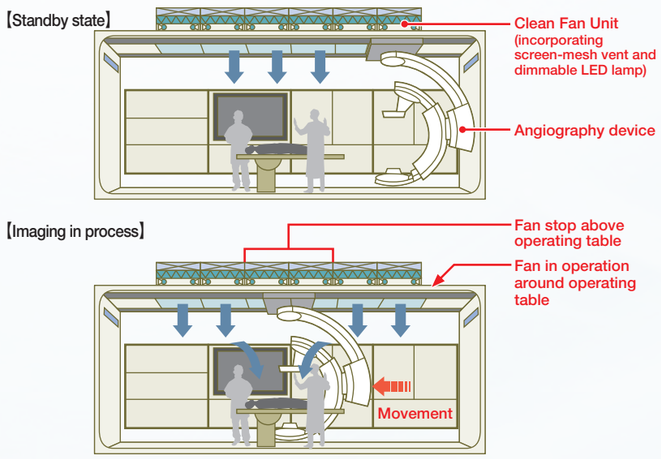
Features

- **Vertical laminar flow** is provided through the Clean Fan Unit incorporating a screen-mesh vent and a dimmable LED lamp.
- This system **provides an improved environment around the operating table** in a hybrid operating room used for general surgery.
- A switch that senses the position of the angiography device **controls the on/off operation of the blower**.

* High-efficiency particulate air filter

■ Screen-mesh vent

■ Air conditioning system for hybrid operating room



Immunocompromised patient room BCC-P

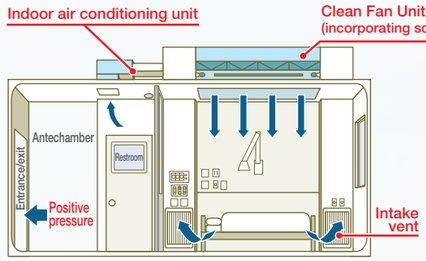
These rooms have been designed to protect patients with weakened immune systems due to, for example, hematopoietic stem cell transplant (bone-marrow transplant) or acute leukaemia, from pathogens. We have successfully created sterile environments in rooms that appear almost identical to typical patient rooms. The rooms have been designed with consideration given to comfort for patients and accessibility for healthcare practitioners.

Features

- These rooms are **Sterile Room Administration Fee 1*** facilities according to the government's revised fee schedule for medical services issued in 2012.
- **Vertical laminar flow system** with Clean Fan Unit incorporating screen-mesh vent and dimmable LED lamp
- Positive pressure** relative to neighboring rooms prevents the **entry of external pathogens**.

■ Immunocompromised patient room

■ Diagram of Vertical Laminar Flow



* Under the 2012 revision of medical treatment fees by the Ministry of Health, Labour and Welfare, this standard has been adopted in response to the initiative to address nosocomial infection measures to enhance the assessment of preventive measures against hospital infections.

** A state in which pressure is higher than the surroundings

Sputum Collection Booth DTB-02

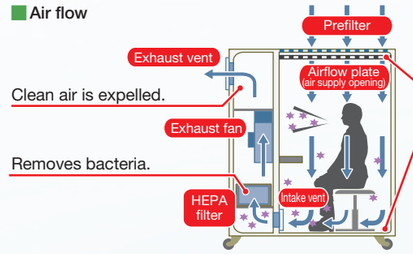
The booth is designed to collect sputum from patients suspected of being infected with airborne infectious agents such as tuberculosis without compromising the surrounding environment.

Features

- The HEPA filters on the exhaust side **completely remove the bacteria contained in the exhaust**, ensuring purified air is discharged.
- A negative pressure* is maintained relative to neighboring rooms **to prevent any bacteria from escaping**.
- The After-Clean Mechanism** need only be switched on to enable **fully automatic operation** during entry into the room, sputum collection, and exit from the room.

■ Sputum Collection Booth DTB-02

■ Air flow



Bacteria released into the atmosphere due to coughing does not remain static. Airflow from the ceiling pushes air through the booth.

Negative pressure is maintained within the booth to ensure that no bacteria leaves the booth.

* A state in which pressure is lower than the surroundings

** By continuing fan operation for a period of time after sputum collection, this mechanism reduces the risk of infection in the area when the door is opened and closed.

Infection Control Unit INF Series

The unit is able to simultaneously complete both air purification and negative pressurization to prevent airborne infection. The unit is suitable for simplified infection control in infection wards, waiting rooms and consultation rooms.

Features

- An existing sickroom can be provided with the benefits of air cleaning and negative pressurization **without a major retrofit**.
- The HEPA filters **sanitize both circulating and exhaust air**.
- **A room can be provided with negative pressurization** through easy duct installation. (With Model INF-201, negative pressurization can be achieved simply with installation of the apparatus alone.)

■ Infection Control Unit

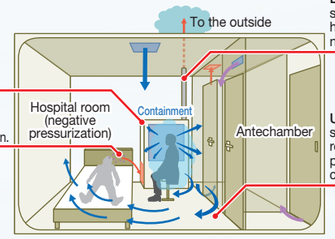
INF-101
Freestanding Model

INF-201
Built-in Model

■ Air flow

Model INF-101 Infection Control Unit: Blows air sanitized with HEPA filters to provide a clean environment for medical personnel.

It quickly draws in and captures droplet nuclei emitted from a patient to prevent further diffusion.



Exhaust: HEPA filters sanitize the exhaust air that helps to maintain the room's negative pressurization.

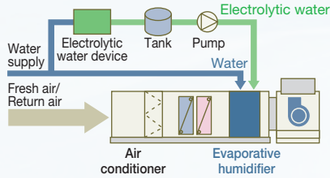
Unidirectional air flow: By shaping the air flow around the room for uniform ventilation, it prevents the spread of contamination in the hospital.

Clean Humidification Element Passing Air System Chepas

In recent years, the evaporative humidification method has been widely adopted in air conditioning systems. However, if these systems are not properly maintained, bacteria can propagate and odors can be generated. In order to solve issues of hygiene related to evaporative humidifiers, Dai-Dan has developed the Chepas system, which uses slightly acidic electrolyzed water*.

■ Front view of unit**

■ Diagram of Chepas operation



* With an available chlorine density of 10–80 ppm and a slightly acidic pH of 5.0 to 6.5, electrolytic water is safe for food sterilization and for hand-washing in hospitals.

Features

- By regularly supplying slightly acidic electrolyzed water to the elements of an evaporative humidifier, this system **kills bacteria propagating in the element and in the lower drain pan**.
- It **supplies clean air** while suppressing the growth of bacteria and the generation of odors.
- It is ideal for medical facilities, food processing facilities, libraries, museums, and other facilities **where mold and bacteria must be minimized**.
- Slightly acidic electrolyzed water is used for food sterilization and for hand-washing in hospitals and **is harmless to humans**.

** Includes an electrolytic water device, tank, pump, and panel in a single unit.

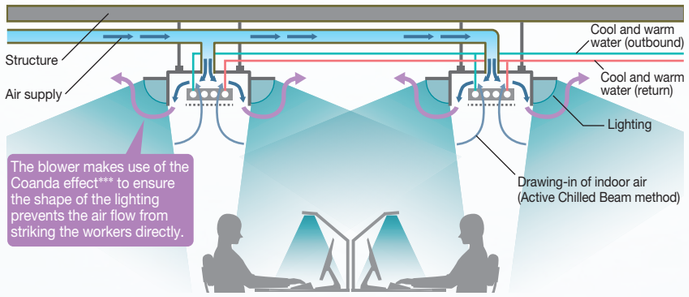
Integrated Lighting and Air Conditioning Unit Ceiling Free

Ceiling Free provides lighting and air conditioning functions in a single integrated unit, which makes it ideal for installation in office buildings. The lighting design and air conditioning system balances comfort and energy efficiency by taking into account the perceived brightness* and by providing an active chilled beam**.

Features

- This illumination design approach takes into account the human perception of brightness in order to create a **comfortable yet energy-efficient illuminated environment**.
- The Active Chilled Beam method utilizes **available renewable energy** to create an air conditioned environment that is both comfortable and energy efficient.

■ Ceiling Free operation



■ Typical installation

* The level of brightness perceived by the occupant from the amount of light entering the eye not only from the desk surface, but also from the entire room.

**The air conditioner incorporates cool and warm water coils. It induces room air flow by introducing air supplied by the outdoor air conditioner and venting the air from a nozzle at high speed. It cools/heats the induced air with coils of the air conditioner.

*** A phenomenon in which a fluid in the form of a gas or liquid flowing along the convex surface of an object tends to continue adhering to that surface

Technology using the power of ions to prevent particle adhesion ion-Drop

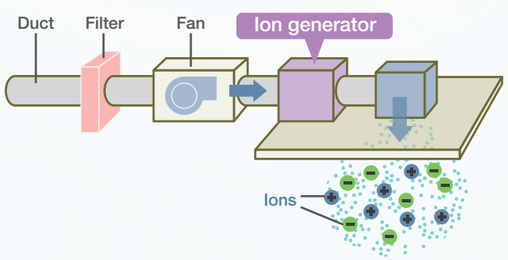
In manufacturing plants, the adhesion of dust particles due to static electricity can be a major problem. In addition, in office buildings, particles of pollen as well as fine particulate matter (PM 2.5) carried in on clothing can present health concerns.

In response, by taking the approach of ionizing the air dispersed throughout a room by the air conditioning system, we have developed a technology using the electric power generated by ions to prevent the adhesion of fine particles caused by static electricity.

Features

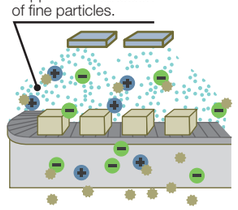
- **Semiconductor fabs and factories involved in film processing, electronic component manufacturing, and food processing**
  By using ionization to **suppress static charges** that contribute to adhesion of dust particles, this system **contributes to improved yield**.
- **Dressing rooms, entrances to office buildings, etc.**
  Air quality, comfort and health are all improved by preventing dust particles from being carried in.

■ The principle of ion-Drop



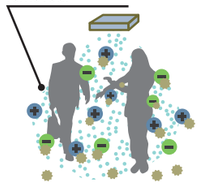
① Manufacturing plant

Suppresses adhesion of fine particles.



② Office building

Particles are easily removed.



* Through ionization, a high voltage is applied to the air to create positive or negative ions. This ionized air can eliminate static electricity.

Energy Consumption Visualization System

We offer a system for buildings requiring careful energy management that clearly displays the amount of energy consumed or produced in the building. This system makes it possible to highlight the appeal and advantages of renewable energy and energy-efficiency initiatives.

Features

- This system makes it possible to manage CO_2 emissions and energy consumption from anywhere in the world (**via the cloud**).
- This system has the extensibility to interoperate with other systems, and **screens can be customized as needed**.
- Minimizing the building's energy consumption improves the building's value and overall corporate value (**reduced CO_2 emissions and environment-friendliness**).

■ Sample screen of the Energy Consumption Visualization System

Flow control system for pumps in refrigeration units Flow Smart

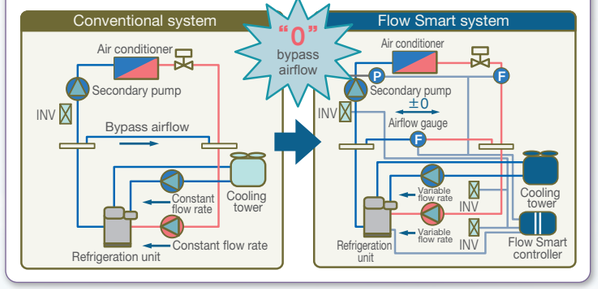
We developed Flow Smart (a pump flow control system for use with refrigeration units) as an energy-efficiency technology to reduce the energy consumed by the pumps in the air conditioning units used by many types of facilities.

The Flow Smart system reduces the running cost of equipment by providing inverter control of the pumps for refrigeration units, which conventionally have been operated at a constant speed. Flow Smart regulates the air flow to prevent any air flow through the bypass unless it is required to run the air conditioning system.

The introduction of Flow Smart enables a 60% reduction in the energy required to run the pump in refrigeration units.

Features

- Bypass airflow control technology developed by Dai-Dan
- Reduces energy consumption of water and coolant pumps in refrigeration units
- Highly energy-efficient as demonstrated by strong demand



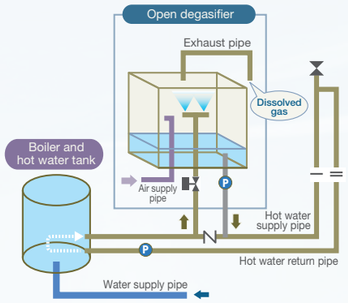
Anticorrosion system for copper hot water supply pipes Open Degasifier

This open degasifier* was developed to reduce the corrosion of copper hot water supply pipes used in centralized hot water supply systems**.

The device, which is connected to copper hot water supply piping, atomizes the hot water internally in order to extract and remove any residual chlorine, dissolved oxygen, free carbonates, and other corrosive elements that might be present. Atomizing the hot water increases the surface area of the water that is in contact with air, increasing the efficiency of extraction.

* Jointly developed with UACJ Corporation (formerly Sumitomo Light Metal Industries, Ltd.).

■ Diagram of open degasifier

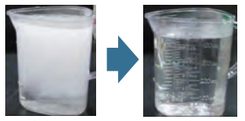


** Hot water supply system with a hot water return pipe and a hot water supply circulation pump is known as a centralized hot water supply system. The return pipe is made of copper.

Features

- Reduces residual chlorine, dissolved oxygen and free carbonates.
- Enables ample hot water pressure and volume.
- Easy installation
- Daily maintenance is not required.

■ Hot water before and after degassing



Automobile and Machinery Manufacturers

Improving the work environment and energy efficiency

System supporting optimal operation of heat sources — Optismart

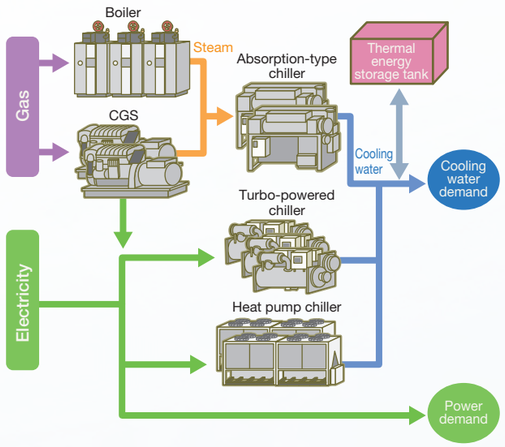
Until recently, operators of heat source systems — particularly large-scale combined heat sources with heat storage tanks and cogeneration systems — determined the timing of startup and shutdown of their systems' various heat sources. However, the operators' varying levels of experience contributed to a decline in the operating efficiency of these heat source systems.

Optismart is a system that provides heat source system operators with a computer-calculated indication of the ideal operating pattern for large-scale combined heat sources.

Features

- Because a computer determines the optimal operation pattern, this system **overcomes differences arising from the varying experience levels** of the heat source operators.
- By determining the optimal combination of heat sources, this system reduces the amount of energy consumed by a heat source (**resulting in increased energy efficiency and reduced CO_2 emissions**).
- **Includes a simulation function** that roughly calculates annual energy consumption when operated with optimal heat sources.

■ Configuration of a typical large-scale combined heat system



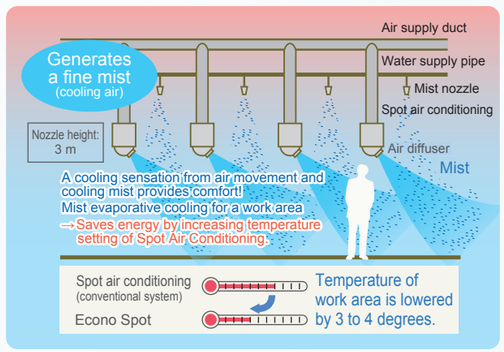
Spot air conditioning system with fine mist — Econo Spot

Our "Econo Spot," which employs evaporative cooling using fine mist along with conventional spot air conditioning, is a system for machinery plants and other factories that efficiently improves the environment in the hot spots of a work area.

Features

- **Ideal for facilities with large spaces** that can be air conditioned with fine mist.
- This **highly efficient and eco-friendly system** employs the natural phenomenon of evaporative cooling with water.
- The **target work area can be cooled with assurance** because the cooling range can be controlled with the mist and air sprayed from the nozzle.
- The **initial cost and running cost are reduced** because mist evaporative cooling reduces the cooling load on the conventional air conditioning equipment.

■ Diagram of Econo Spot

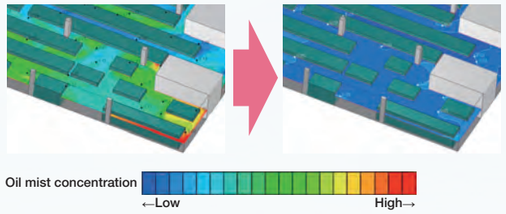


Validation of effects predicted by simulation through site measurement — Oil mist countermeasure technology

In machining floors, cutting oil tends to splatter and evaporate, forming an oil mist that drifts throughout the plant. Although this oil mist is not directly harmful to human health, manufacturing facilities voluntarily adopt their own oil mist standards and manage the density of this oil mist in order to promote comfortable working conditions.

Using airflow simulation technology, we devise a solution capable of providing the most effective ventilation. We then verify its effectiveness.

■ Results of airflow simulation for monitoring oil mist
(Planar view of concentration 1,500 mm above floor)

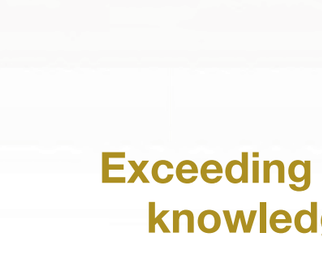


Exceeding customer expectations with knowledge, experience and action

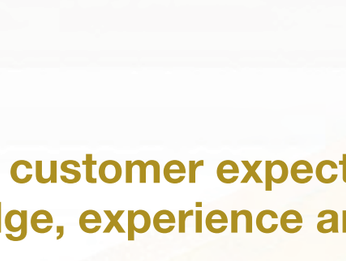
Dai-Dan's Practical Competence

Every building facility we deal with is unique and different, which requires us to employ flexibility and creativity when challenged to accommodate a variety of building structures, usage patterns and customer needs. As a building services engineering and installation provider, we are committed to exceeding the expectations of our customers by applying the knowledge and experience we have gained throughout our history. Moreover, since our establishment, we have exhibited the ability to provide design solutions and installation expertise with inherent skill. This is Dai-Dan's practical competence in the field.

Introducing Our Installations



netXDC Chiba Center 2
SCSK Corporation



East Building
Hiroshima Red Cross Hospital & Atomic-bomb Survivors Hospital

Nankai Terminal Building
Nankai Electric Railway Co., Ltd.

Enhancing Our Installation Expertise and Ability to Provide Design Solutions

Ongoing Improvement of Site Management Methods

Application of the Meister System and Establishment of Partnerships with our Subcontractors across Japan

Data Center

netXDC Chiba Center 2, SCSK Corporation

Installation Project 1

SCSK Corporation constructed netXDC Chiba Center 2, its new data center, as its ninth location in Japan. It went into service on May 1, 2015, as a secure and reliable data center (in compliance with JDCC Tier 4*).

Dai-Dan installed the air conditioning system, and we introduce our initiatives below.

Features of the Data Center

1. A high-quality Data Center capable of supporting business and the evolution of IT

- High-density racks contribute to optimization of TCO**.

2. Adequate “disaster response equipment & security” to ensure superior business continuity

- The latest seismic isolation technology meets standards for rolling + vertical shock.
- Can provide 72 consecutive hours of power generation without refueling.
- Comprehensive security system
- Fully redundant principal facilities

3. Contributes to reduced environmental impact with highly efficient equipment and use of renewable energy.

- Green IT targeting compliance with PUE*** 1.3

* This standard was established by the Japan Data Center Council (JDCC) and stipulates that the contents of the facility meet the level of reliability required for construction of a data center. Tier 4 is the highest service level among all tiers (assumes operational reliability exceeding 99.99% for end users).

** Total Cost of Ownership refers to the total of all expenses including introduction of the computing system, maintenance, and management.

Building outline

Location	Inzai, Chiba Prefecture
Total floor space	15,600 m²
Construction	Steel frame construction: Base isolation foundation + vertical vibration control Damping less than 250 gal in a seismic intensity of Class 7 (seismic intensity of upper 5) Floor load: 1,500 kg/m² Ceiling height: 3,200 mm, underfloor height: 800 mm
Power source equipment	Special high-voltage loop power reception, dual power reception systems Private gas turbine power generation (capable of operating 72 hours without refueling) UPS block redundant method (10 minutes guaranteed)

*** Power Usage Effectiveness is one metric indicating the electric efficiency of the data center. The formula is calculated as follows:
PUE = power consumption of the entire data center ÷ power consumption of the IT equipment.
Electric power efficiency is considered high as it approaches a value of 1.0.

Comment of the customer

Engaging Dai-Dan employees with difficult challenges

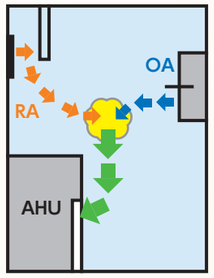
For 20 years, we were not building a new Data Center from construction of the building, and as a result, we had few experienced people remaining on staff and had to contend with a number of challenges, but we nevertheless embarked on this project in collaboration with designers and builders. We focused on creating a data center that would be considered the most reliable and secure in the industry, so we sought to attain full compliance with JDCC Tier 4. As a result, this facility can remain in operation independently for up to three days even if all energy and water lifelines are cut off.

We also required that Dai-Dan staff focus on some very difficult challenges in terms of air conditioning, which has a great impact on running costs. Clearly, Dai-Dan employees met the challenge of overcoming some very high hurdles by applying their technical skills and practical competence.

Takao Morita
Manager, Facility Construction Sec. netX Facility Dept. netX Data Center Business Div. IT Management Group, SCSK Corporation

Air conditioning overview

Air conditioning characteristics	● Makes maximum use of ambient air cooling and high-efficiency cooling by means of inverter control. ● Operation is optimized through visualization of temperature distribution and equipment operation status. ● PUE target is 1.3. ● Heat sources: N＋2 units, Plumbing: 2 routes, Air conditioning: N＋2 units, Central monitoring: 2 systems ● During an outage, cooling water continues to be supplied from the heat storage tank after the chiller stops and until it reboots in 10 minutes.
Air conditioning equipment	● AHU: Computer system 110 kw × 160 units ● Fan for ambient air cooling: 12,400 m³/h × 20 units, 20,700 m³/h × 12 units
Cold/heat sources	● Turbo chiller: 800 USRT × 7 units ● Cooling tower: 3,660 kW × 7 units ● Plate-type heat exchanger: 4,290 kW × 6 units



Mock-up of the air conditioning machine room allows for examination of airflow during ambient air cooling

Heat source machine room (inverter turbo chiller)

Air conditioning machine room (floor vent air handling unit)

Comment of the field representative

Because our customer’s standards were very high, this was a good learning experience.

This project involved the construction of a high-quality data center designed to be fully compliant with JDCC Tier 4. The customer’s standards were also quite high, so this was a good learning experience for those of us who were in charge of the task. We feel a major sense of accomplishment because we were able to adhere rigidly to the plan even though the construction deadline was very tight. Thanks to the cooperation of our Technical Research Laboratory and our Industrial Facilities Department, we were able to devise the mock-up shown above and engage in on-site data measurement. We were therefore able to safely complete the fine-tuning of the ambient air cooling, which had been an issue from the beginning.

In closing, I would like to express my sincere appreciation to everyone at the design and construction companies, the contractors of other facilities, our subcontractors, and above all, the employees responsible at SCSK Corporation for their cooperation and for their role in bringing this project to completion.

Yoshiaki Kotaniguchi Manager of Engineering Section 2, Engineering Department 3, Tokyo Head Office

Medical Facility

East Building, Hiroshima Red Cross Hospital & Atomic-bomb Survivors Hospital

Installation Project 2

The Hiroshima Red Cross Hospital & Atomic-bomb Survivors Hospital undertook the renovation of existing buildings and maintenance of the external structure as well as the construction of new buildings as part of the hospital's redevelopment to meet new earthquake-resistance standards and refurbish deteriorating wards. Basic design work started in 2012, and new construction began in November 2013. The project was completed in September 2015. In October, the East Building opened to the public. This building was designed as a facility capable of providing medical care during a disaster; as a facility offering enhanced cancer treatment and medical cooperation; and as a facility providing emergency care and advanced medical care in the area.

The renovation of the Center Building and South Building connected to the East Building, as well as maintenance of the front parking lot, will require more than one-and-a-half-years to complete, with a grand opening scheduled for June 2017.

Dai-Dan was responsible for installing the hospital facilities' air conditioning system under contract from the builder, Fujita Corporation. That project is introduced here.

Hospital renovation brings enhancements and improvements.

- A heliport was provided on the roof of the East Building for improved patient transportation.
- The 3rd floor of the East Building aggregates an ICU, HCU, and operating rooms as well as emergency critical care beds.
- The number of operating rooms was increased from 6 to 10.
- The number of beds for emergency and postoperative care was increased from 14 to 20.
- The emergency ward was expanded and an adjacent CT/general imaging system was installed.
- The hematology and oncology treatment center was expanded from 45 to 55 beds.

Building outline

Date completed	September 18, 2015
Location	Senda-machi, Naka-ku, Hiroshima City
Total floor space	24,446.33 m^2 (building area 3,242.97 m^2)
Construction	Steel and steel-reinforced concrete (subterranean seismic construction)
Scale	11 floors above ground, first floor elevator machine room
Bed capacity	232 beds (East Building only)

Comment of the customer

Difficult installation work was carried out while the hospital continued to function.

As for construction of the East Building during the hospital's renovation, we were concerned about the compressed construction schedule, as the workers could not easily install the stakes from the start of construction work due to the presence of underground objects. During the early days of the project, an outdoor air conditioning unit in the machine room froze, but Dai-Dan responded quickly and the problem was resolved without issue. In addition, although fan coil unit air conditioners had been employed previously, the design was changed to individual air conditioning units, and complaints about excessive heat and cold declined sharply. This was a life-saver for our side of management. I wish to thank everyone at Dai-Dan who took our problem to heart to determine to prove that we could improve our air conditioning during the no-heating and no-cooling shoulder seasons while there is a functional limit on air conditioner usage.

Koji Sakamoto

Manager of Facility Section, Hiroshima Red Cross Hospital & Atomic-bomb Survivors Hospital

Air conditioning overview

Air conditioning characteristics	● Air handling equipment ・Air-cooled module chillers (three units) supply cool and warm water to the outdoor air conditioning units. ・The OP Hall, ICU, HCU, Autopsy Room, and Kitchen are served by outdoor air conditioning units. Other facilities are served by air-cooled heat pump units. ・Compact gas-fired once-through boilers (two units) supply 2 autoclaves on the 2nd and 4th floors and the rotating oven and washing machine on the 9th floor. ● Ventilation equipment Class 1, 3 ventilation + heat exchangers at all sites ● Flue gas equipment Mechanical smoke extraction from general-use rooms, emergency elevator
Air conditioning equipment	Operation Hall × 1 unit, ICU/HCU × 1 unit Autopsy Room × 1 unit, Kitchen × 4 units
Cold/heat sources	For central air conditioning: Air-cooled module chillers × 3 units

Case studies of improved quality

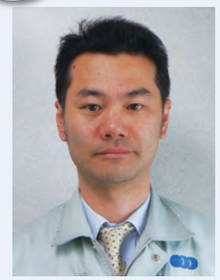
Ventilator fans for chemical exhaust system

Fan silencer in service

Air-cooled chiller silencer in service

Comment of the field representative

We strove to provide facilities with enhanced quality.



Tsuyoshi Fujita

Project Master of Engineering
Section 2, Engineering Department 3,
Chugoku Branch

This building is a regional medical support hospital located in the center of Hiroshima City, and it has been designated a local cancer coordination center. Because the building site is narrow, the floor height is low and the building is curved, which required a creative approach to installation because the space was smaller for the volume of the facilities. In addition, time was required for removal of underground objects, so it was clear that the construction period would be compressed.

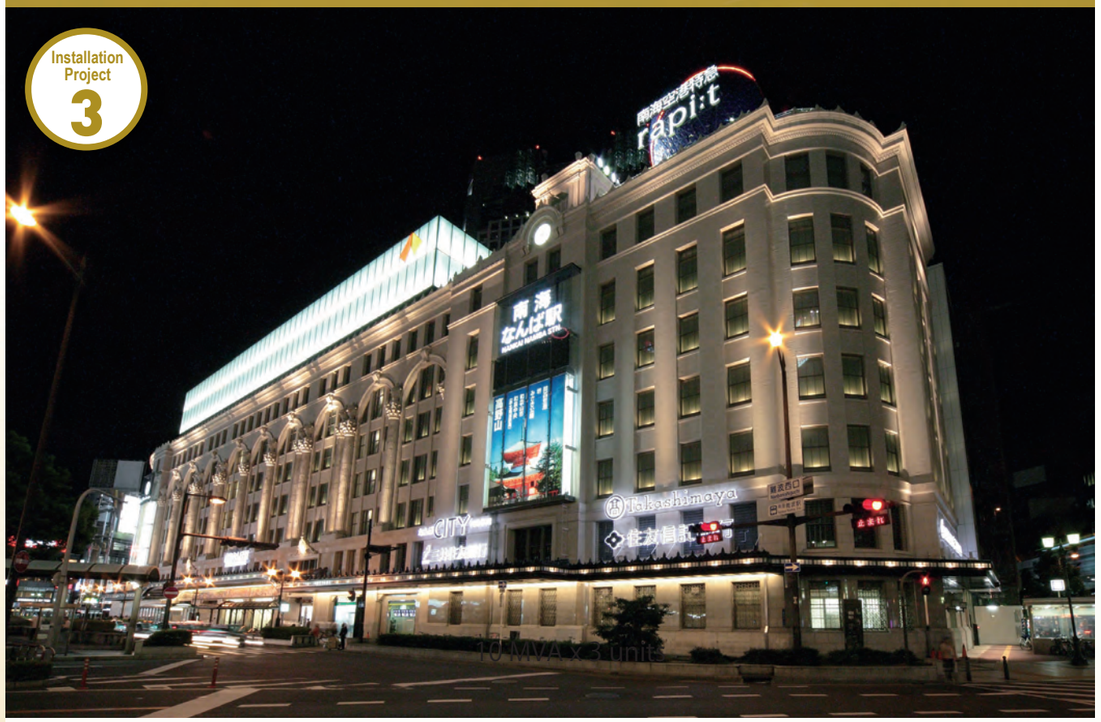
In light of this situation, we studied how to ensure quality. For example, we confirmed the operation of positive and negative pressures to prevent hospital-acquired infection through air conditioning and ventilation systems by checking the operating condition of the fan. However, it was necessary to test when it was connected to the existing structure. Moreover, we had to test the installation methods* used to seal the ducts of the chemical exhaust system and select a sealant to prevent air leakage; prevent water leaks from the drain pipes in numerous patient rooms; and examine noise abatement devices to prevent noise from rooftop equipment affecting neighboring residents.

As a result, our work had to contend with many adjustments during planning and installation. We are deeply grateful to the hospital management, the construction company, the subcontractors, and the branches that contributed to this accident-free project. I very much appreciate the contributions of all.

*to interlock boards together by joining parts

Shopping/Railway Complex

Nankai Terminal Building, Nankai Electric Railway Co., Ltd.



Nankai Namba Station is a railway terminal in the Osaka Minami district that opened in December 1885.

The Nankai Building on the opposite side of Midosuji Boulevard marked its 84th anniversary in 2016. The Namba CITY Building itself fully opened in March 1980. The concept of developing a community around Namba Station was advocated to take advantage of the opening of Kansai International Airport in September 1994. This gave rise to the plan to build a super-high-rise hotel above Namba Station. Consequently, the Nankai Group opened Nankai South Tower Hotel Osaka (currently Swissotel Nankai Osaka) on March 29, 1990.

Kansai Airport functions as a gateway between Osaka City and the world and continues to change with the times while respecting tradition.

Dai-Dan began installing lighting of the vicinity of the Nankai railroad line in 1907, and since then we have been in charge of design and installation of new construction, extension, and repair projects. In a series of upgrading projects related to an extra-high-voltage power-receiving substation, we have been engaged in servicing of electrical equipment under Nankai Building Service Co., Ltd. Here, we introduce that project.

Building outline

Location	Osaka City, Osaka Prefecture
Total floor space	335,935 m^2
Scale	36 floors above ground, 3 floors below ground
Construction	Steel-reinforced concrete
Operations	Specialty stores and railroad terminal complex
Main facilities	Namba Station, Nankai Electric Railway; Osaka branch, Takashimaya department store; Namba CITY (Main Building, South Building); Swissotel Nankai Osaka
Characteristics	A 24-hour (multipurpose) complex comprising a railway station, department store, hotel, offices, bank, and other stores

Construction overview

(1) Updating project for extra-high-voltage monitoring panel	Construction period: June 2013 to March 2015
(2) Updating of No. 3 TR	Construction period: November 2015 to March 2016

Note: Followed by a series of updating projects

Electrical equipment overview

Characteristics of the electrical equipment	● 77,000 kV: Main line and 2 spare power-receiving lines ● Contracted electrical current: 17,000 kW ● Generators: System serving Namba CITY and hotel 6,600 V/2,000 kVA × 1 unit, 1,850 kVA × 1 unit System serving Takashimaya department store and bank 6,600 V/1,500 kVA × 1 unit ● In the event of a malfunction of an extra-high-voltage transformer, electricity can be transmitted from adjacent extra-high-voltage transformers. ● Sub-electric rooms: 17 locations (one of which houses the backup power supply)
Extra-high-voltage transformers	● 3-phase/3-way: 77,000/6,600 V 10 MVA × 3 units ● 3-phase/3-way: 77,000/6,600 V 12 MVA × 1 unit
Operation and monitoring equipment	● Extra-high-voltage monitoring panel in extra-high-voltage electric room ● Central monitoring panel in Control Center
GIS (gas insulated switchgear)	● Receives the main line and spare lines. The devices supply electricity to the various extra-high-voltage transformers.

Extra-high-voltage monitoring panel

Carry-in of No. 3 extra-high-voltage transformer

No. 3 extra-high-voltage transformer after installation

Comment of the field representative

We proceeded according to plan with detailed attention to safety.

This upgrading project was part of a large-scale plan involving power outage work on an extra-high-voltage power-receiving substation.

Because this project took place in a shopping and hotel complex that is open 24 hours daily, we worked to ensure the facility was not affected by any mishaps.

I would like to thank everyone at Nankai Building Service as well as our subcontractors, suppliers, and dealers for their cooperation.

This upgrading project will continue with additional installations until 2024.

We are confident that each of these installations will proceed in complete safety.

Toru Kakemoto
In charge of Deputy Manager of Engineering Section 4, Engineering Department 1, Osaka Head Office

Enhancing Our Installation Expertise and Ability to Provide Design Solutions

Sharing and utilizing the enhanced value generated by our on-site expertise

Case study presentations to share expertise and integrity throughout Dai-Dan

In November 2015 we held the Eighth Case Study Presentation. This event gives our employees an opportunity to present the achievements they have made through expertise and integrity in the course of their day-to-day work. Awards are also presented.

These presentations are broadcast live via our videoconferencing system to allow all employees across the country to participate.

These case studies typically address topics such as improvement of conventional installation methods; efficiency improvements through adoption of new installation methods and equipment; energy-efficient and environment-friendly design; learning from past shortcomings; cost reduction; and examples of improved safety and quality management methods. A total of 167 applications were submitted from all over Japan.

Among these, 48 passed the first assessment, with 26 passing the second assessment to receive the following awards and be part of the case study presentations: one Chairman's Award, two President's Awards, two Head of Technical Construction Division Awards, five Outstanding Performance Awards, 10 Good Effort Awards, and six Encouragement Awards (resulting in 17 awards to groups and nine awards to individuals).

The Chairman's Award, the highest award, was presented to the Kyushu Branch for its case study on "Verification of the use of ozone as a water purifier."

The case studies recognized at the presentation are shared at each office and site and are utilized as notable achievements suitable for internal training purposes. Through this initiative, we expect to enhance our employees' skills and improve Dai-Dan's technology as well as our safety management and quality control expertise.

Award recipients

Case Study Presentation

Comment of the winner of the Chairman's Award

Considering the numerous excellent examples of design, installation, recommendation, and upgrading throughout Japan, I feel extremely honored to have been selected for the Chairman's Award at the Eighth Case Study Presentation.

My case study — which involved about two years of work — involved a trial-and-error approach to finding a method of dissolving gaseous ozone in water and a method of obtaining the characteristic benefits of ozone in water. Eventually, I was able to verify the water purifying effect.

With the first attempt at verification, I encountered many unknowns, but I kept working my way through these challenges without giving up. My repeated attempts at verification eventually produced results and, as a result, I received a high appraisal. Perhaps that's why I was selected for the Chairman's Award.

I intend to take courses through continuing education in order to respond flexibly and with confidence to a greater variety of customer demands as a Dai-Dan engineer.

Go Suyama
Chief of Engineering Section 3, Engineering Department, Kyushu Branch

Technical Reports

Our technology is supported by the results of a combination of ingenuity, hardship, failures and successes in the field.

When an individual engineer writes and illustrates his or her experiences, a sense of commonality is achieved and the personal experience contributes to our company's technical capabilities. These examples of expertise and ingenuity are incorporated into the Technical Reports, which are made available to all engineers.

Technology Information Hour

The Technology Information Hour takes place after work through our videoconferencing system to provide opportunities for sales, design, and engineering staff to share information on ceaselessly advancing technology. Topics include the latest technology information, quality management, safety measures, and energy efficiency. The Technology Information Hour started six years ago; as of this writing, 170 sessions have been broadcast to a total of 12,826 participants.

Topic selection and session leadership are undertaken by engineering staff of the Technical Construction Division, Technical Development Division, the Technical Research Laboratory and the Industrial Facilities Department. In addition, external lecturers present some talks in these sessions, and study group meetings are held at each office. Sessions are recorded and distributed to those who are unable to attend the sessions due to work-related reasons, in order to provide greater opportunities for self-directed learning.

The New Information Hour will continue to be held in fiscal 2016 with topics related to various underlying technologies including medical, devices, energy efficiency, and electricity, with the goal of adding these technologies to our basic technologies.

Major topics of sessions held throughout the previous year

- Causes of and countermeasures for quality incidents and industrial accidents
- Energy consumption visualization system with demand controller
- Subsidies for energy conservation
- Promoting the use of IT in the field
- Study meeting for automated control
- Trends in LED usage
- Community TV reception technology
- Introduction to the Clean & Dry Lab of the Technical Research Laboratory's new Research Center
- Using supercritical technologies
- Basic introduction to plans for medical product manufacturing facilities
- Technical seminar on top runner secondary standard and transformer deterioration

Training engineers and passing on skills applicable to work in the field

An innovative human resource system for appropriate appraisal of field specialist engineers

We launched a new human resource system in April 2014 intended to support appropriate evaluation and job promotion of engineers engaged in installation in the field.

In our previous system, only employees in the management division could be promoted to the position of section manager or department manager. Therefore, for engineers specializing in on-site work, we established the positions of Grand Project Master (GPM) and Project Master (PM), which are equivalent to the positions of section manager and department manager in the management division, respectively.

Engineers can choose either the management pathway or field specialist pathway. If they choose the latter, they can be promoted to the position of GPM or PM.

Also, in April 2015, we established the Technical Master (TM) position for field specialist engineers below the rank of section manager and reviewed our employee appointment system. By August 2016, we had appointed seven GPMs, 47 PMs, and 22 TMs.

Installation experience is evaluated according to its application to medical, industrial or other types of facilities, and a special allowance is paid to GPMs, PMs and TMs in recognition of their achievements. A special promotion may be awarded depending on the number of special allowances paid.

As a design and installation company, Dai-Dan needs to develop outstanding engineers capable of performing installations in the field and willing to pass on their skills. We are taking steps to enhance their technical skills by accurately evaluating skilled engineers capable of working on-site and increasing their motivation.

With this new human resource system, we are helping to ensure that the skills of outstanding engineers in charge of installation will be passed on.

Flexible allocation and capitalization of skilled personnel through understanding of specialized installation skills

Engineer Ranking Chart according to area of specialization (Committee for Living in the New Era)

Our greatest asset, our employees, must demonstrate their abilities to the maximum as they meet the variety of demands that arise with advanced building facilities while continuing to provide a level of quality that exceeds customer expectations.

Our Engineer Ranking Chart, sorted according to area of specialization, does not rank our engineers, but accurately determines the areas with which an individual is familiar or has installation experience. Its aim is to place the right engineer in the right post in order to create the ideal installation system.

In order for Dai-Dan to continue to be a company required in the society, our Committee for Living in the New Era, which studies personnel allocations free from stereotyping, prepared the Engineer Ranking Chart in December 2011 and updated it as of July fiscal 2014 according to the area of specialization of the technical employees (810 in installation divisions and 192 in development design divisions).

We are currently using this resource mainly for the purpose of providing engineer support across office boundaries, and we believe that its adoption across a wider range of applications, including systematic staff allocations, will enable us to pass on skills to future employees.

Creating value by providing solutions with a flexible approach

Dai-Dan is involved in providing electrical, air conditioning and plumbing works, and our engineers are diverse in terms of their specialization as well as their gender. This diversity generates value created by “out of the box” thinking fused with a flexible approach.

Currently, many female employees are active on our front lines in the field. Under our new mid-term management plan, we advocate the strategy of “promoting a diversified approach to work,” and we are engaged in improving the work environment so that female employees can continue to advance.

VOICE

Skills of our female employees in the field

I once saw my older sister, who had studied architecture, working on drawings, and thought that her work was just so appealing. So I followed in her footsteps and made good progress. My school lectures taught me that the indoor environment can greatly influence efficiency and comfort as well as the way people work, so I thought I could provide comfortable spaces to many people from the facilities side. Consequently, I chose to work in this industry. I accepted Dai-Dan’s offer largely because I was able to make a human connection here, and those senior to me all mentioned that this company had a welcoming atmosphere.

Currently, I am involved in a new construction project for an office building with a total floor area of 8,260 square meters that is scheduled for completion in the spring of 2017. But the most impressive project I have been involved with so far is the construction of a building for a university. I was involved with onsite work on this project from the beginning right up to completion, even though I had been with the company for only two years.

As a field representative, and as a field supervisor, I was blind to many things, and even now I clearly remember how I felt insecure every day on the job. But one event greatly changed my somewhat negative outlook: my boss simply told me to “not be afraid of failure.” He told me that it is important to resolve problems early instead of dwelling on the failure. So, I developed the ability to adopt a positive attitude toward whatever came up.

Another positive experience was an encounter with one female CAD operator. When I saw her working with vigor, I decided that I wanted to become like her some day and that I would work harder.

At my worksite, I had the opportunity to get involved in all processes from the review of drawings to final installation. But many a time, actual installations didn’t go according to the drawings, and it gave me headaches. One thing that left a lasting impression was when we had to stack a dehumidifier and an indoor unit in a top and bottom configuration due to the limited space inside a particular ceiling. Finally, we were able to solve this issue in a pleasing manner after the site staff in charge and senior workers had tossed around ideas and worked through the problem with a lengthy trial-and-error approach.

Although we encountered many hardships in the field, I cannot express the sense of accomplishment I felt once we were able to complete a project safely after overcoming all the challenges we faced.

At the jobsite, I learned that personal relationships are essential in order to get work done. I don’t say it’s because I am female, but the subcontractors and I would often joke around, and when they made me laugh, they would say, “This job is fun.” I think that this was the big factor that enabled us all to get through a difficult situation together.

I was relieved as the completion day approached; on the other hand, I missed the people I had worked with as their numbers thinned out day by day. But when they said they wanted to work with me again on another project, I was delighted. However, I still felt I could try harder in the field.

On the days I encountered the CAD operator, she encouraged me, and getting to know various other people on the job site helped me grow. Moreover, I often think about how wonderful it would be if the young people who see me work are encouraged or inspired to enter this industry and overcome their own unease. I hope to acquire much more experience so that I can become such an engineer.

Shuri Sasaki

Engineering Section 2, Engineering Department 3, Tokyo Head Office

Ongoing Improvement of Site Management Methods

Continuously improving health and safety initiatives with the goal of eradicating industrial accidents

Workplace health and safety management system

Under the leadership of our executive management, Dai-Dan places the highest priority on the health and safety of our employees and implements health and safety initiatives involving offices, worksites, and subcontractors. We continuously endeavor to remove hazards and reduce the risk of workplace accidents as we strive to maintain and enhance health; promote the creation of more comfortable work environments; and ultimately improve health and safety standards.

More specifically, our headquarters formulates an annual Company-wide Health and Safety Management Plan. The plan is based on Our Policy for Health and Safety developed by our president and incorporates quantitative and priority goals after they are revised each year following an assessment of past results.

Under this plan, each branch/office formulates and implements a Branch/Office Health and Safety Management Plan that includes its own respective priority goals. Each worksite also develops a Branch/Office Health and Safety Management Plan for each construction project and Installation Management Targets (addressing safety, quality, and the environment) outlining specific hazardous and harmful factors with respect to each project. They are implemented following the adoption of changes or revisions to accommodate the ongoing progress of the project.

Our offices and headquarters regularly conduct health and safety audits and patrols; they also investigate and evaluate the enforcement of these Health and Safety Management Plans. We continue to maintain and anchor this system as we conduct activities to revise and improve them.

Ensuring health and safety is one of our social obligations to society, and we aim to create a company that upholds the public trust. We strive to attain continuous improvement in addition to improving our health and safety initiatives utilizing our workplace health and safety management system.

Our Policies for Health and Safety

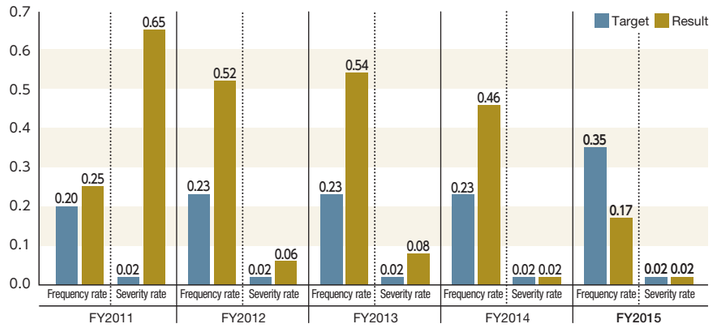
Health and Safety Philosophy

“Ensuring Health and Safety” is our obligation to all the employees of our companies, their families and the society.
In DAI-DAN, we give top priority to “Safety” and “Health”. We strive to be the corporation which the society trusts, with DAI-DAN’s top management and employees working together to enhance the safety and comfortable working environment.

Action Statements

1. We utilize “Health and Safety Management Systems” to eradicate all industrial accidents. We endeavor to eliminate risk and hazards in all work activities, and continuously improve and enhance the health and safety of our workplace.
2. We promote cooperation among offices, worksites, subcontractors, with good communication, and promote voluntary revitalization of health & safety activities by defining each role.
3. We observe workplace safety and health-related laws including our company’s internal health & safety management systems regulations for the enhancement of health and safety standard of our employees and staff, preserving and improving their health.
4. We educate all people working for DAI-DAN in our policies for health and safety and also disclose them to the public.

Safety performance



Frequency rate (frequency of workplace accidents)

$$\frac{\text{The number of accident-related deaths and injuries (four or more days off work)}}{\text{Total work hours} \times 1{,}000{,}000}$$

Severity rate (severity of accidents)

$$\frac{\text{Workdays lost}}{\text{Total work hours} \times 1{,}000}$$

Initiatives for fiscal 2015

In fiscal 2015, we experienced a decrease in accidents (from 36 to 26 industrial accidents, excluding commuting and office accidents). Our target values included a 0.17 frequency rate (0.35 target value), and a 0.02 severity rate (0.02 target value).

However, accidents involving falling and tumbling from height, which were identified as one of the most pressing health and safety management initiatives, increased in terms of both number of incidents and total workdays lost. In addition, many experienced employees of greater age and with more than 10 years of experience suffered accidents; notably, employees aged 50 years and older were involved in 67% of accidents.

We have identified the following focal points and are striving to achieve company-wide improvements during this fiscal year:

1. compliance with the basic actions and rules when working at height;
2. thorough implementation of fall-prevention actions on portable platform;
3. implementation of on-site risk identification as well as the practice of "finger-pointing and calling" for each worker; and
4. prevention of health risks attributable to excessive workload.

Target

Reduction of workplace accidents

Priority items

- Prevention of accidents involving falls
- Prevention of accidents involving new and less-experienced employees
- Adoption of "finger-pointing and calling" as well as risk identification for each worker

Industrial Injury Prevention Rally

We held Industrial Injury Prevention Rallies at 11 locations across Japan during National Health and Safety Week in order to raise awareness of health and safety.

About 2,600 people participated in the 2016 rallies, including the chairman, president, executive officers, our employees, and employees of our subcontractors. Certificates were presented to individuals and groups who promoted outstanding health and safety initiatives.

At each venue, they delivered safety lectures, presented case studies on safety initiatives at their worksites, and renewed their commitment to safe operations.

Fiscal 2016 Industrial Injury Prevention Rally Nagoya

Safety inspections

Safety inspections are conducted by employees at various levels, from inspections by top management to inspections by the Health and Safety Association of our subcontractors. We make an effort to advocate health and safety awareness and to enhance health and safety standards.

Our president, Shohei Kitano (second from left), participates in an inspection.

Using IT to increase efficiency of fieldwork and improve installation quality

Introducing the use of tablets and cloud services

Tablet utilization is one initiative to promote the adoption of information and communications technology (ICT) in our company. This innovation has shown the benefit of increased efficiency of business processes and revitalization of in-house communications.

The tablets lent to individual engineers and the applications installed in them are used as a new communication tool that contributes to greater visualization when reports are submitted to managers or information and instructions are issued to workers in the field. As a result of this innovation, we have realized an improvement in efficiency and increased reliability of task delivery.

Using Internet-based cloud services to enable interactive data access contributes to real-time information dissemination and reception, including delivery of field data by means of photos and video and access to technical databases from outside the office. Essentially, the cloud is used as a tool to reduce the distance between offices and the field as well as between supervisors and the people in charge.

We are shifting towards a "paperless" organization by deploying data through the cloud using personal tablets for each individual attending in-house meetings instead of using a large volume of printed matter. This can be an important part of our environmental initiatives.

Field technology inspection

Confirming progress of installation

Task meeting

Application of the Meister System and Establishment of Partnerships with Our Subcontractors across Japan

Maintaining quality assurance through strong partnerships with our subcontractors

Dai-Dan Meister System

Revision of the system

We began implementing the Dai-Dan Meister System in 2011 with the objective of securing excellent foremen for our subcontractors to support our ultimate goals of improving work quality and ensuring safe and efficient field operations. Installation work — particularly in the areas of electronic devices, biotechnology and other leading-edge technologies on which we plan to focus our resources — requires a high degree of expertise in order to maintain high quality.

In October 2012, we revised the regulations in order to train more Excellent Foremen and High-level Foremen under our Meister System. One of the revisions entails providing subsidies for acquisition of higher certifications such as the registered essential technicians certificate. In addition, we decided to pay cash rewards for Meisters and Excellent Foremen for their fieldwork.

In July 2016, awards were presented to 96 certified foremen from 55 companies and cash rewards were presented to 155 Meisters and Excellent Foremen.

Meister Award Ceremony

The 5th Meister Award Ceremony was held in December 2015. 951 foremen serving at Dai-Dan sites were designated High-level Foremen, 54 of whom were named Excellent Foremen following thorough assessments by each office. Furthermore, the five best foremen were certified as Meisters. Each Meister was presented with a certificate, Meister helmet and a plaque.

So far, a total of 26 Meisters have been approved: seven electrical workers, 10 plumbers, five duct installers, one refrigerant piper, and three insulation workers by trade.

Comment of a Meister

Last December, I was awarded the title of "Dai-Dan Meister."

I am pleased to have been awarded such an honorable title, but at the same time I now feel the weight of responsibility.

I have always been careful with regard to fieldwork processes, the allocation of personnel, and practices such as "finger-pointing and calling" and on-site risk identification that are the foundation of safety. One can safely and smoothly make progress at the job site by performing the task with sufficient understanding of the process, including deadlines and the need to leave some time to spare, and by allocating personnel based on the above. I believe that this leads to improved quality and higher productivity.

In the future, I will adopt the perspective of a field supervisor while maintaining awareness as a Dai-Dan Meister and will seek to communicate with workers on other jobs in order to become engaged in field administration and process control. By remaining aware of the state of progress of the entire job in real time and reflecting it in the processes, I will be able to eliminate hazardous tasks and useless dead-end work. In addition, I will strive to play a role as a registered thermal insulation skilled worker to hand down my skills and focus on the efficiency of on-site installations while never forgetting my first day on the job.

Takanori Ida
ARAI Industrial Co., Ltd.

Meister Award Ceremony

Dai-Dan's network of subcontractors

In the business environment surrounding the building installation service industry, large regional differences exist in the availability of personnel, and the situation can be considered unstable.

Under these circumstances, we have taken steps to establish a nationwide network of subcontractors that extends beyond the scope of individual offices. Through this network, we can send workers from around the country to offices where worker shortages are expected. In future, we will effectively utilize this network to establish a stable installation system at each site; at the same time, we will increase opportunities to improve the skills of our subcontractors. We will continue to provide our customers with safe and high-quality building installation services.

FY2015 CSR Performance and FY2016 Targets

In order to enable continuous improvement of our CSR activities, we set targets for each fiscal year and complete the PDCA cycle accordingly.
In this report, the FY2015 performance and the FY2016 targets are summarized according to the seven core themes of ISO 26000*.

Self evaluation: Target achieved / Target not achieved

Theme	Items	Target/Task	FY2015 performance	Self evaluation	FY2016 targets	Core subjects of ISO 26000: Organizational governance	Human rights	Labor practices	The environment	Fair operating practices	Consumer issues	Community involvement and development	Page
Fair and Transparent Business Practices	Corporate governance	Build and maintain a system to ensure ethical execution of operations	• Establishment and disclosure of Dai-Dan's Corporate Governance Guidelines • Corporate law internal control system functioned appropriately	☺	Strengthen corporate governance to meet changes in social trends	✓							47
	Compliance	Strengthen the compliance system (compliance with the Antimonopoly Act and other relevant laws and regulations) and promote sound corporate management	• Group training sessions, briefings, and seminars were held to familiarize attendees with the importance of compliance with laws and regulations • Published issues Nos. 15 and 16 of Compliance News to raise awareness	☺	Perform ongoing awareness-raising activities regarding compliance and ensure our business activities comply with the Antimonopoly Act and other relevant laws and regulations	✓	✓			✓			49
	Risk management	Spread and entrench the business continuity plan (BCP) within the company	• Emergency drills were conducted • Training was strengthened to enhance safety check services (by email, with a 100% response rate)	☺	• Conduct emergency drills • Consider extending the safety check system to include subcontractors in the office	✓				✓			51
	Disclosure (Proactive and timely disclosure of information)	Disclose information appropriately and in a timely manner	Complied with laws and regulations and swiftly disclosed information	☺	Proactively disclose information						✓		52
Environmental Contribution	Environmental conservation initiatives	Achieve environmental management system plan targets *Refer to page 53 for FY2015 environmental targets and results.	Customer proposals / Planning / Designing: Number of solutions that leverage Dai-Dan technology adopted Customer proposals / Planning / Designing: CO_2 emission reduction through design solutions Customer proposals / Planning / Designing: CO_2 emission reduction through adopted solutions	☺	Achieve environmental management system plan targets *Refer to page 53 for FY2016 environmental targets.				✓				53
			Installation: Promoted sustainable procurement Installation: Promoted sorting and recycling of industrial waste Installation: Removed thermal insulation of drainpipes	☺									
			Office initiatives: Reduced the energy consumption Office initiatives: Reduced the use of photocopy paper Office initiatives: Introduced hybrid vehicles	☺									
Meeting Customer Expectations	Quality improvement initiatives	Achieve quality management system plan targets	• Improved customer satisfaction • Reduced quality issues	☺	Achieve quality management system plan targets						✓		56
	Initiatives with subcontractors	Continue the activities of the sectional committee	Implemented the activities of the sectional committee	☺	Continue the activities of the previous fiscal year						✓		58
Valuing Our Employees	Respect for human rights	Continue initiatives to raise awareness of human rights	Raised awareness through new employee training session	☺	Continue initiatives to raise awareness of human rights		✓						59
	Development of human resource	Check and review the effectiveness of the Dai-Dan Mentor System	Monitored individual circumstances through additional interviews with each mentor.	☺	Confirm and review the effectiveness of the Dai-Dan Mentor System			✓					
		Strengthen technical expertise	• Published the DAI-DAN Technical Current News (Published in September) • Continued skill development through the CPD system	☺	Continue to strengthen technical expertise			✓					
	Work/life balance and the work environment	Initiatives to address mental health issues	• Conducted mental health seminars • Introduced the seminar into the curriculum for new employee training and position-specific training • Conducted stress checks for all employees	☺	Continue the activities of the previous fiscal year			✓					62
		Follow up on employees working long hours	Decreased the percentage of employees working long hours engaging in face-to-face consultations with a doctor to 62.1%	☹	Achieve a 100% doctor consultation rate for employees working long hours			✓					
			Increased the percentage of employees working long hours to 0.4%	☹	Decrease the percentage of employees working long hours to below 0.4%			✓					
Meeting Local Expectations	Dissemination of technical information to external parties	Contribution to the construction industry	• Delivered five lectures at the nationwide meeting of the Institute of Electrical Installation Engineers of Japan • Delivered 10 lectures at meetings of the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan	☺	Continue the activities of the previous fiscal year							✓	64
	Social contribution activities	Targeted number of activities: more than 440	Dai-Dan's offices across Japan voluntarily conducted 492 activities	☺	Continue the activities of the previous fiscal year							✓	65
Dai-Dan's Practical Competence	Sharing of technical information	Share information obtained at workshops	Held the Case Study Presentation	☺	Continue the activities of the previous fiscal year						✓		39
			Presented activity outcomes via teleconference	☺	Continue the activities of the previous fiscal year						✓		40
	Workplace health and safety management system	Achieve workplace health and safety management system plan targets	• Work-related accidents decreased relative to the previous fiscal year • Safety results (frequency and severity rates)	☺	Achieve workplace health and safety management system plan targets			✓					42
	Partnerships with subcontractors	Ensure the Dai-Dan Meister System is implemented	Held the 5th annual Dai-Dan Meister Award Ceremony	☺	Improve and entrench the Dai-Dan Meister System						✓		44

* A guide on how businesses can operate in a socially responsible way

Fair and Transparent Business Practices

In order to ensure the sustainable creation of corporate value, we seek to improve and strengthen our corporate governance system in a sustainable manner. In addition, our executive officers and other employees uphold the highest ethical standards when conducting business.

Corporate Governance

Our approach to corporate governance

As a building services engineering and installation provider, Dai-Dan is committed to the management principles of always taking on the challenge of creating value for our customers while contributing to the development of a better environment and stronger communities. In justifying the trust placed in us by all stakeholders including shareholders, customers, business partners, employees, and local communities, we remain focused on continuously enhancing our corporate governance in order to maintain effective management practices.

Our corporate governance system

The objective of Dai-Dan's corporate governance system is to ensure appropriate and efficient management by maintaining discrete decision-making, oversight, and administrative functions, thereby enabling swift and appropriate deliberation and implementation of decisions.

In June 2015, we elected two external directors known for their varied experiences and wide-ranging viewpoints in order to add a broader perspective to the discussions of the Board of Directors while also strengthening our management's monitoring functions.

Both external directors contribute their own perspectives in providing valuable advice on our sustainable growth and improvement of corporate value. They are fulfilling their role by providing invaluable judgment.

Our internal and external auditors help to ensure monitoring of management by conducting audits and site visits and by submitting their own objective questions and presenting their viewpoints to the Board of Directors.

External directors and auditors exchange information and opinions regularly and hold meetings of the independent officers' committee comprising independent officers. They discuss the administration of the Board of Directors and take steps to contribute to effective corporate governance. It is our opinion that our current oversight system for our auditors and Board of Directors functions adequately in the interests of maintaining corporate governance.

Board of Directors

The Board of Directors comprises 10 directors, two of which are external directors. It convenes monthly and holds special meetings as necessary. In addition to overseeing business operations, the board deliberates on important matters related to corporate management, including subjects discussed in Executive Committee meetings. The articles of incorporation of Dai-Dan provide that the Board of Directors should consist of 12 people or less.

Board of Auditors

The Board of Auditors comprises four auditors (two of whom are external auditors). In principle, they meet prior to Board of Directors meetings. They thoroughly examine the issues discussed at Board of Directors meetings, attend the meetings in person, and contribute their views as necessary.

According to the audit policy and audit plan established by the Board of Auditors, the auditors monitor the directors' fulfillment of their duties by conducting audits of offices in cooperation with accounting auditors. Their responsibilities include attendance at Board of Directors meetings and other important gatherings as well as reading of important documents requiring approval.

Executive Committee

Executive Committee meetings are held when necessary. The committee comprises regular members who are appointed by the Board of Directors and temporary members selected according to the subject of the agenda. The committee develops management policies and other policies for Dai-Dan and its group subsidiaries, and extensively examine the progress of goal achievement. In addition, the committee members discuss important matters concerning management strategy and management of the company itself. The committee then makes recommendations to the Board of Directors as needed.

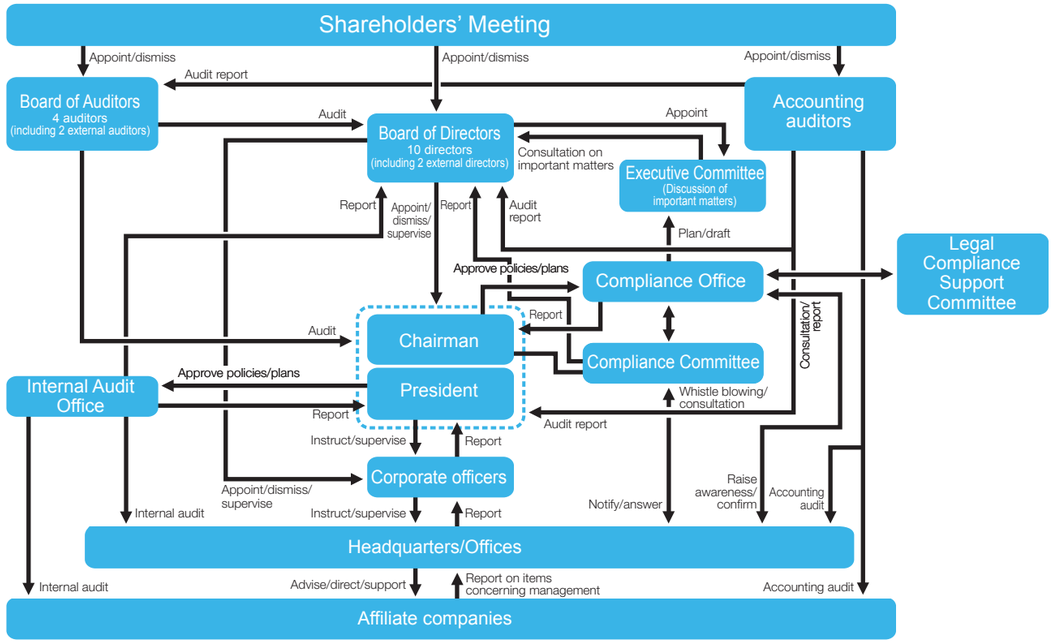
Corporate Officers' Committee

The Corporate Officers' Committee, in principle, meets once a month. The committee members meet to discuss management policies, important operational policies and decisions made by the Board of Directors. The committee members also report on work carried out by corporate officers.

General Managers' Committee

General Managers' Committee meetings are, in principle, held once a month to ensure that tasks are being executed in an integrated manner. Management policies and measures are explained, and the state of business operation of each office and their respective issues are discussed, and prompt solutions sought.

Corporate governance system



Selecting independent external directors and independent external auditors

Three people are selected to report to Tokyo Stock Exchange, Inc. as independent officers — the two external directors and one of the two external auditors. In selecting the independent officers among our external directors, we apply our own "criteria for determining the independence of an external director" in addition to the independence criteria prescribed by Tokyo Stock Exchange, Inc.

Internal control system

Dai-Dan has developed an internal control system that focuses on the improvement of internal rules. This is intended to ensure compliance across our entire company and subsidiaries and includes the execution of tasks by directors in compliance with laws and the articles of incorporation as well as appropriate performance of all tasks. In addition, we confirm the operational status of the company's internal control system each fiscal year and report our findings to our Board of Directors while continuing to revise and improve this system in order to improve efficiency and legal compliance.

Internal control system for financial reporting

In April 2008, we implemented an internal control system for financial reporting under the Financial Instruments and Exchange Act. The Internal Audit Office under the president examines and assesses the effectiveness of the system.

The fiscal 2015 assessment concluded that, as of the end of fiscal 2015, our internal control system for financial reporting is effective. An independent auditor also provided a similar opinion.

Compliance

Corporate Code of Ethics

We have developed five Action Principles and 14 Action Standards to guide our executives' and other employees' compliance with laws and regulations and support their demonstration of good social conscience. The Action Principles summarize the concepts to be kept top of mind during the performance of day-to-day tasks.

Excerpt from our Corporate Code of Ethics Our Action Standards serve as practical guidelines to the Action Principles on which they are based.

Action Principles

1. Observe laws and social norms and conduct business activities in a sensible manner.
2. Participate in the building of a society that can sustain its development.
3. Respect the fundamental human rights of all.
4. Maintain a fair and transparent relationship with stakeholders.
5. Recognize our place in society and strive to contribute to the emergence of a better society.

Action Standards

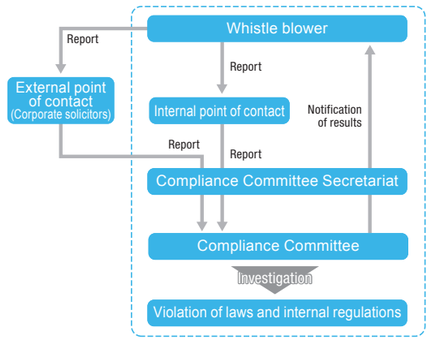
1. Maintain positive relationships with customers and users
2. Ensure safety and quality
3. Ensure fair and open competition
4. Engage in ethical business transactions
5. Fairly disclose corporate information
6. Ethically manage critical information
7. Protect and respect intellectual property rights
8. Improve working conditions and work environments
9. Respect human rights and individuality
10. Address environmental issues
11. Practice proper accounting and tax payment
12. Maintain sound relationships with politicians and the government
13. Eliminate any dealings with antisocial forces
14. Avoid engaging in self-serving actions

The whistle blowing system and consultation system

Dai-Dan has established a whistle blowing system and consultation system with the purpose of swiftly identifying issues in the workplace, which are otherwise difficult to identify (behavior or actions that contravene laws, internal regulations or social ethics). We have implemented this by establishing a reporting route independent from the operational chain of command. Reports can be made internally through these systems, but they can also be made externally via our corporate solicitors.

Any individuals that file a report are guaranteed by the Corporate Code of Ethics that they will not be subjected to any unfair treatment. Reports can also be submitted anonymously to ensure the privacy of the whistle blower.

Internal whistle-blowing and consultation flowchart



The Compliance Committee Secretariat acts as an internal point of contact.

Compliance Committee

The Compliance Committee was established to ensure compliance with laws and internal regulations, and to strengthen fair and ethical company operations with strong compliance. The committee is chaired by the president, and is responsible for boosting executives' and other employees' compliance awareness, receiving and investigating reports of violations, and developing preventive measures. During fiscal 2015, the committee met on five occasions.

Promoting awareness and compliance

In each fiscal year, Dai-Dan formulates a plan and implements various initiatives in order to promote awareness and compliance.

Training in proper compliance is provided during new employee training sessions, position-specific training sessions, and as part of the training programs of each office. This approach ensures that many executives and other employees are exposed to appropriate compliance training.

Results of Main Initiatives in FY2015

- Release of a Message from Management on the topic of Compliance Month
- Submission of written oaths according to the terms of our Corporate Code of Ethics
- Presentation of group training sessions on corporate ethics and compliance
- Presentation of seminars by lawyers on compliance with the Antimonopoly Act (for management-level and general employees)
- Presentation of study sessions on compliance with the Antimonopoly Act
- Publication of Compliance News
- Confirmation of "office compliance action status" at all offices

Main Action Plan for FY2016

- Release of a Message from Management on the topic of Compliance Month
- Submission of written oaths according to the terms of our Corporate Code of Ethics
- Presentation of group training sessions on corporate ethics and compliance
- Presentation of seminars by lawyers on compliance with the Antimonopoly Act and other relevant laws and regulations (for management-level and general employees)
- Familiarizing employees with appropriate installation systems according to the Construction Business Act
- Publication of Compliance News
- Confirmation of the compliance activities status at all offices
- Promoting awareness of whistle-blowing and consultation systems
- Voluntary study of compliance through "e-learning"

Strengthening the system to ensure thorough, fair, and appropriate business operations

Dai-Dan has strengthened its compliance promotion system with the recognition that "managing the company in conformity with the spirit of compliance" is part of our management foundation. We continue to improve awareness of compliance while ensuring thorough business operations in accordance with relevant laws and regulations.

Compliance Office

In April 2014, Dai-Dan established the Compliance Office and placed it under the direct control of the chairman while ensuring it remains independent from the headquarters and offices. This office collaborates with the Compliance Committee in planning, drafting, and implementation to help ensure that our business activities comply with the Antimonopoly Act and other relevant laws and regulations.

In cooperation with the Internal Audit Office, this office continues to monitor the compliance activities in our offices.

Legal Compliance Support Committee

In April 2014, we established the Legal Compliance Support Committee, a professional organization supporting the Compliance Office. This Committee comprises external experts and provides expert advice applicable to the initiatives carried out by the Compliance Office. It also holds seminars on legal compliance and conducts awareness-raising activities for all our offices.

Prevention of insider trading

Strict rules have been imposed on share transactions as per our Insider Trading Control Ordinances in order to prevent unjust share trading by corporate insiders, protect shareholders and contribute to a stable and fair securities market.

Additionally, the Introduction on Insider Trading Ordinance for Executive Officers and Employees of Listed Companies created by the Tokyo Stock Exchange has been made available on our corporate intranet in order to establish an environment in which executives and employees have a good understanding of insider trading.

Registration with J-IRISS

Dai-Dan's executive officers are registered with the Japan-Insider Registration & Identification Support System (J-IRISS), which is operated by the Japan Securities Dealers Association. Through these initiatives we have in place a system to prevent insider trading, including unintended insider trading.

Protection and respect for intellectual property

Dai-Dan believes that intellectual property can be developed both in the lab and the field. Therefore we proactively apply for patents on inventions and designs by both our Technical Research Laboratory and our on-site workers. In fiscal 2015, we were granted a total of four patents, including one for an adjustment system for indoor atmospheric pressure. In addition, we have been implementing risk management initiatives to ensure we do not infringe upon the intellectual property of others.

Initiatives to counter antisocial forces

Dai-Dan is firmly opposed to antisocial forces and is committed to avoiding any relationship with such entities. Our Corporate Code of Ethics clearly sets forth this principle, and our training ensures thorough compliance. In addition, the contracts we enter into with subcontractors clearly state that the contract will be terminated if the subcontractor is found to be substantively involved with antisocial forces. This is intended to effectively exclude antisocial forces from our business dealings from the outset.

Regarding the Cease and Desist Order and Surcharge Payment Order issued by the Japan Fair Trade Commission

Regarding our submission of a bid for installation of facilities for the Hokuriku Shinkansen railway line, Dai-Dan underwent an on-site investigation from the Japan Fair Trade Commission on September 4, 2013; we fully cooperated with the Commission's investigation. On October 9, 2015, the Commission issued Dai-Dan a Cease and Desist Order and a Surcharge Payment Order.

We deeply regret causing distress to our shareholders, business partners, and other concerned parties in regard to this matter.

We take such orders with the utmost seriousness and address them to ensure such a situation never arises again. We are further strengthening our compliance system to prevent any recurrence, and we will continue to take steps to regain public trust.

Risk Management

Risk Management Regulations

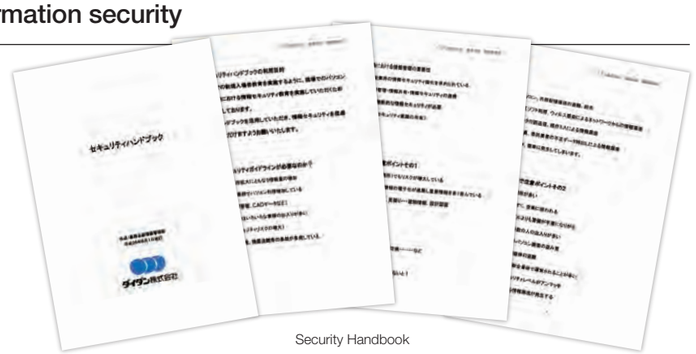
Dai-Dan introduced Risk Management Regulations in April 2001 to prepare for potential risks such as natural disasters, the leaking of confidential information that could damage the company, and to keep damages to a minimum.

In the event that an identified risk becomes reality, a “countermeasures headquarters” is established to allow all employees to work as one to identify problems and share information.

Initiatives to strengthen information security

The Information System Usage Guidelines are made available for viewing by executives and other employees on the corporate intranet. Additionally, education on the handling of electronic information is provided during new employee and position specific training sessions.

Moreover, we provide information security training to the employees of our subcontractors using the Security Handbook to strengthen our information security.



Security Handbook

Emergency drills under our business continuity plan

Osaka Head Office

Kyushu Branch

Tohoku Branch

Toyota Branch

In September 2016, Dai-Dan completed an emergency drill in keeping with our business continuity plan (BCP) at all our workplaces throughout Japan. By following the action manual (specifying initial response) for each office, which outlines the delegation of roles, we completed an earthquake drill that included first aid, evacuation, safety check, posting of emergency stockpiles, and verification of our satellite-phone-based communications system. At the same time, we incorporated the lessons learned in previous years’ drills.

We will continue to conduct drills and improve the chain of command required in a disaster during normal times. This is intended to support two priorities: ensuring the safety of executives, employees, and their families; and providing customer support in an earthquake or other large-scale disaster. We continue to promote employee awareness by providing training and drills and improve the effectiveness of our BCP.

Initiatives to protect personal information

We recognize that the leakage of personal information is a risk that has potential to cause a loss of trust. As such, we have strengthened our internal systems in order to protect personal information, and have posted the Personal Information Protection Policy on our corporate website. Furthermore, we have created a manual based on our Personal Information Protection Regulations and distributed the manual to all executives and employees in order to ensure the protection of personal information.

In January 2016, the Japanese government’s “My Number System” was introduced. Accordingly, we have posted the Basic Policy on Proper Handling of Specific Personal Information, Etc.” on our corporate website. Also, in line with the “Guidelines for proper handling of Specific Personal Information,” we are taking necessary and appropriate safety management measures to prevent leakage, loss, and unauthorized use of an individual’s number and personally identifying information. We remain committed to ensuring appropriate handling of each individual’s number and other personal data.

Disclosure (Proactive and Timely Disclosure of Information)

Shareholder meeting

The 87th annual meeting of shareholders was held at our Osaka Head Office on June 29, 2016. We recognize the shareholder meeting as a valuable venue for communicating with our shareholders. Business reports are displayed on a large screen and accompanied by a narrative to give our shareholders a clearer understanding. Additionally, we send out our shareholder meeting notifications early in order to provide sufficient time for shareholders to consider the reports and matters related to resolutions. Prior to the meeting, we screened a video titled “enefice Kyushu, Our New Kyushu Branch Office Building,” which had opened in May 2016, introducing the highlights of this new facility.

Briefing session on financial results and analyst tour

Dai-Dan holds briefing sessions on its financial results twice a year. Our previous consolidated briefing sessions were held on December 3, 2015 and June 7, 2016 to present our second-quarter financial results and full-year financial results, respectively. The sessions present an overview of financial results, the business environment, and performance prospects as well as the state of progress of our Mid-Term Management Plan. Furthermore, we respond appropriately to individual interviews from analysts and institutional investors.

On September 5, 2016, we held an analyst tour at enefice Kyushu, our new Kyushu Branch office building. During the tour, we introduced our Net Zero Energy Building (ZEB) initiative derived from our building facilities.

IR tools

The investor information page on our corporate website allows investors to view earnings summaries, securities report and other important items. The page also provides information such as business reports, medium-term business reports and notifications of shareholder meetings. This information is provided in the form of IR news available on the main page of the website and is updated as necessary.

DAI-DAN REPORT

Dai-Dan began publishing an annual CSR report with our fiscal 2008 issue. In 2014, we introduced the “DAI-DAN REPORT” as an integrated corporate report in order to provide stakeholders with a broader array of public information. All our CSR reports are available on our corporate website. For our international stakeholders, we have an English edition of our CSR Report that is available on our global website.

Japanese edition
http://www.daidan.co.jp/csr/report.html

English edition
http://www.daidan.co.jp/english/eco21/index.html

Environmental Contribution

We believe it is our mission to contribute to the emergence of a society committed to global environmental sustainability.

Environmental Conservation Initiatives

Our environmental stance

Our company can best contribute to the emergence of a society committed to global environmental sustainability by providing building services with low environmental impact; therefore, we promote the adoption of these facilities by recommending them to our customers. Moreover, it is paramount that we continue to reduce the environmental impact associated with our company's business operations and that we raise the environmental awareness of our employees as well as others with whom we work. We continue to take steps to further advance our energy-efficiency and resource-conservation initiatives at our offices as well as throughout our installation services.

Equally important is the need to conduct conclusive leak-prevention and suitable waste management beginning with fluorocarbons, which can contribute to global warming, as well as toxic substances. This applies to both facilities under construction and our company's own facilities. Consequently, we remain committed to stringent observance of all environmental laws and regulations.

Our Environmental Management System: FY2015 environmental targets and results/FY2016 environmental targets

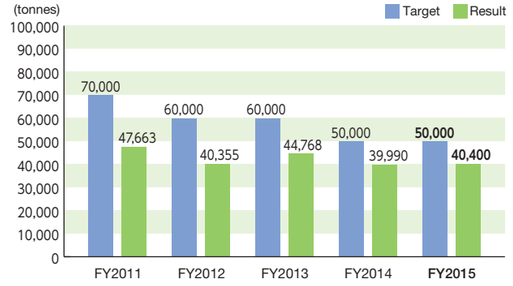
○: Target achieved △: In progress

Activities and responsible departments		Main target or item to be monitored	FY2015 target	FY2015 result	Assessment	FY2016 target
Proposal, planning, designing	Sales department Design department	Number of solutions that leverage Dai-Dan technology adopted	More than 70	58	△	More than 70
		CO_2 emission reduction through design solutions	More than 50,000 tonnes	40,400 tonnes	△	More than 45,000 tonnes
		CO_2 emission reduction through adopted solutions	More than 20,000 tonnes	16,849 tonnes	△	More than 20,000 tonnes
Installation	Installation department Procurement department	Energy consumption converted to CO_2 emissions	—	954 tonnes	—	—
		Promotion of sustainable procurement	More than 40%	39.2%	△	More than 40%
		Promotion of sorting of industrial waste Quantity sorted in the field	More than 3.5/workplace	3.1/workplace	△	More than 3.5/workplace
		Promotion of recycling Proceeds of sale of recycled materials	More than 83 million yen	54.492 million yen	△	More than 60 million yen
		Reduction of thermal insulation used for drainpipes	More than 75,000 m	93,350 m	○	More than 95,000 m
Office activities	All employees	Energy consumption converted to CO_2 emissions	Less than 1,710 tonnes	1,618 tonnes	○	Less than 1,600 tonnes
		Water consumption	—	17,482 m³	—	—
		Copy paper usage	Less than 58 tonnes	61.1 tonnes	△	Less than 58 tonnes
		Increasing adoption of hybrid vehicles and other next-generation vehicles	45%	53%	○	60%
		Improvement of sorting rate of general waste	—	65.2%	—	—

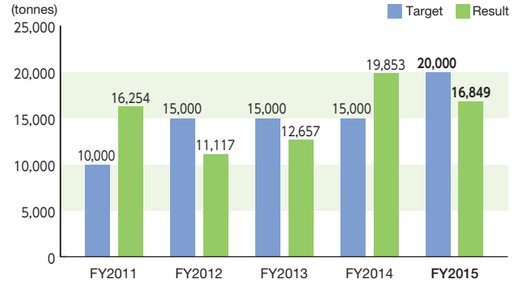
Initiatives to provide energy saving solutions

During the design phase, we proactively provide customers with energy-efficient solutions, which are predominately based on technologies developed by Dai-Dan to contribute to reduced CO_2 emissions. Throughout fiscal 2015, we offered solutions that would have reduced CO_2 emissions by 40,400 tonnes, with customers adopting energy-efficiency options that saw a total reduction of 16,849 tonnes of CO_2.

CO_2 emission reduction through design solutions



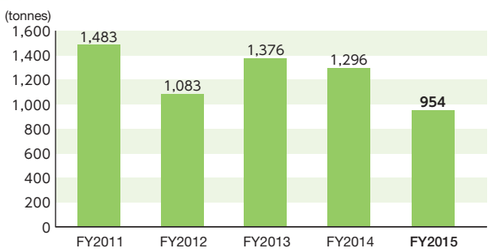
CO_2 emission reduction through adopted solutions



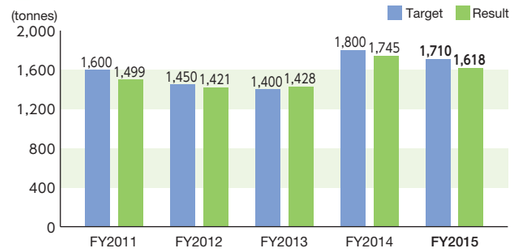
Initiatives to reduce energy consumption

We are committed to reducing energy consumption, such as electricity and gas, and reducing use of photocopy paper at installation sites and offices. In fiscal 2015, our energy consumption converted to CO_2 emissions totaled 954 tonnes and 1,618 tonnes at installation sites and offices, respectively.

CO_2 emissions at installation sites



CO_2 emissions at offices

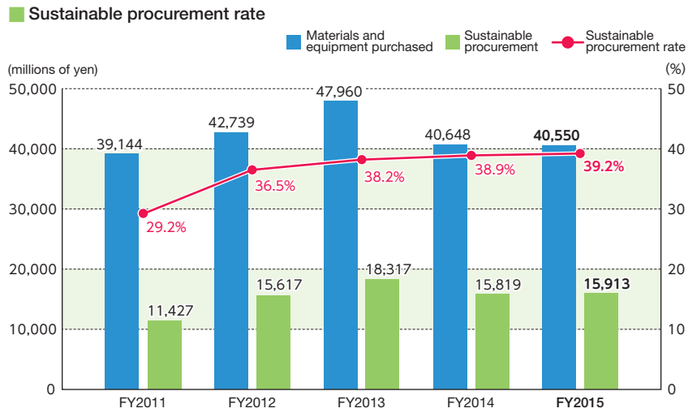


Note: The CO_2 conversion value was revised in FY2014.

Initiatives to promote sustainable procurement

Dai-Dan promotes sustainable procurement to our customers, and has designated items that are applicable to sustainable procurement in the following five areas: introduction of energy saving, high efficiency equipment; use of environmentally friendly material; introduction of highly durable equipment; introduction of low emission devices; and introduction of water saving equipment. Sustainable procurement rate during fiscal 2015 was 39.2%.

Sustainable procurement rate

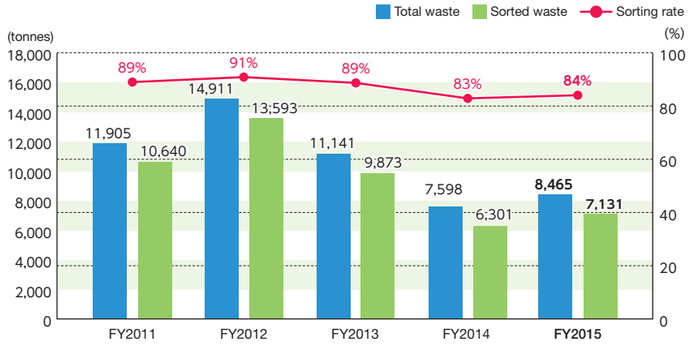


Initiatives to sort industrial waste

At Dai-Dan, we promote the sorting of waste at all our installation sites. Throughout fiscal 2015, we produced 8,465 tonnes of industrial waste, of which 84% was sorted.

Furthermore, we promote awareness of reducing industrial waste at our offices and encourage sorting. In fiscal 2015, our offices produced 115 tonnes of general waste, of which 65% was sorted.

Industrial waste sorting rate



Increasing adoption of hybrid vehicles and other next-generation vehicles

Since fiscal 2012, we have been promoting a shift to hybrid vehicles as we seek to further our energy efficiency and resource conservation. As of the end of fiscal 2015, 53% of all our company vehicles were hybrid vehicles, and for fiscal 2016 we are targeting a rate of 60% for hybrid as well as next-generation vehicles (including PHV, EV, and clean diesel vehicles).

Contribution made by research on reducing environmental impact

Reduction of waste using supercritical CO_2

Under our significant initiative to reduce waste, we have developed and put to practical use a technology that uses supercritical CO_2 in a process for refurbishing air filters used in factories.*

Initially adopted by the Research Institute for Quality Living Co., Ltd. (an inspection organization of the Aeon Group), this system has been employed in a variety of industries including electronic devices and food processing. As a technology for reducing environmental impacts, it has earned high praise from customers and associated institutes.

* See p. 25 for more information on our technology for cleaning and refurbishing air filters with supercritical CO_2.

Japan's largest supercritical CO_2 cleaning and refurbishment equipment

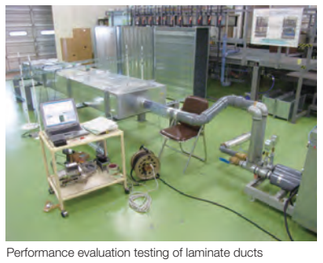
Conserving resources through duct size optimization and the use of laminate ducts

By verifying the quantity of air moving in the ducts following their installation and optimizing the size of those identified as wasteful, we are conserving resources.

We also promote resource conservation by introducing laminate ducts made with specially reinforced steel sheet that is 10% to 30% thinner than conventional duct materials.

Before laminate ducts are installed, they are subjected to leakage tests* and tests to ensure durability and resistance to vibration at the Technical Research Laboratory.

* Tests to ensure that no air leaks from the joints



Performance evaluation testing of laminate ducts

Meeting Customer Expectations

We continue to work towards ever-higher levels of quality in order to further improve customer satisfaction.

Quality Improvement Initiatives

Our vision of quality

At Dai-Dan, we believe it is our corporate mission to contribute to the creation of the environments that our customers require. Therefore, we consider it important to respond swiftly to customer demands and to make recommendations to our customers.

Moreover, in order to ensure our customers are further satisfied, we aim to provide high-quality products that can be used safely and with full confidence. In addition, we are working to meet our obligations prior to installation, including responding to risks regarding installation services and to promote improvements through our employees as well as our subcontractors.

Works Review Meetings

Throughout our long history we have provided building services to customers in various industries with diverse building applications. In order to capitalize on our long track record of installations and our knowledge of customer facilities, we hold Works Review Meetings for each project with the attendance of the sales departments, engineering departments and other specialized departments concerned. We strive to provide high-quality facilities that best serve our customers from the perspectives of functionality, quality, cost and energy efficiency.

Building Chart System

We have been using a Building Chart System, an internal information system, since May 2010 in order to make the most of our installation experiences. The Building Chart System is used to record the details of the installation, the details of recommendations, and customer requirements for each building. We enhance customer satisfaction by recommending detailed renovation options that contribute to comfortable use of a building.

Customer Consultation Office

At the completion of a project, Dai-Dan conducts a status review of major equipment and provides ongoing advice to improve performance. This work is carried out by the project manager, who can offer insights into the building services even after the handover.

Dai-Dan opened its Customer Consultation Office in November 2012. Customers are welcome to contact us for information on building maintenance and to submit cost estimate requests. Our effective customer support system is prepared to meet a wide range of customer needs without delay.

Adopting advanced facility technologies

Our Technical Development Group provides in-house support regarding customer consultations and requests that we receive from customers at our offices throughout Japan. For example, we share information and provide cooperation within the Technical Development Group and suggest solutions with regard to applications for government subsidies, advanced environmental factory control, advanced medical facilities, and issues requiring measurement and analysis. We support all offices with a foundation in the latest technological trends and by making use of our company's unique developmental technology. Furthermore, for challenges encountered during installation, we collaborate with our Technical Construction Division and work cooperatively to resolve customer problems.

Customer evaluations

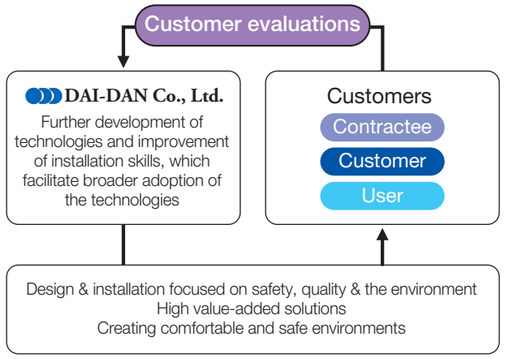
We conduct customer satisfaction surveys after we have completed installations. We verify the points to review or to keep in mind during follow-up service through a customer evaluation survey involving all parties concerned at the internal project evaluation meeting.

Over the lengthy lifecycle of a building, despite changes in those representing both Dai-Dan and the customer, we are able to provide facilities that satisfy our customers over the long term. We are also able to ensure follow-up service by passing on the information available in our information systems.

Customer satisfaction survey results (Perfect score = 4)

Item	FY2013	FY2014	FY2015
Installer capacity	3.42	3.50	**3.47**
Installation management	3.39	3.46	**3.44**
Creativity and solution proposals	3.38	3.44	**3.42**
Backup capacity	3.33	3.42	**3.42**
Overall evaluation	3.44	3.51	**3.48**

Number of surveys completed: FY2013; 583/FY2014; 577/FY2015; 622



Quality and Environmental Management System

At Dai-Dan, we have integrated our quality and environmental management systems for effective operation. Moreover, with the 2015 revision of the relevant ISO standards, we took the opportunity to review our management systems and are planning to incorporate additional improvements for increased effectiveness.

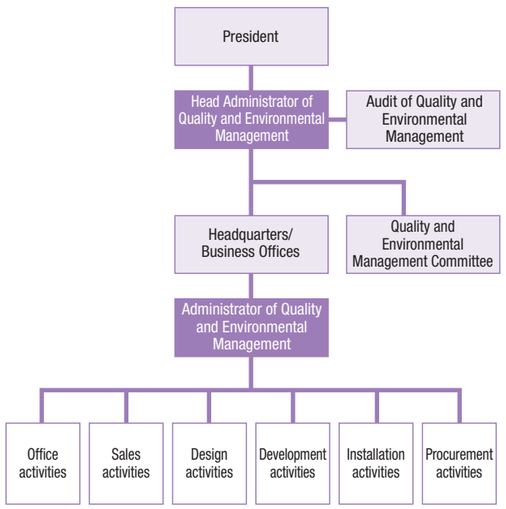
- Our goal is to provide more comfortable building services, so any quality issues that negatively affect our customers are registered with our in-house information system. Thus, we can take steps to reduce the occurrence of such issues by sharing the recurrence prevention measures that have been implemented.
- We identify risks related to our installation services, especially when the possibility exists that a customer's production operations or business activities can be significantly impacted. In such cases, we strengthen the backup capabilities of our offices and headquarters in order to provide assistance in the field. In addition, in the area of information security, we have established workplace security rules to prevent information leakage and are taking steps to enhance our customer's peace of mind.
- We have identified environmental initiatives intended to reduce energy consumed by building facilities and regard this as one of our most important initiatives. Toward this end, we are promoting energy-efficiency innovations and resource-conservation efforts for our customers' facilities.

Our Policies Regarding Quality and Environmental Protection

"As a building services engineering and installation provider, we continually take on the challenge of creating value for our clients while contributing to the development of a better environment and stronger communities"; in keeping with these management principles, we ensure our business practices contribute to quality and environmental preservation. Moreover, with the goal of improving customer satisfaction, we are contributing to the emergence of a society committed to a sustainable environment.

1. We strive to contribute to social development and environmental preservation by complying with laws and norms of society regarding quality and environmental standards as well as regulations established by our company.
2. While planning to strengthen our basic technologies, we strive to upgrade the skills of our employees and establish strong partnerships with our subcontractors while providing assured quality.
3. We are dedicated to developing and providing energy-saving, environmentally friendly technologies. We assess the environmental impact of building facilities and offer proposals for impact reduction and energy efficiency.
4. We, as a good corporate citizen, carry out social contribution activities and positive information disclosure, to enhance communications with society.
5. We publicize our quality and environmental targets internally and continue to strengthen them in order to improve the results of our initiatives.

Quality and Environmental Management System



Initiatives with Subcontractors

Activities with subcontractors

For our company to provide safe, high-quality building services and facilities by the required delivery date, it is indispensable that we work in collaboration to integrate the many skilled professionals who perform the installations with our technical capability to plan and manage the installations. Toward that end, we emphasize that subcontractors are important partners who represent one of the two wheels of the bicycle.

We established Dai-Gen Kai and the Safety, Health & Technology Association as organizations of subcontractors founded on a longtime relationship of mutual trust at each office where we are implementing sectional committee activities by profession.

These sectional committees address a variety of themes including improving quality, ensuring safety, streamlining installation methods, developing new installation methods and new materials, implementing environmental measures, exchanging information, and ensuring legal compliance. However, as construction demand had increased in recent years, the committees have also been addressing the aging of skilled workers, the reduced number of young workers entering the workforce, and the restricted supply of manpower to meet the existing demand for construction. In light of this situation, the important issues from a cost perspective include increasing installation efficiency and adopting labor-saving methods.

The members of the sectional committees address the challenges in earnest and study potential solutions.

We have also established a "subcontractor network" that links regional contracting organizations across the country. In ordinary times it provides manpower to supplement labor shortages, while during large-scale disasters it underpins our business continuity plan, which includes customer recovery response. In this way we are meeting our social responsibilities as a company.

By solving problems through collaboration with subcontractors and developing and implementing the results in the field, we are contributing to a process of continual improvement.

With the goal of further improving our technological capacity with regards to safety, quality, and cost, Dai-Dan will remain committed to responding to customer demand and expectations as we continue to engage in manufacturing with our subcontractors.

Fiscal 2015 initiatives of the Dai-Gen Kai sectional committees (details of initiatives)

Fiscal 2015 initiatives of the sectional committees of the Dai-Dan Nagoya Safety, Health & Technology Association

Sectional committee	Topics and principal activities
Duct Sectional Committee	• Visualization of quality problems • Compiling materials intended to share data about actual experiences with quality problems
Instrumentation Sectional Committee	• Compiling a list of "Don'ts" in order to prevent quality problems
Various Installations Sectional Committee	• Compiling a book of best practices
Electrical Sectional Committee	• Sharing technology as well as new product information
Delivery Sectional Committee	• Conducting product briefings and training sessions • Investigating and developing preventive measures from case histories of problems • Developing price trend information
Piping Sectional Committee	• Compiling a list of "Do's" (book of best installation practices)
Thermal Insulation & Paint Sectional Committee	• Compiling a list of best practices and site visits
Refrigerant Sectional Committee	• Accommodating the revised law to reduce fluorocarbons emissions in Japan (introduction of qualification classes, completing certification forms) • Investigating the current state of installation methods

Comment of a subcontractor

In the area of basic technologies, Dai-Dan's mid-term management plan contains a proposal for "collaborating with subcontractors to develop new systems."

Recognizing the importance of constructing such a system, the Safety, Health & Technology Association of Nagoya Dai-Gen Kai has been an active participant in the fiscal 2016 Daidan Meister System. In addition, Dai-Dan honors the Dai-Dan Meisters who have developed skilled craftsmanship and who are playing active roles in collaboration with Dai-Dan. Nagoya Dai-Gen Kai is also focused on developing outstanding foremen in response to the current labor shortage and the likely future decline in technical skills.

Through this approach, we utilize specific presentations and the results of the initiatives of the eight sectional committees in various applications regarding safety, quality, and installation efficiency and translate the results into stable successor training. In the future, the 171 companies of the Safety, Health & Technology Association of Nagoya Dai-Gen Kai will continue to strengthen cooperation with Dai-Dan and respond to their trust while devising methods of improving safety and quality and reducing cost.

Yutaka Wakuda
Chairman of Nagoya Dai-Gen Kai
Chairman of DAI-DAN Nagoya Safety, Health & Technology Association
Chairman of Daidenkouji Co., Ltd.

Sectional committee activities undertaken by Dai-Dan and subcontractors

By developing strong partnerships with Dai-Gen Kai and the Safety, Health & Technology Association, organizations comprising Dai-Dan subcontractors, we are safely providing building installation services at appropriate cost while maintaining high quality. The results of the annual activities carried out by the sectional committees in the areas of specialization of Dai-Gen Kai are compiled in the "Sectional Committee Activity Report." The results of the activities of each district are released and shared nationwide.

Sectional Committee Activity Report

Valuing Our Employees

Dai-Dan respects each of our employees and encourages them to take on the challenge of creating greater value, and also promotes positive work-life balance.

Respect for Human Rights and Development of Human Resources

Human rights issues

Dai-Dan's Corporate Code of Ethics clearly states the importance of respect for human rights and individuality. We value personal dignity and make efforts to improve work environments. During our new employee training sessions, we raise awareness for respecting basic human rights.

– Respect for human rights and individuality –
Excerpt from the Action Standards of the Corporate Code of Ethics

- All executives and employees must respect all human rights and individuality, and create work environments that do not tolerate actions that may harm human dignity.
- All executives and employees must strive to improve work environments and systems to create a workplace that allows our diverse human resources to exploit their skills to the fullest extent.

New employee technical training

New employee technical training is the very beginning of the training we provide. It consists of introductory technical training and fundamental technical training, both of which together allow new employees to learn and put into practice their fundamental knowledge.

Over the five months of training, we incorporate a curriculum that goes beyond the typical boundaries of job types. The training not only incudes lectures but also provides greater opportunities for employees to "see," "try," and "experience" new things, thus enhancing their efficiency at acquiring knowledge and technical skills. It also equips new employees with the ability to immediately contribute to the company.

Through this five-month training, new employees not only acquire specialized knowledge and technical skills, they also develop a strong bond with their fellow new employees, with whom they will grow together in friendly competition.


Safety experience training


Practical training course


Tour of duct fabrication plant


Tour of pipe plant


Site tour

VOICE

Reflecting on my new employee training

Now that we have completed our new employee training over the course of five months, I feel that this training has achieved three major accomplishments.

First, it has imparted knowledge of facilities, which is indispensable to one's career as a Dai-Dan engineer.

This training is not just about acquiring random knowledge. On the contrary, the lectures and practical skill training are presented in a balanced manner, so we were able to learn through real hands-on experience. During the self-study section prior to entering the training institute, I thought that even learning about the various types of pipe materials was difficult, but now I am able to recall the names and uses if it is a typical product just by looking at the pipes.

Moreover, we acquired not only the data, but also learned how to select pipe sizes as well as calculation methods and CAD operation. I feel that I have taken the first steps toward entering the world of building facilities, and it was an extremely gratifying process.

The second result was the experience of actually setting foot on an actual construction site. As a result of having such varied experiences, I was able to see one aspect of how such facilities are constructed.

Being able to see the equipment, materials, and work is one thing, but what was most helpful was hearing the comments of senior employees and tradespeople, which enabled me to really feel in my bones how Dai-Dan is building a relationship of trust with society through quality installation.

After being assigned to my new post at the Technical Research Laboratory that would serve as my location, I began to feel that I had to actively visit the job sites and not just remain in the research lab, so that I could function as a go-between between the two venues.

The third and final result was establishing close relationships with my peers and those senior to me that I had met in training.

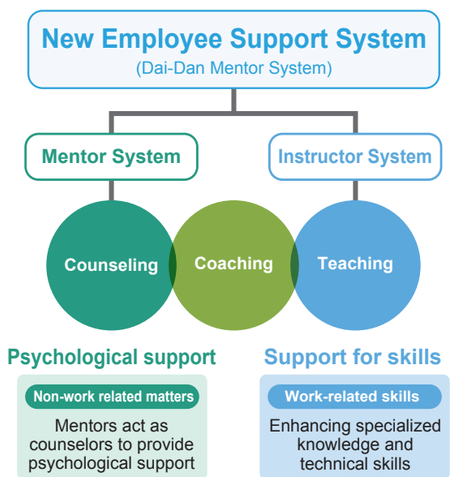
From now on we will each begin working at our assigned locations, but I'm looking forward now to meeting up again at the follow-up training sessions after a year of assignment. We can see how much we have grown and progressed after absorbing a variety of opportunities at each stage.

Mai Shiomi
Applied Technology Section
Technical Research Laboratory
(joined in 2016)

New Employee Support System (Dai-Dan Mentor System)

The Dai-Dan Mentor System consists of two systems: the Instructor System, which supports the enhancement of specialist knowledge and technical skills, and the Mentor System, which provides psychological support and assists career development. These two types of mentors (instructors and mentors) provide comprehensive support to new employees.

This chain of personnel development reflects our human resource development belief that people grow as they assist in the development of others.



VOICE

My experience in receiving mentor support

After the five-month new employee training spent surrounded by peers with whom I was at ease, I was posted to the Design Department at my assigned location at the Osaka Head Office. Both officially and privately I had many worries regarding the atmosphere of the workplace, my duties as a designer, and living on my own for the first time.

I feel that what made it possible to overcome this vague unease at an early stage was that I was able to receive support from my senior mentor immediately following my posting.

I was in a different department from my mentor, but there were times when we did work on the same floor and he usually called out to me and created an environment where it was easy to approach him for a consultation. My mentor told me stories about how he himself felt uneasy around the time he was a new hire. Knowing that even my mentor — who handles his tasks so energetically now — felt some unease in those days left me feeling somewhat relieved, and I was able to get used to the atmosphere of the workplace and duties without much delay.

What's more, when I was able to consult him about private matters, he would say, "Let's go drinking!" and we were able to have a fun consultation while enjoying saké.

Apart from my mentor, there are other more senior employees around me whom I can rely on for consultation or to ask questions and have a laugh with. This makes me realize that I am working in fortunate circumstances.

Through these experiences, I have felt that the mentor system has been an effective system for riding out the period of anxiety one experiences immediately following a new posting. I think that I will continue to put in daily effort so I can also serve as a mentor as soon as possible.

Kenta Shimoji
Design Section 1, Design Department
Osaka Head Office
(joined in 2015)

Official qualification acquisition scheme

Official qualifications can be the foundation for individuals as they go about their work, and they also significantly influence the credibility and authority of knowledge.

They are especially important for engineers as whether or not an engineer have a qualification is closely related to on-site work. Therefore, the acquisition of official qualification is indispensable.

In order to support our employees' commitment to enhance their technical skills and in order to secure qualified engineers and improve the overall technical level of the company, Dai-Dan encourages and provides support for the acquisition of official qualifications.

For those who acquire official qualifications recognized as necessary by Dai-Dan, we subsidize course fees and also offer incentives and official qualification acquisition benefits.

Number of employees who have major qualifications

Qualification	Number
Doctorate	5
Professional engineer	29
First-class architect (qualified architect and building engineer)	18 (13)
First-class electrical work operation and management engineer	213
First-class plumbing work operation and management engineer	774
Building services architect	134

Qualification	Number
First grade instrumentation engineer	303
Energy manager	58
First-type electrical work engineer	238
Building service engineer (air conditioning)	489
Building service engineer (plumbing)	472
First grade construction industry accountant	16

Notes:
- Figures pertaining to the number of people who have acquired the above qualifications are current as of the end of March 2016.
- The number of qualified individuals includes duplicated qualifications due to the multiple fields covered by each qualification.

CPD scheme for technical improvement

There are no limits to the specialization and improvement of technical skills. In order to support our employees' on-going commitment to skills improvement, we maintain a database on employee educational history using the Dai-Dan CPD* scheme and utilize it for human resource development.

The educational history of each employee is reported to the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan (SHASE). It is then assessed and verified for the appropriateness of our education and human resource development.

* Abbreviation for Continuing Professional Development, which refers to the continued development of skills and knowledge throughout an individual's professional career.

** Quantified figures of an individual's continuing professional development record in accordance with category specific point standards. They are used as official evidence of CPD history (performance results).

CPD status of company-wide initiatives

Category	Previous CPD points**	Current CPD points	Major programs
Ⅰ. Technical information learning	14,889	13,383	Attending external lectures, including those related to acquiring qualifications, and participating in exhibitions, product information sessions and tours
Ⅱ. In-house training/OJT	20,714	20,315	Attending in-house training and OJT
Ⅲ. Self-education	5,829	6,775	Taking recommended correspondence courses and self-education using specialized books
Ⅳ. Work experience	12,940	12,900	Successful work, winning of internal awards, Works Review Meetings, on-site inspections, safety inspections, teaching study groups, checking of patent-pending content, and serving as a committee member for creating internal technical documents
Ⅴ. Research and technology/reporting	609	930	Publication of research papers, contributing to journals and other publications
Ⅵ. Provision of information and technical instructions	876	1,132	External provision of information and technical instructions, participation in academic conferences and research committees, and serving as an instructor for official qualification courses
Ⅶ. Instructor	3,359	3,529	In-house training instructor, part-time lecturer at a university or technical college
Ⅷ. Winning of an award, acquisition of qualification, others	5,293	6,540	Winning of an external award, acquisition of a technical and safety plumbing related official qualification, acquisition of a degree, and obtaining a patent
Total	**64,509**	**65,504**	

Notes:
- Previous points are those points acquired between April 2014 and March 2015.
- Current points are those points acquired between April 2015 and March 2016.
- Categories II, III, IV, VII and category V have annual maximum points of 20 and 40 respectively.

Publication of the DAI-DAN Technical Current News

With the objective of publicizing the technology we develop and our research initiatives, we publish the DAI-DAN Technical Current News every September. The publication gives comprehensive explanations of experiments, assessment methods and analysis results using charts and images. The 110th edition was published in September 2016. Copies of these publications are donated to the National Diet Library.

Work-Life Balance and the Work Environment

Leave system

Dai-Dan has established various leave systems to allow our employees to make the most of their holidays to refresh themselves.

Since fiscal 2011, employees have been encouraged to take summer holidays at the same time as part of our efforts to reduce electricity consumption. Employees are also encouraged to take paid annual leave and refreshment holidays before or after their summer holiday to have their body and mind refreshed.

Many employees make the most of an extended break as a refreshment holiday to travel abroad or take the time to enjoy hobbies that they did not typically have time for.

Long-service employees are not only entitled to holidays, but are also given a travel coupon depending on the duration of their service, making their family trips and other trips more fulfilling.

Major leave systems (excluding statutory paid annual leave)

Type of holiday	Details
Summer holiday	Three consecutive days in summer
Refreshment holiday	Seven consecutive days (annual)
Long service leave	10 years: 3 days 20 years: 5 days 30 years: 7 days 40 years: 5 days
Congratulatory or condolence leave	Predetermined number of days for occasions such as weddings

Summer holiday usage rate

Fiscal year	Rate
FY2014	92.2%
FY2015	90.0%
FY2016	90.4%*

* As of the end of August

Continued employment scheme

Dai-Dan has introduced a continued employment scheme as part of our initiatives to meet the needs of Japan's aging and declining population. Under this scheme, we extend the employment of staff who reach retirement age but desire to keep working. Through this we are leveraging skills and expertise acquired over many years, and enabling those skills to be passed on to the next generation of workers.

In fiscal 2013, we employed all staff who desired to continue working until the age specified by the transitional measures following the amendment of the Act on Stabilization of Employment of Elderly Persons.

Continued employment rate for persons of retirement age

	FY2013	FY2014	FY2015
Persons of retirement age	26	25	22
Persons continuing employment	25	24	21
Continued employment rate	96.2%	96.0%	95.5%

Initiatives to address mental health issues

Maintaining a healthy mind helps keep you highly motivated for work and vitalizes the company.

In order to ensure the mental health of employees and establish an employee-friendly workplace, Dai-Dan offers mental health education.

New employee training teaches the basics of mental health to equip staff with the knowledge to allow them to identify and cope with their own stresses.

Furthermore, as part of our efforts to fulfill our company's duty of considering employee safety, during new deputy manager and managerial staff training sessions, participants have the chance to develop a better understanding of mental health from a legal perspective, and the means to identify potential stressors for staff. They also learn to address the issues as an organization.

Since fiscal 2013, our company has been offering stress checks for all employees. Once our employees have been able to understand their particular stress situation themselves, they can grasp their state of mental health. This gives some insight into early detection of metal health disorders. Since fiscal 2016, we have been implementing a stress check system based on the amended Industrial Safety and Health Act. We are planning to have those who experience a high degree of stress to undergo a medical examination with interview instructions from a doctor.

Dai-Dan provides an environment where each employee is able to work with a healthy body and mind to ultimately build an energetic company.

Following up on employees working long hours

Dai-Dan provides employees working long hours, as defined by the Industrial Safety and Health Act (those who have worked more than 100 hours over the legally defined monthly work hour limit) and those who have worked more than 80 hours of the legally defined monthly work hour limit for three consecutive months, with consultations with medical doctors once per month. Through this, we are managing the health of our employees and adopting improvements in line with advice from doctors.

Labor union activities

The Dai-Dan Labor Union marked its 43rd anniversary in August 2016.

The union has all along been engaged in discussions with the company and has pursued union activities while recognizing the difficulty of reconciling diverse views expressed by personnel from many offices both inside and outside Japan.

We believe the union leadership should attend gatherings at each workplace across the country in order to better appreciate the opinions of each member.

Union members will make concerted efforts to achieve even better working conditions and work environments.

—Chairperson for the 43rd term, Dai-Dan Labor Union

Employee review system

The outline of our employee review system is as shown below and is utilized depending on the objectives of implementation.

Through communication between supervisors and subordinates (interviews, etc.), and regular provision of feedback on evaluation results, we attempt to enhance target achievement levels, determine skills put into practice, and develop staff through guidance.

Employee review

Performance review

① The level of achievement over the past year compared to the goal is reviewed.

② Job-type specific outcome contribution items are determined.

Employee behavior review
(About 5 yrs after joining the company)

① Competence demonstrated to achieve the performance is reviewed.

② The review is carried out in line with job-type specific standards.

Competence growth review
(During the first 5 yrs of employment)

① The growth of competence at the stage where the individual's base is established is reviewed.

② For those who have been assigned to different job types, the review is used as a checklist.

Comment of an employee on child care leave

I delivered my son in December 2012 and my daughter in October 2015. Each time I filed for both maternity leave and child care leave. At the time that I was pregnant with my son, there wasn't anyone in my work environment who had returned to work following delivery, so I felt a bit uneasy. But even during a long-term leave of absence from work that extended to more than one year, I stayed in regular contact with my boss and the Administration Department by phone and e-mail, so I was able to return to work with ease.

I currently use the reduced work hour system, but I'm more strongly aware than before of the need to make progress with my work efficiently within the limited time available. What's more, I am profoundly grateful to have had the benefit of the understanding and cooperation of those around me such as my boss, those senior to me, and my peers. Thanks to them, I have been able to enjoy irreplaceable time with my children after work.

From my experience, I feel that ours is becoming a female-friendly society in which we can work and contribute. Balancing work and childcare can be difficult and leave one harried, but I am fulfilled in my daily life.

Yoriko Ishida
Chief of Design Section 4
Design Department
Tokyo Head Office

Dai-Dan Alumni Association

The Dai-Dan Alumni Association, which marks its 41st anniversary this year, was founded with the aim of expressing appreciation for the achievements of the alumni and to create opportunities for the alumni to socialize and renew old friendships.

With 45 new members having enrolled this year, the current membership is 578 as of June 30, 2016.

The annual luncheons with the company's executives and administrators were divided into three regions – East Japan, Central Japan, and West Japan – and were held in Tokyo, Nagoya, and Osaka, respectively, with total attendance reaching 218.

With about 40% of the membership attending, we are quite pleased regarding Dai-Dan. The meeting place was enlivened with everyone updating each other on their lives and reminiscing, and we were able to see their cheerful faces. In the future, we also expect to receive frank opinions and advice about the company's current situation. We are preparing for next year and eagerly await the participation of even more people.

94 participants from the West Japan region at the Swissotel Nankai Osaka (Nov. 20, 2015)

42 participants from the Central Japan region at the Chunichi Palace (Oct. 22, 2015)

82 participants from the East Japan region at the Hotel New Otani (Apr. 8, 2016)

Dissemination of technical information to external parties

In order to contribute to the development of Japan's building services industry, Dai-Dan supports the running of academic conferences and dispatches lecturers to external organizations. In particular, Dai-Dan's engineers are dispatched to external training centers and educational institutions across Japan as lecturers to provide classes on building service technologies.

External organization memberships and positions (as of August 2016)

Organization	Position
The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan	General Director
Institute of Electrical Installation Engineers of Japan	General Director
Air-conditioning & Plumbing Contractors Associations of Japan	General Director
Japan Electrical Construction Association	Advisory committee member
Association of Japan Instrumentation Industry	Administration council member
Japanese Association of Building Mechanical and Electrical Engineers	General Director
Association of Building Engineering and Equipment	General Director
Japan Architecture Facilities Inspection Association	General Director
Japan Electrical Engineer Association	General Director
Osaka Electrical Construction Association	General Director
Aichi Electrical Construction Association	General Director
Tokyo Electrical Construction Association	General Director

Organizations to which Dai-Dan employees are dispatched as lecturers

Organization	Position
Kanto Gakuin University	Part-time lecturer
Kogakuin University	Part-time lecturer
The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan	Lecturer
Kanto Plumbing Contractors Cooperative Association	Lecturer
School of Tokyo Electrical Construction Association	Lecturer
Osaka Piping Higher Training School	Lecturer

Signing of the Disaster Prevention Agreement (cooperation with local communities)

If a large-scale disaster strikes, we are, as a member of the construction industry, required to aid the swift recovery of electricity, water and social infrastructure, while at the same time ensuring the continuation of our business and that of our customers.

Dai-Dan has, through its industrial associations, signed a Disaster Prevention Agreement with local governments concerning post-disaster emergency activities. We have also entered into agreements directly with some municipalities and industry organizations, and have established a system that allows for the swift provision of post-disaster emergency assistance.

We aim to assist with the swift recovery of the local community and local businesses by proactively participating in reconstruction efforts of the affected region.

Assistance through the Dai-Dan Society Activity Fund

In April 1993, as part of our social contribution activities for our 90th anniversary, the Dai-Dan Society Activity Fund was established in the Osaka Community Foundation. From returns on fund assets, we support social welfare enhancement activities especially for persons with physical disabilities.

FY2014: Development program for at-home care provider volunteers (former nurses)

FY2015: Music Atelier "Echo"
(Local community music therapy to promote personal exchanges and vitalization of community members through the power of song)

FY2016: Citizen singing exercise school for preventing the need for nursing care
(Visits to nursing facilities for singing and exercising and other activities to extend the healthy life expectancy of the elderly)

Donations

Dai-Dan contributes financial support for various causes to help create and build a better community.

Our contributions include donations to geoenvironmental protection organizations, university scholarship funds and artistic activities, as well as sponsoring community events in areas across the country where our sites are based.

Part of sales proceeds from beverage vending machines used by Dai-Dan employees is donated to the Central Community Chest of Japan, National Land Afforestation Promotion Organization, TABLE FOR TWO International (NPO) and others.

We have also been donating to the areas affected by the Great East Japan Earthquake every year since immediately after the disaster happened. In addition, we provided contributions to those affected by the earthquake that struck Kumamoto in April 2016.

As for emergency stockpiles of items under the company's business continuity plan, contributions are being made partly through NPOs.

Social contribution activities (initiatives at offices across Japan)

Dai-Dan promotes social contribution activities. Our major activities are clean-up of the local community, which we encourage all employees to participate in. All the activities we run are published on the intranet notice board to raise awareness of social contribution activities.

Community cleanups

Sites	Names of the projects or details
Hokkaido Branch	• Cleanup in the area surrounding the Hokkaido Branch • Trash Pickup Beach Walk in Ishikarihama • Volunteer cleanup of a dry riverbed on the Toyohira River
Tohoku Branch	• Sendai City Beautification Support Program (Ichibancho, Aoba Ward)
Niigata Branch	• Cleanup in the area surrounding the Niigata Branch • Shinano River Clean Mission
Tokyo Head Office General Administration Division (Tokyo) Sales Division Industrial Facilities Department	• Tokyo Fureai Road Program • Cleanup of Iidabashi Outer Moat
Yokohama Branch	• Cleanup in the area surrounding the Yokohama Branch
Kanto Branch	• Street cleaning in Sakuranamiki-dori, Sakuragi-cho, Saitama-shi
Nagoya Branch	• Cleanup in the area surrounding the Nagoya Branch
Toyota Branch	• Cleanup in the area surrounding the Toyota Branch
Shizuoka Office	• Cleanup in the Morishita Park in Suruga-ku, Shizuoka • Trash retrieval on Mount Fuji
Hokuriku Branch	• Volunteer Support Program
Toyama Office	• Cleanup in the area surrounding the Toyama Office • Our Hometown Toyama Beautification Blitz • Cleanup in the area surrounding the Hamakurosaki Beach Campground
Fukui Office	• Fukui City Beautification Partner Scheme • Participation in "Cleanup Fukui" • Cleanup of Shono River
Osaka Head Office Internal Audit Office General Administration Division Industrial Facilities Department (Osaka)	• Osaka City Beautification Partner Scheme • Cleanup for Osaka Marathon
Okayama Branch	• Cleanup in the area surrounding the Okayama Branch • Major cleanup of Okayama (29th major cleanup of Lake Kojima Basin)
Chugoku Branch	• Cleanup in the area surrounding the Chugoku Branch • Volunteering at cleanup of Peace Memorial Park • Intensive cleanup of Peace Memorial Park • Volunteering at cleanup of Miyajima Tsutsumigaura Beach
Shikoku Branch	• Intensive cleanup at Sunport Takamatsu, Chuo-dori and other areas • Pick-and-Love-the-Town Movement (Area surrounding Marugame Castle)
Kyushu Branch	• Ohori Park Cleanup Team • Fukuoka Castle Cleanup Project
Kumamoto Branch	• Town cleanup sponsored by Ai-Port, Kumamoto Civil Activity Support Center

In addition to the above activities, we also participate in cleanups led by each site and individuals.

Trash Pickup Beach Walk in Ishikarihama


Sendai City Beautification Support Program (Ichibancho, Aoba Ward)


Tokyo Fureai Road Program


Street cleaning in Sakuranamiki-dori, Sakuragi-cho, Saitama-shi


Cleanup in the area surrounding the Chugoku Branch


Volunteering at cleanup of Miyajima Tsutsumigaura Beach


Intensive cleanup at Sunport Takamatsu, Chuo-dori and other areas

Forest development, tree planting, and flower planting

Sites	Names of the projects or details
Hokkaido Branch	Planting flowers amid shrubbery at a branch office
Chiba Office	Town Open Garden Operation
Chugoku Branch	Volunteer tree care at Peace Memorial Park
Technical Construction Division Technical Development Division Technical Research Laboratory	Miyoshi Green Support Squad (Tree planting in woodlands and forest development)


Planting flowers amid shrubbery at a branch office

Company-wide activities

Activity	Details
Eco-cap Project	In FY2015, we collected 285,000 caps. The proceeds fund medical care, vaccines, support for people with disabilities, and environmental education for children.
Charity Calendar Market	In January 2016, 1,275 calendars and diaries were donated from throughout Japan.
Donation of used stamps	We donated the used stamps collected by the offices to the following groups: • Japan Overseas Christian Medical Cooperative Service (JOCS), a public interest incorporated association • Tanzania Pole Pole Club • Shapla Neer (Citizens' Committee in Japan for Overseas Support, a specified nonprofit corporation)

Other activities

Activity	Details
Traffic Safety Guard Activity	We posted traffic safety guards at the North intersection of Toyota-shi Tsuchihashi Station. (Toyota)
Nichiban Core Eco Project	We participated in Nichiban Core Eco Project involving "Collection of discarded tape cores to protect the green earth." The funds are used to plant mangrove trees. (Tokyo, Nagoya, Kyushu)
Blood Drive	With the cooperation of the Japanese Red Cross Society, employees and subcontractors gave blood at our Hokkaido Branch. Also, our Nagoya Branch participated in a blood drive held by the Japanese Red Cross Society in the Urbannet Nagoya Building, where the branch office is located.
Volunteering at Stamp Collecting	At the Tokyo Head Office, employees volunteered to cut out stamps from used envelopes. The stamps collected are exchanged for cash and the proceeds are used as volunteer business capital for Chiyoda Ward in Tokyo.


Traffic safety guards posted as part of a road safety initiative


Volunteers collecting stamps

Financial Report

■ Consolidated Balance Sheets ····· P. 67
■ Consolidated Income Statements ····· P. 68
■ Consolidated Statements of Comprehensive Income ···· P. 68
■ Consolidated Statements of Changes in Net Assets ····· P. 69
■ Consolidated Statements of Cash Flows ····· P. 70

Financial Report

Consolidated Balance Sheets

(in million yen)

Assets		
Accounts	Previous Consolidated Accounting Year (From April 1, 2014 to March 31, 2015)	Current Consolidated Accounting Year (From April 1, 2015 to March 31, 2016)
Current assets		
Cash and deposits	24,385	23,563
Notes receivable, accounts receivable from completed construction contracts and other	49,511	56,157
Electronically recorded monetary claims—operating	3,290	8,095
Costs on uncompleted construction contracts	424	385
Raw materials and supplies	0	0
Deferred tax assets	1,278	1,392
Other	1,945	2,117
Allowance for doubtful accounts	(5)	(7)
Total current assets	**80,831**	**91,704**
Noncurrent assets		
Property, plant and equipment		
Buildings and structures	5,371	5,392
Accumulated depreciation	(2,737)	(2,908)
Buildings and structures, net	2,633	2,484
Machinery, equipment and vehicles	177	164
Accumulated depreciation	(132)	(132)
Machinery, equipment and vehicles, net	44	32
Tools, furniture and fixtures	800	808
Accumulated depreciation	(619)	(650)
Tools, furniture and fixtures, net	180	158
Land	1,048	1,063
Construction in progress	11	439
Total property, plant and equipment	**3,919**	**4,178**
Intangible assets	**156**	**594**
Investments and other assets		
Investment securities	17,494	16,543
Deferred tax assets	1	1
Net defined benefit assets	9,633	7,866
Other	1,595	1,612
Allowance for doubtful accounts	(190)	(188)
Total investments and other assets	**28,533**	**25,836**
Total noncurrent assets	**32,609**	**30,608**
Total assets	**113,440**	**122,312**

(in million yen)

Liabilities and Net Assets		
Accounts	Previous Consolidated Accounting Year (From April 1, 2014 to March 31, 2015)	Current Consolidated Accounting Year (From April 1, 2015 to March 31, 2016)
Liabilities		
Current liabilities		
Notes payable, accounts payable for construction contracts	37,937	42,067
Short-term loans payable	4,379	4,519
Income taxes payable	990	1,622
Advances received on uncompleted construction contracts	1,500	2,794
Provision for warranties for completed construction	85	81
Provision for loss on construction contracts	480	628
Loss reserve related to antimonopoly law	390	—
Provision for environmental measures	—	2
Other	6,550	9,717
Total current liabilities	**52,312**	**61,434**
Noncurrent liabilities		
Long-term loans payable	1,583	1,401
Deferred tax liabilities	4,237	3,208
Net defined benefit liability	1,377	1,376
Provision for environmental measures	107	—
Provision for overseas investment loss	6	5
Long-term accounts payable	352	303
Other	0	0
Total noncurrent liabilities	**7,665**	**6,295**
Total liabilities	**59,978**	**67,729**
Net Assets		
Shareholders' equity		
Capital stock	4,479	4,479
Capital surplus	4,809	4,809
Retained earnings	36,186	39,588
Treasury stock	(669)	(674)
Total shareholders' equity	**44,807**	48,203
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	6,797	6,326
Foreign currency translation adjustment	39	20
Remeasurements of defined benefit plans	1,592	(169)
Total accumulated other comprehensive income	**8,429**	**6,176**
Non-controlling interests	**225**	**203**
Total net assets	**53,462**	**54,583**
Total liabilities and net assets	**113,440**	**122,312**

Consolidated Income Statements

(in million yen)

Accounts	Previous Consolidated Accounting Year (From April 1, 2014 to March 31, 2015)	Current Consolidated Accounting Year (From April 1, 2015 to March 31, 2016)
Net sales of completed construction contracts	**121,780**	**138,346**
Cost of sales of completed construction contracts	**107,216**	**121,632**
Gross profit on completed construction contracts	**14,563**	**16,713**
Selling, general and administrative expenses	**10,016**	**10,176**
Operating income	**4,547**	**6,537**
Non-operating income		
Interest income	15	13
Dividends income	209	250
Real estate rent	34	34
Insurance fee	105	106
Foreign exchange gain	139	—
Other	3	5
Total non-operating income	**507**	**410**
Non-operating expenses		
Interest expenses	157	144
Guarantee commission	6	11
Foreign exchange loss	—	11
Other	14	9
Total non-operating expenses	**179**	**177**
Ordinary income	**4,875**	**6,770**
Extraordinary income		
Income on sales of noncurrent assets	1	2
Gain on sales of investment securities	—	4
Gain on reversal of provision for environmental measures	105	—
Profit reversed from the allowance for the loss relating to the antimonopoly law	—	47
Total extraordinary income	**107**	**54**
Extraordinary loss		
Impairment loss	5	—
Loss on retirement of noncurrent assets	105	1
Loss on valuation of investment securities	5	18
Loss on valuation of golf club membership	0	2
Provision of loss reserve related to antimonopoly law	92	—
Total extraordinary loss	**210**	**22**
Income before income taxes and minority interests	**4,771**	**6,802**
Income taxes—current	**1,796**	**2,405**
Income taxes—deferred	**45**	**150**
Total income taxes	**1,842**	**2,556**
Net income	**2,929**	**4,246**
Profit (loss) attributable to non-controlling interests	**7**	**(2)**
Profit attributable to owners of parent	**2,921**	**4,248**

Consolidated Statements of Comprehensive Income

(in million yen)

Accounts	Previous Consolidated Accounting Year (From April 1, 2014 to March 31, 2015)	Current Consolidated Accounting Year (From April 1, 2015 to March 31, 2016)
Net income	**2,929**	**4,246**
Other comprehensive income		
Valuation difference on available-for-sale securities	3,106	(470)
Foreign currency translation adjustment	0	(39)
Remeasurements of defined benefit plans, before tax	2,151	(1,762)
Total other comprehensive income	**5,258**	**(2,273)**
Comprehensive income	**8,188**	**1,973**
(Particulars)		
Comprehensive income attributable to owners of parent	8,151	1,995
Comprehensive income attributable to non-controlling interests	36	(22)

Consolidated Statements of Changes in Net Assets

Previous Consolidated Accounting Year (From April 1, 2014 to March 31, 2015)

(in million yen)

	Shareholders' equity					Accumulated other comprehensive income				Non-controlling interests	Total net assets
	Capital stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity	Valuation difference on available-for-sale securities	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income		
Balance at the beginning of current period	4,479	4,809	34,597	(666)	43,221	3,690	68	(559)	3,199	189	46,609
Cumulative effect of changes in accounting policies			(618)		(618)						(618)
Restated balance	4,479	4,809	33,979	(666)	42,602	3,690	68	(559)	3,199	189	45,991
Changes of items during the period											
Dividends from surplus			(713)		(713)						(713)
Profit attributable to owners of parent			2,921		2,921						2,921
Purchase of treasury stock				(4)	(4)						(4)
Disposal of treasury stock		0		0	0						0
Increase that results from exclusion of subsidiaries from consolidation			0		0						0
Net changes of items other than shareholders' equity						3,106	(28)	2,151	5,230	36	5,266
Total changes of items during the period	—	0	2,207	(3)	2,204	3,106	(28)	2,151	5,230	36	7,471
Balance at the end of current period	4,479	4,809	36,186	(669)	44,807	6,797	39	1,592	8,429	225	53,462

Current Consolidated Accounting Year (From April 1, 2015 to March 31, 2016)

(in million yen)

	Shareholders' equity					Accumulated other comprehensive income				Non-controlling interests	Total net assets
	Capital stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity	Valuation difference on available-for-sale securities	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total accumulated other comprehensive income		
Balance at the beginning of current period	4,479	4,809	36,186	(669)	44,807	6,797	39	1,592	8,429	225	53,462
Cumulative effect of changes in accounting policies			—		—						—
Restated balance	4,479	4,809	36,186	(669)	44,807	6,797	39	1,592	8,429	225	53,462
Changes of items during the period											
Dividends from surplus			(847)		(847)						(847)
Profit attributable to owners of parent			4,248		4,248						4,248
Purchase of treasury stock				(5)	(5)						(5)
Disposal of treasury stock		—		—	—						—
Increase that results from exclusion of subsidiaries from consolidation			—		—						—
Net changes of items other than shareholders' equity						(470)	(19)	(1,762)	(2,252)	(22)	(2,275)
Total changes of items during the period	—	—	3,401	(5)	3,395	(470)	(19)	(1,762)	(2,252)	(22)	1,120
Balance at the end of current period	4,479	4,809	39,588	(674)	48,203	6,326	20	(169)	6,176	203	54,583

Consolidated Statements of Cash Flows

(in million yen)

Accounts	Previous Consolidated Accounting Year (From April 1, 2014 to March 31, 2015)	Current Consolidated Accounting Year (From April 1, 2015 to March 31, 2016)
Net cash provided by (used in) operating activities		
Current net income before tax adjustments, etc.	4,771	6,802
Depreciation and amortization	345	284
Increase (decrease) in allowance for doubtful accounts	(475)	(1)
Increase (decrease) amount of net defined benefit liability	(89)	(82)
Increase (decrease) in provision for environmental measures	(112)	(105)
Interest and dividends income	(225)	(263)
Interest expenses	157	144
Increase (decrease) in reserve for overseas investment loss	(7)	(0)
Loss (gain) on valuation of investment securities	5	18
Loss (gain) on sales of investment securities	—	(4)
Loss (gain) on sales of noncurrent assets	(1)	(2)
Loss on retirement of noncurrent assets	105	1
Impairment loss	5	—
Increase (decrease) in loss reserve related to antimonopoly law	92	(47)
Reversal of foreign currency translation adjustment entailed in exclusion of consolidation	(73)	—
Decrease (increase) in notes and accounts receivable—trade	4,387	(11,450)
Decrease (increase) in costs on uncompleted construction contracts	(271)	39
Decrease (increase) in other current assets	476	(164)
Decrease (increase) in other noncurrent assets	475	4
Decrease (increase) in net defined benefit asset	(381)	(749)
Increase (decrease) in notes and accounts payable—trade	(2,070)	4,130
Increase (decrease) in advances received on uncompleted construction contracts	(1,623)	1,294
Increase (decrease) in other current liabilities	(450)	2,898
Increase (decrease) in other noncurrent liabilities	—	(48)
Subtotal	5,041	2,696
Interest and dividends income received	225	263
Interest expenses paid	(154)	(143)
Loss related to antimonopoly act paid	(473)	(342)
Income taxes (paid) refund	(2,210)	(1,862)
Net cash provided by (used in) operating activities	2,427	611
Net cash provided by (used in) investing activities		
Proceeds from withdrawal of time deposits	27	27
Payments into time deposits	(27)	(27)
Purchase of property, plant and equipment	(391)	(259)
Proceeds from sales of property, plant and equipment	3	2
Purchase of investment securities	(4)	(4)
Proceeds from sales and redemption of investment securities	13	13
Payments of loans receivable	(2)	(2)
Collection of loans receivable	2	3
Expenditures by acquiring of other noncurrent assets	(166)	(269)
Revenue by sales of other noncurrent assets	144	23
Net cash provided by (used in) investing activities	(401)	(493)
Net cash provided by (used in) financing activities		
Increase in short-term loans payable	34,680	39,010
Decrease in short-term loans payable	(36,170)	(38,710)
Proceeds from long-term loans payable	1,950	1,800
Repayment of long-term loans payable	(2,087)	(2,142)
Purchase of treasury stock	(4)	(5)
Proceeds from sales of treasury stock	0	—
Cash dividends paid	(713)	(847)
Net cash provided by (used in) financing activities	(2,344)	(894)
Effect of exchange rate change on cash and cash equivalents	78	(45)
Net increase (decrease) in cash and cash equivalents	(239)	(822)
Cash and cash equivalents at beginning of period	24,598	24,358
Decrease in cash and cash equivalents resulting from exclusion of subsidiaries from consolidation	(0)	—
Cash and cash equivalents at end of period	24,358	23,536

Third Party Opinion

This opinion statement is based on the Corporate Social Responsibility (CSR) Guideline published by the Japan Federation of Bar Associations. It was prepared with the cooperation of attorneys who are members of the Kinki Branch of the Association (Hajime Yoshida, Ryota Matsui, Koichiro Murotani) and presents opinions based on interviews with department managers and reviews of relevant documents.

Tsuneo Yamada
Attorney/Former Chairman of Osaka Bar Association
Director of Japan CSR Promotion Association
Branch Manager of Kinki Branch

Initiatives related to corporate governance and legal compliance

The company's initiatives based on the corporate governance code are judged to be appropriate, especially regarding the following: the method used by directors to evaluate the effectiveness of the Board of Directors; the Independent Officers Council's voluntary compilation of a self-evaluation questionnaire regarding the operations of the Board of Directors; and the Board of Directors' subsequent efforts targeting further improvements. The approach of compiling true opinions of the directors through an Independent Officers Council can be highly praised as an effort that could help to invigorate the Board of Directors.

Regarding the incident related to violation of the Antimonopoly Act and the receipt of a Cease and Desist Order as well as a Surcharge Payment Order on October 9, 2015, from the Japan Fair Trade Commission, the Compliance Office as well as the Legal Compliance Support Committee are continuing with their initiatives in order to prevent a recurrence. The company is providing employees with training on the Antimonopoly Act and corporate ethics, encouraging their participation in study sessions, and publishing a compliance newsletter. While it can be understood that they are conducting ongoing activities intended to disseminate and instill compliance awareness, I anticipate further improvements and efforts to disseminate awareness of compliance. This should include simplifying the content of the compliance newsletter by introducing specific examples from other companies and increasing the number of issues published.

Initiatives related to respect for human rights of employees and improving the work environment

The action plan that put forth the three objectives supporting a balance between work and family life based on the Law for Measures to Support the Development of the Next Generation deserves high praise, even from the perspective of promoting the success of female employees. The company is contributing to a better workplace environment for women, instilling measures to remove barriers to continued employment, and increasing the number of female employees. Future initiatives that promote career advancement for women can be anticipated.

On the other hand, with regard to the employment of persons with disabilities, the legally obligated employment rate has not yet been achieved. In light of the fact that the revised Act on Promotion of Employment of Persons with Disabilities came into force in April 2016, we can expect that the company will make further efforts.

Regarding paid leave, the rate of participation in paid leave in fiscal 2015 was 18% (compared with 40.3% for the construction industry as a whole), and 59% of employees did not take even one day of paid leave. Even when one considers the number of employees with specialized duties, they should strive to improve the rate of participation in this program.

Moreover, with respect to a reduction in lengthy work hours, the company gave notice in May of this year regarding a reduction in overtime work and holiday work. The specific measures that were indicated are deserving of praise and future changes in this area can be anticipated.

Initiatives related to environmental preservation

Regarding the Smart Energy Lab at Kyushu Branch of Dai-Dan, which was completed in May 2016, advanced technology has been introduced to help reduce environmental impacts. This facility was constructed to collect data and conduct studies, and it can be highly praised as a practical initiative reflecting the management principle of "contributing to a better environment."

Furthermore, they emphasize the viewpoint of contributing to the emergence of a sustainable society and it is admirable that they are following the PDCA cycle connected to goal setting, achievement level, judgment, and inspection of the environmental management system, but the target values were not achieved for many items in fiscal 2015, and there exists a need to study the cause and implement specific initiatives for achieving the goals adopted for the next fiscal year.

Also, regarding the social contribution activities, they are engaged in efforts to preserve woodlands and clean up rivers and shorelines, but I would anticipate that they will even more aggressively address not only the issues of a reduced environmental impact but also environmental regeneration and environmental remediation in the future.

VOICE Reflecting on the Third Party Opinions

I sincerely thank Mr. Yamada for offering his invaluable viewpoint in cooperation with Messrs. Yoshida, Matsui and Murotani.

Regarding the challenges that relate to compliance, the work environment, and environmental preservation pointed out by Mr. Yamada, we intend to establish specific policies to resolve issues and effect improvements.

In order to contribute to the development of a better environment and stronger communities as outlined in our management principles, the entire company is committed to working on our initiatives in these areas as a unified force under the strategies and measures stipulated in the four management policies we adopted in April 2016 as part of our mid-term management plan.

Takayuki Ikeda
Director, Executive Corporate Officer, Head of General Administration Division

Global Network

Headquarters Organizations

Name	Zip Code	Address	Telephone Number
General Administration Division	550-8520	1-9-25 Edobori, Nishi-ku, Osaka City	06-6447-8000
Sales Division	102-8175	2-15-10 Fujimi, Chiyoda-ku, Tokyo	03-3261-8231
Technical Construction Division	354-0044	390 Kita-Nagai, Miyoshimachi, Iruma-gun, Saitama Prefecture	049-258-1891
Internal Audit Office	550-8520	1-9-25 Edobori, Nishi-ku, Osaka City	06-6447-8065

Name	Zip Code	Address	Telephone Number
Technical Development Division	354-0044	390 Kita-Nagai, Miyoshimachi, Iruma-gun, Saitama Prefecture	049-258-1891
Technical Research Laboratory	354-0044	390 Kita-Nagai, Miyoshimachi, Iruma-gun, Saitama Prefecture	049-258-5725
Industrial Facilities Department	102-8175	2-15-10 Fujimi, Chiyoda-ku, Tokyo	03-5276-4710
Compliance Office	102-8175	2-15-10 Fujimi, Chiyoda-ku, Tokyo	03-3261-8231

Branch/Office Organizations

Name	Zip Code	Address	Telephone Number
Hokkaido Branch	001-0020	5-1-43 Nishi, Kita 20, Kita-ku, Sapporo City	011-716-9116
Obihiro Office	080-0010	4F Aobatokachi Bldg., 12-20 Odoriminami Obihiro City, Hokkaido	0155-25-3559
Hakodate Office	041-0851	4-17-40 Hondori, Hakodate City, Hokkaido	0138-55-7086
Tohoku Branch	980-0811	1-15-17 Ichiban-cho, Aoba-ku, Sendai City	022-225-7901
Aomori Office	030-0802	4F Tanuma Bldg., 2-4-10 Hon-cho, Aomori City	017-773-1582
Akita Office	010-0951	6F Sanno Piares Bldg., 2-2-17 Sanno, Akita City	018-824-6491
Morioka Office	020-0032	Hiramatsu Bldg., 2-16 Yugaose-cho, Morioka City	019-654-3023
Fukushima Office	960-8031	4F Fukushima Sakaemachi Bldg., 10-21 Sakaemachi, Fukushima City	024-521-4213
Yamagata Office	990-0043	1F Honcho Bldg., 2-4-3 Hon-cho, Yamagata City	023-634-2620
Niigata Branch	950-0088	2-4-3 Bandai, Chuo-ku, Niigata City	025-247-0201
Tokyo Head Office	102-8175	2-15-10 Fujimi, Chiyoda-ku, Tokyo	03-3261-8231
Kanto Branch	330-0854	3F GINZA YAMATO 3 Bldg., 1-10-2 Sakuragi-cho, Omiya-ku, Saitama City	048-644-8468
Gunma Office	371-0805	7F Daidoseimei Maebashi Bldg., 3-9-5 Minami-cho, Maebashi City, Gunma Prefecture	027-226-7720
Tochigi Office	321-0953	6F Yamaguchi Bldg., 4-1-20 Higashishukugo, Utsunomiya City	028-637-3380
Ibaraki Office	300-0037	7F Regal Tsuchiura Bldg., 1-16-12 Sakuramachi, Tsuchiura City, Ibaraki Prefecture	029-825-6656
Chiba Office	261-0023	25F NTT Makuhari Bldg., 1-6 Nakase, Mihama-ku, Chiba City	043-211-8881
Yokohama Branch	231-0062	24F Nisseki Yokohama Bldg., 1-1-8 Sakuragi-cho, Naka-ku, Yokohama City	045-683-1050
Nagoya Branch	461-0005	16F Urbannet Nagoya Bldg., 1-1-10 Higashisakura, Higashi-ku, Nagoya City	052-973-4750
Toyota Branch	471-0835	1-20 Akebono-cho, Toyota City, Aichi Prefecture	0565-28-1841
Mikawa Office	448-0011	5-6-4 Tsuiji-cho, Kariya City, Aichi Prefecture	0566-27-0324
Nagano Office	380-0824	5F Choeidaiichi Bldg., 1282-11 Minamiishido-cho, Nagano City	026-228-3820
Matsumoto Office	390-0811	2F Orii Bldg., 1-1-2 Chuo, Matsumoto City, Nagano Prefecture	0263-33-7016
Shizuoka Office	422-8067	17F-1704 South Pot Shizuoka Bldg., 18-1 Minami-cho, Suruga-ku, Shizuoka City	054-281-3501
Mie Office	514-0004	2F-B Kasama Bldg., 3-261 Sakaemachi, Tsu City	059-225-3840
Gifu Office	500-8175	2F Daini-nagazumi Bldg., 1-9 Nagazumi-cho, Gifu City	058-265-8224
Hokuriku Branch	920-0902	1-6-15 Owari-cho, Kanazawa City	076-261-6147
Toyama Office	930-0019	1-10-20 Yayoi-cho, Toyama City	076-441-3371
Fukui Office	910-0005	4F Fukui Hosokaikan, 3-4-1 Ote, Fukui City	0776-23-2166

Name	Zip Code	Address	Telephone Number
Osaka Head Office	550-8520	1-9-25 Edobori, Nishi-ku, Osaka City	06-6441-8231
Tenri Branch	632-0012	4-228 Toyoda-cho, Tenri City, Nara Prefecture	0743-63-1231
Kobe Branch	651-0088	7F Nihon Seimei Sannomiya Ekimae Bldg., 7-1-1 Onoe-dori, Chuo-ku, Kobe City	078-221-7777
Kyoto Branch	604-8186	2F Urbanex Oike Bldg. East Wing, 361-1 Umeya-cho, Kurumayaoike-sagaru, Nakagyo-ku, Kyoto City	075-251-6411
Wakayama Office	640-8203	6F Nankai Wakayama Bldg., 3-6 Higashikuramae-cho, Wakayama City	073-433-9431
Shiga Office	527-0025	#11 Janty 21, 6-55 Yokaichi Higashihonmachi, Higashi-omi City, Shiga Prefecture	0748-25-5400
Okayama Branch	700-0984	6-10 Kuwada-cho, Kita-ku, Okayama City	086-223-3106
Chugoku Branch	730-0812	2-22 Kakomachi, Naka-ku, Hiroshima City	082-241-4171
Yamaguchi Office	754-0011	4F Sanyo Bldg. Ogori, 4-6 Ogorimiyukimachi, Yamaguchi City	083-976-0121
San-in Office	690-0015	#103 Heights Shalom, 2-29-13 Agenogi, Matsue City	0852-27-5890
Shikoku Branch	760-0018	11-20 Tenjinmae, Takamatsu City	087-861-6030
Matsuyama Office	790-0065	2-208-1 Miyanishi, Matsuyama City	089-922-7161
Kochi Office	780-0088	10-16 Kitakubo, Kochi City	088-884-8231
Tokushima Office	770-0872	4-1-10 Kitaokinosu, Tokushima City	088-664-8121
Kyushu Branch	810-0023	3-1-24 Kego, Chuo-ku, Fukuoka City	092-771-4361
Kumamoto Branch	862-0941	1-7-6 Izumi, Chuo-ku, Kumamoto City	096-364-7134
Miyata Office	823-0016	680-1 Shiromaru, Miyawaka City, Fukuoka Prefecture	0949-33-2602
Saga Office	841-0031	#101 Sungarden Yarita, 436-1 Yaritamachi Tosu City, Saga Prefecture	0942-84-2350
Nagasaki Office	850-0027	#202 Grand Mansion, 31-3 Okeya-machi, Nagasaki City	095-828-0772
Oita Office	870-0033	#402 Matsumoto Bldg., 1-3-22 Chiyomachi, Oita City	097-532-4350
Miyazaki Office	880-0933	#201 Inoue Bldg., 2189-2 Kusabazaki, Otsubo-cho, Miyazaki City	0985-54-6382
Kagoshima Office	890-0046	1F San Laqua Bldg., 2-25-12 Nishida, Kagoshima City	099-256-3662
Okinawa Office	900-0015	4F Arute Bldg. Naha, 3-15-9 Kumoji, Naha City	098-868-1700

Singapore Branch	—	315 Outram Road #15-09, Tan Boon Liat Building, Singapore 169074	010-65-62218488
Hong Kong Branch	—	21F Edinburgh Tower, The Landmark, 15 Queen's Road Central, Hong Kong	010-852-22898888
Malaysia Branch	—	No.75-3 Jalan SS 23/15, Taman SEA, 47400 Petaling Jaya, Selangor, Malaysia	010-60-3-78055443

* The blue shading indicates regional headquarters.

DAI-DAN Co., Ltd.

For any feedback or inquiries relating to this report, please contact

DAI-DAN Co., Ltd. DAI-DAN REPORT 2016 PROJECT

1-9-25 Edobori, Nishi-ku, Osaka City 550-8520 Japan
TEL. 06-6447-8000 http://www.daidan.co.jp/

Waterless Printing. Naturally.

VEGETABLE OIL INK

MIX
Paper from responsible sources
FSC® C013238

Published in October 2016