

# SUSTAINABLE DEVELOPMENT GOALS



= Sustainability Report =



# Sustainable development goals (SDGs)

With the pledge to “leave no one behind,”  
these common universal aims  
(consisting of 17 goals and 169 targets)  
were approved by all member states at the 2015 UN Summit  
as part of the 2030 Agenda for Sustainable Development.

Ref.: The Sustainable Development Goals (SDGs) and  
Actions in Japan by the Ministry of Foreign Affairs

## SUSTAINABLE DEVELOPMENT GOALS



# DNC sustainability commitments

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**Yoshio Baba**

President/Representative Director  
of Dai Nippon Construction (DNC)

**DNC is committed to construction and civil engineering efforts that will make the world a better place with a 2030 target.**

In pursuit of the United Nations' 2015 Sustainable Development Goals (SDGs), DNC promotes sustainability for worldwide wellbeing toward a new dawn based on the concept of Shaping the Future, Different from Today.

DNC's activities in 49 countries and regions worldwide (as of FY 2020) give the organization a global role in environmental issues and public wellbeing. Based on a corporate philosophy of promoting such wellness, DNC remains committed to environmental conservation and improvement via reliable production.

The company also focuses on compliance, sincere interaction, and development of staff/management based on a philosophy of respect and a dedication to safe, secure infrastructure with ongoing project evolution.

DNC remains committed to supporting sustainability in collaboration with its associates both domestically and internationally.

# Main SDG challenges addressed by DNC

DNC considers the SDGs in its activities to address social challenges based on a corporate philosophy of ongoing public wellbeing and the major challenges of **global and regional wellness, harmony between the environment and energy, and people-centered work/safe working environments**. All staff share the company's agenda for **sustainability** and work toward SDG achievement.

## DNC's vision for sustainability

### Concepts

## Shaping the Future, Different from Today



### Corporate philosophy

## Promotion of wellbeing

DNC is committed to meeting public expectations and supporting wellbeing worldwide with reliable technology and quality.

## Major DNC challenges toward sustainability

### Global and regional wellness

Contribution to the development of countries and lives worldwide by working on robust infrastructure and high-quality output



### Harmony between the environment and energy

Commitment to the use of sustainable global environment by taking the lead in developing and using environmentally friendly materials and energy



### People-centered work/safe working environments

DNC strives to maintain environments in which people can work safely and efficiently and be respected regardless of nationality and gender. Focus is placed on technological development in collaboration with other sectors and educational institutions.



#### Action agenda

##### Commitment

Meeting public expectations through commitment along with ongoing corporate operation and growth

##### Pride

Pride in public support and ongoing dedication to technology and quality




##### Openness to challenges

Ongoing focus on challenges based on goals, ambition and a global perspective, along with a passion for production

# Major challenges and efforts

The three major material challenges and activities toward SDG achievement are summarized here.  
DNC pursues specific measures and key performance indicators (KPIs)  
toward goal achievement by 2030.

## Corporate contributions to sustainability

Global and regional wellness		<b>Advanced infectious disease research facility construction</b> <ul style="list-style-type: none"> <li>Plans for development of the Institut National de la Recherche Biomédicale (INRB) in the Democratic Republic of the Congo</li> </ul> <b>Reduction of traffic accidents worldwide</b> <ul style="list-style-type: none"> <li>Provision of safety guidance overseas</li> </ul>
		<b>Elementary school construction</b> <ul style="list-style-type: none"> <li>Plans for the construction of elementary schools in Bisau in the Republic of Guinea-Bissau</li> <li>Phase 1 of the third elementary education facility development plan in Mongolia</li> </ul>
		<b>Sewerage improvement</b> <ul style="list-style-type: none"> <li>Sewerage improvement for Port Moresby in Papua New Guinea</li> </ul> <b>Involvement in water-related projects</b> <ul style="list-style-type: none"> <li>Flood control, river, agricultural irrigation and water supply/sewage projects</li> </ul>
		<b>Road infrastructure development</b> <ul style="list-style-type: none"> <li>Construction and renovation of roads in Japan and elsewhere</li> </ul> <b>New construction technology</b> <ul style="list-style-type: none"> <li>Development of IC T, CIM and other new technologies and establishment of environments for related introduction</li> <li>Improvement of work efficiency via the promotion of I-Construction</li> </ul>
		<b>Corporate continuity in disaster conditions</b> BCP plans <b>New construction technology</b> <ul style="list-style-type: none"> <li>Flood control, river, agricultural irrigation and water supply/sewage projects</li> </ul>
Harmony between the environment and energy		<b>Harmony between energy and nature</b> <ul style="list-style-type: none"> <li>Water channels for irrigation and small-scale power generation using check dams</li> </ul> <b>Carbon-neutrality</b> <ul style="list-style-type: none"> <li>Renewable-energy project work</li> </ul> <b>Reduction of environmental loads</b> <ul style="list-style-type: none"> <li>Elimination of ZEB primary balance consumption</li> <li>Comprehensive evaluation of consideration for environments, landscapes, pleasant environments and other factors based on CASBEE</li> </ul>
		<b>Waste reduction/environmental conservation</b> <ul style="list-style-type: none"> <li>Recycling of on-site construction by-products to create construction materials</li> </ul> <b>Waste reduction and local aesthetics</b> <ul style="list-style-type: none"> <li>Separation, reuse and reduction of waste</li> <li>Local cleaning</li> </ul>
		<b>Carbon-neutrality</b> <ul style="list-style-type: none"> <li>CO2 emission control to combat greenhouse effects in construction, design and application</li> </ul>
People-centered work/safe working environments		<b>Neutrality of staff gender/nationality</b> <ul style="list-style-type: none"> <li>Environments friendly to all genders</li> </ul>
		<b>Optimization of working environments</b> <ul style="list-style-type: none"> <li>Promotion of work-style reform</li> <li>Organization of second-life seminars</li> </ul> <b>Development of AI safety and productivity</b> <ul style="list-style-type: none"> <li>Staff safety based on body-recognition AI</li> <li>AI-based efficiency in on-site management</li> </ul> <b>Development of technical AI ability</b> <ul style="list-style-type: none"> <li>Promotion of related qualifications and guidance/training in associate companies</li> </ul>
		<b>Support for self-sustaining development in developing countries</b> <ul style="list-style-type: none"> <li>Industrial/public infrastructure improvement for self-sustaining development in developing countries</li> <li>Technology transfer to developing countries</li> </ul>
		<b>Commercial-academic collaboration with other sectors</b> <ul style="list-style-type: none"> <li>PFI partnerships with various sectors and effective use of public land via consolidation of public facilities</li> </ul> <b>Sharing of corporate technology</b> <ul style="list-style-type: none"> <li>Information provision via the New Technology Information System (NETIS)</li> </ul>



# DNC efforts for global wellbeing

DNC works globally toward SDG achievement.

Over 210 construction projects in 49 countries and regions (as of November 2020)



## Major projects in developing countries (as of 2020)

### ■ Africa

Republic of Djibouti	FY 2018 economic and social development program (improvement of National Route 1)
Republic of South Sudan	Nile River Bridge Construction Project
	Juba Water Supply System Development Project
Arab Republic of Egypt	Cairo University Specialized Pediatric Hospital Outpatient Facility Construction Project
Democratic Republic of the Congo	Judo and Sports Center Construction Project
Republic of Liberia	Monrovia Somalia Drive Reconstruction Project (Phase 2)
Republic of Guinea	Reconstruction of Soumba Bridge on National Route 3
	Kaporo Artisanal Fishing Port Construction Project
Burkina Faso	Southeastern Ouagadougou Tansoba Bypass Improvement Project
United Republic of Tanzania	New Bagamoyo Road Widening Project (Phase 2)
Republic of Zimbabwe	Northern North-South Corridor Improvement Project

### ■ Asia

Kyrgyz Republic	Bishkek-Osh Road Avalanche Protection Project
Mongolian State	Ulaanbaatar Primary/Secondary Education Facility Improvement Project
Kingdom of Bhutan	Primary National Highway No. 4 Bridge Reconstruction Project

### ■ Oceania

Independent State of Papua New Guinea	Nadzab Airport Redevelopment Project
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## Global and regional wellbeing

DNC contributes to the development of countries and lives worldwide by working on robust infrastructure and high-quality structures.



### Advanced infectious disease research facility construction

#### ● Improvement of the Institut National de la Recherche Biomédicale (INRB) in the Democratic Republic of the Congo



INRB: research building, lecture hall and other buildings  
(Years of construction: 2018, 2019)

People still often die from Ebola and Malaria in developing countries. As such, infection research and the construction of related advanced research directly affect people's lives.



**Takeharu Kakeya**  
Building Construction Department,  
International Division

### Reduction on traffic accidents worldwide

#### ● Provision of safety guidance overseas



Driver safety training

Driver checklists and related tools are produced in workplaces overseas for DNC driver training on traffic regulations and stringent observation of speed limits to eliminate all traffic accidents.



**Shigeru Kawakami**  
Civil Engineering Department,  
International Division

#### Goals to be achieved by 2030

- Strengthen measures in relevant projects to eradicate infections.
- Eliminate traffic accidents.

## Global and regional wellbeing

DNC contributes to the development of countries and lives worldwide by working on robust infrastructure and high-quality structures.



### Elementary school construction

- School construction in Bissau in the Republic of Guinea-Bissau
- Phase 1 of the third elementary education facility development plan in Mongolia



School buildings in Guinea-Bissau  
(Construction: 2012 – 2014)

To improve educational facilities in Bissau, 16 elementary schools with a total of 130 classrooms have been constructed.

DNC contributes to the improvement of schooling environments and enrollment rates in the country.



**Shinichi Yokoyama**  
Building Construction Department,  
International Division



School in Ulan Bator  
(Construction: 2004 – 2006)

As part of school construction with an ongoing Japan grant-in-aid that started in 2000, four schools were constructed in the first term of Phase 3.



**Takehiko Hirose**  
Building Construction Department,  
International Division

Goal to be achieved by 2030

- Construct educational facilities to help improve educational environments in developing countries.



## Global and regional wellbeing

DNC contributes to the development of countries and lives worldwide by working on robust infrastructure and high-quality structures.



### Sewage improvement

#### ● Sewage improvement in Port Moresby, Papua New Guinea



Joyce Bay sewage treatment plant, Port Moresby

As part of the first full-scale sewage treatment plan in Southern Oceania, this plant is expected to act as a model for related advancement in the region.



**Shigeru Kawakami**

Civil Engineering Department,  
International Division

### Involvement in water-related projects

#### ● Flood control, rivers, agricultural irrigation and water supply/sewage projects



Uchigatani Dam construction (Gifu Prefecture)

DNC is involved in various water-related projects including work related to flood control, rivers, agricultural irrigation and water supply/sewerage to support daily living and protection of assets, ensure stable supplies of agricultural and potable water, and contribute to the conservation of the environment and public health.



**Chihiro Kumazaki**

Civil Engineering Business  
Promotion Department,  
Civil Engineering Head Division

#### Goals to be achieved by 2030

- Improve water supply/sewage systems in more than 20 countries and regions.
- Increase involvement in projects for safe management, purification and use of water.

## Global and regional wellbeing

DNC contributes to the development of countries and lives worldwide by working on robust infrastructure and high-quality structures.



### ■ Involvement in road infrastructure

- Construction and renovation of roads in Japan and elsewhere



Improvement of the Sakuho Section of the Chubu Odan Expressway (6) (Nagano Prefecture)



Project for Reconstruction of Somalia Drive in Monrovia (Republic of Liberia)

DNC contributes to the construction of roads to connect cities and people and support daily living and economic activity.

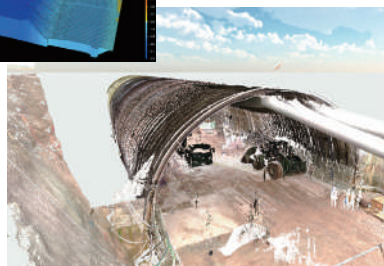
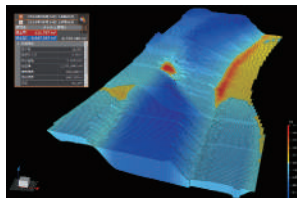


**Chihiro Kumazaki**

Civil Engineering Business  
Promotion Department,  
Civil Engineering Head Division

### ■ New technologies in construction

- Development of ICT, CIM and other new technologies, and establishment of environments for related introduction
- Improvement of work efficiency via the promotion of I-Construction



3D measurement data/Checking of landforms/  
Construction work progress

DNC promotes i-Construction for the utilization of 3D and other types of data in processes relating to surveying, design, construction planning, construction and inspection, along with environments for improved information communication technology (ICT) and construction information modeling (CIM) to enhance productivity. The company uses i-Construction for mass management in earthwork and checking of landforms/construction progress.



**Kenji Hayashi**

Civil Technology Department,  
Civil Engineering Head Division

#### Goals to be achieved by 2030

- Increase involvement in robust infrastructure projects to support economic growth and public wellbeing.
- Increase the on-site utilization rate of ICT and CIM to 100%.

## Global and regional wellbeing

DNC contributes to the development of countries and lives worldwide by working on robust infrastructure and high-quality structures.



### 11 Sustainable Cities and Communities



## Corporate continuity in disaster conditions

### ● BCP plan



Disaster control/recovery headquarters training  
Data backup training

DNC focuses on disaster recovery as part of its social responsibilities, and supports speedy recovery at construction sites and completed properties as well as the restart of client trading. To these ends, the company plans rapid resumption of corporate activity in disaster conditions after checking of the safety of employees and their family members.

### Naoyuki Arasawa

Administration Department,  
Administration Head Division



## Urban redevelopment

### ● Public-focused urban development projects



Terrasse Nayabashi  
(Prime urban redevelopment for the Nayabashi eastern section)

DNC previously acquired the lower levels of a high-rise condo to create a medical-mall development project for public support. The company also works on urban management to produce appealing environments.

### Kazushi Kondo

Strategy Planning Department,  
Business Strategy Head  
Division



#### Goals to be achieved by 2030

- Review plans regularly for ongoing training to ensure prompt commercial resumption in post-disaster situations.
- Promote the development of pleasant urban environments and project contribution.



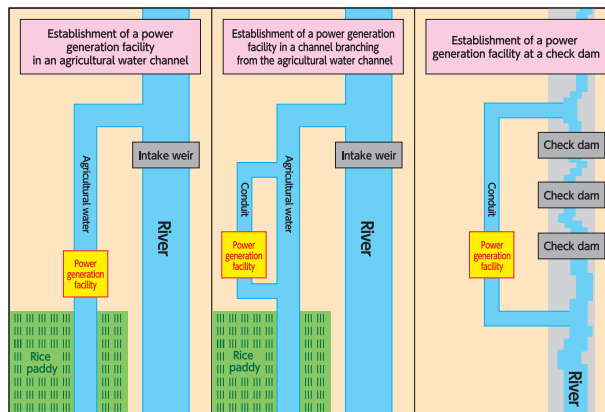
## Harmony between the environment and energy

DNC contributes to global sustainability via initiatives in the development and use of environmentally friendly materials and energy.



### Harmony between energy and nature

#### Water channels for irrigation and small-scale power generation using check dams



Small-scale hydropower generation

Hydropower is a highly stable form of renewable energy generated using small amounts of water and potential energy. DNC surveys and examines possible generation sites with focus on local demand.



**Kazushi Kondo**

Strategy Planning Department,  
Business Strategy Head  
Division

### Carbon-neutrality

#### Renewable energy project work



Esashi wind power generation project

To mitigate emissions of CO<sub>2</sub> and other greenhouse gases, DNC contributes to the output of solar, biomass, wind, water and other renewable energy sources in order to reduce the use of petrol, coal and other fossil fuels.



**Chihiro Kumazaki**

Civil Engineering Business  
Promotion Department,  
Civil Engineering Head Division

#### Goals to be achieved by 2030

- Enable water-based electricity generation toward 1 million kwh/year.
- Eliminate all greenhouse gas emissions by FY 2050 toward decarbonization.



## Harmony between the environment and energy

DNC contributes to global sustainability via initiatives in the development and use of environmentally friendly materials and energy.



### ■ Reduction of environmental loads

- Elimination of ZEB primary balance consumption
- Comprehensive evaluation of consideration for environments, landscapes, pleasant environments and other factors based on CASBEE



ZEB planner registration

DNC supports the construction of net zero energy buildings (ZEBs) to eliminate the related annual balance of primary energy consumption while maintaining pleasant indoor environments (registered as a ZEB planner in 2018). The company promotes reduced energy consumption via ZEBs as a key measure against global warming, and supports the verification and development of related technologies. Clients are supported with extensive information on the significance and advantages of ZEBs for active development of such construction.

#### Kazuhisa Sakamoto

Building Construction Business  
Promotion Department,  
Eastern Japan Regional Branch



Dai Nippon Construction Head Office in Gifu  
(the first in the prefecture to receive the maximum  
“S” CASBEE certification)

DNC uses the Comprehensive Assessment System for Building Environmental Efficiency (CASBEE) for objective evaluation of building quality and environments, including energy saving, environmental friendliness, pleasant indoor environments and general aesthetics. The DNC Gifu Head Office was the first in the prefecture to receive the maximum “S” CASBEE certification.

#### Hirofumi Nishijima

Building Construction Engineering  
Department,  
Building Construction Head Division



#### Goals to be achieved by 2030

- Conduct/propose ZEB design verification in at least one case a year for ongoing verification and accumulation of ZEB technology.
- Achieve CASBEE certification of A or higher for environmentally friendly buildings and an overall BEE average of 1.2 or higher.

## Harmony between the environment and energy

DNC contributes to global sustainability via initiatives in the development and use of environmentally friendly materials and energy.



### Waste reduction/environmental conservation

- Recycling of on-site construction byproducts to create building materials



Generation of gravel



Gravel before recycling



Gravel after recycling



Road made with recycled gravel

DNC reduces waste by transporting gravel and other construction byproducts to recycling facilities.

#### Hiroshi Tsukakoshi

Department of Environment,  
Safety and Quality Management,  
Eastern Japan Regional Branch



### Waste reduction and local aesthetics

- Separation, reuse and reduction of waste
- Local cleaning



Local cleaning activity

DNC's waste reduction efforts include separation of office refuse, double-sided printing and file recycling. Staff also engage in volunteer cleaning activities to help keep Shinjuku tidy.

#### Nobuyoshi Kiriki

Administration Department,  
International Division



#### Goals to be achieved by 2030

- Increase construction waste separation by at least 85% in the civil engineering division and by 80% in the construction division
- Reduce waste and maintain clean working environments via reuse/reduction and cleaning activities.

# Harmony between the environment and energy

DNC contributes to global sustainability via initiatives in the development and use of environmentally friendly materials and energy.



## 13 Climate Action



### Carbon-neutrality

- CO2 emission control to combat greenhouse effects in construction, design and application



Awareness based on hosting environment-related posters

#### «Examples»

- Effective on-site use of soil generated from construction
- Use of highly energy-efficient construction machinery and vehicles
- Design/construction of ZEBs and energy-saving buildings
- Turning lights off during lunch breaks and ensuring appropriate air-conditioner setting
- Promotion of the Cool Biz and Warm Biz initiatives



Training on fuel saving for on-site CO2 reduction

#### «FY 2020 targets»

- Construction/civil engineering division  
Reduction of CO2 emissions (t-CO2/100 million yen in finished work) from DNC construction by 26% from the FY 2005 – 2011 average

- Office division  
Reduction of annual power consumption by 10% from the FY 2015 value

#### Hironaga Goto

Department of Environment,  
Safety and Quality Management,  
Head Office



#### Goal to be achieved by 2030

- Reduce CO2 emissions by 30% from the 2005 – 2012 average.



## People-centered work/safe working environments

DNC strives to maintain environments in which people can work safely and efficiently and be respected regardless of nationality and gender. Focus is placed on technological development in collaboration with other sectors and educational institutions.



### ■ Neutrality of staff gender/nationality

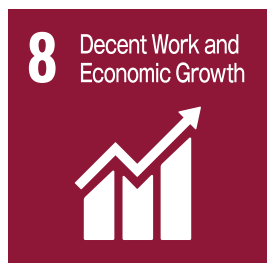
#### ● Environments friendly to all genders



Health and safety patrol by female engineers

- Efforts are made to create positive working environments and provide roles appropriate for women with children.
- The company's employment policy promotes recruitment of female engineers and other staff.
- Workplaces feature multilingual signs, pleasant restrooms, female facilities and changing rooms.
- Interns are also welcomed regardless of gender/nationality.

**Himeko Kumagai**  
Building Construction Department,  
Eastern Japan Regional Branch



### ■ Improvement of working environments

- Promotion of work-style reform
- Organization of second-life seminars



Work-style reform promotion meeting

Work-style improvement, time-saving and other measures are discussed at the work-style reform headquarters and branches, and work-life balance is also promoted. Second-life seminars are held for employees approaching retirement age to present the fundamentals of the retirement system, public pensions after re-employment, social insurance and planning for everyday living.

**Naoyuki Arasawa**  
Administration Department,  
Administration Head Division



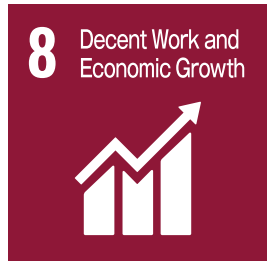
#### Goals to be achieved by 2030

- Increase the number of female staff by 10%.
- Provide multilingual signs, pleasant restrooms, women's facilities and changing rooms in all workplaces.
- Ensure eight days off every four weeks in all workplaces.



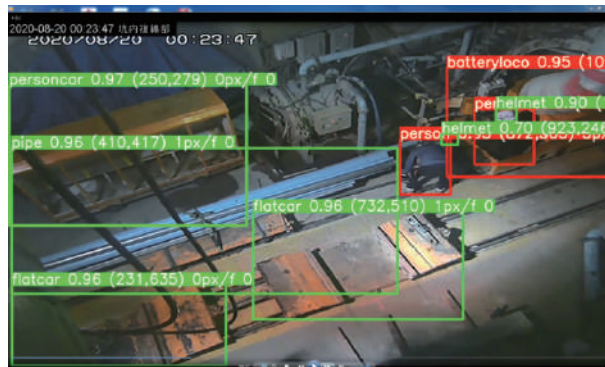
## People-centered work/safe working environments

DNC strives to maintain environments in which people can work safely and efficiently and be respected regardless of nationality and gender. Focus is placed on technological development in collaboration with other sectors and educational institutions.



### Development of AI safety and productivity

- Staff safety management based on body-recognition AI
- AI-based efficiency in on-site management



AI detection of staff/equipment

A system is run to prevent contact accidents by monitoring staff and construction machinery using AI recognition technology. A construction photo management system is also being developed using AI image/character recognition to reduce management work.



**Akie Mimura**  
Technology Development  
Department, Head Office

### Development of technical AI ability

- Promotion of related qualifications and guidance/training in associate companies



On-site training of technical staff

Construction technology/on-site training are provided to technical staff, and acquisition of construction qualifications is promoted. Registration of skilled staff via a construction career enhancement system is also promoted in conjunction with associate companies to promote construction industry leadership.



**Yukihsa Hasegawa**  
Civil Engineering Department,  
Eastern Japan Regional Branch

#### Goals to be achieved by 2030

- Improve construction site productivity by 20% using AI.
- Promote acquisition of useful qualifications by engineers, architects and construction management engineers.

## People-centered work/safe working environments

DNC strives to maintain environments in which people can work safely and efficiently and be respected regardless of nationality and gender. Focus is placed on technological development in collaboration with other sectors and educational institutions.



### Support for self-sustaining development in developing countries

- Industrial/public infrastructure improvement for self-sustaining development in developing countries
- Technology transfer to developing countries



With local staff at the completion of PNG bridge construction



Intern hosting for a road in Liberia

Most DNC construction overseas is on Japanese ODA projects. The company contributes to regional economic growth and poverty reduction by constructing high-quality facilities based on its various technologies and a wealth of experience, and also contributes to human resource development and technology transfer.

**Takashi Inagaki**  
Business Promotion Department,  
International Division



**Masayuki Muto**  
Engineering Department,  
International Division



Technical transfer is promoted via on-the-job training under the guidance of supervisors from Japan and a third country. The company welcomes internship applications.

**Hiroshi Yano**  
Building Construction Department,  
International Division



Goal to be achieved by 2030

- Ensure appropriate processing of all internship requests.

## People-centered work/safe working environments

DNC strives to maintain environments in which people can work safely and efficiently and be respected regardless of nationality and gender. Focus is placed on technological development in collaboration with other sectors and educational institutions.



### Commercial/academic collaboration with other sectors

- PFI projects
- Partnerships with various sectors and effective use of public land via consolidation of public facilities



Kamoseien Crematorium in Minokamo

PFI projects are conducted to reduce financial loads, improve public services and contribute to local economies based on commercial initiative in design, construction, maintenance and management of facilities.

By way of example, universal design to ensure safety and privacy for people of all ages is implemented at Kamoseien Crematorium in Minokamo in accordance with the following criteria:

- Ease of understanding for all visitors
- Environmental friendliness with abundant greenery and harmony with surrounding areas
- Disaster-safe facility

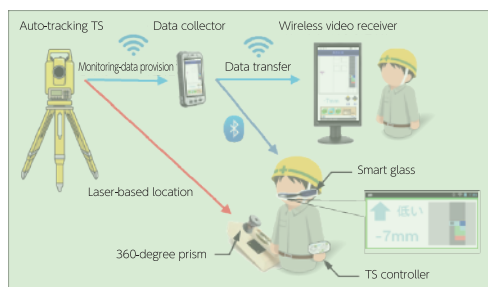
#### Kazushi Kondo

Strategy Planning Department,  
Business Strategy Head Division



### Sharing of corporate technology

- Information provision via the New Technology Information System (NETIS)



System for management of concrete crest heights  
(NETIS reg. KT-180117-A)

DNC provides information on the Ministry of Land, Infrastructure, Transport and Tourism's New Technology Information System (NETIS) database, which is used for sharing of corporate and other forms of technology.

#### Akie Mimura

Technology Development Department,  
Head Office



#### Goals to be achieved by 2030

- Actively contribute to PFI projects and participate in ten SPCs.
- Promote DNC technology via channels such as NETIS and exhibitions.

Shaping the Future, Different from Today

