

# **FY18 ESG Presentation**





# OMRON Sustainability Initiatives

**Tsutomu Igaki**

**Executive Officer**

**Global Investor & Brand Communications HQ**

# Our DNA: Improving Lives and Contributing to a Better Society Through Our Key Practices

In 1959, Omron Founder Kazuma Tateishi created the motto,

## To Improve Lives and Contribute to a Better Society

In words that are easy to understand, this motto implies that the very purpose of the company's existence is to serve society as well as to pursue profits.



Founder Kazuma Tateishi  
(1900-1991)



Handwritten Sketch by Our Founder

## **Our Mission**

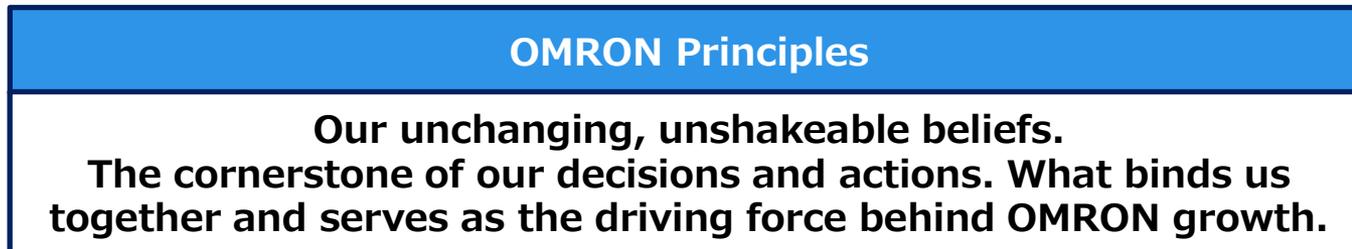
**To improve lives and contribute to a better society**

## **Our Values**

- **Innovation Driven by Social Needs**  
Be a pioneer in creating inspired solutions for the future.
- **Challenging Ourselves**  
Pursue new challenges with passion and courage.
- **Respect for All**  
Act with integrity and encourage everyone's potential.

# Management Based on the OMRON Principles

We have declared our Management Philosophy based on the OMRON Principles, setting our Long-Term Vision and conducting our business guided by the OMRON Group Management Policy



# Global Activities to Promulgate and Create Shared Belief in the OMRON Principles

Promulgating and creating shared belief in unique OMRON activities in all workplaces

## CEO Circle



## OMRON Principles Dialogue



## The OMRON Global Award (TOGA)



## Messages From Senior Management



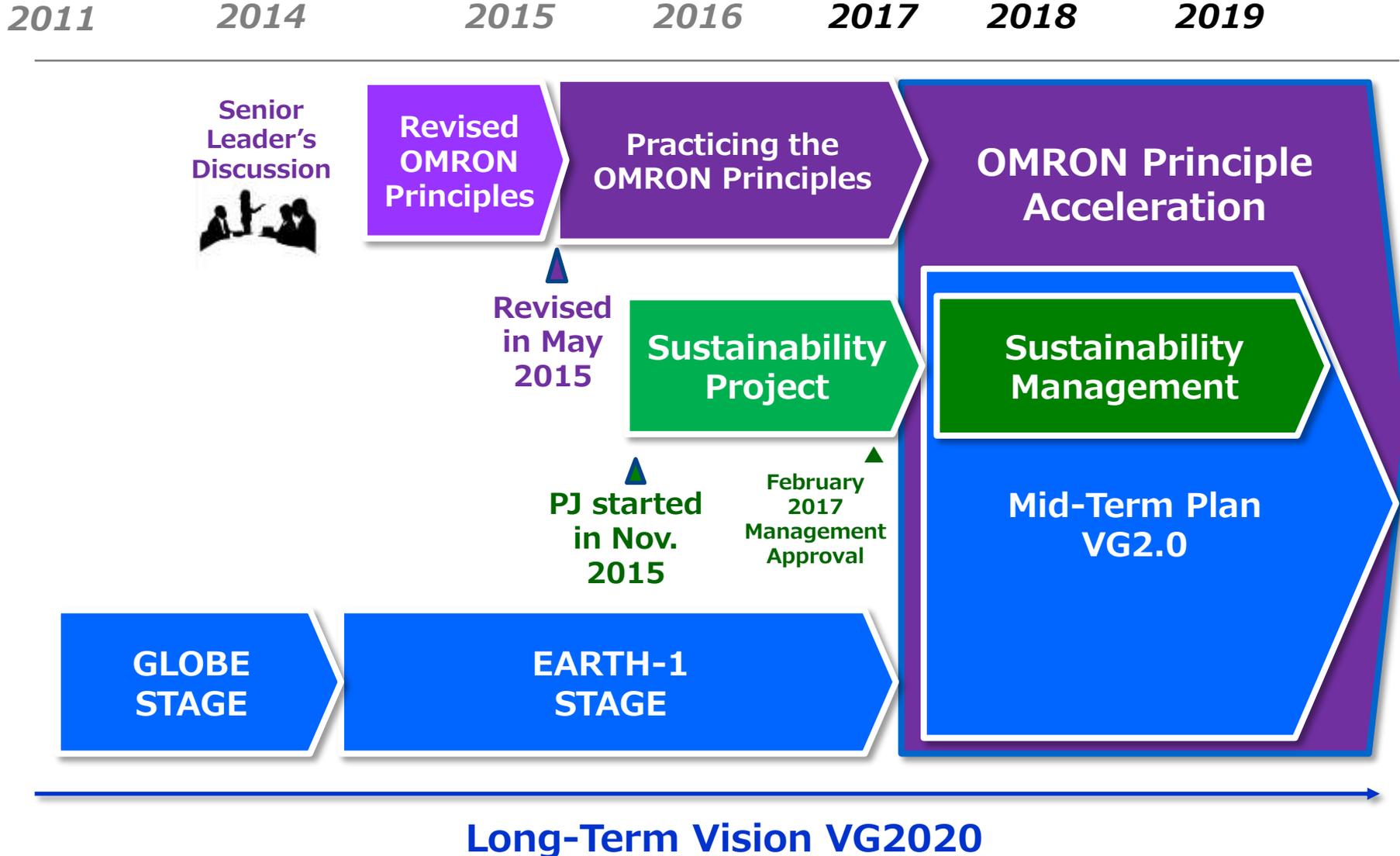
## Engagement Survey



## OMRON Principles Workplace Interchange



# OMRON Principles and Sustainability Initiatives



# Linking Medium-Term Management Plan and Sustainability Initiatives

## OMRON Principles

### Medium-Term Management Plan VG2.0

#### Business Target & Strategies

Net Sales ¥1 trillion  
Operating Income ¥100 billion

1. Redefine focus domains and maximize the strength of businesses
2. Evolve business models
3. Reinforce core technologies

×

Collaborative Creation With Partners

+

Human Capital Management,  
Manufacturing, and Risk Management

#### Sustainability Initiatives

A global value-creating group that is qualitatively and quantitatively superior



×

Collaborating With Partners



+



# Management Commitment to Sustainability

Adopt sustainability indicators from third-party organizations for use in medium- and long-term performance-linked compensation (Directors and Executive Officers)

Medium- to Long-Term  
Performance-Linked  
Compensation

Calculation  
Formula

MEMBER OF  
**Dow Jones  
Sustainability Indices**  
In Collaboration with RobecoSAM

Standard Compensation x  
Performance Factor x  
ROE Factor

×

**Sustainability  
Factor**

=

Stock-Based  
Compensation

Short-Term  
Performance-  
Linked Compensation

Base Salary

Base : Short-Term : Mid/Long-Term = 1 : 1 : 1.5  
(CEO)

**OMRON**



# Corporate Governance

**Takashi Kitagawa**  
Executive Officer  
Board of Directors Office

**Fraud  
Prevention  
Systems**

**Management  
Monitoring  
Systems**

**Earnings  
Capacity  
Improvement  
Systems**

## **What Does Corporate Governance Mean to You?**

**Management  
Foundation**

**Mirror  
Reflection of  
Management**

## Grow Sustainable Corporate Value Based on the OMRON Principles

### Basic Stance for Corporate Governance of the Company

At the OMRON Corporation and its affiliated, corporate governance is defined as the system of processes and practices based on the OMRON Principles and the OMRON Management Philosophy. The system is intended to ensure transparency and fairness in business and speed up management decisions and practices. This is done by connecting the entire process from oversight and supervision all the way to business execution in order to boost the OMRON Group's competitive edge. OMRON's corporate governance also involves building such a system and maintaining its proper function. The ultimate objective is to achieve sustainable enhancement of corporate value by earning the support of all stakeholders.

In accordance with this basic stance, the OMRON Group has set forth the following corporate governance policies as the foundation for the Group's pursuit of continuous improvement of its corporate governance.

## Our Mission

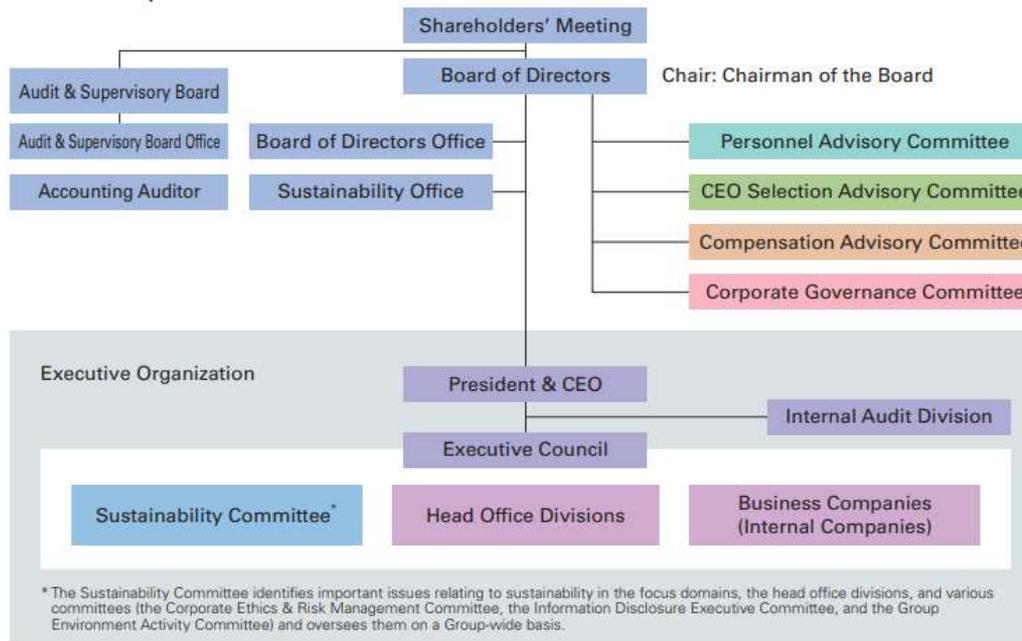
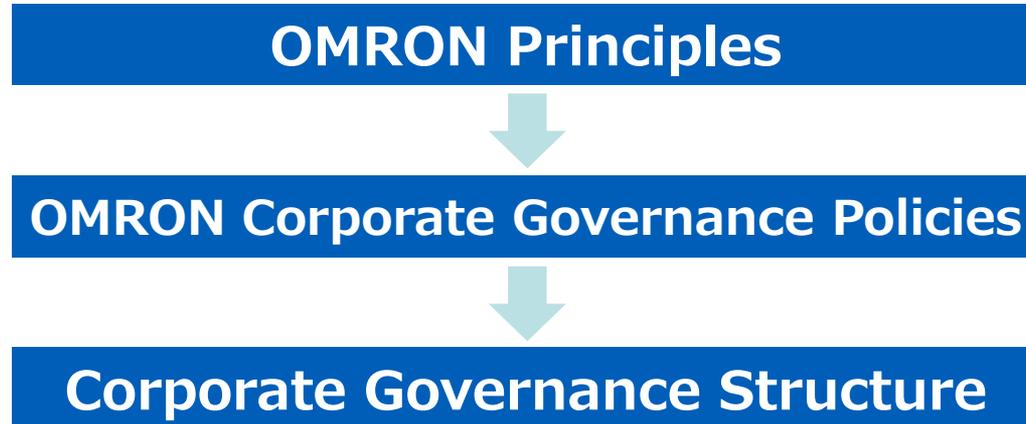
To improve lives and contribute to a better society

## Our Values

- **Innovation Driven by Social Needs**  
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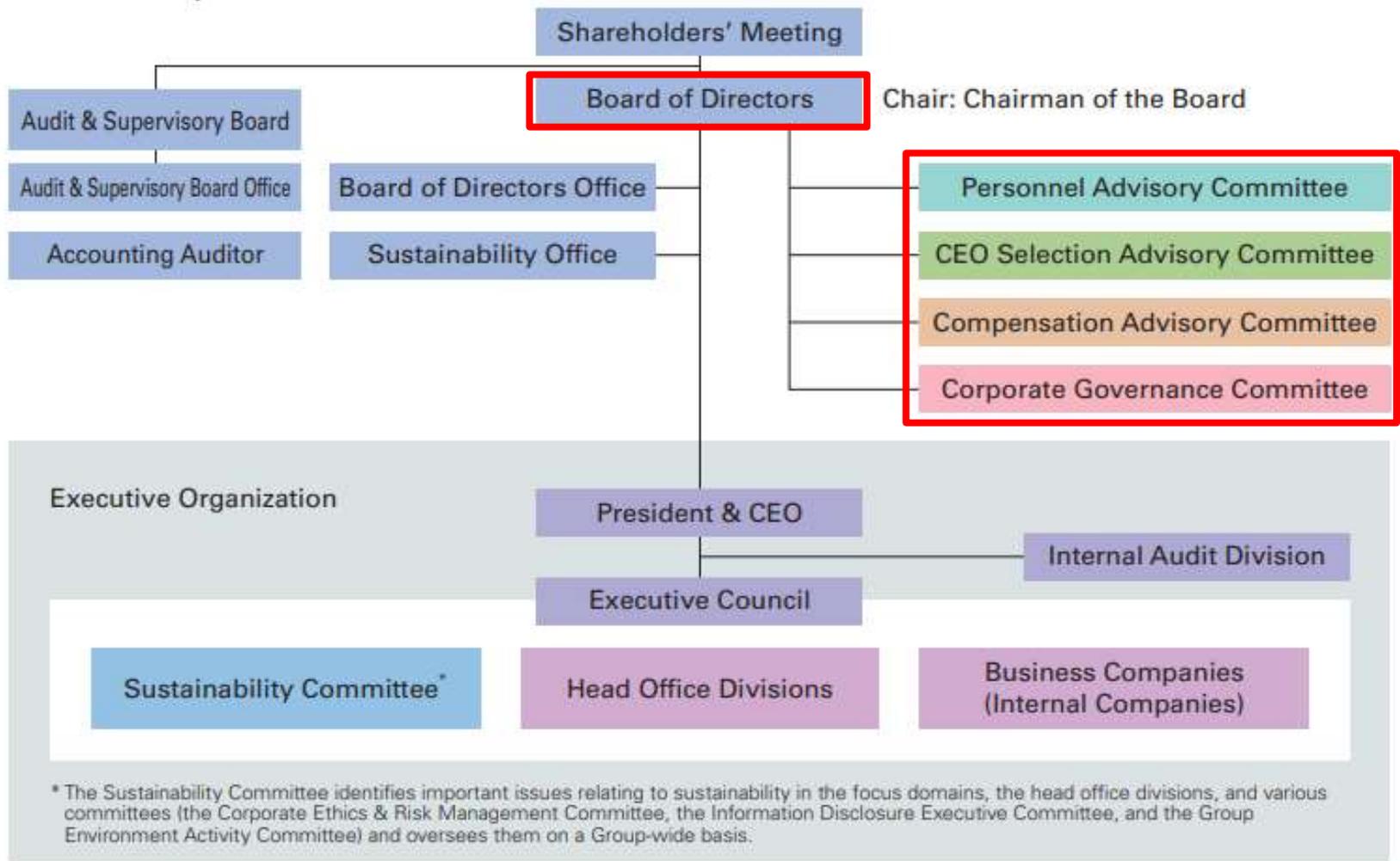
# Corporate Governance Framework

The OMRON Principles link directly to our corporate governance.



# Corporate Governance Structure

We have designed a hybrid structure incorporating the outstanding features of nominating committees to strengthen the oversight function of the board of directors.



# Advisory Committee Members

Chairs of the Personnel Advisory Committee, CEO Selection Advisory Committee, and Compensation Advisory Committee are outside directors. A majority of the members of these committees are outside directors. The chair and members of the Corporate Governance Committee are outside directors and outside members of the Audit and Supervisory Committee, raising transparency and objectivity in our decision-making. Our CEO does not serve as a member on any of these committees.

Title	Name	Personnel Advisory Committee	CEO Selection Advisory Committee	Compensation Advisory Committee	Corporate Governance Committee
Chairman of the Board	Fumio Tateishi		<input type="checkbox"/>		
Representative Director	Yoshihito Yamada				
Representative Director	Kiichiro Miyata	<input type="checkbox"/>			
Director	Koji Nitto			<input type="checkbox"/>	
Director	Satoshi Ando	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<u>Outside Director</u>	Eizo Kobayashi★	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="checkbox"/>	<input checked="" type="radio"/>
<u>Outside Director</u>	Kuniko Nishikawa★	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/>	<input type="radio"/>
<u>Outside Director</u>	Takehiro Kamigama★	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Audit & Supervisory Board Member (Full-time)	Kiichiro Kondo				
Audit & Supervisory Board Member (Full-time)	Tokio Kawashima				
Audit & Supervisory Board Member ( <u>Independent</u> )	Hideyo Uchiyama★				<input type="checkbox"/>
Audit & Supervisory Board Member ( <u>Independent</u> )	Tadashi Kunihiro★				<input type="checkbox"/>

Chairperson    Vice-Chairperson    Committee Member   ★ Independent under Tokyo Stock Exchange rules

Ratio of Outside Directors and Outside Audit and Supervisory Board Members

3/5

3/5

3/5

5/5

**The selection and responsibilities  
of our president and CEO and  
the role of outside directors.**

# Our View on the Selection of the President and CEO

## OMRON Corporate Governance Policies\* (extracts) revised on Nov.27, 2018

### Section 4 Corporate Governance System

#### 5. Advisory Committees

##### (2) The CEO Selection Advisory Committee

In accordance with the relevant rules, the CEO Selection Advisory Committee is intended to bolster the management oversight function of the Board of Directors by enhancing the transparency, objectivity, and timeliness of the decision-making process regarding nomination of candidates for CEO.

The CEO Selection Advisory Committee annually conducts assessment of the CEO and nominates a candidate for the CEO for the succeeding fiscal year.

In the case of re-appointment, the CEO Selection Advisory Committee nominates the current CEO for the succeeding fiscal year, based on results of an evaluation reflecting the Company's business results. The Committee then makes recommendations to the Board of Directors.

In the case of change, the CEO Selection Advisory Committee nominates candidates for the CEO for the succeeding fiscal year based on the succession plan, etc. and makes recommendations to the Board of Directors.

### The Corporate Governance Report (Comply and Explain)

#### - OMRON Corporate Governance Policies\* (extracts) revised on Nov.27, 2018 -

The Board of Directors takes the appointment and dismissal of the CEO as one of the highest-priority matters in management oversight. Accordingly, the CEO Selection Advisory Committee, dedicated to the nomination of candidates for the CEO, annually evaluates the performance of the CEO and nominates candidates for the CEO based on the results of the evaluation, thereby maintaining the transparency, objectivity, and timeliness of the CEO appointment process. As such, the Company annually appoints a CEO for the succeeding fiscal year based on the evaluation reflecting the Company's business results, etc. and thus has established a system for deliberating the reappointment or dismissal of the current CEO based on the business results, etc.

\* <https://www.omron.com/about/corporate/governance/>

# Members of the CEO Selection Advisory Committee

Outside directors play a major role in the CEO Selection Advisory Committee, ensuring transparency and objectivity in the CEO selection process.

## CEO Selection Advisory Committee

<b>Chairman</b>	Outside Director <b>Eizo Kobayashi</b>
<b>Vice Chairman</b>	Director <b>Satoshi Ando</b>
<b>Member</b>	Outside Director <b>Kuniko Nishikawa</b>
<b>Member</b>	Outside Director <b>Takehiro Kamigama</b>
<b>Member</b>	Chairman of the Board <b>Fumio Tateishi</b>

- ✓ Chair is an outside director
- ✓ Majority of members are outside directors
- ✓ CEO is not a committee member
- ✓ All members are non-executive directors



**Eizo  
Kobayashi**

**Senior Representative,  
ITOCHU Corporation**



**Kuniko  
Nishikawa**

**President & CEO,  
Firststar Healthcare Co. Ltd.,  
Chief Executive Officer,  
FRONTEO Healthcare, Inc.**



**Takehiro  
Kamigama**

**Mission Executive,  
TDK Corporation**

# CEO Selection Advisory Committee: Deliberations, Selection Process

The CEO Selection Advisory Committee meets on an annual basis. Members-only deliberations are conducted after asking the president and CEO three questions. After receiving reports and holding discussions, the board of directors selects (or reappoints) the president and CEO. This process ensures a highly transparent and objective selection process, unique to OMRON.

- **Annual discussion of president appointment (not just when new president is to be named)**
- **Matters Discussed (specific questions to the CEO by the committee chair)**
  - ✓ President Appointment for Upcoming FY  
⇒Do you intend to continue as CEO in the upcoming fiscal year?
  - ✓ Succession Plan  
⇒Who do you intend to be your successor in the event of an emergency?
  - ✓ Succession Plan  
⇒What are you doing to educate and train your successor? \*Provide list of successors

## ■ Committee member discussion after CEO leaves the room

**CEO Selection Advisory Committee\*1**  
**Three Discussion Items**



**Board of Directors\*2**  
**Decision on CEO**

\*1 Committee chair is an outside director; majority of members are outside directors

\*2 Eight directors (three of whom are outside director)

# Board of Directors

Outside directors serving as members of the CEO Selection Advisory Committee provide executive oversight of the board of directors, ensuring we meet our duties in selecting the CEO.

## Board of Directors

Report

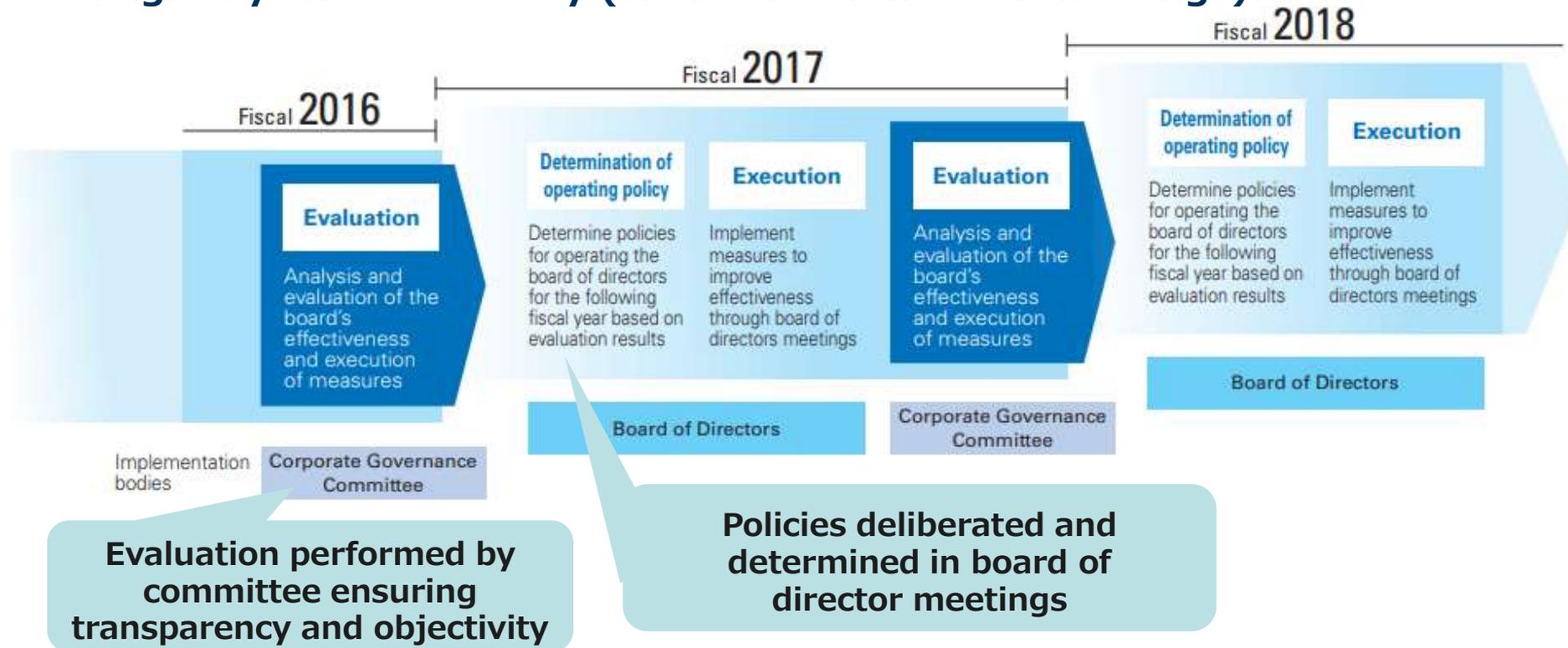
Oversee

## Executive Body

CEO: chief officer in charge of  
management and operations

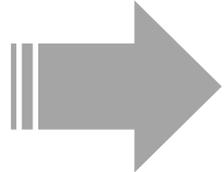
# Systems to Ensure Board of Director Effectiveness

The Corporate Governance Committee (consisting of only outside directors) evaluates the effectiveness of the OMRON board of directors. Based on this evaluation, we improve the effectiveness of the board of directors through management policy decisions (overseen by the board of directors) and oversight by executive body (via board of director meetings).

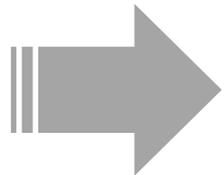


**Outside directors contribute significantly to improving board of director effectiveness**

# What role do outside directors play in the OMRON governance structure?



**CEO Selection Advisory Committee  
selects/reappoints CEO**



**Oversee operational execution in  
board of director meetings**

# Higher Levels of Sustainable Corporate Value

This has been an explanation of OMRON governance in the brief time we have to share today. We encourage ongoing dialogue toward creating higher levels of sustainable corporate value.



# Reference



# Reference:

## Overview of Fiscal 2017 Board of Director Effectiveness Evaluation

### Policy for the operation of the board of directors for fiscal 2017

The board of directors exercises its oversight function with particular focus on three areas to ensure achievement of the medium-term management plan VG2.0, which began in fiscal 2017:

- ✓ **Progress of short-term management plans**
- ✓ **Human resources and technology strategies key to medium-term management strategies**
- ✓ **Initiatives to address materiality, which have been identified based on sustainability policies**

### Results of the fiscal 2017 evaluation of board effectiveness

The Corporate Governance Committee confirmed that the board of directors operated according to the policy for board operations for fiscal 2017 and that the board demonstrated its oversight function. Evaluation results and future issues are as described below:

#### ✓ **Progress of short-term management plans**

The board of directors discussed and approved VG2.0 and the company-wide management plan for fiscal 2017. In addition, the board of directors received sufficient reports from executives regarding initiatives at individual divisions.

#### ✓ **Human resources and technology strategies key to medium-term management strategies**

##### **(1) Human resources strategies**

The board of directors discussed human resources strategies, a key component of VG2.0. The board recognized that human resources strategies were important to achieve VG2.0 and that the board should continue to exercise its oversight function.

##### **(2) Technology strategies**

The board of directors confirmed the companywide core technology system developed on the SINIC Theory platform. SINIC Theory is OMRON's unique predictive theory encompassing AI, IoT, robotics, and other rapid technological innovations. The Board recognized that technology strategies were important to achieve VG2.0 and that the board should continue to exercise its oversight function.

##### **(3) Other strategies related to medium-term management strategies**

The board of directors recognized the need to exercise its oversight function on strategies related to information systems and quality to achieve the company's medium-term management strategies.

#### ✓ **Initiatives to address materiality which have been identified under sustainability policies**

To ensure the achievement of VG2.0, the board of directors received reports on fiscal 2020 targets and KPIs for material sustainability issues.

The board also received reports related to the company-wide management structure for advancing Sustainability and reports on material issues.

OMRON began sustainability initiatives in fiscal 2017. The board recognized the need to exercise its oversight function on an ongoing basis.

### Policy for the operation of the board of directors for fiscal 2018

Based on the results of the fiscal 2017 evaluation of board effectiveness and identified future issues, the board of directors has been charged with exercising its oversight function to ensure the achievement of VG2.0, focusing on three areas in particular:

- ✓ **Strategies for information systems and quality with respect to medium-term management strategies**
- ✓ **Ongoing initiatives for human resources and technology strategies**
- ✓ **Initiatives to address material sustainability issues (materiality)**

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# OMRON Group Environmental Action for a Sustainable Society

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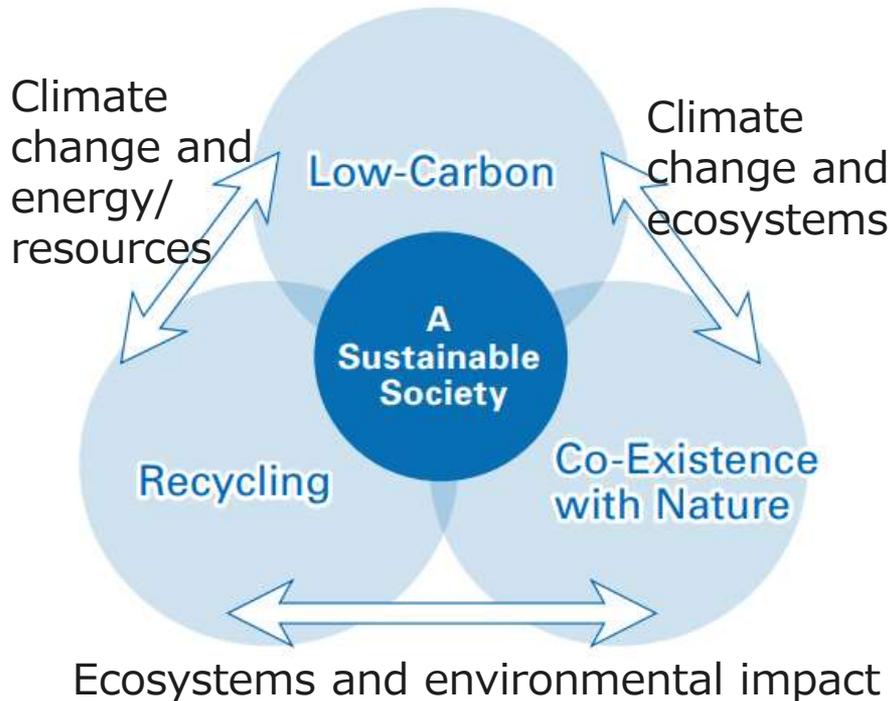
**Kiyoshi Yoshikawa**  
**Managing Executive Officer**  
**Global Manufacturing Innovation HQ**

# Omron Principles and Environmental Policy

## Our Mission

To Improve lives and contribute to a **better society**

## A Sustainable Society



## Vision: Green Omron 2020

### Omron Group Environmental Policy

In line with OMRON Principles, we will contribute to realizing sustainable societies, globally, by providing eco-friendly products and services that can contribute to the global environment and by efficient management of resources.

1. Provide eco-friendly products and services that can contribute to the global environment
2. Prevent Global Warming
3. Use resources efficiently
4. Co-existence with nature
5. Implement environmental management

### Omron Group Environmental Goals

1. **Reduction of greenhouse gas emissions**
2. Appropriate management and reduction of hazardous substances
3. Reduction of waste
4. Prevention of air, water, and soil contamination
5. Effective usage of water resources
6. Facilitating environmental management

# Green OMRON 2020 Goals: Today's Theme

## Today's Theme

Issues	Goals as of Fiscal 2020
<p data-bbox="316 311 784 372"><b>Sustainability Issues</b></p> <p data-bbox="305 382 857 468">1. Reduction of greenhouse gas emissions</p>	<p data-bbox="942 262 1711 348">Environmental Contribution &gt; CO2 emissions at production centers</p> <p data-bbox="942 362 1622 591">KPI change Global Net Sales to CO2 Emissions ⇒ Greenhouse gas emissions ·2050 Achieve Zero Emission ·2030 Reduce by 32% vs. 2016 ·2020 Reduce by 4% vs. 2016</p>
<p data-bbox="316 618 784 679"><b>Sustainability Issues</b></p> <p data-bbox="305 689 877 818">2. Appropriate management and reduction of hazardous substances</p>	<p data-bbox="942 618 1843 732">Reduction of mercury through the prevalence of digital thermometers and digital blood pressure monitors: 69 tons / year</p> <p data-bbox="942 746 1754 861">                     ✓ Stop use of fluorocarbon (CFC) in FY2018                      ✓ Stop use of fluorocarbon (HCFC)                      ✓ Stop use mercury (fluorescent lamp use)                 </p>
<p data-bbox="305 903 741 946">3. Reduction of waste</p>	<p data-bbox="942 889 1634 968">Achieve Zero Emission at all global production sites</p>
<p data-bbox="305 1003 838 1089">4. Prevention of air, water, and soil contamination</p>	<p data-bbox="942 1003 1843 1089">Perform environmental legal assessments at all global production sites</p>
<p data-bbox="305 1125 838 1210">5. Effective usage of water resources</p>	<p data-bbox="942 1125 1769 1210">Reduce water consumption at all global production sites by 6% vs. FY2015 result</p>
<p data-bbox="305 1246 877 1332">6. Facilitating environmental management</p>	<p data-bbox="942 1246 1765 1332">Acquire and maintain ISO 14001 certification at all global production sites</p>

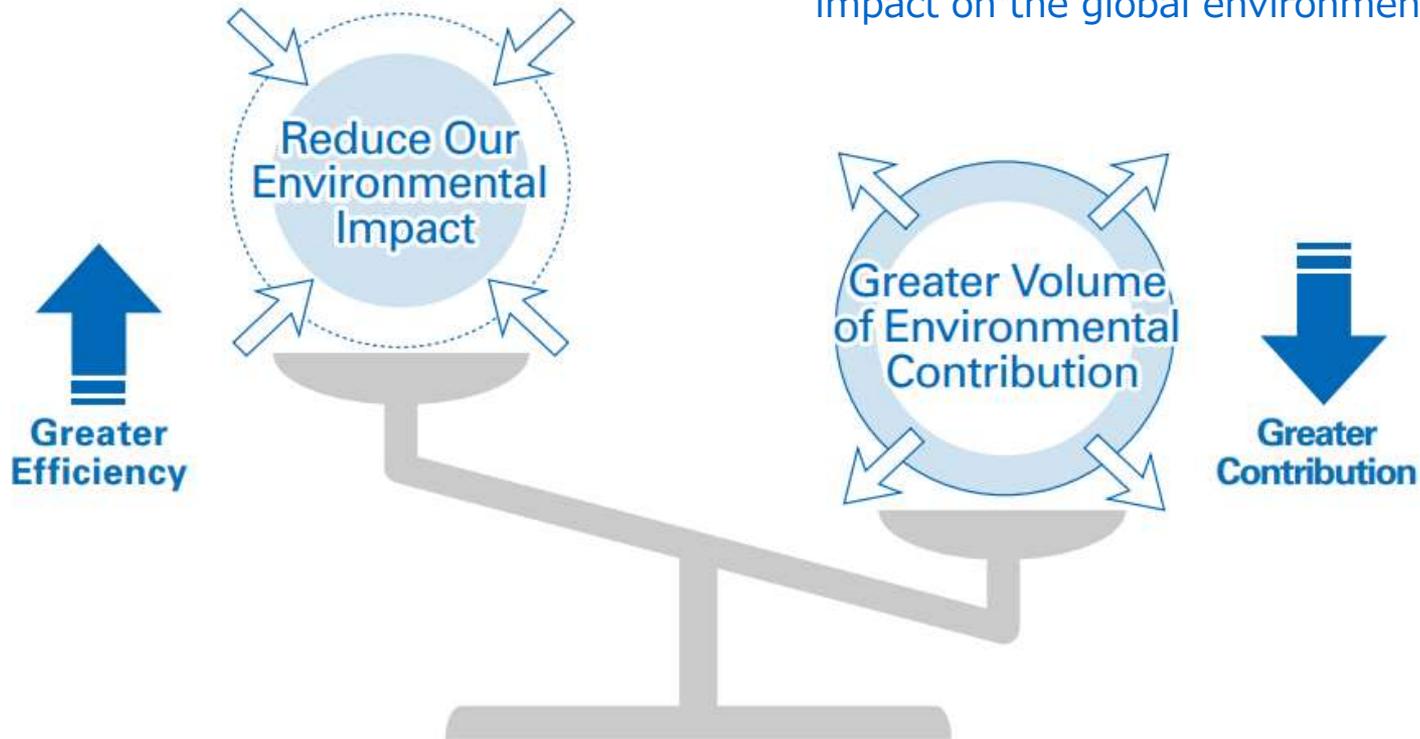
# Expanding Our Environmental Contribution Through Our Businesses

## Maximize the Effective Use of All Management Resources

(Improve energy, resource productivity)

## Products and Services Useful to Society

(Grow our businesses that have a positive impact on the global environment)



### \*Environmental Contribution

Calculated based on the **direct effect** of product contributions and the **indirect effect** of the use of our products and services.

**Direct Effect** CO2 reduction generated through OMRON product energy conservation improvements compared to a standard product  
**Examples** Energy-saving nebulizers, safety sensors, industrial temperature controllers, general power sources

**Indirect Effect** CO2 reduction generated through customer use of products in which OMRON components form a major portion of energy saving/energy generation products

**Examples** PV Inverter, power converter systems for electric and hybrid vehicles, electric power steering

# Key Sustainability Initiatives

## Actions to Reduce Greenhouse Gas Emissions

### Make Maximum Use of All Management Resources



Japan

Adopted system to visualize electricity usage  
(Ayabe City, Kyoto location)



Overseas

Converted self-generated power to clean energy  
(Production plant in Guangzhou City, China)

### Offer Products and Services Useful to Society



Products

Products that contribute to the spread of clean energy



Services

Used abandoned fields to create locally produced, locally consumed energy  
(Miyazu City, Kyoto)



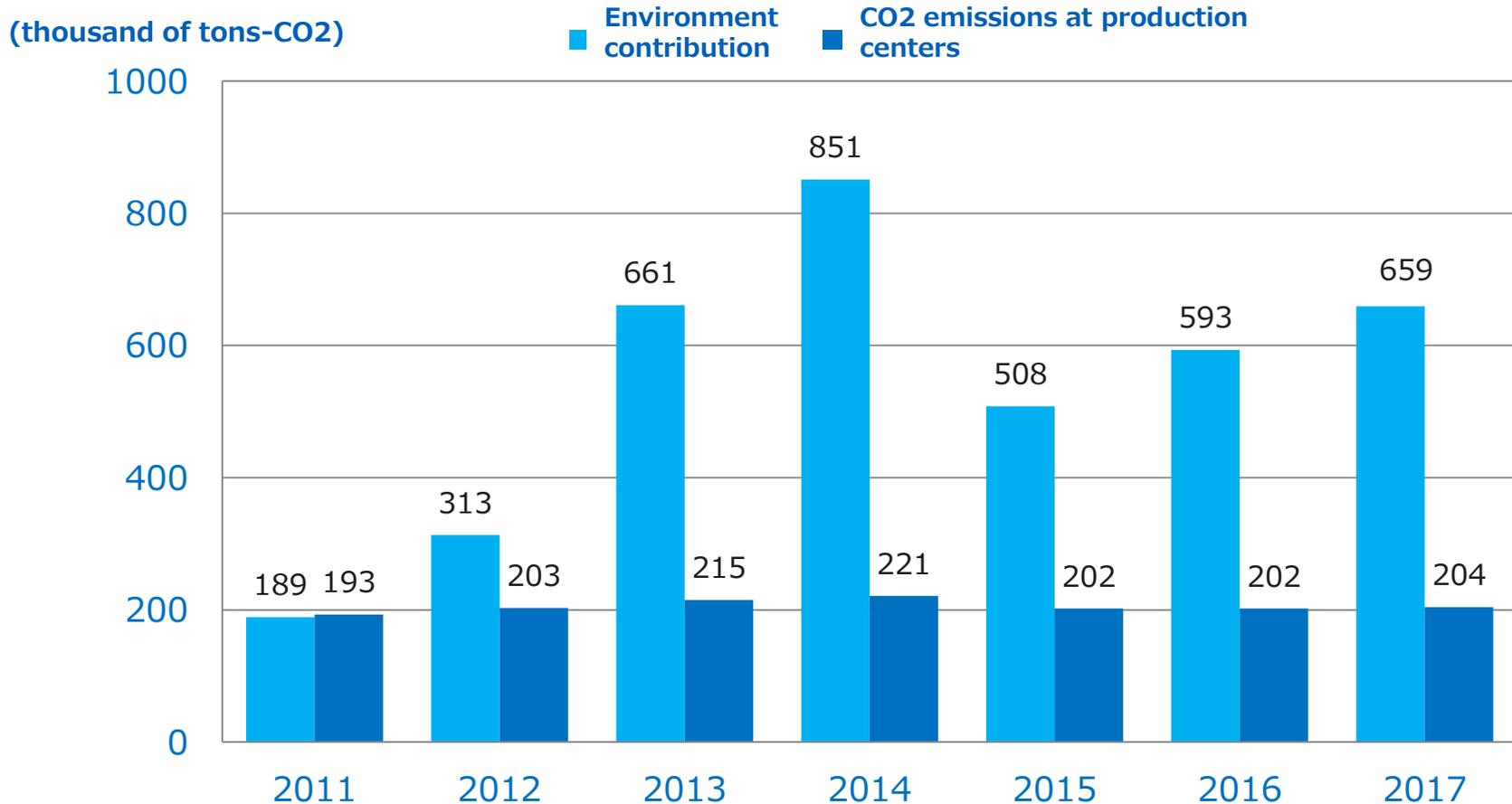
Reduce Our Environmental Impact

Greater Volume of Environmental Contribution

# Key Sustainability Initiatives

## History of Environmental Contribution

Steady rise in environmental contribution since unveiling of Green OMRON 2020



# Revised Greenhouse Gas Emissions Reduction Targets

## Green OMRON 2020

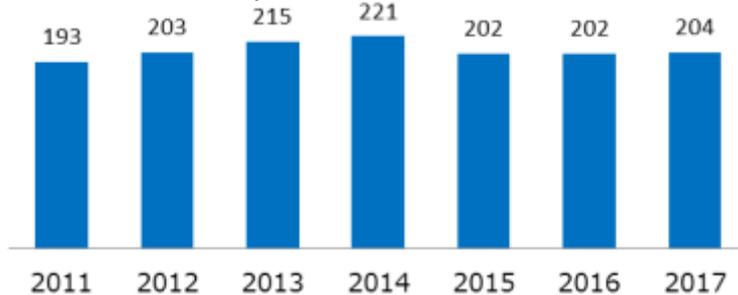
### CO2 emissions at production centers (FY2011-)

( ¥mil./ tons-CO2)



### GHG emission (As of FY2017)

(thousand of tons-CO2)



2018 Established

# Omron Carbon Zero : Zero GHG Emissions by 2050

## Paris Agreement

Issued in 2016

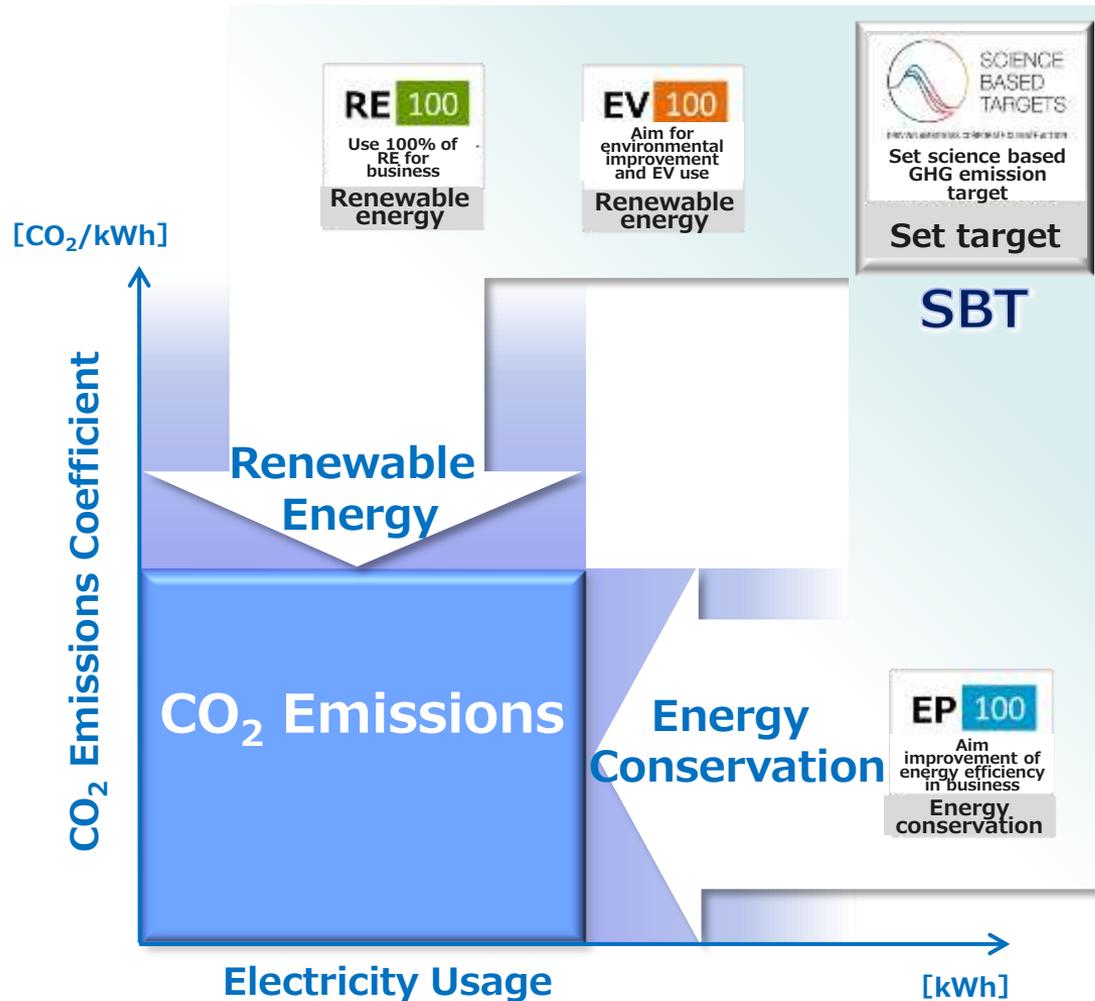


Hold average global temperature increase to within 2°C of pre-industrial revolution era

Limiting greenhouse gas emissions is critical

# Position of Initiatives Relative to OMRON Engagements

We are striving to limit temperature rise to within 2°C to combat global warming. We have set goals in line with SBTs to limit rise in temperature, advancing initiatives in energy conservation and renewable energy.



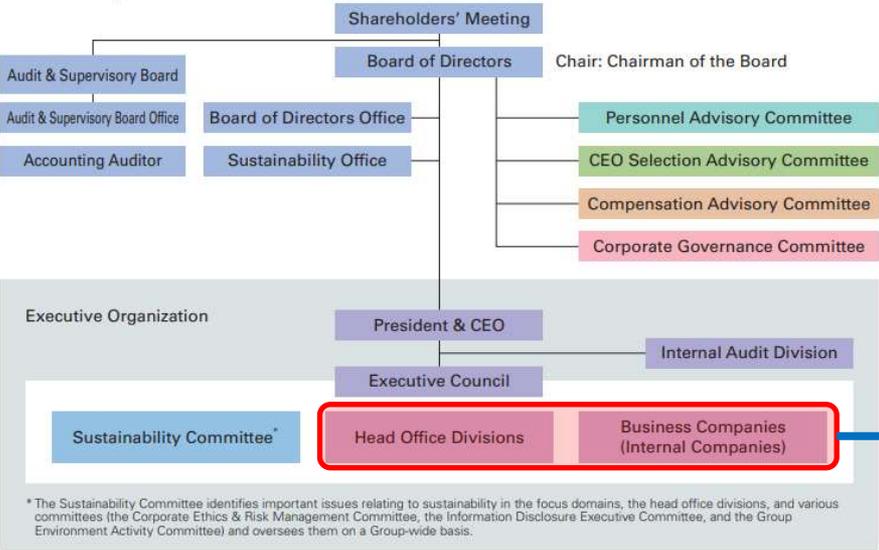
# Green OMRON 2020 Environmental Targets and Progress

Issues	Goals as of Fiscal 2020	FY2017 Results
<b>Sustainability Issues</b>	<b>Environmental Contribution &gt; CO2 Emissions at Production Centers</b>	<b>659k t-CO2 &gt; 204k t-CO2</b>
<b>1. Reduction of greenhouse gas emissions</b>	<b>KPI change Global Net Sales to CO2 Emissions ⇒ Greenhouse gas emissions ·2050 Achieve Zero Emission ·2030 Reduce by 32% vs. 2016 ·2020 Reduce by 4% vs. 2016</b>	<b>·Changed KPIs during FY2018</b>
<b>Sustainability Issues</b>	<b>Reduction of mercury through the prevalence of digital thermometers and digital blood pressure monitors: 69 tons / year</b>	<b>51 tons / year</b>
<b>2. Appropriate management and reduction of hazardous substances</b>	<b>✓ Stop use of fluorocarbon (CFC) in FY 2018 ✓ Stop use of fluorocarbon (HCFC) ✓ Stop use mercury (fluorescent lamp use)</b>	<b>·CFC 39% reduction ·HCFC 25% reduction ·Mercury (fluorescent lamp) 26% reduction</b>
<b>3. Reduction of waste</b>	<b>Achieve Zero Emission at all global production sites</b>	<b>23 locations (58% progress)</b>
<b>4. Prevention of air, water, and soil contamination</b>	<b>Perform environmental legal assessments at all global production sites</b>	<b>36 locations (90% progress) Two locations excluded for strategic purposes</b>
<b>5. Effective usage of water resources</b>	<b>Reduce water consumption at all global production sites by 6% vs. FY2015 result</b>	<b>5.9% reduction</b>
<b>6. Facilitating environmental management</b>	<b>Acquire and maintain ISO 14001 certification at all global production sites</b>	<b>39 locations (98% progress)</b>

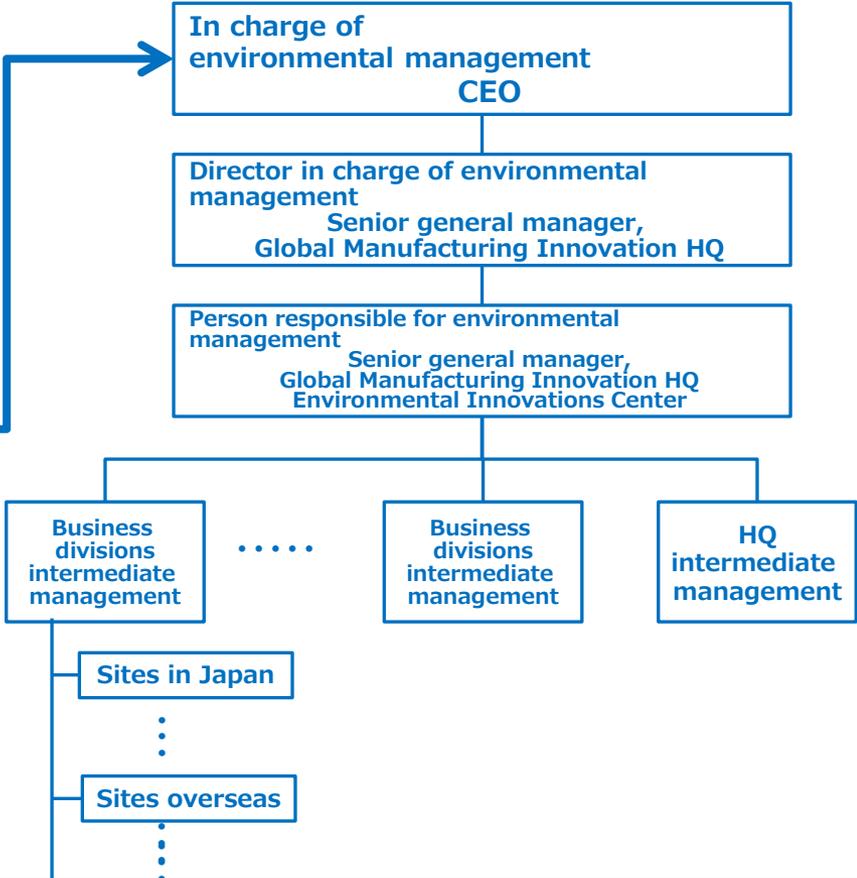
# Environmental Management Structure

Sustainability reports are made to the board of directors who monitor and oversee progress. Individual business divisions are responsible for execution, working in cooperation to identify risks and opportunities; responsible for setting targets and forming/implementing business plans.

## Sustainability Management Structure

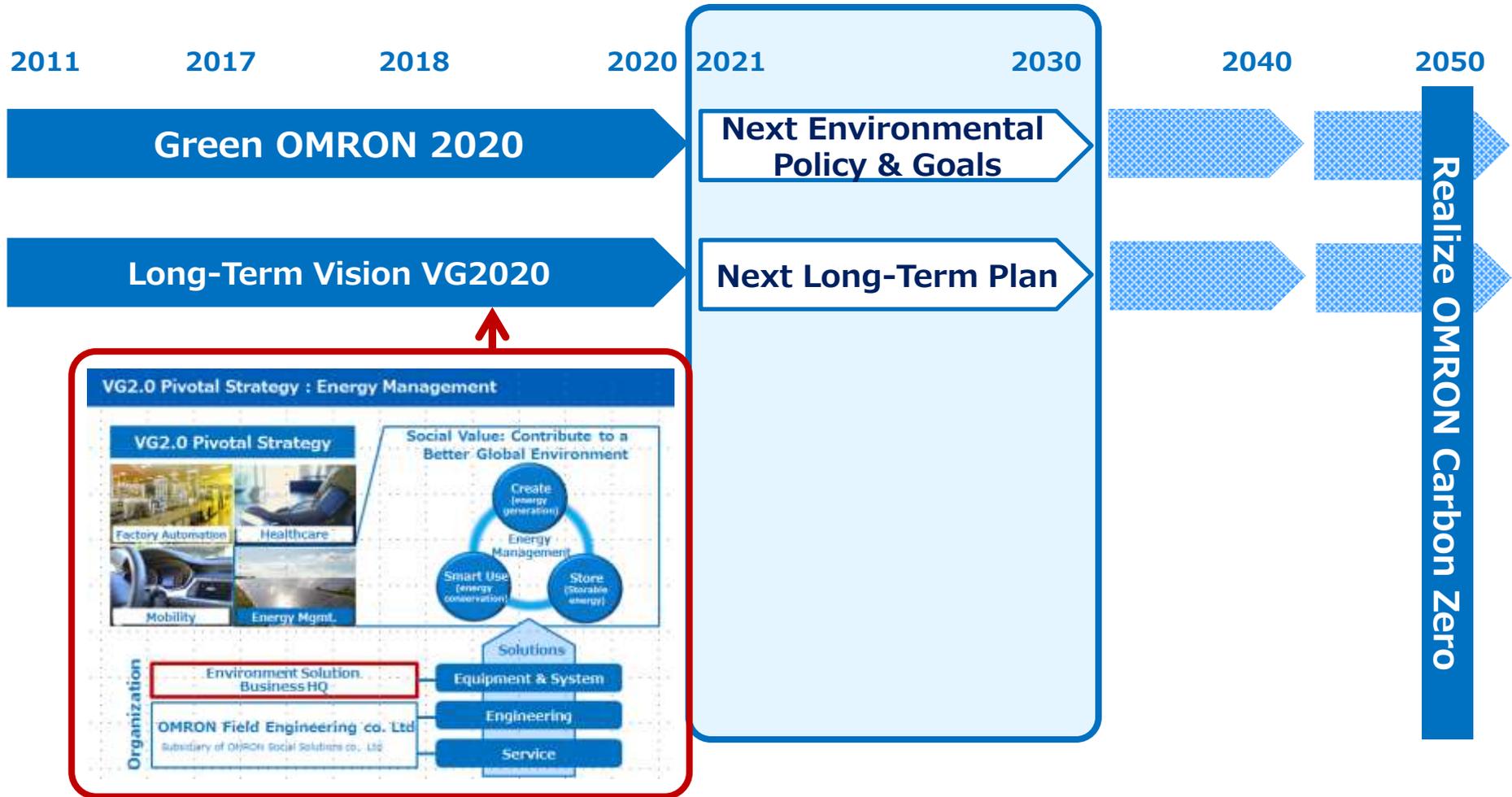


## Environment Management Structure



# Future Direction

Pursue activities to accomplish 2020 goals; research policies and targets for the next 10 years



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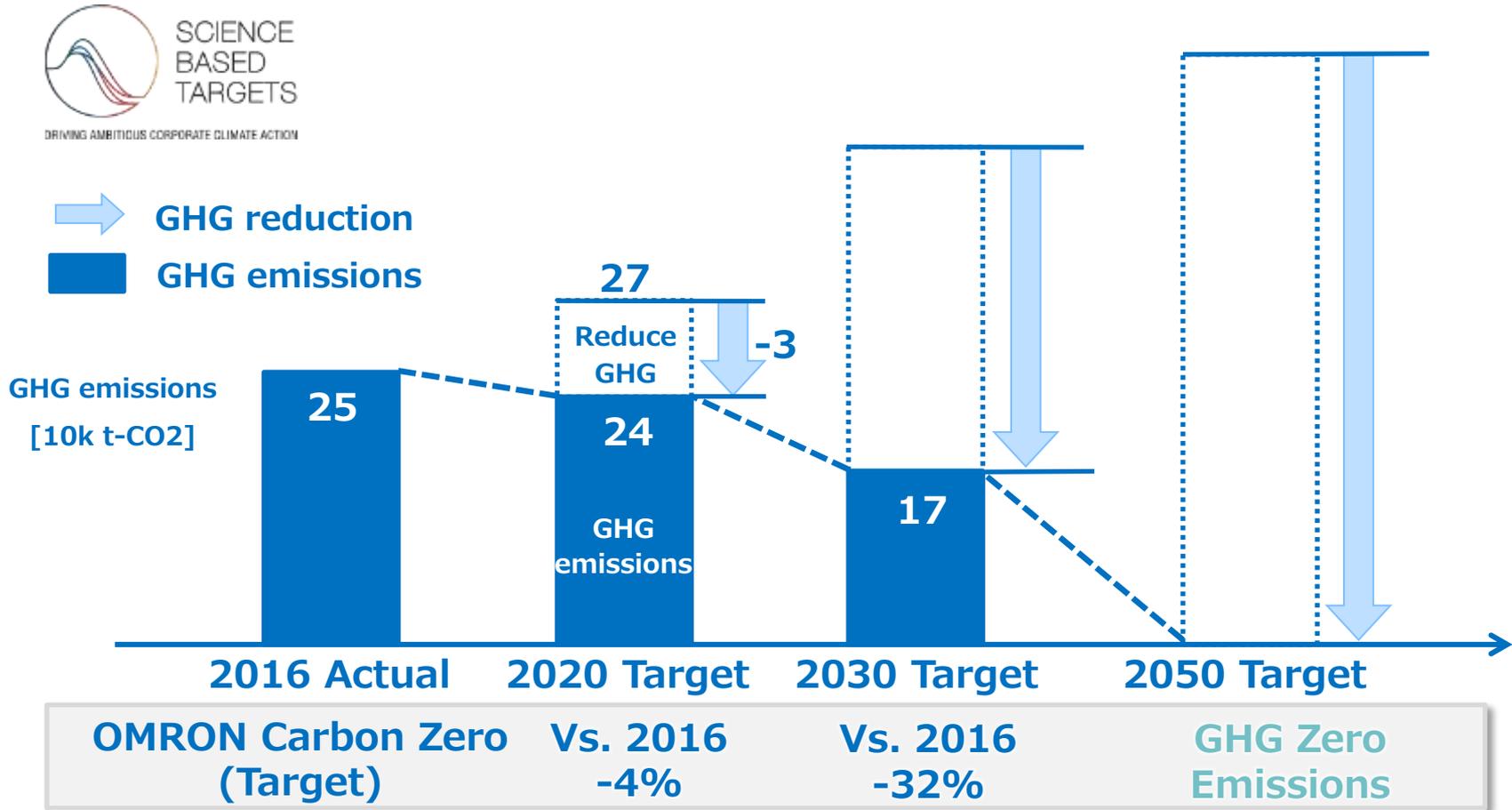
# **OMRON Carbon Zero for a Sustainable Society**

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**Teruyasu Imai**  
**Senior General Manager**  
**Environmental Innovation Center**  
**Global Manufacturing Innovation HQ**

# OMRON Carbon Zero

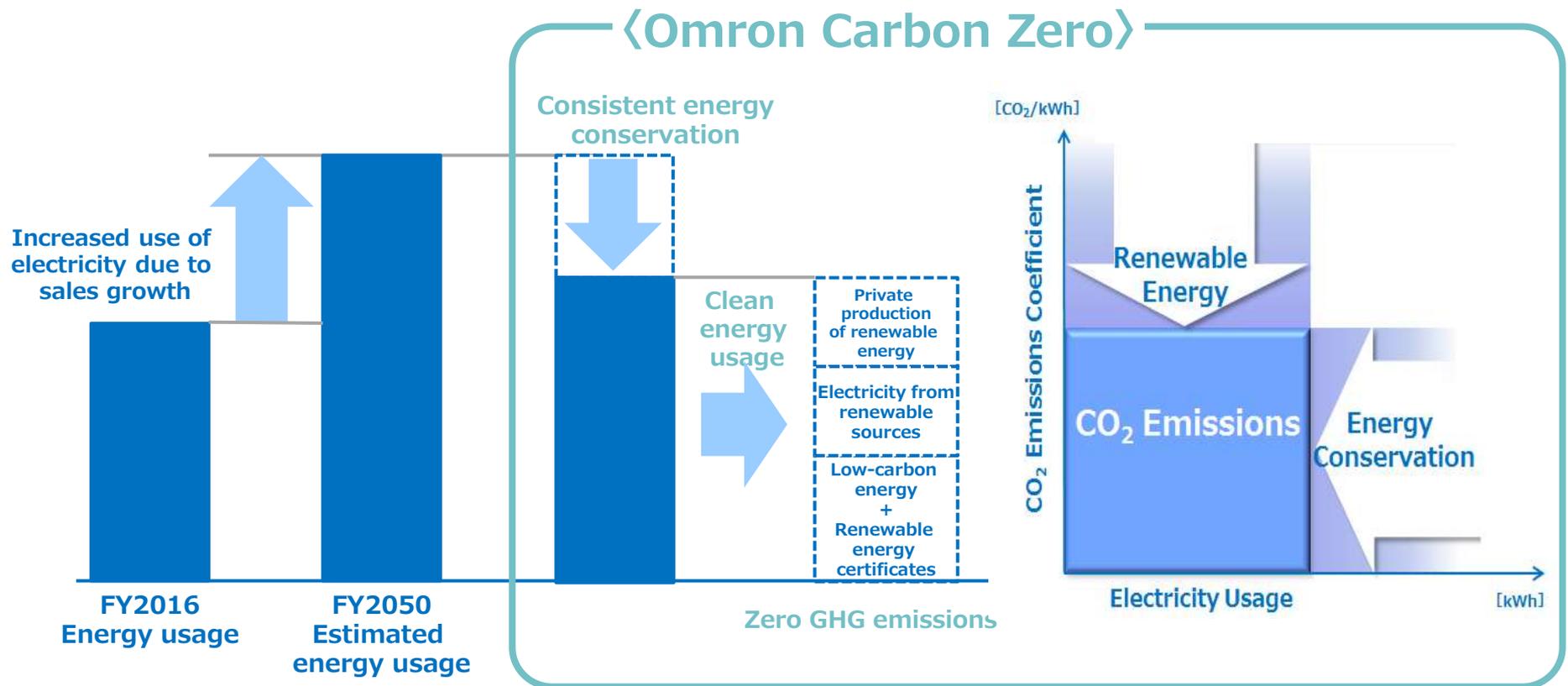
- Set goals in line with SBTs to respond to global warming
- Aim for **zero greenhouse gas (GHG) emissions by 2050** (Scope 1, 2)  
(2018.7.27 news release)



Currently drawing up Scope 3 targets

# OMRON Carbon Zero Basic Policy

Nearly 90% of OMRON Group greenhouse gas emissions arise from electric power. As we minimize energy usage through consistent conservation, we also advance our transition to clean energy use through a number of different measures.



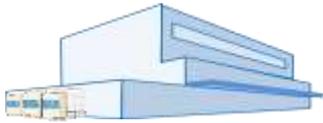
# Energy Conservation and Renewable Energy Activity Cycle Toward Reducing GHGs

The main feature of the OMRON Group's GHG reduction programs is the energy conservation and renewable energy activity cycle. This cycle leverages the expert staff, knowledge, products, and services of our energy management business.

## Determine Potential

Energy experts provide on-site diagnoses  
(Leveraging OMRON Group internal business expertise)

- Identify conditions on-site (risks and opportunities)
- Suggest responses to risk
- Suggest actions on improvement opportunities
- Simulate impact
- Calculate costs for measures



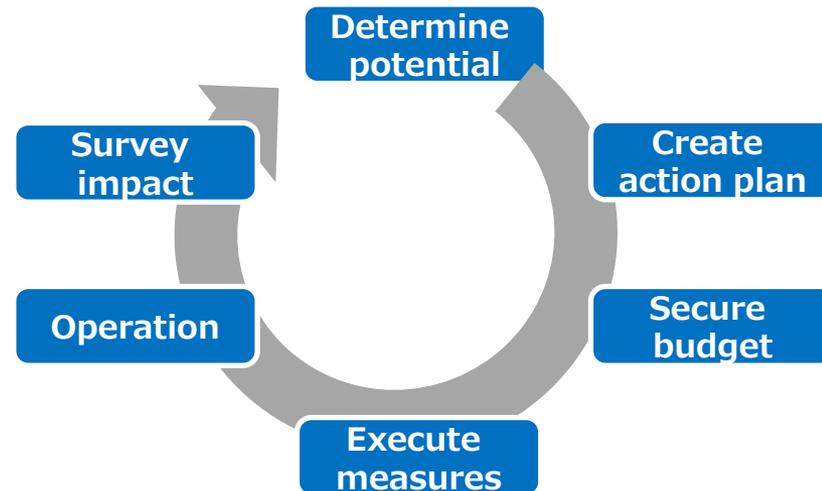
### Determination results

(Ex.)

Category	Suggestions	Reduction Vol. kWh	Reduction Vol. t-CO2
Transformer Equipment	Upgrade to High-Efficiency Transformers	45,668	36
Transformer Equipment	PV Electricity Generation	300,000	234
HVAC Equipment	Revise Temperature Settings for Second Floor Central Air	13,845	11
Compressor	Reduce Compressor Air Volume	151,532	118
Compressor	Revise Air Intake Route for Compressor Room	21,577	17
Compressor	Compressor Inverter Control	98,350	77
Lighting Equipment	Reduce Lighting in Second Floor Storage Room	13,415	10
Lighting Equipment	Turn Off Lights During Breaks in the Production Room Work Area	3,227	3
Production Line	Prevent Heat Dissipation From Steam Pipes	95,600	75
Production Line	Measures to Prevent Leaks From Steam Pipes	45,552	36

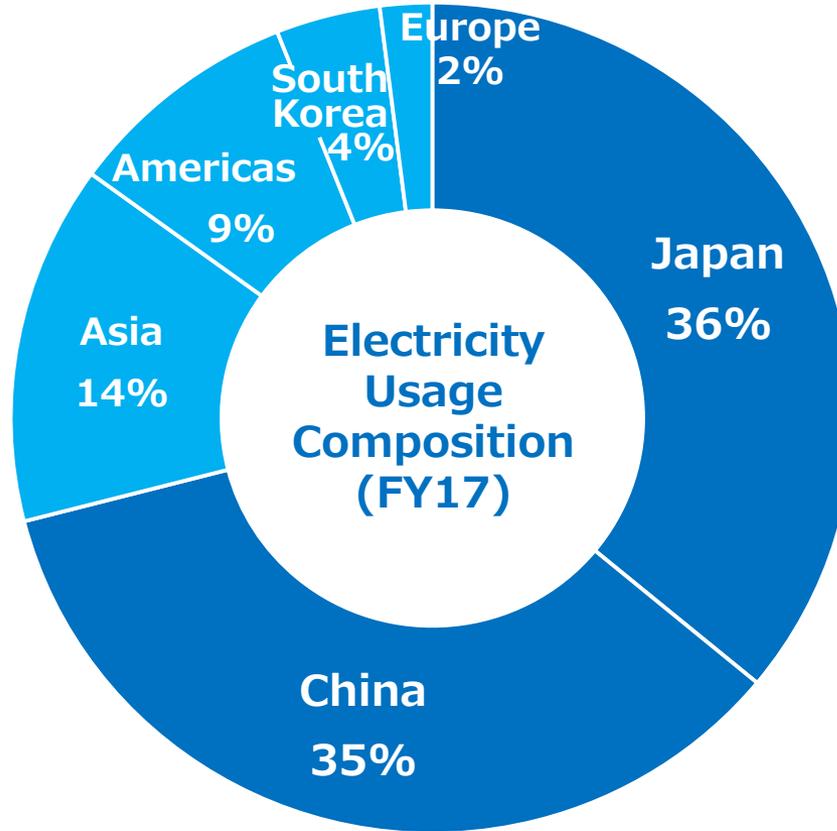
## Sustainable Energy Conservation and Renewable Energy Activity Cycle

Execute the PDCA cycle beginning with an analysis of potential



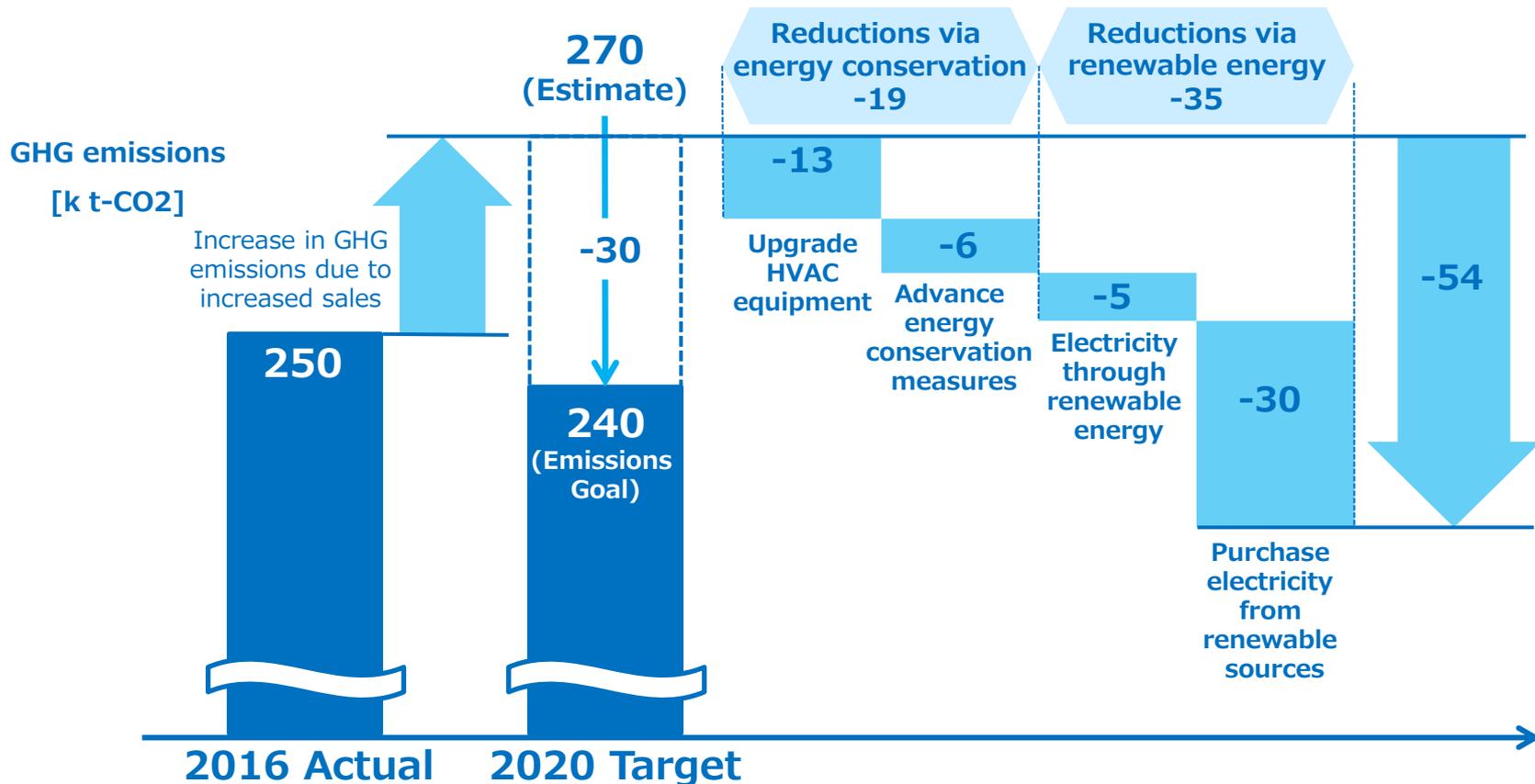
# OMRON Electricity Usage

Seventy percent of OMRON Group electricity usage is in Japan and China.



# Activities Looking Ahead to 2050

- Plans in place to reduce total electricity usage in Japan/China (70% of total group usage) by 54k t-CO<sub>2</sub>
- Rolling out energy conservation and renewable energy cycle programs in other areas to meet 2050 goals



# Expand Use of Renewable Energy

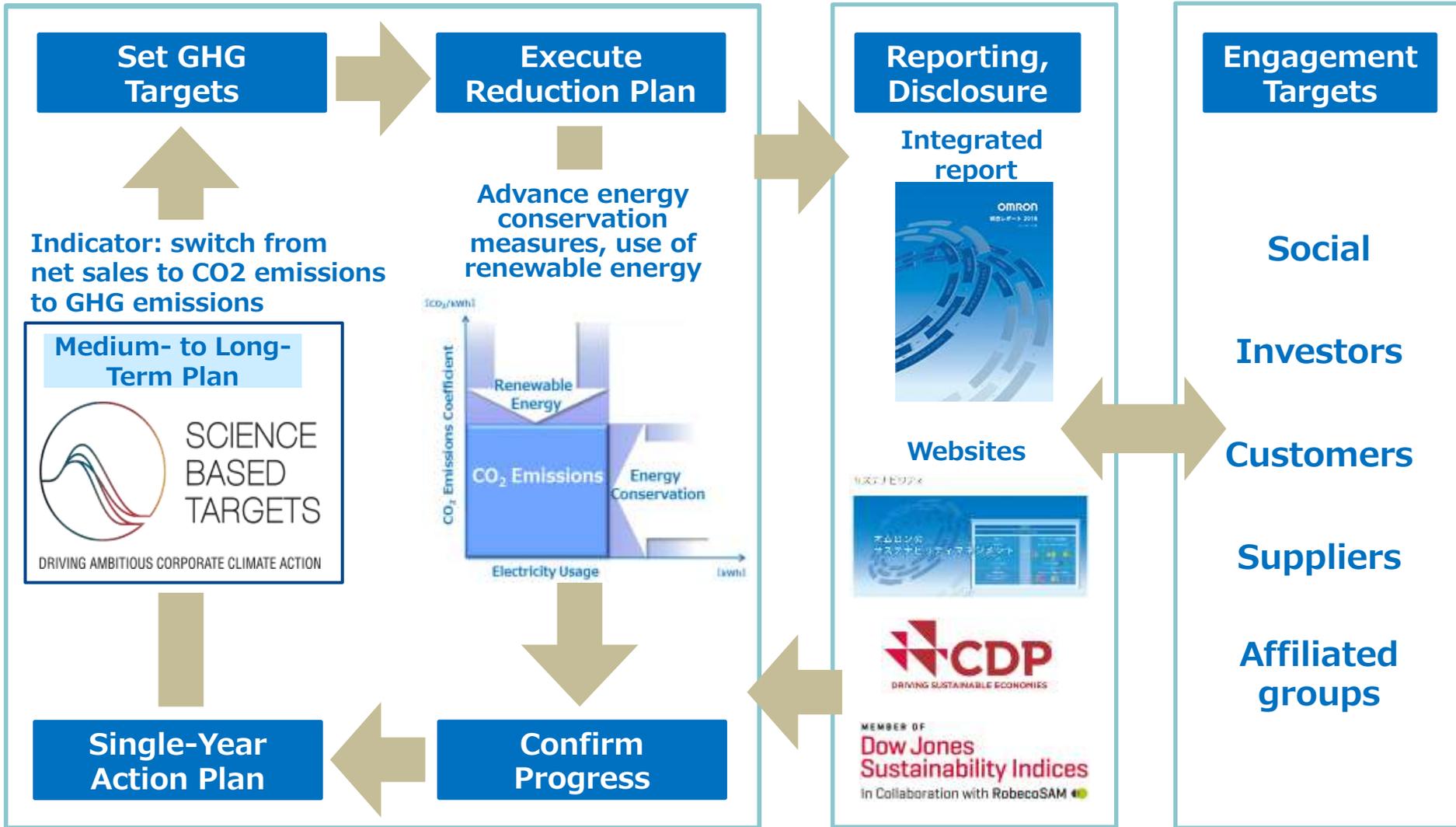
Adopt self-consumption solar power, expand purchases of renewable energy, and continue to increase share of renewable energy used in group electricity consumption

	2017 Actual	2018 Fcst	2020	2021-
Electricity Consumption (MWh/yr)	350,587	357,000	413,000-20,000 =393,000*	Global purchasing of •Electricity from renewable sources •Renewable energy certificates
Renewable Energy Usage (MWh/yr)	5,552	22,900	70,800	
Self-Consumption Solar Power	765	1,700	5,300	
Purchase of Electricity from Renewable Sources	4,787	21,200	65,500	
Renewable Energy Usage (%)	1.6%	6.4%	18.0%	

\*Use renewable energy to reduce electricity use by 20,000MWh

Additional Information	Self-Consumption Solar Power Equipment Installations	7	9	16	Search for GHG Reduction Measure Ideas  Today, we are investigating options, routes, processes, and other means to obtain electricity from renewable sources and procure renewable energy certificates. We intend to incorporate these means into future GHG reduction measures.
	Purchases of Electricity from Renewable Sources (by location)	Netherlands: wind Power Brazil: hydroelectricity	Netherlands: wind Power Brazil: hydroelectricity Japan (Kansai): hydroelectricity	Netherlands: wind Power Brazil: hydroelectricity Japan (Kansai): hydroelectricity supplemental investigations ongoing	

# PDCA for Climate Change Issues



**OMRON**



# OMRON Environmental Solutions Business Engagement

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**Katsumi Ohashi**  
Environmental Solutions Business HQ

# VG2.0 Pivotal Strategy : Energy Management

## VG2.0 Pivotal Strategy



Factory Automation



Healthcare

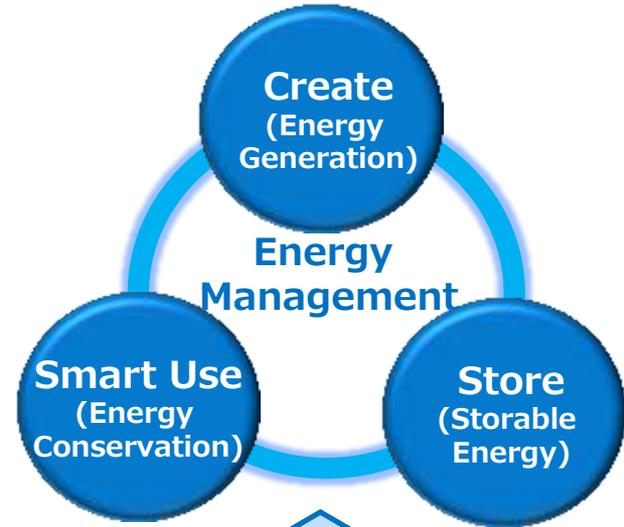


Mobility



Energy Mgmt.

## Social Value: Contribute to a Better Global Environment



Organization

Environment Solution  
Business HQ

OMRON Field Engineering co. Ltd

Subsidiary of OMRON Social Solutions co., Ltd

Solutions

Equipment & System

Engineering

Service

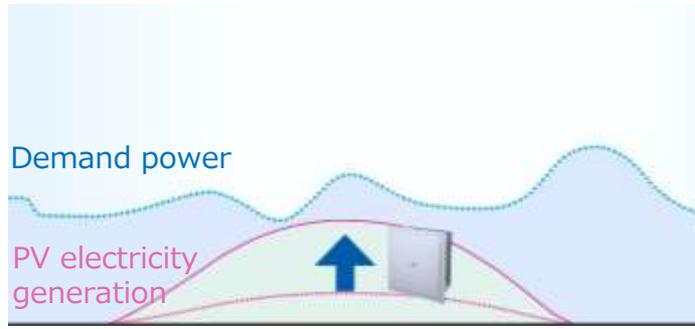
# Vision of the Environmental Solutions Business

Vision Use energy conversion technology and control technology to **contribute to a sustainable society** through the **wider adoption of renewal energy.**

Spread of renewable energy



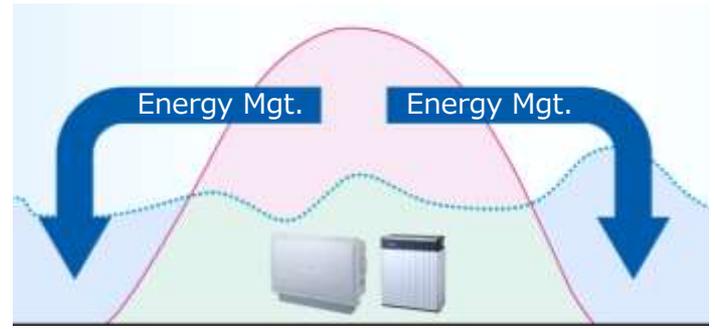
Sales of PV invertors for solar power generation



Building a sustainable society



Leverage storage battery systems for use in renewable energy management affected by changes in the weather



# Environmental Solutions Business Domains

Optimal use of overall energy linked to generation, storage, and conservation products and services

## PV Inverters for Solar Power

**Generate Without Waste**

Conversion of generated power

**PV inverters**



**Energy intelligent gateways**



## Storage Battery System

**Store as shown above**

Electricity via solar power hybrid storage battery system

Collaboration between storage battery and electricity generation

**Home/industrial use flexible storage battery system**



**Energy Conversion & Control**

**Engineering**

Monitor volume of power generated

Measure, control electricity

**Smart Use**

OMRON field engineering

Solar power monitoring service

Electricity volume sensors

## Electricity Sensors



## No.1 share of the generation, storage, and conservation markets

Share **35%**

**Energy Generation:** home-use PV inverters  
**No.1** in Japan

Share **33%**

**Energy Generation:** industrial-use low-voltage PV inverters  
**No.1** in Japan

Share **26%**

**Storable Energy:** home-use storage battery systems  
**No.1** in Japan

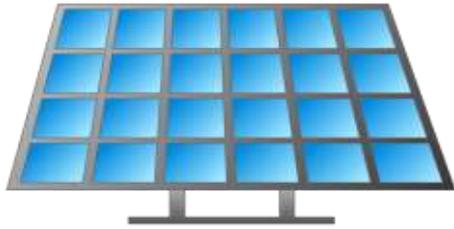
Share **33%**

**Energy Conservation:** industrial-use electricity sensors (multi-circuit)  
**No.1** in Japan



# Do You Know *PV Inverters* ?

Device that converts direct current from solar cells and storage batteries **efficiently** to alternating current for home use, connecting **safely to an electric power system**



Solar Cell  
(Direct Current)



Storage Batteries  
(Direct Current)



PV Inverter



Electricity Sales  
(Alternating Current)

# OMRON is Here

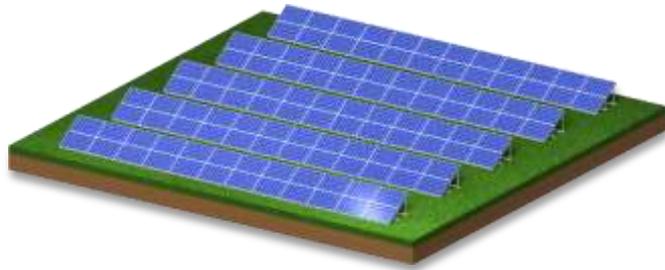
## OMRON products used in above-ground solar power systems and residences



**PV Inverter**



**Storage  
Batteries**



# OMRON Strength: Eight Years Invested in Commercialization

In 2002, a grid safety empirical research project was conducted for entire town's clustered installation of solar power electricity generation systems

First-ever clustered installation empirical research in Japan



For use with multiple solar cells



Patent application release to the public

Standardization



Certification



Pal Town Josai no Mori, Ota city, Gunma Pref.

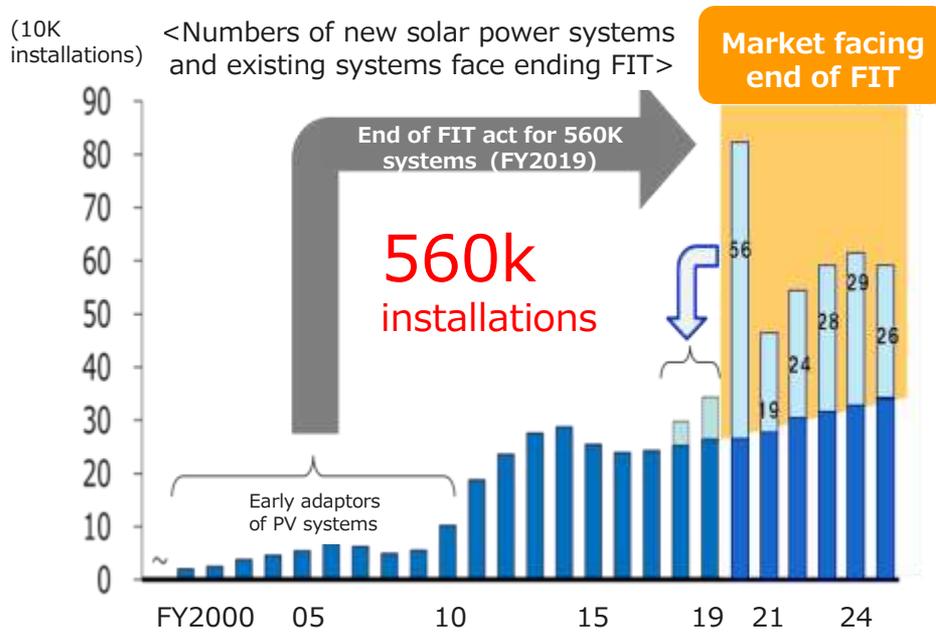
Established AICOT®; created **the world's largest multi-clustered system** for a total of 553 homes producing a total 2,129 kW

# Future Market Opportunity and Value Offering

We see the end of feed in tariff (FIT) and RE100 as future market opportunities where we can offer controls for self-consumption systems

## The End of FIT

- Accelerate adoption of **storage batteries** used in solar power self-consumption systems



**Value in solar power self-consumption system controls**

## Renewable Energy 100 (RE100)

- Accelerate adoption of **solar power** suppliers among participating companies

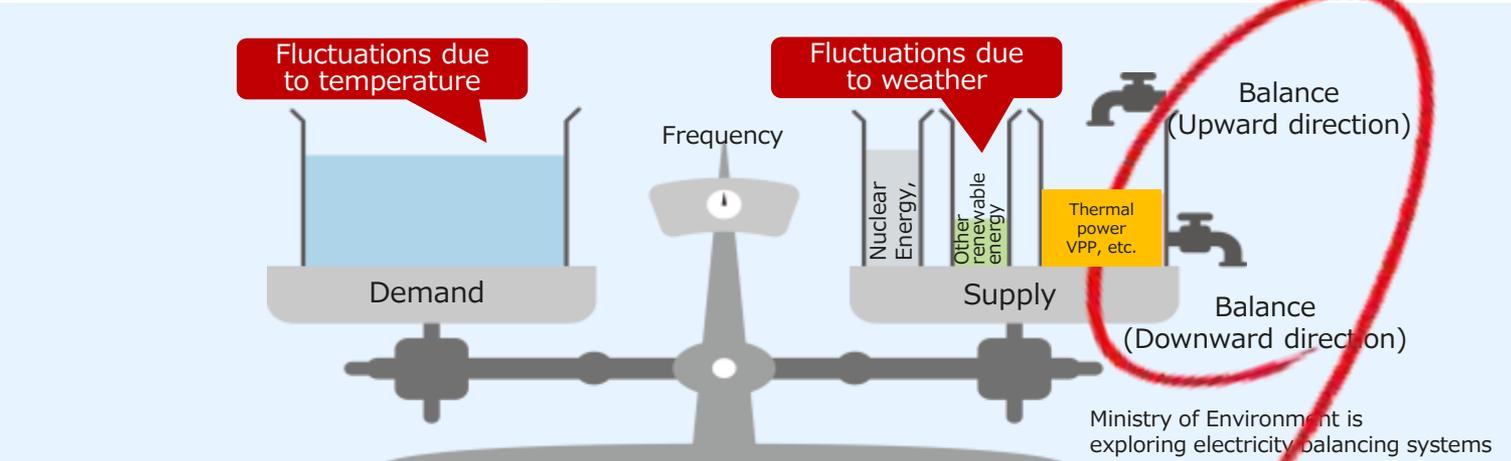
### <Major Participating Companies>

Apple, Microsoft, Google, Citibank, Bloomberg, PHILIPS, BMW, GM Motors, AXA, Ricoh, Sekisui House, Askul

(138 companies as of July 2018)

# Related Social Issues

Importance of balancing power generation with power consumption. Imbalances could result in blackouts (worst case). Important to **provide balance** for the adoption of renewable energy, which fluctuates with changes in the weather.

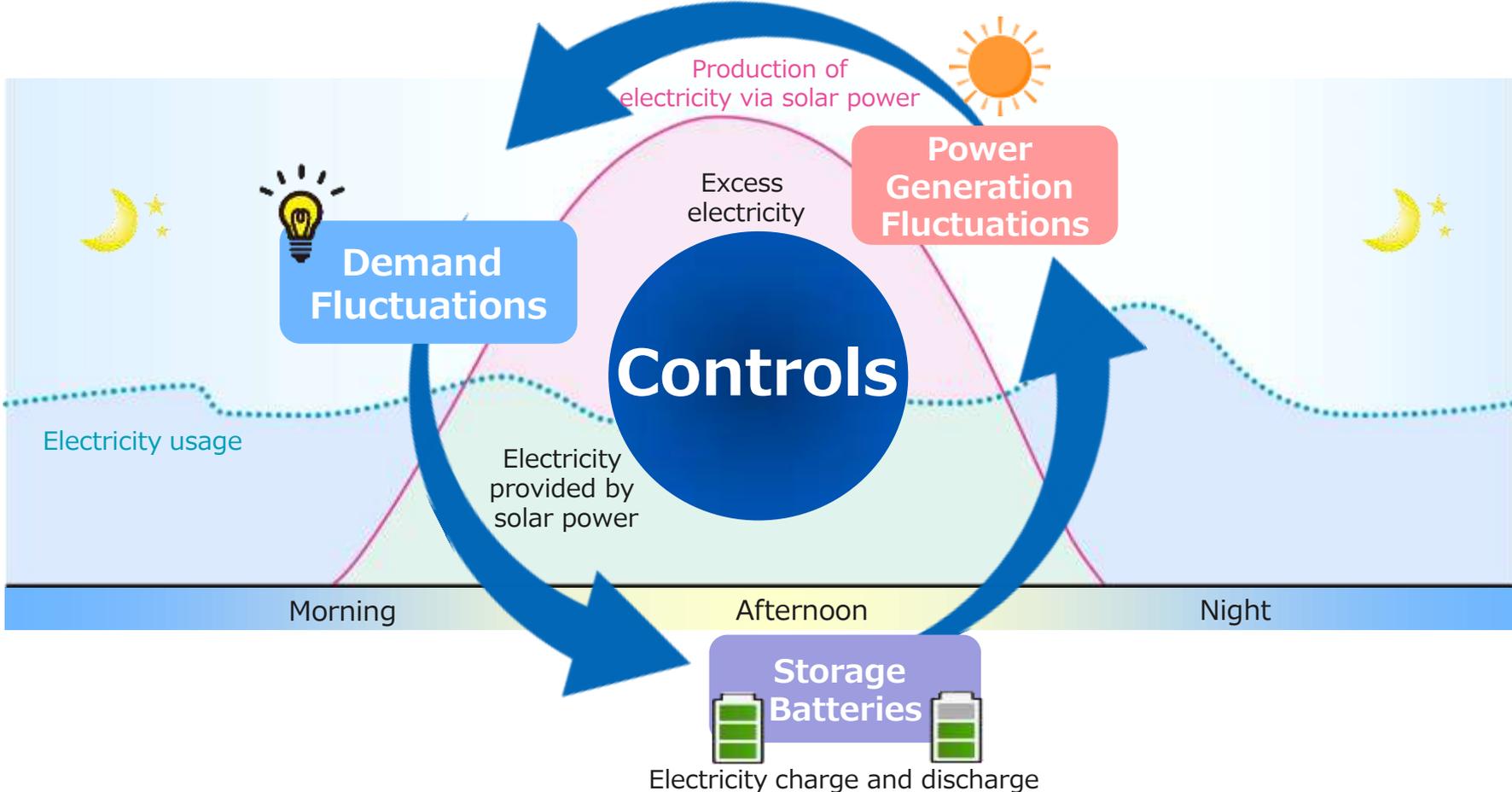


**Important to balance demand (consumption demand) and supply (power generation)**



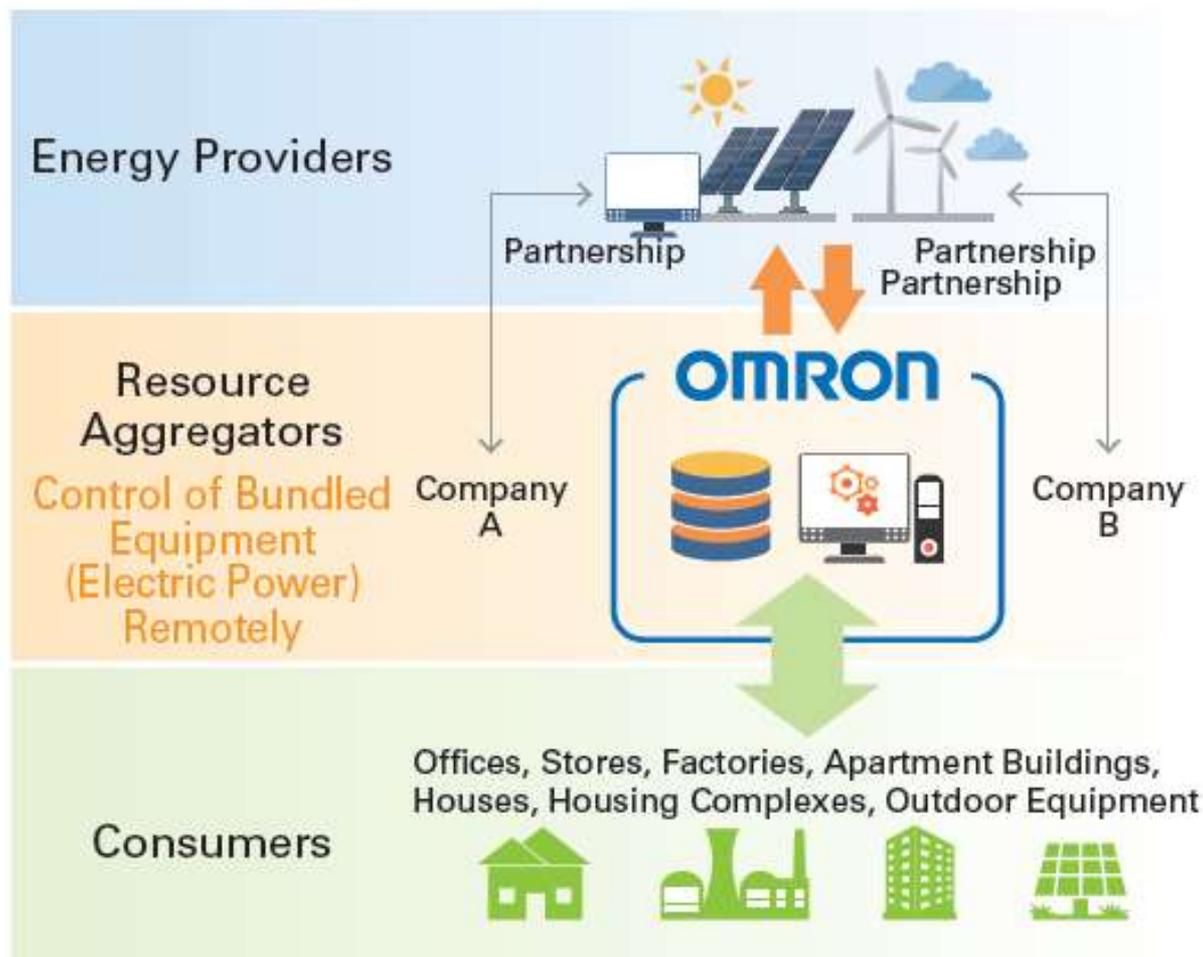
# Key to Wider Renewable Energy Adoption

Leverage PV inverters and No.1 position of storage battery system market, contributing to balance through electricity generation and storage controls, encouraging wider adoption of renewable energy which changes with weather fluctuations



# Looking Ahead to the Near Future

Link equipment to networks to bundle and control electricity.  
Enter the electricity aggregation business using solar power, storage batteries.



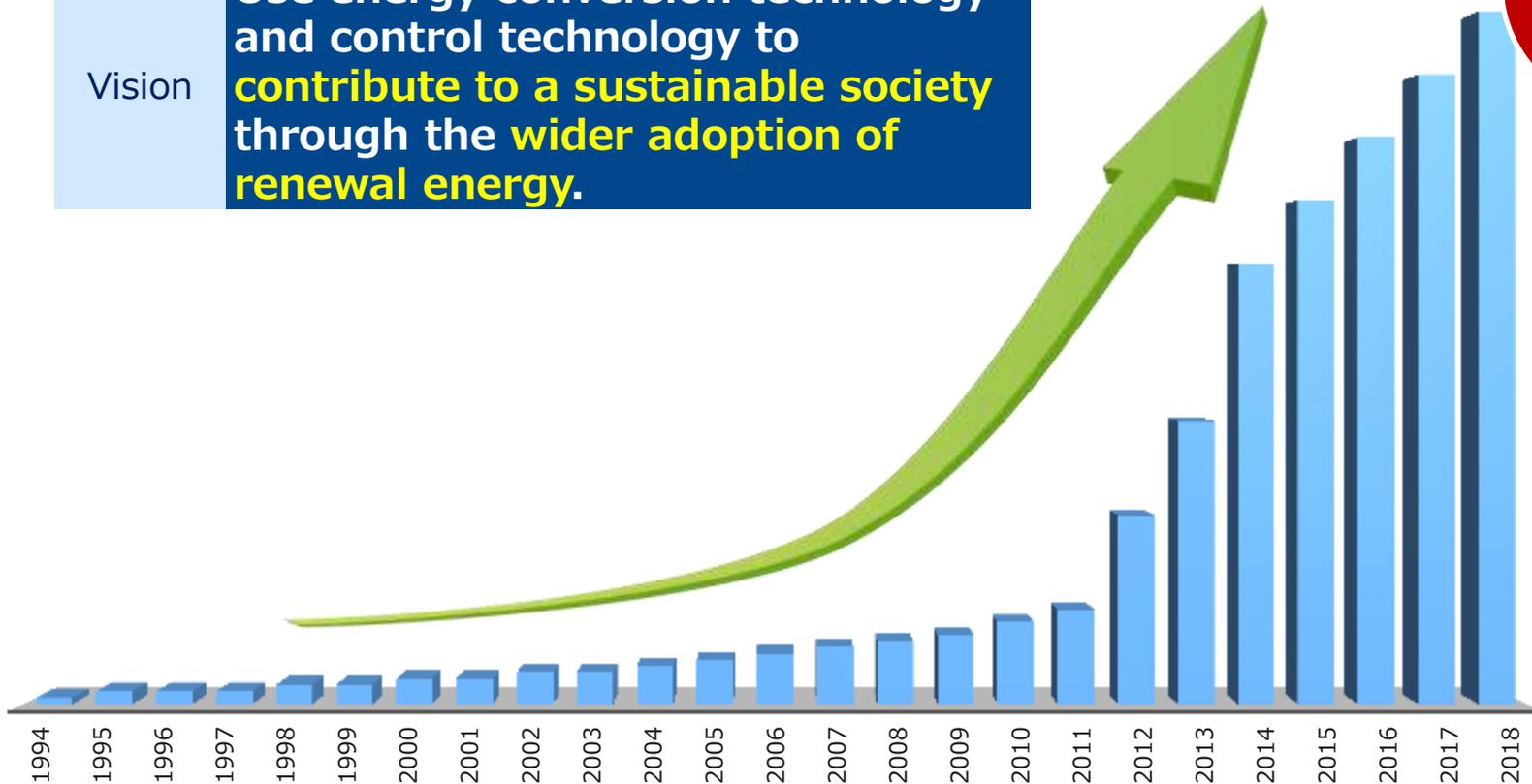
# Contribute to the Spread of Renewable Energy

Sustainability targets: Aim for 11.2GW by 2020, contributing to the wider adoption of renewable energy

Vision

Use energy conversion technology and control technology to **contribute to a sustainable society through the wider adoption of renewal energy.**

2020  
Cumulative  
11.2GW



**OMRON**



# Reinvigorate Communities Through Renewable Energy!

Creating a solar power generation business using idle fields in Miyazu City, Kyoto Pref.

**Tetsuya Miyazaki**  
**OMRON Field Engineering Co., Ltd**  
**Energy Management HQ**

# VG2.0 Pivotal Strategy : Energy Management

## VG2.0 Pivotal Strategy



Factory Automation



Healthcare

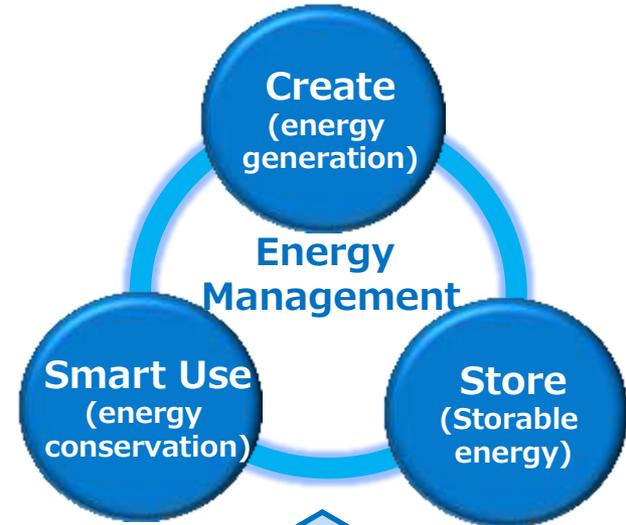


Mobility



Energy Mgmt.

## Social Value: Contribute to a Better Global Environment



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Service

# OMRON Field Engineering (OFE) Business Domains

- Main businesses in the public sector (rail, traffic, finance, etc.); nearly 50 years of experience of equipment construction and maintenance in highly demanding markets.
- Leverage strengths to improve services in the energy sector

## Railways

(Ex. Passenger gates, ticket vending machines)



## Traffic Systems

(Ex. Traffic control, Traffic signals)



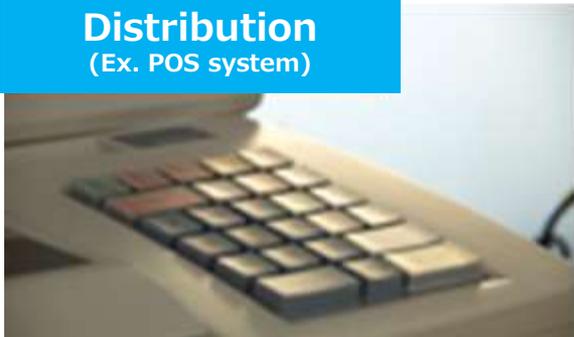
## Finance

(Ex. ATMS, moneychangers)



## Distribution

(Ex. POS system)



## Parking

(Ex. Parking gates)



## Energy

(Ex. Generation, conservation, storage energy equipment)



# OFE Energy Management Business

Improving lives and contributing to a better society by solving energy issues

**Smart Energy Management Systems**  
(Smart, rational use of energy through a combination of generation, conservation, and storage)



## **Buildings**

Factories, hospitals,  
commercial facilities, etc.



## **Areas**

Regions, communities

**Energy Management Business**

# Area, Energy Solutions

Work with local governments and companies to commercialize local production and consumption of renewable energy, solving regional issues



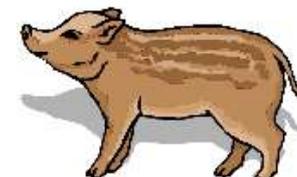
# Issues Facing Miyazu City, Kyoto Pref.

## Devastation of idle fields becoming serious issue, burden to the region

### Miyazu City



- City is a famous destination to see the *Amanohashidate sandbar*; however, population has decreased by one-third over the past 30 years (1985 to 2015). Current permanent population stands at 18,000.
- Yura district is a village of 1,000 people. 45% elderly population. Marked population decline; significant increase in abandoned fields over the past 40 years.



Residential areas are surrounded by an increasing number of abandoned fields; frequent threat of animal damage causing safety concerns

\*Map supplied by Geospatial Information Authority of Japan

# Create Solutions

## Solar power generation business using idle fields as a community asset

**Major reason why improvement of abandoned fields was accepted by locals (Social needs)**



Cooperation with local relations

Miyazu City: town/people /jobs  
Population vision/strategic goals  
Ratio of self-supplied renewable energy  
**0 % (2014) ⇒ 5 % (2019)**  
(City needs)

**Miyazu City (local government)**

Investment

**Miyazu retail electricity sales company (currently examining commercial viability)**

Cheap Electricity

**Town hall, public facilities, etc.**  
**Regional retail electricity sales business**

Regional FIT retail electricity sales

Regional contribution

Financing

Bank of Kyoto

Kyoto Hokuto Shinkin Bank

**Solar power enterprise (launched in FY2017)**

Business viability via FIT use

Investment

**Kyocera (PV equipment)**

**Investment Kaneshita construction (production)**  
Miyazu HQ general contractor

Investment

**OFE**

**Regional Power Generation Business Model**

# History of Power Plant Construction

**Business viability = construct six power plants (including non-abandoned field locations in Yura) for a total of 5MW to ensure electricity production scale**

Yura No.1 Solar Power Plant



Yura North Solar Power Plant (No.1 through No.3)



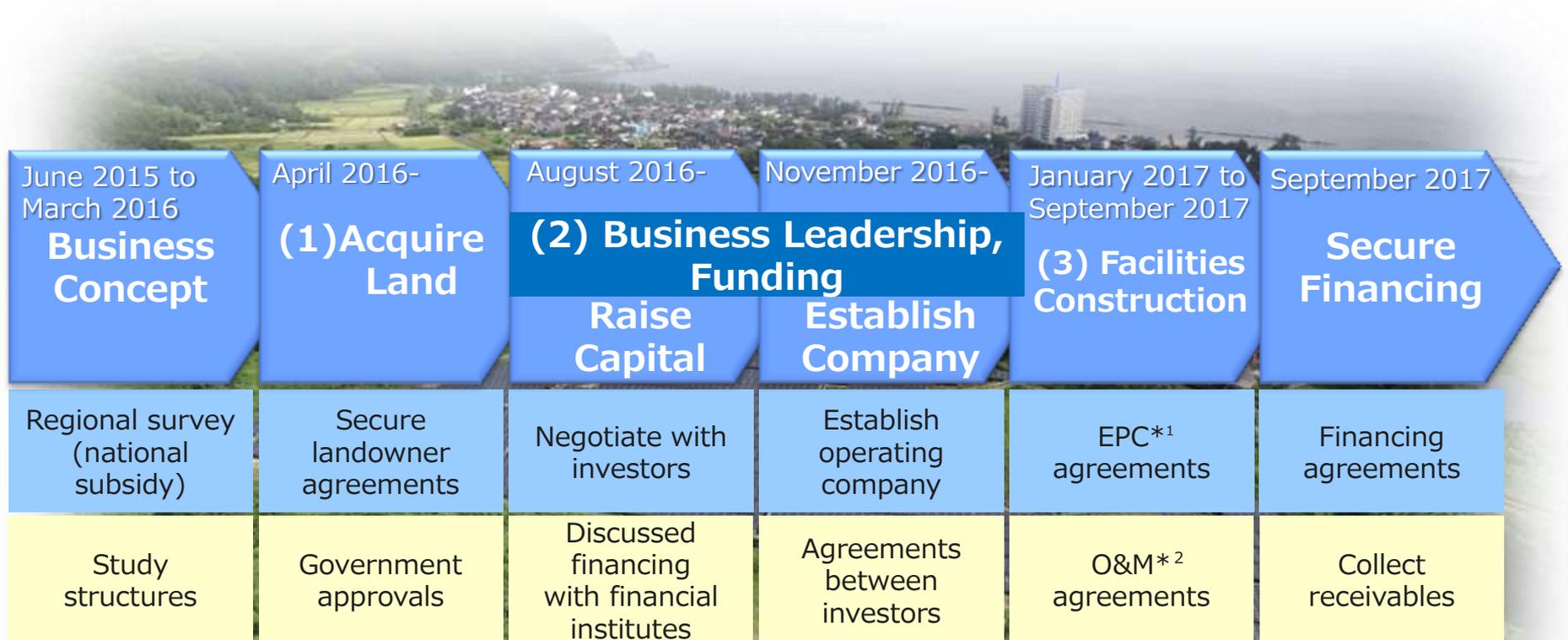
Upper Miyazu Solar Power Plant



Miyazu City Joshi Solar Power Plant

# Commercialization Process

- OFE led all commercialization processes, bringing together Miyazu City, landowners, investors, and financial institutions to coordinate the business.
- Major factor for success was conceiving the business with a local government and working together for commercialization with the community.

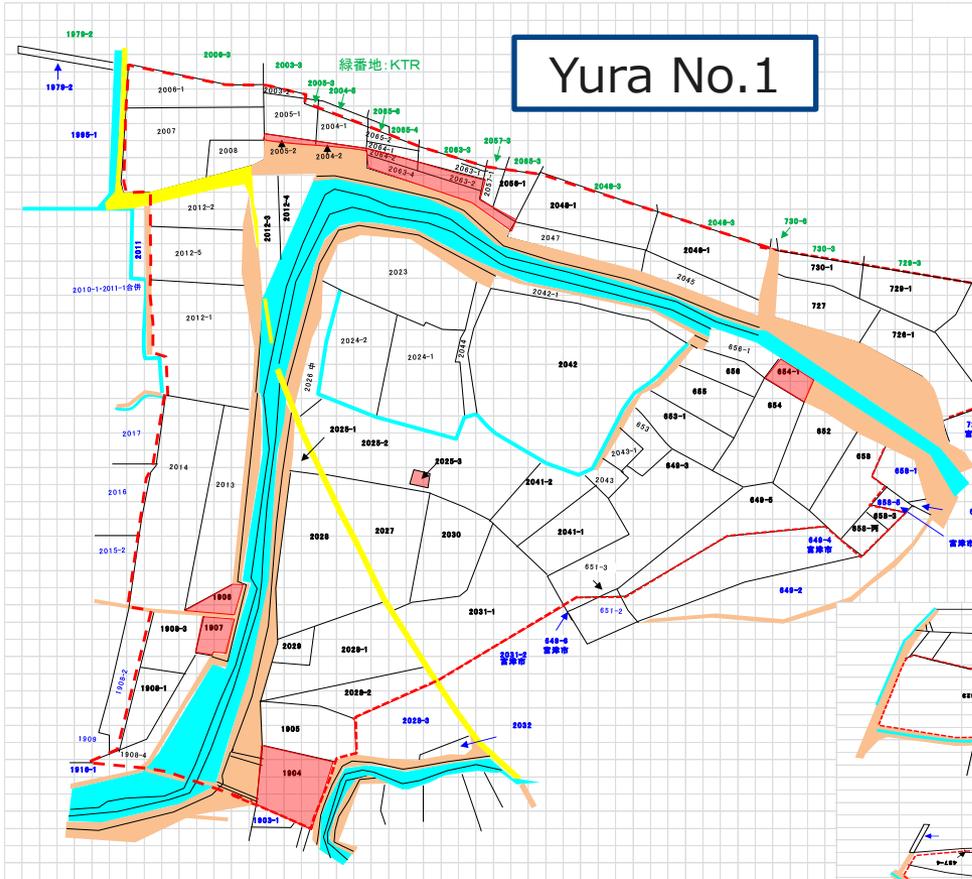


\*1 EPC: Engineering, Procurement, Construction

\*2 O&M: Operation and Maintenance

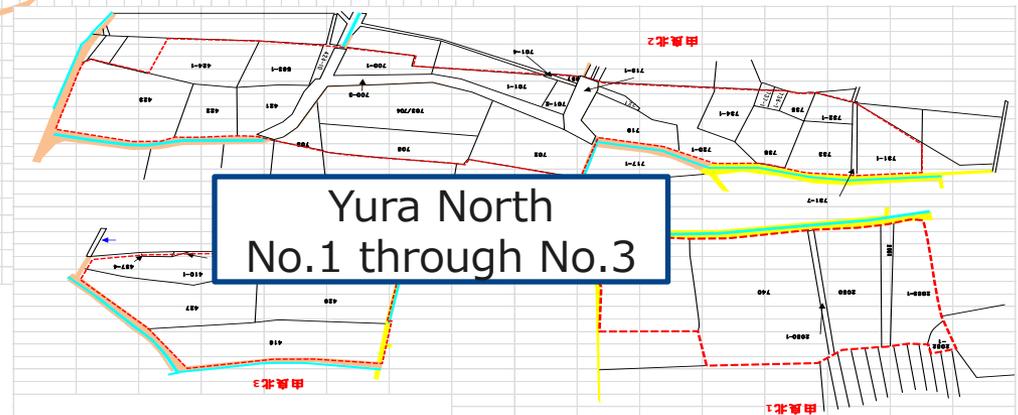
# Success Point (1): Acquire Land

- Lease agreements signed for 140 plots with 100 landowners
- Completed agreements for all plots and registered inheritances as result of painstaking surveys, discussions, explanations, and negotiations.



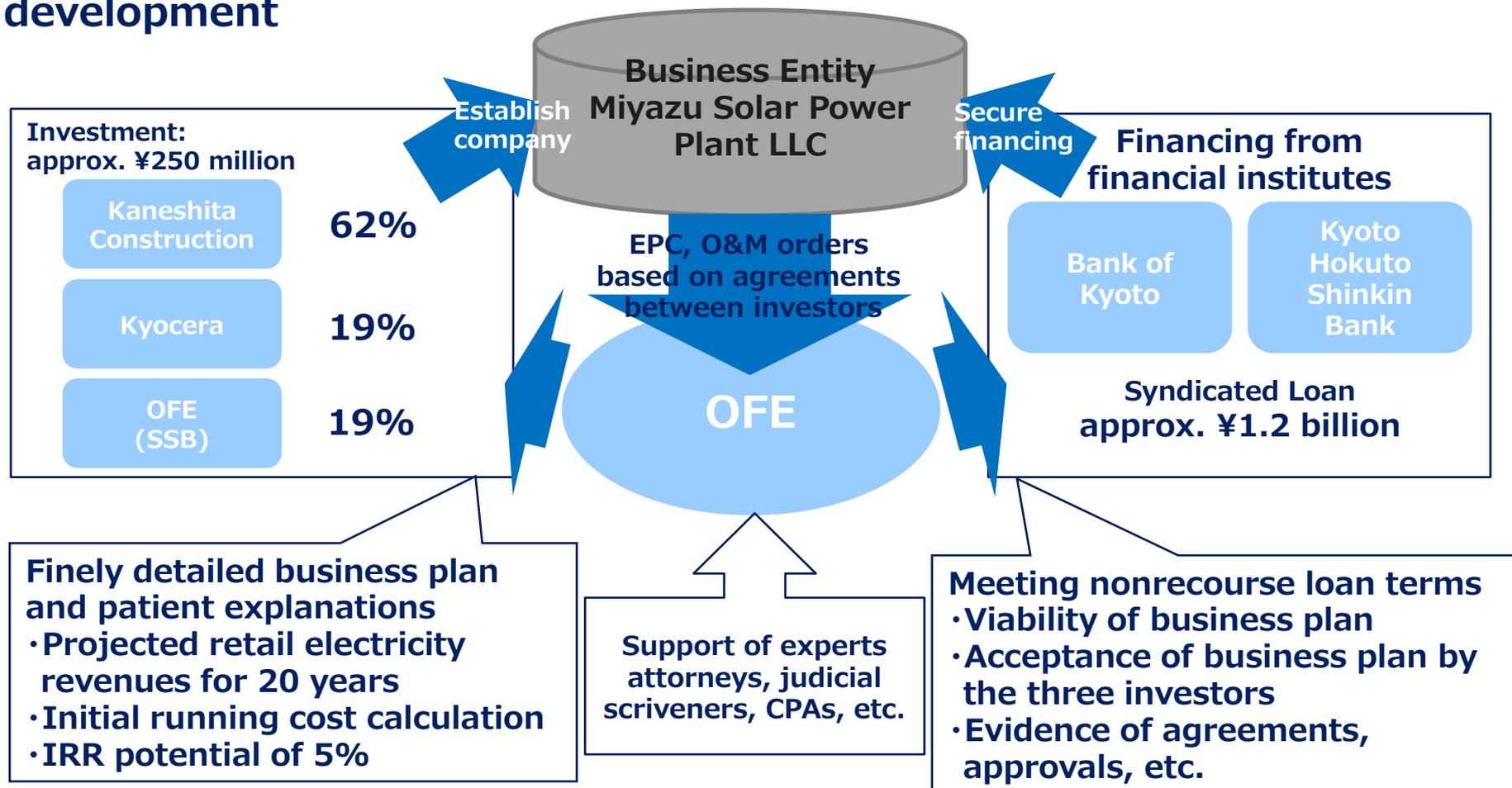
## Current Status

- No inheritance for land having no lessees or buyers
- Considerable number of landowners moved out of town or overseas
- Remains difficult to contact local owners due to lack of information



## Success Point (2): Business Leadership, Funding

- Due to lack of business leadership, OFE proposed business plan to local companies and financial institutions; succeeded in agreement to establish SPC and passed due diligence for nonrecourse loan
- Major factor for success was a common vision of community development



# Success Point (3): Facilities Construction (Battle With Nature)

Completed construction safely, overcoming difficult land conditions

Brutally cold winter with **snow accumulation** over 1m

**Soft** paddy fields and swamp conditions

**Jungle-like** trees and weed infestation

**20-Year Operation**



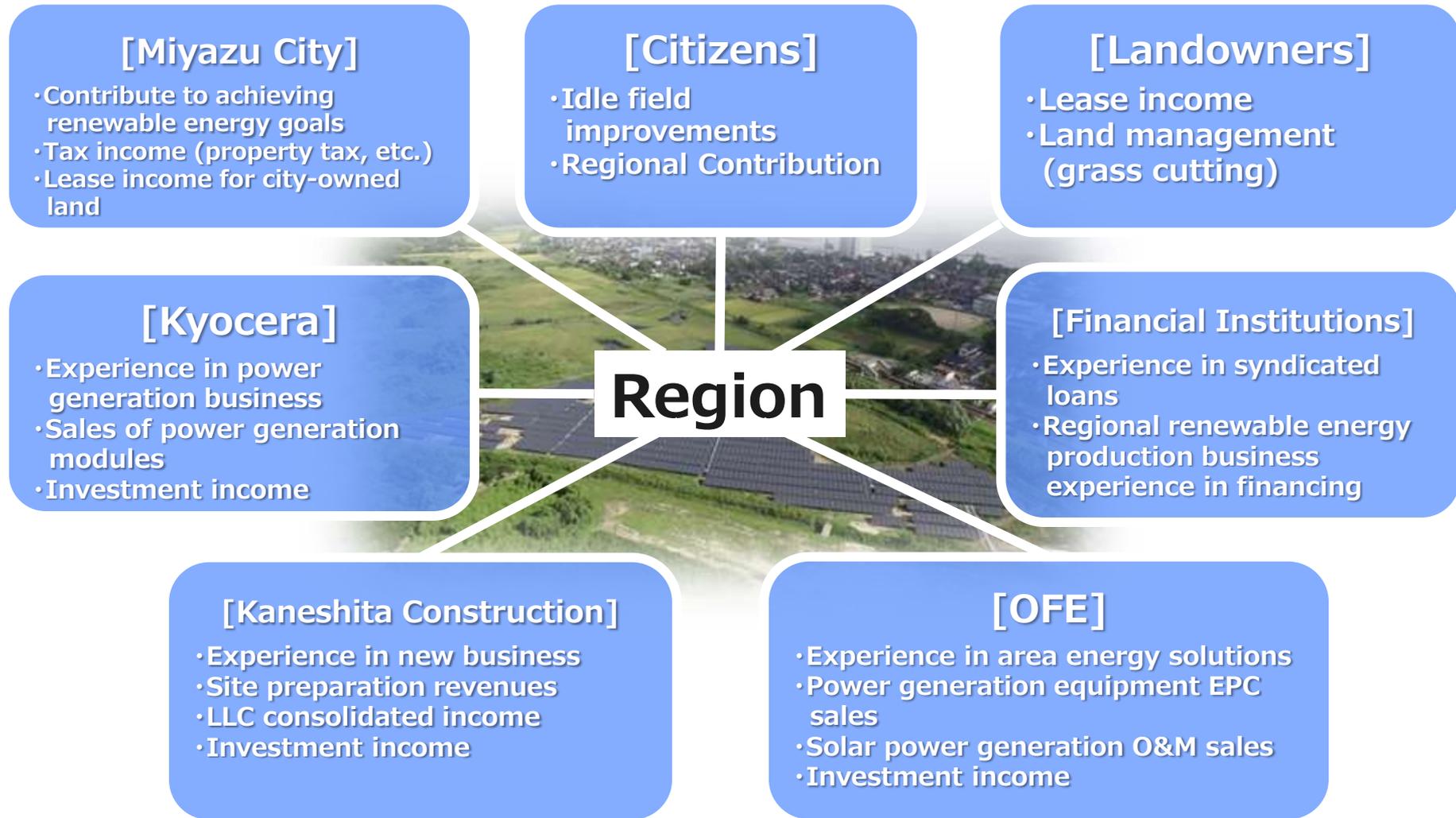
\*From the Ministry of Land, Infrastructure, Transport and Tourism website

**Elevation difference**  
Park ruins 2m-plus high

Significant **water damage** in the past

# Value of Initiatives Implemented

## Model Offering Benefits to All Parties



## And Then : Second-Phase Business

Same three firms opened power plants in seven sites across three prefectures, generating 3.2MW.

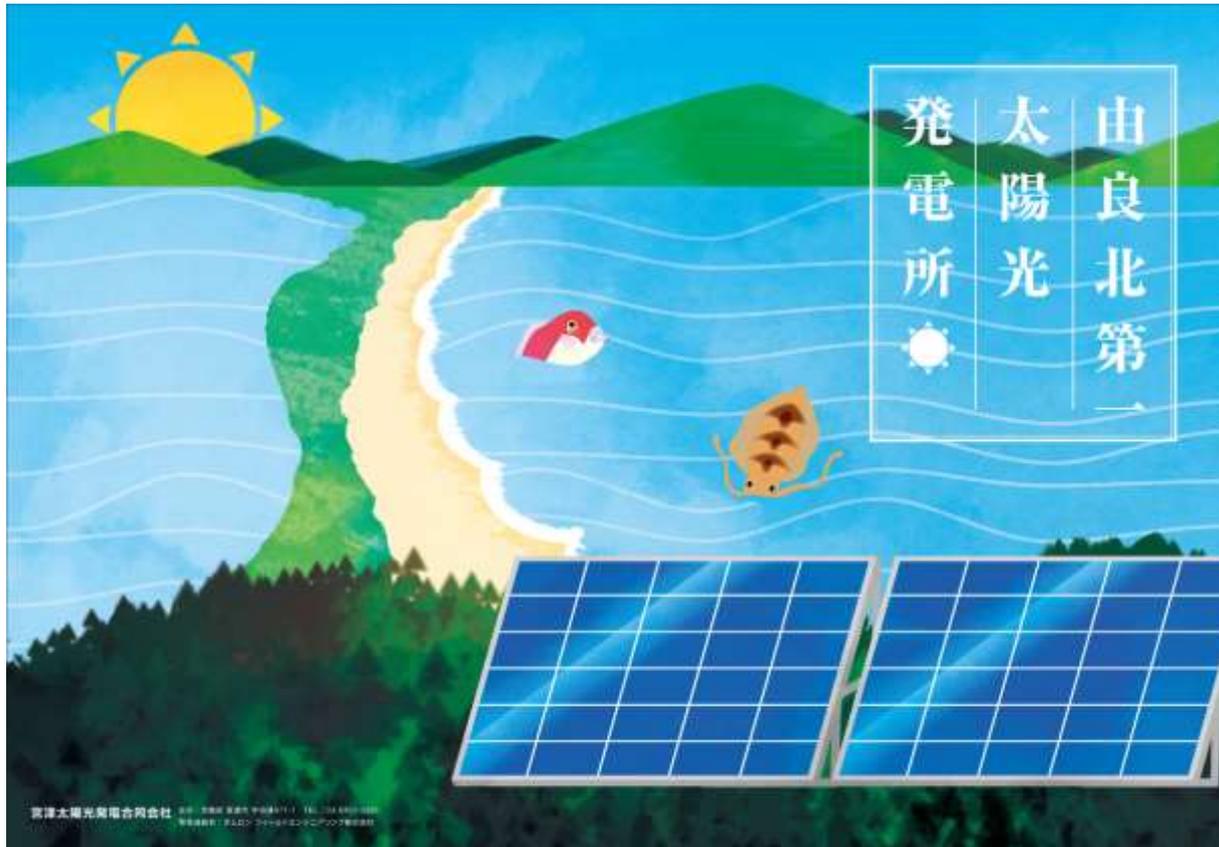
Oeyama No.1, No.2 Solar Power Plant



Built **observatory** on top to aid in regional development

# Solving Regional Issues

Working with partners inside and outside the company to resolve regional issues through renewable energy



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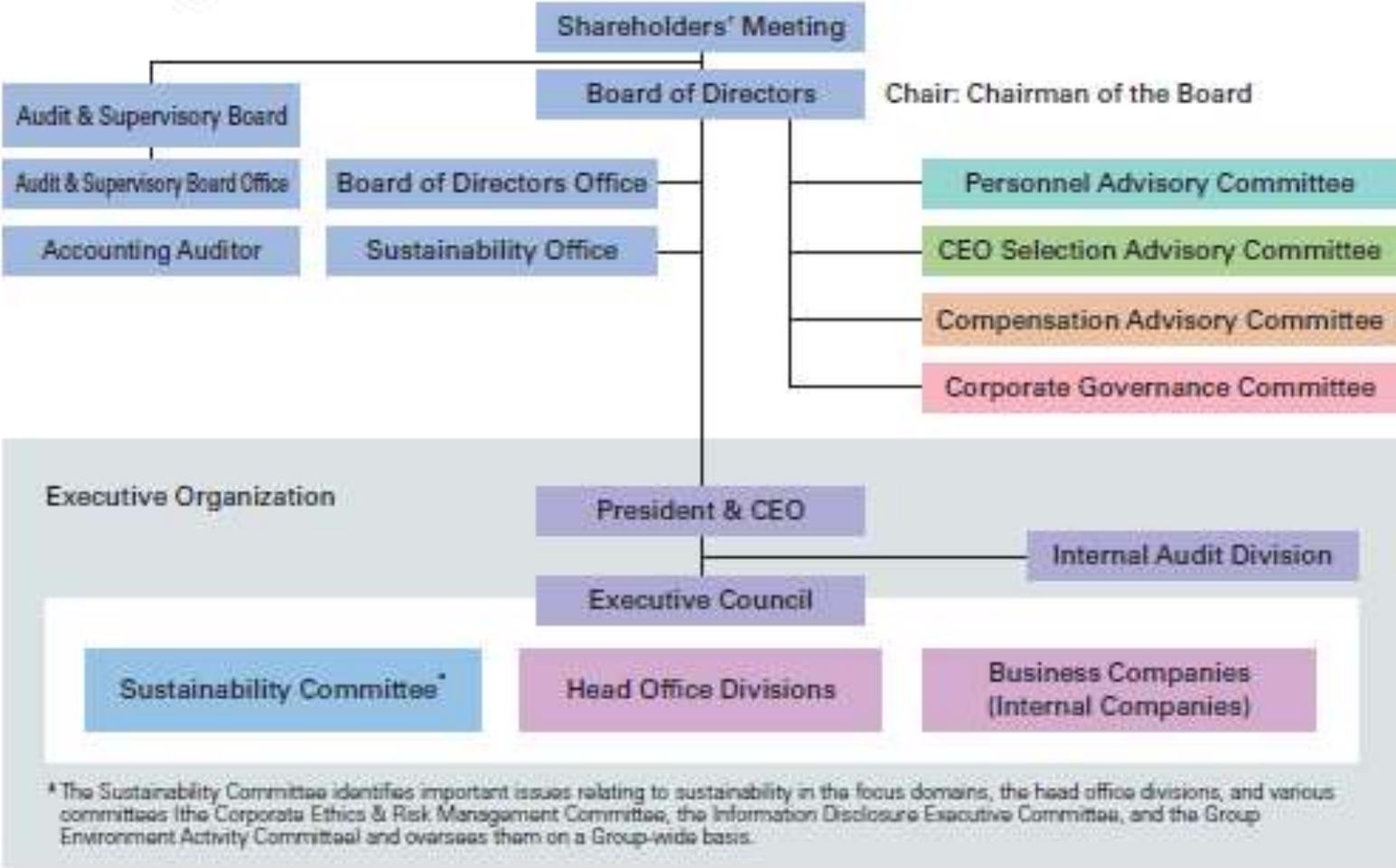


# Sustainability Initiatives

**Kashuku Hirao**  
**Senior General Manager**  
**Sustainability Office**

# Sustainability Management Structure

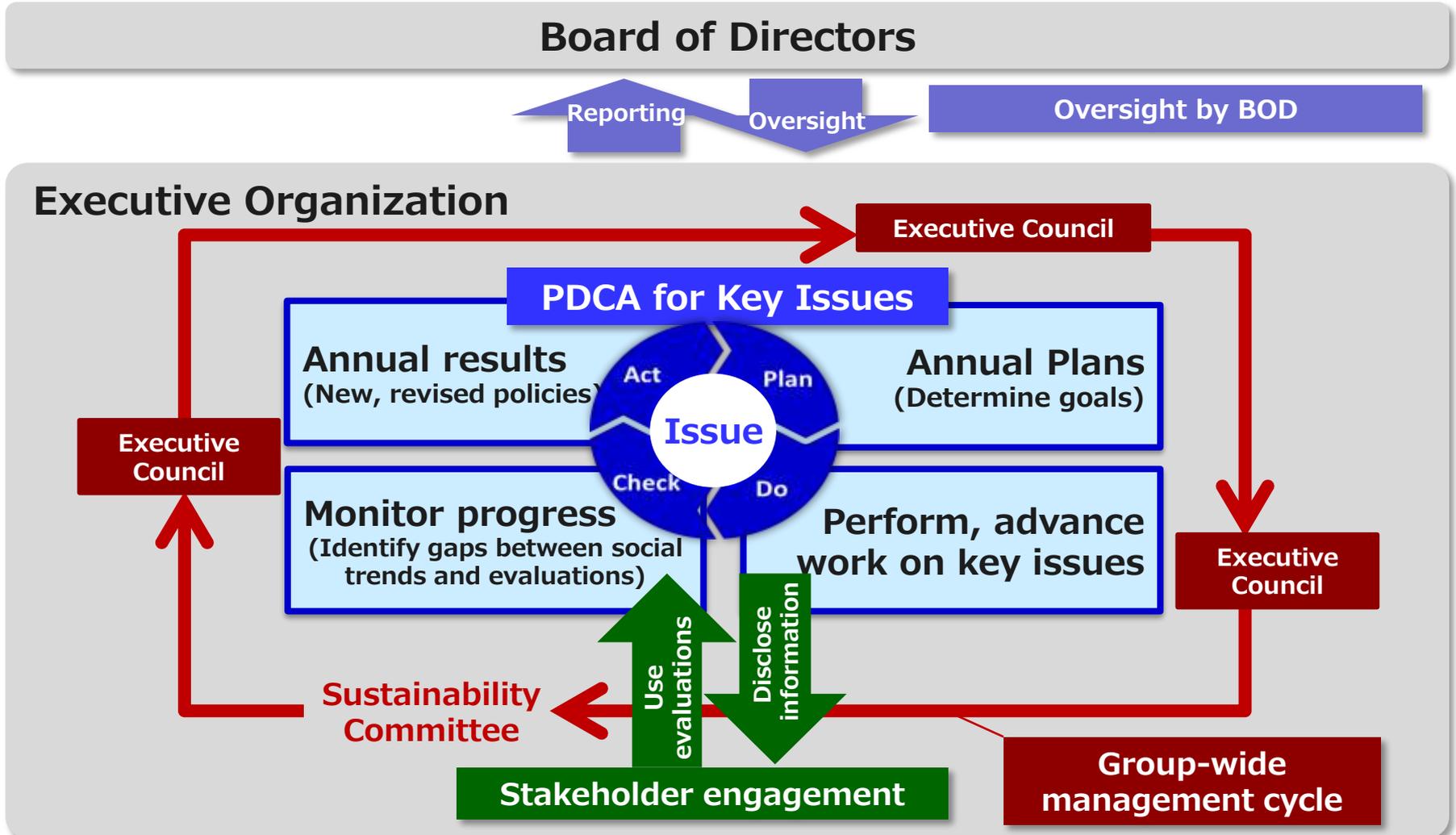
The Sustainability Office reports to the board of directors and is responsible for advancing sustainability company-wide



\* The Sustainability Committee identifies important issues relating to sustainability in the focus domains, the head office divisions, and various committees (the Corporate Ethics & Risk Management Committee, the Information Disclosure Executive Committee, and the Group Environment Activity Committee) and oversees them on a Group-wide basis.

# Sustainability Management Structure

The OMRON board of directors has monitoring and oversight for sustainability initiatives. The board identifies social trends and internal corporate conditions, revising targets and initiatives on an ongoing basis.



# Solving Social Issues Through Our Businesses

Red: targets updated or added

## Sustainability Targets (Fiscal 2020 Goals/KPI)

**Factory Automation**  
Respond to labor shortages and diversifying manufacturing practices

- Create new products leading to **innovative**-Automation in four focus industries  
– Create Controls Technologies for Manufacturing Innovation –



**Healthcare**  
Zero brain and cardiovascular diseases, respiratory diseases

- Blood pressure monitor sales: 25 million units /year
- **Develop analytical technologies to continuously track blood pressure fluctuations**
- Nebulizer + asthma wheeze monitor sales: 7.65 million units/year



**Mobility**  
Reduce traffic accidents, environmental footprint of automobiles

- Create safe driving support systems, technologies
- Create 360° recognition technologies for advanced driving support/self-driving vehicles
- Sales of vehicles with eco-friendly products: **12 million units/year**  
(Increase ratio of high fuel efficiency products: 50%)



**Energy Management**  
Promote the use of renewable energy, CO<sub>2</sub> reductions

- Cumulative shipped capacity of solar power/storage battery systems: 11.2GW
- **Build the energy resource aggregation business using PV/storage system (Japan)**



\*See the OMRON corporate website for more. [https://www.omron.com/about/sustainability/omron\\_csr/tasks\\_goals/](https://www.omron.com/about/sustainability/omron_csr/tasks_goals/)

# Issues Responding to Stakeholder Expectations

Red: targets updated or added

## Human Capital Management

- Talent Attraction and Development
- Diversity and Inclusion
- Wellness Management
- Occupational Safety and Health
- Respect for Human Rights and Labor Practices

### Sustainability Targets (Fiscal 2020 Goals/KPI)

- Continue expanding TOGA<sup>\*1</sup>,
- Accelerate the PDCA implementation via employee engagement surveys
- Ratio of women in managerial roles (Japan): 8%
- **Improve awareness of wellness management<sup>\*2</sup> (company-wide awareness of Boost5<sup>\*3</sup>)**
- International OSH<sup>\*4</sup> certifications: At sites representing 80% of production capacity
- Define and adopt due diligence processes for human rights



## Manufacturing/Environment

- Product Safety and Quality
- Supply Chain Management
- Reduction of Greenhouse Gas Emissions
- Appropriate Management and Reduction of the use of Hazardous Substances

- Produce safety assessments for newly developed products: 100%
- **Improve product safety assessments**
- Sustainability self-checks at partner suppliers: 100% implementation; score of 85 points or higher
- **Reduce GHG emissions by 4% (vs. fiscal 2016, SBT conformity<sup>\*5</sup>)**
- Reduce mercury through the adoption of digital thermometers and digital blood pressure monitors: 69 tons/year



## Risk Management

- Fair Business Practices
- Information Security, Personal Information Protection

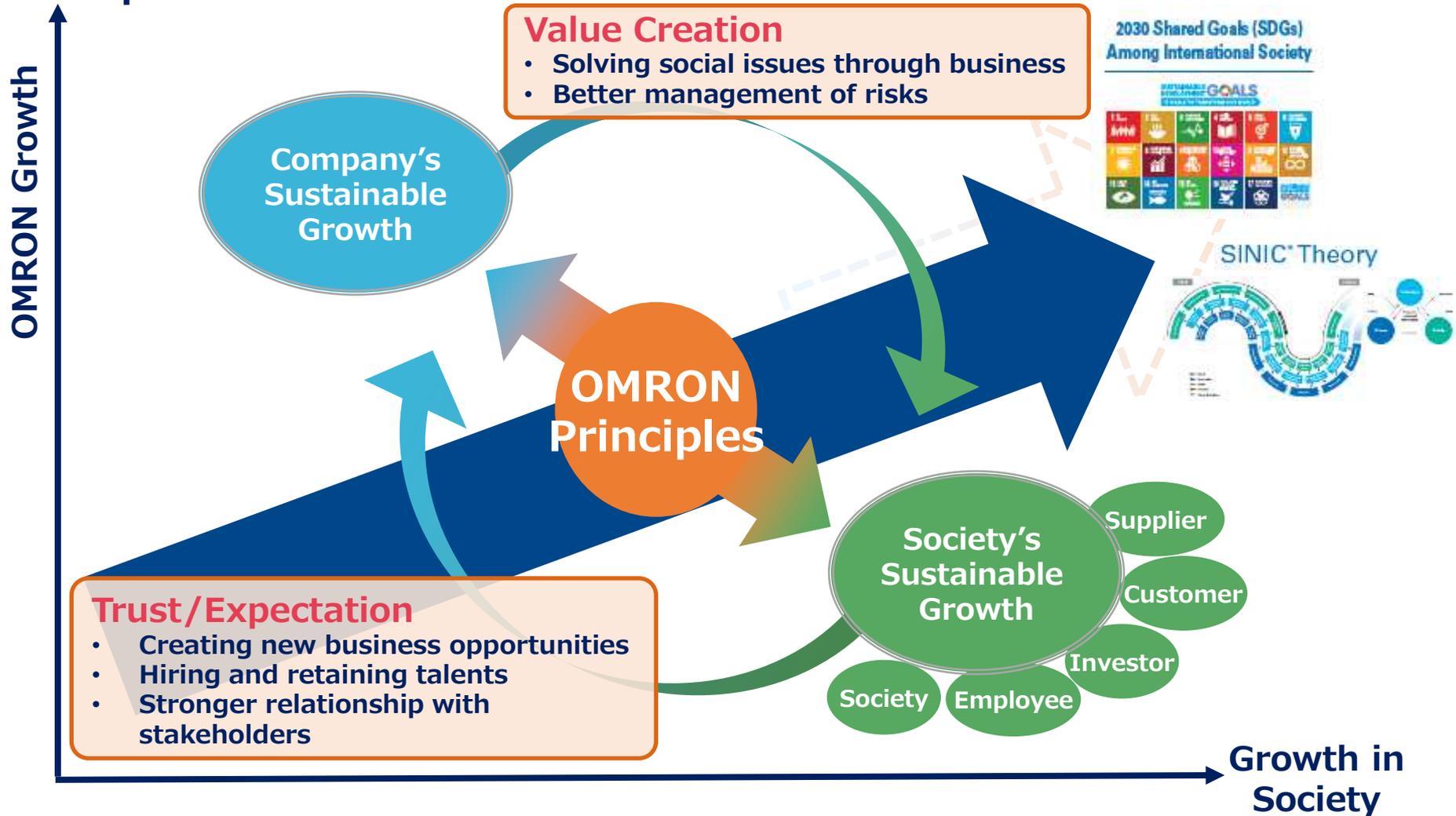
- Promote OMRON Group rules in all global bases
- Global training for ethical conduct
- Build a new information security system



\*See the OMRON corporate website for more. [https://www.omron.com/about/sustainability/omron\\_csr/tasks\\_goals/](https://www.omron.com/about/sustainability/omron_csr/tasks_goals/)

# Sustainability Vision to Be Led by Principles

Strive for sustainable OMRON corporate value growth and sustainable social development from a global perspective, based on the OMRON Principles



# External Evaluations

Win both prestigious Social and Governance awards in Japan.

- Selected for Health and Productivity 2019 Recognition
- Winner of the Corporate Governance of the Year 2018 Minister of Economy, Trade and Industry Award



# Reaching for Higher Levels of Sustainable Corporate Value

To reach higher levels of corporate value, we will continue to analyze the risks and opportunities related to climate change and disclose information.

- We have expressed Our Support of the Proposals of the Task Force on Climate-related Financial Disclosures (TCFD)



**News Release** **OMRON**  
OMRON Corporation  
Brand Communications Department  
+81-75-344-7175

February 22, 2019

## OMRON Declares Support for the TCFD Guidance<sup>1)</sup>

OMRON Corporation (HQ: Shimogyo-ku, Kyoto, President and CEO: Yoshinori Yamada) has declared its support for the guidance by the Task Force on Climate-related Financial Disclosures (TCFD), an organization established by the Financial Stability Board (FSB).

Recognizing that climate change affects our future sustainable growth, we at OMRON will analyze the risks and opportunities that climate change might pose to our business and disclose related information in accordance with the Task Force on Climate-related Financial Disclosures.

**About OMRON's Efforts Against Climate Change**  
With the understanding that to fulfill our corporate responsibility to fight climate change, one of the most urgent global issues, is to realize Our Mission, "To improve lives and contribute to a better society," which is part of the OMRON Principles, we have identified "sustainability issues and goals (non-financial goals)" in the medium-term management plan "V62.0" (from 2017 to 2020) and are taking concrete measures on a global basis. In July 2018, we set new medium- and long-term environmental targets under OMRON Carbon Zero and have since been working to reduce greenhouse gas emissions to zero by fiscal 2050.

**About the TCFD**  
The Task Force on Climate-related Financial Disclosures was established by the FSB, an international organization in which central banks and financial regulators of major countries are participating. As of this writing, over 550 organizations, including financial institutions, private enterprises, and governments around the globe, have declared their support for the TCFD Guidance.

**About OMRON Corporation**  
OMRON Corporation is a global leader in the field of automation based on its core technology of "Sensing & Control + Think." OMRON's business fields cover a broad spectrum, ranging from industrial automation and electronic components to automotive electronic components, social infrastructure systems, healthcare, and environmental solutions. Established in 1933, OMRON has about 38,000 employees worldwide, working to provide products and services in 117 countries and regions. For more information, visit OMRON's website: <http://www.omron.com/>



**OMRON**