# HIOKI E.E. CORPORATION Financial Results Briefing for the Fiscal Year Ending December 31, 2017

(Securities Code: 6866)

February 2018



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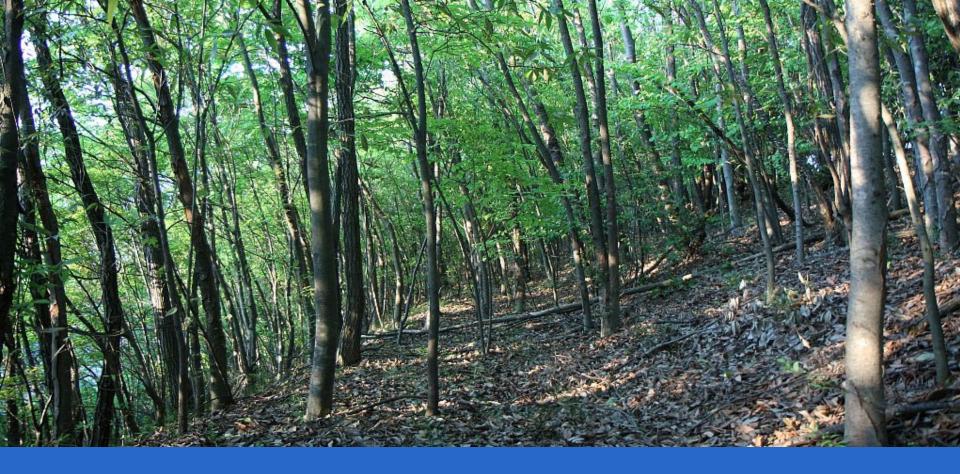
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### Company Overview

HIOKI

Photograph: Trees at HIOKI Forest Hills

#### **Overview**

Name
HIOKI E.E. CORPORATION

Businesses
Development, manufacture, sale, and repair

of electrical measuring instruments

Founded June 1935

Incorporated
January 1952

Capitalization ¥3,299 million

Representative Kazutoshi Hosoya, President & CEO

Head Office 81 Koizumi, Ueda-shi, Nagano Prefecture

Subsidiaries

HIOKI Forest Plaza Corporation; HIOKI USA Corporation; HIOKI

(Shanghai) Sales & Trading Co., Ltd.; HIOKI SINGAPORE PTE. LTD.;

HIOKI KOREA CO.,LTD.; HIOKI INDIA ENGINEERING PRIVATE

LIMITED; HIOKI EUROPE GmbH

■ Employees 934 (consolidated-basis, including part-time workers) (as of

December 31, 2017)

#### **HIOKI Product Organization and Fields of Use**

HIOKI meets customer needs ranging from advanced R&D to production lines and on-site electrical work in every industry with 300 products.

Overall organization

R&D

**Production lines** 

Package and board manufacture

Electric device manufacture

Field maintenance

**Automatic testing** equipment

Data recording

equipment

Power generation and distribution Transport equipment

Materials,

Machinery manufacture Transport equipment manufacture

Power equipment inspections Elevator maintenance

Electronic measuring instruments

Field measuring instruments

Peripheral equipment and other

Alternative energy environment



Electronic component manufacture Medical device manufacture



Environment Energy

Electronic devices Transport equipment



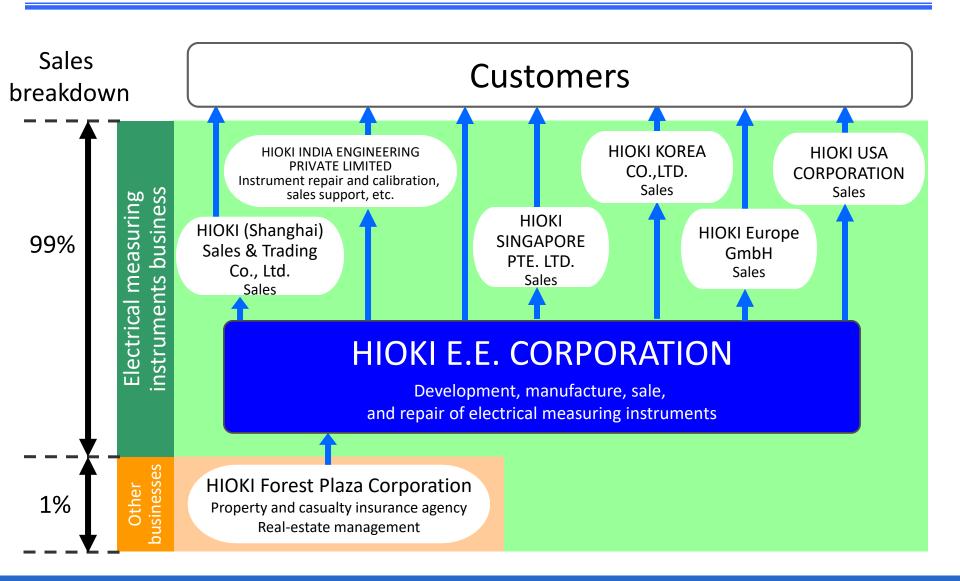
Electrical and power equipment inspections Communications equipment testing



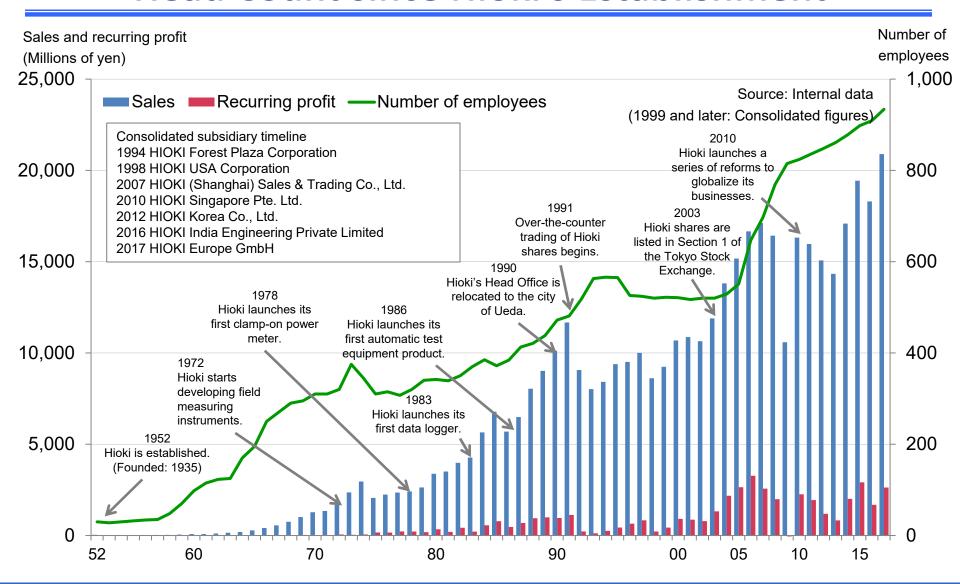
Accessories for products shown above

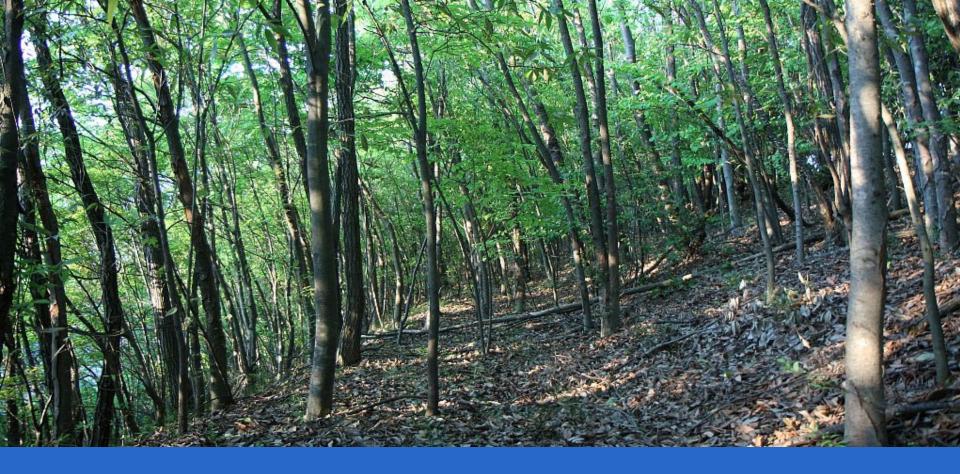
<sup>\*</sup>The width of each application category illustrates its relative contribution to HIOKI's sales.

#### **HIOKI Group Business Diagram**



# Performance and Employee Head Count since Hioki's Establishment





# Financial Results Overview

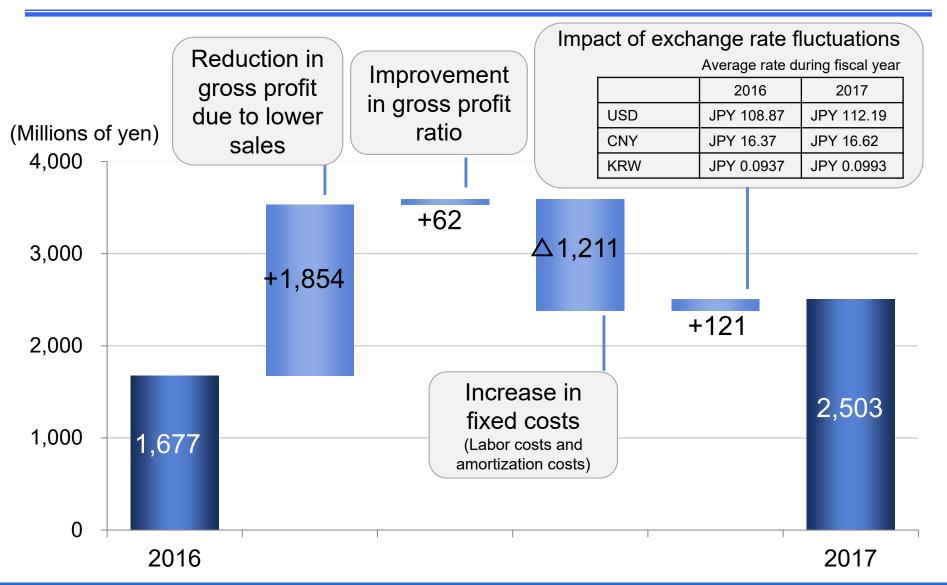
HIOKI

Photograph: Trees at HIOKI Forest Hills

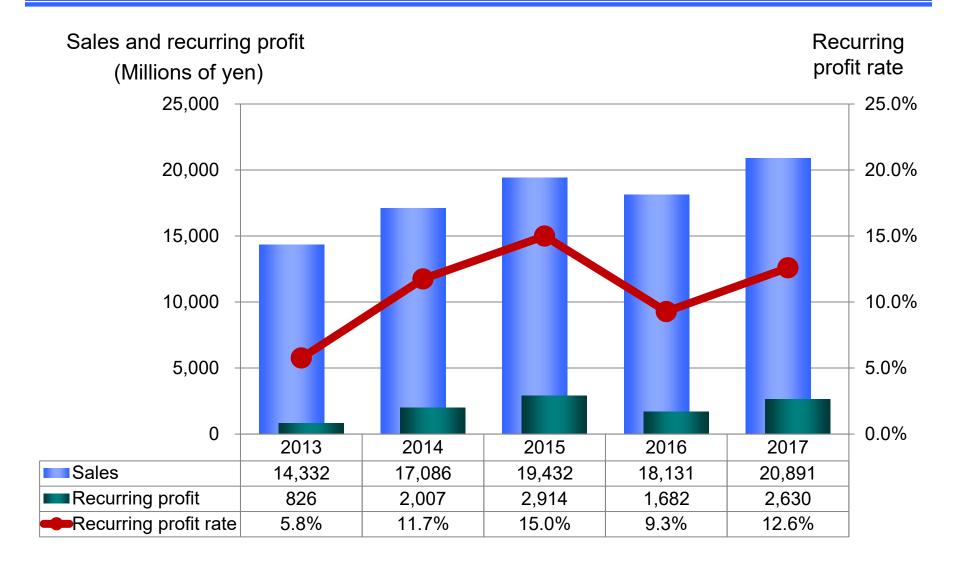
#### **Overview of 2017 Results**

	2016		2017		
	Results (millions of yen)	Percent of sales (%)	Results (millions of yen)	Percent of sales (%)	Year-on-year (%)
Sales	18,131		20,891		115.2%
Cost of sales	11,053	61.0%	12,030	57.6%	108.8%
Selling, general, and administrative expenses	5,400	29.8%	6,357	30.4%	117.7%
Operating profit	1,677	9.3%	2,503	12.0%	149.2%
Recurring profit	1,682	9.3%	2,630	12.6%	156.4%
Net income	1,167	6.4%	1,998	9.6%	171.2%
Earnings per share	¥85.67		¥146.67		

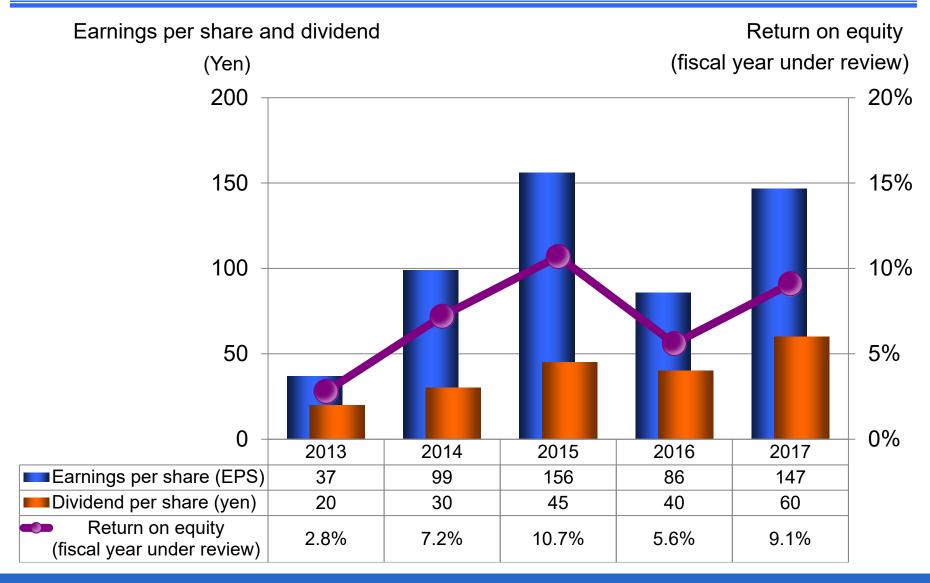
#### **Factors Affecting Operating Profit in 2017**



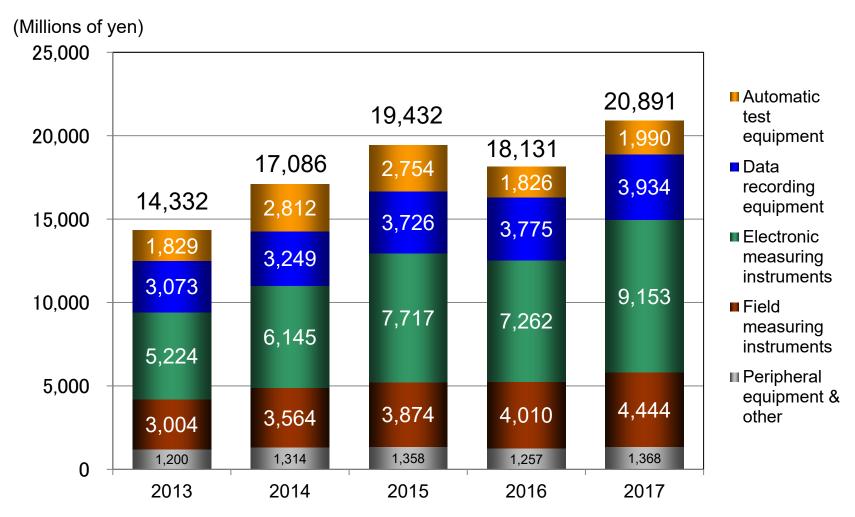
#### **Trend in Sales and Recurring Profit**



#### Trend in Earnings per Share and Dividend



#### **Trend in Sales by Product Category**



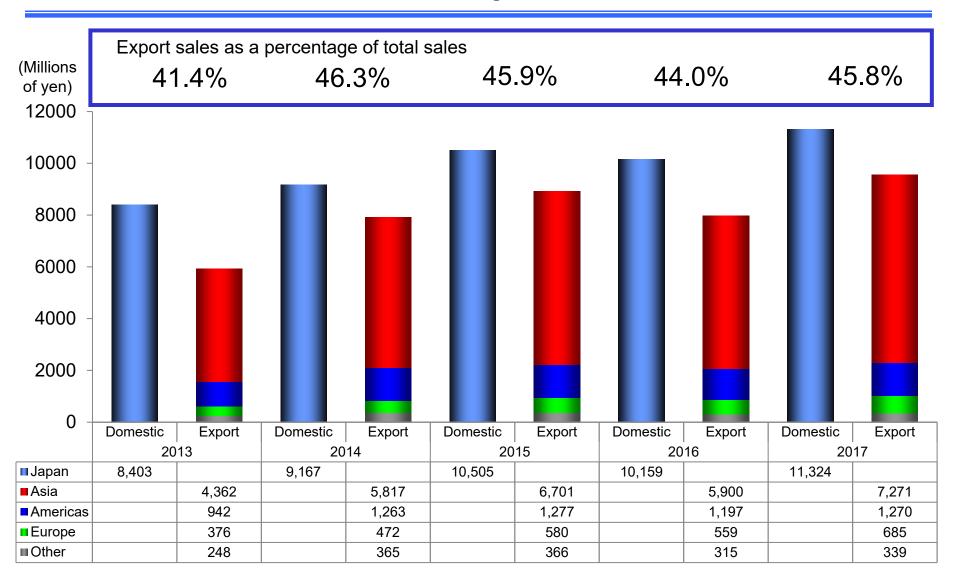
<sup>\*</sup>Some product categories changed in 2016. Results for 2013 and subsequent years have been stated in terms of the new categories.

#### **2017 Overview by Product Category**

Automatic test equipment	<ul> <li>As technological progress in printed circuit boards for use in vehicles accelerates with the adoption of electric vehicles and self-driving technologies, we are taking a case-by-case approach to accommodating diversifying testing requirements.</li> <li>Hioki's high-precision measurement technologies are being adopted by semiconductor manufacturers, particularly in Taiwan and South Korea.</li> </ul>	
Data recording equipment	<ul> <li>We introduced a flagship Memory HiCorder for use with power electronics, which constitute a core technology for the post-carbon society of the future.</li> <li>Sales of data recording equipment for use in electronic component and automotive testing systems continued to grow.</li> </ul>	
Electronic measuring instruments	<ul> <li>We introduced a number of new products, including no-metal-contact probes and an optical measuring instrument for RGB lasers.</li> <li>Demand for components for use in smartphones rose, fueling dramatic growth in sales of circuit element measuring instruments. Adoption of EVs accelerated in China and Europe, and sales of battery testers grew significantly.</li> </ul>	
Field measuring instruments	<ul> <li>We launched numerous new products with features unique to Hioki (including a bypass diode tester and an AC clamp power meter for use in detecting electricity theft), leading to steady growth in sales.</li> </ul>	



#### **Trend in Export Sales**

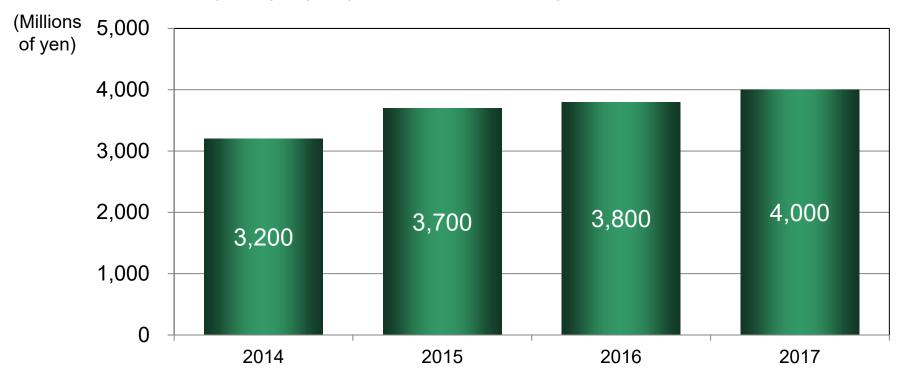


## Environmental and Alternative Energy Markets (Sales of Related Products)

#### Market trends

Demand for instruments used in equipment maintenance, management, and monitoring in the solar power market remained robust, as did demand for clamp-on power meters and equipment power meters used to measure the power consumption of various types of equipment and electrical machinery.

Target products: Clamp-on power meters, equipment power meters, PV megohmmeters, current sensors, loggers, battery testers, power quality analyzers, remote measurement systems



### Electronic Components and Automotive Markets (Sales in Related Categories)

#### Trends in the electronic components market

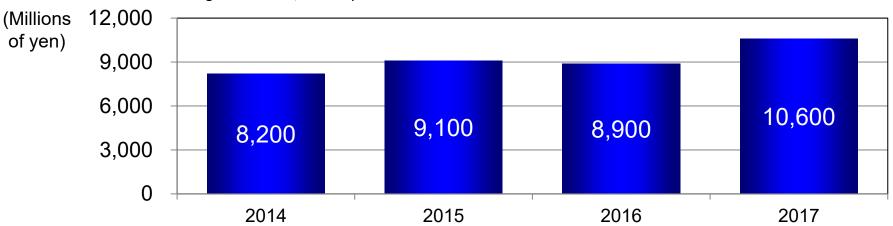
Capital investment in the electronic component market accelerated, reflecting factors such as faster communications speeds and more advanced functionality for mobile devices and growing use of the Internet of Things (IoT) throughout society. We expect continued growth in the future.

Target products: Automatic test equipment, super-megohmmeters, impedance analyzers, resistance meters, battery measuring instruments

#### Trends in the automotive market

Capital investment in EV development accelerated on expectations that the vehicles would be rapidly adopted in China and Europe. Demand for instruments used to measure batteries was also robust. We expect to see global competition in developing self-driving technologies.

Target products: Automatic test equipment, super-megohmmeters, LCR meters, resistance meters, power meters, battery measuring instruments, memory recorders



<sup>\*</sup>Some product categories changed in 2017. Results for 2014 and subsequent years have been stated in terms of the new categories.

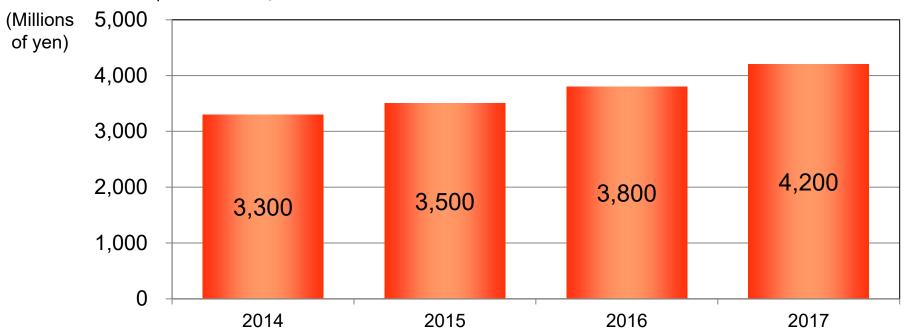


#### **Infrastructure Market** (Sales in Related Categories)

#### Trends in the infrastructure market

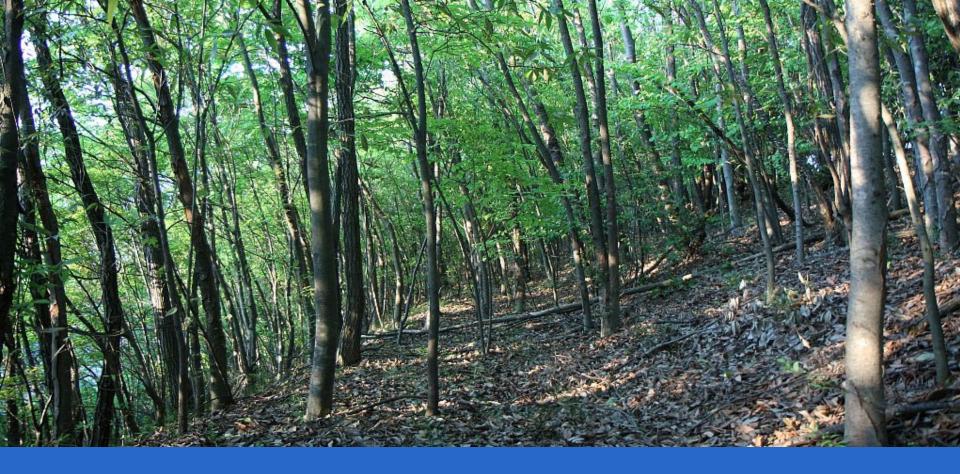
Demand for instruments used in electrical work and equipment maintenance rose, and the boost in domestic demand caused by infrastructure construction in advance of the Tokyo Olympics continued. We also saw strong demand in emerging markets spurred by economic development.

Target products: Digital multimeters, testers, clamp-on current meters, grounding resistance meters, PV megohmmeters, phase detectors, etc.



<sup>\*</sup>Some product categories changed in 2017. Results for 2014 and subsequent years have been stated in terms of the new categories.





# Mid-term Business Plan and Strategy



#### **Hioki's Vision**

A company that continues to operate into the indefinite future

Hioki is striving to become a company that generates continuous growth while playing an essential role in society.

#### **Achieving Hioki's Vision**

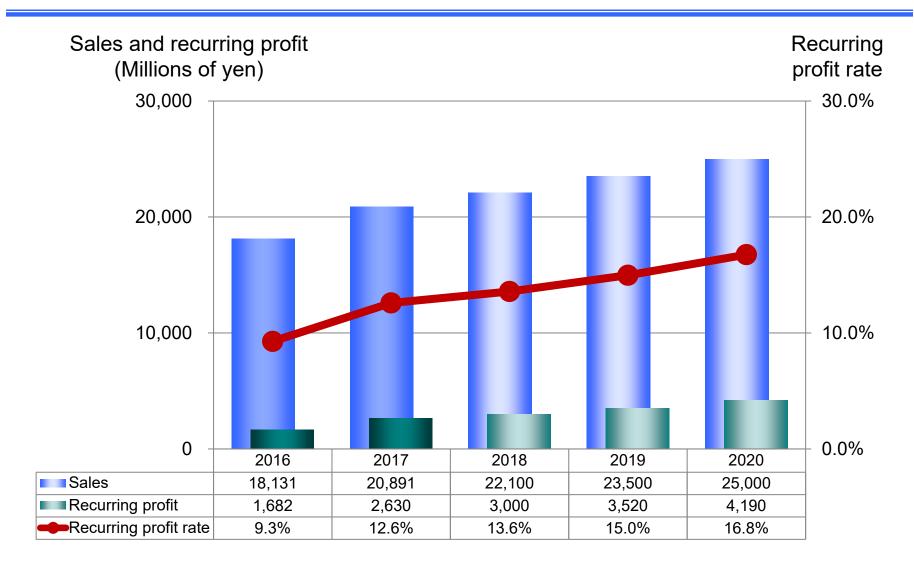
- Transforming Hioki into a highvalue-added company
- Increasing productivity

Recurring profit ratio of 20% or more International sales as 50% or more of total sales

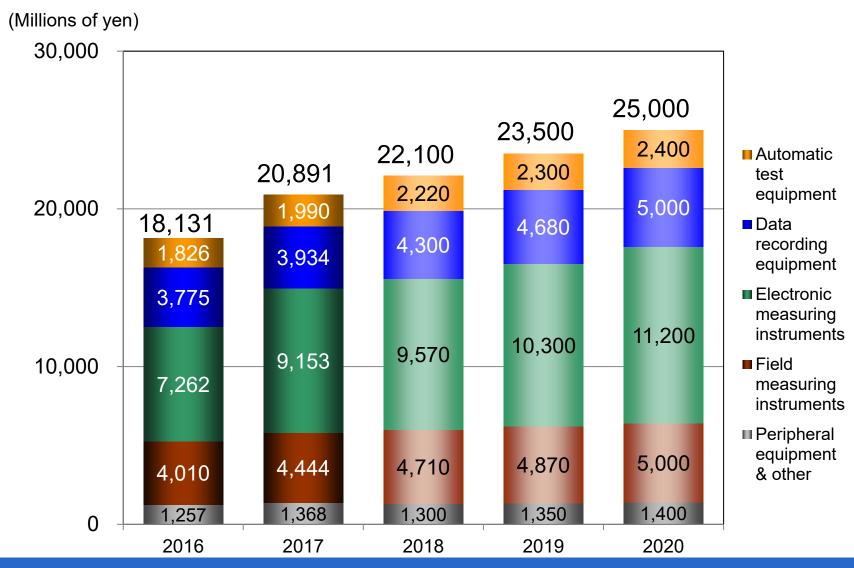
#### **2018 Results Forecast**

	2017		2018		
	Results (millions of yen)	Percent of sales (%)	Plan (millions of yen)	Percent of sales (%)	Year-on-year (%)
Sales	20,891		22,100		105.8%
Cost of sales	12,030	57.6%	12,460	56.4%	103.6%
Selling, general, and administrative expenses	6,357	30.4%	6,820	30.9%	107.3%
Operating profit	2,503	12.0%	2,820	12.8%	112.7%
Recurring profit	2,630	12.6%	3,000	13.6%	114.0%
Net income	1,998	9.6%	2,200	10.0%	110.1%
Earnings per share	¥146.67		¥161.45		

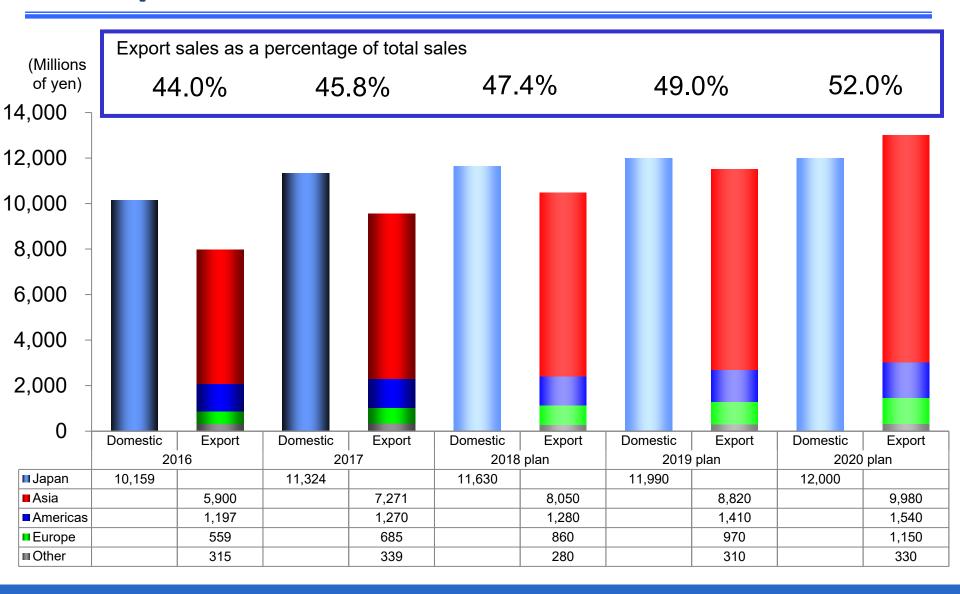
#### Mid-term Business Plan (2018 to 2020)



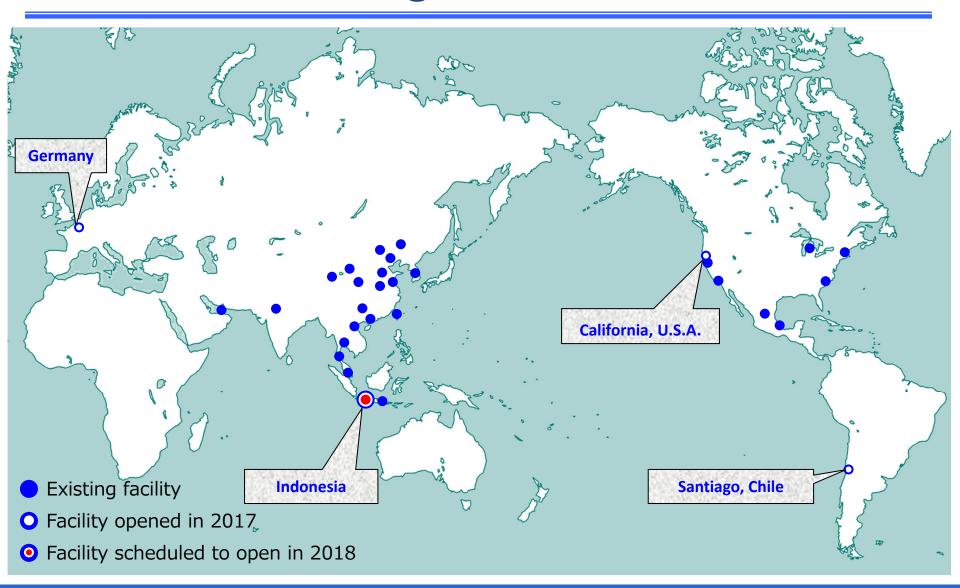
# Mid-term Sales Plan by Product Category (2018 to 2020)



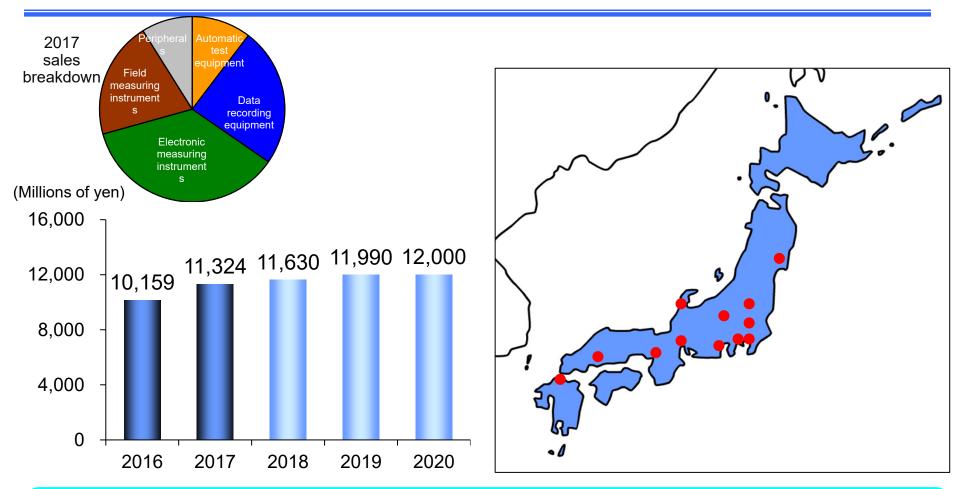
#### Export Mid-term Sales Plan (2018 to 2020)



#### **Pursuing Globalization**

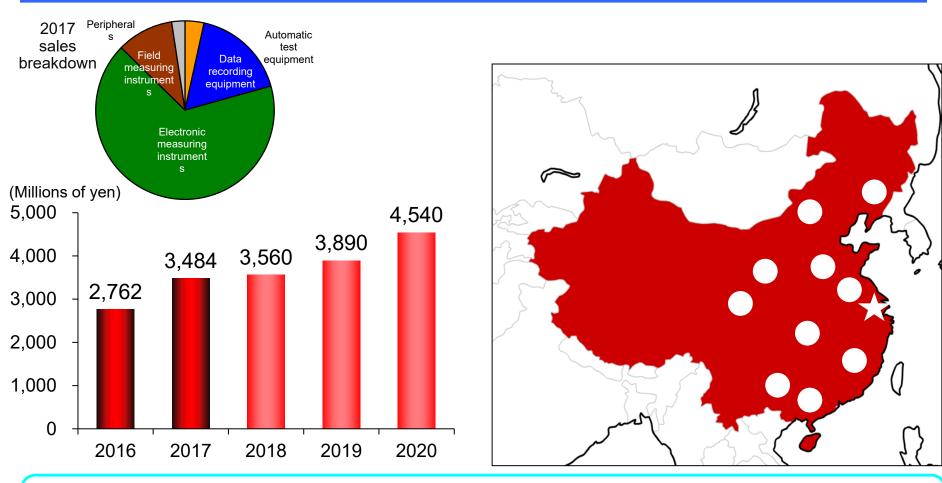


#### **Key Regional Markets: Japan**



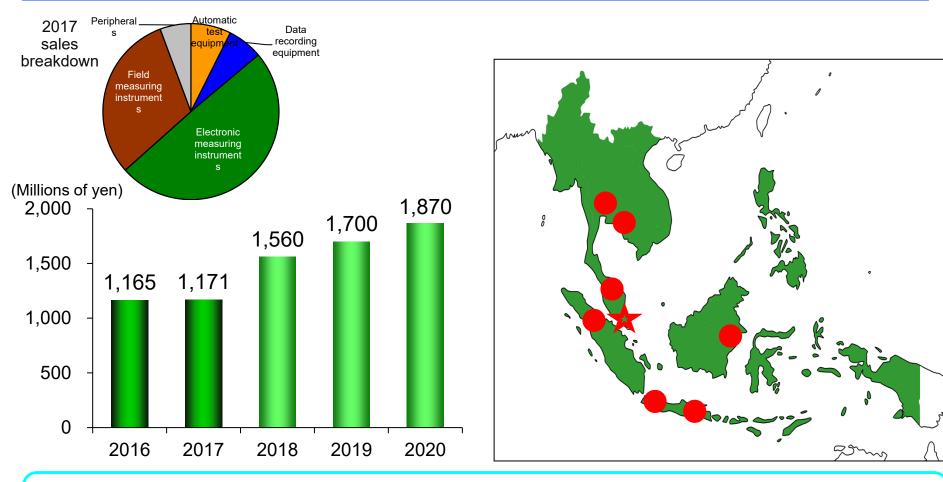
- We will reorganize our sales departments and introduce a new branch office system, transferring authority to bring it closer to manufacturing work and put in place structures to facilitate rapid decision-making.
- We will work to increase sales in priority growth markets such as automobiles, electronic components, and infrastructure.

#### **Key Regional Markets: China**



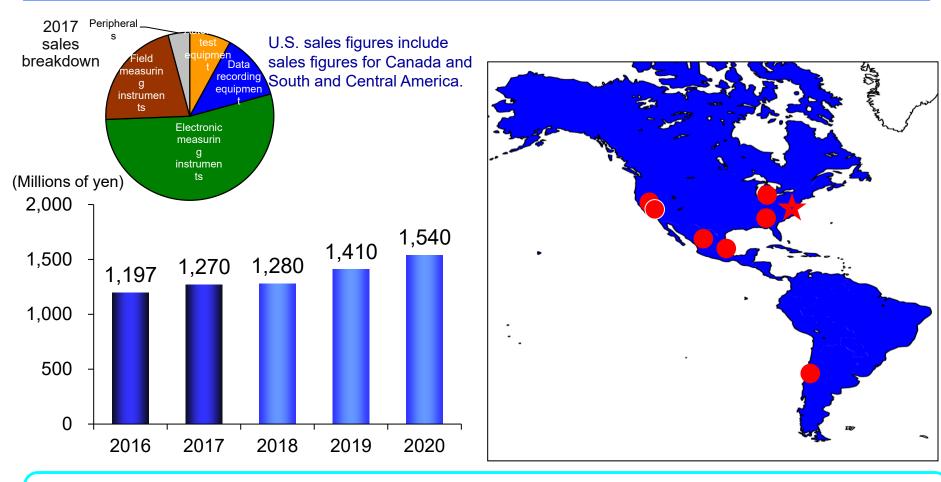
- We will formulate and work to implement a sales strategy that takes advantage of the Internet to spread awareness of the Hioki brand in the Chinese market.
- We will work to expand sales, particularly of electronic measuring instruments, in the EV, electronic component, and robotics markets, among other sectors.

#### **Key Regional Markets: Southeast Asia**



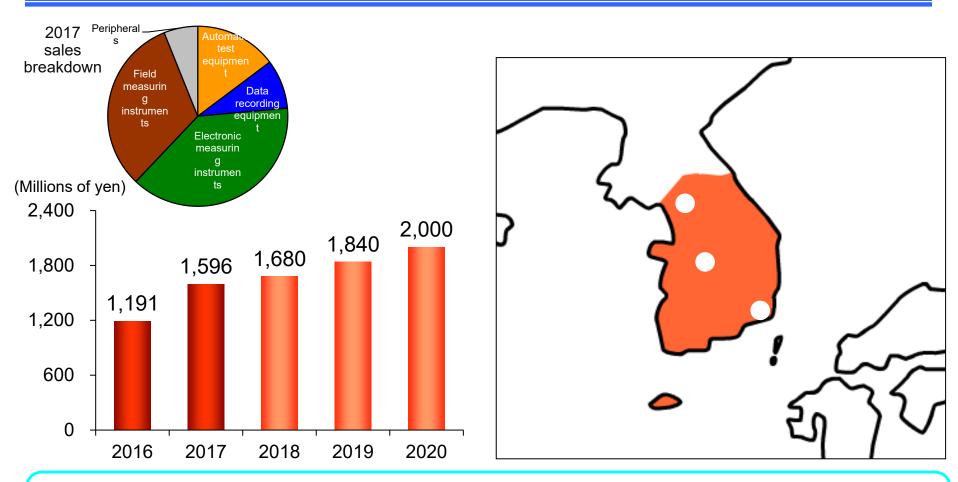
- We will continue to complete the process of converting our satellite office in Indonesia into a local corporation.
- We will add South Asia and Oceania to this regional category and work to increase sales in the infrastructure market and other sectors.

#### **Key Regional Markets: U.S.A.**



- We will open a branch office in California, and will work to increase sales with a focus on products used in the EV and battery industries.
- We will cultivate the Latin American market by assigning personnel to Chile (Santiago).

#### **Key Regional Markets: South Korea**



- We will strengthen efforts to increase sales to major local users of our products, and work to spread awareness of distributors and the Hioki brand in each product category.
- We will work to increase sales of electronic measuring instruments and data recording equipment for use in the automotive and power industries.

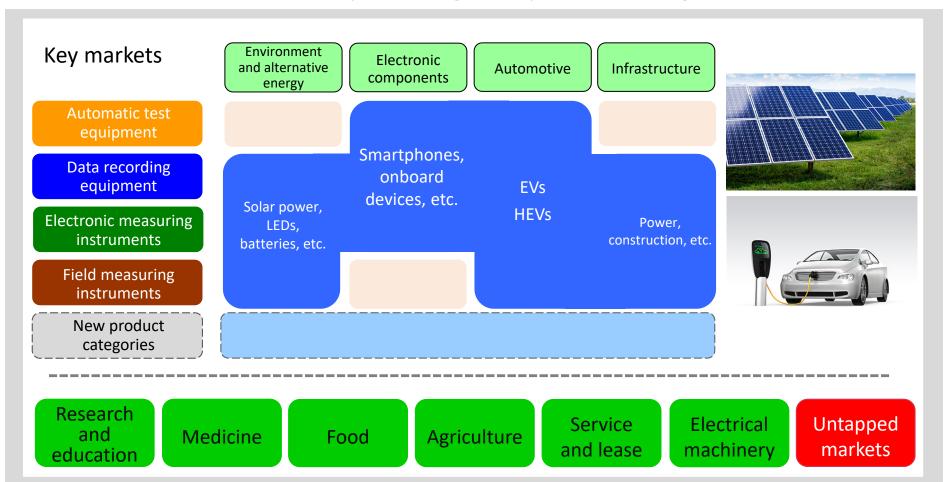
#### **Other Key Overseas Regions**

Europe ¥860 million	Last July, we established a sales subsidiary in Frankfurt, Germany, and we're working to cultivate key markets such as the automotive and aviation sectors.	
Taiwan ¥1,010 million	Orders of general-purpose measuring instruments are strong. Inquiries concerning automated testing equipment are rising.	
Middle East ¥260 million	We will work from the satellite office we opened in Dubai to promote products and strengthen sales support in Middle Eastern countries.	
India  Y240 million  The year before last, we established a subsidiary to offer before last, we will focus on build a subsidiary to offer before last, we will be subsidiary to offer before last, we will b		

Figures: From 2018 plan

#### **Hioki's Expanding Products and Markets**

We're working to grow and develop by expanding product launches in every market and by creating new product categories.



# Creating market value through the "value creation" approach



#### **Evolution of Technology**

Changes in the competitive landscape

- AI, IoT, M2M
   Progress in computerization
- Progress in computerization, for example of transport equipment
- Growth of the environmental and alternative energy fields

Hioki's response



- Measurement technologies that are an order of magnitude better
- Sensing technologies
- Digital/software technologies
- Reliability technologies

Hioki is tracking changes in the competitive landscape as it works to advance its measurement technologies.



#### Measurement Technologies Developed in Response to Technological Evolution

Hioki has introduced products for the RGB laser market, which is expected to grow at a rapid pace.



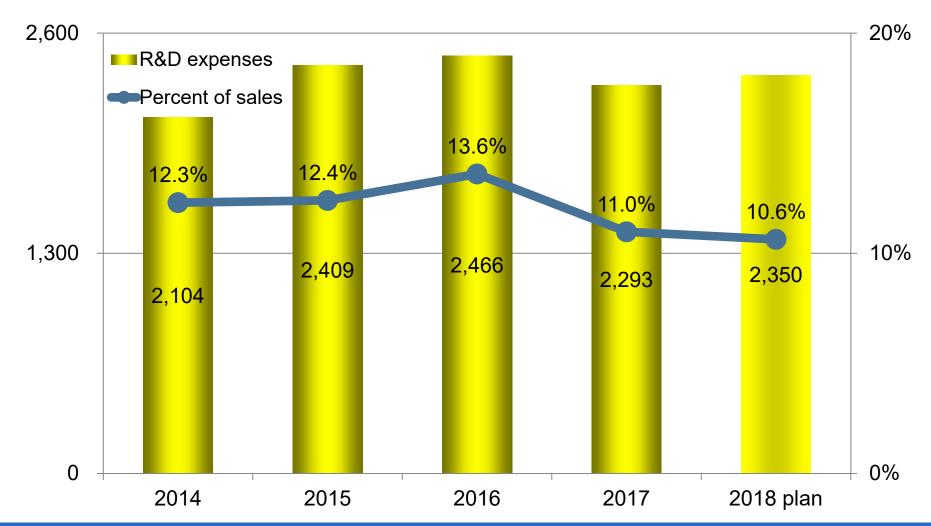




Hioki developed the Discrete Centroid Wavelength Method, a new measurement technology for adjusting the white balance of laser displays.

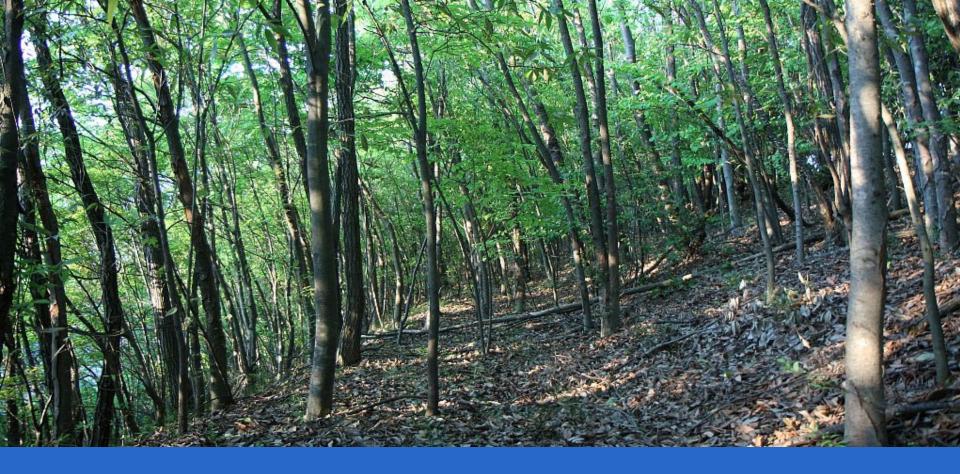
#### **Trend in R&D Expenses**

(Millions of yen)



#### **Management Policies**

- Providing high-quality products and service of the highest caliber
- Link our dividend to business performance based on the ideal of consistently returning ¥20 of profit to investors and with a view to achieving a dividend ratio of 40%
- Increasing the transparency and objectivity of management in accordance with our corporate governance code



### Reference Materials



#### **HIOKI's Corporate Vision**

Management Vision

High Value-added Company

Management Policies

One and Only Products and Services

**Eight Management Policies** 

The HIOKI Philosophy

#### **Respect for Humanity**

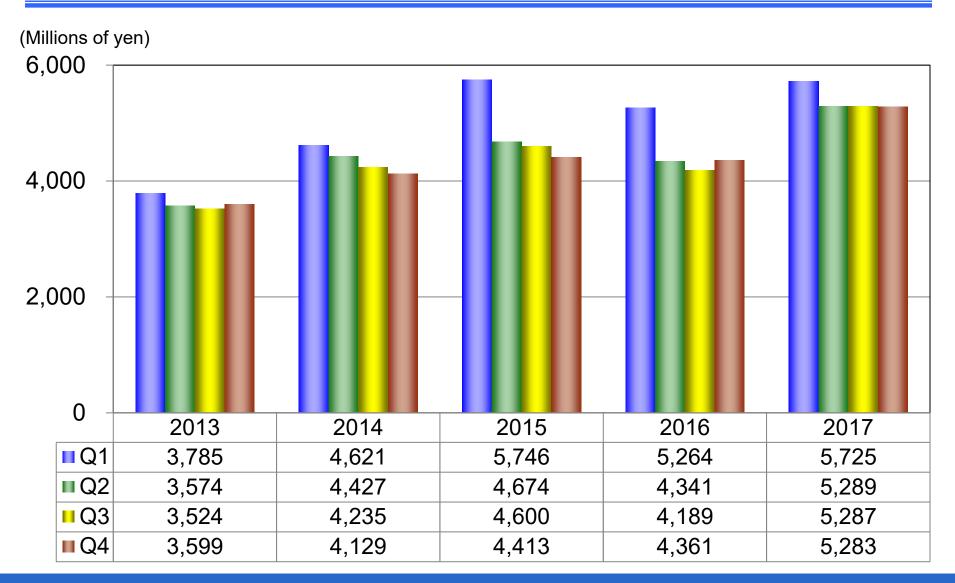
Developing potential and respecting individuality and aptitude

#### **Contribution to Society**

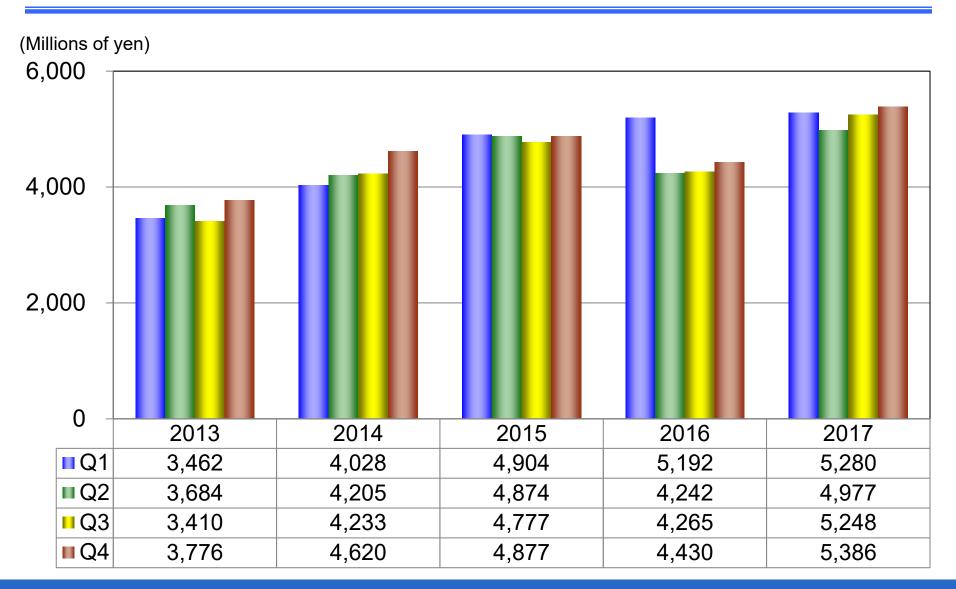
Practicing environmental management and fostering the development of the leaders of the future



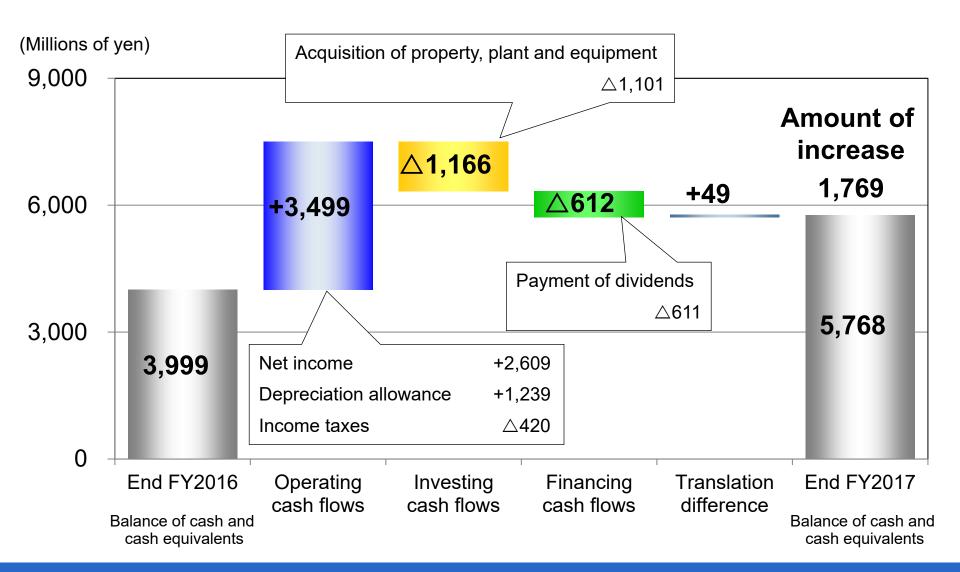
### **Quarterly Order Volume**



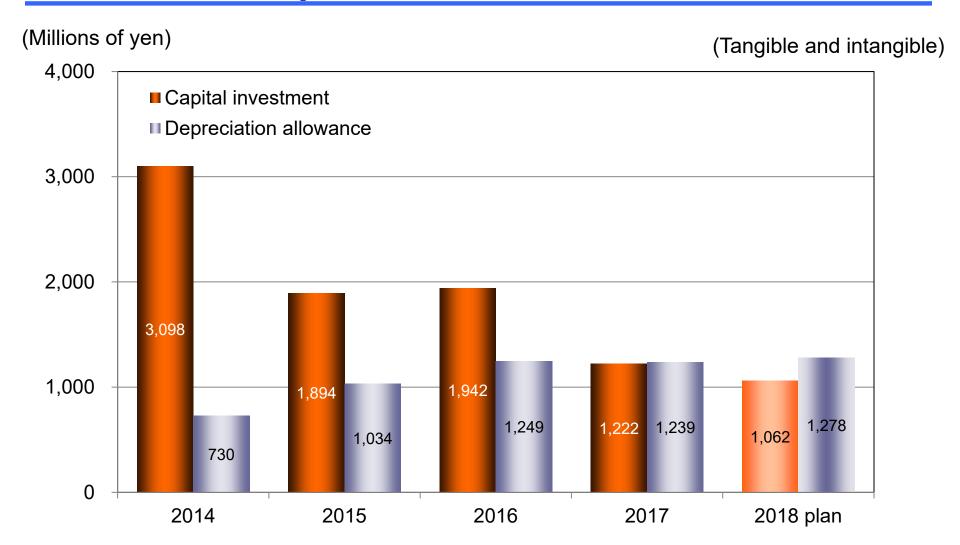
### **Quarterly Sales**



#### **Cash Flows**



# Capital Investment and Depreciation Allowance



Reference Materials

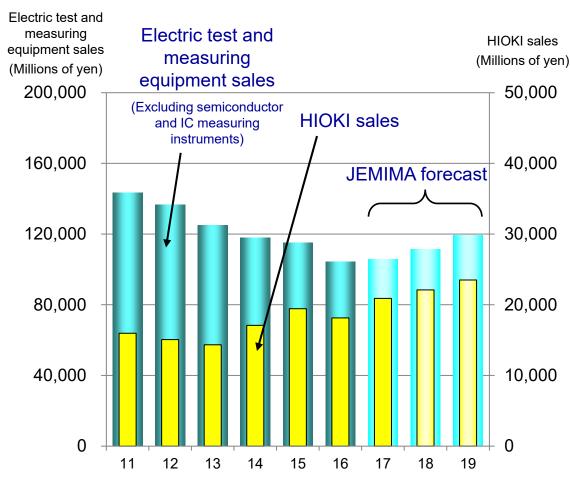
## **Business Environment in the Electrical Measuring Instruments Industry and Future Outlook**

\*Japan Electric Measuring Instruments Manufacturers' Association (JEMIMA) forecast

Electrical measuring instruments: Growth is expected to continue at an average annual rate of 6.3% from FY2017 to FY2021.

This growth reflects the start of next-generation 5G mobile communications service worldwide in 2020, development of wireless infrastructure for IoT use, and investment in data centers. Other factors include accelerating development of technologies for use in EVs and self-driving systems.

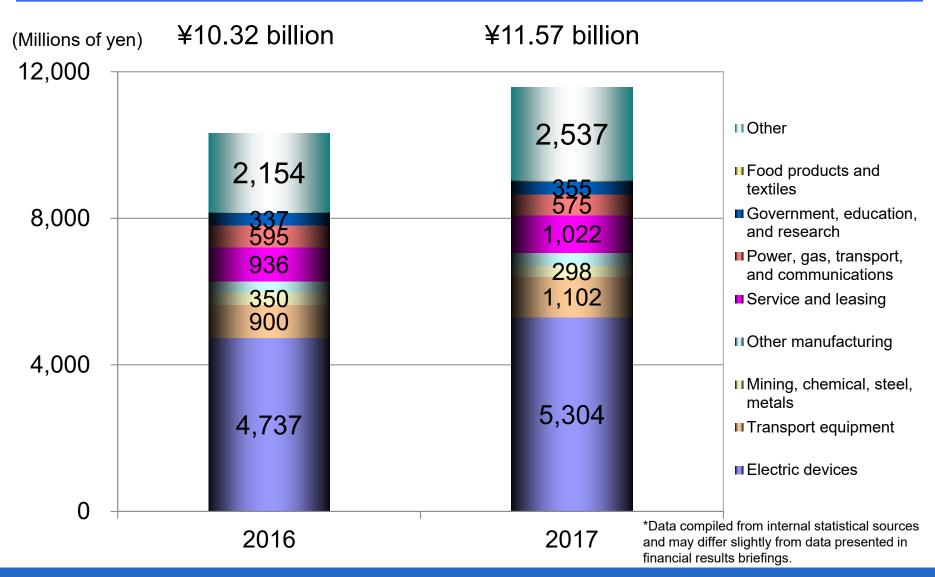
Based on statistical data from the Japan Electric Measuring Instruments Manufacturers' Association. Sales figures for 2017 and subsequent years reflect JEMIMA forecasts (as of December 2017).



- \* As defined by JEMIMA, electric test and measuring equipment accounts for about 30% of electricity meters. Under the JEMIMA classification scheme, HIOKI's products consist of general measuring instruments, obtained by excluding semiconductor and IC measuring instruments from the electric test and measuring equipment category.
- \* Based on statistical data from the Japan Electric Measuring Instruments Manufacturers' Association. Sales figures for 2017 and subsequent years reflect JEMIMA forecasts (as of December 2017).

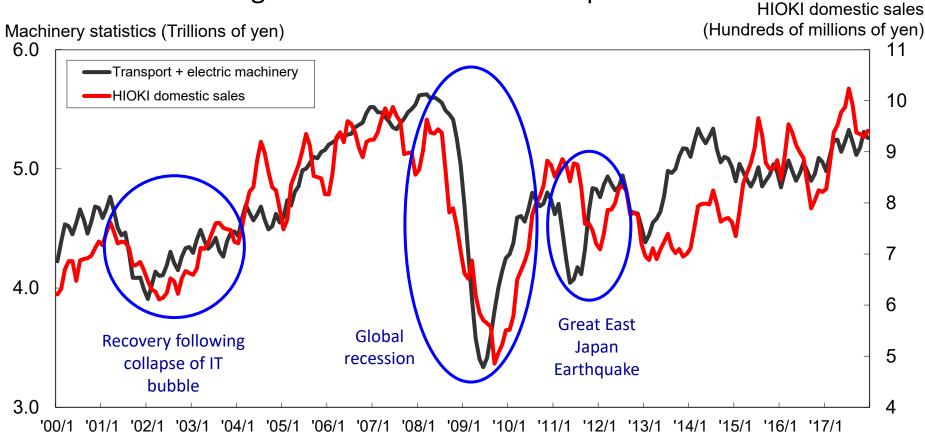


### Trend in Sales (Domestic) by Industry



# Trend in Machinery Statistics and HIOKI Performance

We consider machinery statistics (for transport machinery and electrical machinery) a leading indicator of our business performance.



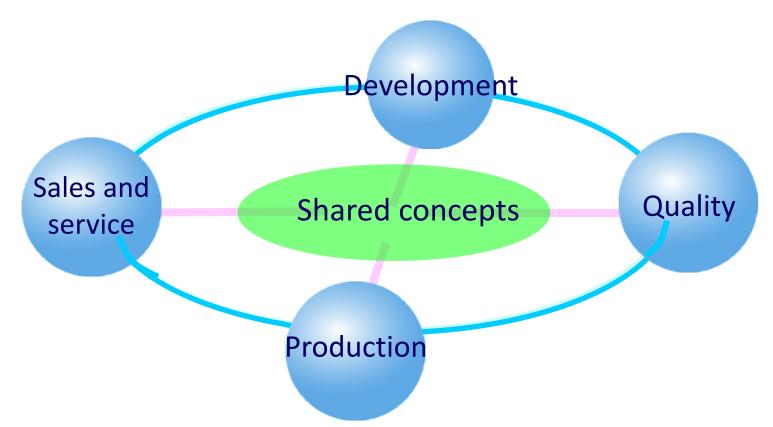
<sup>\*</sup> Machinery statistics and HIOKI domestic monthly sales calculated as six-month moving averages. Machinery statistics reflect estimated production value based on the mining and manufacturing index.





#### **Improving Value-added Productivity**

Concurrent engineering

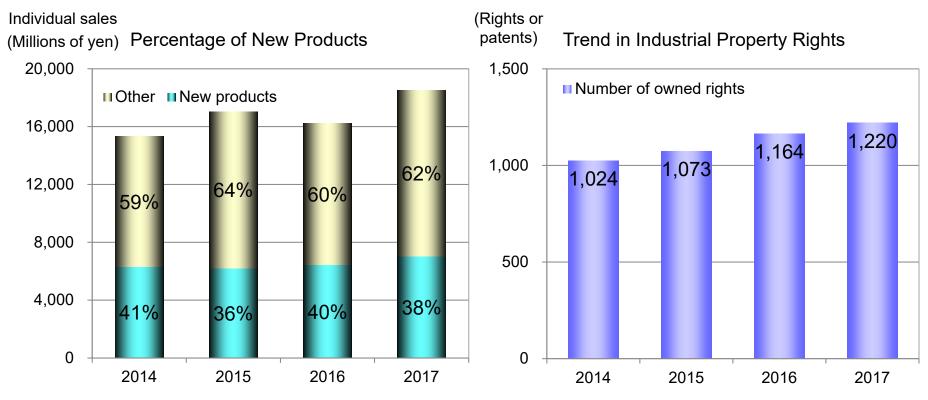


In HIOKI's approach to product development, departments come together organically with the goal of improving productivity.



# Development Capability: Unique Products Built around Core Technologies

- Patent program that motivates inventors
- R&D spending as percent of sales: Greater than 10%



<sup>\*</sup>Products are treated as new products for the first four years after their launch.

# Production Capability: Manufacturing Calibrated to Sales Velocity



 Aggressively practicing a "Quality First" approach from the standpoint of the Three Reality principle based on the 5S philosophy



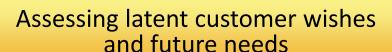
- Enhancing initiatives at the source of development
- Minimizing cost through leveled production



- Anticipating customer information and accommodating customer requests
- Shortening delivery times for after-sales service

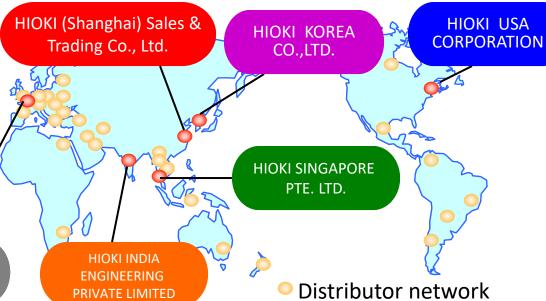
# Sales Capability: Solutions-oriented Sales with a Customer Focus

- Direct marketing targeting customers in Japan (about 55,000 companies)
  - About 70 salespeople at 11 facilities in Japan
  - About 34,000 sales visits per year





HIOKI EUROPE GmbH





#### **Automatic Test Equipment**

Pass/fail testing of electronic circuit boards

Principal products

Fields of use (applications)

Populated circuit board testing systems

Testing circuit boards on which electronic components have already been mounted

Bare board testing systems

Testing circuit boards with embedded active and passive devices or boards on which no components have been mounted

(Including IC packages and flexible boards used in devices such as mobile phones)



**FA1240 FLYING PROBE TESTER** 



FA1811 Flying Probe Tester



1220-50 IN CIRCUIT HITESTER

Support for higher-density patterns and multifunctional boards

#### **Data Recording Equipment**

 Recording and analyzing changes in electrical signals over time

**Principal products** 

Fields of use (applications)

Memory recorders

Observing and recording waveforms for high-speed phenomena in an extensive array of applications ranging from the electric field to the machinery field



MR6000 Memory HiCorder

Developed in 1983

Data loggers

Monitoring and recording long-term changes in temperature, voltage, and other characteristics across numerous channels

Capable of capturing large amounts of data over extended periods of time



LR8432 Heat Flow Logger

### **Electronic Measuring Instruments (1)**

Evaluating and testing electronic components and devices

Principal products

Fields of use (applications)

Circuit element measuring instruments

Testing on electronic component production lines Evaluating the performance of materials

Fast, high-stability measurement in a compact, lightweight package



IM7585 Impedance Analyzer

Safety testers

Performing insulation resistance measurement and withstand voltage testing of electrical equipment

Broad product line for an array of applications



ST5520 Insulation Tester

Optical measuring instruments

Testing components used in optical devices (LEDs, lasers)

Illuminance, luminance, and power measurement



RGB Laser Luminance Meter TM6103



### **Electronic Measuring Instruments (2)**

 Ensuring energy-saving performance and power supply quality in the environmental energy field

Principal products	Fields of use (applications)
	Evaluating and analyzing inverters and motors
Power meters	Reducing energy use by electrical equipment;

managing power

PW6001 Power Analyzer

HIOKI developed the first clamp-type meter in 1978.

## Power quality analyzers

Verifying the quality of dispersed power supplies such as alternative energy (solar and wind power, fuel cells, etc.) and cogeneration systems

Analytical devices capable of identifying the causes of power supply problems



PQ3100 Quality Analyzer

#### Current probes

Observing current waveforms

For use as oscilloscope sensors



#### **Field Measuring Instruments**

 Performing maintenance and inspections of electrical wiring work and equipment

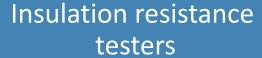
Principal products

Fields of use (applications)

Testers and clamp ammeters

Performing maintenance and inspections of electrical wiring work and equipment

A powerful brand with a long history



Performing maintenance and inspections of electrical work and equipment

A must-have instrument for electrical work

Digital multimeters

Measuring characteristics from voltage to current and resistance

Used in all applications



CM3286 AC Clamp Meter



IR4053 Insulation Tester for Photovoltaic Systems



DT4254 Digital Multimeter



#### Note on the Information in This Presentation

Plans, forecasts, strategies, and other information in this presentation relating to future business performance were compiled on the basis of currently available data and by their nature incorporate a certain degree of risk and uncertainty. Actual performance will be determined by a variety of important factors and may vary significantly.



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