

ULVAC

ULVAC
VALUE REPORT

2017

真

*Ultimate
in Vacuum*

空



Basic Corporate Philosophy

The ULVAC Group aims to contribute to the development of industries and science by comprehensively utilizing its vacuum and peripheral technologies through the mutual cooperation and collaboration of the Group companies.

Management Policies

Improvement of Customer Satisfaction

Innovative Production Technology

Innovative Product Development

A Free and Open Culture

Enhancement of Corporate Value

Corporate Profile of the ULVAC Group

Name: ULVAC, Inc.
Trademark: ULVAC
Head Office: 2500 Hagisono, Chigasaki,
Kanagawa Prefecture, Japan
Established: August 23, 1952
Capital: ¥20,873,042,500
Number of Employees: Non-consolidated 1,225
Consolidated 6,072 (As of June 30, 2017)
Business Areas: Development, manufacturing, sale and customer support for vacuum equipment, peripheral devices, vacuum components and materials for the display, solar cell, semiconductor, electronic, electric, metal, machinery, automobile, chemical, food product and medical product industries, as well as universities and research labs, and import and export of various equipment. Additionally, research guidance and technical advice for vacuum technologies in general.

ULVAC

Business Segments of the ULVAC Group

Vacuum Equipment Business

FPD and PV production equipment

- Liquid crystal display (LCD) production equipment
- OLED production equipment
- Roll coaters
- Solar cell production equipment

Semiconductor and electronic device production equipment

- Semiconductor production equipment
- LED production equipment
- Electronic device production equipment

Components

- Vacuum pumps
- Vacuum gauges
- Helium leak detectors
- Process gas monitors
- Thin-film measuring equipment
- EB, RF and DC power generators
- Vacuum valves
- Deposition controllers
- Vacuum transfer robots

Industrial equipment

- Vacuum heat treatment furnaces
- Vacuum melting furnaces
- Vacuum brazing furnaces
- Rare-earth magnet production equipment
- Vacuum freeze-drying equipment
- High-vacuum distillation equipment
- Automatic leak testers

Vacuum Application Business

Materials

- Sputtering target materials
- High-melting-point materials and production of components
- Nano-metal inks

Others

- Surface analyzers
- Controllers
- Mask blanks

Major Vacuum Equipment

Sputtering equipment, vacuum evaporation equipment, CVD equipment, etching equipment, ashing equipment, ion implantation equipment, annealing equipment, etc.

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Editorial Policy

We have integrated the previous Annual Report and the CSR Report into this ULVAC VALUE REPORT. We consider this report to be an important communication tool to promote the understanding of the ULVAC Group's operating results and CSR activities among our stakeholders.

■ **Published:**

November 2017 (Previous issue published in November 2016)

■ **Guidelines Referenced:**

ISO26000: 2010 (Guidance on social responsibility) First Edition
The International Integrated Reporting Framework, the International Integrated Reporting Council (IIRC)

Report's Scope and Period

Scope: ULVAC Group

While the report covers the ULVAC Group as a whole, any portions for which the scope differs are indicated.

Period: Year ended June 30, 2017

(July 1, 2016 to June 30, 2017, Fiscal 2016)

Some portions of the report include activities and initiatives from July 2017 onward.

<Disclaimer>

Figures shown in tables and graphs in this report may not add up to the indicated total because of rounding. Some figures have been revised from previous years' data because the scope of reporting was expanded or calculating methods have been changed.

Basis for Value Creation

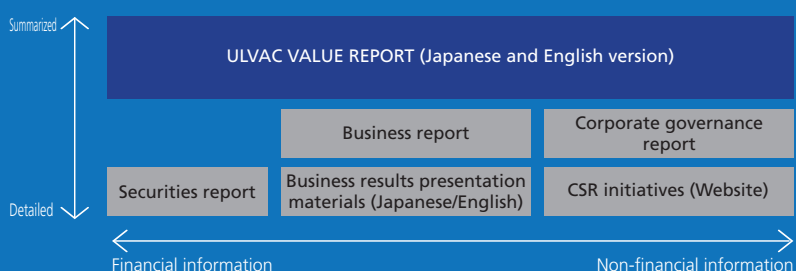
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ULVAC's Communication Tools



We endeavor to achieve the optimum information disclosure by making various communication tools available to meet your needs.

To help you deepen your understanding of the ULVAC Group, our communication tools range from statutory disclosure documentation centering on information on financial closing to this report that offers non-financial information, such as social and environmental initiatives indispensable for creating value, in addition to information on business activities, management strategies, and financial information. Please also refer to our website for the latest information.

ULVAC's History

ULVAC was founded at a time when vacuum technology had not yet entered widespread use in Japan. As a trailblazer, we championed vacuum technology by introducing new technologies to the market and addressing the needs of customers in diverse industries. ULVAC will continue tackling technological innovation to speed progress toward the "smart society" to which we aspire.

Challenging new industrial sectors

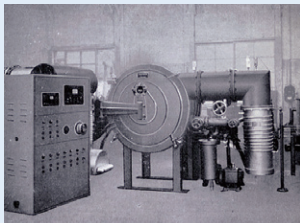
Ever since its foundation, ULVAC has been refining its capability to flexibly manipulate vacuum technology. In step with the changing industrial structure of the era, we have always boldly sought to develop new technologies while expanding application fields to include the production of automobiles, chemicals, pharmaceuticals, and food, metallurgy, as well as mass production of semiconductors and electronic devices, flat-panel displays, and organic light-emitting diode displays. Inspired by the promise of the emerging "smart society" where electronics supports every industry and lifestyle, we are confident that our vacuum technology will be a key to the advance of the cluster of transformative technologies, including IoT, big data, artificial intelligence, and self-driving vehicles, that will underpin next-generation lifestyles.

1952~

Automotive



Reflectors for automobiles



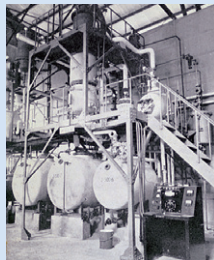
Vacuum evaporation equipment

1960~

Chemical/ pharmaceutical/food



Pharmaceuticals



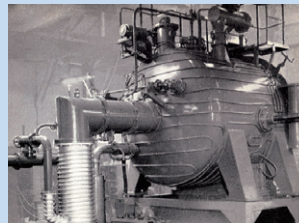
High-vacuum distillation equipment for plasticizers

1962~

Metal/steel



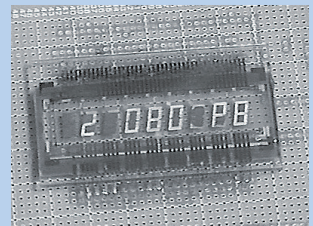
Special steel



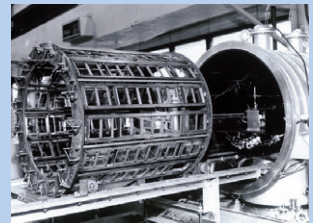
100 kg-class vacuum induction melting furnace

1973~

Liquid crystal display



LCD calculator display



Transparent conductive film deposition equipment

History

1952

- Japan Vacuum Engineering Co., Ltd. was founded.

1955

- Opened the Omori Plant in Tokyo to start manufacturing equipment in Japan.

1959

- Opened the Yokohama Plant in Kanagawa Prefecture.

1964

- Established the first overseas subsidiary in Hong Kong.

1968

- Chigasaki Head Office and Plant in Kanagawa Prefecture completed.

1969

- Changed the company name in English to ULVAC CORPORATION to promote exports.

1971

- Established a subsidiary in Hamburg, then West Germany, as a base for cultivating the western European market.

1972

- Opened the Institute for Super Materials as ULVAC's first research facility.

1975

- Opened the North American Office. Established a subsidiary in North America as a base for exports to the U.S.

1977

- Established KYUSYU ULVAC CORPORATION (present-day ULVAC KYUSHU CORPORATION) in Kagoshima Prefecture to expand sales activities in the Kyushu area.

1982

- Established a subsidiary in Taiwan.

1982

- Established the Tsukuba Institute for Super Materials in Tsukuba Science City (present-day Tsukuba City), Ibaraki Prefecture.

1983

- Opened the Beijing Office in China.

1987

- Established ULVAC TOHOKU, Inc. in Aomori Prefecture to strengthen production of large-scale equipment.

1952

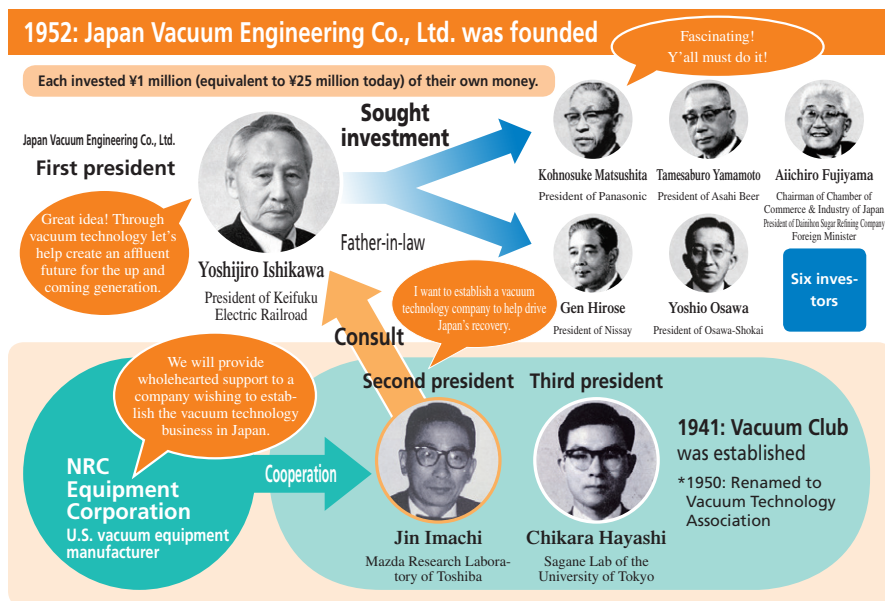
1960

1970

1980

The story of ULVAC's foundation

At the time when Japan was engaged in post-war recovery, a group of talented young researchers and engineers gathered with the aim of "contributing to the revival of Japanese industry through vacuum technology." In 1952 six angel investors, impressed by the passion of these visionary young people, invested in the establishment of Japan Vacuum Engineering Co., Ltd., the forerunner of present-day ULVAC.



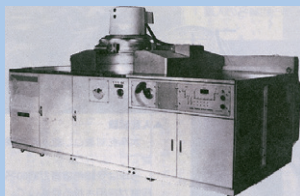
1975~

Semiconductor



Computer

(Photo: Courtesy of IBM Archives)



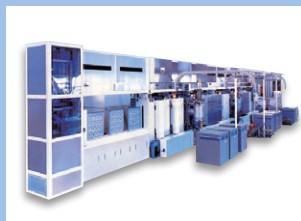
System 731

1983~

Electronic storage media



Compact discs



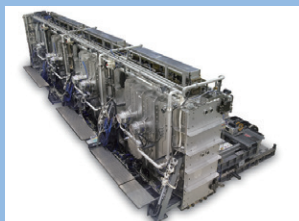
In-line sputtering equipment for magnetic disks

1992~

FPD



Flat panel display



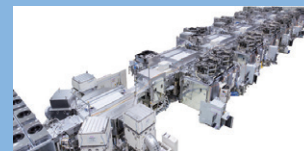
LCD production equipment

2016~

OLED



OLED



OLED production equipment

1990

- Opened the Fuji Susono Plant in Shizuoka Prefecture, as a plant dedicated to semiconductor production equipment.

1995

- Established a vacuum pump production base in China.
- Established a subsidiary in South Korea.

1990

2001

- Changed the company name to ULVAC, Inc.

2002

- Established a subsidiary in Singapore.

2003

- Established a base for full-scale production and field support in China.

2004

- Listed on the First Section of the Tokyo Stock Exchange.
- New buildings of Chigasaki Head Office and Plant completed.

2000

2005

- Established a large-scale production base for large LCD production equipment in South Korea.
- Established a subsidiary in Thailand.
- Established R&D bases in South Korea and Taiwan.
- Established a subsidiary in Malaysia.

2006

- Established a production subsidiary for large LCD production equipment in Taiwan.

2007

- Established a base in India.

2005

2010

- Relocated the Chiba Institute for Super Materials to the Tomisato Industrial Park in Chiba Prefecture to enhance R&D.

2011

- Established the South Korea Institute for Super Materials to enhance R&D in South Korea.

2015

- Established the Future Technology Research Laboratory in Tsukuba, Ibaraki Prefecture.

2016

- Began manufacturing production equipment for large displays in China.

2010

ULVAC's Businesses

Across a wide range of industries, ULVAC is a source of numerous products and technologies that meet the needs of our customers and the market.

At present, ULVAC operates in six business areas.

Net sales by business segment (amount and %)

Vacuum Application Business

¥31.2 billion

13%

Vacuum Equipment Business

¥200.6 billion

87%

Others

¥16.7 billion



X-ray photoelectron spectroscopy equipment

ULVAC is a source of technology derived from vacuum-based production equipment for diverse industries.

Materials

¥14.6 billion



Sputtering target materials for FPD production equipment

ULVAC is a source of electronic materials, such as sputtering targets, for diverse industries. In addition, in the high-performance materials sector, ULVAC is a source of integrated manufacturing and precision processing technologies for titanium, tantalum, zirconium, niobium, etc.

Industrial equipment

¥21.5 billion

With a long history of producing vacuum equipment for industrial use, ULVAC has been involved in this business sector since the emergence of vacuum technology in the 1950s.



Vacuum melting furnace

Currently, leveraging the fundamental technology it has developed so far, ULVAC provides various solutions across wide-ranging industries, including the automotive, pharmaceutical, and food industries.



Cryopump



Leak detector



Dry vacuum pump

Components

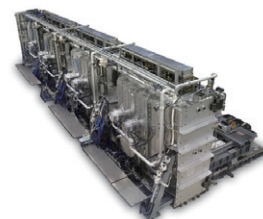
¥31.8 billion

As a comprehensive vacuum product manufacturer, ULVAC is also dedicated to the development of components. ULVAC pursues cutting-edge vacuum technology while providing a wide range of product lines, extending from vacuum pumps and measurement and analysis equipment, to components, such as power generators for various types of deposition equipment and vacuum valves.

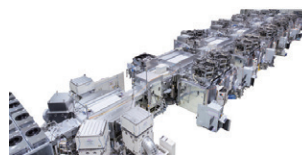
FPD and PV production equipment

¥110.9 billion

As befits a company involved in a range of FPD*1 and PV*2 manufacturing technologies, ULVAC not only develops production equipment but also offers solutions worldwide that leverage its development of advanced materials.



LCD production equipment



OLED production equipment

Semiconductor and electronic device production equipment

¥36.4 billion

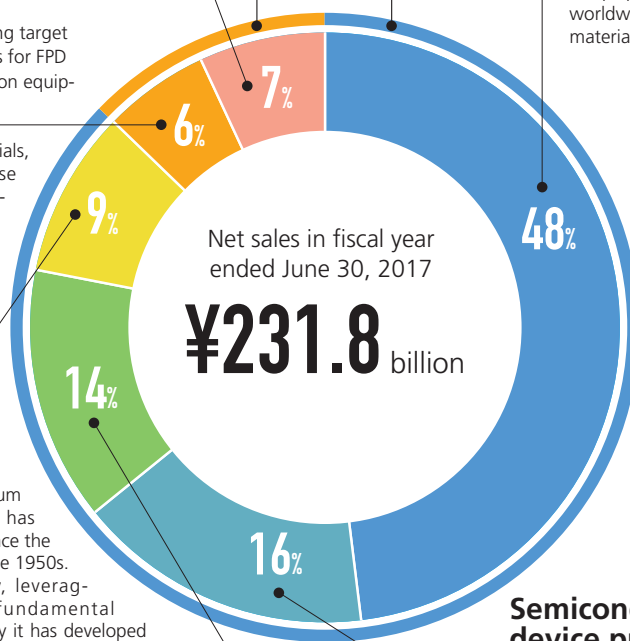
Higher integration and higher performance at lower cost are demanded for next-generation semiconductors and other high-performance devices. Based on its development of super-miniaturization technologies for such semiconductors and other electronic devices, ULVAC delivers a stream of new technologies and products to the world that underpin the progress of society.



Sputtering equipment for electronic devices

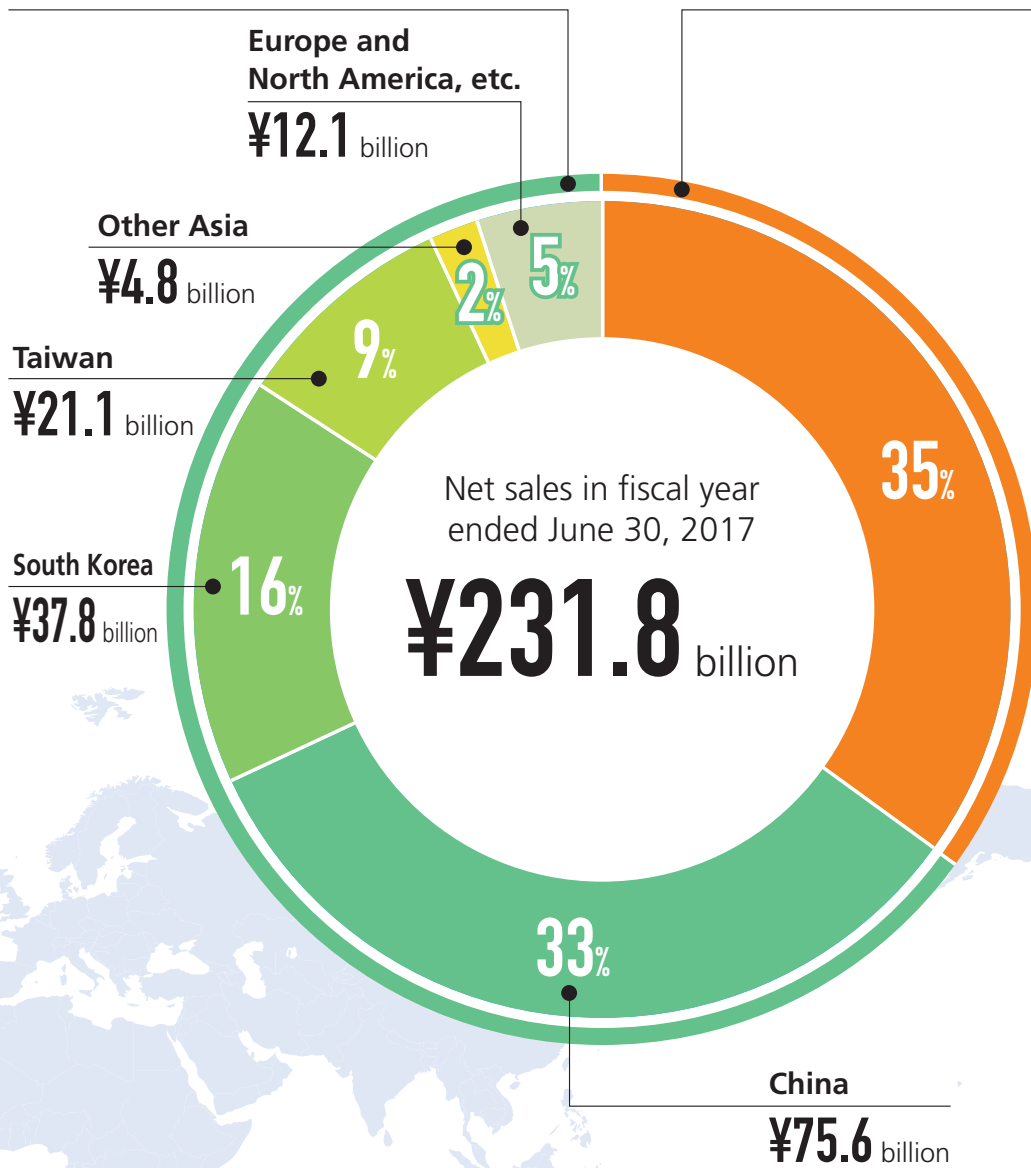


Sputtering equipment for semiconductors



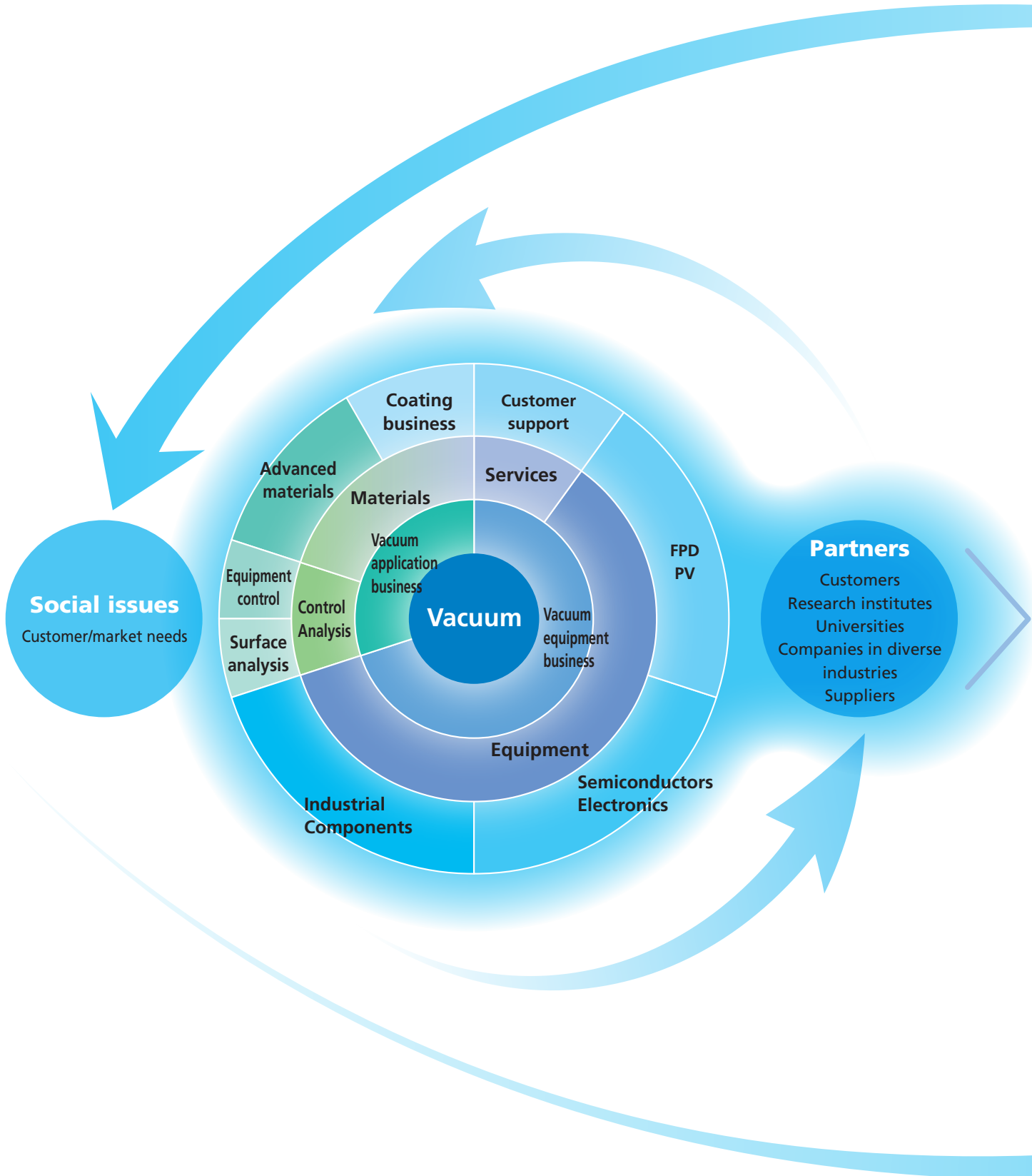
Net sales by region (amount and %)

Overseas **¥151.4** billion **65%** Japan **¥80.4** billion **35%**



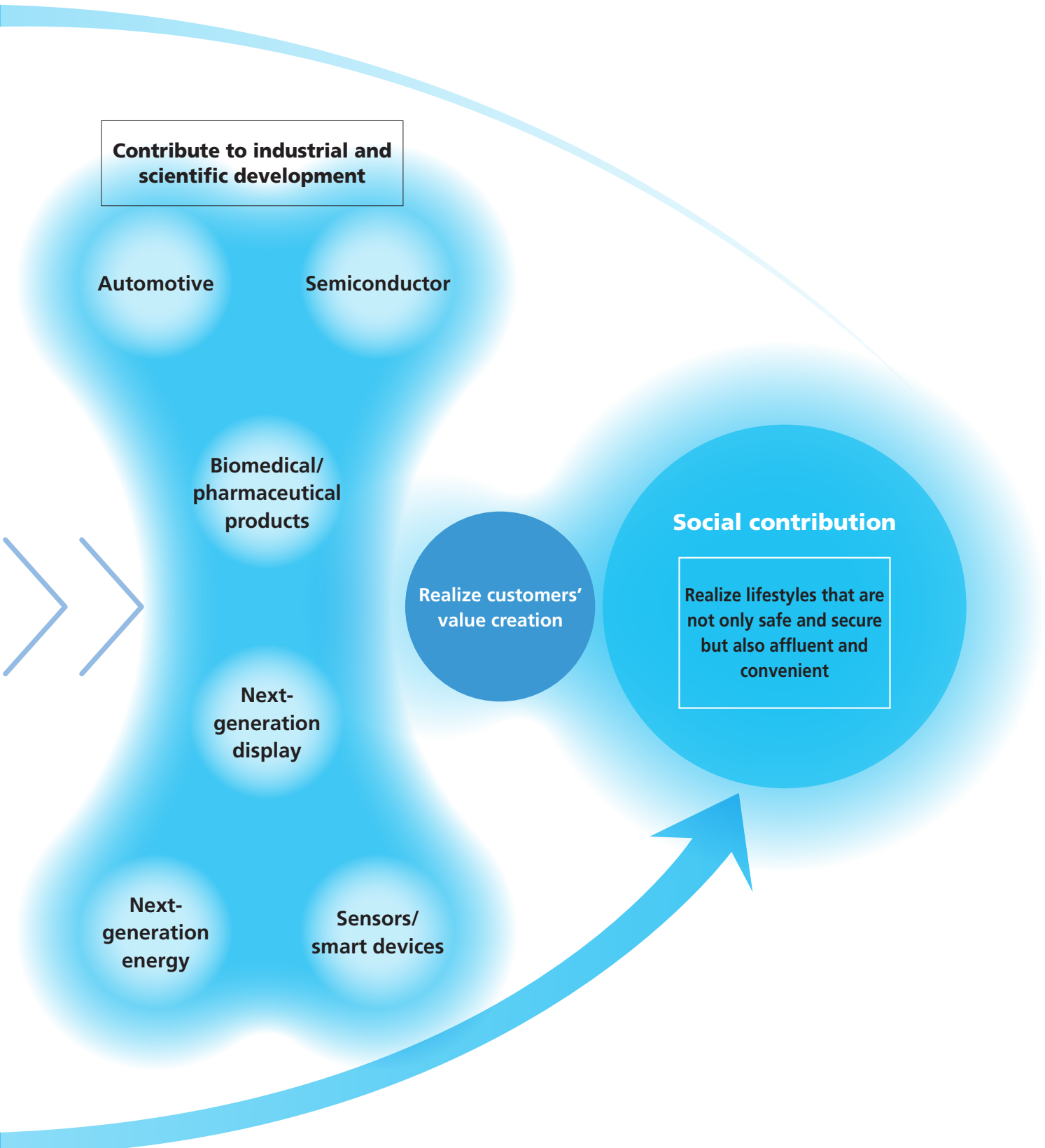
ULVAC's Value Creation <Process>

As a comprehensive vacuum products manufacturer, ULVAC offers solutions that contribute to the resolution of issues confronting society and thus to the overall progress of society.



Vacuum technology is at the heart of industrial and scientific development.

As a comprehensive manufacturer of products utilizing vacuum technology, ULVAC seeks to maximize synergy throughout the Group, encompassing diverse business fields and formats, while strengthening collaboration with partners to offer high-value-added solutions that contribute to the resolution of issues confronting society and moreover facilitate the realization of lifestyles that are not only safe and secure but also affluent and convenient.



ULVAC's Value Creation <Source of Value>

Research & Development

Ongoing value creation from a medium- to long-term perspective

The ULVAC Group has long been a source of vacuum-technology-based products and materials indispensable for wide-ranging industries. With vacuum technology at the heart of everything we do, we will continue to pursue innovative, pioneering R&D capable of addressing actual and potential needs and create high-added-value products and technologies, thus contributing to the progress of society.

Priority market needs and creation of profitable products

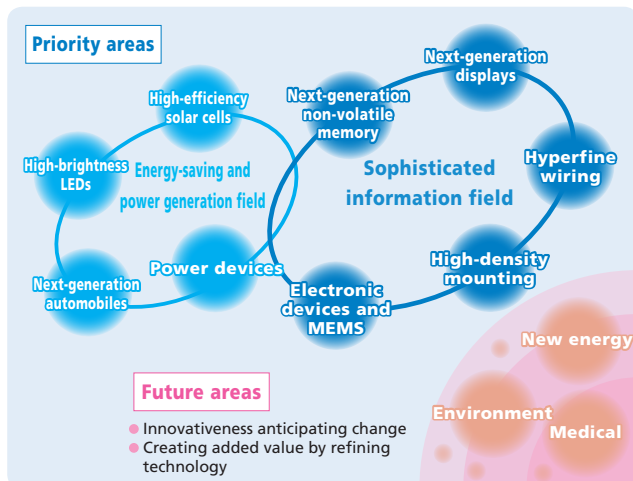
By unlocking the tremendous potential of vacuum technology, ULVAC creates new value for the future while contributing to the progress of a safe and affluent society.

Priority areas	<ul style="list-style-type: none"> • Key technologies for growing and developing fields • Technological solutions to deepening social issues
Sophisticated information field	Next-generation displays (High-definition displays and flexible displays)
	Next-generation non-volatile memory (large-capacity and low-power-consumption memory) and hyperfine wiring
	Electronic components, MEMS (devices and sensors to support IoT), and high-density mounting
Energy-saving and power generation field	High-efficiency solar cells, high-brightness LEDs, power devices, and next-generation automobiles

Nine priority areas

—Toward affluent and safe lifestyles

In order to leverage ULVAC's strengths, we have designated nine priority areas for development. Furthermore, we are pursuing development and enhancement in each area through the cooperation of the marketing manager (CPM), design and cost reduction manager (CDM) and the technology manager (CTM).



R&D Organizations

Under the Supervisor of Development, a global R&D structure is in place covering not only the domestic arm but also overseas arms of the Group.

We are accelerating development through unification while endeavoring to create differentiated technologies by capitalizing on Group companies' technological innovation and fusion of their technologies.

Furthermore, while conducting product development to ensure short- to medium-term profits through development and business operations in our designated priority areas, the Future Technology Research Laboratory is sowing the seeds for the long-term future, with a time horizon of 10 to 20 years.

ULVAC's R&D Structure (as of July 2017)



Source of ULVAC's Value Creation

ULVAC's R&D → P29

ULVAC's Future Envisaged by Senior Fellows → P31, 32

These sections offer a closer look at ULVAC's R&D.

Global Network

Sales & service networks offering solutions to support industrial development worldwide

Deploying the capabilities of the Group's 49 companies, we have established sales & service networks optimized for each region, such as Japan, the United States, Europe and Asia. Vacuum technology is one of the keys for many other cutting-edge technologies, and will be increasingly required for a wide range of industries and growth fields in the future.

Number of employees

6,072

(Consolidated basis)

Japan:	3,066
China:	1,588
South Korea:	584
Taiwan:	530
Southeast Asia:	155
North America:	149



(As of June 30, 2017)

ULVAC Group

ULVAC, Inc.

ULVAC Group Companies in Japan

ULVAC TECHNO, Ltd.
 ULVAC KYUSHU CORPORATION
 ULVAC TOHOKU, Inc.
 ULVAC KIKO, Inc.
 ULVAC EQUIPMENT SALES, Inc.
 ULVAC CRYOGENICS INCORPORATED
 ULVAC-PHI, Inc.
 TIGOLD CORPORATION
 ULVAC COATING CORPORATION
 NISSIN SEIGYO Co., LTD.
 ULVAC Human Relations, Ltd.
 SHINKU CERAMICS Co., LTD.
 FINE SURFACE TECHNOLOGY Co., LTD.
 Reliance Electric Limited
 SHOWA SHINKU Co., LTD.

Overseas ULVAC Group Companies

● North America

ULVAC Technologies, Inc.
 Physical Electronics USA, Inc.

● Europe

ULVAC GmbH

● China

ULVAC (CHINA) HOLDING Co., LTD.
 ULVAC (NINGBO) Co., LTD.
 ULVAC (SUZHOU) Co., LTD.
 ULVAC Orient (Chengdu) Co., Ltd.
 ULVAC Automation Technology (Shanghai) Corporation
 ULVAC Tianma Electric (Jingjiang) Co., Ltd.
 ULVAC (Shenyang) Co., Ltd.
 ULVAC (Shanghai) Trading Co., Ltd.
 ULVAC Materials (Suzhou) Co., Ltd.
 ULVAC Opto-electronics Thin Film Technology (Shenzhen) Co., Ltd.
 ULVAC CRYOGENICS (NINGBO) INCORPORATED
 ULVAC NONFERROUS METALS (NINGBO) Co., LTD.
 ULVAC Research Center SUZHOU Co., Ltd.
 Hong Kong ULVAC Co., Ltd.
 ULVAC VACUUM EQUIPMENT (SHANGHAI) Co., LTD.

● Taiwan

ULVAC TAIWAN INC.
 ULTRA CLEAN PRECISION TECHNOLOGIES CORP.
 ULCOAT TAIWAN, Inc.
 ULVAC AUTOMATION TAIWAN Inc.
 ULVAC SOFTWARE CREATIVE TECHNOLOGY, Co., LTD.
 ULVAC Materials Taiwan, Inc.

● South Korea

ULVAC KOREA, Ltd.
 Ulvac Korea Precision, Ltd.
 Pure Surface Technology, Ltd.
 ULVAC CRYOGENICS KOREA INCORPORATED
 ULVAC Materials Korea, Ltd.
 UF TECH, Ltd.

● Southeast Asia

ULVAC SINGAPORE PTE LTD
 ULVAC MALAYSIA SDN. BHD.
 ULVAC (THAILAND) LTD.

Customer Support

ULVAC CS Solutions pool the Group's knowledge

We are pursuing outstanding service by pooling the Group's knowledge, including the original technologies and service knowhow cultivated by the Group companies, in order to support our customers' production operations in a manner that meets their needs. Furthermore, by using information on customer needs as feedback for the development of new equipment, we aim to offer even more sophisticated vacuum technologies and service.

Equipment maintenance service

Emphasizing close communication with our customers, we offer service swiftly.

● Global CIP (continuous improvement program)

This service provides our overseas customers, in addition to our domestic customers, with effective usage techniques, and improvements in yield rate and productivity over many generations for the equipment they are already using.

● Factory outsourcing (FOS)

We provide support for the operation and maintenance of equipment and facilities, as well as the ordering of components, selection of equipment, and process development, by contract, dispatch or personnel transfer.

● Rejuvenation, precision cleaning, and resource recovery

We aim for overall cost reductions through extension of component life and the cleaning cycle, and recovery of valuable materials, etc. Based on our extensive knowledge of vacuum equipment as a whole, we propose the optimal surface treatment and cleaning for your needs.

Component maintenance

● Pump maintenance

We provide maintenance of components such as vacuum pumps.

● JCSS vacuum gauge calibration service

ULVAC is an MRA/JCSS* accredited calibration laboratory in the pressure (vacuum gauges) category.

*JCSS (Japan Calibration Service System): Calibration laboratory accreditation system under the Measurement Act
 *International MRA (mutual recognition agreement)

Components and consumables

We achieve high-quality, swift, and reliable delivery through in-house manufacturing of components.

Analysis service

We provide analysis services using the ULVAC Group's analysis and evaluation equipment.

Sale and purchase of pre-owned equipment

We sell, purchase, refurbish, relocate, import and export pre-owned products, ranging from components to production equipment.

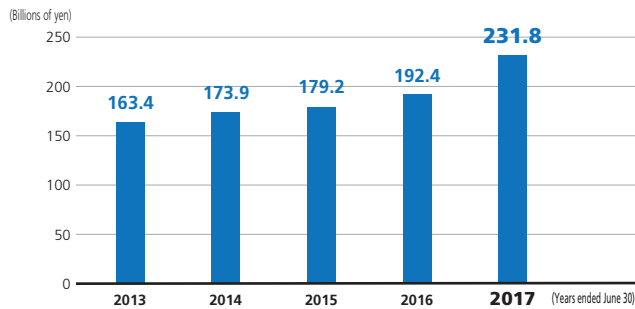
Training service

We provide training services for ULVAC products (equipment, vacuum pumps and components).

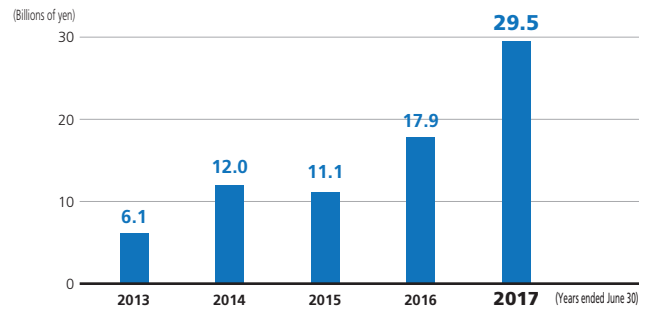
Consolidated Financial and Non-financial Highlights

Consolidated Financial Highlights

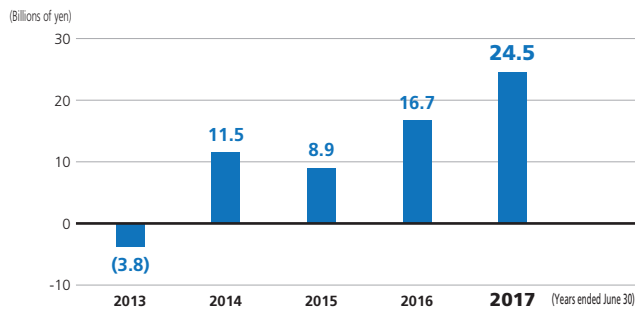
Net sales



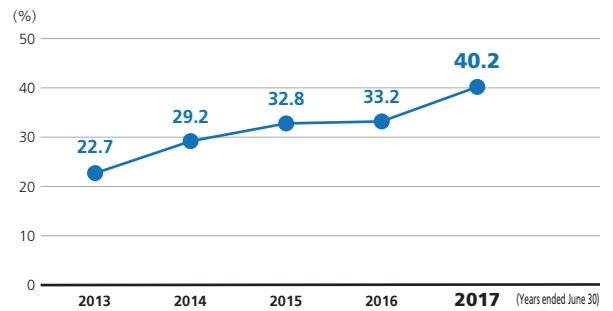
Operating income



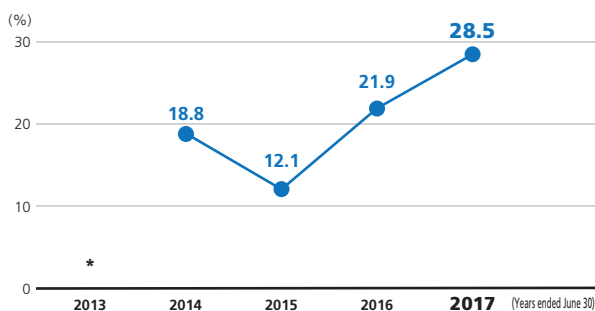
Net income



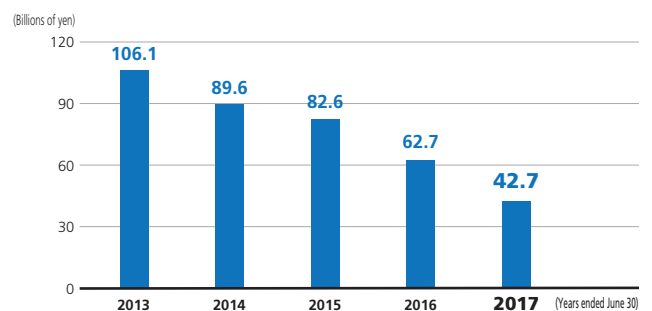
Equity ratio



ROE (Return on equity)



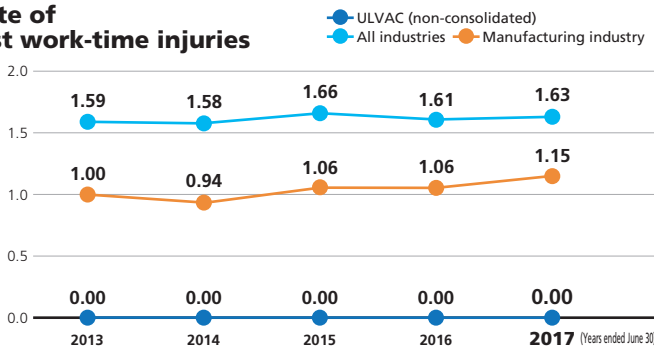
Interest-bearing debt



*ROE for the fiscal year ended June 30, 2013 is not presented because the Company recorded a net loss for that fiscal year.

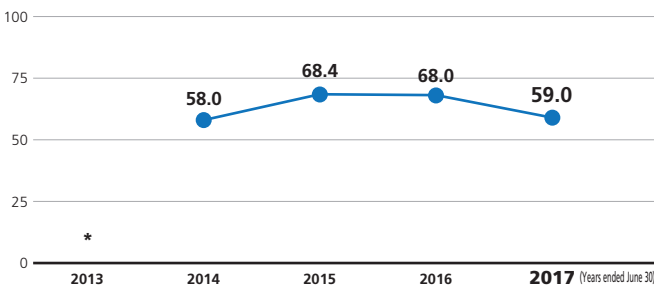
Non-financial Highlights

Rate of lost work-time injuries



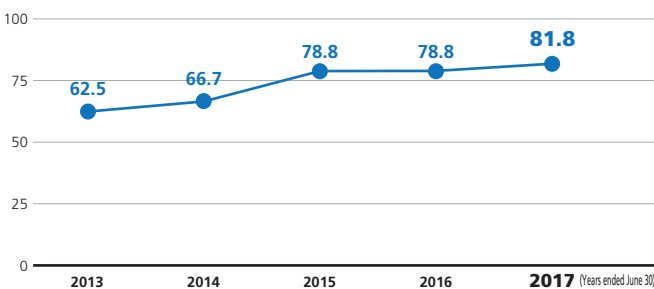
*Source for average data for all industries and the manufacturing industry: "Survey on Industrial Accidents 2016" by the Ministry of Health, Labour and Welfare of Japan.

Annual paid leave utilization rate (%)

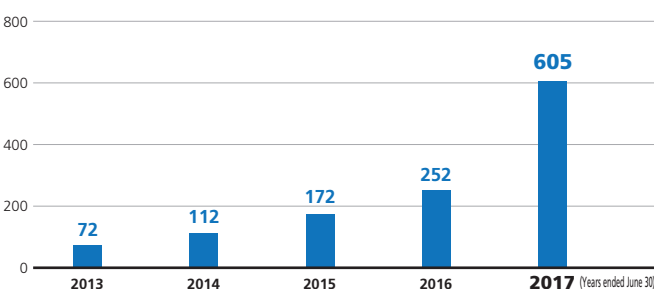


*The figure for the year ended June 30, 2013 is not indicated because control by the new system started in the year ended June 30, 2014.

Localization ratio of presidents of overseas subsidiaries (%)



Number of people participating in vacuum demonstration classes



Commitment to safety

According to a report by the Ministry of Health, Labour and Welfare, the number of workers who suffered fatal or occupational accidents causing four days or more lost work-days has stopped decreasing in recent years and is flatlining at around 110,000. Although the proportion accounted for by the manufacturing industry has been gradually decreasing, it still accounts for about a quarter, indicating the difficulty faced by the industry in its efforts to eliminate occupational accidents. It is in this context that ULVAC has been promoting various safety initiatives, including risk assessment, through the operation of the Occupational Safety and Health Management System (OSHMS), which lead to five consecutive years of zero frequency rate of occupational accidents. With "safety first" as the Group's principle, we will redouble our efforts to eliminate occupational accidents.

Work-life balance

Measures are in place to encourage employees to take annual paid leave so they can deliver results with vigor and productivity.

The entitlement of ULVAC employees to annual paid leave begins on the day they join the company. The "spot-leave campaign" has proved effective in encouraging employees to take annual paid leave. The paid leave accumulation system enables employees to use unused, expired annual paid leave for the purpose of long-term hospitalization, nursing care, or childcare. Coordination during busy periods is an ongoing issue and we will consider measures in view of the diversity of workstyles and employee preferences.

Training of next-generation executives as well as recruitment and promotion of global human resources

The ULVAC Group operates globally and comprises 118 bases. Based on the conviction that it is preferable to appoint people of the respective countries and regions to be in charge of management of overseas bases, we have been fostering and promoting local managers and have assigned local employees to important positions overseas. With a view to accelerating business promotion and in preparation for the next leap forward, our new mid-term management plan positions human resources development as a key element in strengthening the management base. We will continue training next-generation executives as well as cultivation and promotion of global human resources.

Supporting education of the next generation and contributing to local communities

ULVAC holds vacuum demonstration classes and plant tours, mainly for local public institutions, such as elementary schools, and for people in local communities and shareholders. Adhering to the Basic Corporate Philosophy, "The ULVAC Group aims to contribute to the development of industries and science by comprehensively utilizing its vacuum and peripheral technologies through the mutual cooperation and collaboration of the Group companies," we will support education of the next generation and contribute to local communities through vacuum demonstration classes and other initiatives.

Consolidated Financial and Non-financial Highlights

Financial Data

	(Unit)	FY2006 2007.6	FY2007 2008.6	FY2008 2009.6	FY2009 2010.6
Key financial results					
Net sales* ¹	Millions of yen	239,151	241,212	223,825	221,804
Operating income (loss)	Millions of yen	16,625	9,081	3,483	4,809
Ordinary income (loss)	Millions of yen	16,105	5,075	835	4,942
Net income (loss)* ²	Millions of yen	7,335	3,610	811	2,138
Net assets	Millions of yen	94,365	91,853	90,158	102,504
Total assets	Millions of yen	317,557	303,069	318,076	313,784
Cash flows from operating activities	Millions of yen	1,131	32,068	(31,891)	44,312
Cash flows from investing activities	Millions of yen	(26,850)	(25,944)	(14,051)	(10,876)
Cash flows from financing activities	Millions of yen	23,738	(1,750)	51,325	(23,418)
Cash and cash equivalents at end of period	Millions of yen	11,664	16,977	21,827	29,721
Key performance indicators					
Net assets per share	Yen	2,105.48	2,052.48	1,961.08	1,992.06
Net income per share	Yen	170.99	84.16	18.90	46.60
Equity ratio	%	28.4	29.1	26.4	31.3
ROE (return on equity)* ³	%	8.5	4.0	0.9	2.3
Ratio of ordinary income to total assets* ⁴	%	5.5	1.6	0.3	1.6
Price-earnings ratio* ⁵	Times	25.91	44.68	146.79	37.34
Other indicators					
Capital investment	Billions of yen	32.1	23.4	19.6	11.1
Research and development expense	Billions of yen	8.9	8.6	8.3	8.0
Interest-bearing debt	Billions of yen	84.3	86.7	136.1	100.2
Dividends	Yen	47.0	21.0	21.0	21.0
Dividend payout ratio	%	27.5	25.0	111.1	45.1
Number of employees	Persons	5,543	6,356	6,871	7,169

Notes:

1. Net sales do not include consumption taxes.
2. Effective from FY2016, the Company has applied the "Revised Accounting Standard for Business Combinations" (ASBJ Statement No. 21, September 13, 2013) and "net income attributable to owners of parent" is presented instead of "net income."
3. ROE (return on equity) figures for FY2010 to FY2012 are not presented because the Company recorded a net loss for these periods.
4. The ratio of ordinary income to total assets for FY2011 is not presented because the Company recorded an ordinary loss for FY2011.
5. Price-earnings ratios for FY2010 to FY2012 are not presented because the Company recorded a net loss for these periods.

FY2010 2011.6	FY2011 2012.6	FY2012 2013.6	FY2013 2014.6	FY2014 2015.6	FY2015 2016.6	FY2016 2017.6
232,040	196,804	163,351	173,878	179,174	192,437	231,831
1,850	(6,384)	6,115	11,996	11,132	17,864	29,468
1,441	(6,497)	6,264	13,384	12,475	18,373	29,716
(8,706)	(49,984)	(3,807)	11,538	8,874	16,698	24,469
92,023	41,187	59,436	72,238	84,928	78,032	104,917
313,616	249,651	243,289	230,791	242,348	219,561	245,306
17,730	(8,492)	22,357	32,213	21,992	23,708	37,818
(14,833)	(11,328)	(4,506)	(3,023)	(4,055)	(5,593)	(13,713)
2,159	12,616	(3,619)	(16,881)	(14,895)	(32,448)	(22,580)
35,722	28,180	44,204	57,012	61,670	44,862	47,555
1,787.51	751.00	806.38	1,040.23	1,398.66	1,477.29	2,002.90
(176.43)	(1,012.94)	(87.79)	223.18	172.73	338.37	496.35
28.1	14.8	22.7	29.2	32.8	33.2	40.2
—	—	—	18.8	12.1	21.9	28.5
0.5	—	2.5	5.6	5.3	8.0	12.8
—	—	—	9.66	10.91	9.21	10.88
17.8	12.7	6.8	6.2	6.7	7.0	8.3
8.3	7.1	5.0	5.2	5.6	6.3	6.9
105.1	120.2	106.1	89.6	82.6	62.7	42.7
—	—	—	—	10.0	30.0	50.0
—	—	—	—	5.8	8.9	10.1
7,878	6,981	6,579	5,971	5,904	5,886	6,072

Commitment of Top Management

Achieve growth by creating new value,
seizing the opportunity at the big turning
point of technological innovation

Setsuo Iwashita

President and Chief Executive Officer

Profile

March	1984	Joined the Company
August	1992	Manager of Beijing Business Office and Shanghai Business Office, Overseas Operation Division
September	1995	Director and Chief Executive Officer of ULVAC (NINGBO) CO., LTD.
July	1998	General Manager for Chinese Region, Asia Division of the Company
March	2006	Director and Chief Executive Officer of ULVAC (CHINA) HOLDING CO., LTD.
October	2006	Chairman of ULVAC (Shanghai) Trading Co., Ltd. Chairman of ULVAC (SUZHOU) Co., Ltd.
September	2011	Director of the Company
July	2012	Director and Executive Officer
September	2013	Managing Executive Officer
July	2015	Senior Managing Executive Officer Chairman of ULVAC (CHINA) HOLDING CO., LTD.
September	2016	Director and Senior Managing Executive Officer of the Company
July	2017	President and Chief Executive Officer (current position)



People are the source of value creation. By cultivating excellent human resources capable of transcending organizational borders, we will unleash our potential as a comprehensive vacuum products manufacturer.

● ULVAC's DNA

Founded 65 years ago when Japan was engaged in post-war recovery, ULVAC aspired to contribute to the revival of industries through vacuum technology. Relishing a challenge, our founders applied themselves to the manufacturing of vacuum equipment, the first company in Japan to accomplish this technological feat, opening up new possibilities in a tough era. Their remarkable achievements continue to inspire us.

The vision of ULVAC's founders is expressed by the corporate creed integral to our corporate DNA. In the course of 65 years, while the market environment has drastically changed, ULVAC's business has grown more than a hundredfold and our products have evolved remarkably. Despite these extraordinary developments, the corporate creed is a precious inheritance of wisdom that continues to illuminate our path forward.

Firstly, the priority is emphatically on "people" as the beating heart of the business. Our corporate creed states, "People determine whether the company will prosper or fail." Whereas divisional strategies tend to focus on products and the user experience, rather than utilization of human resources, people remain the source of ULVAC's value creation. Based on this conviction, my first action on taking office as president was to call for cultivation of workplaces where every employee can work with vigor and enthusiasm while achieving personal growth. ULVAC will be able to maximize value creation when every employee enjoys physical and mental health, is full of energy, and displays his or her full potential. In the new mid-term management plan, which I discuss below, human resources development is a key strategy for establishing a formidable management base.

The corporate creed also states, "We shall pursue appropriate profit." This is another point we should bear in mind. For sustainable growth and development of ULVAC, profitable business expansion is essential and the level of profit should be appropriate. This has been clearly stated since our foundation. In terms of the nature of the business to be conducted in pursuit of profit, the corporate creed states, "Our business shall be comprehensive utilization of vacuum technology."

● Global perspective and synergy

In the course of ULVAC's growth and development as a comprehensive vacuum products manufacturer, we have expanded the scope of our business to include not only equipment but also components, materials, and surface analysis. However, from the viewpoint of "comprehensive utilization of vacuum technology," collaboration among businesses is insufficient and their respective strengths are not fully deployed. In other words, synergy has yet to be fully achieved. In order to accelerate global business development commensurate with our growth potential and to expand our contribution to the industrial sector through

vacuum technology, it is essential for the 49 companies in the ULVAC Group operating at 118 bases (as of June 30, 2017) to have keener interest in one another, deepening their understanding of other Group companies' business areas, and strengthening links.

In this regard, we are promoting the "Window Project" initiative whose objective is to enhance communication throughout the ULVAC Group through visualization and sharing of information on the activities of Group companies and divisions. We are introducing a system in which information displays serve as "windows." By looking through the "windows," business bases will always be up to date with each other's statuses.

At the same time, by cultivating excellent human resources capable of transcending organizational borders, we are endeavoring to establish the foundation for achieving the synergy required for "comprehensive utilization of vacuum technology." For this purpose, we are promoting personnel exchanges within the Group more than ever, while streamlining the head office functions.

Having succeeded Mr. Hisaharu Obinata, the current chairman, as president, my mission is to build a firm foundation through human resources development while encouraging everyone in the ULVAC Group to cultivate a global perspective. Through these endeavors, I want to unleash the tremendous potential of ULVAC as a comprehensive vacuum products manufacturer.

Record-high profit for the second consecutive year

● Review of the previous mid-term management plan

ULVAC's financial performance is on an upward trajectory. For the fiscal year ended June 30, 2017 (fiscal 2016), orders received, net sales, and profit all greatly exceeded the targets of the initial plan, and ULVAC achieved record-high profit for the second consecutive year. Underpinned by continuing vigorous capital investment, the FPD production equipment, semiconductor and electronic device production equipment, and components businesses led increases in orders received and net sales. Regarding profit, in addition to the impact of increased sales, inculcation of "Front Loading" that emphasizes the early stages of operations to prevent additional costs and implementation of corporate-wide cost reduction measures through visualization of costs were effective, resulting in higher profit.

As a result, consolidated financial results for fiscal 2016 were: orders received of ¥235.5 billion, up 5.3% year on year, net sales of ¥231.8 billion, up 20.5%, operating income of ¥29.5 billion, up 65.0%, ordinary income of ¥29.7 billion, up 61.7%, and net income of ¥24.5 billion, up 46.5%. We were able to wrap up the mid-term management plan covering the three years from July 2014 to June 2017 (fiscal 2014 to 2016) with good results.

Under the previous mid-term management plan whose theme was "Stronger profitability by changing awareness," we promoted relentless research and development and efforts to improve the efficiency of the Group's production system in response to expanding demand brought about by changes in the market, such as the shift to OLED and to larger LCDs, while improving profit. Through these initiatives, over the past three years, net sales increased 1.3 times of those of fiscal 2013 while the operating income margin ratio increased from 6.9% of fiscal 2013 to 12.7%. In terms of the financial position, the equity ratio

Commitment of Top Management

improved to 40.2% and the dependence on interest-bearing debt greatly decreased.

Thanks to the achievements under the previous mid-term management plan, ULVAC overcame the crisis it faced five years ago and our people have regained confidence. To use this as a springboard for further progress, we will take up new value-creation challenges through implementation of the new mid-term management plan.

Key targets of the new mid-term management plan: net sales of ¥250 billion, operating income of ¥35 billion and operating income margin ratio of 14% on a consolidated basis for the fiscal year ending June 30, 2020

● Secure enduring strength of the FPD business and establish the semiconductor and electronic devices business as the second pillar

Under the new mid-term management plan, our quantitative targets for fiscal 2019 are net sales of ¥250 billion, operating income of ¥35 billion, and operating income margin ratio of 14%. The plan calls for an increase of approximately 8% in net sales and approximately 19% in operating income compared with fiscal 2016. Growth drivers for accomplishing the plan are the FPD business whose enduring strength we intend to secure through vigorous capital investment and the semiconductor and electronic devices business, which we will strengthen as the second pillar.

Regarding the FPD business, manufacturers of LCD panels for large-screen TVs are expected to step up efforts to expand production facilities. Leveraging ULVAC's competitive advantages, namely, advanced technologies for large sputtering equipment and the market superiority in China, we will strive to secure more orders. OLED panels for smartphones are also expected to be a focus of vigorous capital investment. We are collaborating with our customers to expedite efforts to achieve mass production of OLED panels. At the same time, we will also work to capture demand arising from the trend toward greater application of OLED to diverse fields, such as smartwatches and foldable smartphones, exploiting the flexibility of OLED panels, virtual reality, and in-car displays.

Regarding the semiconductor and electronic devices business, in view of the trend toward a smart society, we will tackle technological innovation to resolve technological issues related to miniaturization, higher efficiency and larger capacity of sensors, communication devices, next-generation batteries, etc. We will respond to needs associated with next-generation non-volatile memories, in addition to NAND and DRAM for which demand remains high as well as logic, which is a new field for ULVAC, and follow the trend toward strengthening of production systems in China based on the Chinese government's policy of promoting domestic production. Through these efforts, we aim to increase sales of the semiconductor and electronic devices business by 40% in three years.

For fiscal 2017, the first year of the new mid-term management plan, the plan calls for net sales of ¥239.0 billion, up 3.1% year on year, operating income of ¥31.0 billion, up 5.2%, ordinary income of ¥31.0 billion, up 4.3%, and net income of ¥25.5 billion up 4.2%.

Tackle technological innovation and create new value by leveraging Group synergy as a comprehensive vacuum products manufacturer accelerating global business development

● Seize the business opportunity at the big turning point of technological innovation

FPD-related technological innovation, such as production equipment for OLED panels for smartphones and large production equipment for large-screen TV LCD panels, remains a focus of high expectations.

In addition, progress toward a smart society as seen in the emergence of the Internet of things (IoT), electrification of vehicles, the advent of self-driving vehicles, and greater utilization of AI and robots, require memory devices with larger capacity and higher speed, as well as improvements such as miniaturization, sophistication, improved efficiency, energy saving of equipment including various sensors, communication devices, power devices, next-generation batteries, with rising needs and expectations of technological innovation. We believe that ULVAC's vacuum technologies are among the keys for addressing these needs and resolving the issues.

As a comprehensive vacuum products manufacturer, technological innovation and creating new value by leveraging Group synergy are integral to ULVAC's enduring aspirations to contribute to the development of industries and science by utilizing vacuum technologies for an affluent future.

I am convinced that the present era of rapid change and technological innovation is creating extraordinary opportunities for businesses utilizing ULVAC's vacuum technologies.

With a view to seizing these opportunities, we have set "enhancement of power to create value" as a key strategy in the new mid-term management plan, and will strengthen marketing to be nimble to identify technological issues in society, markets, final product development manufacturers, customers, etc., and promote development of ingenious technologies and products to create equipment with high added value.

In technological development, we are focusing on the following priority areas: "next-generation displays," "next-generation non-volatile memory," "hyperfine wiring," "electronic components and MEMS," and "high-density mounting" in the sophisticated information field, and "high-efficiency solar cells," "high-brightness LEDs," "power devices," and "next-generation automobiles" in the energy-saving and power generation field.

We will also promote strengthening of global procurement and production systems and cost reduction.

Through the execution of the new mid-term management plan, ULVAC aims to realize highly profitable corporate management by comprehensively utilizing vacuum technology, maximizing synergy among equipment, materials, deposition processing, analysis & services, and cooperating with global business partners. At the same time, we will emphasize human resources development for the next leap forward while cultivating a corporate culture that relishes challenges.

● Market environment and global business development

The market environment for ULVAC is upbeat. Vigorous capital investment in the electronics field is continuing. In particular, the mainstay FPD business is expected to enjoy a high level of sales in line with hefty capital investment for LCD panels for large-screen TVs and OLED panels for smartphones. In addition to the rising investment in NAND and DRAM, investment is expected to grow for the development of next-generation non-volatile memory to realize large-capacity, high-speed servers and various devices to support the progress of the smart society, including IoT and self-driving vehicles. In view of these trends, the semiconductor and electronic devices business is a promising driver of ULVAC's next round of growth.

I believe the opportunities are greater than ever before for applying ULVAC's vacuum technology in diverse ways that benefit the individual and society in virtually every sphere.

As for the composition of ULVAC's net sales by region, sales in Japan account for approximately 35%, sales in East Asia (China, South Korean, and Taiwan) account for around 50%, and sales in Europe and North America and Southeast Asia account for the rest. Although the ratio of overseas sales is high, sales in Europe and North America, which account for roughly half of the global GDP, only account for about 5%. ULVAC has established global product development and production systems centering on East Asia to create a framework for swiftly and precisely meeting corporate customer needs. Our ongoing issue is to increase sales in Europe and North America and in emerging-market countries while accelerating global business development by taking advantage of our strengths.

Aim to become an enterprise with which stakeholders feel fortunate to be involved with.

● Aspire to be an enterprise valued by society

Under the new mid-term management plan, ULVAC will pursue the strengthening of its management base through four measures: "human resources development," "deepening relationships and coordination within the Group," "information platform development," and "financial strength improvement." Among these, we are according the top priority to "human resources development," which is the source of value creation. In light of the need to unleash Group synergy, collaboration with global business partners, development of creative technologies and products, strengthening of global procurement and production systems, and other strategies, ULVAC will facilitate vigorous exchange of employees, centering on younger people, within and outside the Group, encouraging them to tackle diverse themes, in order to develop human resources capable of leading ULVAC to success in the coming years.

In regard to our initiatives to cultivate workplaces where every employee can work with vigor and enthusiasm and achieve personal growth, I think it is necessary to help make employees feel "excited" about their work so as to bring out their capabilities 120%. Managers should always consider how to make people in their workplaces feel "excited" and take every opportunity to encourage them. I would like to change the mindset of our employees by transforming the structure of our organizations to an inverted pyramid where managers who make a greater



contribution to human resources development are highly valued.

Above that inverted pyramid, in which employees are at the top of the hierarchy, are customers. From the viewpoint of strengthening relationships with stakeholders, it is certainly important to maintain and improve the quality of our technologies and products and fulfill our responsibilities as a supplier, thus enhancing our customers' confidence in ULVAC, but it is also crucially important to secure channels for accurate communication of the voice of the customer and to swiftly respond to it. Such a corporate culture is required in relationships with suppliers. We will deepen relationships with our business partners on an equal footing through fair and equitable transactions based on mutual respect.

We will actively disseminate accurate information on our business, management strategies, and financial performance in an easy-to-understand manner to our shareholders and investors who are supporting our business and create opportunities for communication with them. We hope these efforts will lead to the cultivation of constructive, durable relationships with them so that they will hold ULVAC shares continuously with an eye to the long term.

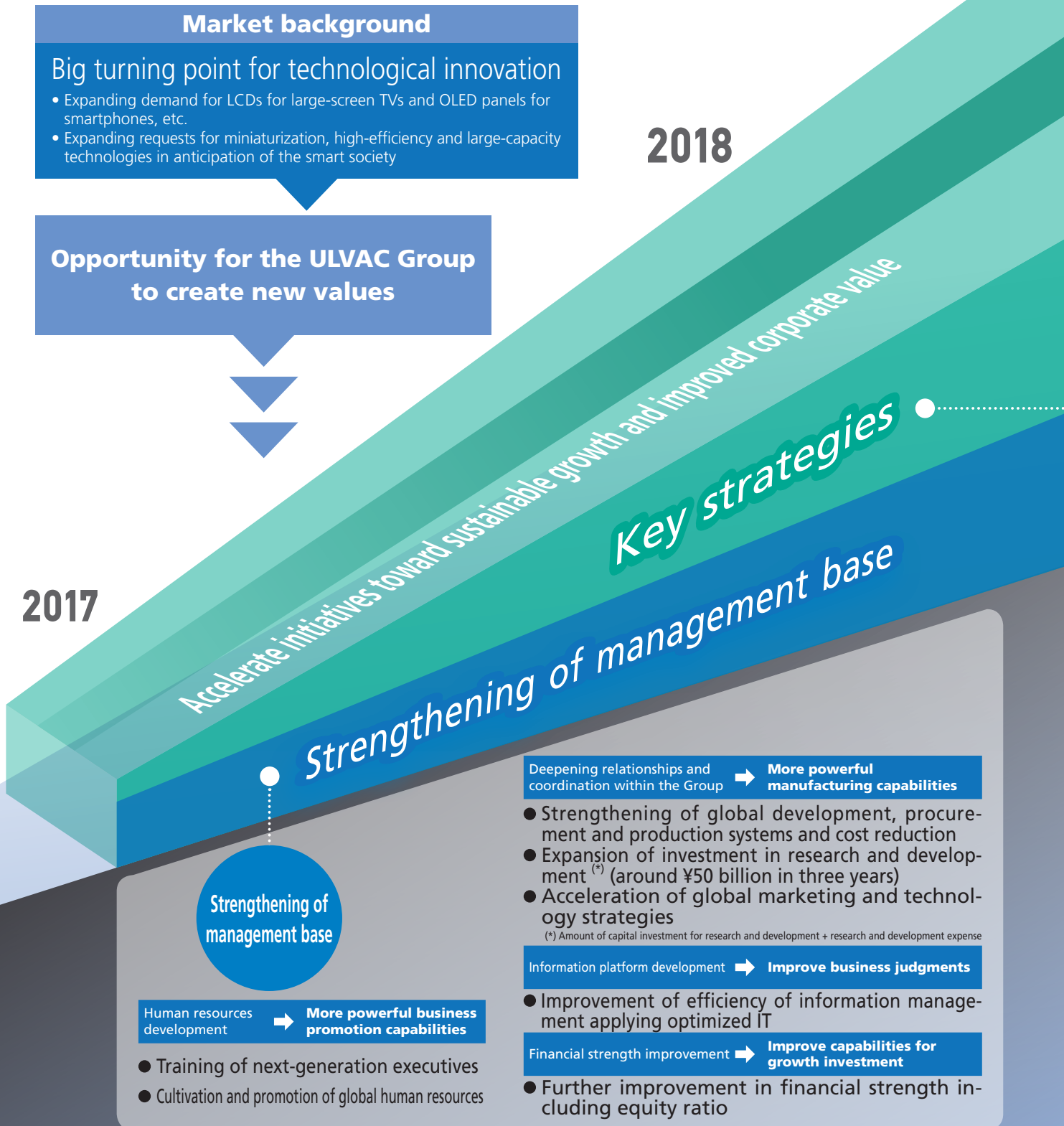
In the distribution of profit to our shareholders, we comprehensively take into consideration our financial base, consolidated financial performance for each fiscal year, payout ratio, and other factors, while enhancing the internal reserve necessary for investing in R&D for further growth and strengthening the financial base. ULVAC paid an end-of-term dividend for fiscal 2016 of ¥50 per share (an increase of ¥20 per share from the previous fiscal year). The end-of-term dividend for fiscal 2017 is expected to be ¥60 per share.

We will deepen communication with our stakeholders by cultivating relationships and engaging in dialogue so that ULVAC will continue to be an enterprise valued by society.

ULVAC aspires to be an enterprise whose employees, customers, and all other stakeholders feel that ULVAC is a source of happiness.

New Mid-term Management Plan (from FY2017 to FY2019)

Through the implementation of the new mid-term management plan, we will steadily respond to strong demand for FPD production equipment that is underpinned by vigorous capital investment mainly in LCDs for large-screen TVs and OLED panels for smartphones. At the same time, by pursuing innovation in line with the trend toward the smart society, we will continue cultivating new demand for equipment in the semiconductor and electronic devices business to achieve sustainable growth and improve corporate value.



2019

Toward further growth!

FY2019 targets
(Fiscal year ending June 30, 2020)

Net sales: **¥250 billion**

Operating income: **¥35 billion**

Operating income ratio: **14%**

Vision

- Highly profitable corporate management by comprehensively utilizing vacuum technology, maximizing synergy among equipment, materials, deposition processing, analysis & services, and cooperating with global business partners
- Human resources development for the next leap forward
- A corporate culture that relishes challenges

Key strategies

Promotion of business growth

- Securing enduring strength of FPD business

Respond to large demand

- Strengthening of semiconductor and electronic devices business

Technological innovation challenge in line with the trend toward the smart society Drive growth as the second pillar

- Global development

Global development of the components and materials business, etc. as a stable revenue base

Enhancement of power to create value

- Strengthening of marketing and development of creative technologies and products
- Strengthening of global procurement/production systems and cost reduction

Implement market and technology strategies from the medium- and long-term perspectives

Final product development manufacturer

Final product development manufacturers are increasingly playing a leading role to set the trend of devices.

Device manufacturer (memory, MEMS...)

Divisions and sales forces provide value and gather information through daily activities.

ULVAC: Core technologies, products and solutions

Create new value and challenge cutting-edge technological issues through direct cooperation with final product development manufacturers

Vacuum Equipment Business (1)

FPD and PV Production Equipment



Shigemitsu Sato

Managing Executive Officer
General Manager of FPD and
PV Division

Maintain virtuous cycle of quality enhancement while promoting development of successor products

The quality enhancement initiatives launched four years ago have yielded good results and we have entered a virtuous cycle capable of securing profit. We will work to maintain this virtuous cycle, secure our share of the FPD market by proposing technological innovations, and promote development of successor products.

Greater market share and competitive advantage through early development

In the FPD field, device manufacturers are expected to continue capital investment in production equipment for LCDs for large-screen TVs in China. They also plan vigorous capital investment in production equipment for small and medium-sized panels in line with the shift from LCD to OLED.

For LCDs for large-screen TVs, the mainstream production equipment will be G10.5 (using 3 m x 3 m substrates or larger) that is capable of producing multiple 65- or 75-inch panels from one substrate. ULVAC has a large share of the market for such large sputtering equipment and we expect our market share to increase further because our products offer low particle counts, superior productivity, and superior reliability, thanks to continual development of element technologies. On the other hand, regarding OLED for small and medium-sized panels, we will target demand associated with capital investment in product diversification, notably the introduction of flexible displays. In these circumstances, ULVAC will accelerate development of element technologies to secure a competitive edge.

With regard to products other than FPD, although still in a nascent stage, solar cell- and automotive-related capital investment in China is also promising.

Identify development needs through constructive relationships with customers

Our sales and profit are growing as we respond globally in terms of production and sales & marketing while stepping up quality enhancement and information sharing, riding the wave of vigorous capital investment in the FPD field.

We will continue promoting these initiatives while, at the same time, we intend to actively introduce new technologies and enter new markets. In this regard, we envisage joint development projects attuned to customer needs, rather than development solely by ULVAC. Through this approach we hope to strengthen relationships of trust with our principal customers, thereby increase our market share, and secure orders associated with their increasing capital investment. Specific development themes in the FPD field include high-definition OLED technology, new evaporation sources (high productivity, high usage efficiency), new process development, and OLED production equipment for large substrates.

We will pursue development also with an eye to business expansion in non-FPD fields (thin-film battery-related, OLED lighting, high-efficiency solar cells, etc.).

Key measures

- Secure the FPD market share by accelerating technological innovation
- Enhance quality of manufacturing to streamline the process and promote customer satisfaction
- Vigorously enter promising markets early with products attuned to customer needs

Vacuum Equipment Business (2)

Semiconductor Production Equipment



Tomoyasu Kondo

Executive Officer
General Manager of Semiconductor
Equipment Division

For the semiconductor equipment operation to become the second pillar and achieve substantial global business development

Our aim is to expand the semiconductor equipment operation as ULVAC's second pillar and achieve substantial global business development by continuing to ride the wave of buoyant investment in the semiconductor field. To accomplish this, we will endeavor to seize business opportunities based on our growth strategy emphasizing responsiveness to customer needs and by earning customer confidence in ULVAC.

Dynamic strategy addressing emerging needs to capture business opportunities

The emergence of the smart society is fueling continued growth of the semiconductor market. Demand for servers and other devices to handle big data is also expanding along with the development of infrastructure supporting the IoT era. In these circumstances, semiconductor devices are becoming ever more highly integrated and various innovations in semiconductor technology are creating new business opportunities.

The Semiconductor Equipment Division has traditionally focused on products for interconnect metallization processes for DRAM and NAND in the memory market. Besides these conventional memories, storage class memory (SCM) comprising non-volatile memories is a new category of semiconductor devices that has emerged in recent years. In the previous mid-term management plan, we positioned deposition equipment for SCM as a growth field and have been focusing our efforts on it. In response to rising demand, we are about to see our efforts bear fruit.

Along with the higher integration of semiconductors, processor performance also increases along with miniaturization. Regarding ULVAC's entry to the logic and foundry markets, our systems are poised for introduction in customers' mass-production operations. We will promote our business by meticulously monitoring changes in markets, technologies and materials.

Business development based on a breakthrough growth strategy with peerless expertise

Carrying on with the four growth drivers of "process responding to miniaturization," "deposition for non-volatile memory," "deposition for wafer-level packaging," and "full-scale entry to the logic and foundry mass-production equipment markets," we will sharpen our focus on business related to them. Based on a growth strategy unique to ULVAC's semiconductor equipment business, we will pursue business development differentiated from that of other major manufacturers offering solutions.

Going forward, in the booming memory market we intend to expand sales of the native oxide removing system that employs ULVAC's proprietary technology. We will also pursue development of new technologies utilizing our industry-leading prowess in sputtering equipment. Moreover, in pursuit of inorganic growth, we will address needs related to SCM, which is a new category of semiconductor devices, and offer equipment for the mass production of processors, which is a new market for ULVAC.

The U.S. and East Asia are currently the principal geographic markets for semiconductor equipment. In order to develop our business in China in ULVAC's next growth phase, we will expedite construction of a framework for that purpose.

Key measures

- Double the market share by promoting order-taking related to the four growth drivers
- Promote technological development for strategic business development and strengthen relationships with partners that have pioneering technologies
- Enrich the semiconductor business unit targeting global business development and human resources development

Vacuum Equipment Business (3)

Electronic Device Production Equipment



Tetsuya Shimada

General Manager of Advanced
Electronics Equipment Division

Expand global business development in the electronic devices field

Electronic devices are indispensable for IoT, which will be the infrastructure of the emerging supersmart society, and demand for electronic devices is ever increasing. Responding to the development of new technologies in Europe and North America and expansion of mass production in Asia, ULVAC will vigorously promote business development in the globally expanding electronic devices market.

Electronic devices for realization of the supersmart society

The installed base of IoT devices worldwide is expected to exceed 30 billion units by 2020. A consequence of the advent of the supersmart society, the successor to the current information society, is that all industrial processes from development to production, sales, and services will be connected by utilizing IoT, big data, AI, robots, etc. For semiconductors and electronic devices, greater capacity, miniaturization, thickness reduction, and lower power consumption are required. In line with the progress in packaging technology and high-density technology to realize these needs, the size of substrates has also increased from wafer size to panel size and technological development for larger substrates on which to embed more devices is underway.

In the electronic devices field, the market for production equipment is expanding worldwide, centering on development needs in Europe and North America and mass-production needs in Asia, creating new business opportunities globally. ULVAC offers a wide choice of process equipment attuned to market needs. To expand sales worldwide, we will accelerate initiatives while strengthening collaboration with overseas Group companies.

Global rollout of equipment to expand the market

In terms of its scope and scale, the electronic devices field is growing remarkably centering on communication devices, sensing devices, optical devices, and other devices supporting IoT, while development is underway simultaneously at multiple locations worldwide. In the market for equipment in this field, while refining fundamental technologies, it is necessary to develop cutting-edge technologies to support the continuous evolution of equipment.

Therefore, ULVAC will vigorously cultivate new customers in Europe and North America, which are the sources of new devices, while strengthening the service structure. By establishing a collaborative structure with leading contenders, we will also emphasize development of new equipment capable of securing a strong presence in the market. On the other hand, in Asia we will promote sales & marketing while swiftly catching the technological orientation and market trends by taking advantage of the ULVAC Group's numerous production sites there.

Through these initiatives, we will strengthen the global rollout of equipment to expand the market, with the aim of positioning electronic device production equipment as ULVAC's second pillar alongside FPD production equipment.

Key measures

- Reach out from Japan to Asia and to Europe and North America to promote global business development
- Maintain the tempo of development in order to be an enterprise at the forefront of technology, with a view to the emerging supersmart society
- Strengthen collaboration with Group companies and cultivate relationships with customers and partners

Vacuum Equipment Business (4)

Industrial Equipment



Youichi Oohinata

Executive Officer
General Manager of Industrial
Equipment Division

Serving the full spectrum of industries with vacuum technology involving thermal application

The Industrial Equipment Division offers vacuum technology solutions involving thermal application. Based on a sure grasp of customer needs across the full spectrum of industries, we are developing the equipment customers require in order to create higher-value-added products of superior quality. Our solutions cover such processes as heat treatment, brazing and melting, serving the needs of the electronic materials, chemical, pharmaceutical, food and other industries.

Supply tools for developing higher-value-added products of superior quality

The industrial equipment business covers an extensive field. Our products include equipment for heat treatment of engine parts in the aerospace industry; equipment for heat treatment of parts for power systems and vacuum brazing of energy-saving exhaust gas recirculation (EGR) cooling systems in the automotive industry; and systems employed in the manufacture of the rare-earth magnets widely applied in electric motors and generators. Moreover, vacuum equipment is used in many fields that affect people's health and wellbeing in everyday life, such as high-purity refining of vitamin E, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA); freeze drying of pharmaceuticals, raw materials of pharmaceuticals, and functional materials; special vacuum drying of food without spoiling the taste; and high-sensitivity leakage detection processes for preventing leakage of refrigerant and fuel. All these processes performed in a clean vacuum environment in the absence of air (oxygen, nitrogen, etc.) lead to high-added-value products of superior quality.

As our customers headquartered in Japan expand their business operations in China and Southeast Asia, we will fully utilize our production bases in Japan and China to supply development tools that contribute to the prosperity of industries.

Enhance presence by utilizing bases in Japan and China

ULVAC produces industrial equipment at two bases in Japan and two bases in China. The sites in Japan focus on planning and development of value-creation-type products based on new production processes and a new business model. The bases in China are engaged in the development of products geared to local needs, mainly in China and Southeast Asia where consumption is expanding, in addition to existing process technology, and promote ULVAC products as highly reliable branded products to expand sales and enhance ULVAC's presence in local markets.

Going forward, we are sharpening our focus on fields such as energy saving and the environment, pharmaceuticals and regenerative medicine, and food. Vacuum technology is widely used in these fields and major growth is expected worldwide. From production bases in Japan and China, ULVAC will offer equipment to realize the optimum processes in these fields.

Key measures

- Swiftly identify needs and develop new processes
- Promote localization of development bases attuned to market needs in each region
- Reduce equipment costs through global procurement
- Develop human resources through global personnel exchanges

Vacuum Equipment Business (5) Components



Kiyokazu Yanagisawa

Executive Officer
General Manager of Components
Division

Reaching out to the global market with an extensive product lineup

Vacuum technology is essential for diverse industries. As a comprehensive manufacturer of vacuum components supporting the industrial infrastructure, we offer a full lineup of vacuum pumps, measurement equipment, and power generators for deposition processes. By offering an extensive product lineup corresponding to various applications from R&D to mass production in many industrial fields, we are reaching out to the global market.

Addressing the needs of various markets

Vacuum components are used not only in production equipment for FPD panels, semiconductors, and electronic devices, but also in numerous other major industries, such as the automotive, medical, analysis, and food industries. To meet diverse needs in this extensive market, we offer the optimum vacuum pumps, measurement equipment, and power generators for deposition processes.

The vacuum pump business is led by ULVAC CRYOGENICS, which is a manufacturer specializing in cryopumps and cryogenic freezers, ULVAC KIKO, which handles compact vacuum pumps, and ULVAC, Inc., which handles other vacuum pumps in general. Demand for vacuum pumps has been robust in the semiconductor and automotive industry, as well as across a broad swath of industry. In particular, in the FPD market, sales of cryopumps for OLED production have increased greatly.

Reflecting an increasing focus on quality control, demand for measurement equipment is rising. Process gas monitors are increasingly used for management of yields of various types of vacuum equipment to control the vacuum quality in addition to pressure control. Moreover, demand for vacuum equipment and for leak testing related to automobiles and electronic devices has been rising year by year in view of the importance of quality control.

ULVAC's power generators for deposition processes have earned confidence as power generators developed by a vacuum equipment manufacturer and are leading to stronger relationships with customers.

Sustainable, stable growth with customers based on superior quality and technology

We believe we can continue to enhance the value of our business by offering the optimum products for various industrial fields as a comprehensive manufacturer of vacuum components with a balanced portfolio of pumps, measuring equipment, and power generators.

We emphasize the critical roles of individual creativity and organizational vitality in business promotion. Thus, we endeavor to enhance the quality of our work and offer products of superior quality to deepen the relationships of trust with customers. We conduct product development from customers' viewpoints based on the technologies we have nurtured and promote cultivation of new markets and new applications. While contributing to the prosperity of our customers with ULVAC quality and technologies, we are resolved to achieve sustainable, stable growth of ULVAC.

Our business development so far has been successful centered on Japan and East Asia. We are also promoting vigorous overseas business development in Southeast Asia and in Europe and North America by deepening cooperation with local subsidiaries. Going forward, we will work to expand our network of business partners, aiming at further global growth.

Key measures

- Promote individual creativity and organizational vitality
- Establish relationships of trust with customers by enhancing the quality of our work and offering products of superior quality
- Cultivate new markets and new applications through product development from customers' viewpoints
- Promote global business development by deepening cooperation with Group companies and expanding our network of business partners

Vacuum Application Business

Materials



Seigou Kinugawa

General Manager of
Materials Division

Be a pioneer in offering excellent materials to the market

Sputtering equipment, ULVAC's mainstay products, require target materials as a base for deposition substances. We are endeavoring to develop products endowed with functions required in the emerging smart society and in the energy-saving and power-generation markets, such as target materials and corrosion-resistant, superconductive high-melting-point metals, in cooperation with the equipment divisions and research institutes, and aim to be the first to introduce them to the market.

Aspiring to leadership in development of new materials

We aspire to become a global leader in target materials and high-melting-point metals through collaboration of companies within the ULVAC Group and industry-leading customers in fields related to the smart society, as well as to energy saving and power generation.

Materials embodying ULVAC's technological strengths, namely, high-melting-point metals, special alloys, oxides, dielectric materials, and magnetic materials, are indispensable for next-generation displays, next-generation non-volatile memory, hyperfine wiring, electronic devices, MEMS, etc. We will develop materials required in such cutting-edge fields and deliver them to our customers ahead of the competition. For this purpose, we launched MiniLabo, consisting of facilities for prototyping and evaluation in the development of target materials and other small samples as well as an operational framework, in fiscal 2016 and established a system for advanced development, including basic research.

Active in both niche and mass-market segments, collaboration with competitors

As the market becomes more global, there will be segments with intensifying competition because of the entry of competitors and niche segments where competition is relatively moderate. We intend to vigorously tap into promising niche segments by taking advantage of the characteristics of our materials. In particular, our policy is to address all the business opportunities whenever our customers introduce new products in line with the progress in performance of panels and devices. Previously, it was difficult for ULVAC alone to promote business in segments and regions with fierce competition, considering profitability. From now on, we will not eliminate collaboration with competitors and establish complementary partnerships with a view to expanding profit both in niche and mass-market segments.

Key measures

- Develop and release oxide semiconductor and Cu/Al/Mo alloys for next-generation panels
- Develop and release high-melting-point metal silicide, magnetic materials, oxides, and dielectric materials for semiconductors and electronic devices
- Increase production capacity in Japan of materials for semiconductors and electronic devices
- Promote investment and alliances in various countries

Others

Semiconductor mask blanks market

We will respond effectively to increasing needs for miniaturization and higher definition in line with the expansion of the application field and the proliferation of types, reflecting the improved performance of smartphones, development of self-driving vehicles, and the ramp-up of demand related to IoT and artificial intelligence (AI).

Surface analyzer market

Surface analyzers are used not only for R&D in the laboratories of universities and companies but also for daily routines such as product inspection. Application fields are wide ranging and so are geographical regions and markets. ULVAC will offer surface analyzers with new functions and increasingly sophisticated functions.

Feature
1**ULVAC's R&D**

Source of Value Creation

We will work through R&D of leading



Mission to accelerate development

This is my third year as Supervisor of Development. I previously spent several years involved with production technology and sales at one of our subsidiaries in South Korea, and before that I was working in development, based at Head Office. My mission since returning to Japan to head the R&D organizations has been to speed up our development efforts by inculcating the solutions and perspectives required for global development, that is, to strengthen what was insufficient in the traditional Japan-centered development structure.

The reason for this is that the competition between the device manufacturers, which are ULVAC's customers, has intensified. We have seen the emergence of major players based in South Korea, China and Taiwan. Device development by overseas manufacturers is a rapid process. ULVAC already derives around 60% of sales from outside Japan. However, as we build this global business, it has become essential for our development structure to match the speed and urgency of the overseas device manufacturers.

Starting from fiscal 2016, the first year of the mid-term management plan, we have been working to build a faster development structure to help us accomplish the plan objectives and to accelerate change so we can achieve concrete results.

Integration of development via "Open R&D"

In fiscal 2015 when I became Supervisor of Development, I advocated the "Open R&D" approach for the ULVAC Group. Not only does the ULVAC Group have R&D operations at the Head Office and research laboratories, but also Group companies have their own independent development capabilities and we have development functions based overseas as well. There has not been enough technological exchange or sharing of information within this framework.

To boost the speed of development, we need to forge stronger links connecting the Group's development operations as a whole, and we must also increase efficiency based on an open approach to research content and related knowledge. In addition, it is becoming increasingly important for our global business development that any local subsidiaries conducting R&D close to overseas customers share the information gained with the rest of the ULVAC Group's R&D departments. "Open R&D" has shifted the Group in this direction through initiatives aimed at integration of R&D.

"Selection and concentration" are also vital in this regard. It is important that we make better selections of development themes at an early stage so that we can concentrate resources and achieve results quickly. Another trend we are seeing in recent years is for our customers, the device manufacturers, to make increasingly sophisticated demands of us in terms of equipment quality and productivity. The ULVAC Group is responding to such demands by making proposals to customers based on products at an early stage of development with a view to joint projects.

One of the policies underpinning the projects undertaken by the R&D divisions in fiscal 2017 is the "evolution and reinforcement of core technologies." By this, we mean the further evolution and reinforcement of the Group's common technological assets, irrespective of application. These assets include vacuum deposition technologies (such as sputtering or evaporation) with multiple applications and other core ULVAC equipment technologies based on precision cleaning that are directly linked to higher product yields.

together in the ULVAC Group in pursuit of our common dream technological innovation.

Dr. Choong Ryul Paik

Managing Executive Officer
Supervisor of Development

By developing such technologies, we expect to hone our competitiveness in areas with major growth potential and capture demand.

Organizational structure, roles and functions of R&D divisions

In terms of organizational structure, the Research and Development Planning Department at the Head Office is the hub of our global network of development bases.

The Research and Development Planning Department is responsible for evaluating trends of the leading technologies worldwide to ensure we are aligned with the direction of technological developments in the future. While accurately grasping technological trends in relevant fields, the department liaises with CTOs in Japan, South Korea, China, Taiwan and the U.S. and reports to management.

The Research and Development Division provides support to business divisions to boost the competitiveness of ULVAC Group-supplied equipment, mainly through the development of element technologies. This involves performing various types of analysis to support materials development and equipment manufacturing.

The Institute for Super Materials is engaged in the development of LCD, OLED and other thin-film deposition processes and in manufacturing process development for high-purity, magnetic and other materials. Its role underpins the mid-term management plan's objective of securing the enduring strength of the FPD business.

The Institute of Semiconductor & Electronics Technologies develops manufacturing technology for next-generation semiconductors and power devices, aligned with progress toward the smart society. These efforts are closely linked to attaining the mid-term management plan's objective of strengthening the semiconductor and electronic devices business.

The Future Technology Research Laboratory is responsible for conducting research into the seeds of the Group's future growth based on a long-term perspective. We are working to accelerate the translation of these efforts into concrete outcomes.

We established our first overseas R&D base in South Korea. We have put in place a structure in South Korea for conducting joint development with a South Korean manufacturer that has the top share of the global memory chip market. Recently, we have also been working to speed up development by allocating the tasks between sites in Japan and South Korea. In Taiwan, we have created a development structure that meets the needs of leading manufacturers of LCDs and system LSIs. Our development framework in Taiwan is designed to cater to the diversity of the Taiwanese electronics industry. In China, we plan to upgrade our local development bases to reflect the expanding capital investment in semiconductor facilities in line with the Chinese government's policy form domestic production.

In South Korea, Taiwan and China, we have established facilities to have an "in-market" presence. On the other hand, in the case of our R&D base in the U.S., we emphasize the gathering of information in cutting-edge technology fields.

Winning the global competition in R&D

My belief is that ULVAC's growth and prosperity has been underpinned by our corporate culture, which combines a willingness to take calculated risks with the resolve to embrace bold new technological challenges. In my role as Supervisor of Development, my aspiration is that we pass on this culture to the younger generation and make a Group-wide effort to attain our common dream of leading technological innovation through R&D.

Looking ahead, R&D will require more people capable of achieving success in a global setting. We will need to create a more integrated "Global ULVAC" by accelerating efforts to assign Japanese personnel to overseas bases, deploy more non-Japanese nationals, and promote more exchanges of personnel. Through these initiatives, we can leverage greater diversity of ideas and experience in new R&D projects. This is the key to winning the global competition in R&D. We relish the challenge.

Feature
2

ULVAC's Future



Dr. Koukou Suu

Senior Fellow
General Manager of Global Market & Technology Strategy Division

Fueling ULVAC's growth by focusing on the devices and key technologies supporting technological innovation

Responding promptly to the shift toward the "smart society"

The Global Market & Technology Strategy Division was established three years ago to evaluate market needs and the latest technological trends so this information can be reflected in the development strategy for ULVAC technologies and products. Since ULVAC is targeting growth in the fields of semiconductors and electronic equipment, the most important strategic theme for us is to catch the trend of the emerging "smart society" that promises to transform the world, and to respond promptly to this trend. In view of ULVAC's global business development, we assess the growth fields and related developments in each region and are working from a systematic medium-to long-term perspective on the devices and key technologies that will support technological innovation.

Currently our efforts are focused on the four fields of semiconductors, electronic devices, new energy, and flexible electronics. With an emphasis on the quality, quantity and speed of development at ULVAC, we are also promoting collaboration to enhance each of these aspects, both within the Group and with outside partners.

Miniaturization, higher efficiency, larger capacity, and lower power consumption are the keys to the emerging "ecosystem"

We expect the markets for semiconductors and electronic equipment to expand rapidly due to the shift toward the smart society in which electronics are at the heart of every industrial sector and everyday life. This is leading to the development and mass adoption of IoT and other technological advances such as cloud computing, big data, artificial intelligence, wearables, virtual/augmented reality, self-driving vehicles, biomedical equipment, and the blockchain. As links develop organically between these technologies and companies, people and objects, a new value chain will form resembling an "ecosystem."

The keys to this ecosystem will be miniaturization, higher efficiency, larger capacity, and lower power consumption to enable high-speed processing of vast amounts of data, reductions in energy losses and other benefits. This is the technological challenge facing the manufacturers of devices and final products that form ULVAC's customer base. ULVAC is channeling resources into joint development programs to address these technological issues so we can supply production equipment, manufacturing solutions and materials to support the drive toward miniaturization, higher efficiency, larger capacity, and lower power consumption.

The diversity and comprehensive capabilities of the technology platforms cultivated by ULVAC are now attracting plaudits, as evidenced by the growing number of inquiries we are receiving from final product developers and manufacturers with which we had little or no connection previously. This trend creates new business opportunities for us.

Semiconductor and electronic equipment fields set for strong growth over next five years

The example of self-driving vehicles shows how the shift to the smart society can translate into expanding growth opportunities for ULVAC. In the current safety assistance phase, vehicles are being equipped with multiple cameras, radar, ultrasound and other sensors to gather data on driving conditions. Five years from now, when semi-autonomous vehicles are on the road, the number of such sensors per vehicle will increase to at least 20, and this figure is expected to rise to more than 30 with the advent of fully self-driving vehicles. (See *Reference 1)

In line with this transition, there will be a need for high-speed communication devices as well as semiconductors capable of processing vast amounts of visual data rapidly.

Hence, major technological innovation over the next five years in the fields of semiconductors and electronic equipment is expected to drive significant growth in related markets. Based on accurate assessments of technological innovation and markets, the Global Market & Technology Strategy Division will seek to fuel the growth of ULVAC.

*Reference 1: "Imaging Technologies for Automotive," Yole Development, 2016

Envisaged by Senior Fellows



Dr. Hirohiko Murakami

Senior Fellow
General Manager of Future Technology Research Laboratory

Innovation: The challenge of going beyond existing knowledge and technology to anticipate the future and capture markets

In quest of originality to create ones from zeros

Targeting the “creation of innovation” to support the future development of ULVAC, the Future Technology Research Laboratory is engaged in developing the seeds for the Group’s long-term growth. The prerequisite for any R&D undertaken by a company is that it should yield benefits for society once it is commercialized so that the company doing so can generate profits. However, with companies targeting growth by offering value oriented toward globalization or standardization, most R&D activities seek to modify, improve or adapt existing knowledge and technology. The resulting tendency is to reject the challenge of adopting a stance based on originality, in which the goal is to create a “1” from a “0.”

To anticipate the future and capture greater market share, ULVAC needs to adopt a long-term view and take up the challenge of creating innovation that goes beyond existing knowledge and technology. The efforts of the Future Technology Research Laboratory are helping to define the sort of enterprise ULVAC could be 10 or 20 years from now by opening up new possibilities and options.

Research focusing on spintronics and quantum dots

The Future Technology Research Laboratory has identified around 20 basic research themes for which we are promoting joint projects with external research and educational institutions, as well as other companies. Our research focuses on spintronics and quantum dots, two areas that we believe have high growth potential as future technologies.

Taking advantage of the charge and spin properties of electrons, spintronics achieves data storage by going beyond electronics, which is based on the charge property alone. The applications of spintronics are expected to result in major advances in terms of processing larger quantities of information using less energy.

Quantum dot technology is based on semiconductor crystals that have special electrical attributes. Besides realizing next-generation display technology that will replace LCD and OLED panels, this technology is expected to contribute to major technological advances in areas such as lasers, solar cells and quantum computing. We are currently involved in the joint development of a next-generation display based on quantum dot technology.

Helping researchers grow into “value inventors”

For ULVAC, research into future technologies not only defines new possibilities and choices for the future, but is also significant from the viewpoint of contributing to human resources development of researchers.

The researchers we want at the Future Technology Research Laboratory are those who can articulate their own research vision and the related narrative. To help cultivate such researchers, we want them to have as many opportunities as possible to present papers at international conferences so they can experience the external feedback and appraisal process. Gaining feedback from people outside with different viewpoints helps our researchers grow from people who simply get results into “value inventors” who can extract meaning from research findings. I am confident that this will nurture the qualities needed to accomplish highly original research.

By anticipating the future and taking up the challenge of technological innovation, we will contribute to society and the development of the ULVAC Group.

Management

Basic Policy on Corporate Governance

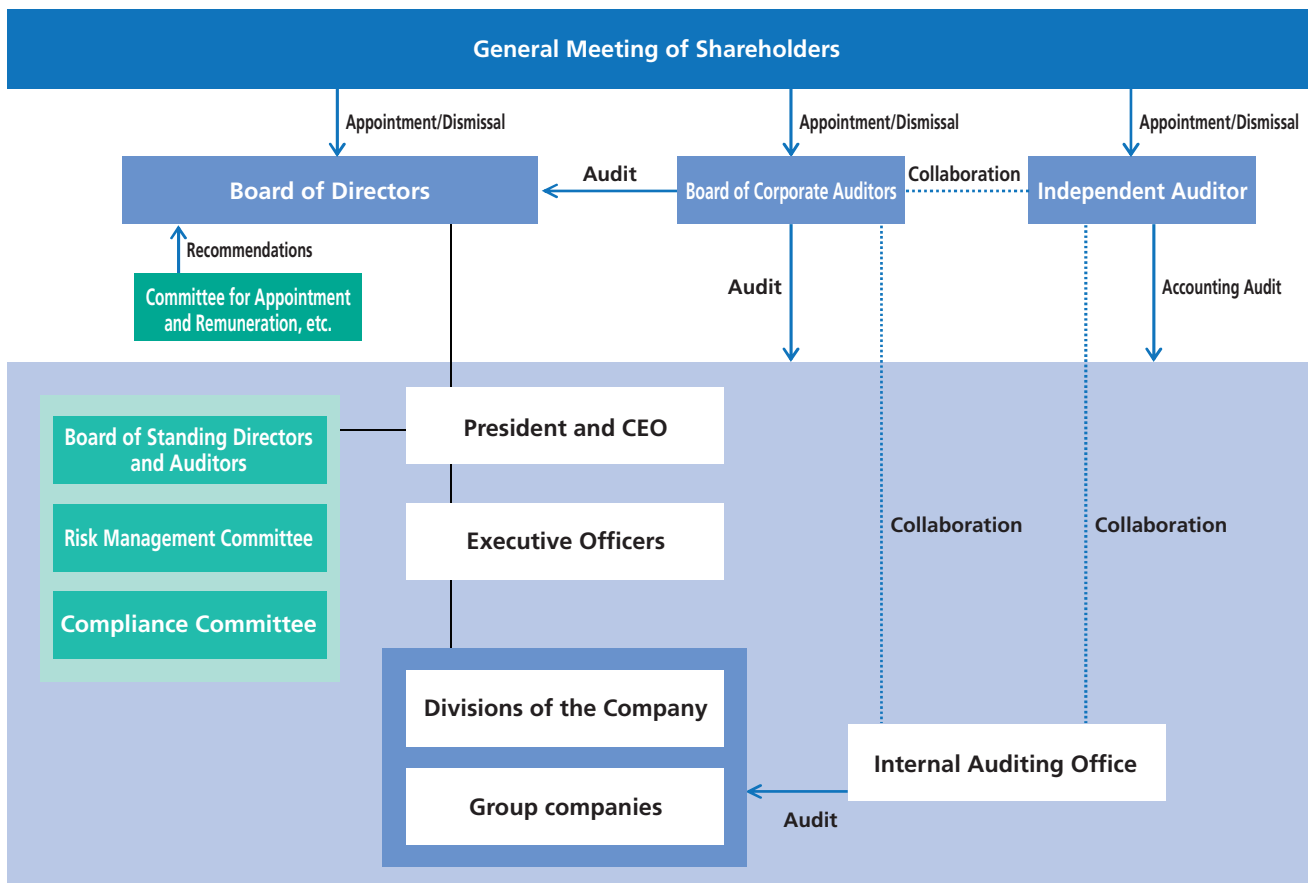
The ULVAC Group works to ensure thorough corporate governance in order to increase corporate value over the medium to long term, in accordance with its Basic Corporate Philosophy: "The ULVAC Group aims to contribute to the development of industries and science by comprehensively utilizing its vacuum and peripheral technologies through the mutual cooperation and collaboration of the Group companies." From this perspective, we respect the interests not only of shareholders, but also of business partners, local communities, employees, and other stakeholders that are related to our business activities. We also value competitive and efficient operation, while ensuring strict compliance with laws and corporate ethics.

ULVAC has adopted a company with a board of corporate auditors as its management structure. Particularly important institutional structures include the Board of Directors, the Board of Standing Directors and Auditors, the Board of Corporate Auditors, and the Committee for Appointment and Remuneration, etc.

Firstly, ULVAC has a Board of Directors, which is a decision-making body for important management issues. The Board holds regular meetings once a month, as well as ad hoc meetings as necessary to ensure flexibility. The Board of Directors comprises eight members, of whom three are external directors. Two of the external directors are designated as independent external directors. By virtue of this structure, ULVAC is not only able to make swift and efficient judgments concerning important management issues, but is also able to achieve fair, impartial, and highly transparent deliberation, as well as operational supervision.

Next, with the introduction of an executive officer system, executive officers exercise executive functions, having been granted a certain amount of responsibility and authority over their designated areas, through delegation by the Board of Directors. ULVAC also has a Board of Standing Directors and Auditors, which comprises a total of 18 internal directors and executive officers. The Board of Standing Directors and Auditors

ULVAC Management Structure (As of September 30, 2017)



holds regular meetings twice a month, as well as ad hoc meetings as necessary. By virtue of this structure, we have achieved more flexible and swifter business operations that are appropriate for a rapidly changing business environment, based on a clear expression of the responsibilities and authority of each executive officer.

In addition, ULVAC has a Board of Corporate Auditors, which performs auditing and supervision of management decision-making and business operations. The Board of Corporate Auditors comprises four members, of whom two are external auditors. Both of the external auditors are designated as independent external auditors. Furthermore, we ensure full auditing and supervisory functions through close links between corporate auditors and the Internal Auditing Office and the independent auditor, whose independence is ensured, as well as through attendance and comments by corporate auditors at important meetings, such as meetings of the Board of Directors and the Board of Standing Directors and Auditors, and through regular

meetings between the Internal Auditing Office and the President, etc. By virtue of this structure, we have achieved rigorous, fair, impartial, and transparent auditing and supervisory functions, ensuring that each corporate auditor obtains sufficient information.

In addition, we have a Committee for Appointment and Remuneration, etc., for instances that require objective determination of important matters, such as the appointment and remuneration of directors and executive officers. The Committee for Appointment and Remuneration, etc., comprises six members, of whom four are independent external directors or independent external auditors. Of the remaining two members, one is an external director. By having these kinds of advisory bodies for the Board of Directors, we are able to achieve fair, impartial, and highly transparent deliberations with regard to especially important management decisions, and increase the effectiveness of the Board of Directors.



Dr. Kozo Ishida
External Director

ULVAC's management and operation of the Board of Directors

Since I took office as an external director of ULVAC in September 2016, I have been familiarizing myself with ULVAC's philosophy, the nature of the business, and the corporate culture through in-depth communication with other directors and employees.

I have been greatly impressed by the cohesion and strength of purpose evident among ULVAC's Board of Directors and the tenacious corporate culture rooted in tradition that enabled ULVAC to overcome a challenging situation brought about by deterioration of the financial performance. In the operation of the Board of Directors, a commitment to both decisive management reform and operational reform based on faith in the Company's growth potential bore fruit.

I am convinced that respect for the views of external parties, continued vigorous pursuit of reform, and open discussion with a sense of urgency will enable the Board of Directors to achieve effective corporate governance.

Message from an External Director

ULVAC's Corporate Governance Viewed by an External Director

My role

The role of external directors is to supervise execution of management. In addition, I think my role is to offer advice on overall management from a broad perspective, drawing on my many years of experience as an executive, especially concerning the management of subsidiaries in Europe and North America and in M&A, so as to contribute to ULVAC's development.

Sustainable growth of ULVAC is key

Since the FPD business accounts for such a large proportion of sales, I would like to see strategic investment in the next round of growth, for example, by focusing on a new business in addition to the globalization of existing businesses. In particular, it is critically important to foster diverse global human resources and invest in development of new technologies. In view of increasing complexity and accelerated globalization of markets and businesses, it is vital to reform the enterprise system to facilitate flexible and fast management.

Compliance

The ULVAC Group views compliance as a vitally important issue. In addition to conducting awareness-raising activities so that each person in the ULVAC Group acts with a spirit of compliance, we are establishing and operating a range of institutions and regulations to ensure thorough compliance.

Establishment of Corporate Code of Conduct

The ULVAC Group has established a Corporate Code of Conduct comprising 18 items, conducted education, and distributed booklets to inculcate a culture of compliance, in order to ensure that the execution of the duties of officers and employees is compliant with laws and regulations and internal rules, and that we fulfill our corporate social responsibility.



Compliance Education

ULVAC is working to create a culture of compliance through awareness-raising activities. As part of this effort, we are providing opportunities for regular and ad hoc education and training.



Whistleblowing System

ULVAC has adopted a whistleblowing system operated through the Internal Auditing Office, which is an independent body. The Internal Auditing Office also serves as the secretariat for the Compliance Committee, and it is structured to give full consideration to confidentiality throughout the process of investigating the content of reports. This system does not prevent the person making the report from selecting other institutions or organizations within the Company as the destination for the report, and in such case, the report shall also be handled appropriately.

Individuals making reports are not treated unfavorably in any way. Reports can also be submitted anonymously.

After a whistleblower report has been received, the initial response is for the Compliance Committee to conduct an investigation in order to establish the facts. This investigation is particularly mindful of fairness, and is conducted judiciously and thoroughly. If necessary, assistance may be sought from external experts, such as lawyers, and thorough interviews that are as wide-ranging as necessary may be conducted and analyzed.

The president chairs the Compliance Committee and the members of the Committee observe a strict duty of confidentiality in carrying out their duties.

Handling of Violations

If it is deemed that a violation of laws or regulations has been committed based on the results of an investigation by the Compliance Committee, then the opinion of an external expert, such as a lawyer, may be sought as necessary, immediate cessation or improvement measures will be implemented, and those

involved in the violation will be dealt with after deliberation by the appropriate bodies. In addition, the fundamental causes that brought about the violation are also investigated in order to formulate effective measures for preventing recurrence.

Risk Management

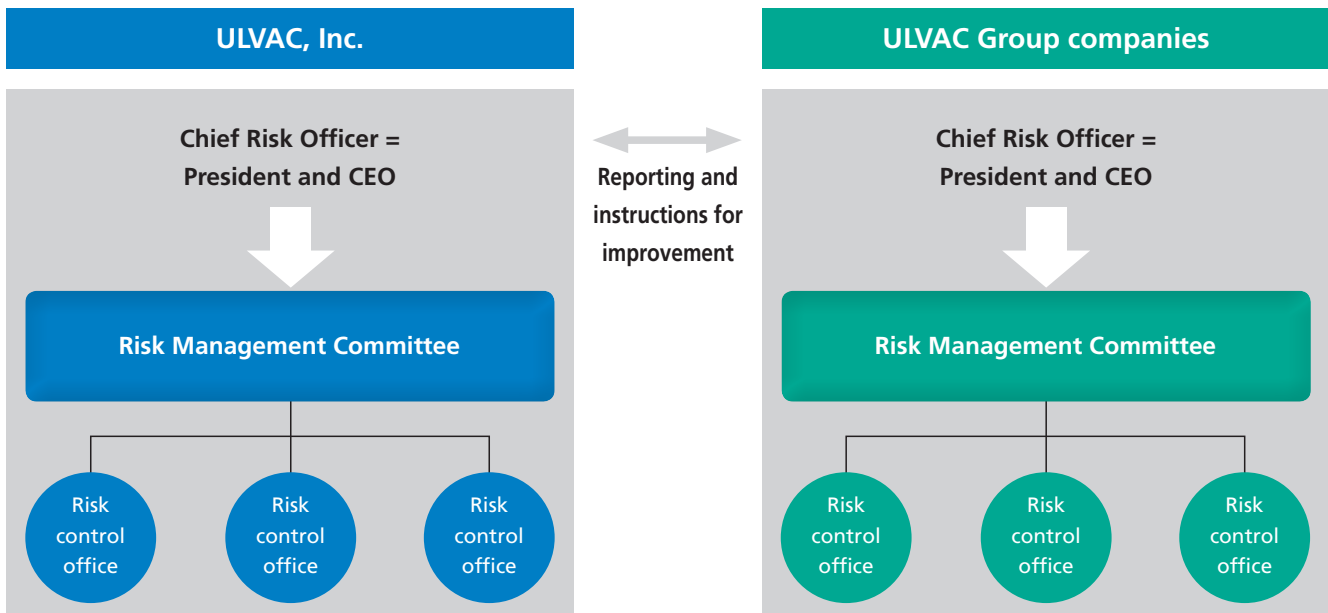
The ULVAC Group considers that responding appropriately to increasingly complex and diverse risk factors leads to the creation of governance structures that contribute to the fulfillment of legal requirements and the creation of internal control structures, and by extension, the medium- to long-term improvement of corporate value. We are expanding systems that can respond appropriately to risk factors through identification, classification, analysis, and evaluation, and we are working to increase corporate value by reflecting them in our management strategy.

Risk Management System

In regard to risk management initiatives, ULVAC has established rules concerning its risk management system, classifying a broad range of risks from various perspectives, and designated the control offices primarily responsible for risk management according to the classification of risks. Furthermore, these risk control offices identify more specific risks and respond to them. We work to ensure that these offices efficiently gather important information in operating the risk management system. In addition, in order to share and evaluate information concerning the operation of the risk management system on a company-wide basis, we

have a Risk Management Committee, which is chaired by the president, and mainly comprises representatives of the risk control offices with primary responsibility for risk management. The Risk Management Committee holds regular twice-yearly meetings as an umbrella organization for risk management, and it determines company-wide basic policies, monitors the state of management and administration, and considers any improvements that can be made, etc. Furthermore, initiatives at ULVAC are implemented at ULVAC Group companies as appropriate for the scale and business type of the company in question.

Risk Management System



- Risk control offices are designated according to risk classifications and they implement risk management through a PDCA cycle.
- Each Group company decides whether it is necessary to establish a Risk Management Committee in consideration of the size of the company in question and other factors.

Directors, Auditors, and Executive Officers



Directors and Auditors

1	2	3	4	5	6	7
Isao Utsunomiya	Senshu Asada	Seiichi Takahashi	Makoto Ito	Akira Mihayashi	Norio Uchida	Dr. Koza Ishida
External Auditor Tax accountant	External Auditor Attorney at law	Auditor	Auditor	External Director President of Nissay Credit Guarantee Co., Ltd.	External Director	External Director Senior Advisor for HORIBA, Ltd.

Executive Officers

Masasuke Matsudai	Hideyuki Odagi	Dr. Choong Ryl Paik	Shigemitsu Sato	Dr. Kazuya Saito	Akira Umeda	Ryou Matsumoto
Senior Managing Executive Officer President of ULVAC TECHNO, Ltd.	Managing Executive Officer Supervisor of Manufacturing	Managing Executive Officer Supervisor of Development	Managing Executive Officer General Manager of FPD*PV Division	Executive Officer General Manager of Institute of Semiconductor & Electronics Technologies and Research and Development Planning Department	Executive Officer General Manager of IR Department and Marketing Department	Executive Officer General Manager of Internal Auditing Office



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Hisaharu Obinata

Chairman

Setsuo Iwashita

President and Chief Executive Officer

Akinori Bo

Director and Executive Vice President

Mitsuru Motoyoshi

Director and Senior Managing Executive Officer
General Manager of Business Strategy Headquarters

Junki Fujiyama

Director and Senior Managing Executive Officer
Supervisor of Corporate Sales & Marketing

Youichi Oohinata

Executive Officer
General Manager of Industrial
Equipment Division

Kiyokazu Yanagisawa

Executive Officer
General Manager of Components
Division

Yu Jer Tsai

Executive Officer
President of ULVAC TAIWAN INC.

Kazuo Ikeda

Executive Officer
President of ULVAC TOHOKU, Inc. and
ULVAC KYUSHU CORPORATION

Takeshi Haginouchi

Executive Officer
General Manager of Corporate Sales
& Marketing Division II

Tomoyasu Kondo

Executive Officer
General Manager of Semiconductor
Equipment Division

Quality Assurance and Product Safety

The ULVAC Group will engage in initiatives to meet customer expectations for high-level, safe ULVAC quality through assurance activities centered on Front Loading.*1

ULVAC Group Quality Policy

“Product quality assurance strengthens our customers’ confidence in ULVAC.”

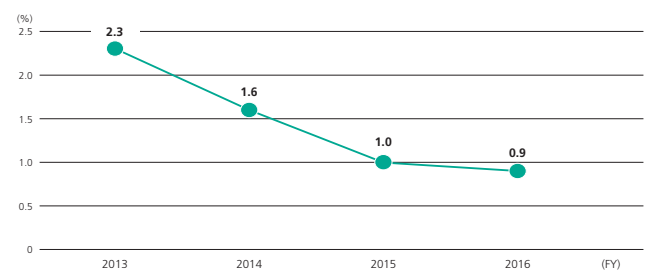
- The ULVAC group is committed to promote ULVAC quality through front-loading in all business processes including development, sales, production and service and through offering products and services which include needs from all parts of the world.
- Each employee within the ULVAC group strives to ensure that their personal efforts contribute to the creation of value necessary to maintain the customer as an everlasting partner.

Action Policies

- We comply with all rules and procedures.
- We do not deliver any nonconforming products to the next process.
- We observe delivery times to the next process.
- We commit to the production budget.

achieving management plan objectives through the global integration of quality and environmental management systems.

Year-on-year comparison of costs related to nonconformity after delivery (non-consolidated)



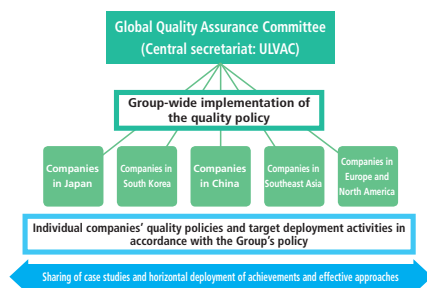
Completion of Global Certification for ISO 9001 and ISO 14001

As of the end of December 2016, 38 ULVAC Group companies had completed integrated certification for quality and environmental management systems. This has enabled the Group to align quality policies group-wide, ascertain quality status, and realize a reporting system pertaining to quality issues and improvement.

Increasing the Number of Qualified Safety Assessor

The ULVAC Group assigns persons with mechanical safety knowledge to each company and division for the purpose of maintaining and improving the safety of ULVAC brand products. We are training qualified safety assessor (SA)*2 to contribute to safe manufacturing by utilizing mechanical safety knowledge based on international safety standards to validate product safety in risk assessment performed at the design stage. We intend to continue groupwide training of qualified SA through internal mechanical safety education so as to increase customer satisfaction by contributing to safe and secure manufacturing.

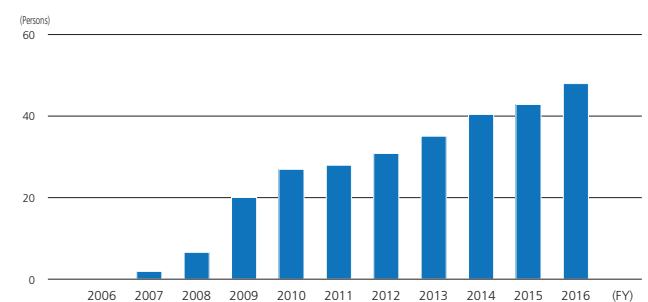
The ULVAC Group’s Quality Management System



Under this system, ULVAC engages in groupwide Front-Loading activities.

Future plans call for further integration with management systems, quality improvement, and earnings structure improvement through the development of ISO 9001:2015 and ISO 14001:2015 management systems with the aim of strengthening governance and

Number of qualified safety assessors in the ULVAC Group



*1 “Front Loading” ordinarily refers to arranging or planning so that a large portion of work occurs in the initial phase. At ULVAC, it is an activity to create quality by identifying issues as soon as possible.

*2 Safety Assessor (SA) Qualification is a qualification scheme based on third-party certification of mechanical safety knowledge and competence under international safety standards.

Procurement

The ULVAC Group strives to create state-of-the-art products and win the trust of end users by engaging in high-quality communication with suppliers, who play a critical role in manufacturing, and further deepening supplier relationships through new initiatives.

Communication with Suppliers

ULVAC holds supplier meetings three times a year and operations briefing meetings once a year as forums for communication with suppliers.

At supplier meetings, we present forecasts for each business segment that incorporate delivery dates for procurement items based on the status of orders received and trade inquiries and disclose timely information to facilitate mutual adjustment of delivery dates.



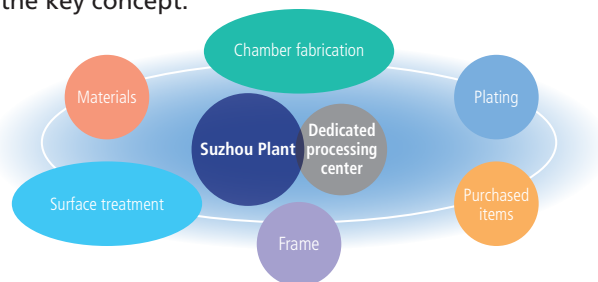
At operations briefing meetings, we express our appreciation to suppliers for their day-to-day cooperation. The president of ULVAC explains the business environment and future outlook, and we confirm our intention to further deepen relationships of trust with suppliers and develop and grow together through shared recognition of the mutual importance of quality, delivery, and price. We also strive to strengthen partnership with suppliers by conducting plant tours to increase supplier understanding of ULVAC and conducting vacuum demonstrations to deepen understanding of vacuums.

Business Continuity Planning (BCP) Surveys

Since fiscal 2014, the Group has conducted business continuity planning (BCP) surveys, verifying management systems and emergency parts supply structure to manage the parts supply chain and minimize parts supply risk from natural disasters or accidents. We follow up to vitalize activities, mainly at suppliers that have not established systems.

Global Procurement

Accompanying the globalization of production ULVAC has pursued since successfully producing large FPD production equipment at ULVAC (SUZHOU) CO., LTD (Suzhou, China), we have proceeded with supply chain development and construction and human resource development to ensure smooth local procurement activities, with local production for local consumption as the key concept.



Voice of Supplier

From a major supplier

We celebrated our 45th anniversary in 2016. Our recent developments include the construction of the Usaginai Coating Plant, construction of additional clean rooms, and introduction of new facilities at the head office plant and Ishinomaki Plant.

ULVAC accounts for more than 70% of our sales, and we will continue to broaden our horizons so we are able to meet a wide variety of needs, from large items to small, and push forward without fear of change.

Some 30 years have already passed since our business relationship with the ULVAC Group began. We are growing steadily together with the ULVAC Group under the concept that business partners are family. I am deeply grateful for ULVAC's patronage over the years.

I am convinced that ULVAC's technologies are essential to the future of humanity. I believe expertise and preeminent skills cultivated over many years will retain their value, even if the times change. I hope to integrate ULVAC's leading-edge technologies with the technologies we have developed at our plants over many years so that both companies achieve growth while increasing their value to society, all employees and their families attain happiness, and we contribute to local communities.



Mr. Eiji Tazawa
President
Tohoku Miyoshi Industry CO., LTD.

Human Resources

To promote ULVAC's businesses, it is necessary that vitalized organizations serve as a foundation on which diverse human resources fully demonstrate their potential. We strive to create value by actively engaging in organizational and human resources development.

Human Resources and Organizational Development

Integration of the ULVAC Group

We are proceeding with the integration of the ULVAC Group in the areas of human resources and education. We are enhancing the content of stratified training, which has long been provided at the parent company and Group companies, with the aim of inculcating the corporate philosophy. We have also convened the Group Personnel and General Administration Meeting to consider multifaceted integration with respect to organizations, regulations, systems, and education.

Diverse Education Programs

Education plans are developed based on the ULVAC Basic Policy for Human Resource Development. We promote the growth of individuals by offering various programs, such as stratified training, skills training, OJT, and support for self-development, and also actively engage in education targeted at specific areas.

In particular, as globalization has progressed in recent years, we have enhanced pre-transfer training for staff assigned overseas and education to boost the language abilities of young employees.

Hiring and Utilization of Human Resources

We are increasing the hiring of young people to maintain an appropriate employee age structure. Furthermore, employees who have reached retirement age can make use of a program for elder employees. In this way, in addition to creating an environment in which seniors can continue to work actively, we have instituted a mechanism for passing on skills to younger employees.

Self-Reporting System

ULVAC has a self-reporting system for employees to share their career plans with their superiors and the company. To maximize the growth of individuals and the company, in determining employee rotations, we take into account the contents of the self-reporting.

Future Issues and Initiatives

We recognize that responding to globalization and developing the next generation of employees are essential for further organizational vitalization. We will take every opportunity to engage in personnel exchanges and provide education with human resources diversity in mind and practice flexible organizational management.

ULVAC Basic Policy for Human Resources Development

We are conscious that the most important resources for corporate vitality and competitiveness are the personnel and the organizations in which they work. We are conducting the following human resources development, based on our corporate philosophy and basic management policy.

1. Human resources who respect other individuals, trust each other and fulfill their responsibilities
2. Human resources who can see the true nature of each issue and create revolutionary technologies and projects with passion and tenacity
3. Human resources who are full of aspirations to improve themselves and take voluntary actions to achieve goals
4. Human resources who have a global perspective and aim to take leadership in exploring the world

ULVAC Academy for Professional Production-Related Training

ULVAC is strengthening the MONODZUKURI structure by providing specialized training to Group employees. The ULVAC Academy conducts groupwide training under the concept of "providing training materials necessary for ULVAC's production to those who need them and creating an environment that facilitates learning throughout the Group." The Academy not only encourages self-study through e-learning and training materials, but also more effectively conducts grouped training, including practical skills training. It enables the individuals who will create the next-generation of products to receive professional training in fields such as manufacturing, manufacturing technology, engineering and design, while also imparting the history of ULVAC and disseminating the latest Group information. In this way, the Academy supports the realization of the ideal form for individuals, divisions, companies, and the Group as a whole.

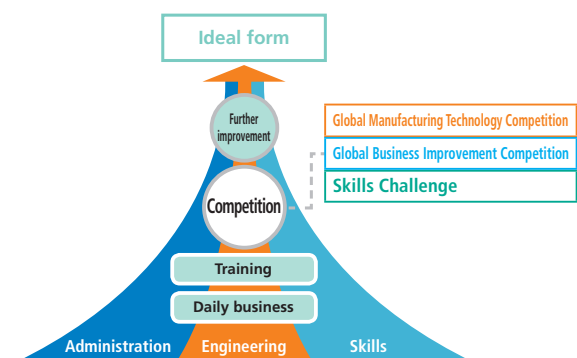
In fiscal 2017, ULVAC integrated the functions of the ULVAC Academy and the education system of the Personnel Department and expanded the curriculum to provide comprehensive education including not only production-related training, but also administrative training to cover the entire Group.



ULVAC Group Vitalization Programs

ULVAC utilizes the diversity that results from different ways of thinking and different cultures to stimulate the awareness of organizations and individuals. By sharing groupwide processes that lead to the resolution of organizational and individual issues, we maximize its effects.

We have made Front Loading the central theme of the Global Manufacturing Technology Competition, Skills Challenge, and Global Business Improvement Competition programs with the aim of ensuring that all employees are aware of Front Loading in their own work not limited to engineering and linking this awareness to outcomes.



Creating Excellent Workplaces

At ULVAC, we strive to institute human resources programs that help employees lead fulfilling professional and private lives, and we continually enhance the effectiveness of these system.

Program Examples

- Granting of annual paid leave from the first day of employment
- Holding of "spot-leave campaigns" to encourage all employees to take paid annual leave
- Selective summer leave system
- Assignment of a person in charge of labor management in each department and rigorous control of overtime
- Staggered working hours alternative work schedule system and flextime system
- No-overtime days

A noteworthy outcome of these programs has been particularly high rates of parental leave utilization and returning to work. Although we have few female employees, in fiscal 2016 five female employees took parental leave and two returned to work after completing leave. The utilization rate and return-to-work rate were 100%.

Fiscal year	Commencement of parental leave (utilization rate)	Return to work after completing parental leave (return-to-work rate)
FY2016	5 persons (100%)	2 persons (100%)
FY2015	2 persons (100%)	3 persons (100%)
FY2014	2 persons (100%)	6 persons (100%)

Voice of Employee Parental leave

I took parental leave in 2013 and 2015 and now work at the same workplace as before I took leave, using the short working hours system. The system of shortening morning and afternoon working hours by one hour each made it so much easier for me to take my children to and from nursery school when they were unable to attend the same school.

Childrearing brings various restrictions, and I owe my ability to work energetically to the understanding and cooperation of my workplace colleagues, for which I am deeply grateful.



Erika Kato

Advanced Electronics Equipment Division

Supporting Product Development and MONODZUKURI through Health Promotion

1) Walk Rallies

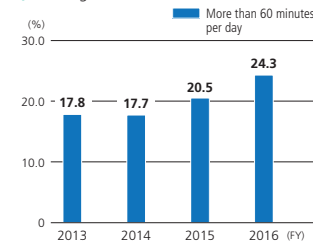
In fiscal 2016, the ULVAC Group began organizing walk rallies using wearable devices for the purpose of making autonomous health management a habitual practice. Even in the first year of this activity, 1,327 employees of the ULVAC Group have participated and enjoyed Walk Rallies for a year. In addition, thanks to physical fitness measurement and other initiatives in self-care training, health management is becoming habitual practice to our employees. As a result, the percentage of ULVAC employees who walk at least 60 minutes per day increased to 24.3% in fiscal 2016.

2) Organization Vitalization Training Using the Results of Stress Check

ULVAC conducts organizational vitalization training using the results of stress checks that examine the physical, mental and social health of employees. We aggregate the results by organizational unit and utilize them in training. Based on the results, managers have set targets at each department and section and are proceeding with workplace vitalization.

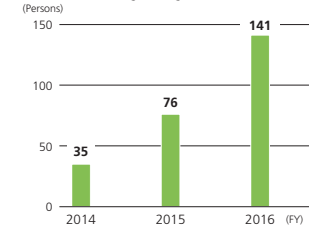
The number of departments requesting training is increasing, and in fiscal 2016, 141 employees from nine departments participated.

1) Walking habits

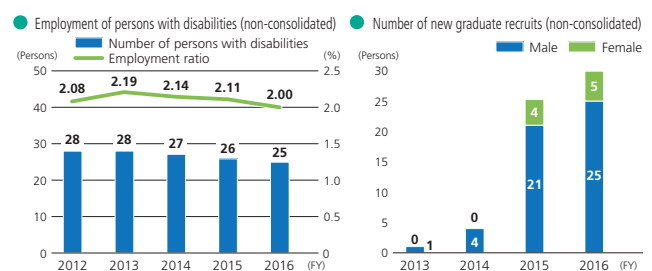
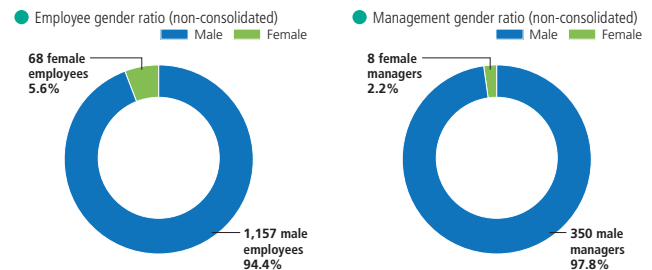


*Aggregated from employee responses to a health check survey questionnaire

2) Annual number of participants in organizational vitalization training (managers)



Human Resources Data



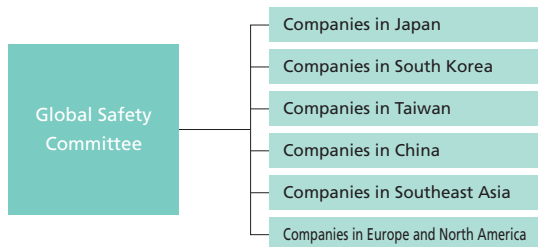
Occupational Safety and Health

The ULVAC Group has made “Safety First” the fundamental principle of business operations. By operating our Occupational Safety and Health Management System (OSHMS), which is focused on risk assessment, we endeavor to ensure safety of the products and services used by our customers and in operations at our customers’ plants as well as to create dynamic workplaces where ULVAC employees can work in good physical and mental health.

Receipt of Type-IV Zero Accident Record Certificate

To ensure the safety and good health of its customers and employees, the ULVAC Group regularly holds meetings of the Global Safety Committee, and all Group companies promote safety and health activities in an integrated manner. Each Group company operates the OSHMS system and everyone is engaged in safety and health activities, such as management reviews conducted by the CEO and other executives and risk assessments performed by each employee. As a result of efforts to prevent occupational accidents, the Chigasaki Plant has achieved a Type-IV zero accident record (10.5 million hours). With “Safety First” as their motto, the Group companies will continue to move forward with efforts to achieve a zero accident record.

ULVAC Group Safety Management System



Zero Accident Record

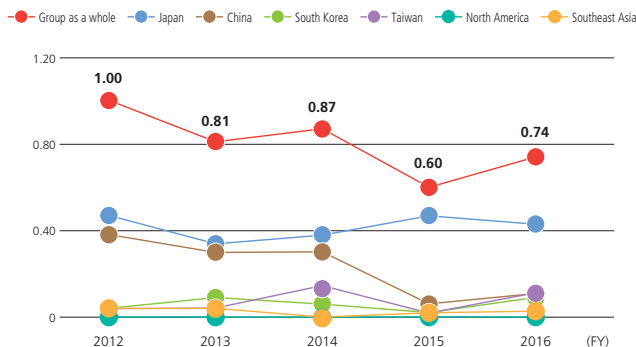


Type-IV zero accident record certificate



Receiving the certificate

Frequency ratio of occupational accidents throughout the ULVAC Group



* This graph shows the rate of occupational accidents in the entire ULVAC Group for each fiscal year, indicating the value for fiscal 2012 (as of June 2013) as 1.00. In fiscal 2016 (as of June 2017), the rate of occupational accidents decreased by 26% compared with that in fiscal 2012.

Safety and Health Activities

Disaster Drills

The 2016 Kumamoto Earthquake and other disasters and accidents that have recently occurred around the world have raised worldwide awareness of the importance of local emergency preparedness. In addition to conducting basic drills in evacuation, initial firefighting and other emergency operations, ULVAC has investigated methods and equipment for effectively conducting emergency medical drills and shared them with the Group companies to help them prepare for emergencies. The Chigasaki Plant has concluded an agreement with Chigasaki City and contributes to local disaster preparedness, such as by making the plant premises available for use by local residents as an evacuation area.



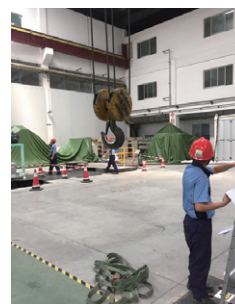
ULVAC CRYOGENICS INCORPORATED
Disaster drill



ULVAC KOREA, Ltd.
Emergency medical drill

Safety and Environmental Patrols

To prevent occupational accidents, after providing education and conducting risk assessments, it is important to create safe workplaces by using patrols to confirm the effectiveness of safety and environmental measures and implementing a PDCA cycle. ULVAC has integrated safety and environmental patrols and implements measures to identify improvement opportunities from both perspectives. ULVAC also conducts patrols of Group companies to eliminate hazard sources apt to be overlooked.



ULVAC Orient (Chengdu) Co., Ltd.
Safety patrol



ULVAC TAIWAN INC.
Pledging commitment to a safety declaration

Environment

Based on its environmental policy, the ULVAC Group provides products that allow customers to embrace the feeling that they have made environmental contributions. Through management and reduction of energy consumption and other efforts, we are working to minimize environmental impacts. As we have a global production system, we are working to gain integrated ISO14001 certification so as to strengthen governance, ensuring information sharing among Group companies and swift implementation of instructions issued by top management. The ULVAC Group will continue its efforts to reduce environmental impacts through its products.

Environmental Philosophy

The ULVAC Group is tackling protect the global environment, one of the major issues confronting people worldwide. We will consider environmental conservation in all aspects of our business activities and will contribute to realization of a better living environment and a more affluent society.

Environmental Policy

Develop energy-saving products, reduce the use of natural resources and protect the environment.

- 1 ULVAC Group products/Final products
- 2 ULVAC Group manufacturing process

The ULVAC Group is conducting energy-saving activities with the target of reducing energy costs by 10% in five years compared to fiscal 2013. In fiscal 2016, we achieved a 1.4% reduction in energy (electricity) consumption compared with the previous fiscal year. Reduction since fiscal 2013 totaled 2.5%, indicating that an awareness of energy conservation has taken root throughout the ULVAC Group.

On the other hand, waste emissions increased by approximately 21% compared with the previous fiscal year.

This increase is thought to be mainly attributable to the increase in production volume. The recovery rate of valuable materials was unchanged at 26%. As recovery of valuable materials is important also from the perspective of material recycling, we will continue to promote it throughout the ULVAC Group.

The ULVAC Group will continue to promote environmental management activities in order to reduce environmental impacts derived from its business activities.

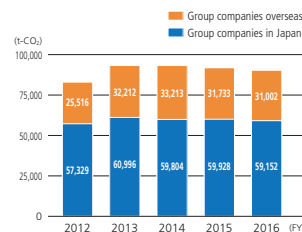
Material Balance

INPUT		OUTPUT	
Electricity consumption	155,639 thousand kwh	CO ₂ emissions	90,154 t-CO ₂ (Emissions due to consumption of electricity, gas, and fuels)
Gas consumption	LPG: 155 t LNG: 608 t City gas: 1,493 thousand m ³	Total waste emissions	8,792 t Total amount of waste recycled: 8,479 t Landfill: 313 t
Fuel consumption	Heavy oil: 70 kL Kerosene oil: 18 kL Diesel oil: 229 kL	Final landfill disposal rate	3.6%
Water consumption	1,118 thousand m ³		
Packaging materials	1,731 t		

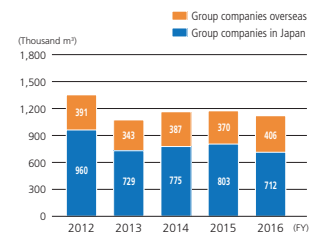
* The above data are based on the data from 37 Group companies in Japan and overseas.

* The volume of packaging materials is based on the data from 28 Group companies in Japan and overseas.

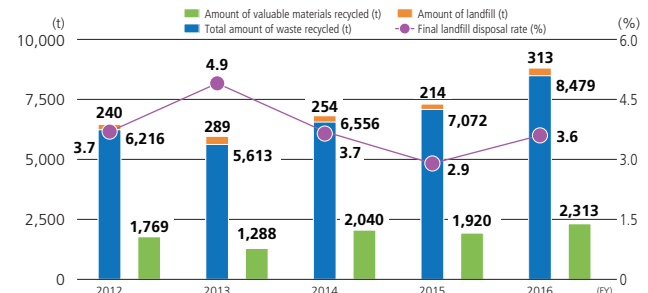
CO₂ emissions



Water consumption



Waste emissions

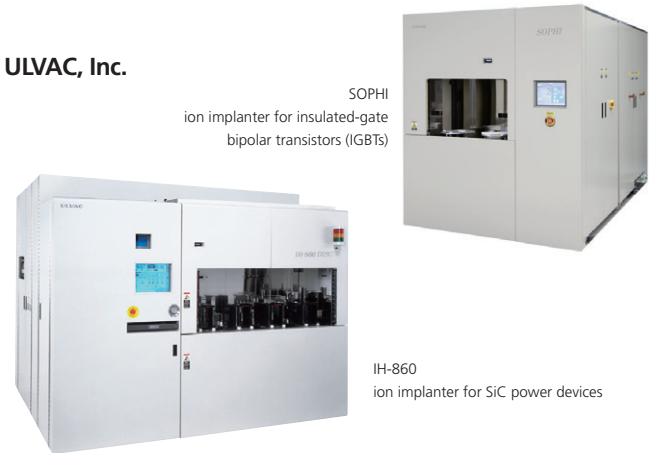


Environment

Ion Implanters for Power Devices

Advanced Electronics Equipment Division, ULVAC, Inc.

In the smart society, power devices will be the technology and products essential for reducing electricity consumption and using energy more efficiently. Power devices convert electricity to the correct voltage and frequency when power is supplied to home appliances, trains, automobiles, and more recently, to electric vehicles, which are expected to grow rapidly. Increasingly, new materials such as silicon carbide (SiC) and gallium nitride (GaN) are applied in power devices in order to handle higher voltages, minimize energy loss, and increase conversion speed. The Advanced Electronics Equipment Division has developed and sells pioneering ion implanters that can be adapted to these materials.



SOPHI
ion implanter for insulated-gate
bipolar transistors (IGBTs)

IH-860
ion implanter for SiC power devices

Receipt of the Kanagawa Global Environment Award

Corporate Environment, Safety and Health Department, ULVAC, Inc.

ULVAC, Inc. received the 2016 Kanagawa Global Environment Award. ULVAC was recognized for its achievements, notably reducing its Fiscal 2014 CO₂ emissions by approximately 37% compared to base year emissions (FY2009) during a five-year period at the Chigasaki Plant, a research and development base for vacuum systems and related equipment. This was accomplished through operational improvements such as the shutting down of clean rooms and R&D facilities as standard practice on non-business days and at night and integration of office areas. ULVAC will continue to vigorously practice efficient energy use and engage in activities to maintain optimized energy consumption.



Environmental Management Representative
Youchi Oohinata receiving the award

Receipt of the Environment and Safety Excellence Award from the Governor of Gyeonggi-do, South Korea

Management Dept., Pure Surface Technology, Ltd.

On December 1, 2016, Pure Surface Technology, Ltd. received the Environment and Safety Excellence Award from the governor of Gyeonggi-do, South Korea at the Human Resources Development Association, Gyeonggi-do. The company was commended for significantly contributing to environmental protection by reducing emissions of oil vapor into the atmosphere through recovery and recycling oil vapor using an oil vapor recovery system. The citation was awarded on the recommendation of the Head of the Environmental Engineers Association, Gyeonggi-do for a contribution that serves as a model for other companies.



Awarding of the citation

Hotaru (Firefly) Project Kagoshima Office

The Kagoshima Office, which constitute of ULVAC KYUSHU CORPORATION, ULVAC, Inc., and ULVAC TECHNO, Ltd., created a biotope on its grounds in 2016 in a nature conservation initiative that is contributing to the local community. It has began discharging plant wastewater into the biotope to create a great habitat for fireflies, the Hotaru Project was launched by employees eager to enjoy firefly's natural light show at dusk. In fiscal 2015, several firefly larvae released into the biotope on an experimental basis emerged. In the second year of the project, many larvae hatched from eggs have grown and are expected to develop into adult fireflies. In May 2017, the Kagoshima Office invited students from an elementary school in the neighborhood for a *medaka* (Japanese killifish) release event at the biotope, thus contributing to environmental education. The Kagoshima Office intends to continue engaging in activities together with the local community.



Social Contribution Activities

The ULVAC Group will continue to contribute to local communities and the global community by effectively utilizing its technologies and human resources to help resolve various social issues.

Harmonious Coexistence with Chigasaki City

Career Advice Lecture for High School Students

In March 2017, a young ULVAC employee and alumnus of Kanagawa Prefectural Tsurumine High School gave a lecture to first-year students of his alma mater to offer insights useful in their future career choices. He discussed the nature of companies and the world of work, provided suggestions on what the students should do during their school years, and offered advice on future job-seeking.



Shuuji Aoyama, an employee in the Advanced Electronics Equipment Division of ULVAC, Inc., with 8 years of service with the company, addressing the students

38th Chigasaki Space Lesson

The 38th Chigasaki Space Lesson was held at the ULVAC, Inc. Chigasaki Head Office/Plant in June 2017. The lesson was sponsored by the Chigasaki Education Committee at the request of the Young Astronauts Club-Japan Chigasaki Chapter, whose first leader was the late Dr. Chikara Hayashi, the third president of ULVAC. The response to the lesson was tremendous, with more than 300 applications received, exceeding the capacity of 100 children.



A vacuum demonstration

ULVAC Festival 2016

ULVAC Festival 2016 was held in November 2016 at the ULVAC, Inc. Chigasaki Head Office/Plant to express gratitude to the employees and their families and to local residents. The festival, held for the first time in six years, featured a number of attractions, including a plant tour, refreshment booths, and stage events such as wind-instrument music performed by local junior and senior high school students, all of which were well received. Visitor turnout exceeded initial expectations.



ULVAC Festival 2016 commemorative photograph (taken from the rooftop)

Activity Case Study

01

Clean Partner Industrial Complex Clean-Up Activity

ULVAC TOHOKU, Inc. and ULVAC Human Relations, Ltd. engage in clean partner activities to beautify the environment of the Hachinohe North-Interchange Industrial Complex. Sixteen people participated in 2016, with cooperation from the Hachinohe City Environmental Department. The amount of trash has continued to decrease after peaking in 2013, and the companies will continue regular environmental activities with the aim of maintaining an attractive landscape.



Clean-up activity

Activity Case Study

02

Volunteer Activities at the South Korea ULVAC Group*

The South Korea ULVAC Group engages in wide-ranging volunteer activities in local communities. Group employees participate in DIY work to improve the living environment for elderly people living alone who require volunteer assistance, provision of coal briquettes and kimchi-making for those on low incomes, and athletic meets and cultural experiences that support orphans and the disabled. The volunteer circle extends beyond the ULVAC Group to include joint activities with SEPAS, a volunteer group affiliated with Samsung.



Making kimchi

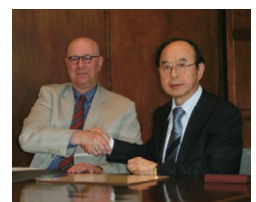
*ULVAC KOREA, Ltd., Ulvac Korea Precision, Ltd., ULVAC Materials Korea, Ltd., Pure Surface Technology, Ltd. and UF TECH, Ltd.

Activity Case Study

03

ULVAC and MIT Establish the Hayashi-ULVAC MISTI Seed Fund

ULVAC, Inc. has agreed to establish the Hayashi-ULVAC MISTI Seed Fund to support opportunities for collaboration between researchers of a Massachusetts Institute of Technology (MIT) educational assistance organization and their counterparts at research institutions in Japan. First established in 2008 by the late Dr. Chikara Hayashi, the fund will support development of the next generation of researchers and contribute to the advancement of leading-edge technologies around the world.



Signing ceremony at MIT

Business Results: Review of Operations for Fiscal 2016

Business results for Fiscal 2016

In the electronics market in which the ULVAC Group operates, trends toward more sophisticated and slim mobile devices continued and demand for semiconductor and electronic devices was generally firm, despite slowing growth in the number of smartphones sold. Regarding flat panel display (FPD) production equipment, robust capital investment continued for OLED production equipment for mobile handsets and large LCD production equipment for TVs.

Against the backdrop of buoyant capital investment by flat-panel and semiconductor manufacturers, demand increased centering on FPD production equipment, semiconductor and electronic device production equipment, and components, leading to increases in

orders received and net sales. In terms of profit, both the gross profit margin ratio and the operating income margin ratio improved owing to increased sales and ongoing cost reduction.

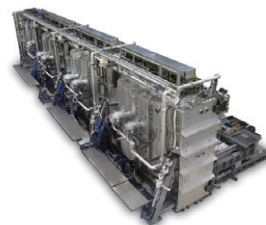
As a result, for the fiscal year ended June 30, 2017 (fiscal 2016), orders received increased 5.3% year on year to ¥235.5 billion, net sales rose 20.5% to ¥231.8 billion, operating income surged 65.0% to ¥29.5 billion, ordinary income jumped 61.7% to ¥29.7 billion, and net income increased 46.5% to ¥24.5 billion. Orders received, net sales, and all exceeded the targets set at the beginning of the fiscal year and record-high results were achieved for the second consecutive year.

Stronger Profitability

Targeting “stronger profitability by changing awareness” under the previous mid-term management plan, ULVAC worked to improve profitability by promoting continuous R&D and enhancing efficiency of the Group’s production system in response to changes in the market, such as the trend toward larger LCDs and the shift to OLED. As a result, net sales increased 1.3 times in three years and the operating income margin ratio improved from 6.9% for fiscal 2014 to 12.7% for fiscal 2016.

Regarding financial strength, the equity ratio improved to 40.2% and the amount of interest-bearing debt and the debt-to-total-assets ratio both improved greatly.

Products making big contributions to sales



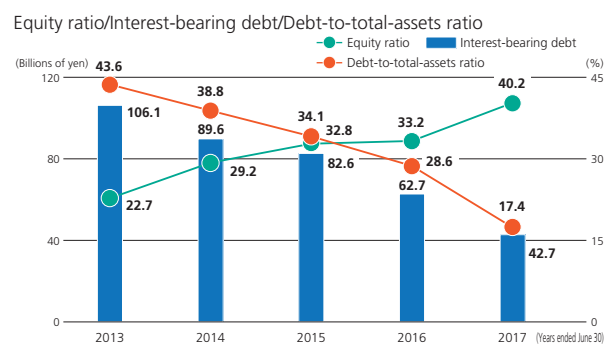
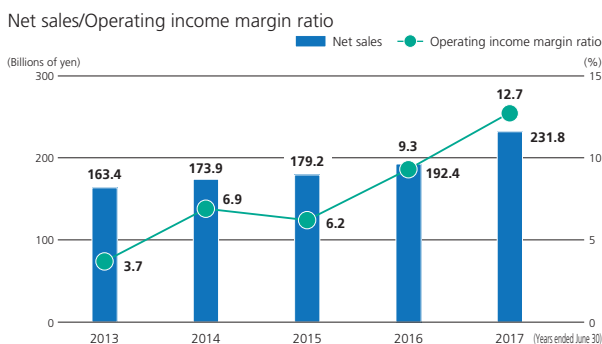
LCD production equipment



Sputtering equipment for semiconductors



Cryopump



Outlook

Review of Operations by Business Segment

Vacuum Equipment Business

For the vacuum equipment business, orders received amounted to ¥205,142 million, orders back-log was ¥101,145 million, net sales were ¥200,601 million, and operating income amounted to ¥26,846 million.

■ FPD and PV production equipment

Orders received for FPD and PV production equipment exceeded the level of the previous fiscal year because orders received for OLED production equipment and large LCD production equipment for TVs were at a high level despite a decrease in orders received for small to medium-sized LCD production equipment. Net sales greatly exceeded the level for the previous fiscal year as sales of large LCD production equipment for TVs as well as sales of OLED production equipment increased.

■ Semiconductor and electronic device production equipment

Regarding semiconductor production equipment, in line with the expansion of investment for memory, demand for sputtering equipment and the natural oxidized film removing system increased. Regarding electronic device production equipment, demand for high-performance device production equipment for mobile devices was firm. As a result, orders received and net sales exceeded those for the previous fiscal year.

■ Components

Both orders received and net sales greatly exceeded those for the previous fiscal year centering on

components for the FPD, semiconductor, and electronic device industries and for the automotive-related industry. In particular, cryopumps for mounting on OLED production equipment contributed greatly to net sales.

■ Industrial equipment

Both orders received and net sales exceeded those for the previous fiscal year, led by vacuum heat treatment furnaces for production of automotive components.

Vacuum Application Business

For the vacuum application business, orders received amounted to ¥30,318 million, orders back-log was ¥5,164 million, net sales were ¥31,230 million, and operating income amounted to ¥2,600 million.

■ Materials

Orders received and net sales centered on sputtering target materials for LCDs. Both orders received and net sales were lower than those for the previous fiscal year, affected by intensifying price competition.

■ Others

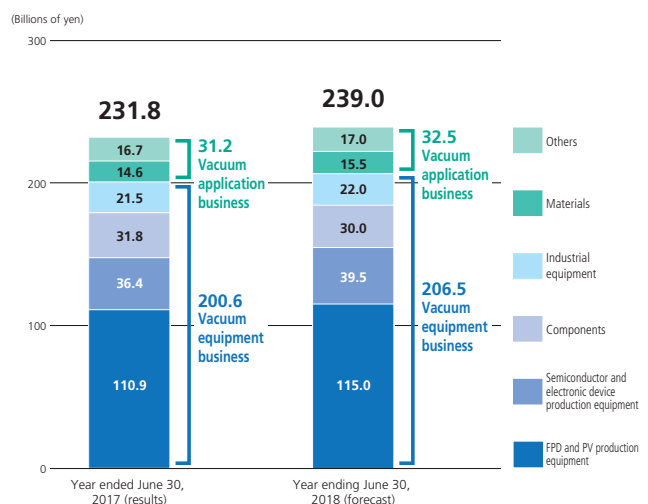
Demand for mask blanks was generally firm, reflecting an increase in demand for high-definition, sophisticated display panels and semiconductors for in-vehicle and industrial applications. On the other hand, regarding analysis equipment, both orders received and net sales were generally sluggish.

Outlook

Regarding FPD production equipment, capital investment for OLED production equipment for mobile handsets and large LCD production equipment for TVs is expected to remain robust. As technological innovation centering on the electronics field is accelerating in view of the trend toward the smart society, capital investment by semiconductor and electronic device manufacturers is expected to be buoyant.

Under the mid-term management plan, ULVAC will strive to further improve profitability and financial strength. At the same time, seizing the business opportunities created by technological innovation, ULVAC will accelerate initiatives toward sustainable growth and improved corporate value.

Forecast of net sales by business segment



Consolidated Financial Statements

Consolidated Balance Sheets

(Millions of yen)

	FY2015 (As of June 30, 2016)	FY2016 (As of June 30, 2017)
Assets		
Current assets		
Cash on hand and in banks	45,713	56,434
Notes and accounts receivable, trade	57,958	70,519
Merchandise and finished goods	4,645	5,097
Work in process	16,808	15,880
Raw materials and supplies	8,009	9,240
Deferred tax assets	4,746	6,027
Other	6,356	7,299
Allowance for doubtful accounts	(621)	(811)
Total current assets	143,616	169,685
Non-current assets		
Property, plant and equipment		
Buildings and structures	78,132	79,246
Accumulated depreciation	(44,765)	(47,018)
Buildings and structures, net	33,367	32,229
Machinery, equipment and vehicles	63,885	65,343
Accumulated depreciation	(50,194)	(50,892)
Machinery, equipment and vehicles, net	13,690	14,451
Tools, furniture and fixtures	13,286	14,153
Accumulated depreciation	(11,961)	(12,506)
Tools, furniture and fixtures, net	1,325	1,647
Land	8,109	8,096
Leased assets	1,516	1,836
Accumulated depreciation	(884)	(1,002)
Leased assets, net	632	834
Construction in progress	3,252	3,049
Total property, plant and equipment	60,374	60,306
Intangible assets		
Leased assets	112	67
Software	754	690
Other	3,051	2,815
Total intangible assets	3,916	3,573
Investments and other assets		
Investment securities	4,035	4,389
Deferred tax assets	1,924	2,298
Other	8,075	7,107
Allowance for doubtful accounts	(2,379)	(2,051)
Total investments and other assets	11,655	11,743
Total fixed assets	75,945	75,622
Total assets	219,561	245,306

(Millions of yen)

	FY2015 (As of June 30, 2016)	FY2016 (As of June 30, 2017)
Liabilities		
Current liabilities		
Notes and accounts payable, trade	35,303	48,829
Short-term loans payable	39,453	30,199
Lease obligations	319	315
Income taxes payable	2,039	2,525
Advances received	13,598	16,908
Deferred tax liabilities	11	10
Accrued employees' bonuses	2,206	2,738
Accrued directors' bonuses	368	401
Accrued warranty costs	1,964	2,069
Provision for loss on order received	558	785
Other	10,331	11,175
Total current liabilities	106,150	115,954
Long-term liabilities		
Long-term loans payable	23,237	12,528
Lease obligations	546	692
Deferred tax liabilities	1,399	1,408
Net defined benefit liability	8,711	8,311
Accrued directors' retirement benefits	319	335
Provision for board benefit trust	—	74
Asset retirement obligations	336	392
Other	831	694
Total long-term liabilities	35,378	24,436
Total liabilities	141,529	140,389
Net Assets		
Shareholders' equity		
Capital stock	20,873	20,873
Capital surplus	4,582	3,912
Retained earnings	50,813	73,801
Treasury shares	(10)	(271)
Total shareholders' equity	76,258	98,315
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	130	491
Foreign currency translation adjustment	(667)	2,480
Remeasurements of defined benefit plans	(2,822)	(2,599)
Total accumulated other comprehensive income	(3,359)	372
Non-controlling interests	5,133	6,229
Total net assets	78,032	104,917
Total liabilities and net assets	219,561	245,306

Consolidated Statements of Income

(Millions of yen)

	FY2015 (July 1, 2015–June 30, 2016)	FY2016 (July 1, 2016–June 30, 2017)
Net sales	192,437	231,831
Cost of sales	141,314	168,001
Gross profit	51,122	63,829
Selling, general and administrative expenses		
Selling expenses	15,740	14,818
General and administrative expenses	17,518	19,543
Total selling, general and administrative expenses	33,259	34,361
Operating income	17,864	29,468
Non-operating income		
Interest income	113	117
Dividend income	251	302
Rent income	360	297
Foreign exchange gains	578	—
Share of profit of entities accounted for using equity method	299	203
Other	1,019	831
Total non-operating income	2,619	1,750
Non-operating expenses		
Interest expenses	797	511
Commission for syndicate loan	244	170
Other	1,070	822
Total non-operating expenses	2,110	1,503
Ordinary income	18,373	29,716
Extraordinary income		
Gain on sales of non-current assets	60	35
Gain on sales of investment securities	—	81
Reversal of impairment loss on non-current assets	241	—
Total Extraordinary income	301	117
Extraordinary losses		
Loss on retirement of non-current assets	749	643
Loss on sales of non-current assets	—	423
Impairment loss	31	—
Loss on sales of investments in capital of subsidiaries and affiliates	109	—
Total extraordinary losses	888	1,065
Income before income taxes and minority interests	17,786	28,768
Current income taxes	3,892	4,556
Deferred income taxes	(3,433)	(1,599)
Total income taxes	459	2,957
Net income	17,327	25,811
Net income attributable to non-controlling interests	629	1,342
Net income attributable to owners of parent	16,698	24,469

Consolidated Statements of Comprehensive Income

(Millions of yen)

	FY2015 (July 1, 2015–June 30, 2016)	FY2016 (July 1, 2016–June 30, 2017)
Net income	17,327	25,811
Other comprehensive income		
Valuation difference on available-for-sale securities	(588)	364
Foreign currency translation adjustment	(8,781)	3,390
Remeasurements of defined benefit plans, net of tax	(2,107)	224
Share of other comprehensive income of entities accounted for using equity method	(36)	10
Total other comprehensive income	(11,512)	3,989
Comprehensive income	5,815	29,799
Comprehensive income attributable to:		
Owners of parent	5,877	28,200
Non-controlling interests	(63)	1,599

Consolidated Statements of Cash Flows

(Millions of yen)

	FY2015 (July 1, 2015–June 30, 2016)	FY2016 (July 1, 2016–June 30, 2017)
Cash flows from operating activities		
Income before income taxes	17,786	28,768
Depreciation	6,931	6,418
Impairment loss	31	—
Increase (decrease) in allowance for doubtful accounts	1,520	(171)
Increase (decrease) in accrued employees' bonuses	443	401
Increase (decrease) in net defined benefit liability	(263)	(247)
Increase (decrease) in accrued directors' retirement benefits	(75)	16
Increase (decrease) in provision for board benefit trust	—	74
Increase (decrease) in accrued warranty costs	69	32
Increase (decrease) in provision for loss on order received	435	227
Interest and dividend income	(364)	(419)
Interest expenses	797	511
Subsidy income	(151)	(98)
Share of (profit) loss of entities accounted for using equity method	(299)	(203)
Loss (gain) on sales of non-current assets	(60)	387
Decrease (increase) in notes and accounts receivable - trade	(5,888)	(10,732)
Decrease (increase) in inventories	(328)	(161)
Increase (decrease) in notes and accounts payable - trade	3,844	12,680
Increase (decrease) in advances received	700	2,634
Increase (decrease) in accrued consumption taxes	162	76
Other	1,461	1,866
Subtotal	26,750	42,060
Interest and dividend income received	429	488
Interest expenses paid	(805)	(510)
Income taxes paid	(2,666)	(4,219)
Net cash provided by (used in) operating activities	23,708	37,818
Cash flows from investing activities		
Payments into time deposits	(1,950)	(12,317)
Proceeds from withdrawal of time deposits	1,896	4,347
Purchase of property, plant and equipment and intangible assets	(5,947)	(6,515)
Proceeds from sales of property, plant and equipment and intangible assets	316	234
Payments for investments in capital of subsidiaries and associates	(286)	—
Proceeds from subsidy income	293	240
Other	84	298
Net cash provided by (used in) investing activities	(5,593)	(13,713)
Cash flows from financing activities		
Net increase (decrease) in short-term loans payable	(23,752)	(11,668)
Proceeds from long-term loans payable	13,610	—
Repayments of long-term loans payable	(9,196)	(8,313)
Repayments of lease obligations	(397)	(368)
Cash dividends paid	(491)	(1,477)
Purchase of treasury shares	(11,854)	(260)
Dividends paid to non-controlling interests	(368)	(494)
Net cash provided by (used in) financing activities	(32,448)	(22,580)
Effect of exchange rate change on cash and cash equivalents	(2,474)	1,168
Net increase (decrease) in cash and cash equivalents	(16,808)	2,693
Cash and cash equivalents at beginning of period	61,670	44,862
Cash and cash equivalents at end of period	44,862	47,555

Company Data/Stock Information

Company Profile

As of June 30, 2017

Name:	ULVAC, Inc.
Trademark:	ULVAC
Head office:	2500 Hagisono, Chigasaki, Kanagawa Prefecture, Japan
Established:	August 23, 1952
Capital:	¥20,873,042,500
Number of employees:	Non-consolidated 1,225 Consolidated 6,072

Stock Information

As of June 30, 2017

Total number of shares authorized	100,000,000
Total number of shares issued	49,355,938
Total number of shareholders	12,385

ULVAC Group Companies

ULVAC Group Companies in Japan

- Bases of ULVAC, Inc.
- Bases of ULVAC Group companies in Japan
- Service bases (ULVAC TECHNO, Ltd.)



- ULVAC TECHNO, Ltd.
- ULVAC KYUSHU CORPORATION
- ULVAC TOHOKU, Inc.
- ULVAC KIKO, Inc.
- ULVAC EQUIPMENT SALES, Inc.
- ULVAC CRYOGENICS INCORPORATED
- ULVAC-PHI, Inc.
- TIGOLD CORPORATION
- ULVAC COATING CORPORATION
- NISSIN SEIGYO Co., LTD.
- ULVAC Human Relations, Ltd.
- SHINKU CERAMICS CO., LTD.
- FINE SURFACE TECHNOLOGY CO., LTD.
- Reliance Electric Limited
- SHOWA SHINKU CO., LTD.

Overseas ULVAC Group Companies

- Overseas ULVAC Group companies
- Sales and service bases

Europe

Europe

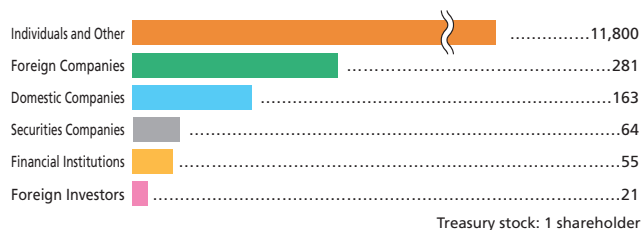
- ULVAC GmbH

China

- ULVAC (CHINA) HOLDING CO., LTD.
- ULVAC (NINGBO) CO., LTD.
- ULVAC (SUZHOU) CO., LTD.
- ULVAC Orient (Chengdu) Co., Ltd.
- ULVAC Automation Technology (Shanghai) Corporation
- ULVAC Tianma Electric (Jingjiang) Co., Ltd.
- ULVAC (Shenyang) Co., Ltd.
- ULVAC (Shanghai) Trading Co., Ltd.
- ULVAC Materials (Suzhou) Co., Ltd.
- ULVAC Opto-electronics Thin Film Technology (Shenzhen) Co., Ltd.
- ULVAC CRYOGENICS (NINGBO) INCORPORATED
- ULVAC NONFERROUS METALS (NINGBO) CO., LTD.
- ULVAC Research Center SUZHOU Co., Ltd.
- Hong Kong ULVAC Co., Ltd.
- ULVAC VACUUM EQUIPMENT (SHANGHAI) CO., LTD.

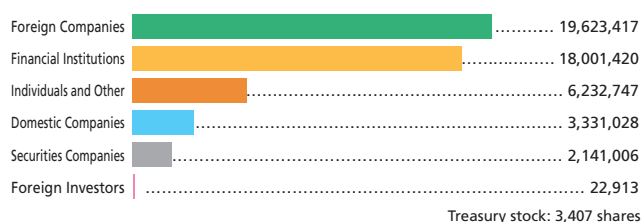
Number of Shareholders

Total 12,385 shareholders



Number of Shares Held

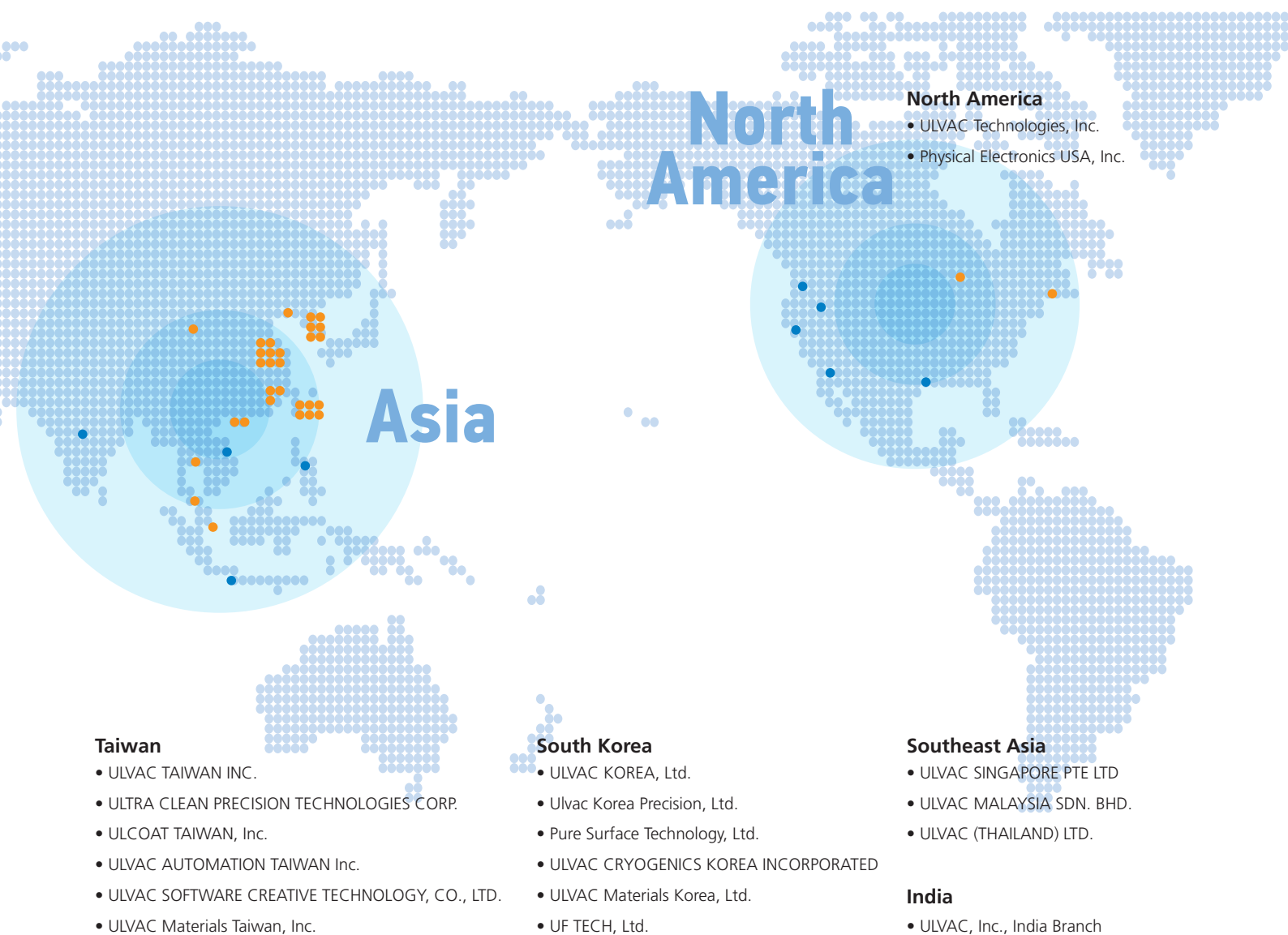
Total 49,355,938 shares



Major Shareholders

Shareholder's name	Number of shares (thousands)	Shareholding ratio (%)
Nippon Life Insurance Company	3,242	6.57
Japan Trustee Services Bank, Ltd. (Trust account)	3,193	6.47
The Master Trust Bank of Japan, Ltd. (Trust account)	1,983	4.02
Mizuho Bank, Ltd.	1,916	3.88
Sumitomo Mitsui Banking Corporation	1,864	3.78
THE BANK OF NEW YORK, NON-TREATY JASDEC ACCOUNT	1,098	2.23
The Bank of Tokyo-Mitsubishi UFJ, Ltd.	910	1.84
TAIYO HANEI FUND, L.P.	884	1.79
THE BANK OF NEW YORK MELLON 140044	878	1.78
STATE STREET BANK AND TRUST COMPANY 505019	772	1.56

Note: Treasury stock (3,407 shares) is excluded from the calculation of shareholding ratios.



ULVAC

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