

About Kaga Electronics' EMS Business

September 30, 2019

KAGA ELECTRONICS CO., LTD.

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- **Kaga Electronics' Business Segments** P- 2 – 3

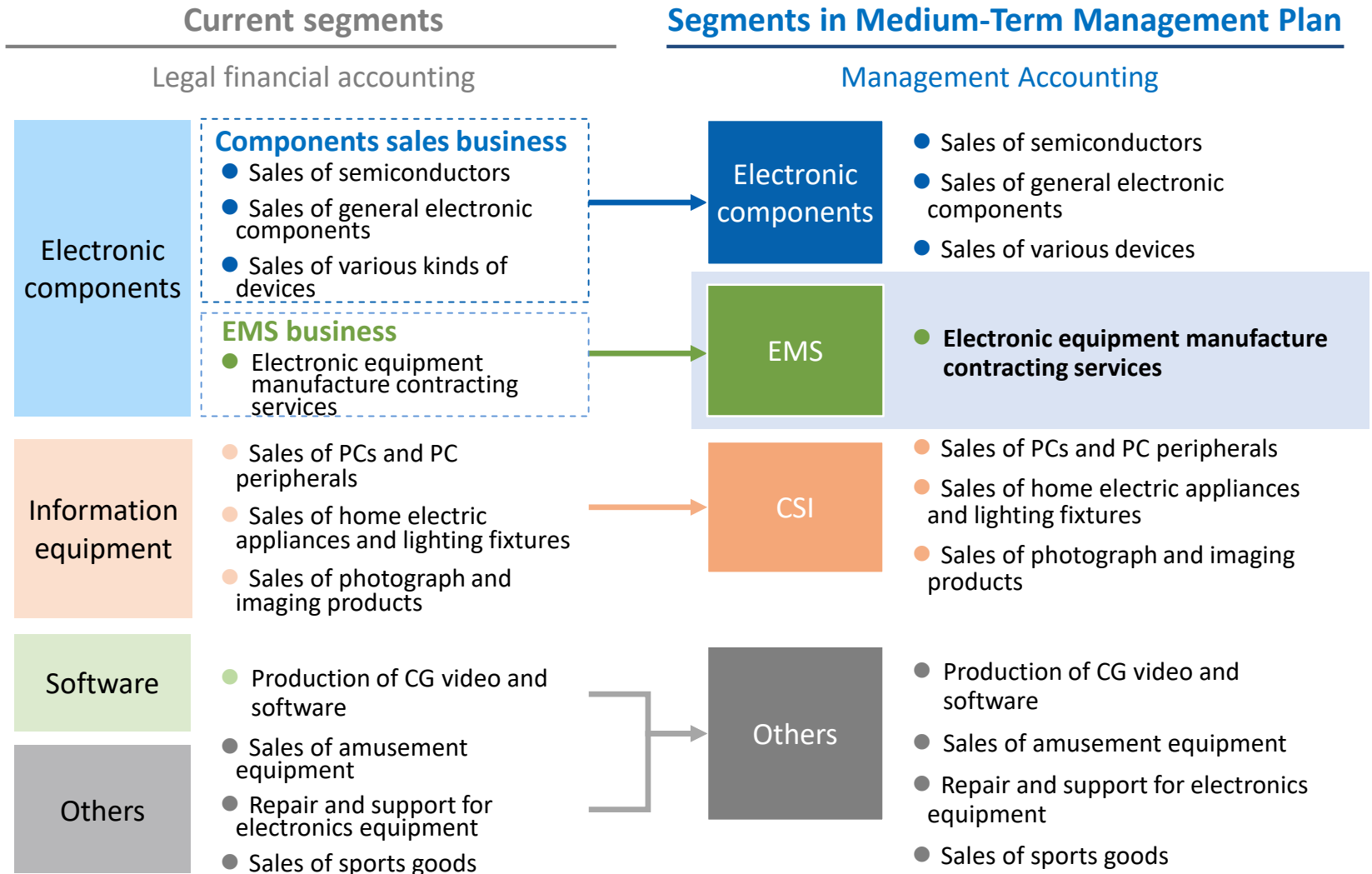
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(Ref)Segment disclosure associated with the New Medium Term Management Plan

Continuous disclosure based on current segmentation according to legal financial accounting, along with voluntary disclosure based on segmentation in line with the new Medium-Term Management Plan



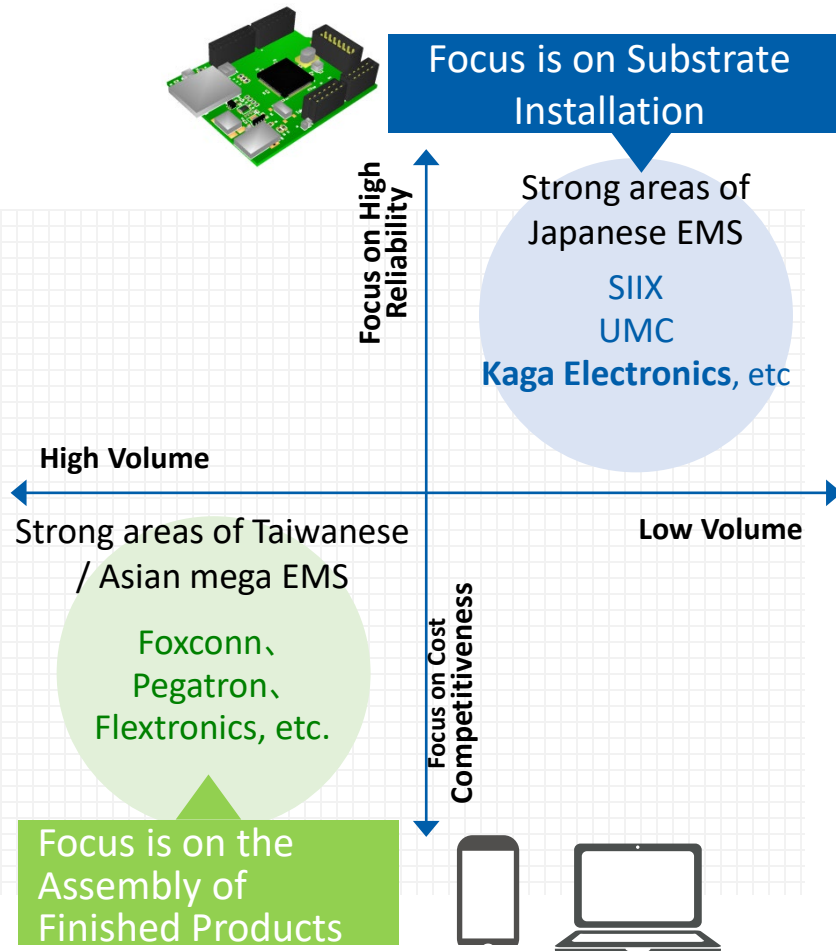
(Ref) Business segments of Parent company and group companies

| | Electronic Components | EMS | CSI | Others |
|---|-----------------------|-----|-----|--------|
| KAGA ELECTRONICS CO., LTD. | | | | |
| Electronics Business Division | ● | ● | (●) | ● |
| EMS Business Division | | ● | | |
| Communication Network Sales Division | ● | ● | ● | (●) |
| Specific Industry Business Division | ● | ● | (●) | ● |
| Strategic Customer Sales Division | ● | ● | (●) | ● |
| Sales Promotion Division | ● | | | |
| Major Affiliates in Japan | | | | |
| KAGA TECH CO., LTD. | ● | (●) | (●) | (●) |
| KAGA DEVICES CO., LTD. | ● | ● | ● | ● |
| KAGA SOLUTION NETWORK CO., LTD. | | | ● | |
| AD DEVICE CO., LTD. | ● | | | |
| KAGA MICRO SOLUTIONCO., LTD. | | ● | (●) | ● |
| DIGITAL MEDIA LAB., INC. | | | | ● |
| KAGA SPORTS CO., LTD. | | | | ● |
| KAGA AMUSEMENT CO., LTD. | | | | ● |
| KAGA TECHNOSERVICE CO., LTD. | | | ● | |
| FUJITSU ELECTRONICS INC. | ● | | | |
| KAGA EMS TOWADA CO., LTD. | | ● | | |
| Major Affiliates Overseas | | | | |
| KAGA TAXAN (SUZHOU) ELECTRONICS CO., LTD. | | ● | | |
| KAGA (SHANGHAI) ELECTRONICS CO., LTD. | (●) | ● | | |
| KAGA (SHENZHEN) ELECTRONICS CO., LTD. | | ● | | |
| KAGA (H.K.) ELECTRONICS LIMITED | | ● | | |
| KAGA DEVICES (H.K.) LIMITED | ● | | | |
| KAGA (TAIWAN) ELECTRONICS CO., LTD | ● | (●) | | |
| KAGA ELECTRONICS (THAILAND) COMPANY LIMITED | (●) | ● | | |
| KAGA COMPONENTS (MALAYSIA) SDN.BHD. | | ● | | |
| KAGA ELECTRONICS INDONESIA, PT | ● | ● | | |
| KAGA ELECTRONICS (VIETNAM) CO., LTD. | | ● | | |
| KAGA (SINGAPORE) ELECTRONICS PTE LTD | ● | (●) | | (●) |
| KAGA ELECTRONICS (USA) INC. | ● | ● | | |
| TAXAN MEXICO S.A. de C.V. | | ● | | |
| KD TEC s.r.o. | ● | ● | | |

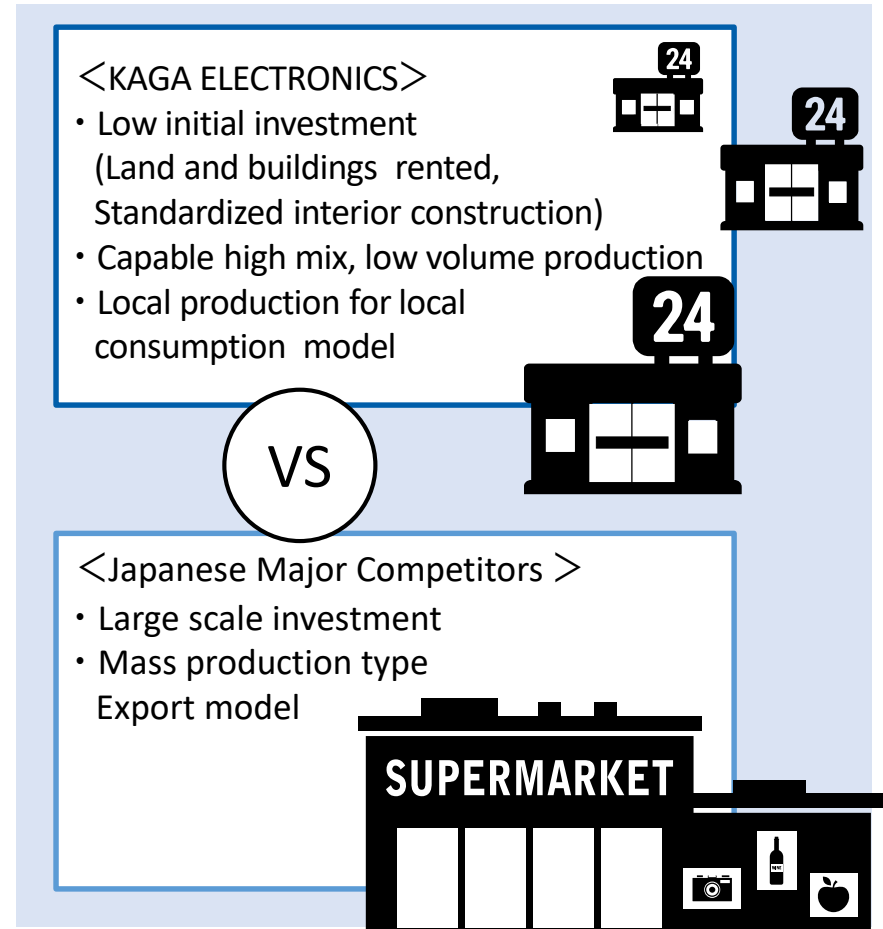
The Strengths of Kaga Electronics' EMS (1): Convenience Store GMS

Kaga Electronics globally deploys a "Convenience Store EMS" that is convenience and valuable for its customers.

Japanese EMS vs Taiwanese / Asian EMS



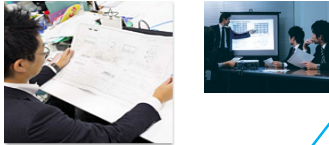
Convenience Store EMS vs GMS EMS



The Group's Strength-② : One Stop

Not just contract manufacturing but offer one-stop service from sales to after-sales support

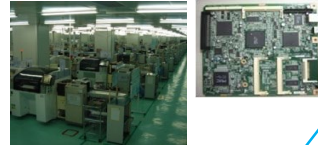
Planning/Design/Development



Components Procurement/Kitting



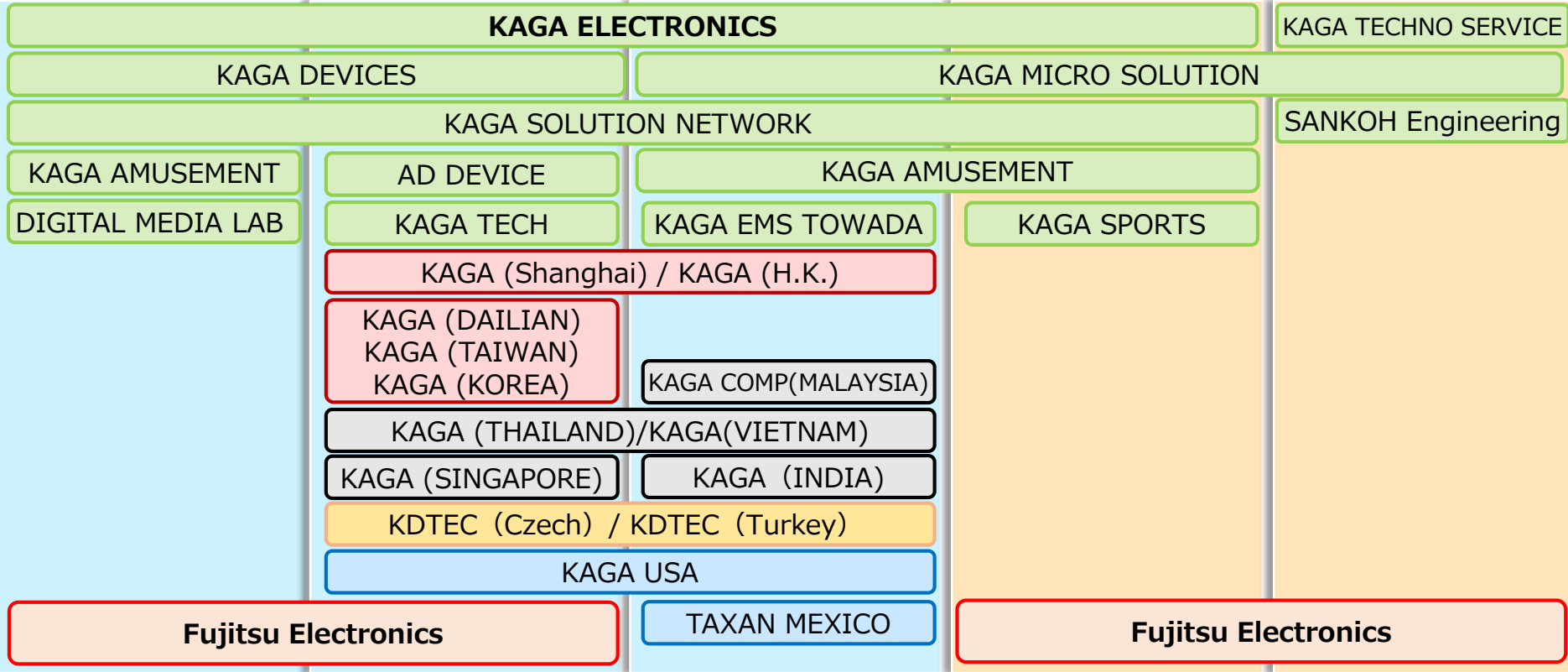
EMS/Contract manufacturing



Sales/Distribution



Support/After-sales service



The Group's Strength-③ : Global Network

Global EMS production system with 19 bases in 10 countries to respond swiftly and flexibly to customer needs.

- Installed mounting equipment in Czech and started European operation
- Entered into Turkey in order to strengthen Europe business

- Expand sales to local Chinese companies
- Expand sales to European and the U.S. companies
- Expand sales to Japanese companies conducting sales in China

- Increase production in Mexico shifting from China
- Established sales office in Chicago to enhance sales activities in the U.S.

- Expand EMS business
- Increase sales of components kitting business
- Develop new customers

Europe

China

Japan

The Americas

ASEAN

● Sales base ● Production base



- Further deepening relationship with Japanese customers
- Centralize the procurement operation to improve efficiency

Introduction to Main Production Bases: China

Kaga Electronics (Shenzhen)

| | |
|---------------------|--|
| Established | 1 9 9 9 |
| Number of Employees | 9 5 0 |
| Products | Automotive-related units, industrial equipment, OA equipment, amusement equipment, communications equipment. |



< Shenzhen Factory >

Kaga Technology (Suzhou) Electronics

| | |
|---------------------|--|
| Established | 2 0 0 9 |
| Number of Employees | 3 6 0 |
| Products | Automotive-related units, medical equipment, industrial equipment, residential equipment, electronic musical instruments, communications equipment |



< Suzhou First Factory (For Export) >

Introduction to Main Production Bases: ASEAN

KAGA ELECTRONICS (THAILAND)

| | |
|---------------------|--|
| Established | 2 0 0 2 |
| Number of Employees | 6 9 0 |
| Products | Automotive-related units, OA equipment, air conditioning equipment, industrial equipment |



<Thailand Factory>

KAGA ELECTRONICS (VIETNAM)

| | |
|---------------------|---|
| Established | 2 0 1 7 |
| Number of Employees | 1 2 0 |
| Products | Automotive-related units, air conditioning equipment, business equipment, medical equipment |



< Vietnam Factory >

Introduction to Main Production Bases: Europe and the Americas

KD TEC

| | |
|---------------------|-----------------------------|
| Established | 2 0 0 9 |
| Number of Employees | 1 2 0 |
| Products | Air conditioning equipment. |



< Czechia Factory >

TAXAN MEXICO

| | |
|---------------------|---|
| Established | 2 0 1 7 |
| Number of Employees | 1 6 0 |
| Products | Automotive-related units, business equipment, industrial equipment. |



< Mexico Factory >

Main Products: Various Substrates

Substrate for Office Equipment



L Size Substrate for Communications Equipment



Power Supply Substrate

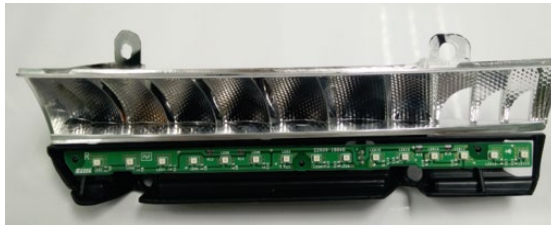


LED-related Substrate

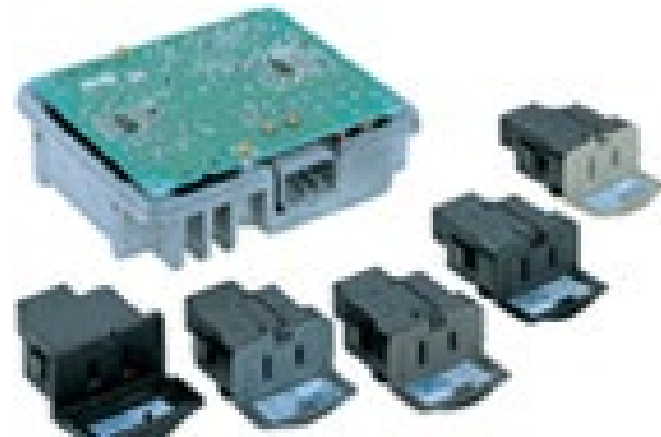


Main Products: Automotive-related Units

Lighting Units for Automotive

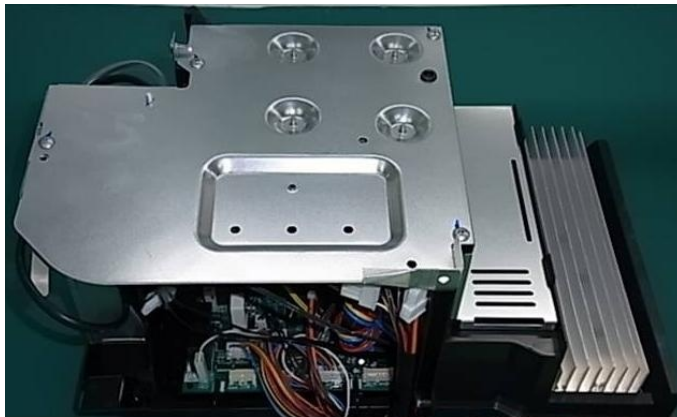


AC Inverter Units



Main Products: Various Units

Air Conditioner Unit



FA Equipment Touch Panel Monitor



Main Products: Various Finished Products

Automotive-related Products



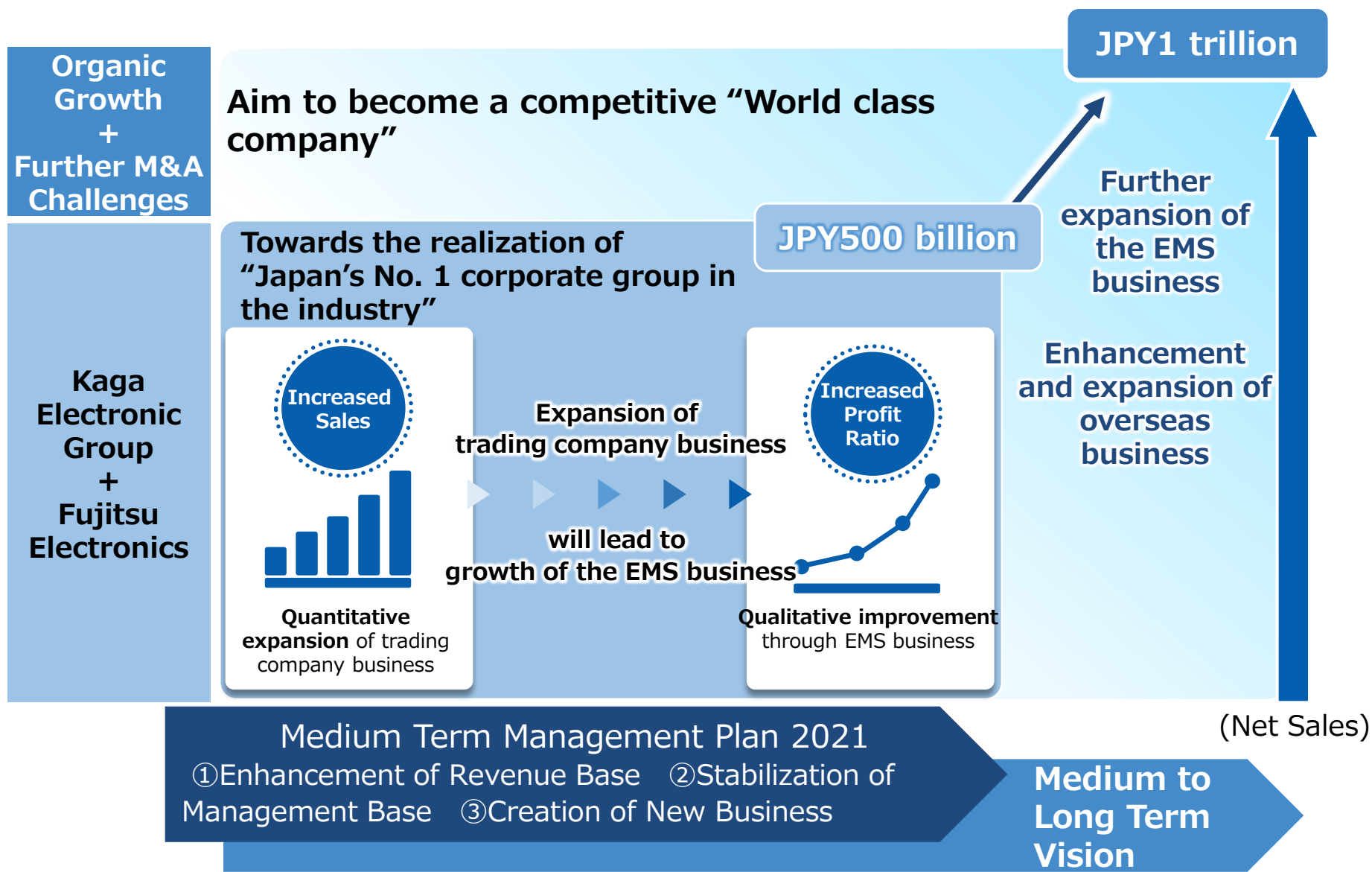
<Automotive Navigation System>

Medical Equipment



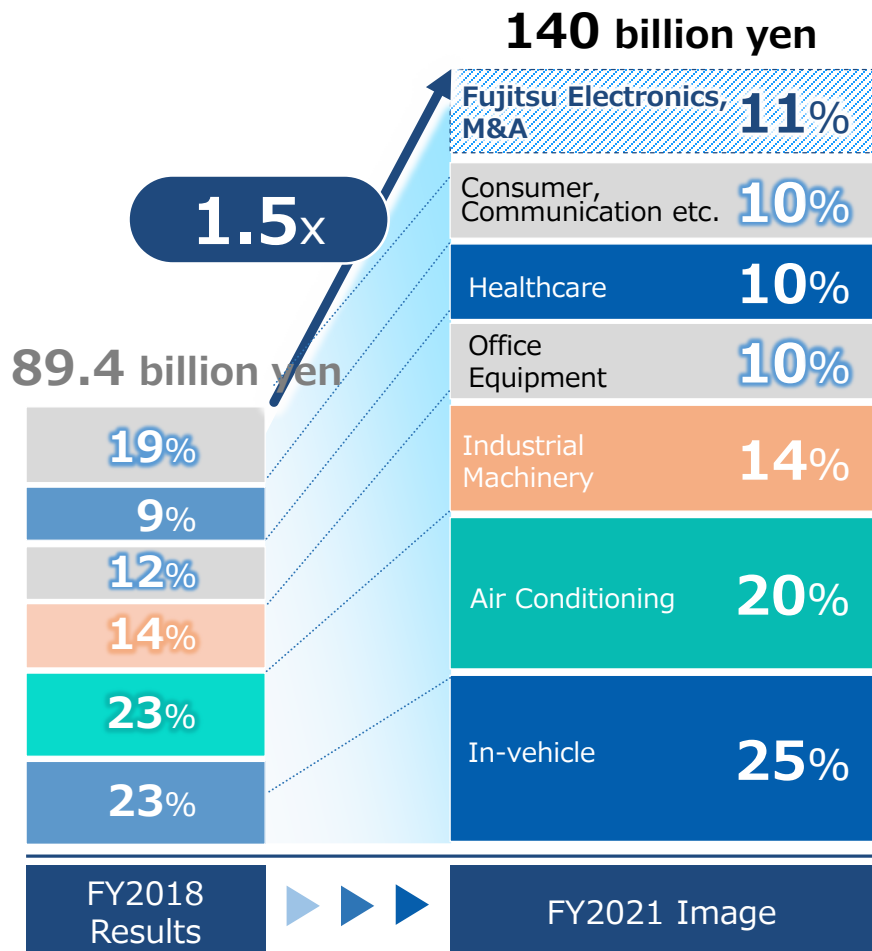
<Automated Medication Dispensing Cabinet>

Positioning of "Medium Term Management Plan 2021"



EMS Business Growth Scenario

Driven by the growth of in-vehicle, air conditioning, industrial machinery, and medical/healthcare, we shall aim for drastic growth of business size of 1.5x that of FY2018



Points



- In addition to our existing production capacity in China, ASEAN, and Europe, we shall aim to expand business in growth areas such as in-vehicle, air conditioning, and industrial machinery, through full scale investment in new bases in Vietnam, Mexico, Turkey, and India.
- We shall develop a “Key Device + EMS” approach for the major customers of Fujitsu Electronics.
- We shall aim to further expand the size of the EMS business, and search for new M&A opportunities inside and outside of Japan.

Key Topics for EMS Business Growth

In parallel with the EMS shift of leading European and American customers of Fujitsu Electronics, strengthening volume, quality, and cost, and comprehensively increasing business competitiveness in comparison with competitors.



Increasing of Production Capacity

- Responding flexibly to moves towards the shifting of production away from China in conjunction with the continuing US-China trade issues, as well as moves towards a return of the overseas production to Japan domestic in order to avoid exchange rate fluctuations and soaring labor costs.



Strengthening of Engineering Capabilities








- No longer relying on general-purpose equipment, using in-house engineering capabilities, and internally developing production equipment at an optimal cost for “convenience store EMS”, and increasing cost competitiveness through this.



Strengthening of Manufacturing Capabilities

- Through the acquisition of Towada Pioneer, the manufacturing know-how accumulated over many years as an electronics specialist, exceptional production personnel and production equipment. Further improving the quality level of the EMS business and strengthening competitive advantage against competitors by sharing resources including jig design and quality assurance systems.
- Positioning the Towada Pioneer and Fukushima New Plant as the "Mother Factory", partnering with overseas bases, and promoting overall optimization to strengthen the management structure and to improve business efficiency.

Major Initiatives

| | | |
|---|---|---|
| Acquisition of Towada Pioneer |  Enhancing of Production Capacity | <ul style="list-style-type: none"> • Capturing increased demand in conjunction with the return to domestic production |
| |  Strengthening of Manufacturing Capabilities | <ul style="list-style-type: none"> • Sharing of production know-how and excellent production personnel • Mother plant for substrate installation |
| |  Strengthening of Engineering Capabilities | <ul style="list-style-type: none"> • Sharing of resources, such as production equipment designs and jig production • Verifying own developed production equipment |
| Construction of Fukushima New Factory |  Enhancing of Production Capacity | <ul style="list-style-type: none"> • Capturing increased demand in conjunction with the return to domestic production |
| |  Strengthening of Manufacturing Capabilities | <ul style="list-style-type: none"> • Mother plant for assembly of finished products |
| Construction of Thailand Second Factory |  Enhancing of Production Capacity | <ul style="list-style-type: none"> • Capturing the shift from Chinese production to avoid the effect of US-China trade disputes |
| Joint Venture in China |  Strengthening of Engineering Capabilities | <ul style="list-style-type: none"> • Differentiation through internally developed production equipment that is suitable for small sized lots of a variety of products |

Overview of Acquisition of Towada Pioneer

KAGA EMS TOWADA



Acquisition Format

Conversion to group company through acquisition of Towada Pioneer shares from Pioneer on October 1, 2019.

Name After Acquisition

KAGA EMS TOWADA CO., LTD.

Address

Towada City, Aomori Prefecture

Business Content

Automotive electronic equipment, installation of substrates in medical equipment, assembly of finished Products

Number of Employees

165 (full time staff)

Acquisition Price

Undisclosed

Construction of New Fukushima Factory

Fukushima Factory



Name

KAGA MICRO SOLUTION CO., LTD.
Fukushima Factory

Address

Sukagawa City, Fukushima Prefecture

Scheduled Launch

October 2019

Business Content

Manufacture, repair, reuse, and recycling of communications equipment, PCs, and PC peripherals

Number of Employees

50
(full time staff)

Investment Amount

Approx. JPY 1.2 bn
(Incl. land acquisition,
buildings, machinery and
equipment)

Construction of Thailand 2nd Factory

Amata Nakhon 2nd Factory



Name

KAGA ELECTRONICS (THAILAND) CO., LTD.
Amata Nakhon 2nd Plant

Address

Amata Nakhon Industrial Estate, Chon Buri,
Thailand

Scheduled Launch

December 2019

Business Content

Installation of substrates for multifunction
devices, printers and automotive related units

Number of Employees

200
(maximum of 350)

Investment Amount

Approx. JPY 500 mil
(Land and buildings
rented)

Own Development of Production Equipment(1)

"HATTEN" Solder Bath



Internal Development Format

October 2018: Establishment of a joint venture by a Chinese production equipment manufacturer and group company Kaga Technology (Suzhou) Electronics Co., Ltd.

Name of Joint Venture

SUZHOU HATTEN INTELLIGENT EQUIPMENT CO., LTD

Address

Suzhou City, Jiangsu Province, China

Business Content

Development, manufacture, and external sale of production equipment for substrate installation

Number of Employees

50

Investment Amount

Approx. JPY 100 mil

Own Development of Production Equipment(2)

"HATTEN" Substrate Installation Automation Equipment Line



※Official company name: 深圳市路遠智能裝備有限公司

Company Establishment Scheme

December 2019: Establishment of a joint venture by FAROAD*, a leading Chinese manufacturer of substrate installation equipment, and group company Kaga Technology (Suzhou) Electronics Co., Ltd.

Name of Joint Venture

蘇州路遠加賀実装技術開発有限公司

Address

Suzhou City, Jiangsu Province, China

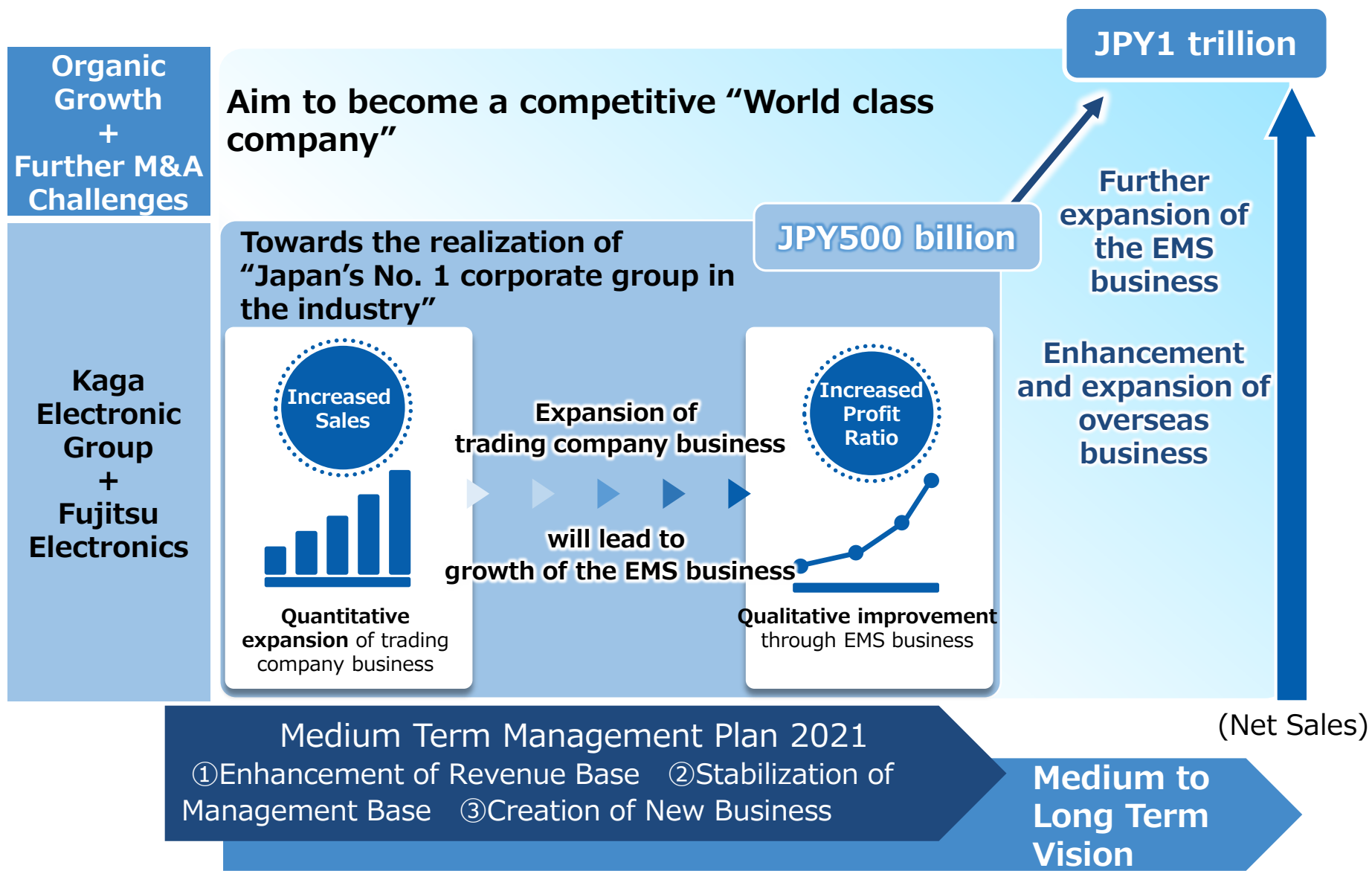
Business Content

Development, manufacture, and external sale of substrate installation equipment sets (operation to commence in December 2019)

Objectives of the Joint Venture

- In-house development of optimal "automation equipment" for "small lot production of many products"
- Realization of not only a significant reduction in initial introduction costs, but also high quality and low-cost operation

Positioning of "Medium Term Management Plan 2021"



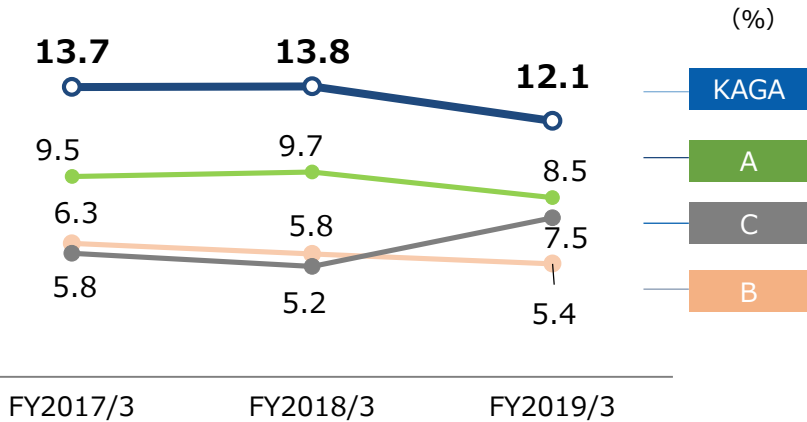
(Ref) Comparison : Global Production System of Major Japanese EMS Players (including partner factory)

| | KAGA | Company A | Company B | Company C |
|-------------------|--------------------------|------------------------|------------------------|------------------------|
| | 10 countries 19 bases | 8 countries 16bases | 5 countries 11bases | 3 countries 3 bases |
| Japan | ● ×5 | ● | ● ×6 | |
| China | | | | |
| Shenzhen | ● | | | |
| Dongguan | ● | ● | ● ×2 | ● |
| Suzhou | ● ×2 | ● | | |
| Hubei | ● | ● | | |
| Shanghai | | ● ×2 | | |
| Guangzhou | | ● | | |
| ASEAN/Asia | | | | |
| Thailand | ● ×2 | ● ×2 | ● | |
| Indonesia | ● | ● ×2 | | |
| Malaysia | ● | | | |
| Vietnam | ● | | ● | ● |
| India | ● | | | |
| Philippines | | ● ×2 | | |
| Korea | | | | ● |
| America | | | | |
| Mexico | ● | ● | ● | |
| Europe | | | | |
| Czech | ● | | | |
| Turkey | ● | | | |
| Slovakia | | ● | | |
| Hungary | | ● | | |

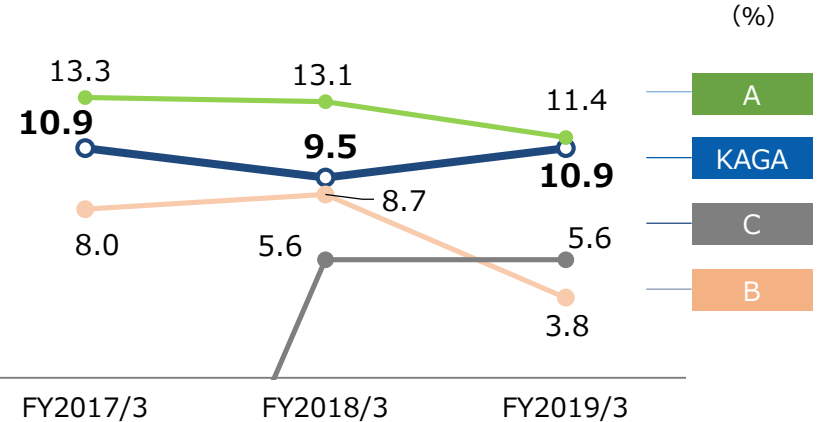
※Source: Our own survey based on the websites of each company

(Ref) Comparison : Recent Performance and Stock Price Valuation

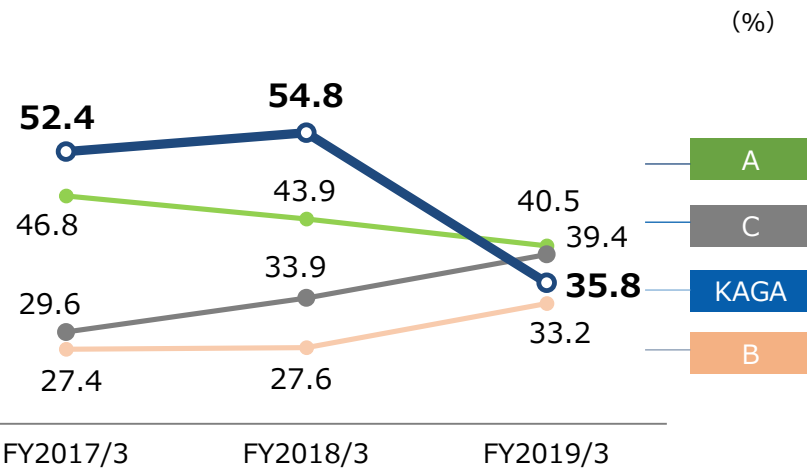
Gross Profit Margin



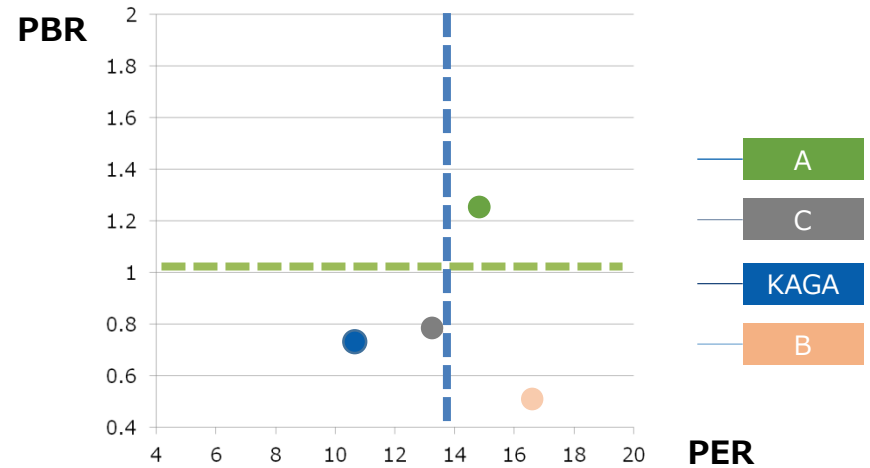
ROE



Equity ratio



Stock Price Valuation as of 27/Sep 2019



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“Everything we do is for our customers



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