

The Change in Electronics

Cross-boarder trade and investment in the Asia-Pacific region

October 26 , 2007 at Kyoto University (Katsura)



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GM , Corporate Planning

Corporate Profile



Head Office: **Kyoto**

Establishment October 1994

Incorporation December 23, 1950

Sales Amount: **69,376 M JPY (as of March 31, 2007)**

*Overseas Sales Amount 73%

Affiliated Companies: **56 (as of March 31, 2007)**

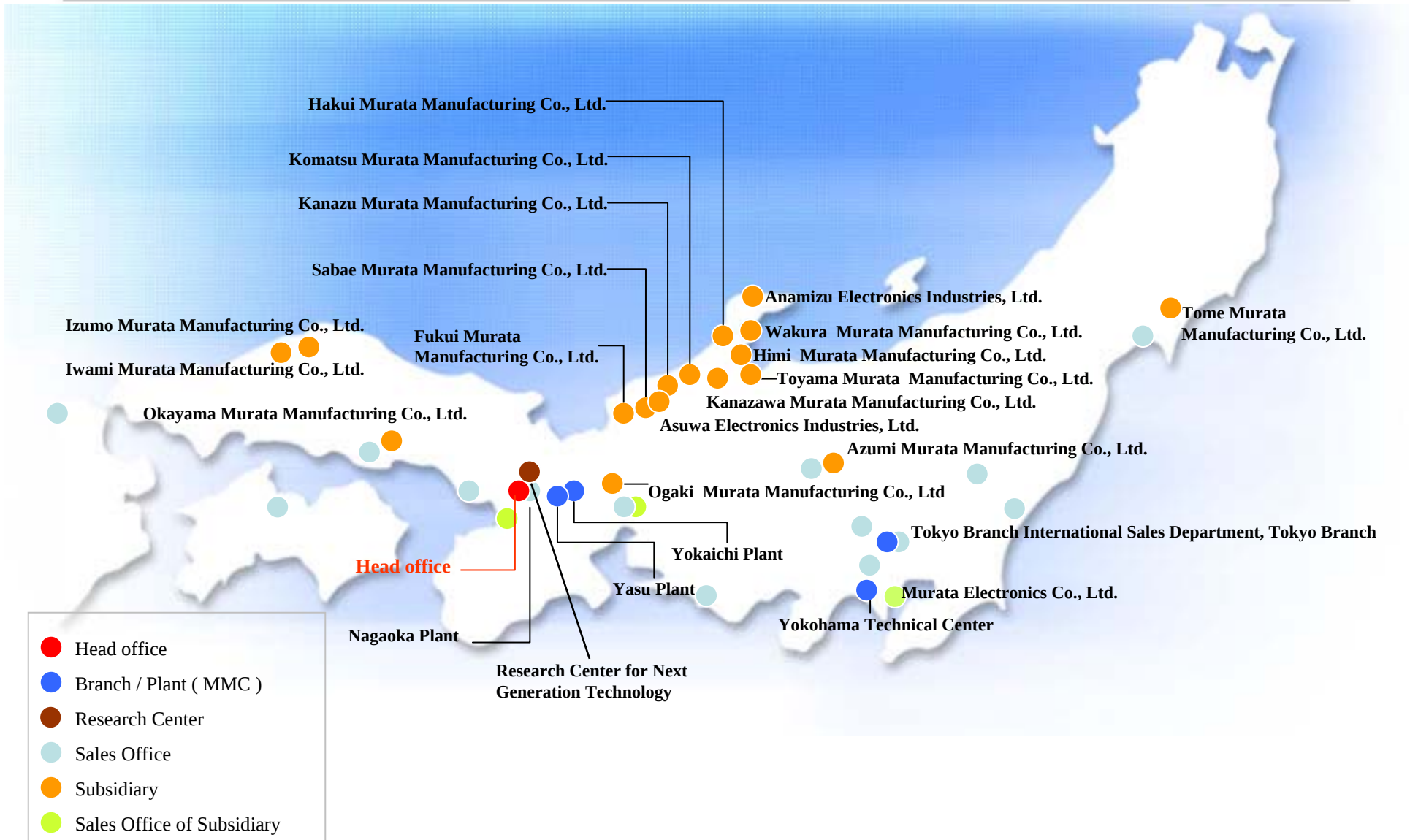
(23 in Japan and 33 overseas)

Employee: **27,453 (as of March 31, 2007)**

(Japan 18,461、Overseas 8,992)



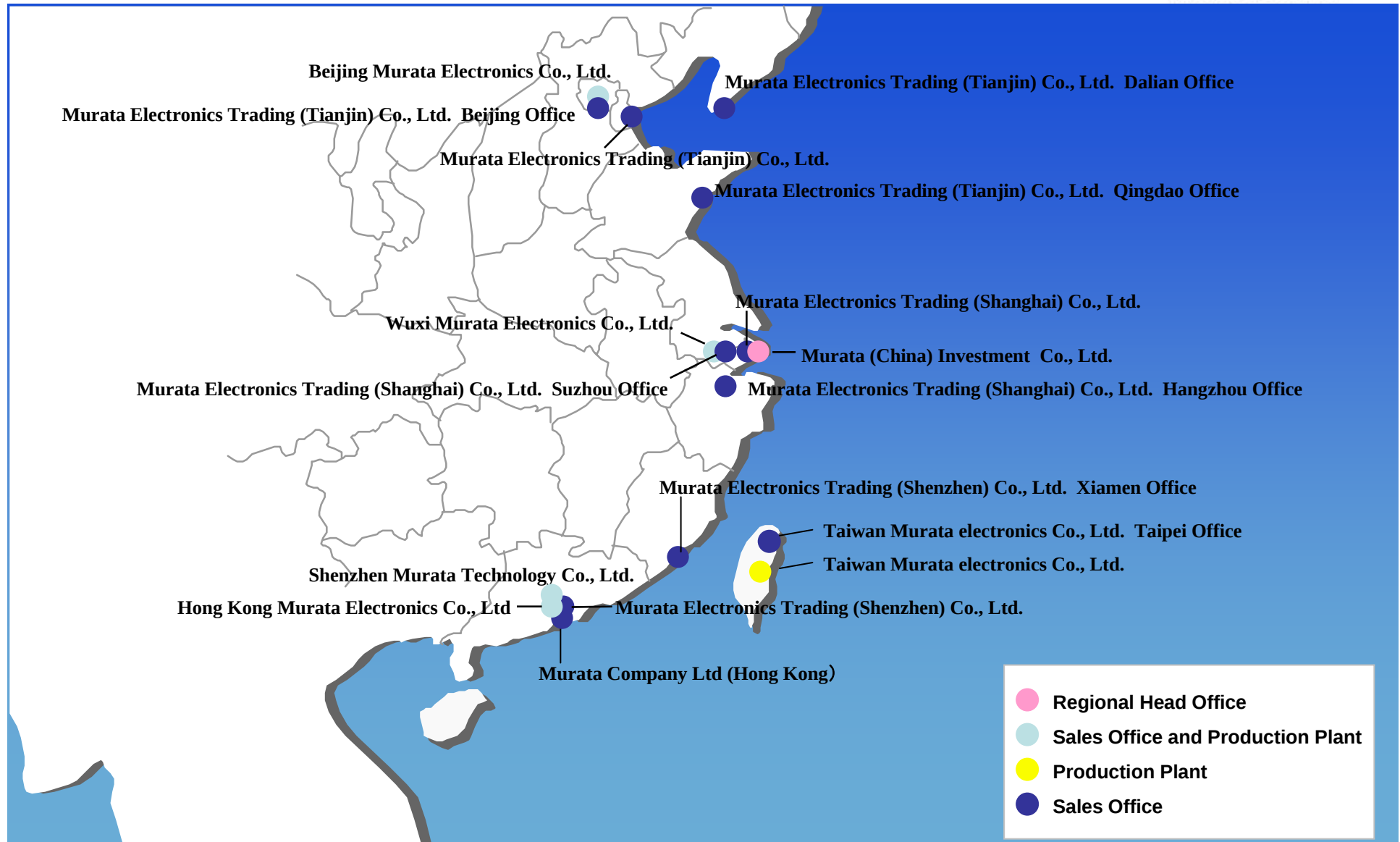
Network in Japan



Global Network



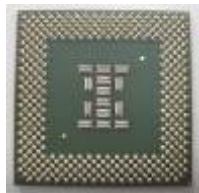
Production and Sales Offices in Greater China



Major Products of Mobile Communication



Major Products for Personal Computer



LCD Parts

DC/DC converter
Chip Ferrite Bead
Semi/High Voltage Chip Multilayer Ceramic Capacitor
Piezoelectric Transformer

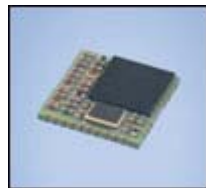
CPU/Memory Control Parts

Chip Ferrite Bead
Chip Multilayer Delay Line
Chip Ceramic Oscillator

Interface Parts

Chip Ferrite Bead
Piezoelectric Sounder*
Semi/High Voltage Chip Multilayer Ceramic Capacitor
USB Circuit Protective PTC Thermistor
Modem/Module

Bluetooth Module



Power Supply Circuit Parts

Semi/High Voltage Chip Multilayer Ceramic Capacitor
High Volume Chip Multilayer Ceramic Capacitor
Heat Protection Chip PTC Thermistor
Rechargeable Battery Temperature Control Chip NTC Thermistor
DC/DC Converter
Switching Power Supplies
Chip EMI Suppression Filters
Chip Coil

Input Device

Piezoelectric Vibrating Gyroscope

PHS Data Card



HDD/DVD/CD-ROM Parts

Sensitive Chip Shock Sensor
Chip Ceramic Oscillator

Major Products for Car Electronics



Engine Controller

Knocking Sensor

NTC Thermistor

ECU Parts

In-Car Chip Multilayer Ceramic Capacitor

Chip Ceramic Oscillator

76GHz Band Radar Module



ITS (Information of Traffic System)

Chip Dielectric Antenna

Dielectric Filter

Chip Multilayer LC Filter

Ceramic Filter

Voltage Controlled Oscillator (VCO)/PLL Module



Back Sonar

Airborne Ultra Sensor

Door Mirror/Door Lock

PTC Thermistor

Burglar Alarm

Airborne Ultrasound Sensor

Shock Sensor

Piezoelectric Buzzer

Safety Parts

Air Bag Sensor



High Accuracy Angular Rate Sensor for Car Navigation



Navigation System

High Frequency Wave Coaxial Connector

Dielectric Filter

Piezoelectric Shock Gyro

NTC Thermistor

Keyless Entry

Surface Acoustic Wave Oscillator

Surface Acoustic Wave Filter

Chip Multilayer LC Filter

Antenna Coil



Contribution to Miniaturization and Low Profile Electronic Devices

Conversion of Mobile Phone



Reference : DoCoMo

■ Automobile Phone



(上) 801型電話機
(下) 重載無線機

1979

■ Shoulder Phone



100型

1985

■ Mobile Phone



TZ-802型 TZ-803型

1987

■ Digital



デジタル・ムーバ/デジタル・ムーバ

1993



初のiモード対応ケータイ

1999



ケータイTV電話

2001

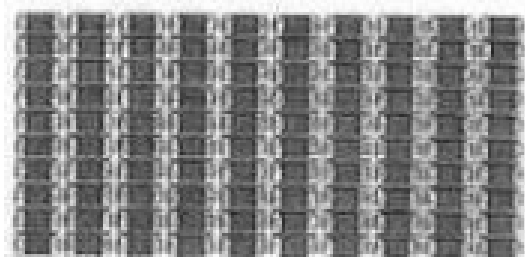


おサイフ携帯

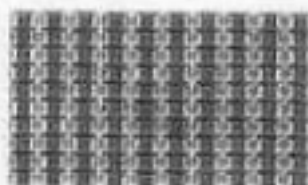
2004



<Multilayer Ceramic Capacitor> - -MLCC



3210



2012



1608



0805

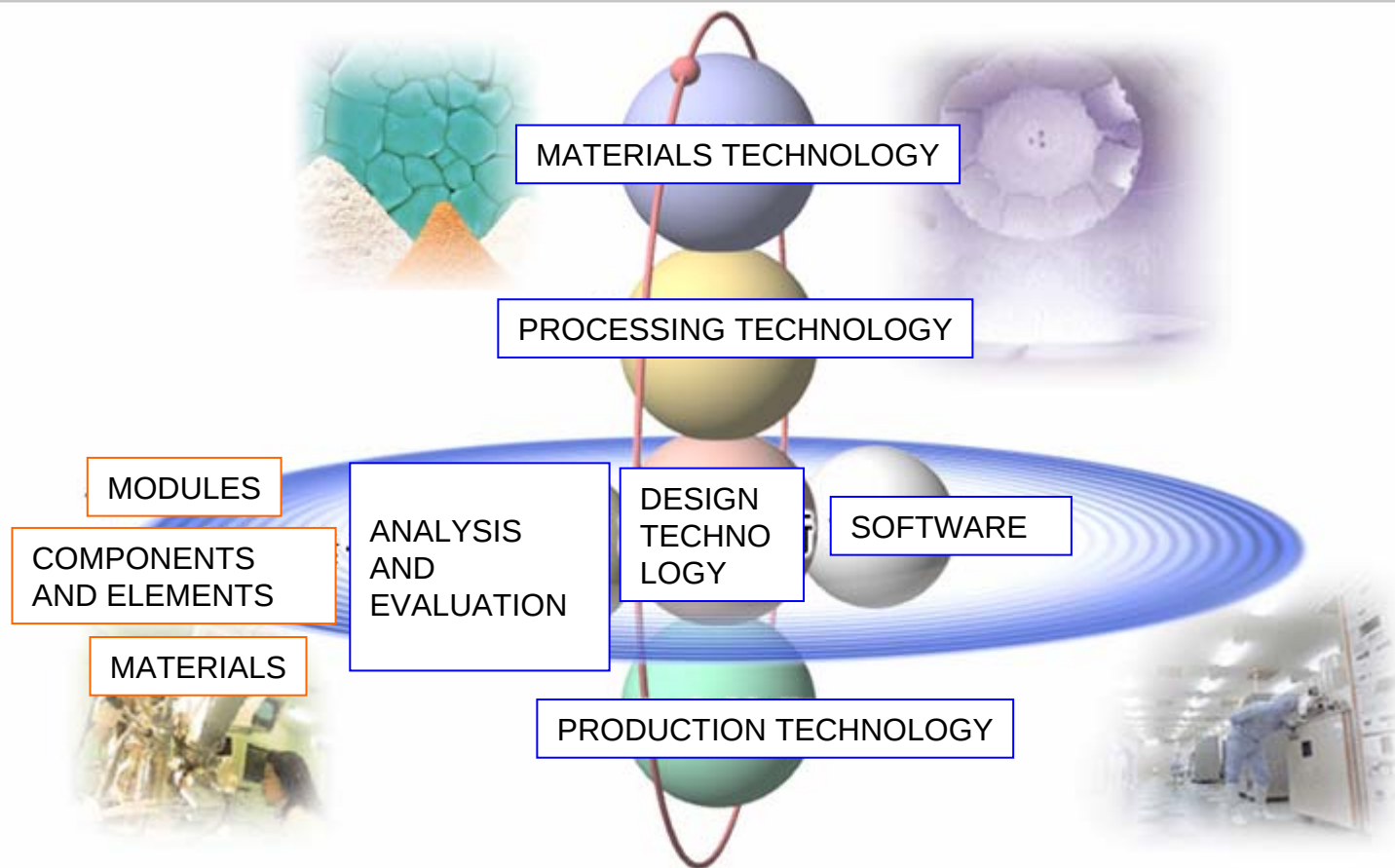


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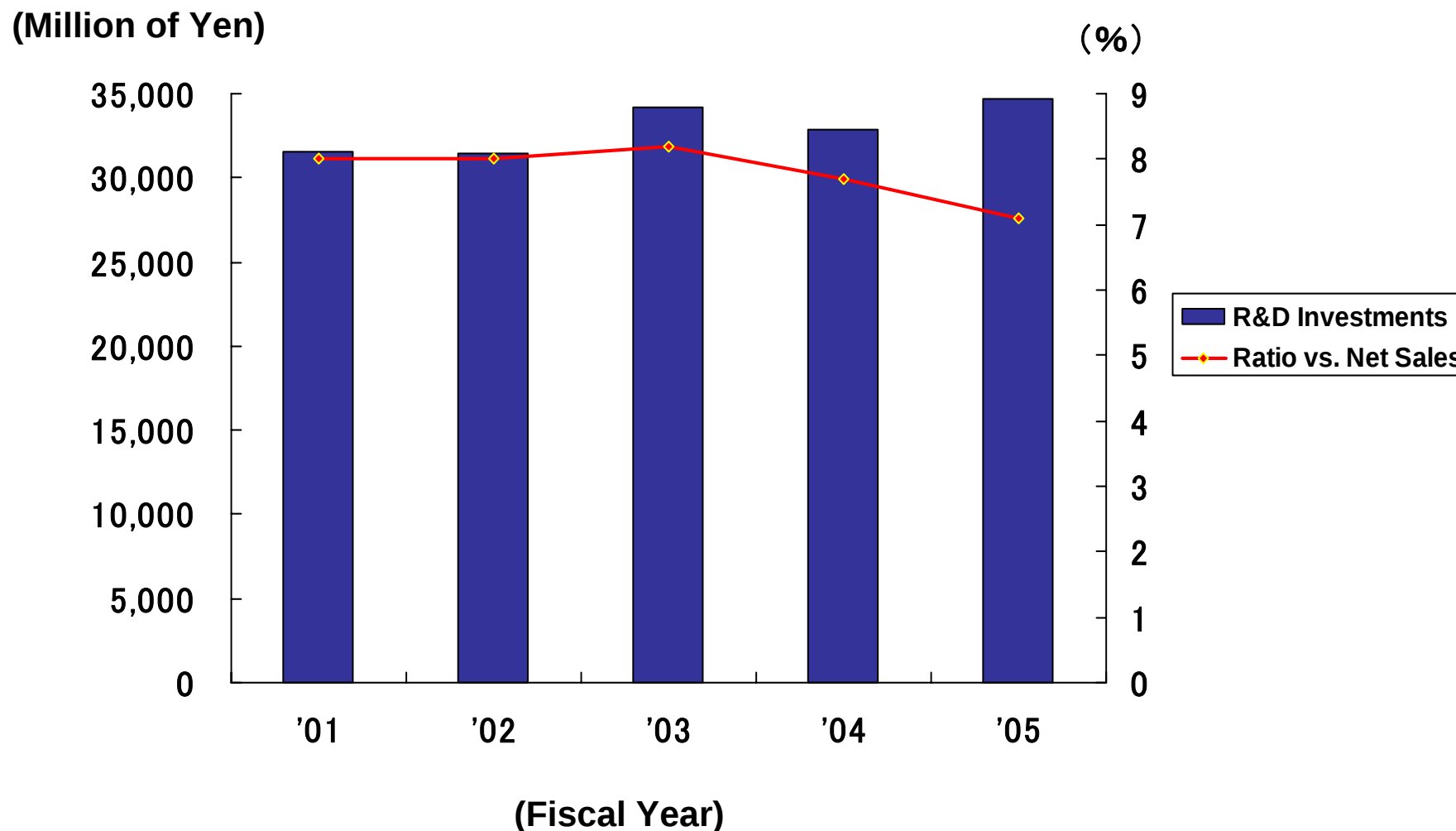
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Vertical Integration of Technologies



R&D Cost to Sales 7%
New Product Sales 30% - - >40%

R&D Investments/ Ratio of R&D Investments vs. Net Sales



Global Market Share



**Multi layer Ceramic
Chip Capacitor**

35%



EMI Clearing Filter

35%



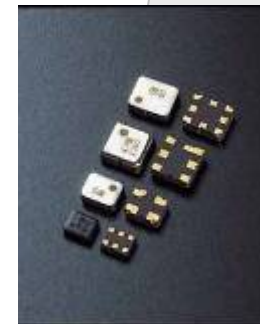
Ceramic Filter / Oscillator

65% ~ 70%

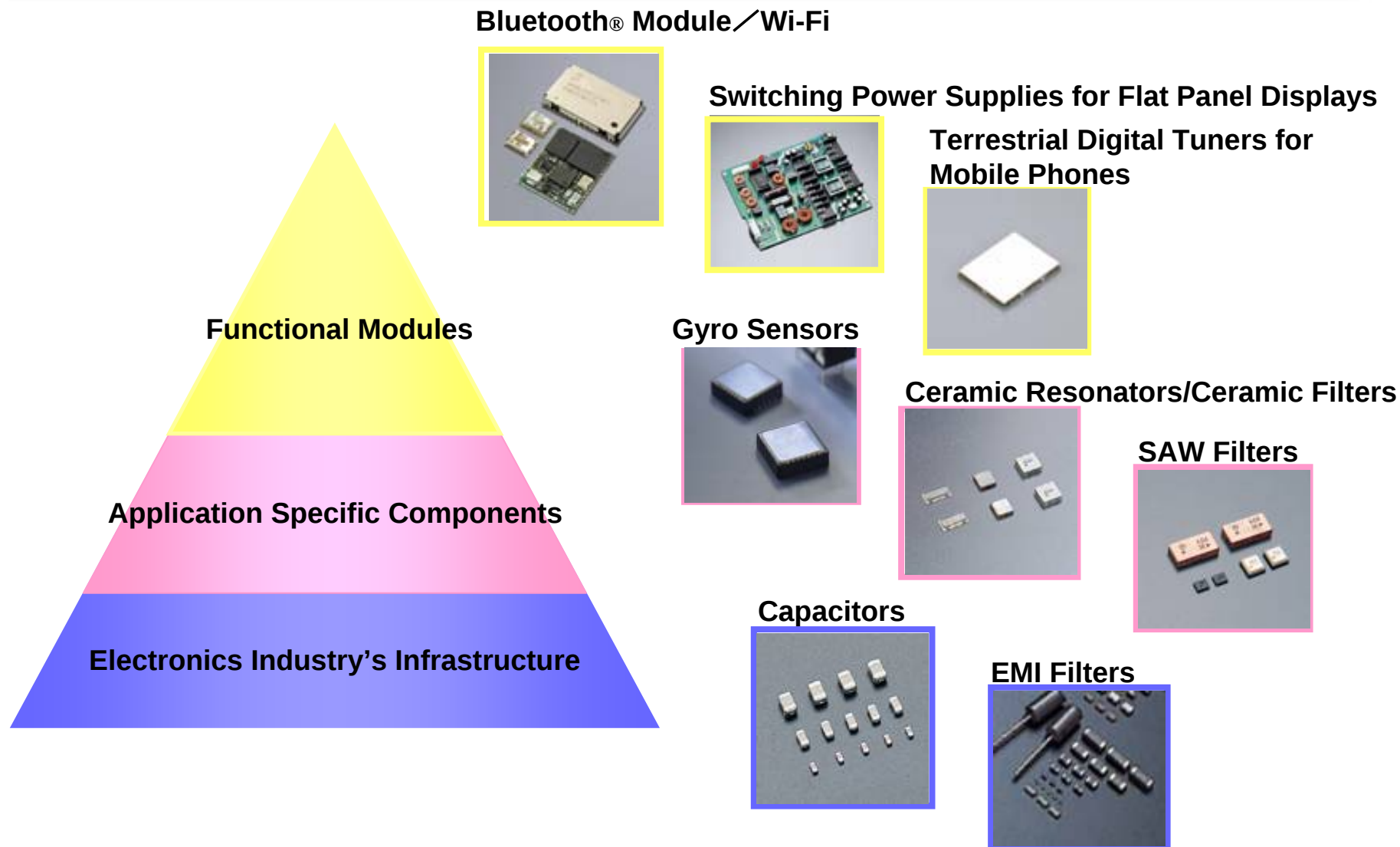


SAWF

25% ~ 30%



Products Group



Net Sales



2006 Annual Consolidated basis : 566,805

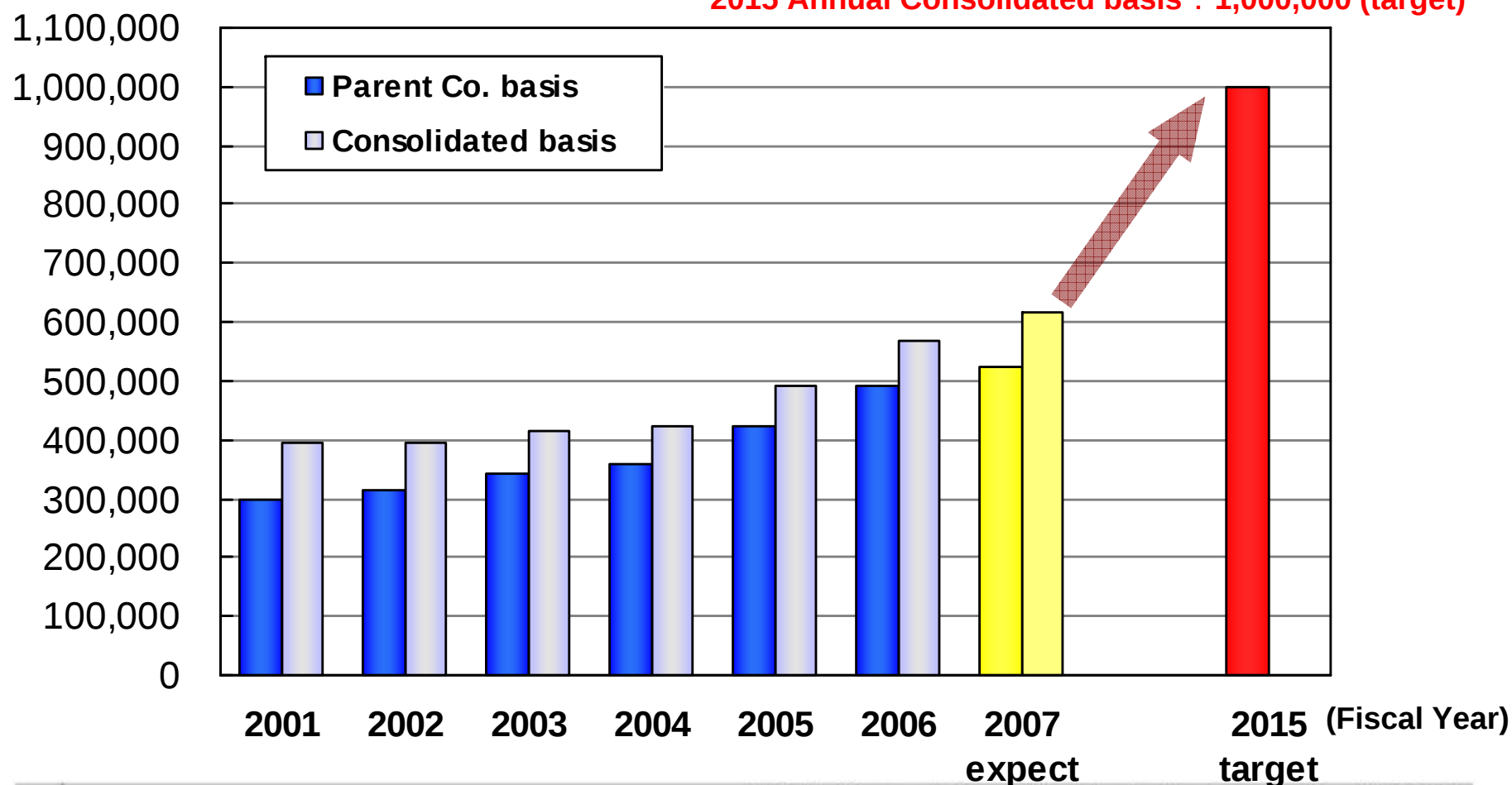
2006 Annual Parent Co. basis : 490,642

2007 Annual Consolidated basis : 615,000(expect)

2007 Annual Parent Co. basis : 525,000(expect)

2015 Annual Consolidated basis : 1,000,000 (target)

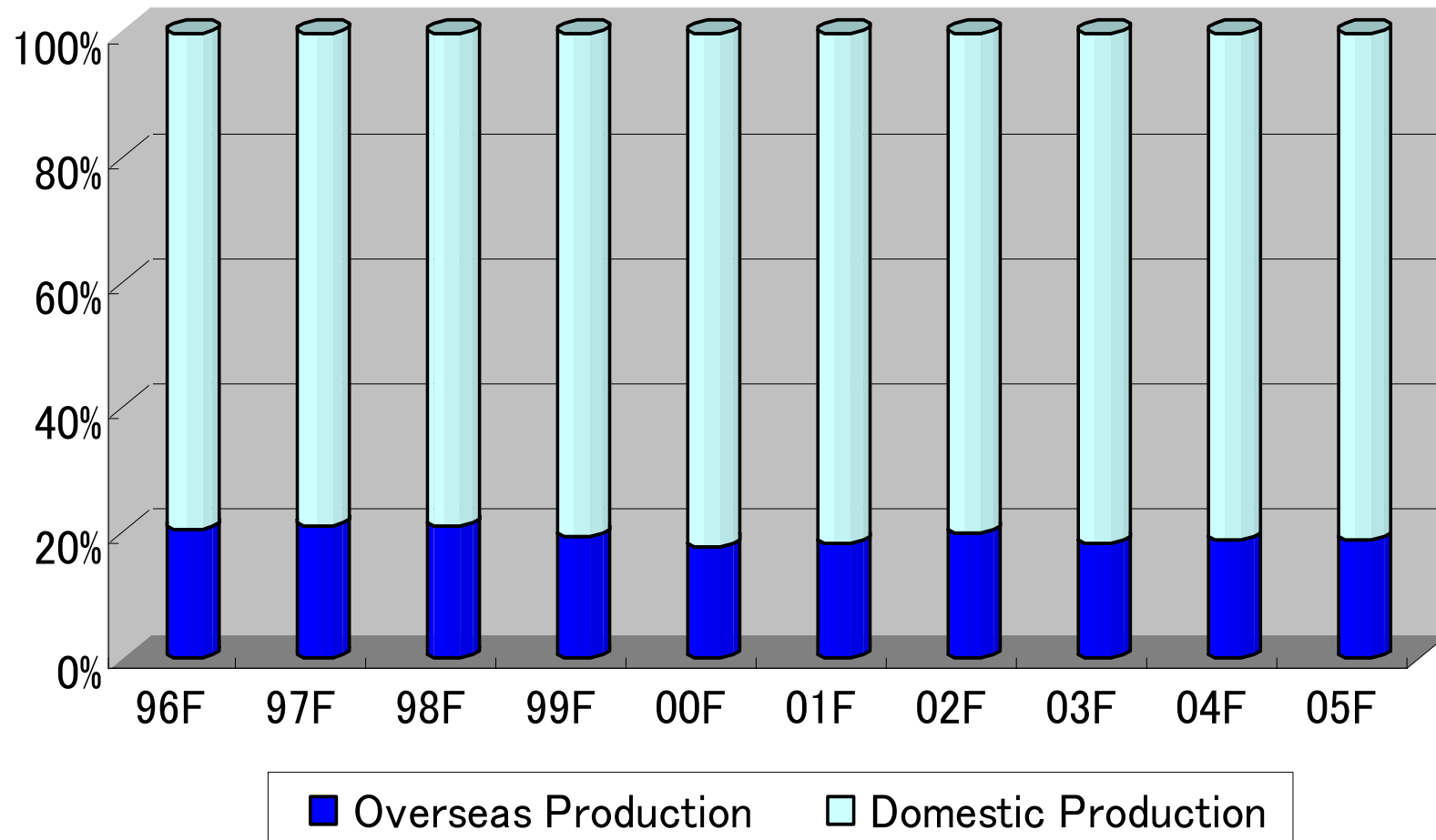
(Million of Yen)



Overseas Production



Less than 20% of production out of Japan



Change of Business Environment

Change of Market and Customer



Market Change:

<1> Change of Leader

<2> Diversification and Complexity of Business

~ '90 : Japanese manufacturer was the world leader.

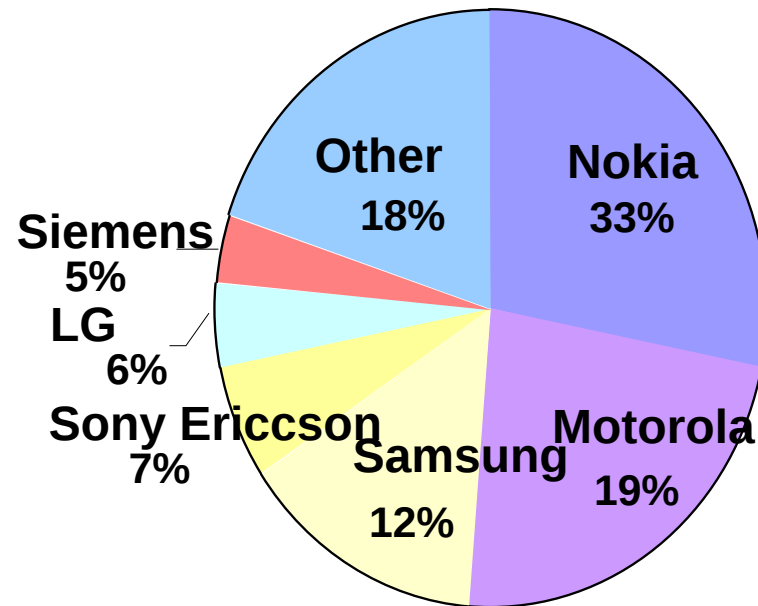
'90~'00 : World leader shifted to non-Japanese.

**'00~: Diversification and complexity of business model.
(EMS、ODM／OEM、Design House、IC、 etc.)**

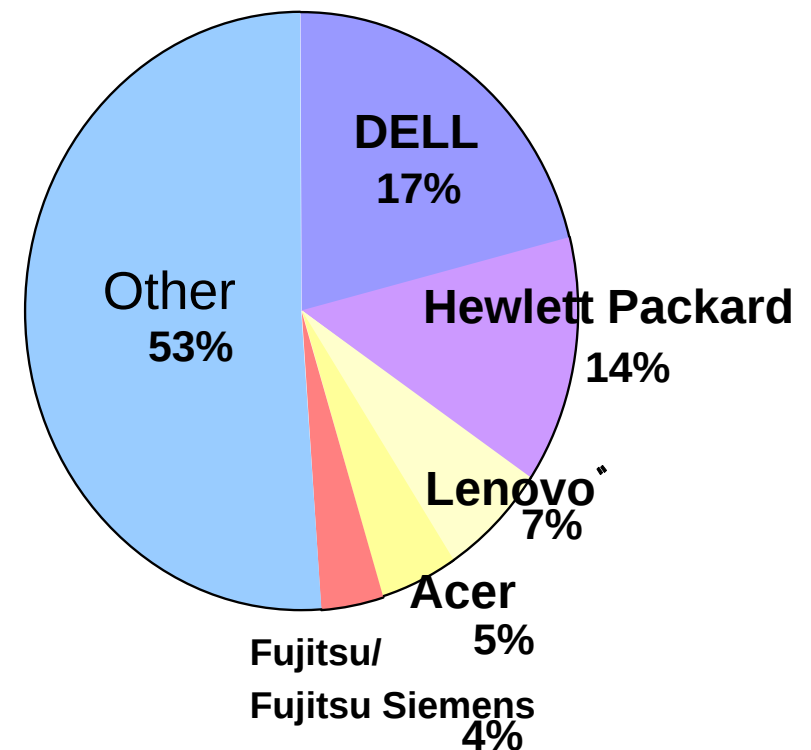
Main Electronic Device World Share



Mobile Phone



PC

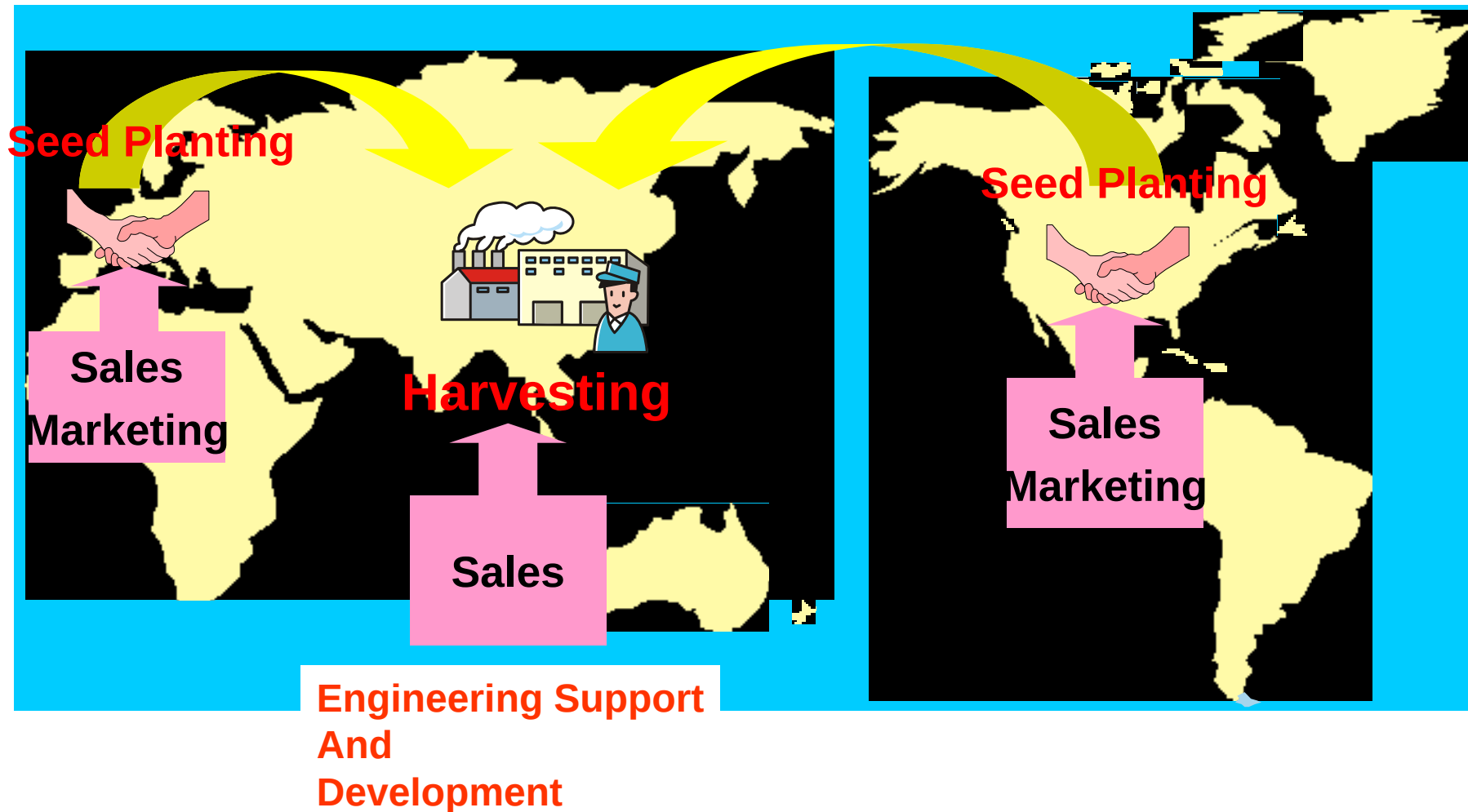


※ Mobile Phone → 2005 third quarter world market share VS end-user sales

PC → 2005 World market shipment volume by vendor (provisional)

(Source) Gartner Data Quest

Relation Between “Seed Planting” and “Harvesting”



Future Structure



Global Sales and Marketing Multi-National Production

- > More in overseas , More advanced products

Domestic R&D Activity

- > More in overseas
- > Basic research , not only in Japan
- > Support local customers
- > Use more engineering resource in overseas
- > Some collaboration with start-up companies
- > M&A