

# The outline of the management of chemical substances as our Green Manufacturing activities



Taro Hatano

Murata Manufacturing  
Company Limited  
March 7, 2006

# Our Company Profile

# Company Profile



<b>Company Name</b>	<b>Murata Manufacturing Co.,Ltd..</b>
<b>Head Office</b>	<b>10-1, Higashi Kotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555</b>
<b>Date of Establishment</b>	<b>October 1944</b>
<b>Paid-in Capital</b>	<b>69,376 million Yen (as of March 31, 2005)</b>
<b>Representative</b>	<b>Yasutaka Murata President and Statutory Representative Director</b>
<b>Number of Employees</b>	
Consolidated basis	<b>26,719 (as of September 30, 2005)</b>
Parent Co.basis("MMC")	<b>5,357 (as of September 30, 2005)</b>

# Main Products



## Dielectricity

Chip Monolithic  
Ceramic  
Capacitors

EMI Suppression  
Filters

Microwave Filters



## Magnetism

EMI Suppression Filters  
Ferrite

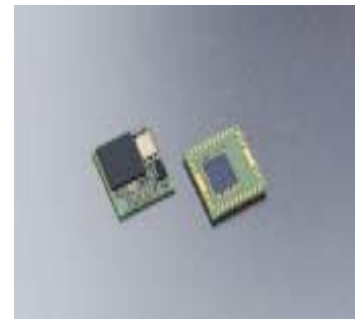


## Piezoelectricity

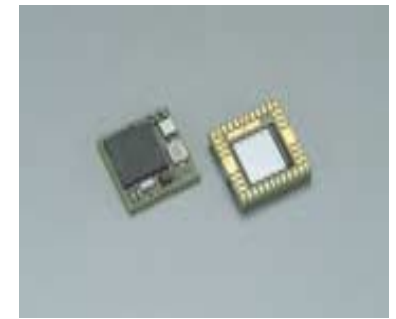
Ceramic  
Resonator  
Ceramic Filters  
Piezoelectric  
Buzzers



## Ceramic Multilayer Technology



Bluetooth Modules



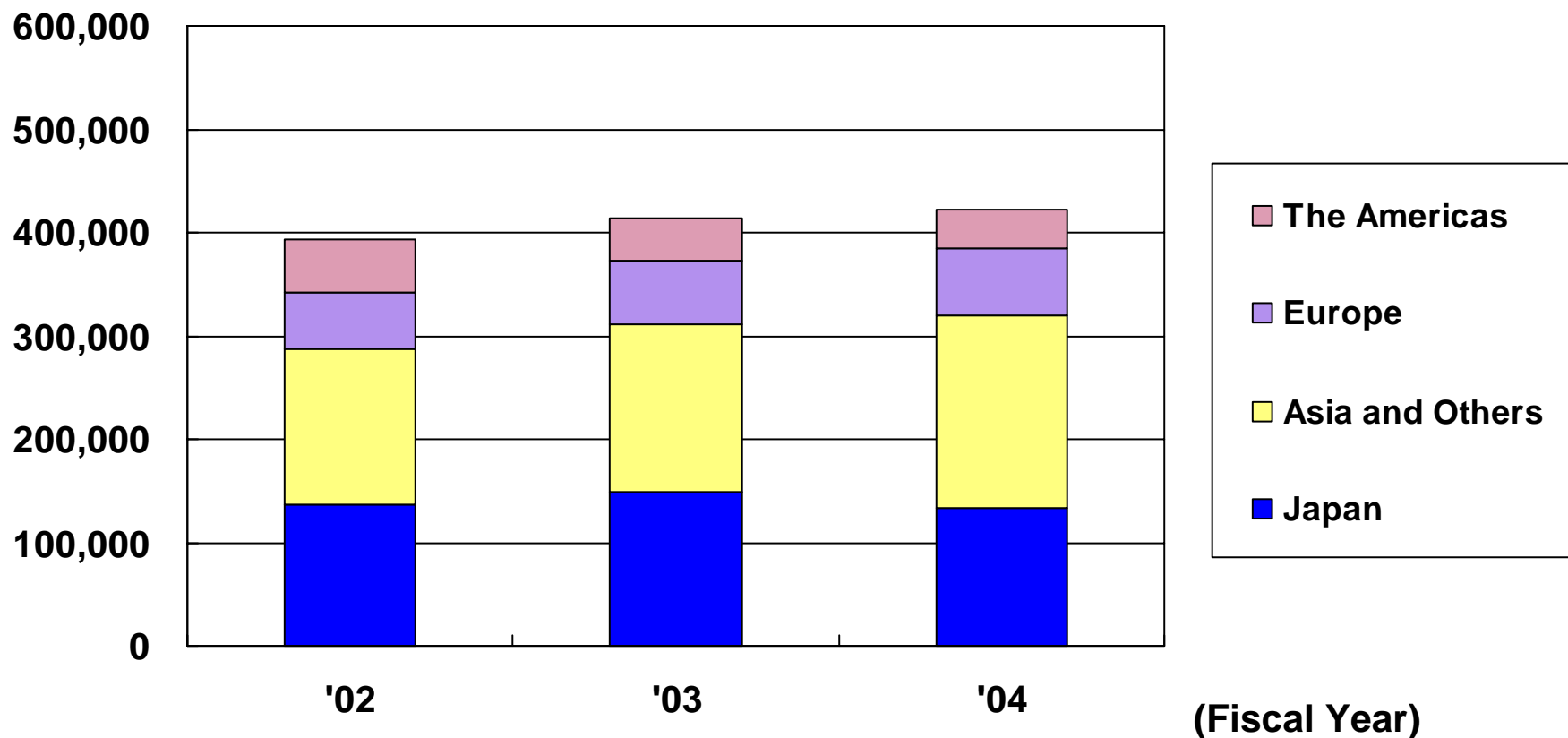
Wi-Fi Modules

# Sales by Area



( Unit:  
Million of Yen)

2003 Consolidated basis : 414,247  
2003 Parent Co. basis : 343,374  
**2004 Consolidated basis : 424,468**  
**2004 Annual Parent Co. basis : 358,919**



\*Sales for India : approximately 43k US Dollars on the average a Month these years

# Global Network

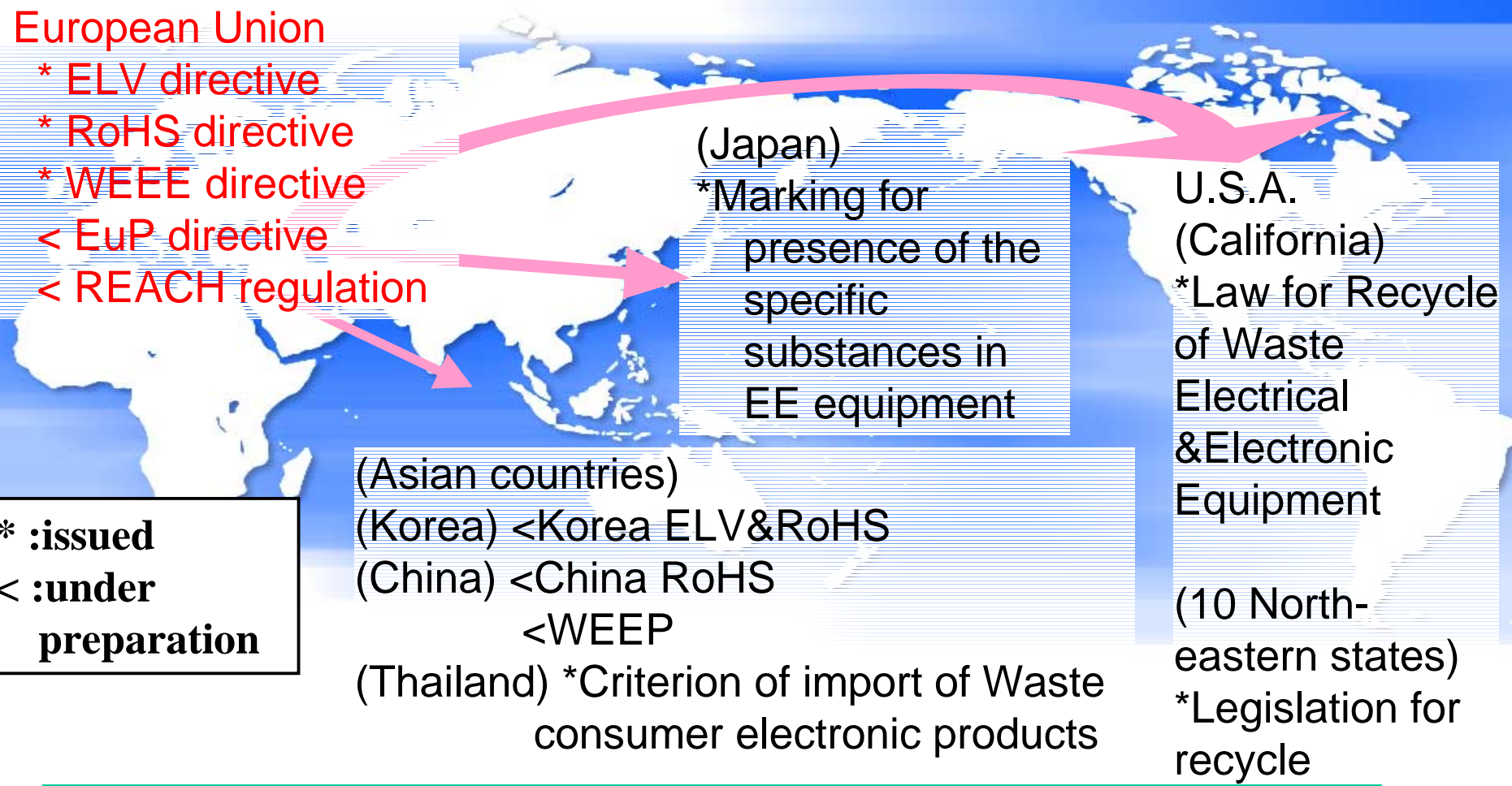


# SUBJECT

1. Why do we need to manage legal and customer requirements for product environment?
2. How do we manage chemical substances in manufacturing our products?
3. How do we manage compliance with product environmental legislation?

# **1. Why do we need to manage legal and customer requirements for product environment?**





\* :issued  
< :under preparation

**EU is now leading the world in legislating restrictions of use of environmental burden substances and is affecting other countries.**

## **- ELV Directive(2000/53/EC) (EU)**

Restriction of use of lead, hexavalent chromium, cadmium, mercury in materials and components of vehicles put on the European market from July 1, 2003

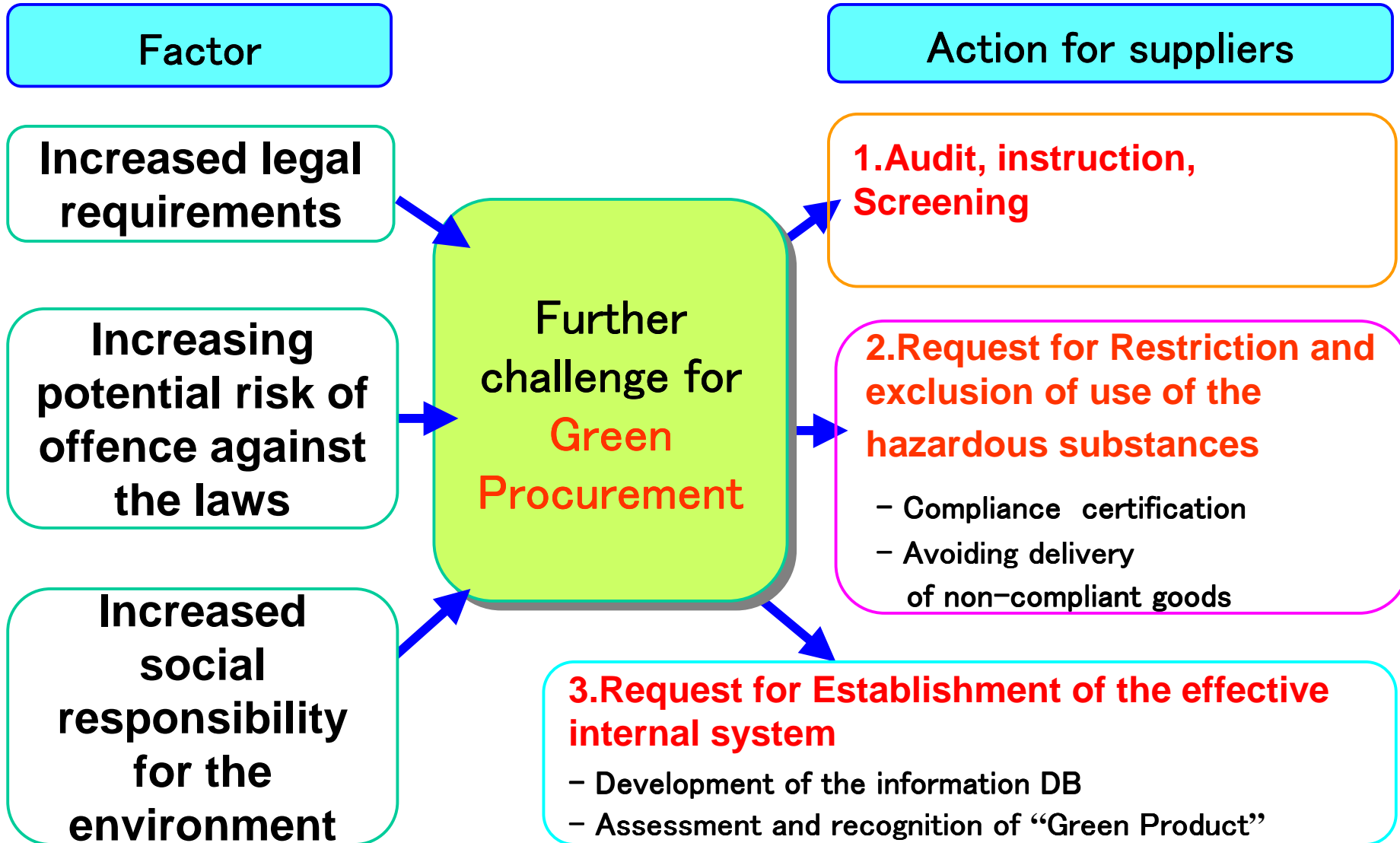
## **- RoHS Directive (2002/95/EC) (EU)**

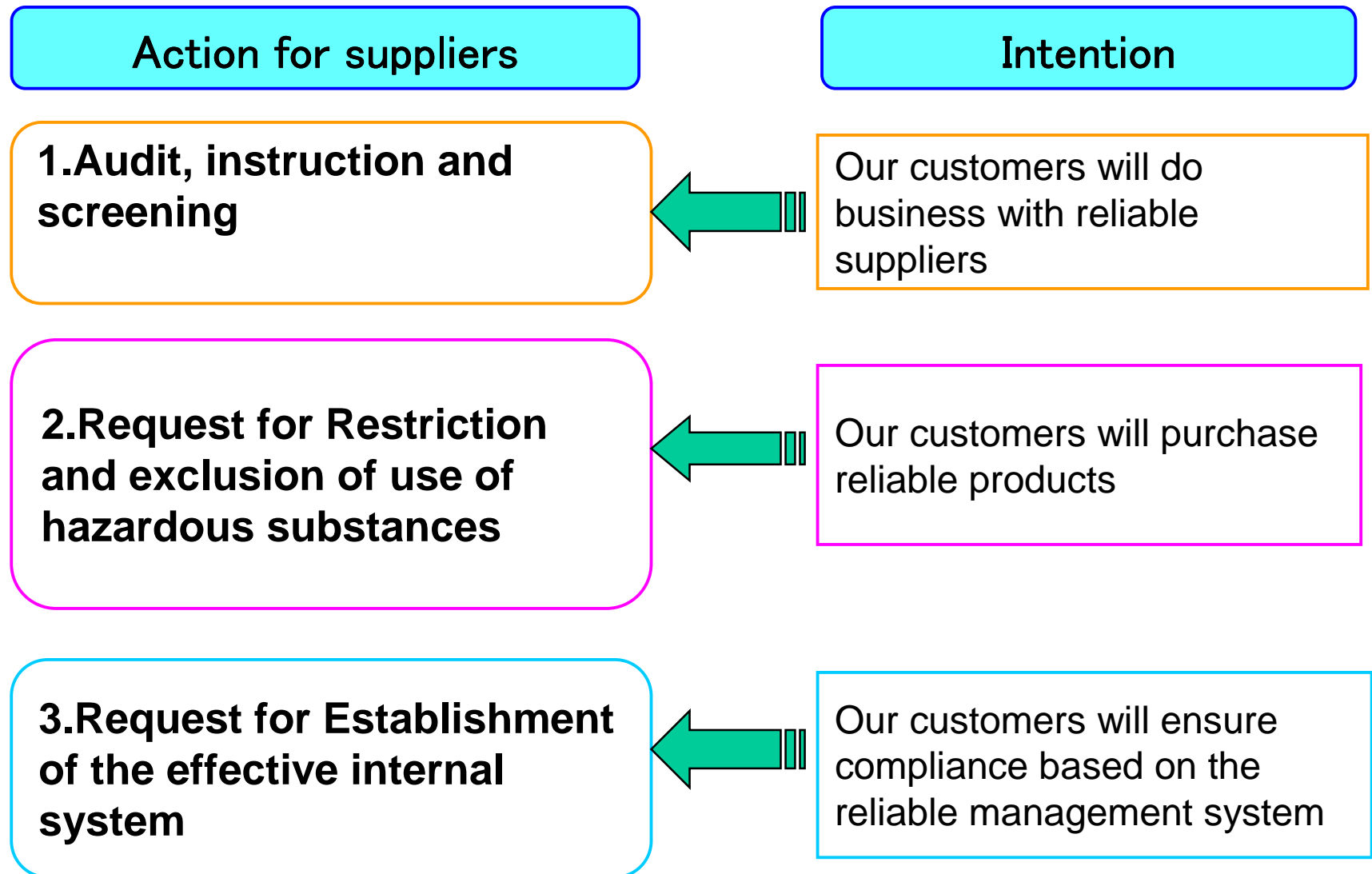
Restriction of use of lead, hexavalent chromium, cadmium, mercury and PBB, PBDE in electrical and electronic equipment to be put on the European market from July 1, 2006

## **- REACH (proposal under discussion) (EU)**

Regulation of evaluation, authorization, restriction of chemicals. Registration of chemicals used in articles will be also required.

# Our customers (Equipment manufacturers) need to improve Green procurement activities

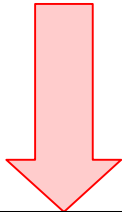




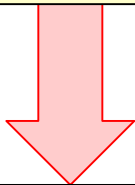
# Our customers' actions for the suppliers and the problems (1)

Our customers will do business with reliable suppliers

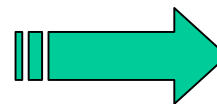
Audit, Rating and Screening of suppliers



- Adverse effect (disappointing result of audit, Cost) > expected effect (The levels of the management cannot be measured)
- Suppliers' trouble caused by deferent requirements from some manufacturers in the audits and the instructions



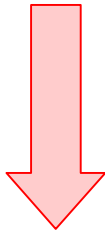
Sharing common knowledge of the management over the supply chain makes the scale



JGPSSI Guideline for the management

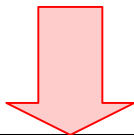
# Our customers' actions for suppliers and the problems (2)

Our customers will purchase reliable products



Request to the suppliers for avoiding restricted substances, and for compliance confirmation and analytical data

- Most of the collected confirmations and the analytical data could be not enough available
- Suppliers' trouble caused by unlimited requirements of some customers based on their unspecific aims



Practice of adequate management of substances surely provides compliance



JGPSSI Guideline for the management

# Our customers' actions for the suppliers and the problems (3)

Our customers will ensure compliance based on the reliable management system



Request to the suppliers for improving the management system

- Diversity of our customers' requirements to the suppliers for improving the management system
- Absence of assessment criteria for the management system and the performance



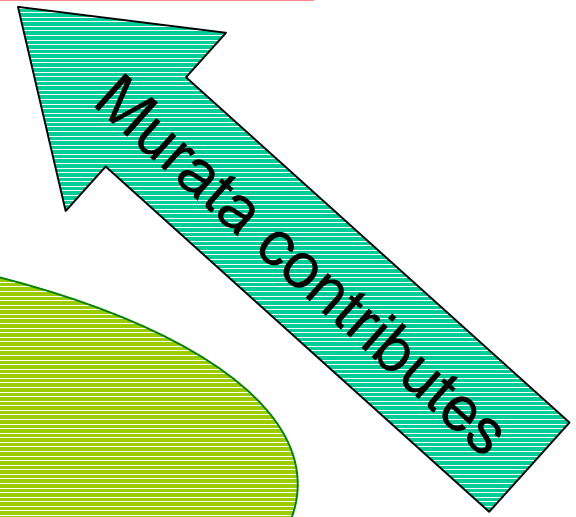
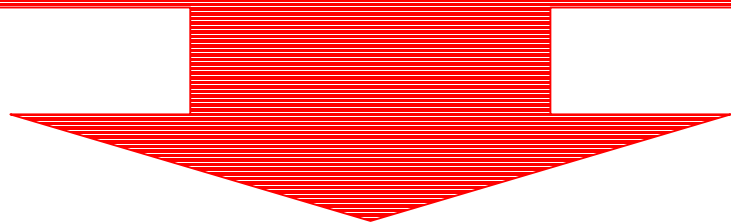
Standardization of the management system makes Reliability

JIG(JGPSSI) guideline for survey of the 24 targeted substances

JGPSSI Guideline for the management

# JGPSSI activities

for standardization across the supply chain

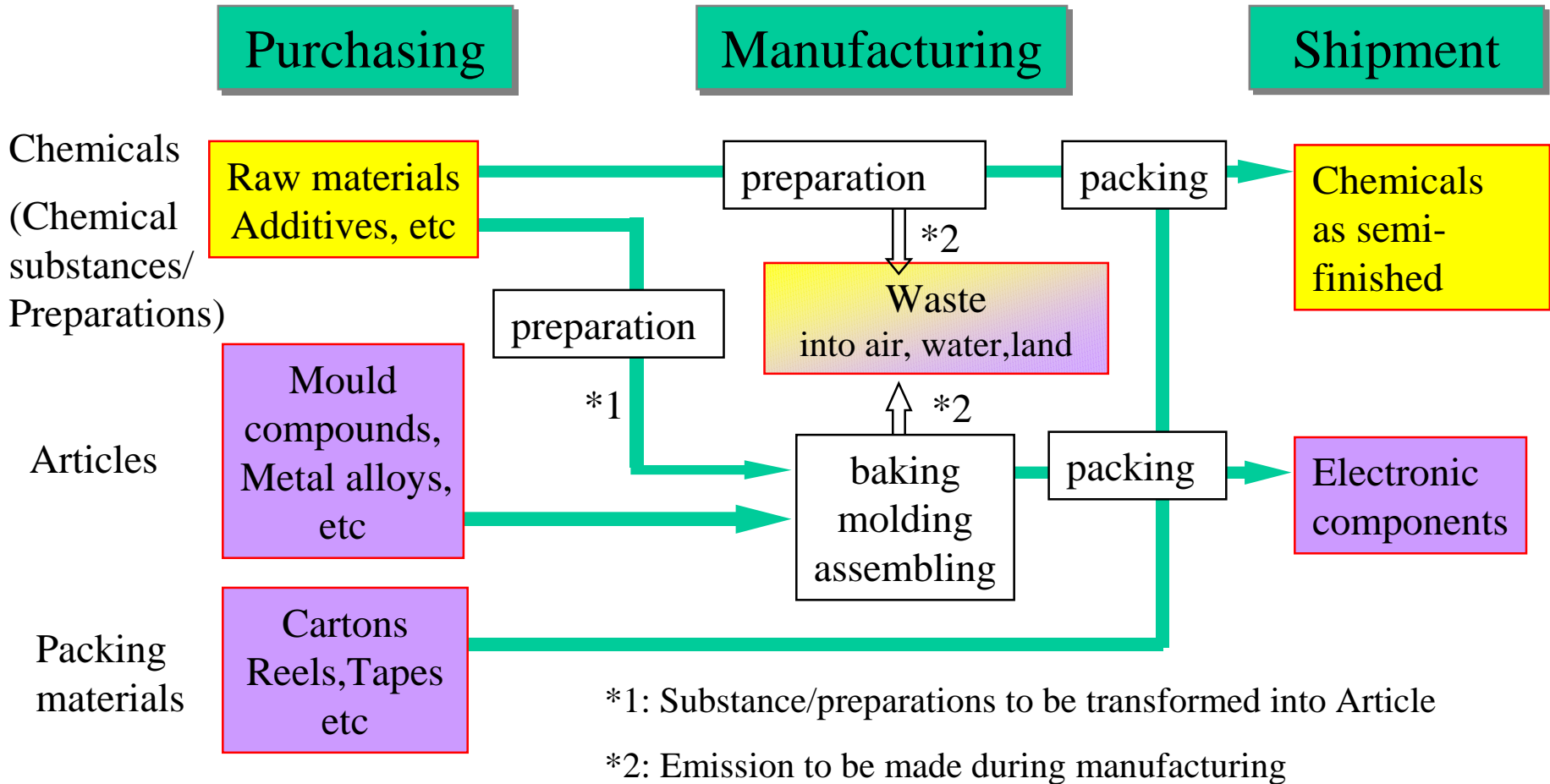


more cost-effective system in the whole industry



## **2. How do we manage chemical substances in manufacturing our products?**

# Our production process



We manufacture main electronic components by transforming Chemical Substances into Articles

## **1. We are promoting the restriction, the reduction and the abolition on the basis of our voluntary criteria**

- (1) the technical criterion for the environmental burden substances in products
- (2) the technical criterion for the environmental burden substances used in the process

## **2. We are surveying, controlling and screening the uses of the environmental burden substances**

- to check the substances in purchased materials including the impurities
- to check and verify the contained substances in selection of new materials
- to prevent ourselves from purchasing unchecked(unregistered) materials

# The structure for restriction of use of the substances in our products and in the process

RANK	In the products	In the process
<b>A: Prohibition</b> (The use is prohibited in accordance with any active legal requirements)	<b>Shall not be contained</b>	<b>Shall not be used</b>
<b>B: Voluntary prohibition</b> (the use is prohibited beforehand so as to avoid offence against potential regulations)	<b>shall not be contained after a certain time</b>	<b>shall not be used after a certain time</b>
<b>C: Reduction</b> (action for the reduction should be made under the long term scheme)	<b>Try reducing the amount of the substances in use</b>	<b>Try reducing the amount of the substances in use</b>
<b>D: Preparation for reduction</b> (Investigation of content of the substances/the alternative should be taken in the purchasing stage and in the development stage)	<b>prepare to reduce the amount of the substances in use</b>	<b>Prepare to reduce the emission of the substances</b>

## The points of our survey and control for the content and the use of substances

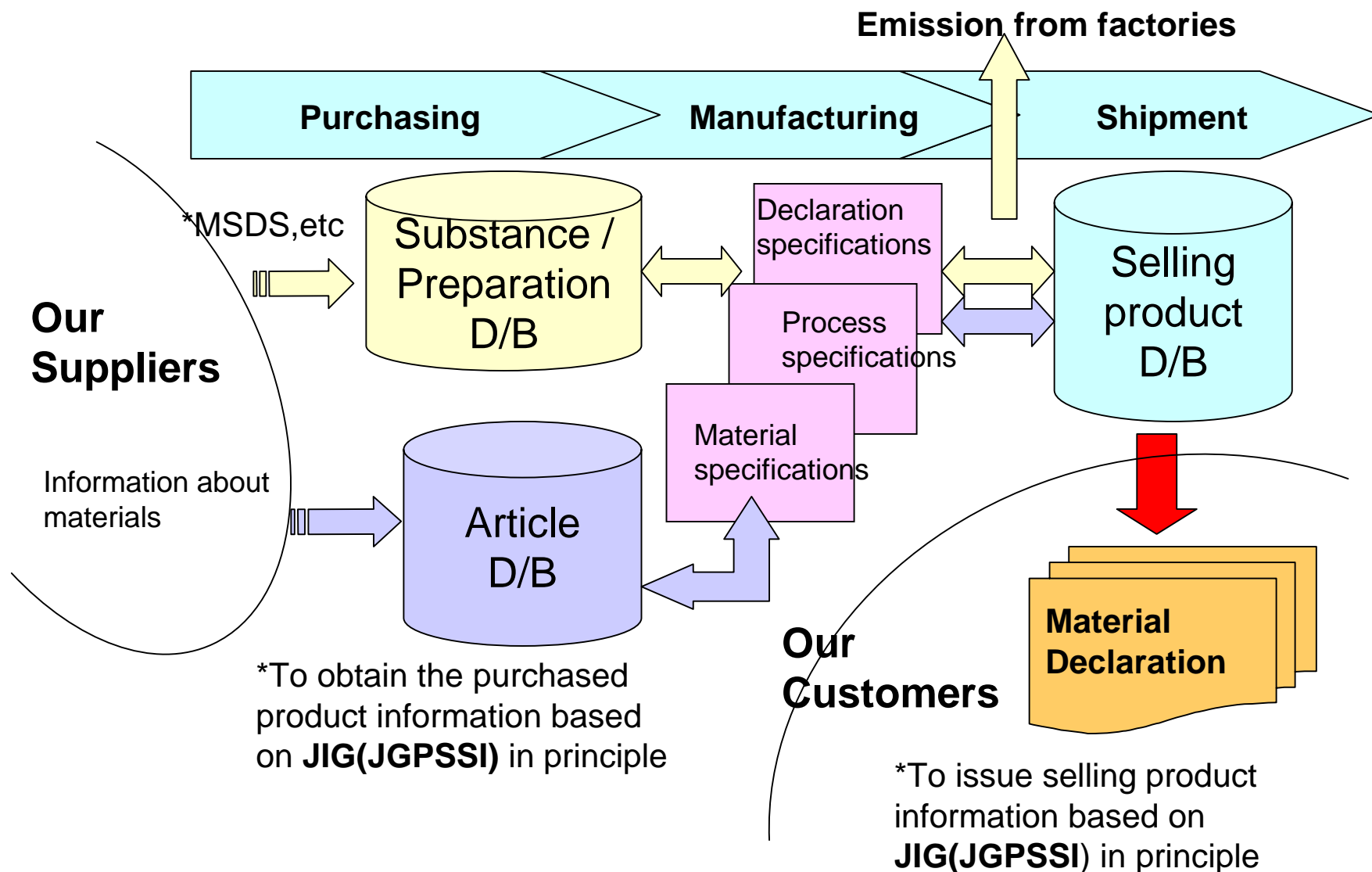
1. To identify “substance/preparation” and “article” in purchasing the materials
2. To examine any substances to use, and to allow ourselves to purchase only the registered ones
  - (1) To manage “self-producing materials” and “purchased materials” under the one system
  - (2) To obtain necessary information with not only Safety Data Sheet(SDS\*) or Material Safety Data Sheet (MSDS\*) but also our independent questionnaire to suppliers \*They are almost alike and obligatory for chemicals manufacturers to issue in Europe, Japan,etc
  - (3) To check our supplier’s confirmation of compliance, and compliance with export control regulations of Japan.
  - (4) To check even very small content and impurities of environmental burden substances

## The objectives to check the substances contained in chemicals

1. To comply with national legislation in any countries where our manufacturing bases locate
2. To check and control the substances in examining for registration
3. To comply with export control regulations of Japan
4. To exclude any pollution or any accidents which may occur in transporting the substance, and exclude any potential risk of offence against relevant laws
5. To collect complementary information about the substance which is not reported in the SDS or the MSDS
6. To support our customer's Green Procurement activities by providing material declaration considering cases of transforming the substance to an article or incorporating into it in the process

## The objectives to check the substances contained in articles

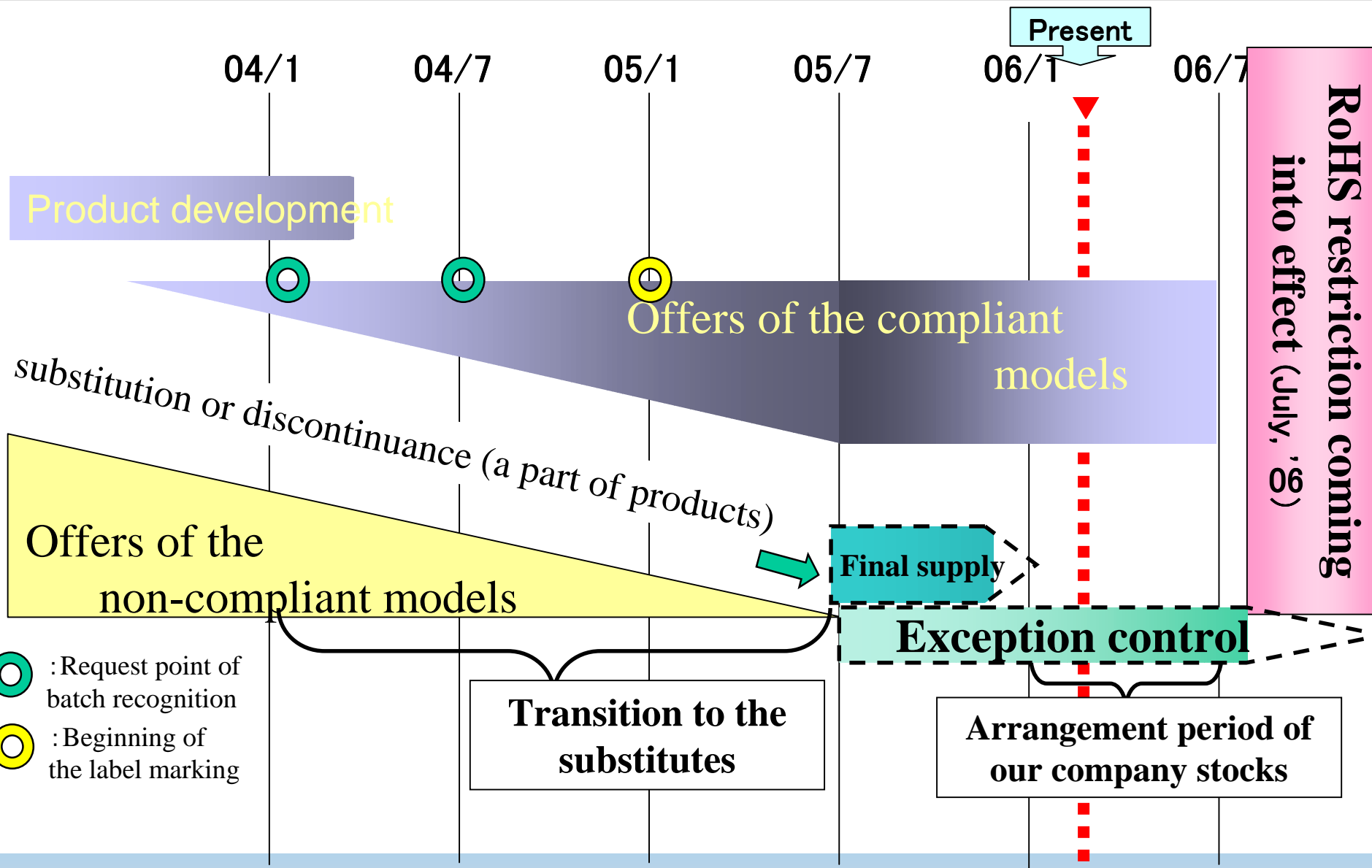
1. To comply with product environmental legislation including European relevant legislation such as RoHS, ELV
2. To provide material declaration about the specific substances in products
3. To support our customers in obtaining information available to their Green Procurement activities





# **3.How do we manage compliance with product environmental legislation?**

# Our RoHS Activities



## Mercury , Specific brominated flame retardants (PBB·PBDE) , Cadmium

Abolished

- The entire abolition is already completed
- The use has been already prohibited before the enforcement.
- Purchasing of materials containing them is prevented by beforehand obtaining compliance confirmations from our suppliers

## Hexavalent chromium

Almost abolished

- The substance is now being used in some kind of materials for some specific usage
- The use has been already prohibited before the enforcement (it is not to be used any more in newly developing models)
- Purchasing of materials containing them is prevented by beforehand obtaining compliance confirmations from our suppliers

## Lead

In progress

-We are asking our customers for approval for specifications of the substitutes

\* the use of lead in ceramics, glasses and high-melting point solders are exempted under EU-RoHS/ELV

Our activities for RoHS are amounting almost to “activities for lead-free products” now

## Our Policy

1. We decline your orders for Non-Compliant products (started in January, 2006)
2. We practice marking "RoHS compliant / non- RoHS compliant" in the packing labels on our all products

< for RoHS Compliant Products >

**ROHS-Y (A)**  
( $\alpha$ )    ( $\beta$ )    ( $\gamma$ )

< for RoHS Non-Compliant Products >

**ROHS-N (A)**

( $\alpha$ ) stands for EU(European Union) "RoHS" .

( $\beta$ ) indicates Compliant / Non-Compliant product.

Y ; RoHS Compliant Product, N ; RoHS Non-Compliant Product

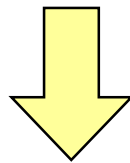
( $\gamma$ ) stands for the current active version of the restriction.

The character "(A) " stands for the current version of EU-RoHS  
Every time RoHS is revised, the indication may change among  
the Roman alphabet.

## ISSUE:

Shortening of the term of shift to RoHS compliant products

(For customers who still use both non-compliant models and compliant ones)



Promotion of solution based on cooperation among the supply chain

## ACTION:

1. To assist the equipment manufacturers with promoting the approval for RoHS compliant models
2. To discuss the time we may continue receiving their enquiry to non-compliant models and the time we may continue supplying the repair parts

Thank you for listening!

<http://www.murata.co.jp>