

**SAI-JAPAN  
BOARD OF AUDIT**

**Information security problems and  
future possibility of Big Data audit  
in Japan**

**Michiko Umeyama  
8<sup>th</sup> Performance Auditing Seminar on IT Audit  
April.28(29).2016**

# <Introduction>

About 1300 staffs  
36 audit divisions



Information & Communication  
Audit Division

Assistant Auditor  
**Michiko Umeyama**



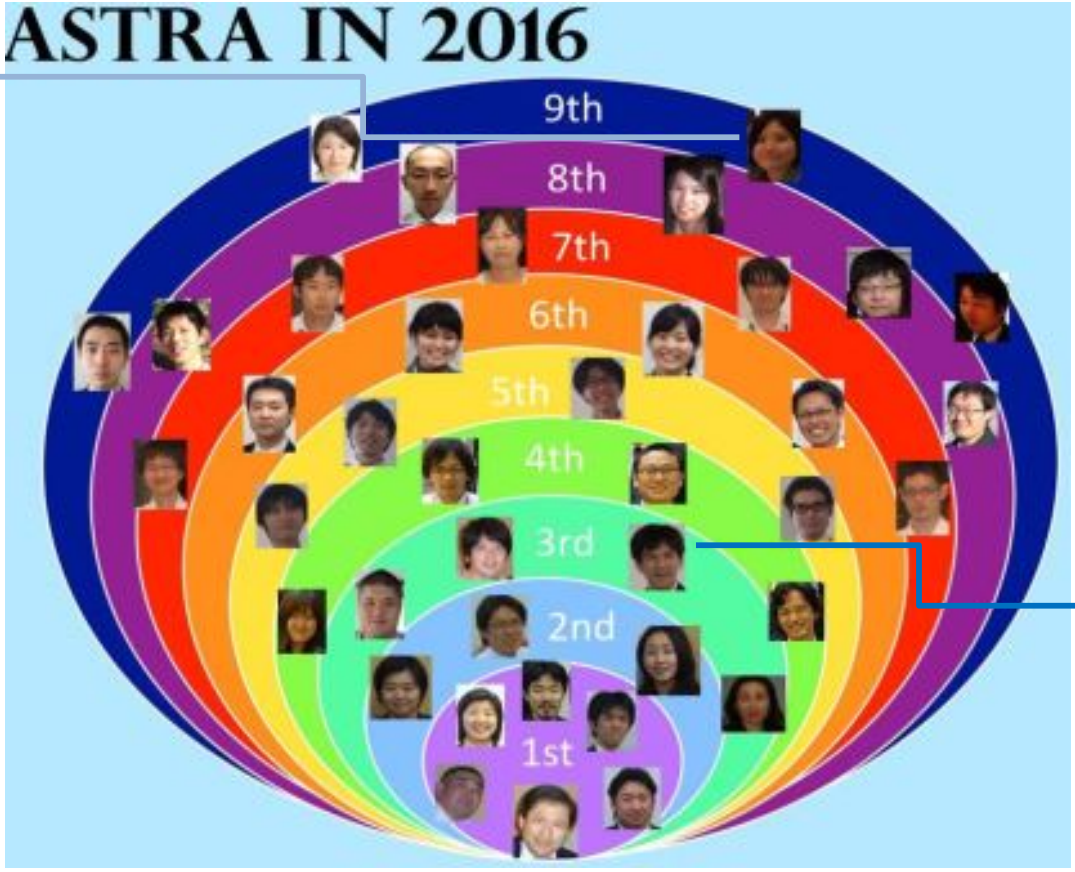
**SAI-JAPAN**

# <Introduction>

## IT AUDIT SKILL-UP TRAINING TEAM SINCE 2005



Presenter:  
Michiko  
Umeyama



Hideki Fujii

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2 Electronic data exchange  
between SAI-Japan and the Auditee entities

3 An example of Big data matching analyses  
by SAI-Japan

4 Social Security and Tax Number System in  
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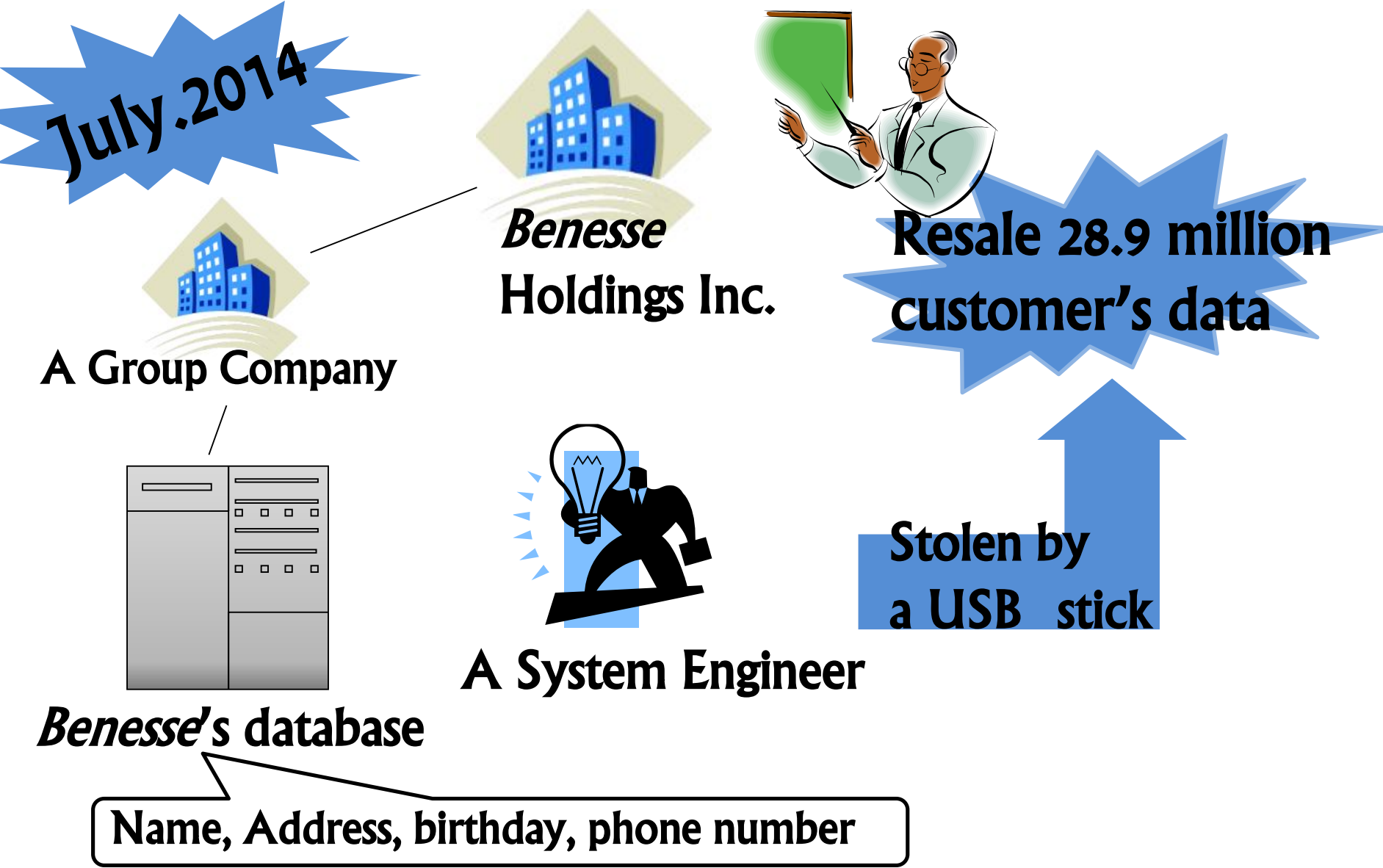
# **1 Background**

**1.1 *Benesse's* massive data leak**

**1.2 Japan Pension Service's case**

# 1 Background

## 1.1 Benesse's massive data leak

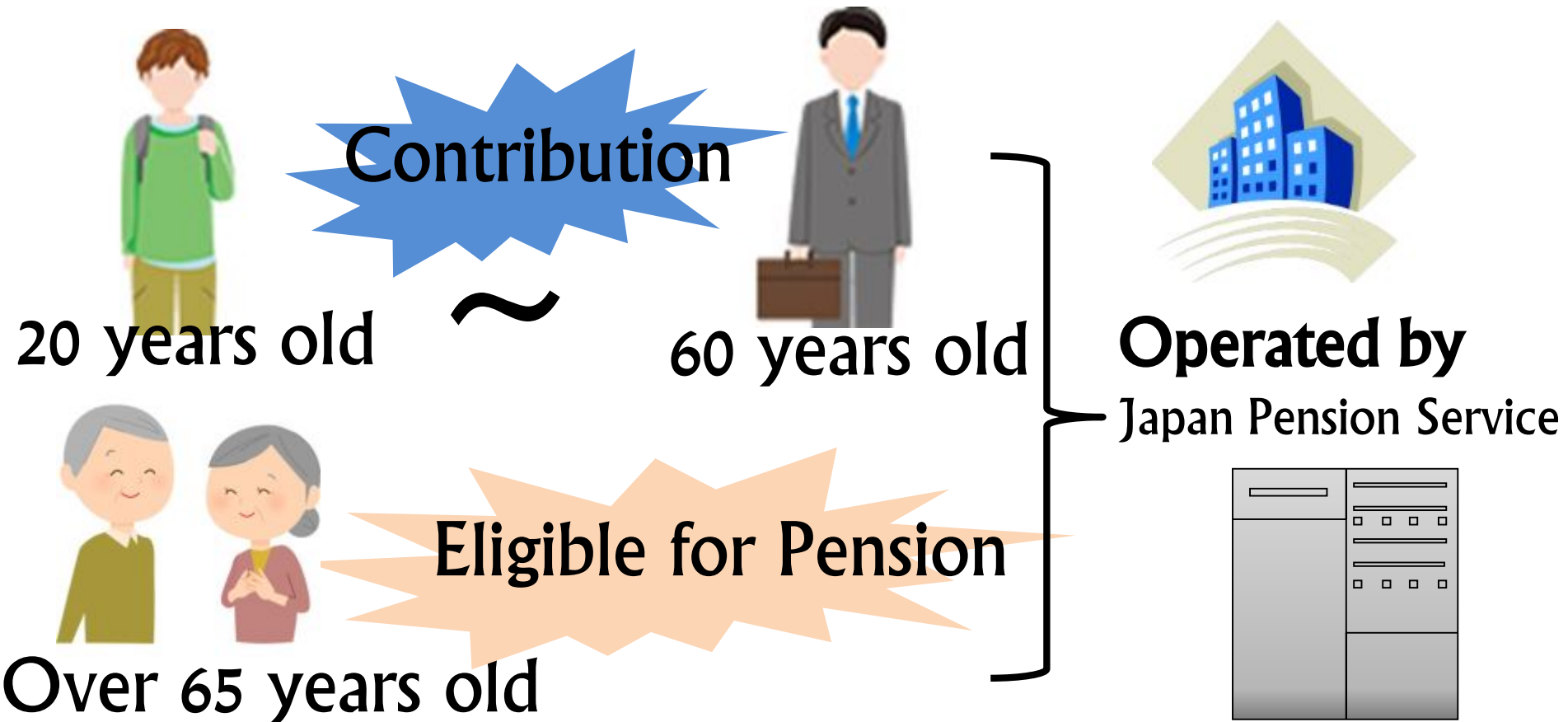


# 1 Background

## 1.2 Japan Pension Service's Case (1/2)

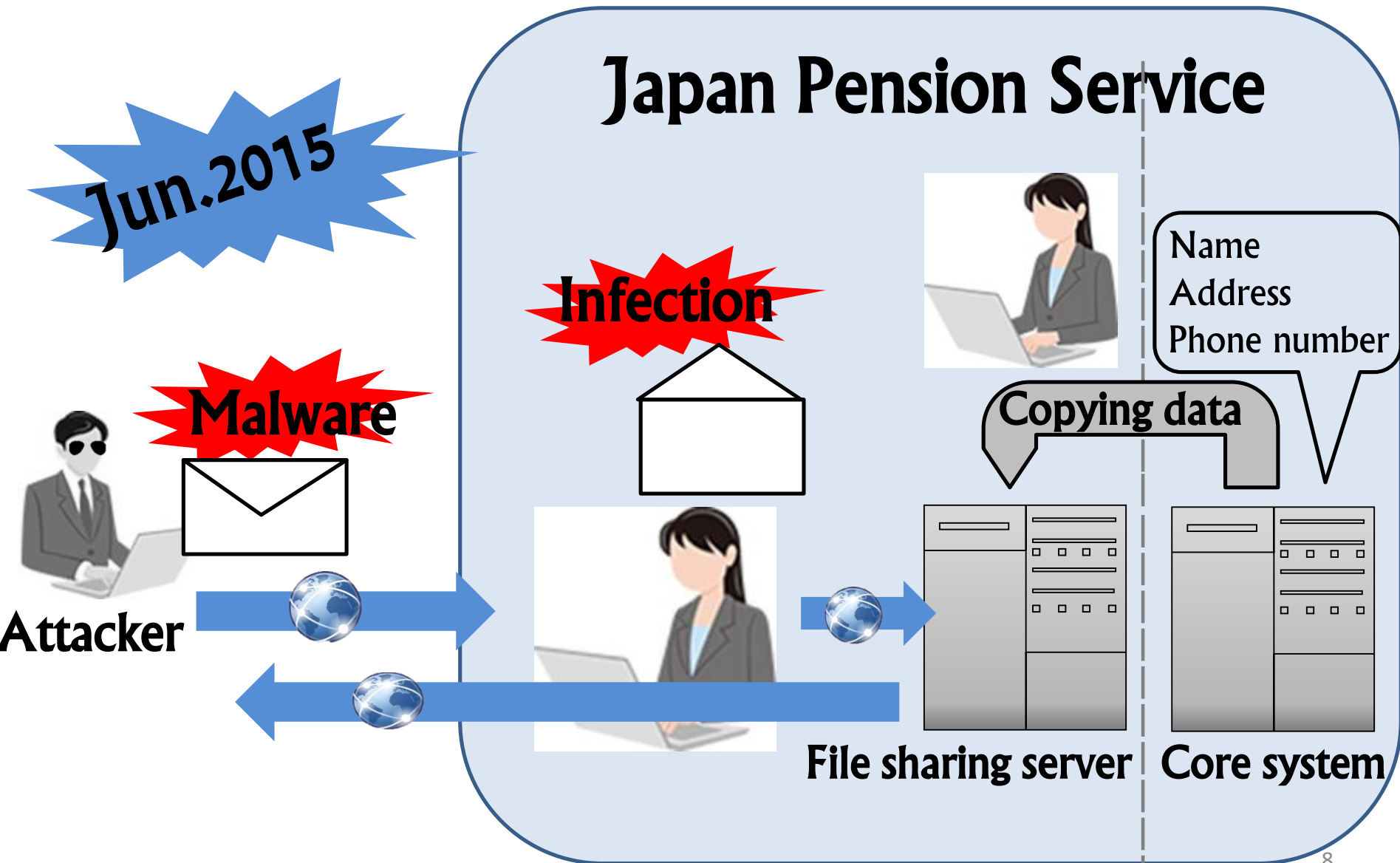
### Introduction

About Japanese National Pension System



# 1 Background

## 1.2 Japan Pension Service's Case (2/2)





## **2 Electronic data exchange between SAI-Japan and the auditee entities**

# 2 Electronic data exchange between SAI-Japan and the auditee entities (1/4)



**Japan-SAI**



**By Article 24**



**By Article 26**



**Auditees**



## **Article 24 of the Board of Audit Act**

- **SAI-Japan has mandate to receive regular financial statements together with vouchers and supporting documents from auditee entities and check them.**
- **Such vouchers and supporting documents are huge (44.67 million pages in 2015).**
- **SAI-Japan permits the auditee entities to arrange to submit documents in electronic media.**

# 2 Electronic data exchange between SAI-Japan and the auditee entities (3/4)

## Japan-SAI



## By Article 24

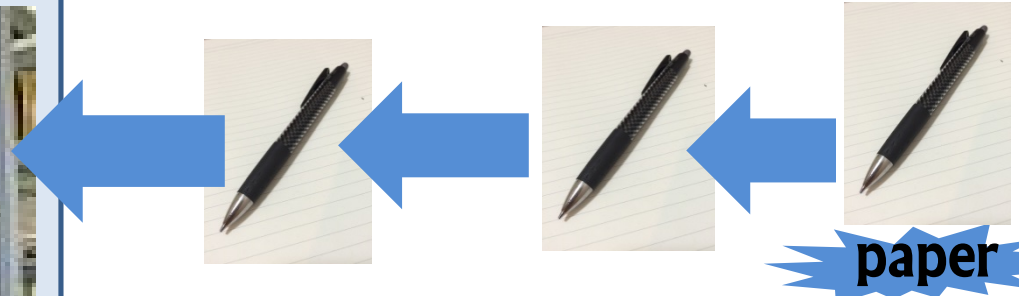


## Auditees

Total 44.67 million pages in 2015

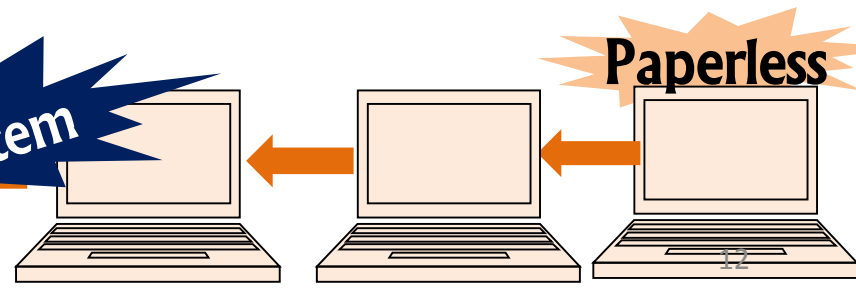


Only 1100 CDROMs in total 2015



## Approval Flow

New system



## Paperless

# 2 Electronic data exchange between SAI-Japan and the auditee entities (4/4)



**By Article 26**

|     |     |     |
|-----|-----|-----|
| 120 | 450 | 700 |
| 120 | 450 | 700 |
| 120 | 450 | 700 |
| 120 | 450 | 700 |
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| 120 | 450 | 700 |
| 120 | 450 | 700 |



**Auditees**



**Japan-SAI**

- SAI-Japan may demand auditee entities to submit documents or other supporting materials etc.

- Such documents or other supporting materials can be in electronic forms.

**Example**



# **3 An example of Big data matching analyses by SAI-Japan**

### 3 An example of Big data matching analyses by SAI-Japan (1/3)

**Mar. 2011**

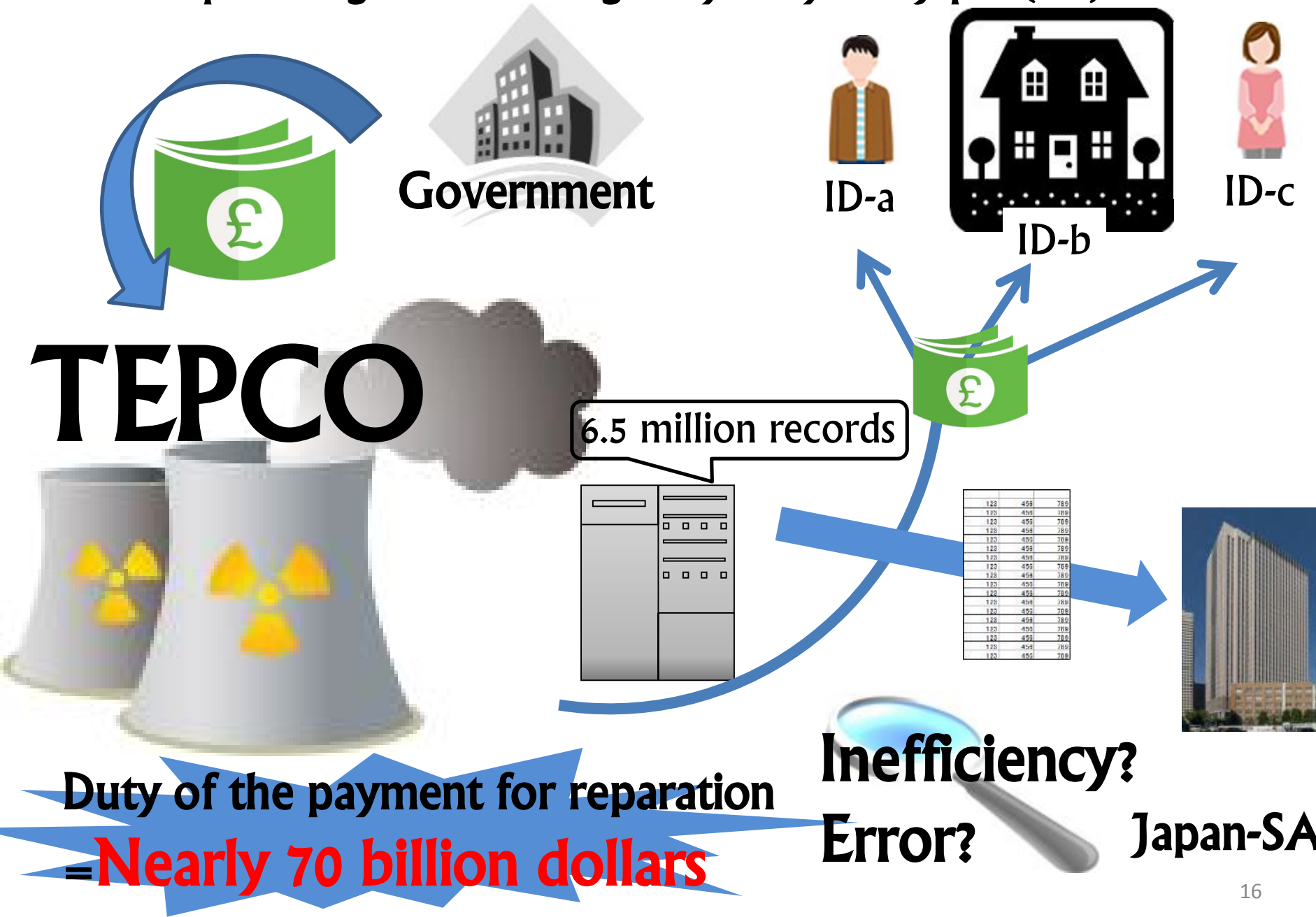
# TEPCO



**TEPCO=Tokyo Electric Power Company**



# 3 An example of Big data matching analyses by SAI-Japan (2/3)





### 3 An example of Big data matching analyses by SAI-Japan (3/3)

**IDEA**  
& Microsoft Access

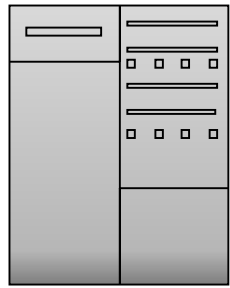


ID-a

ID-b =



**TEPCO**



# **4 Social Security and Tax Number System in Japan**

**4.1 Individual number & corporate number**

**4.2 Use of the Corporate Number as a matching key**

**4.3 Future use of the Corporate Number**

# 4 Social Security and Tax Number System in Japan

## 4.1 Individual number & corporate number (1/5)

Oct.2015



<Individual Number>  
(National ID)

◎△ × ●◎△◆□○△ × ◎

△ × ●◎△◆□○△ × ◎ ×

× ●◎△◆□○△ × ◎◎△

<Corporate Number>



1234567898765

2345678987654

3456789876543

# 4 Social Security and Tax Number System in Japan

## 4.1 Individual number & corporate number (2/5)

### <Individual Number>

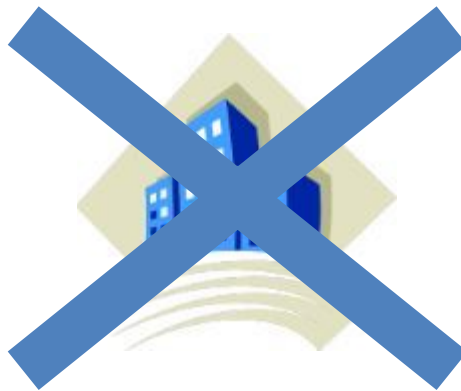
**Social Security**



**Taxation**



**Disaster  
response  
procedures**



**For commercial**

# 4 Social Security and Tax Number System in Japan

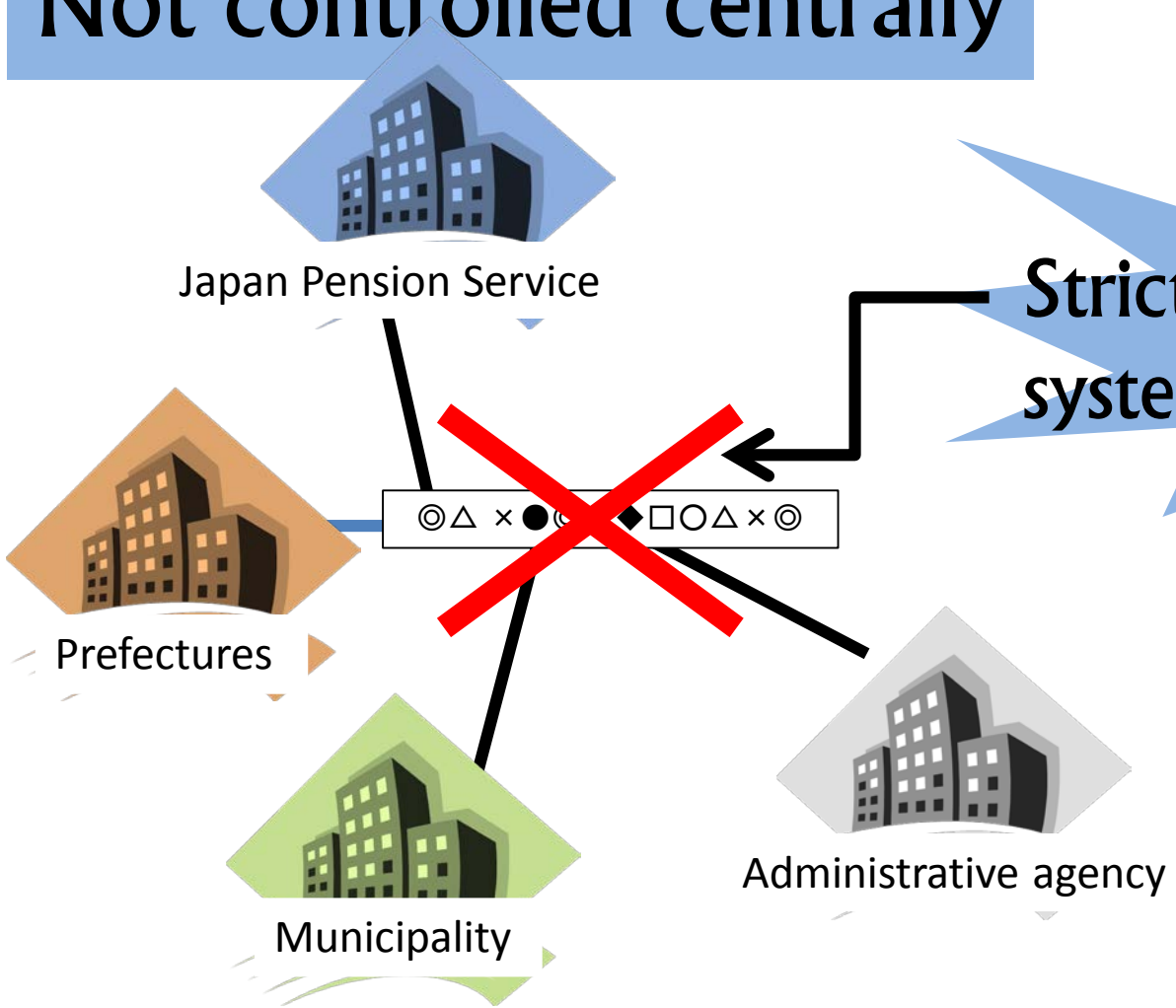
## 4.1 Individual number & corporate number (3/5)

### <Individual Number>

Not controlled centrally



◎△ × ●◎△◆□○△×◎

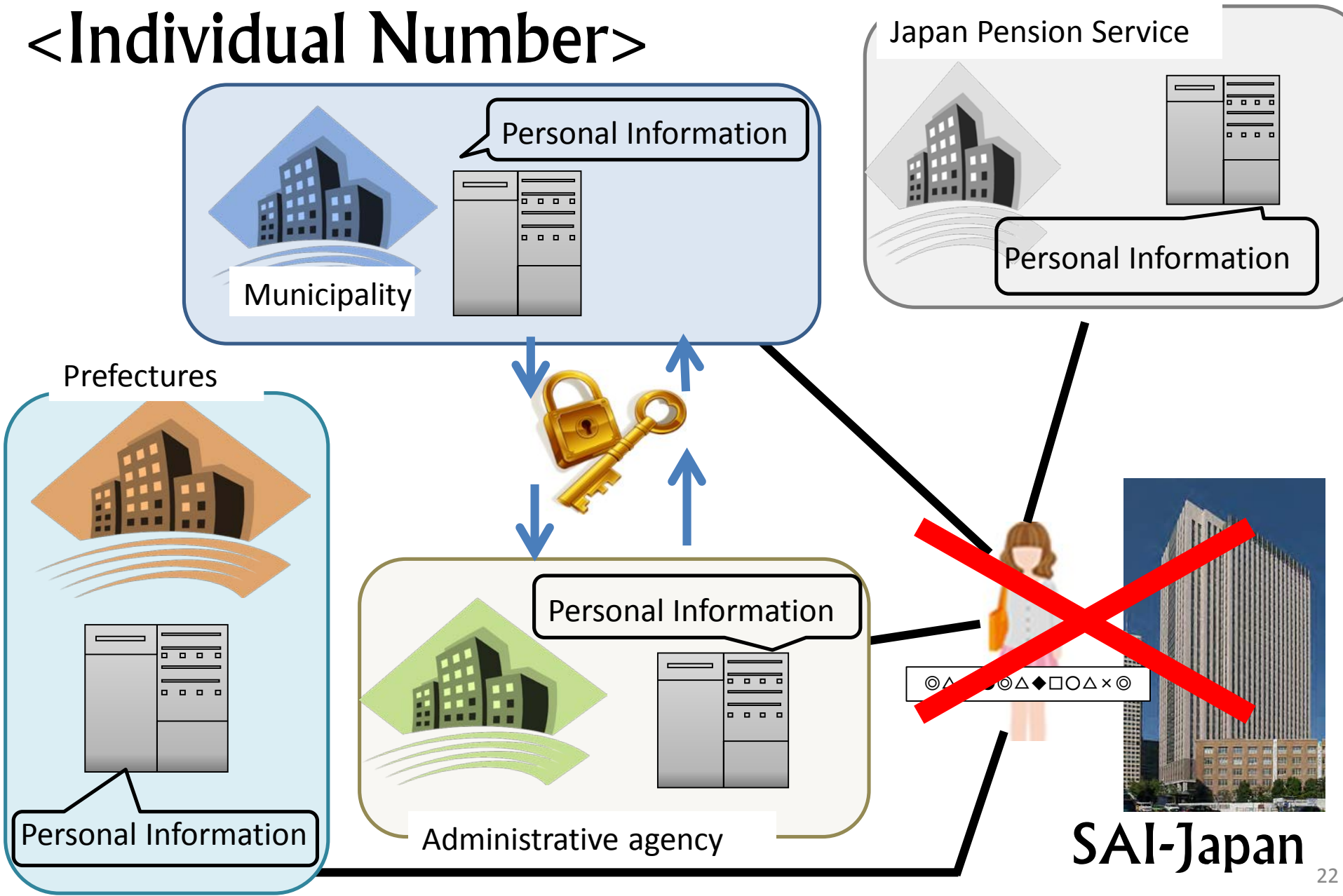


Strict operation-side and system-side monitoring

# 4 Social Security and Tax Number System in Japan

## 4.1 Individual number & corporate number (4/5)

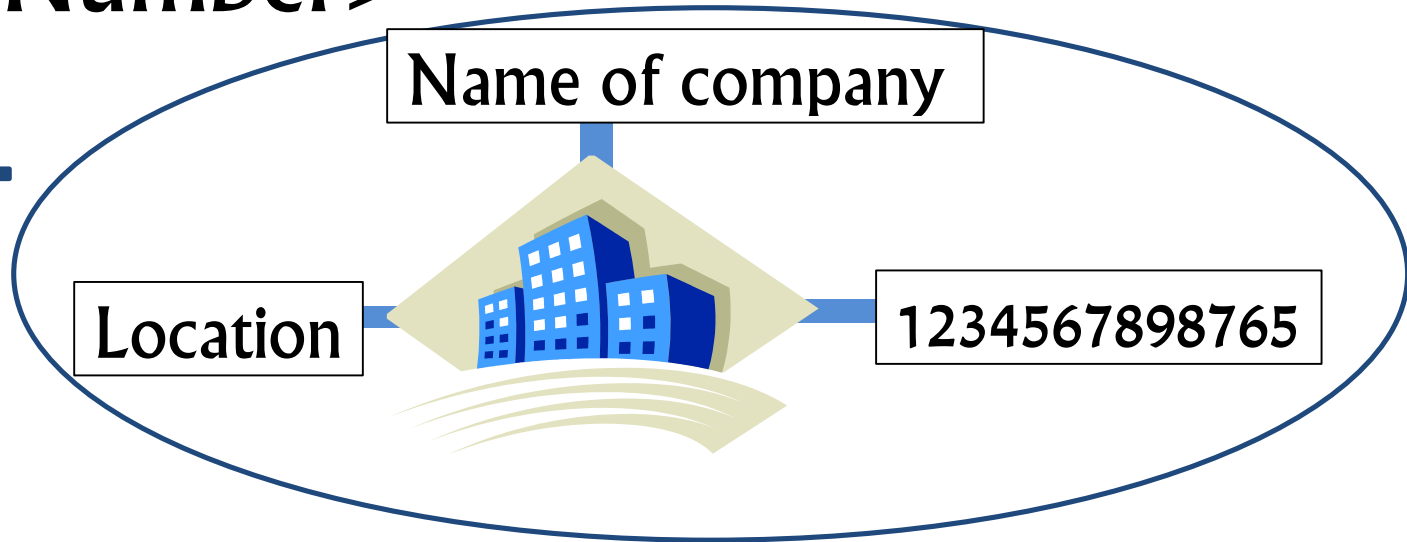
### <Individual Number>



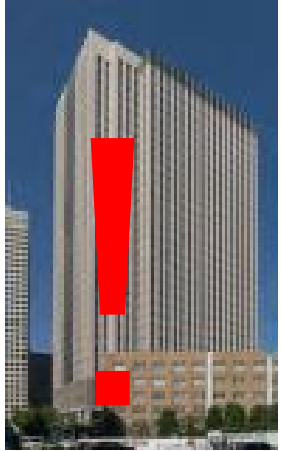
# 4 Social Security and Tax Number System in Japan

## 4.1 Individual number & corporate number (5/5)

### <Corporate Number>



These 3 data can be downloaded for use on your PC



Japan-SAI

## 4 Social Security and Tax Number System in Japan

### 4.2 Use of the Corporate Number as a matching key(1/2)

会計検査院

かいけいけんさいん



kaikeikensain

カイケイケンサイン

**Orthographical variants**

**Solution**



**Corporate Number**



1234567898765







# **5 Conclusion & Discussion**