

# Institutional Management:

Governance,  
Human Resources Development,  
Consolidation of water utilities,  
Public-Private Partnerships



“Let’s drink tap water with the whole family”

No. T7 Ver. 1

Poster of 58<sup>th</sup> Water Week in 2016  
Source: Japan Water Works Association

# Contents

- 1. Introduction**
- 2. Governance**
- 3. Business Plan and PDCA (Plan, Do, Check, Act) Cycle**
- 4. Human Resources Development**
- 5. Management of Small and Medium Scale Utilities**
- 6. Public - Private Partnerships**
- 7. Lessons Learned**

# 1. Introduction

## Water Supply Administration

Ministry of Internal Affairs  
and Communications  
(MIC) : Local Public  
Enterprise Act  
**Administrative matters**

Ministry of Health, Labour  
and Welfare  
(MHLW):  
Water Supply Act  
**Technical matters**

Water Utilities  
under  
Local Governments

# 1. Introduction

## Frequently asked questions from participants of the water supply training courses

**Q1.** What is the **governance** of Japan's water utilities?

**Q2.** Why do Japan's water utilities emphasize **business planning**? What are the contents business plans?

**Q3.** How do Japan's water utilities **develop capacities of human resources**?

**Q4.** Do **small and medium scale water supply utilities** have any **problems** with finance and human resources? If they have problems, how do they attempt to overcome the problems?

**Q5.** How does Japan promote **public-private partnerships** in the field of water supply?

## 2. Governance

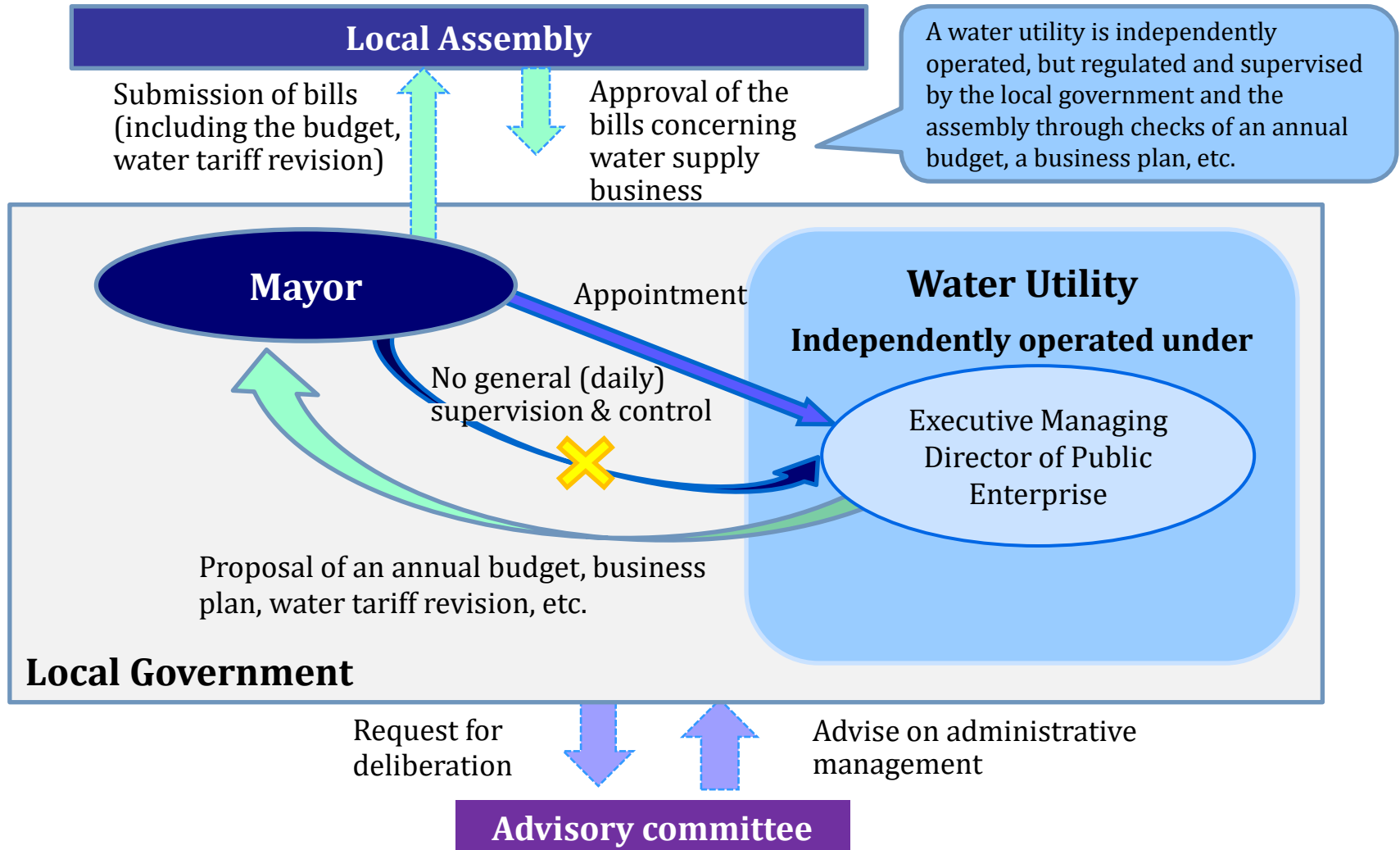
### (1) Roles of the Government, Water Utilities and Citizens

**Goal : Water supply for public health and good living environment**



## 2. Governance

### Regulation & Supervision of Water Utilities



## 2. Governance

### (2) Roles of Executive Managing Director & Technical Administrator

#### Administrative Management

##### Executive Managing Director of Public Enterprise

- Establishing necessary sections and/or department
- Taking charge of employment/dismissal of employees, wages, work hours and other working conditions, punishment, training, etc.
- Preparing a draft of the budget and the settlement of accounts
- Preparing data for a motion to the local assembly
- Acquiring, managing and disposing assets
- Concluding agreements/contracts
- Collecting tariff, fees other than tariff, contribution, and connection charges, etc.
- Carrying out temporary borrowing

#### Technical Management

##### Technical Administrator

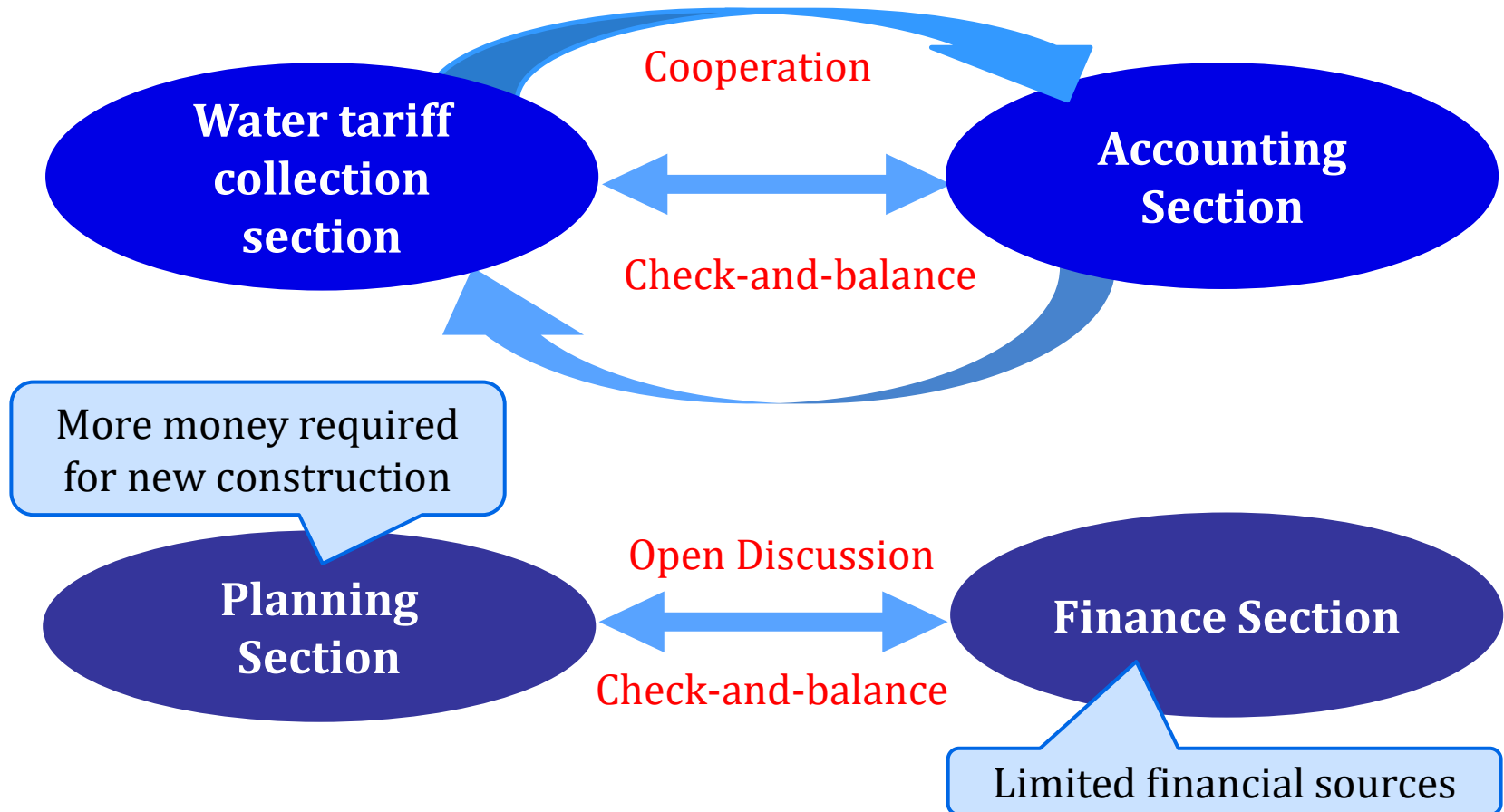
- Inspecting water supply facilities based on the standards for facilities
- Conducting water quality inspection and facility inspection
- Conducting inspection of the structure and material of service connections
- Health checkups
- Emergency suspension of water supply

Water utilities have been properly managed under the technical administrators and the executive managing directors of public enterprises

## 2. Governance

### (3) Organizational Management

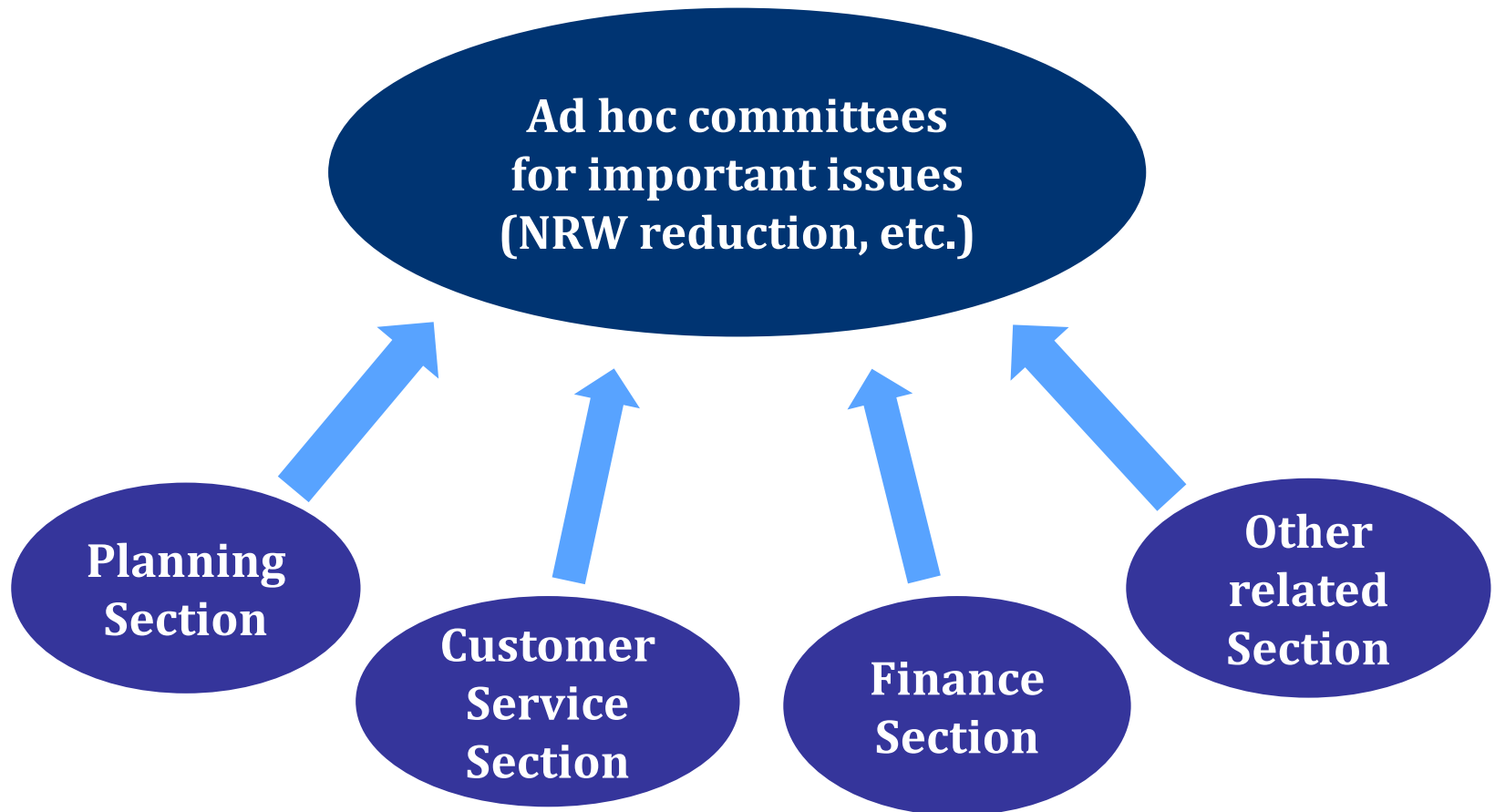
#### Example: Tokyo Metropolitan Government





## 2. Governance

### Example: Tokyo Metropolitan Government (Cont'd)



## 2. Governance

### (4) Advisory Committee

An advisory committee is an affiliated organization ruled by the *Local Autonomy Act* and conducts screening, deliberations, investigations, etc. of management of a local government.

#### Advisory committee ensures:

1. accountability and information disclosure (utility has to make the case for revisions);
2. objectivity in the decision-making process;
3. use of expert advice from members;
4. incorporation of customer input from representatives in the committee.

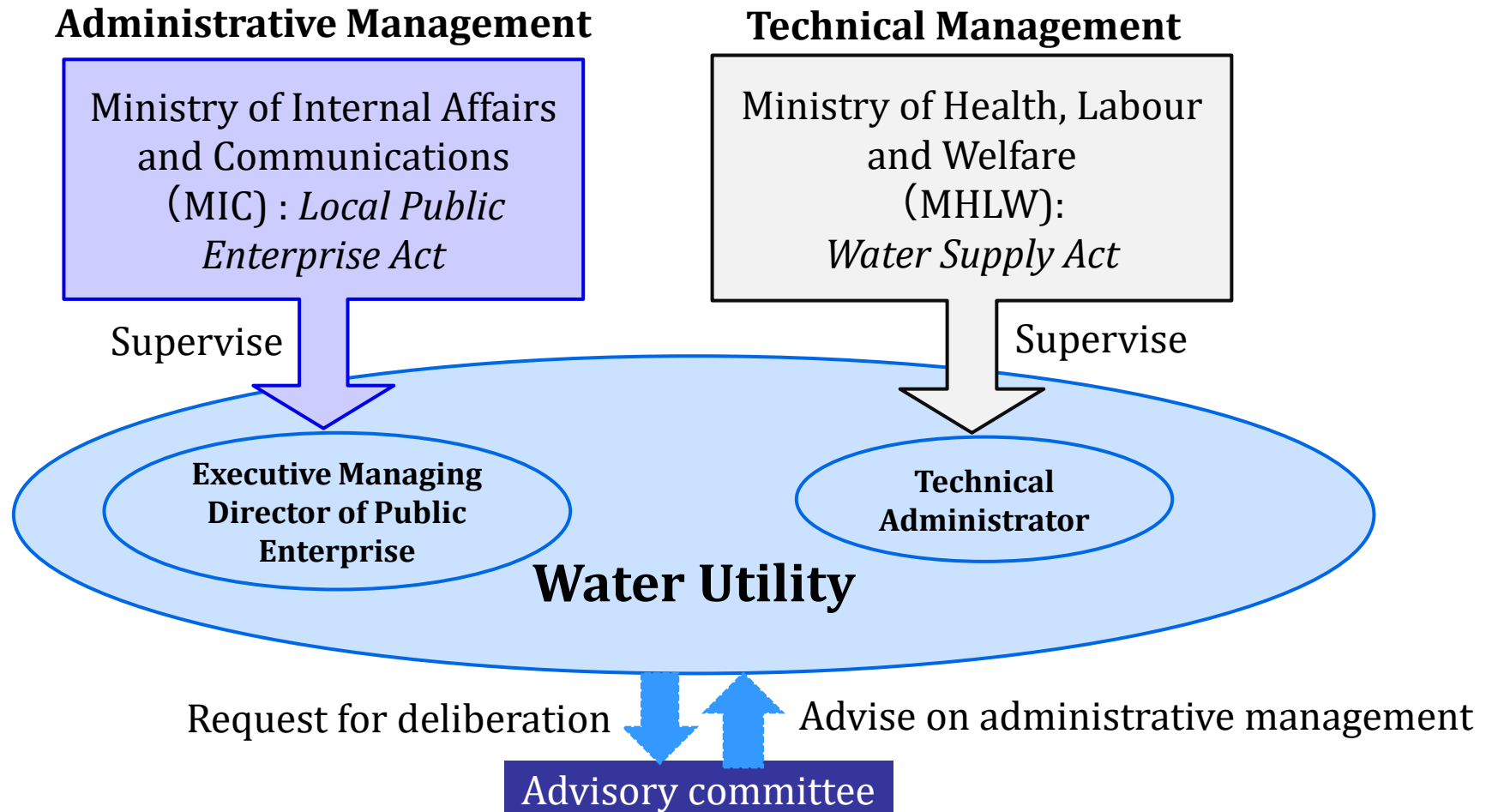


**Advisory committee on waterworks management in Koriyama City**

<https://www.city.koriyama.fukushima.jp/481000/jogesuido/shingikai.html>

## 2. Governance

### (5) Concept of Governance for Water Utility



### 3. Business Plan and PDCA Cycle

#### Water Supply Development based on Plans

##### Postwar Recovery

Ongoing repairs  
of water supply  
facilities

##### Expansion

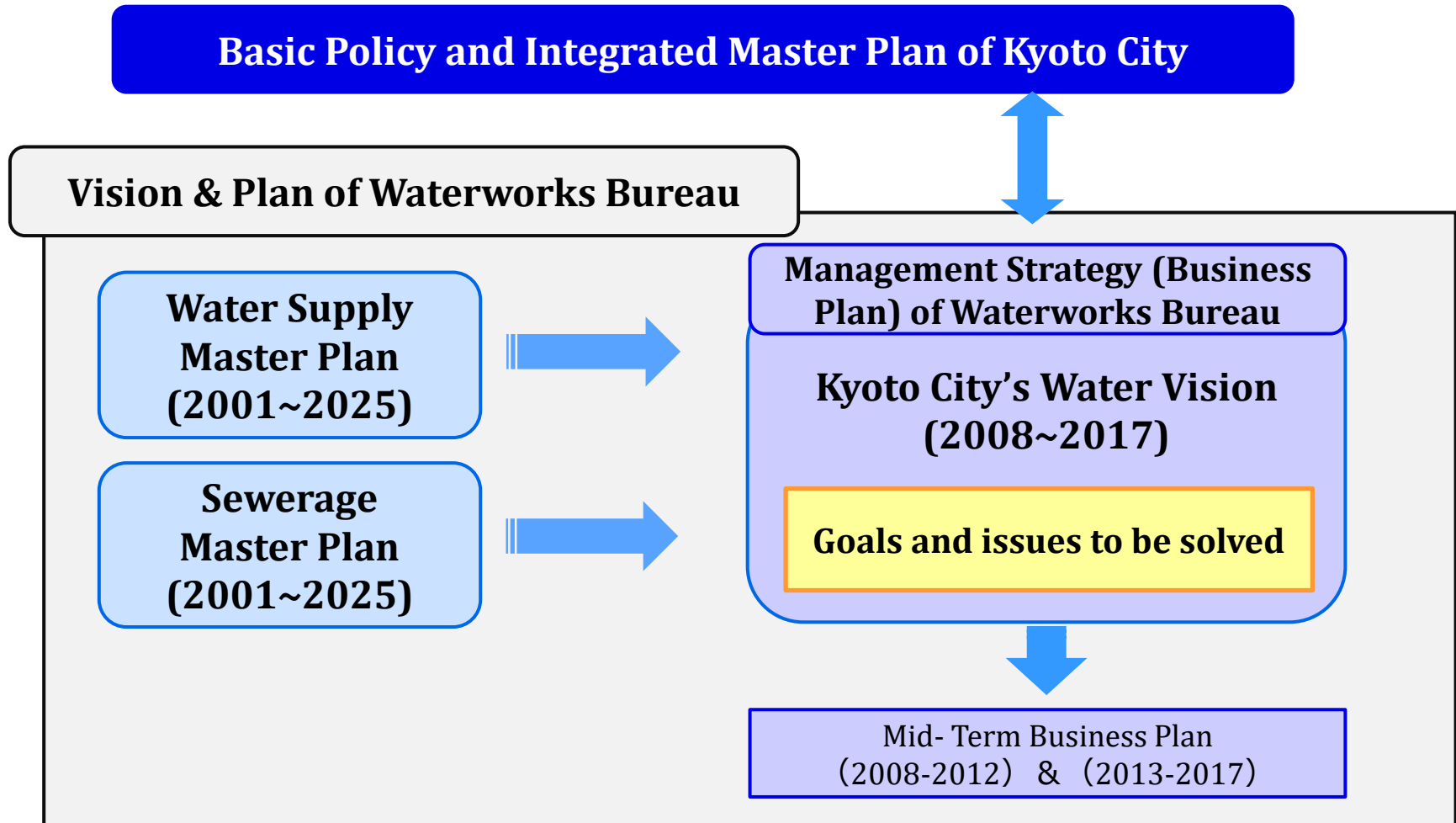
Water supply  
development  
based on master  
plans regulated  
by *the Water  
Supply Act*

##### Maintenance & Rehabilitation

Water supply  
business plan  
(including master  
plan) based on the  
future vision

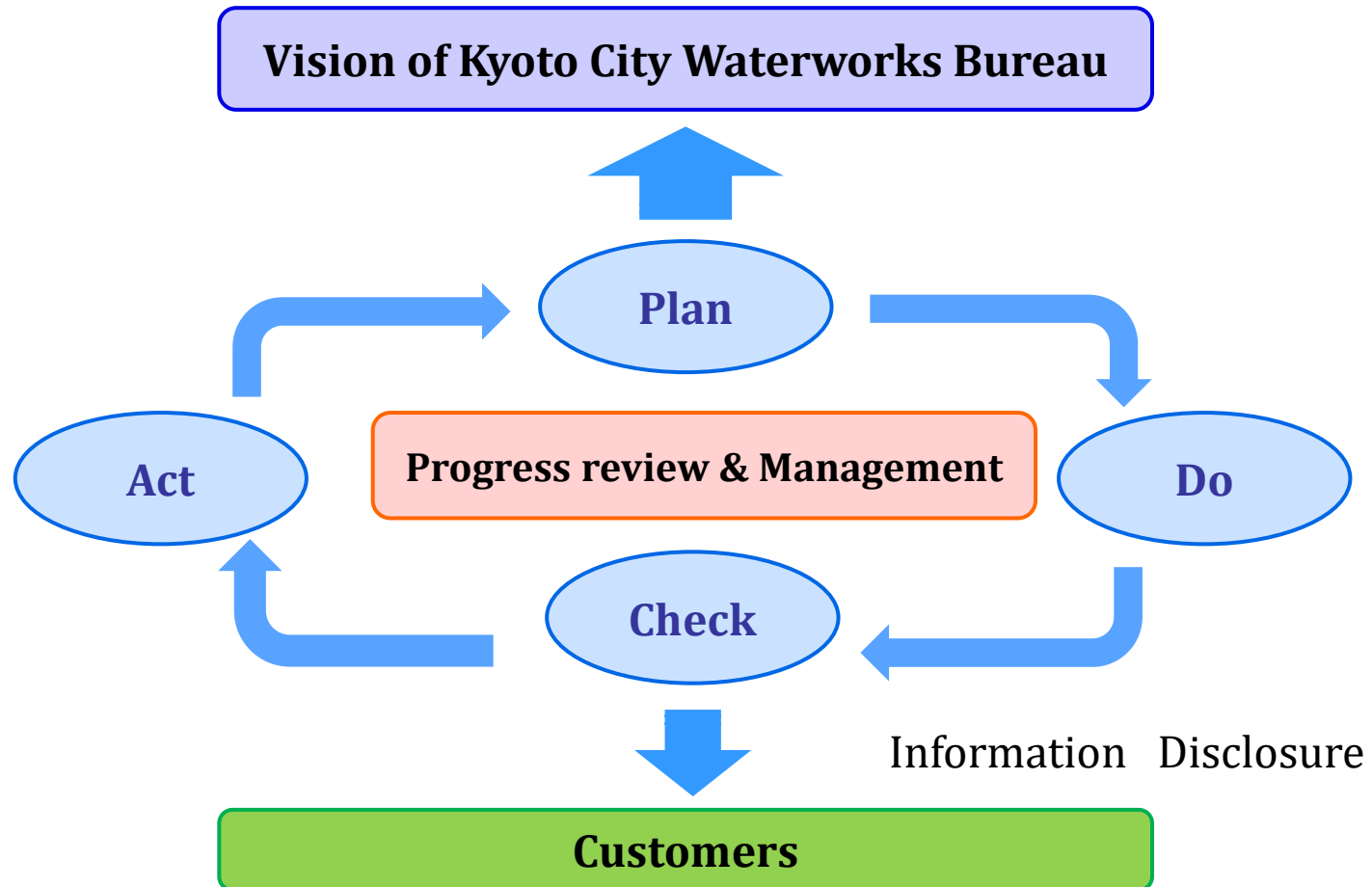
### 3. Business Plan and PDCA

#### Example: Kyoto City



### 3. Business Plan and PDCA Cycle

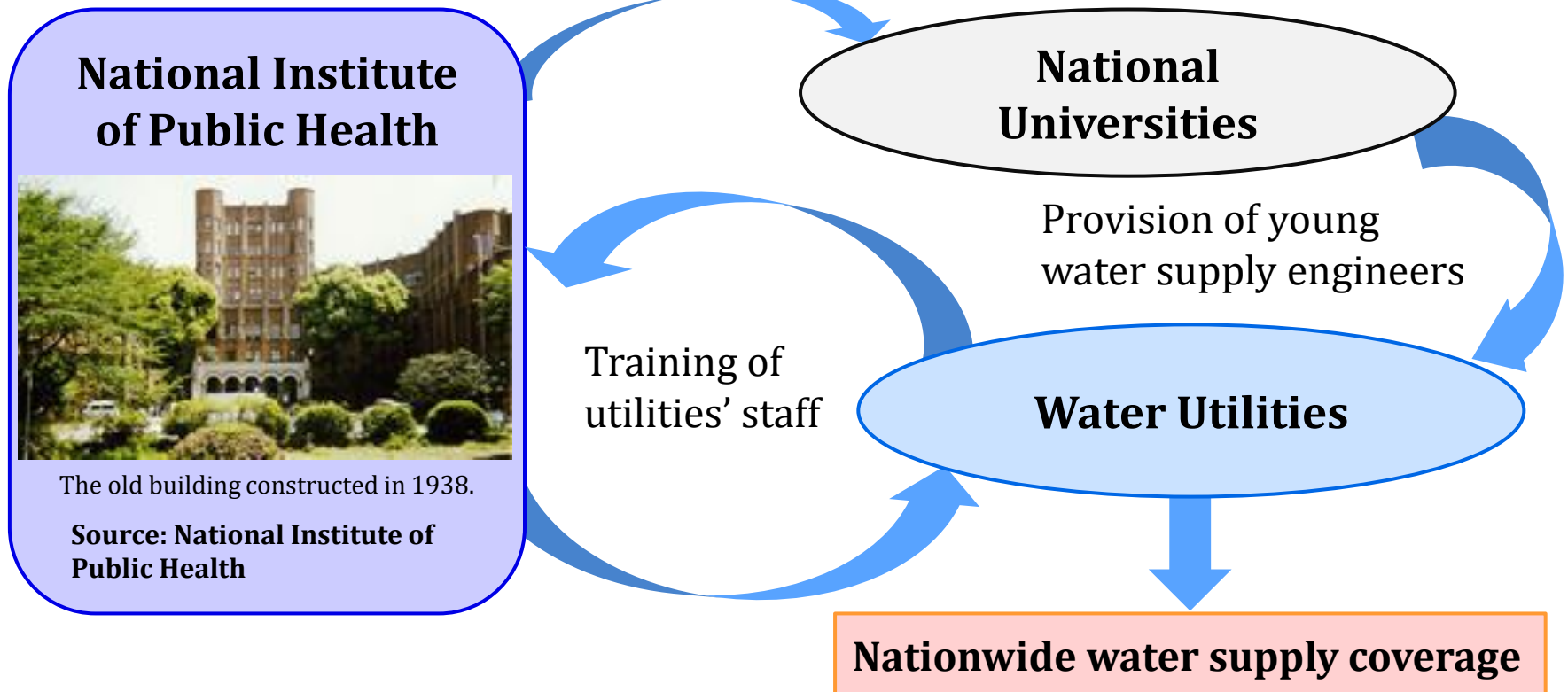
#### Example: Kyoto City (Cont'd)



# 4. Human Resources Development

## National Initiatives for Human Resources Development to Achieve Nationwide Water Supply Coverage

Know-how on curriculum and teaching methods



# 4. Human Resources Development

## Example : Nagoya City

**By 1970s**

Off-site training for new staff and subsequent OJT

**1970s-1983**

OJT only (No offsite training)

**No standardized instructional method**

**Since 1984**

Training at the Technical Training Center

**Standardized know-how of procedures and operations**

**Expansion of target trainees : contractors, overseas trainees, other water utilities' staff**



# 4. Human Resources Development

## Example : Nagoya City (Cont'd)



**Leak Detection**



**Valve Operation**



**Leakage Repair**



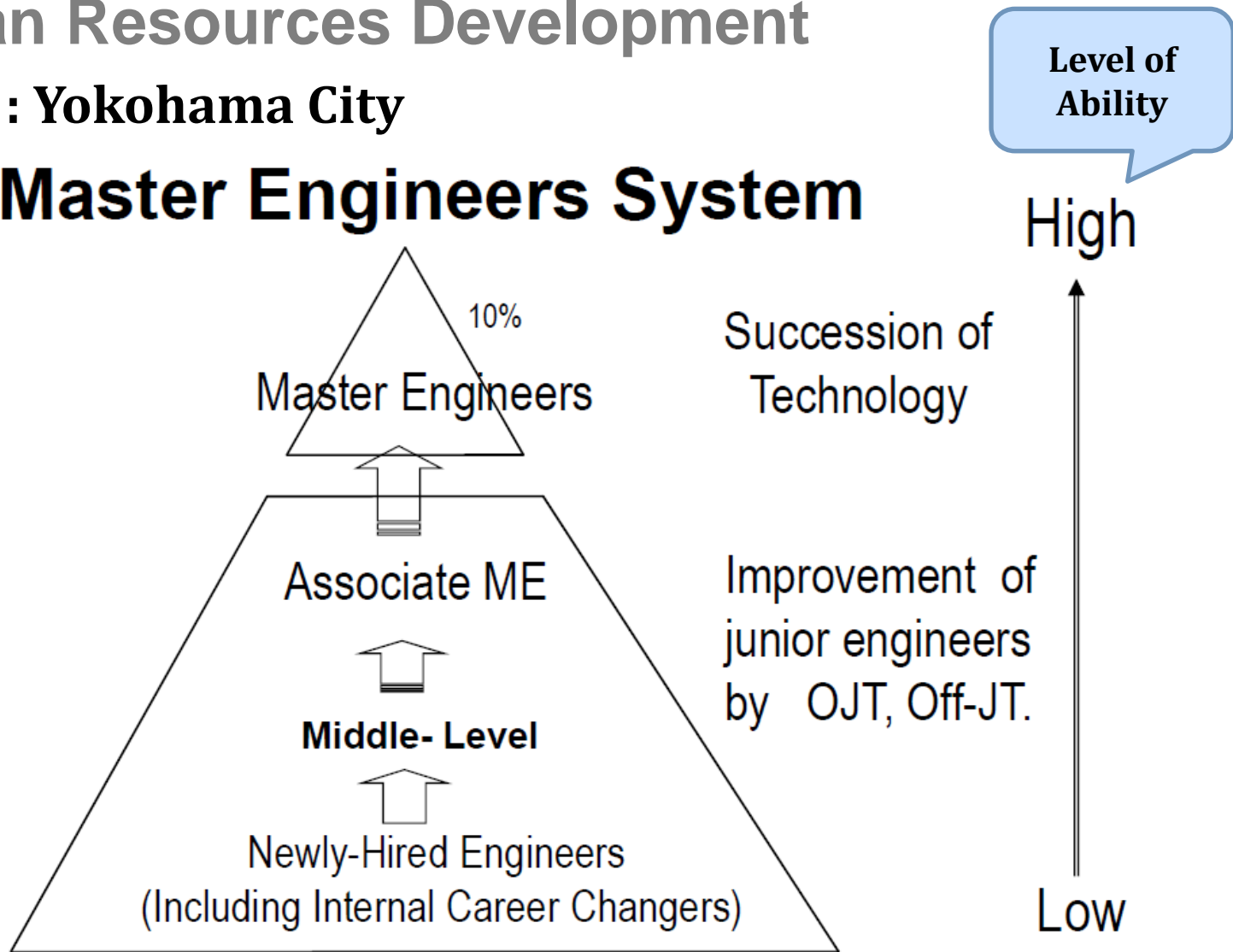
**Endoscope**

Source: Presentation materials by the Nagoya City Waterworks and Sewerage Bureau in the Report of "The Third Executive Forum for Enhancing Sustainability of Urban Water Service in the Asian Region", August 2014

# 4. Human Resources Development

Example : Yokohama City

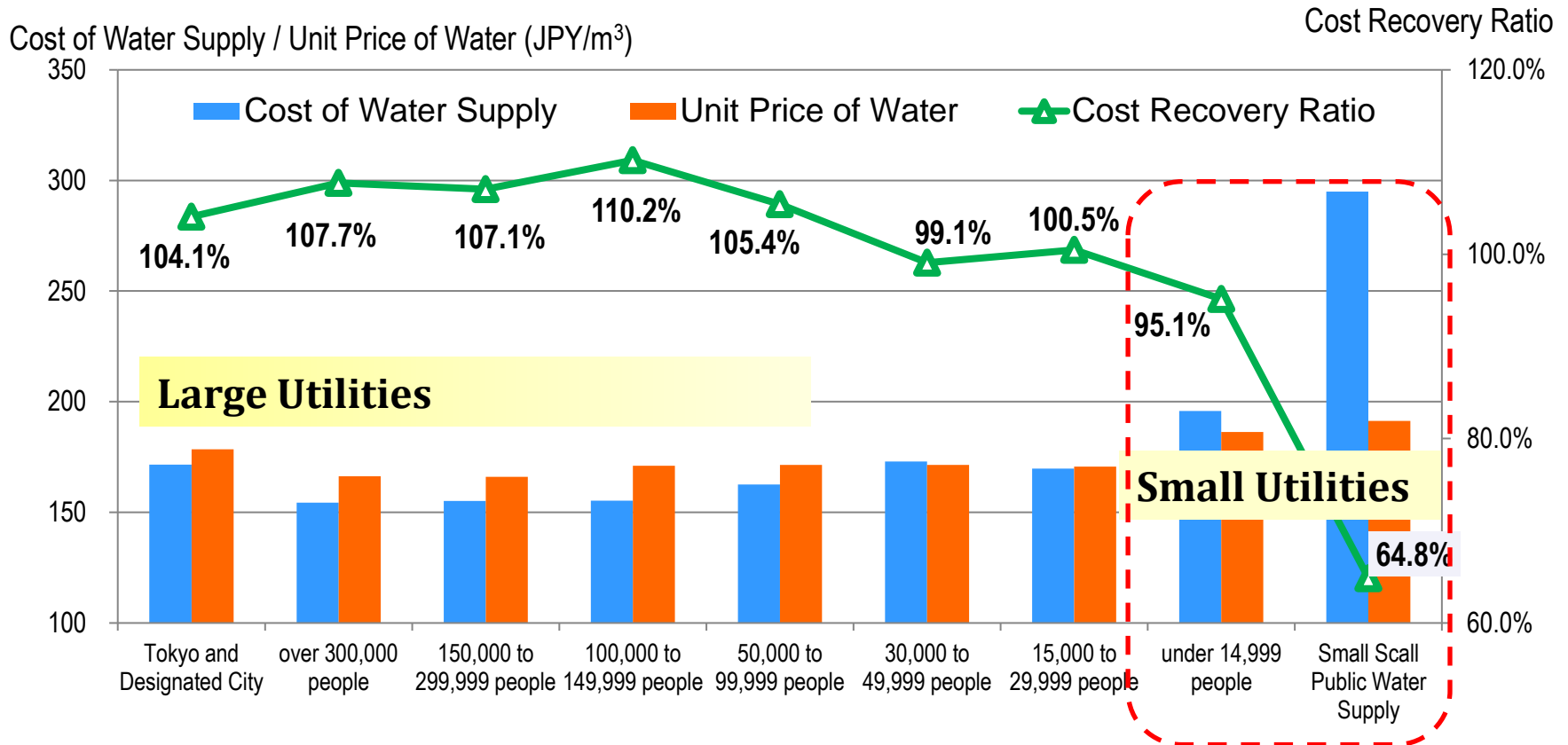
## Master Engineers System



Source: Presentation materials by the Yokohama Waterworks Bureau for "The Third Executive Forum for Enhancing Sustainability on Urban Water Service in Asian Region, 2014"

# 5. Management of Small and Medium Scale Utilities

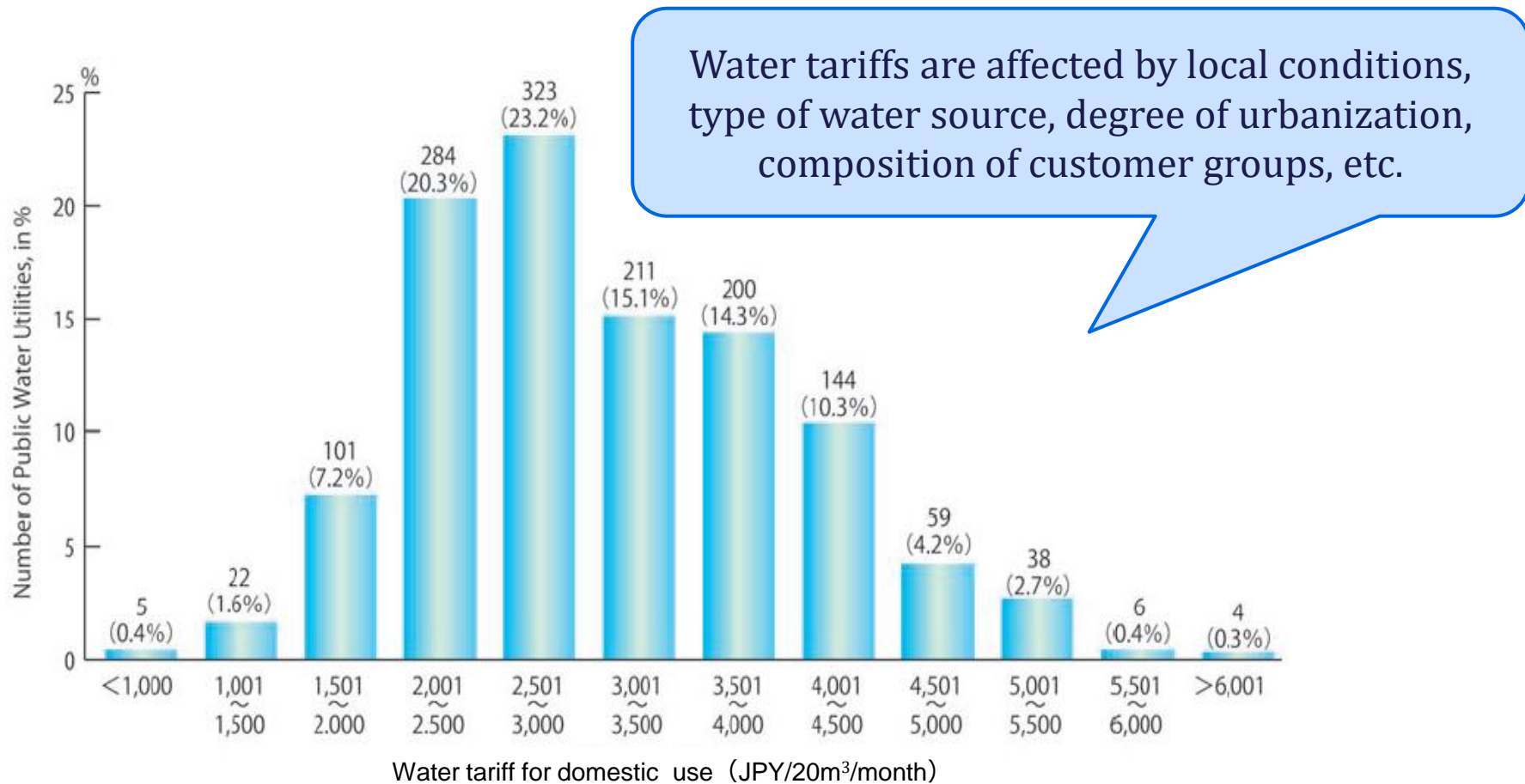
## (1) Challenges of Small & Medium Water Supply Management



Source: Created from the data of "Survey of financial status of local public enterprises, FY 2014"

### Cost recovery in water supply business by size of operation (2014)

## 5. Management of Small and Medium Scale Utilities



Source: JWWA, *Comfortable Life with Water Supply and Transition of Water Supply Volume*, <http://www.jwwa.or.jp/shiryu/water/water.html>

### Tariff Differential among Water Utilities

# 5. Management of Small and Medium Scale Utilities

## (2) Towards Regional Collaboration

1960s

Rapid increase of water demand, construction costs and water tariffs, deterioration of water sources, inadequate operation and maintenance of small scale water supply

1966

System of “A joint public services authority” was introduced

1977

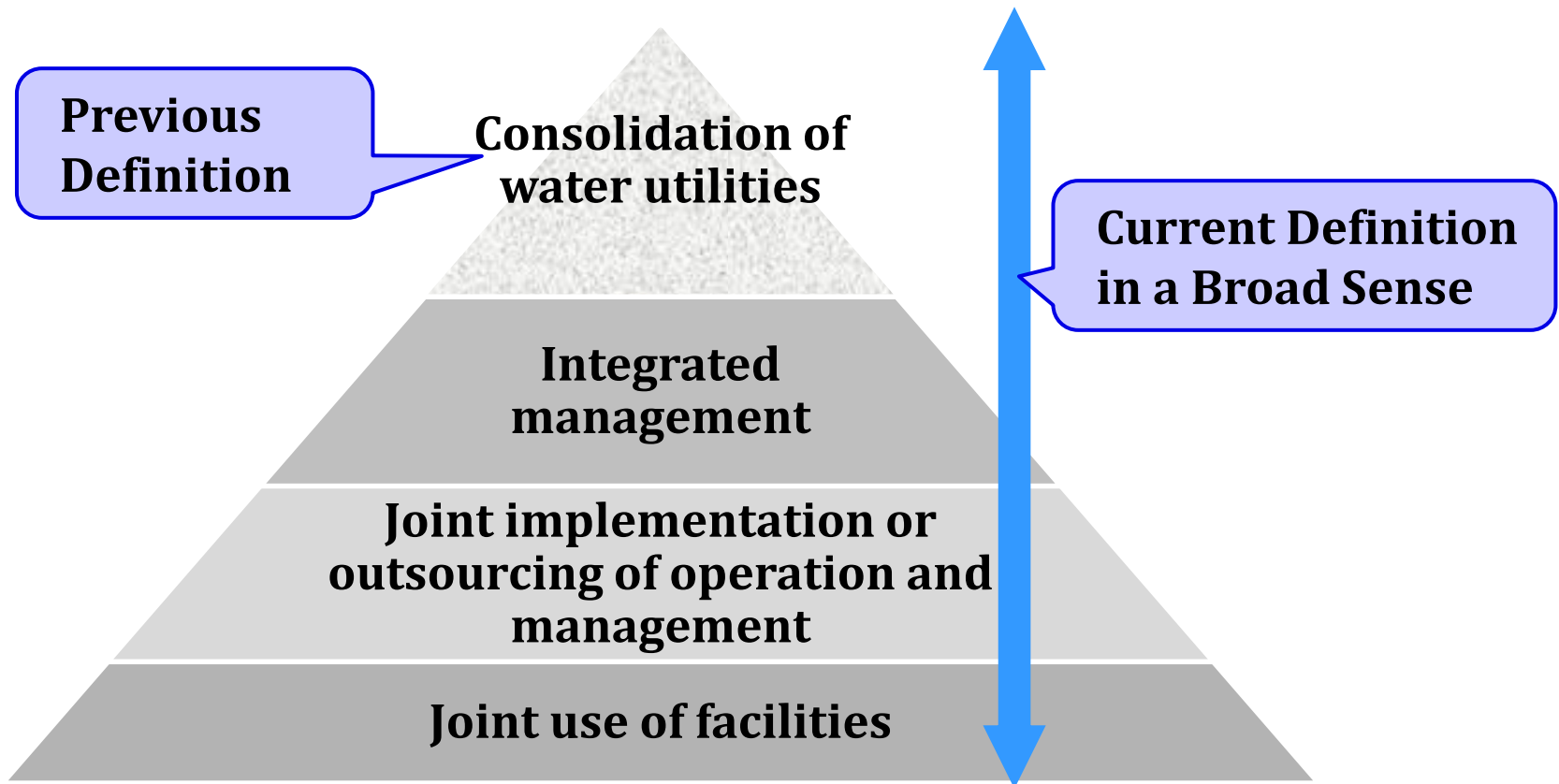
Regional Planning for Water Supply Services was included in Water Supply Act

2000s

Expansion of the concept on regional collaboration

# 5. Management of Small and Medium Scale Utilities

## Previous and New Definition on Regional Collaboration of Water Utilities

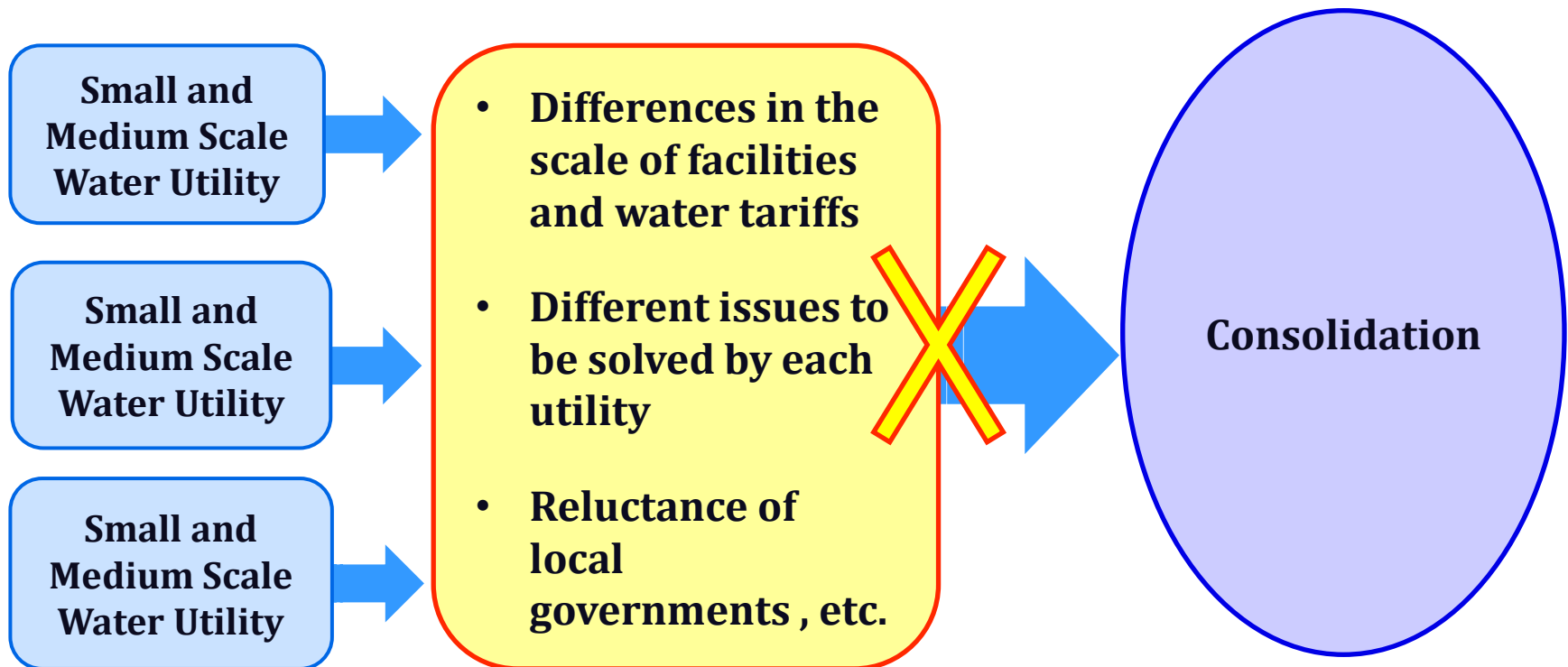


Source: JWVA "Guidelines for the Consideration of Broadening of Water Supply: For the Promotion of Water Supply Vision"

# 5. Management of Small and Medium Scale Utilities

## (3) Constraints on Consolidation

**There are constrains to be overcome in order to consolidate utilities**



# 6. Public and Private Partnerships

## (1) Increasing Roles of Private Sector

**Direct undertaking by a water utility on all works**

### **Construction Works**

Contractors

### **Design Works**

Consultants

### **Operation & Maintenance**

- Outsourcing (service contract)

### **Operation & Maintenance**

- Outsourcing (management contract)

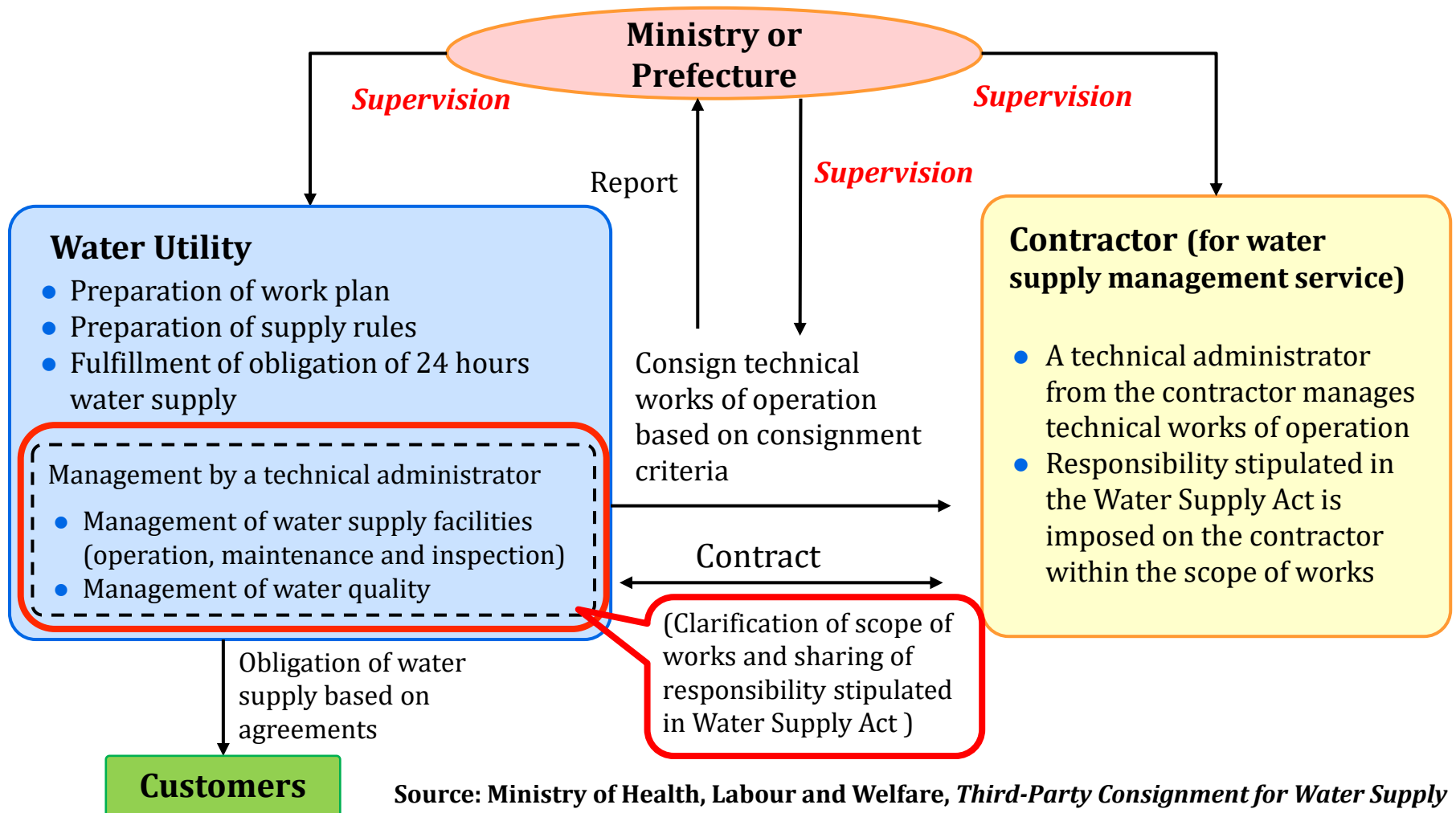
### **Design, Construction, O&M**

- Private Finance Initiative (PFI)



# 6. Public-Private Partnerships

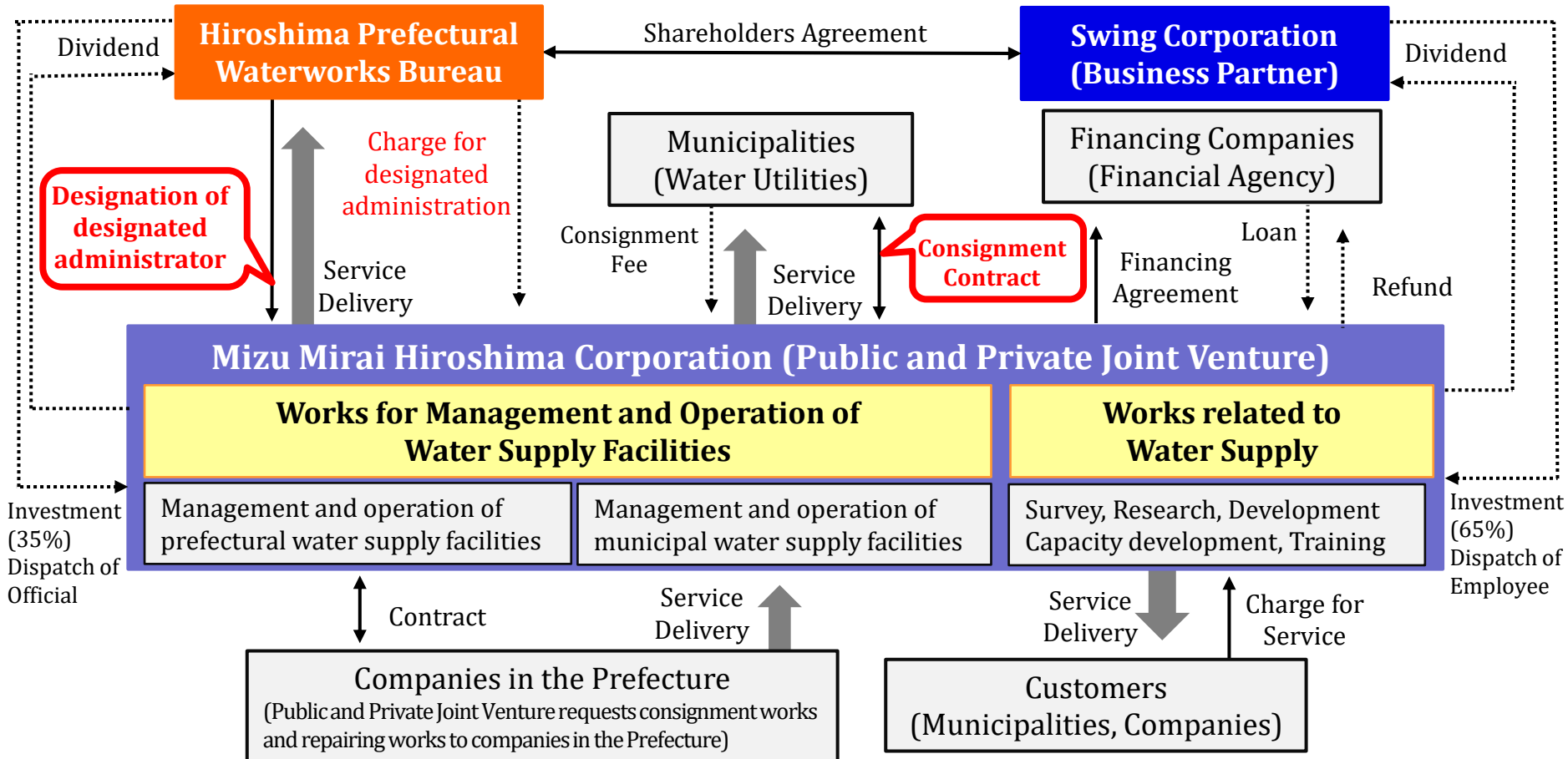
## (2) System for Delegation to a Third Party



# 6. Public-Private Partnerships

## (3) Designated Administrator System

Example : Mizu Mirai Hiroshima



Source: Mizu Mirai Hiroshima Corporation "Joint efforts of citizens in Mizu Mirai Hiroshima", Water Technology Journal, October 2014

## 6. Public-Private Partnerships

### (4) PFI: Private Finance Initiative

Stagnating economic environment and the critical financial deficits of national and local governments



*Act on Promotion of Private Finance Initiative (PFI Act) in 1999*

Development of public facilities through the **utilization of private finance, management abilities and technical capabilities** within the law and guidelines

Examples of PFI projects:

- BOO (Build Own Operate) project for development of power-generating facilities (cogeneration system) in water treatment plants in Tokyo
- BTO (Build Transfer Operate) project for development of sludge treatment facilities in water treatment plants in Aichi prefecture



**Kawai Purification Plant by PFI Scheme, (BTO) Yokohama City**

## 7. Lessons Learned (1)

- **(Governance of Water Utilities)** Water utilities are managed as **independent public enterprises**. They are responsible for their own human resources management, having the ability to improve staff competence. The job and qualification of the **technical administrator** is clearly defined and the utilities take the responsibility for all **technical matters** and for managing the **operations effectively**.
- **(Supervision by the Local Government)** While the water utility is independent in its operations, **the local assembly** maintain the oversight responsibility through **the approval of annual budgets and business plans**. **An advisory committee** supports the utility's management by providing opinions and recommendations.
- **(Business Planning and PDCA Cycle)** **The business plan guides the utility's staff towards a goal** to promote more effective operation. By following the **PDCA cycle** from a plan to check, the utility also reinforces the operational system.

## 7. Lessons Learned (2)

- **(Training)** In addition to subsidies and the development of technical guidelines/ standards, **human resources development** has been essential to the establishment and operation of water supply systems across the country. **Research institutions** and **universities** provide formal training to develop the **required expertise**. It is necessary for utilities to establish **internal training systems** and utilize **external training programs** for **sustainable human resources management**.
- **(Regional Collaboration)** When constructing water supply systems, **sustainability of operation and management** after construction needs to be considered. Small-scale utilities built during the implementation of nationwide water supply coverage generally face difficulties with cost recovery and staff shortage. **Consolidation** and **collaboration of operations** across a region are the ways to improve the **economies of scale** and are promoted utilizing the national subsidies.

## 7. Lessons Learned (3)

- **(Private Sector Involvement)** The municipalities maintain the ownership of the utilities because of the importance of ensuring that the public health objectives such as water quality are achieved water utilities of municipalities implemented all works by themselves at first. After that, the **private sector** began to be involved first in the **construction of facilities**, then gradually in **design, meter reading** and **operation of water treatment plants**.
- **(Regulatory Framework)** As the private sector is getting more involved in the water supply business, **qualification system, standards and regulations** are established to maintain the quality of products and services without compromising competitiveness. **A transparent system for supervision** is also needed to ensure compliance to **regulations on quality of service in the delivery of safe, affordable drinking water**. The roles and responsibilities of public and private partners (risk sharing) must be always clearly stated in the contract.