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Concession in Water and Sewerage Services in Hamamatsu City

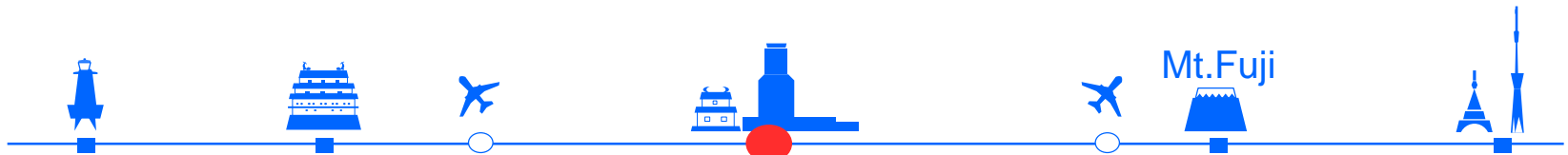
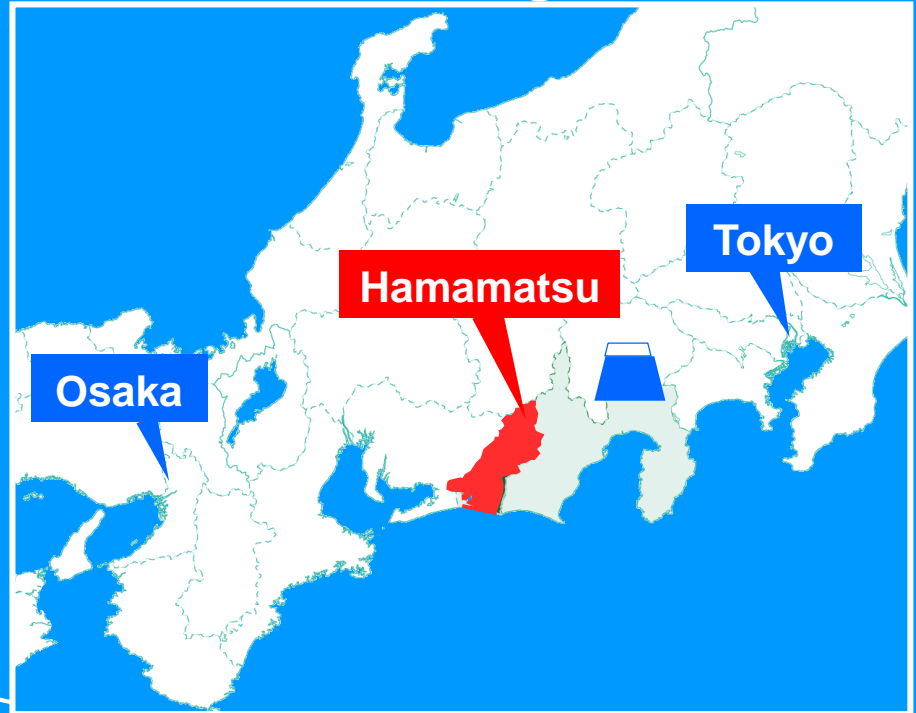
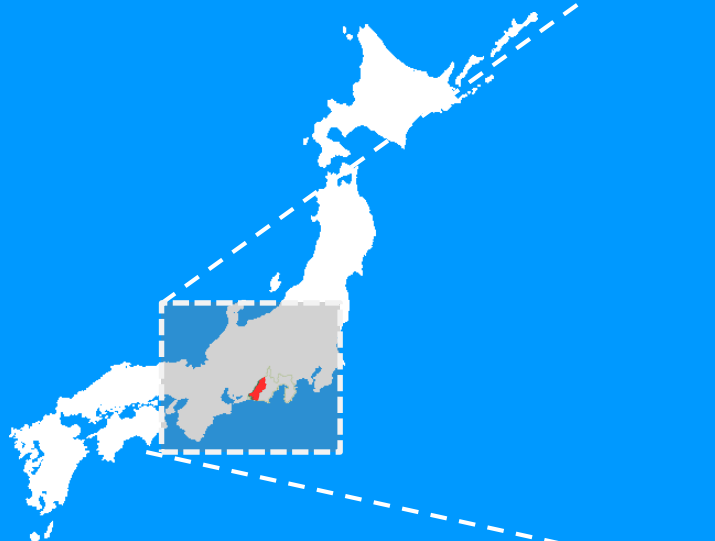
The Mayor of Hamamatsu
Yasutomo Suzuki

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Introduction of Hamamatsu City

City Outline

Good access good location



City Outline

Hamamatsu City

Population 800,000



2nd

Largest

Area **1,558** km²



City Outline



One of the Leading Industrial Cities

Transportation equipment, musical instruments, textiles, photonics industry

Various agricultural and marine products

Tenryu cedar, mandarin oranges, tea, eel, puffer fish



HAMAMATSU CITY

City Outline

Hub of Musical Instruments
Industry

YAMAHA **KAWAI** **ROLAND**

Hamamatsu International Piano Competition

Brilliant pianists from around the world gather to participate in the Hamamatsu International Piano Competition. The competition is held once every three years and 2018 marks the 10th time the competition will be held. The competition plays an important role in promoting universal music culture and international exchange.



City Outline



Hamamatsu is the Epitome of Japan

Hamamatsu is surrounded by the Japan Alps in the north, faces the Pacific Ocean in the south and the mountainous area spreads the urban area.

Unlike metropolitan areas, Hamamatsu has a wide range of industries, from the agriculture and forestry industry to the service industry. It is the so-called "Epitome of Japan", in terms of geography, social and urban structure.

Hence, the problems that Hamamatsu faces represent the challenges in Japan.



Declining Birthrate
and Aging Society



Financial
Operation



Infrastructure
Management

If Hamamatsu realizes a sustainable urban management, it will become a model of a highly motivated regional city.



Northern view from the center of Hamamatsu

Agricultural Area
Various topographies and various agricultural production

North

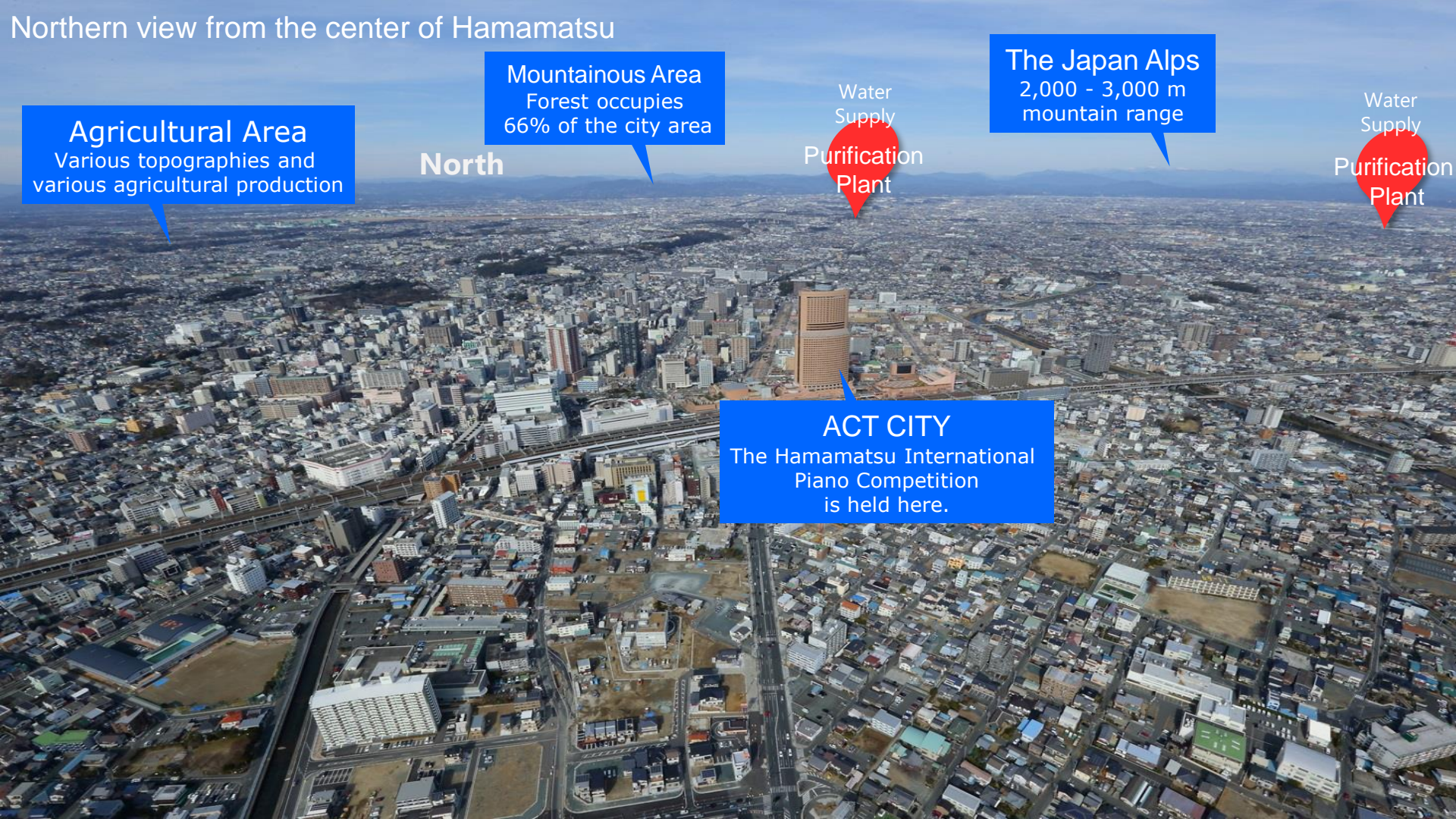
Mountainous Area
Forest occupies 66% of the city area

Water Supply
Purification Plant

The Japan Alps
2,000 - 3,000 m mountain range

Water Supply
Purification Plant

ACT CITY
The Hamamatsu International Piano Competition is held here.



Southern view
from the center of
Hamamatsu

Sewage
Treatment
Plant

South

Sewage
Treatment
Plant

SEIEN
Treatment
Plant

Pacific Ocean

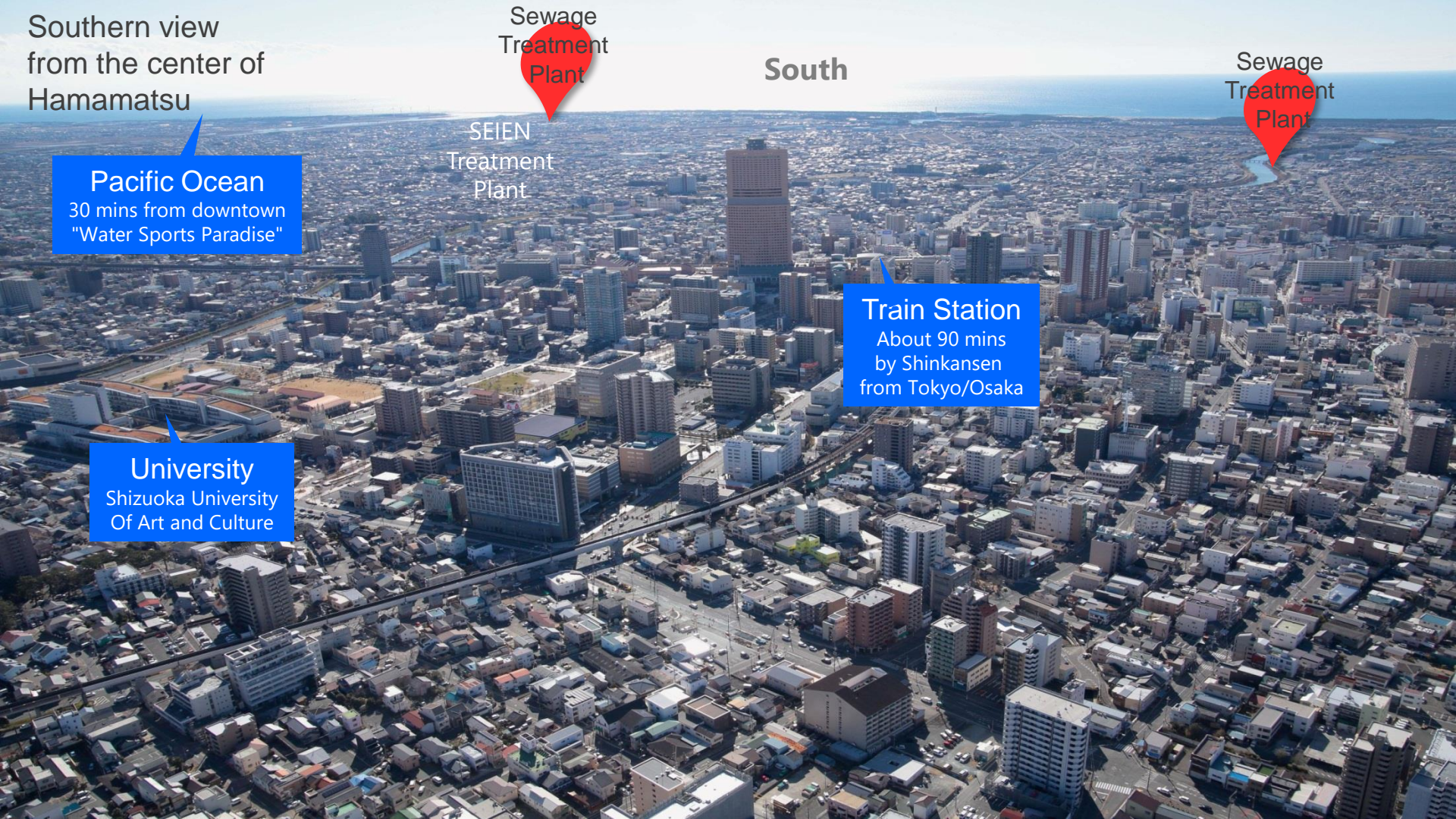
30 mins from downtown
"Water Sports Paradise"

Train Station

About 90 mins
by Shinkansen
from Tokyo/Osaka

University

Shizuoka University
Of Art and Culture



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Challenges of Water and Sewerage Services

3 Challenges of Water and Sewerage Services



Increase in

Demand for the Replacement of Pipelines and Facilities

The water supply facilities of Hamamatsu were intensively built in the 1960s and 1970s, during the high-growth period, and the sewage facilities were in the 1980s and 2000s.

In the next 50 years, a large-scale replacement of these pipes and facilities will be required.



Decrease

in Water Consumption and Tariff Revenues

Due to declining population and dissemination of water-saving equipment, the water supply amount and water fee income has decreased.

According to the future outlook of the city, the water supply amount is expected to decrease by about 25% in 30 years. It is necessary to suppress the increase of burden on users as much as possible.



Decrease in

Working Age Population

It is becoming difficult to secure technical staff because of an aging society. As the investment for replacement should be well-planned, the lack of technical skills must cause a big problem.

It is expected that not only manpower but as well as ICT and AI will be utilized in order to establish a new mechanism to pass down technical skills.

How do we maintain the sustainability with limited management resources (talent, products or services and capital)?



Restrictions in public procurement

Principles and rules of “procurement by competitive bidding”¹

It takes more time and money than private procurement, due to administrative preparation, design work, quantity survey and the period to secure public comments.

Principle of single-year budget²

In principle, contract procedures are carried out after the budget is established. Therefore constructions will be reduced in the 1st quarter, and they will be concentrated at the end of the fiscal year. The burden on the contractor side is large, and the occupancy rate does not rise.

Stipulation of separated or divided orders³







It is necessary to strive for separated or divided orders as much as possible. There is also a limit for collective ordering in multiple fiscal years and execution of large-scale construction.

¹ Local Authority Law Article 234

² Local Public Enterprise Law Article 24, Local Authority Law Article 208 etc.

³ Act on securing orders for SMEs concerning public sector demand Article 8

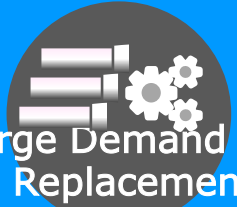
Current Management System in Hamamatsu

Management	Direct Mode (Deciding the of overall objective/overall management)		
Scope	Purification Plant Treatment Plant	Pipelines	Fee Collection
Maintenance/ Daily work	Outsourcing to private contractors by Public Procurement (Partial Direct Operation) 	Outsourcing to private contractors by public procurement (Partial Direct Operation) 	Outsourcing to a private contractor by public procurement (Partial Direct Operation) 
Renovation /Renewal	Public Procurement - Private Construction (Manufacturers etc.) 	Public Procurement - Private Construction (Local Piping Companies) 	Public Procurement - Private Construction (IT Vendors) 

 = Private contractor

Contracts are signed individually approx. every 1~3 years, which makes it difficult to innovate.

The concession can realize...



Large Demand for
the Replacement of
Pipelines and facilities

Massive investments for replacements
through an efficient procurement system



Decrease in
water consumption
and water income

Reduction of costs and burden on residents



Decrease in
Working Age Population

Improvement of productivity by introducing
state-of-the-art technology

The concession can deal with the three challenges
of water and sewerage services.

Why I am tackling the reform?

The will not to postpone problems for the future.

Since I took office as mayor of Hamamatsu in 2007, I have diligently worked for financial reform continuously. I reduced the quorum of staff and labor costs, promoted asset management, reduced subsidies, and reformed auxiliary organizations, etc., which results in reducing the total municipal bonds by more than 90 billion yen.

As water and sewerage services are inconspicuous infrastructures, we should accept, predict and anticipate the reality of their aging. We are able to take effective means only when such infrastructures are in good shape.



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Initiation of the concession project in sewerage services



SEIEN Concession Project

April 2018

The first concession project in Japan
for sewerage services started in Hamamatsu

SEIEN Concession Project Overview

STP & 2 Pumping Stations

The target facility is the largest STP in the city. Capacity of treatment is 200,000 m³ /day. Serviced population is approx. 500,000.

Project duration

Delegating maintenance and structural rebuilding that up to now have been carried out individually will now be done together in the long run.

20 years

Total project cost¹

51.4 BnYen

Operating with sewerage charge received from residents as financial resources

¹ Present value

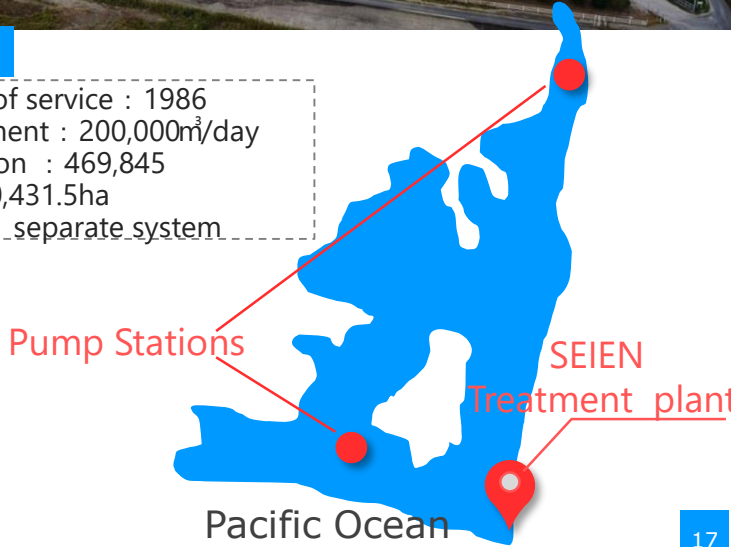
SEIEN Sewage Treatment Plant



提供：旧静岡県下水道公社

SEIEN District

- Commencement of service : 1986
- Capacity of treatment : 200,000m³/day
- Serviced population : 469,845
- Serviced area : 10,431.5ha
- Drainage system : separate system (FY2017)



SEIEN Concession Project Features

Partial concession

The scope of the service of the concessionaire covers the SEIEN Sewage Treatment Plant and 2 pumping stations in SEIEN district. The City manages the branch pipes before transferring the prefecture sewerage. The sewer pipe networks are out of the concession scope because it is more efficient that the city manages them collectively with other treatment districts. In addition, the usage charge collection is in the scope of water suppliers.

Local cooperation and collaboration

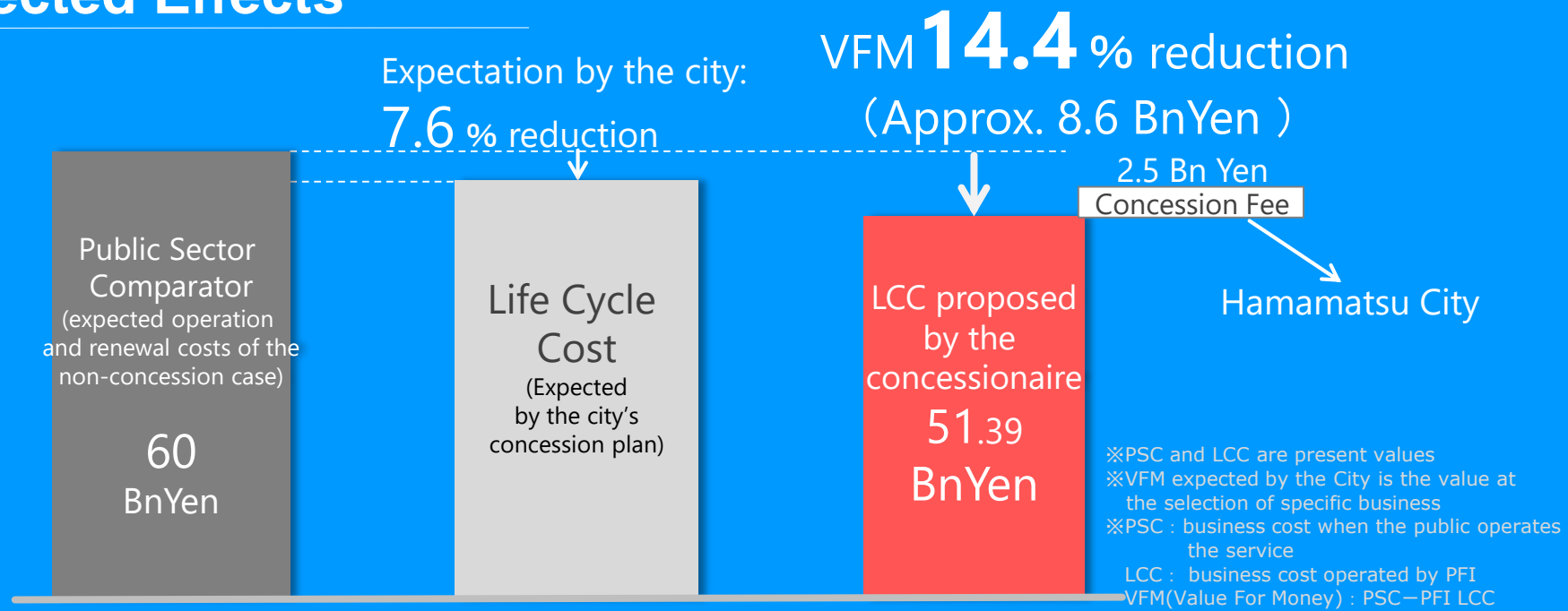
We will revitalize the local economy through local-based management and contribution to the local industry. For example, we plan to start an optional project, an eel farming pilot project (as eel is a specialty of Hamamatsu) and a community event about sewerage etc.

Scope of Work in SEIEN District

Management	Direct Mode by the city (Deciding the overall objective/overall management)		
Scope	STP Pumping Station	Sewer pipe	Fee collection
Maintenance /Daily work	Scope of the Concessionaire	Outsourcing to private contractors by public procurement (Partial Direct Operation)	Outsourcing to a private contractor by public procurement (Partial Direct Operation)
Renovation /Renewal		Public Procurement - Private Construction (Local Piping Companies)	Public Procurement - Private Construction (IT Vendors)
Optional Project		-	-



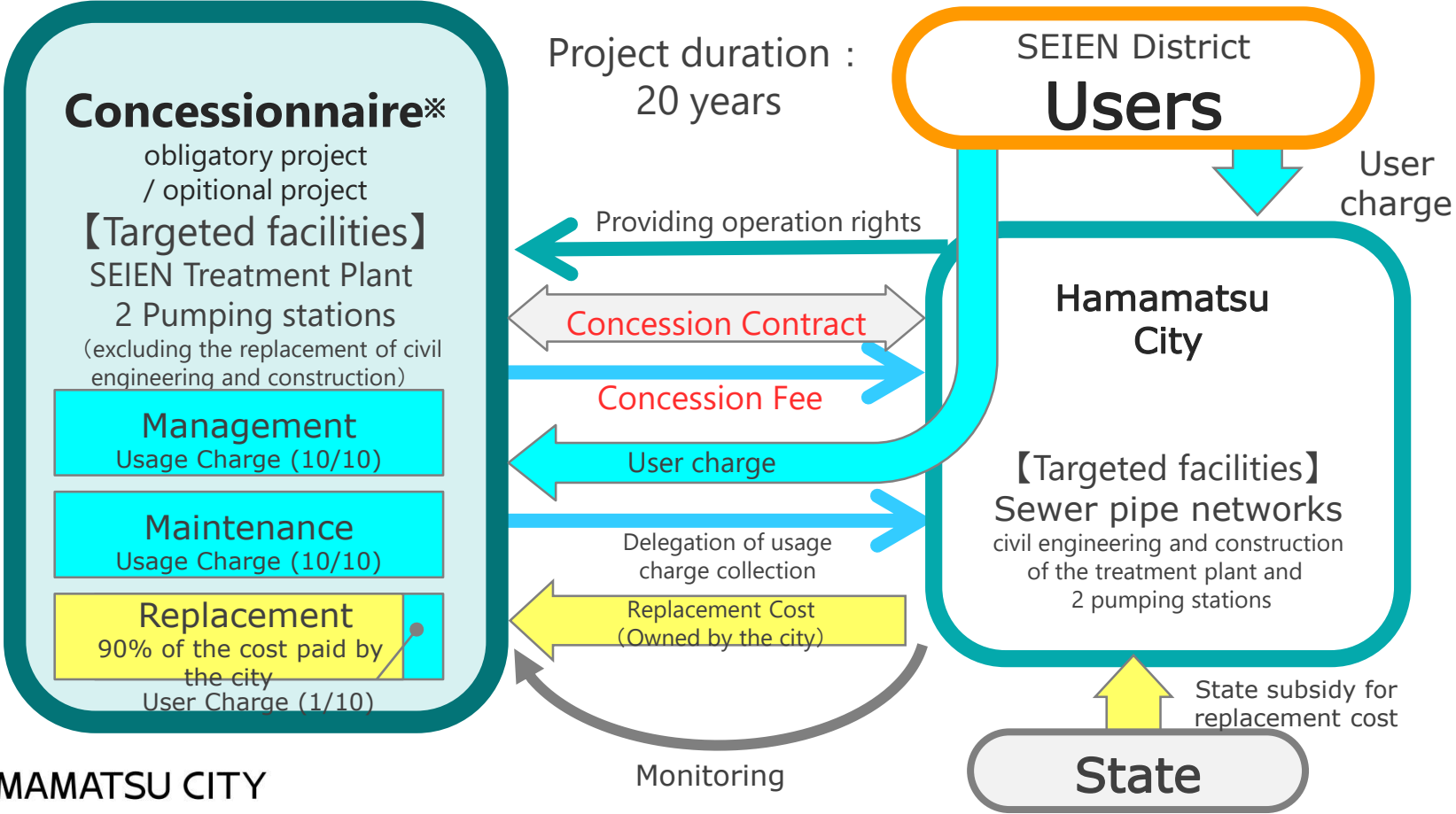
SEIEN Concession Project Expected Effects



It is expected that in 20 years we can reduce the cost of **8.6 billion yen**, including **the 2.5 billion yen** to be paid to Hamamatsu City as a concession fee.

SEIEN Concession Project Scheme

※SPC "Hamamatsu Water Symphony Co., Ltd." established by six companies including Veolia Japan



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Initiation of the water supply concession project



The concession in water supply services
is currently under study

Water Supply Services Overview

Population with water supply¹ 774,896 people

Volume of water supply¹ 240,289m³/Day

Length of water network² 5,412km

Number of Purification plant 2

Percentage of revenue water¹ 92.23%

Cost of water supply¹ ¥120.6/m³

Unit price of water supply¹ ¥126.1/m³

Scale of the service³ 12,067 MYen

1 FY2017 2 April 2017

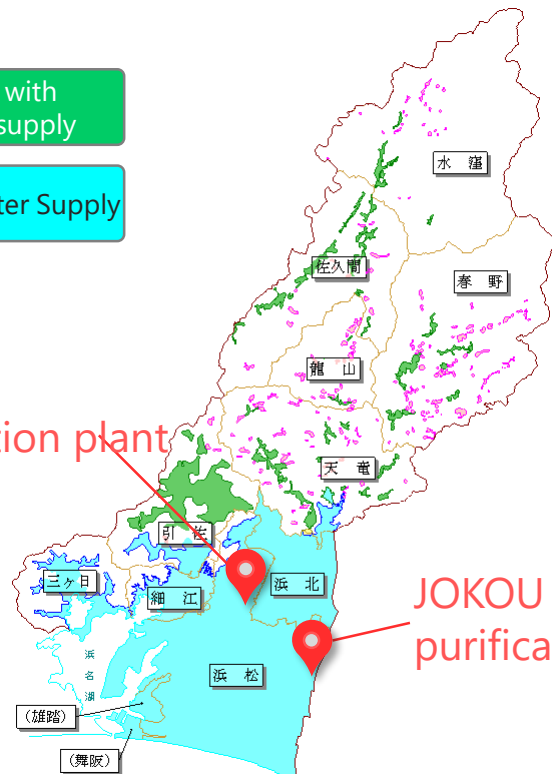
3 Based on the expense and net profit in PL FY2017

The water supply services started in 1931. In addition to two purification plants, various water sources supply drinking water for residents.

Old districts with simple water supply
Districts with Water Supply

OHARA purification plant

JOKOU purification plant



Water Supply Concession Overview of the project

All facilities and pipelines

It is planned to cover 5,412 km of pipelines, 2 purification plants, and all water distribution reservoirs and water source facilities.

Project duration

25 years

It is expected to take half the period of the city's "Asset Management Plan" master plan.

Cost of investment for replacement

145 BnYen¹

Earthquake-proofing and replacement of pipelines and purification plants are planned.

¹ estimated amount in the case of public operation



HAMAMATSU CITY

OHARA purification plant

- Commencement of service : 1970
- Capacity : 150,000m³/Day
- Source : Surface water of Tenryu river
- Processing method : chemical precipitation / rapid filtration



JOKO purification plant

- Commencement of service : 1978
- Capacity : 50,000m³/Day
- Source : Subterranean water from the Tenryu river
- Processing method : chemical precipitation / rapid filtration



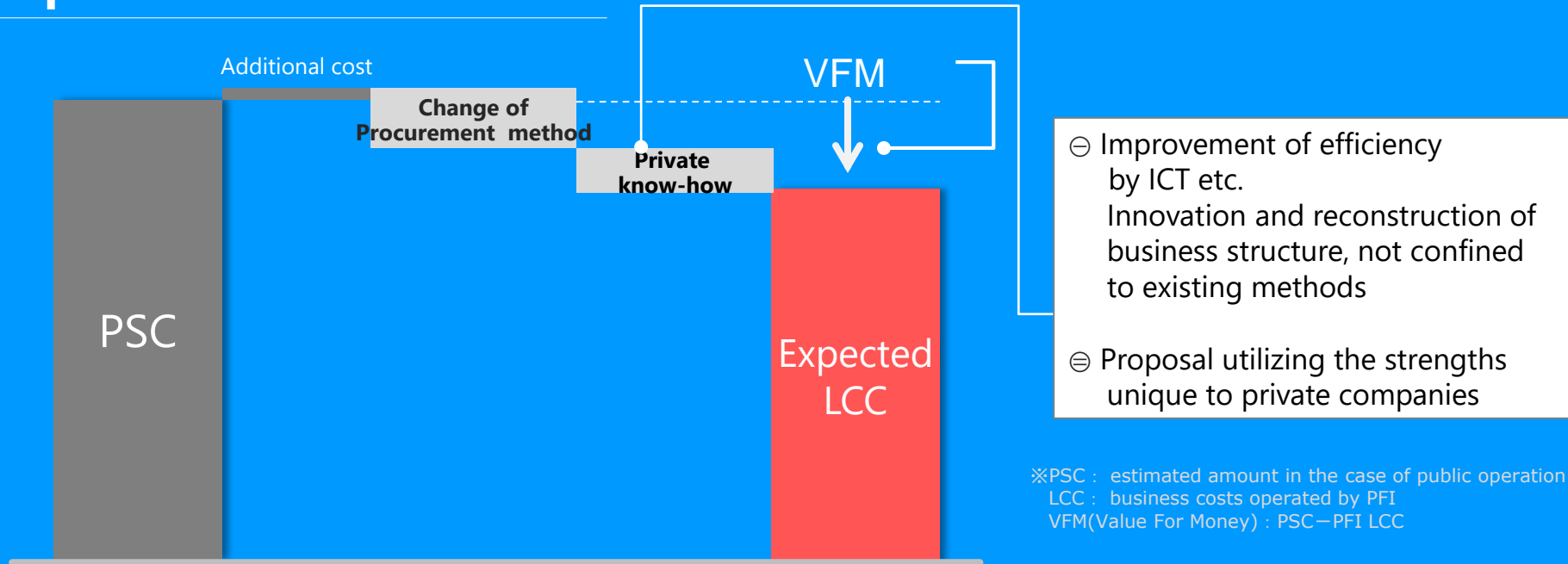
Source of JOKO purification plant

Water intake facility of subterranean water from the Tenryu river and water pipe bridge



Water Supply Concession

Expected Effects



In addition to the effects of private procurement instead of a public one, the effects of ICT / AI will result in the reduction of future burden of residents, which is reflected in the VFM .

Topics under review

- ✓ Revision of the Water Act in Japan is required. After the amendment, its application to our water supply system is also needed
- ✓ Detailed methods for the comprehensive delegation of pipeline network.
- ✓ Continuation of services in times of disasters.

Taking into account the future revision of the Water Act in Japan, we will proceed with the study of the water supply concession project



Thank you for your attention.



HAMAMATSU CITY

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- The sole purpose of this material is to provide information in this lecture.
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