

GREEN ENERGY PORT **HIBIKI**

Project

29 September 2020
Port & Harbor Bureau
KITAKYUSHU City, JAPAN



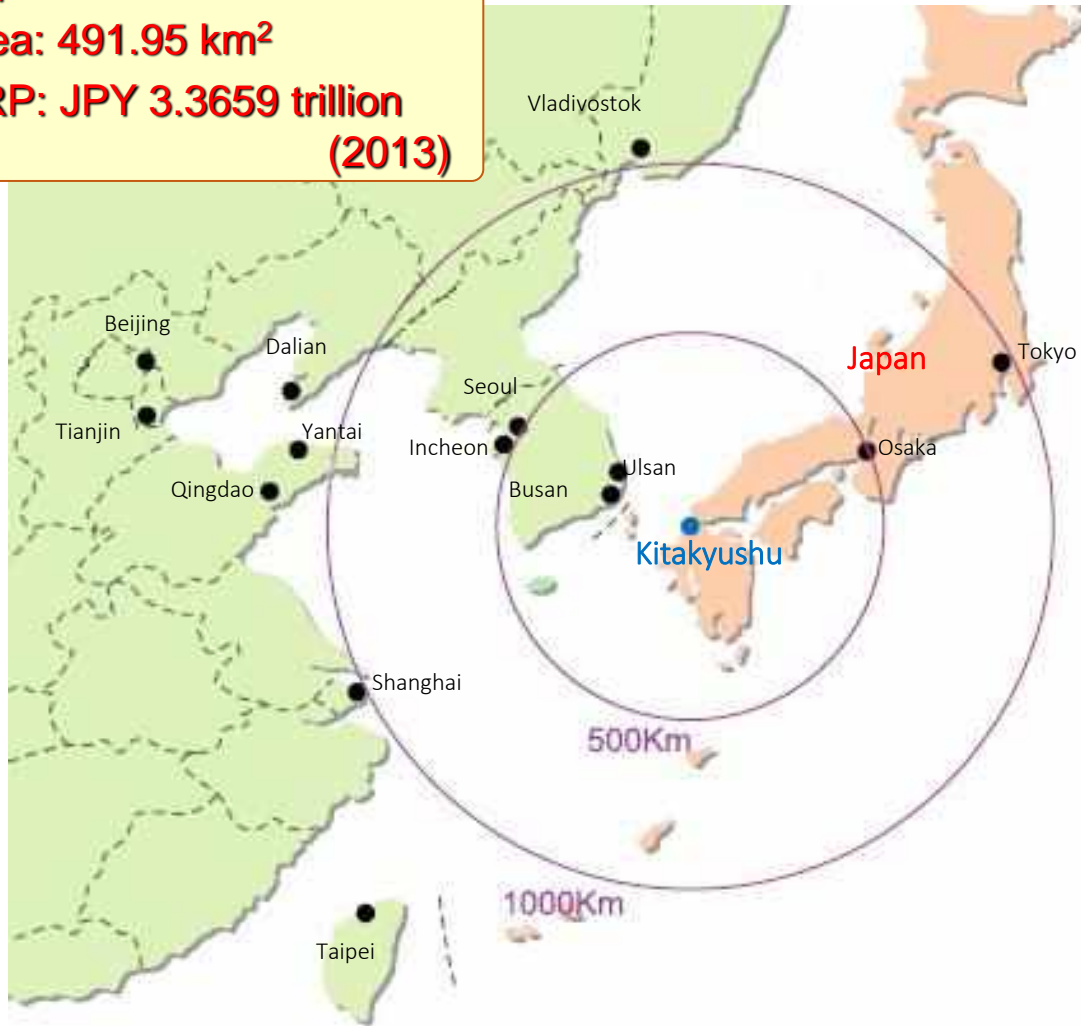
Chapter 1

City of Kitakyushu

1. 1. City of Kitakyushu in general

~ Manufacturing city with a rich natural environment located close to Asia ~

Population: A million or less
Area: 491.95 km²
GRP: JPY 3.3659 trillion
(2013)



Rich natural environment and brand-name foods



Hiraodai Karst Plateau



Wakamatsu northern coast



Ouma bamboo shoots



Kokura beef



Octopus from the Kanmon Straits



Buzen sea oysters



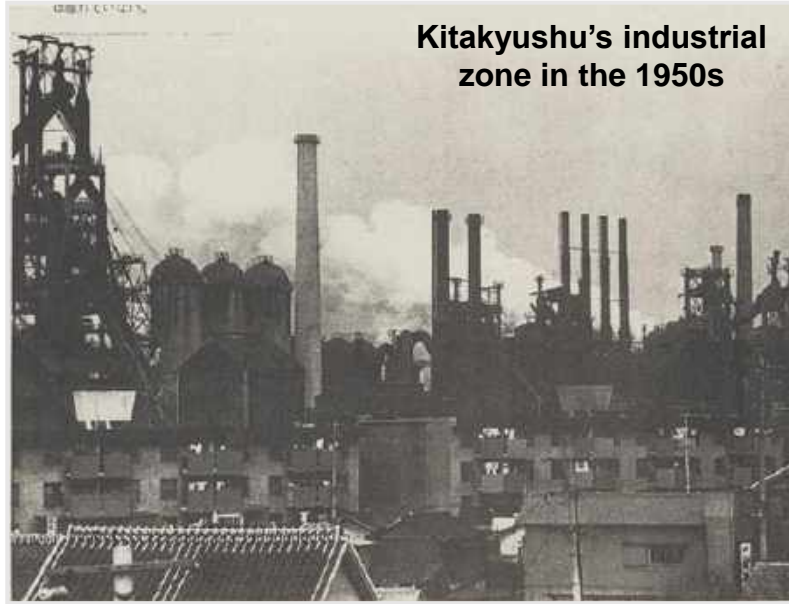
Wakamatsu blue-ribbon tomatoes³

1. 2. Kitakyushu as Industrial town

State-run Yawata Steel Works
in operation (1901)



Kitakyushu's industrial
zone in the 1950s



The zone in the 2010s



**Japan's Industrial modernization
started with us in 1901**

1. 3. Kitakyushu as Industrial Town



 **NIPPON STEEL**



YASKAWA



TOTO




 **TOYOTA**



 **NISSAN**
MOTOR CORPORATION

Leading companies in Kitakyushu



 **MITSUBISHI MATERIALS**



 **MITSUBISHI**
CHEMICAL



 **MITSUBISHI**
HEAVY INDUSTRIES



DENSO

1. 4. A Half Century from "Gray" to "Green"



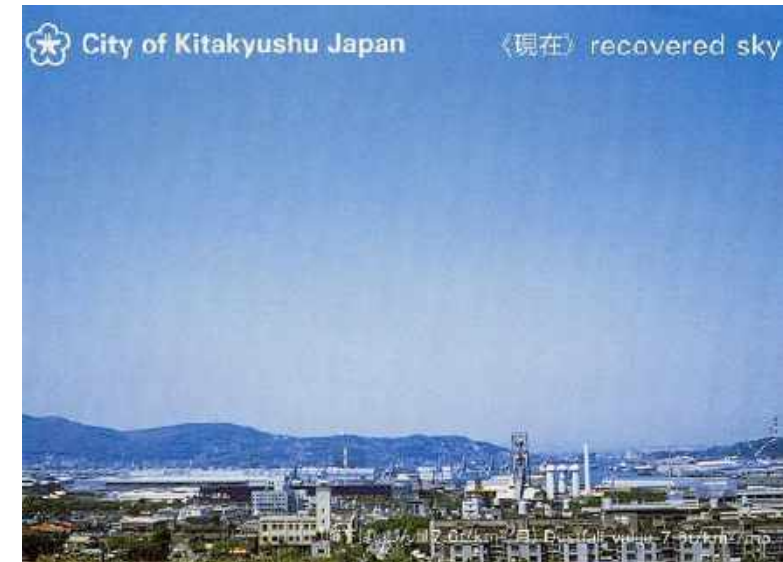
1960s



Increased public awareness



Environmental-related technologies



Now



1. 5. A Half Century from “Gray” to “Green”

1901 Start of operations of state-owned Yawata Works
Development as a manufacturing city supporting the modernization of Japan

1950s Escalation of devastating pollution problems
“Rainbow-colored” smoke, Dokai Bay as the “Sea of Death”

1970s ~ Actions to overcome pollution
Sparked by movements of women’s groups, in collaboration with industries, residents, and the local government

1998~ Kitakyushu Eco-Town Project
Balance between environmental protection and industrial development

2008 Selected as Eco-Model City
New challenges aiming at the development of a “low-carbon society”

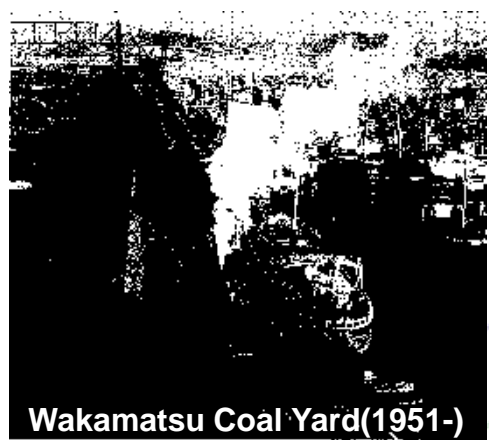
2011~ Green Energy Port HIBIKI

2011 Selected as the first model city in Asia under OECD’s Green Cities Program
(Together with the cities of Paris, Chicago, and Stockholm)
Model city balancing environmental policies and economic growth

2013 Publication of the Green Cities Program report
Disseminating the achievements of Kitakyushu's environmental initiatives around the world



1. 6. Kitakyushu as Port & Harbor town



Wakamatsu Coal Yard(1951-)



Port of Moji (1908-)



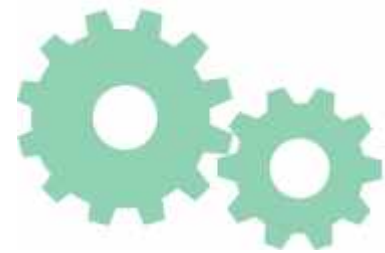
Tachinoura CT (1980)



Hibiki CT (2005)

*Base port site (seen in green in upper left)

- 1889: Moji district is designated as special port for the export of five items, including coal and rice.
- 1898: The port is declared open under the name, Wakamatsu Port.
- 1899: Moji is designated as an open port for general trade as Kitakyushu is organized into a municipality.
- 1904: Dokai district is designated as a special port for import and export.
- 1971: Tanoura Container Terminal begins operations as the first container terminal in the West Japan.
- 1979: Tachinoura Container Terminal begins operations as a major container terminal in in the West Japan.
- 2005: Hibiki Container Terminal begins operations as a leading terminal with deep-water wharves in Japan
- 2022: Hibiki Base Port will begin operations as the main facility of Hibiki integrated center for OWFs.



Chapter 2

Green Energy Port Hibiki Project

2. 1. Where we've started

The Earthquake
triggered outflows of
logistics hubs in
Japan.

The Great Hanshin-Awaji Earthquake of 1995

2. 1. Where we've started

The Earthquake triggered outflow of logistics hubs from Japan.

The Great Hanshin-Awaji Earthquake

The Collapse drove a hollowing out of Japan's manufacturing industry

The Collapse of Lehman Brothers in 2008

2. 1. Where we've started

The Earthquake ('95) &

The Lehman Collapse

drove us to the new project

“Green Energy Port Hibiki”

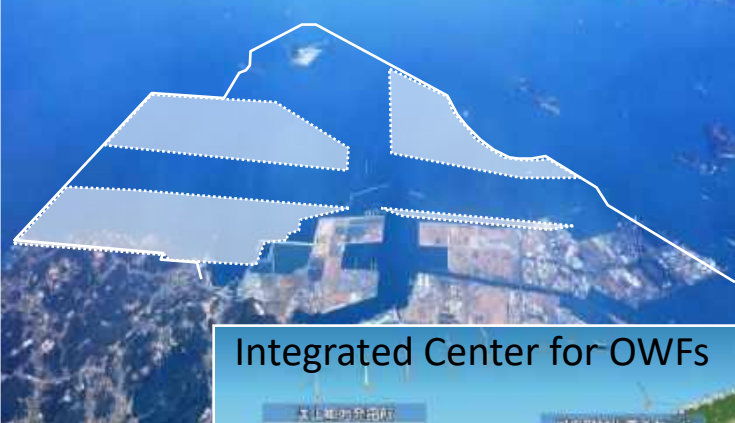
2. 2. Time Frame & Procedures

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Year
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PHASE 1: Attracting empirical research facilities and supplier bases

- Public tender and selection
- Establishment of distribution warehouse and maintenance center
- Onshore installation of offshore wind turbines
- Operation-start of WT/PV Hybrid power plant

Expansion of port area



PHASE 2: Japan's First Large-scale OWF

- Revision of the Ports & Harbor Act, expansion of port area
- Selection of preferred bidders
- Groundbreaking

Integrated Center for OWFs



PHASE 3: Three Functions necessary for "Integrated Center" for OWFs

- Marketing to offshore wind companies in Japan and overseas
- Maintenance of three functions
 - (1) Installation base
 - (2) O&M service base
 - (3) Production base

2. 3. Japan's First Large-scale OWF

First project: Construction of Offshore Wind Farm in Port Area

Japan's Kitakyushu Launches Nearshore Wind Farm Project

...This is the first offshore wind power auction based on the recently amended port and harbor law in Japan.

(Partially quoted from Offshore WIND.biz Posted on August 19, 2016)



Project overview (Plan)

- Developer:
Hibiki Wind Energy Co., Ltd
- Total cost:
JPY 175 billion
- Total output:
220,000 kW
- Schedule:
2022 Construction-start

2. 4. Expected Market for OWF in Japan

JWPA* stated their target capacity of OWF at the 1st public-private discussion table on 17 Jul. 2020.

2030 13GW

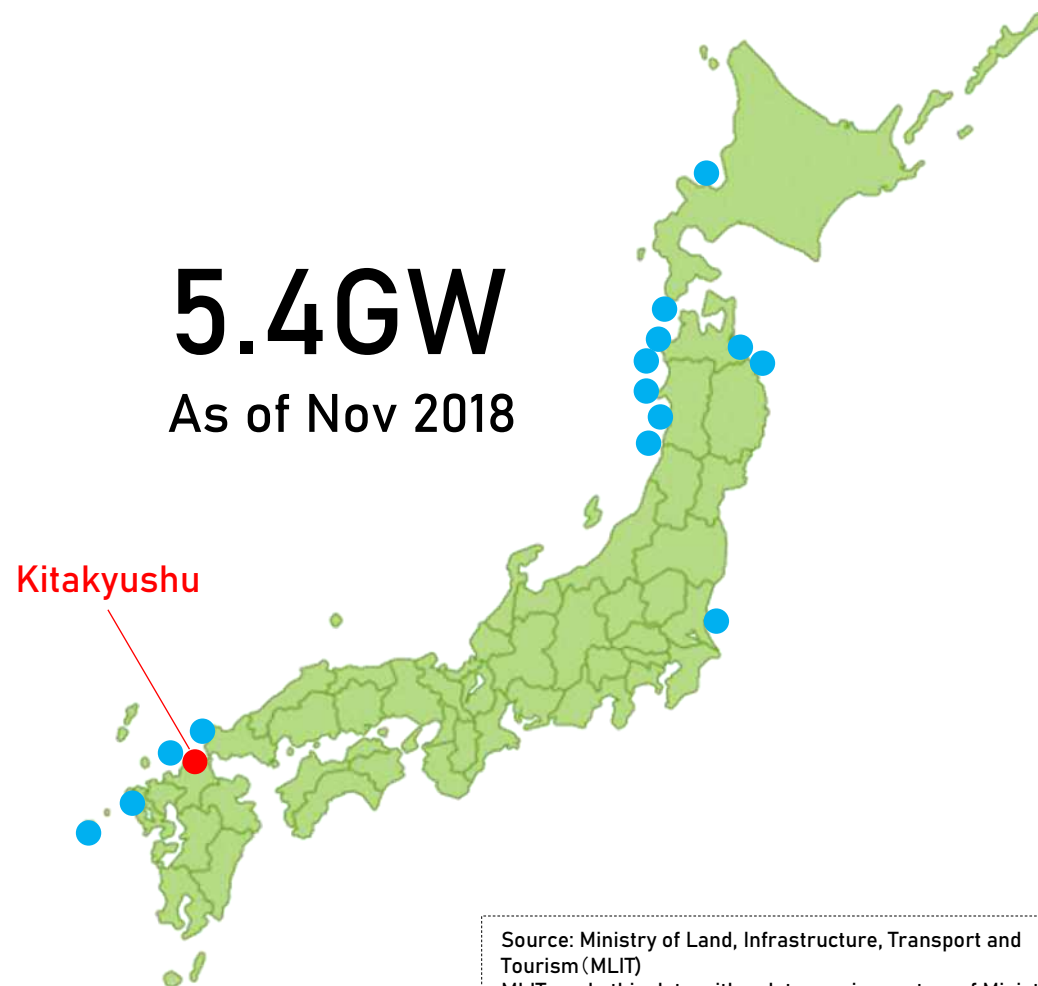
2040 30-40GW

2050 90GW

(plus **40GW** On-shore WF)

OWF projects in Japan

in a process of Environment Impact Assessment



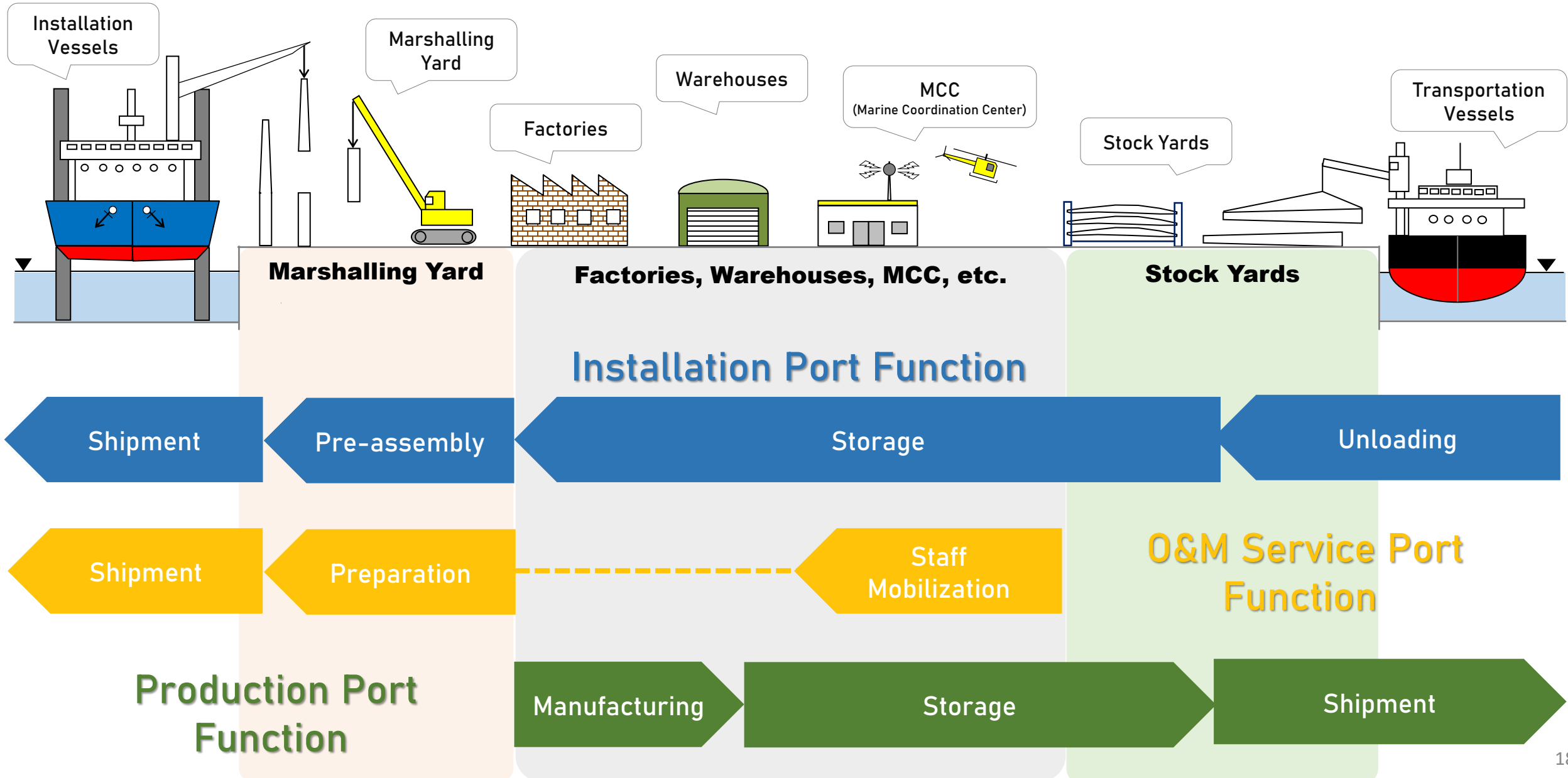
Source: Ministry of Land, Infrastructure, Transport and Tourism (MLIT)
MLIT made this data with a data service system of Ministry of Economy, Trade and Industry.



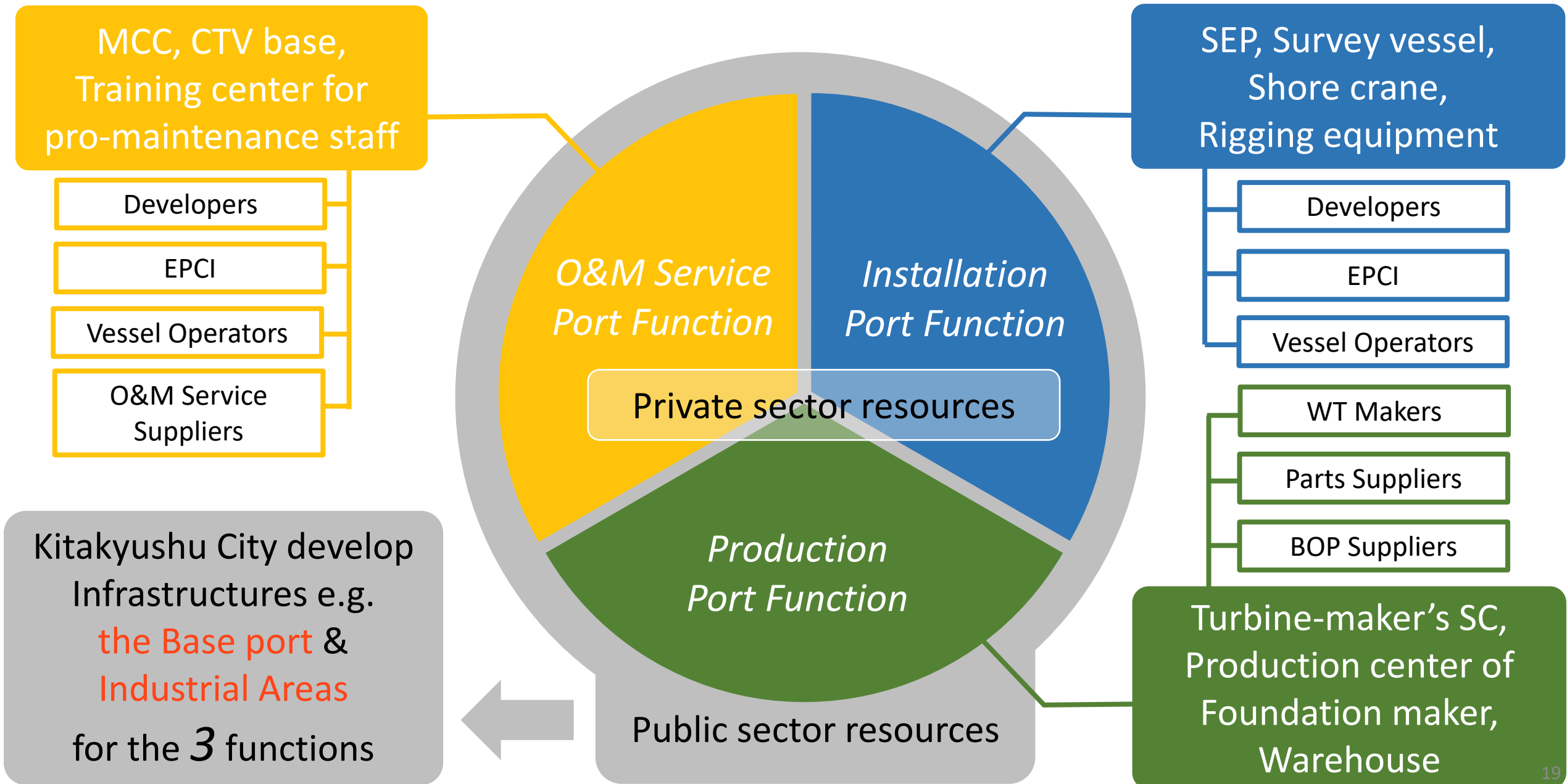
Chapter 3

Our Goal

3. 1. Concept image of "Integrated Center"



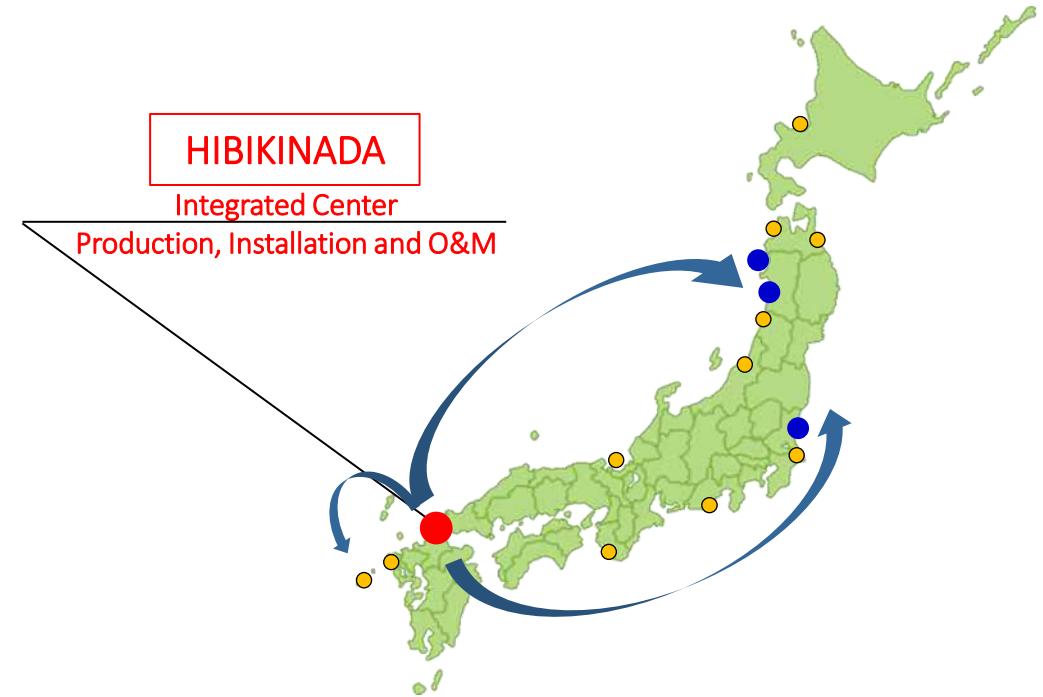
3. 2. Three functions necessary for "Integrated Center" for OWFs



3. 3. Japan's Only Integrated Center for OWFs

Kitakyushu is developing the integrated center for OWFs together with the central government, which is “one and only” center in Japan.

- On 2 Sep,2020, the Japanese government have designated 4 ports including Hibikinada area as base ports for OWF construction.
- Unlike the other 3 ports, Kitakyushu’s Hibikinada is the only port with a vast industrial land directly behind the quay, which can integrate necessary functions for offshore wind industries.



OWF supporting ports in Japan

	Production Port Function	Installation Port Function	O&M Service Port Function
Required roles for ports	<ul style="list-style-type: none"> • Manufacturing of WT components, foundation and heavy products. • Storage of wind turbine components • Dispatch base for working vessels such as SEP, Survey vessel. 	<ul style="list-style-type: none"> • Construction base for OWFs. Pre-assembly, storage and logistics of wind turbine components, etc. 	<ul style="list-style-type: none"> • Base for O&M service for OWFs. Dispatch base for CTV and maintenance vessels
● Hibikinada Center	○	○	○
● Base port		○	○
● Other ports			○

3. 4. Images of the Integrated Center for OWFs

**GREEN ENERGY PORT
HIBIKI**



3. 4. Images of the Integrated Center for OWFs

グリーンエネルギーポートひびき (Digest)



3. 4. Images of the Integrated Center for OWFs



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GREEN ENERGY PORT
HIBIKI

ナセル

重量：300～650t

Nacelle

Weight: 300 - 650t

3. 4. Images of the Integrated Center for OWFs

グリーンエネルギーポートひびき (Digest)

GREEN ENERGY PORT
HIBIKI



3. 4. Images of the Integrated Center for OWFs



GREEN ENERGY PORT
HIBIKI

SEP

3. 4. Images of the Integrated Center for OWFs



GREEN ENERGY PORT
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CTV

3. 4. Images of the Integrated Center for OWFs



GREEN ENERGY PORT
HIBIKI

Cable laying vessel

海底ケーブル敷設船

3. 4. Images of the Integrated Center for OWFs



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Survey vessel

各種調査船

3. 4. Images of the Integrated Center for OWFs



See you all soon again
in Kitakyushu

