

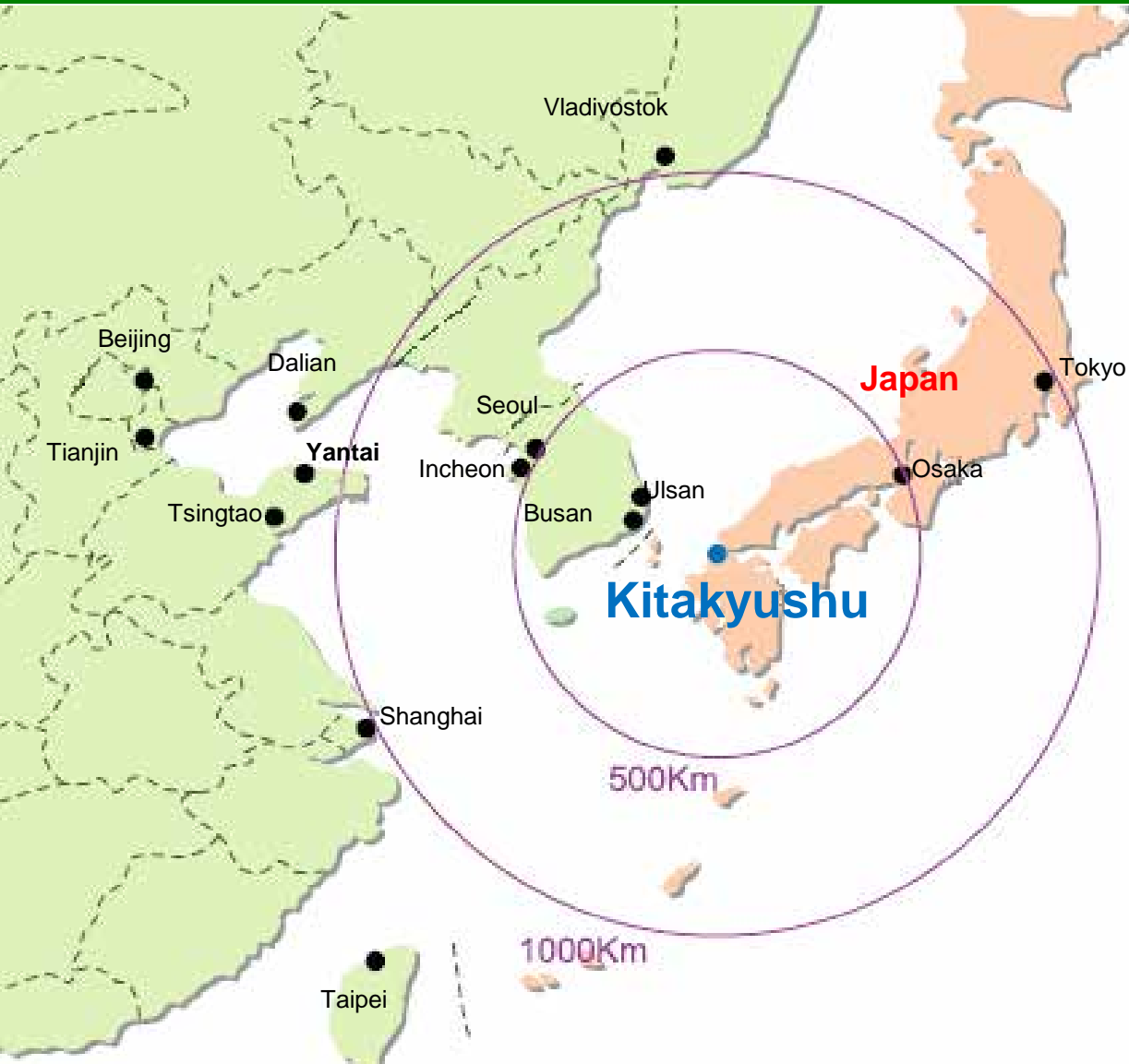
Kitakyushu City's Efforts toward Decarbonization



October 8, 2024
City of Kitakyushu, Japan
SONO Junichi



About Kitakyushu City



Population : 913 thousand persons (as of Feb 2024)
Area : 492.5 Km²

Abundant nature and special local agricultural and marine products



Karst plateau and Hiraodai



Northern shore of Wakamatsu



Kokura Beef



Buzen sea oyster



Wakamatsu specialty tomato

Representative Enterprises of Kitakyushu



Nippon Steel



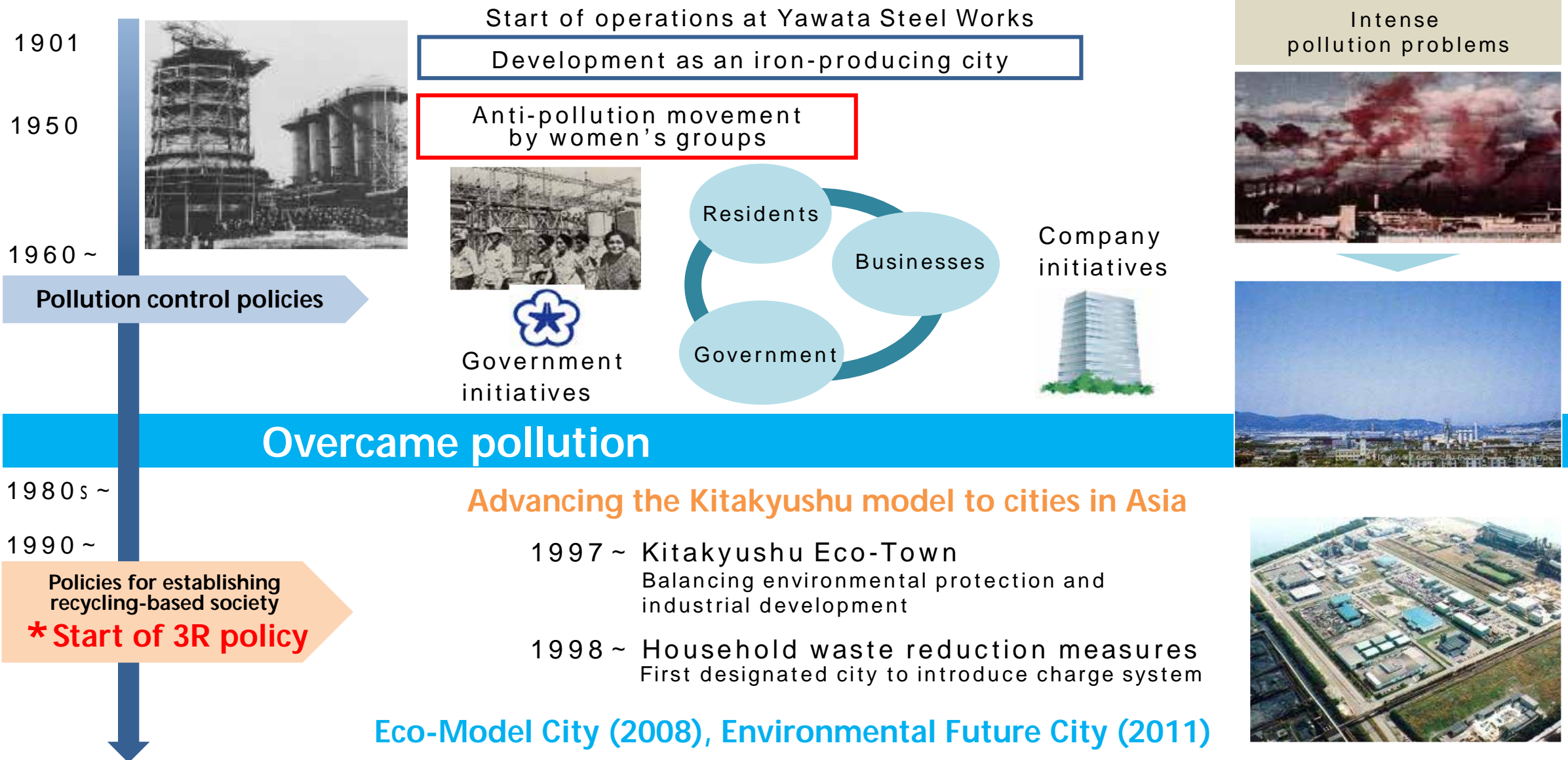
Yaskawa Electric Corporation



TOTO

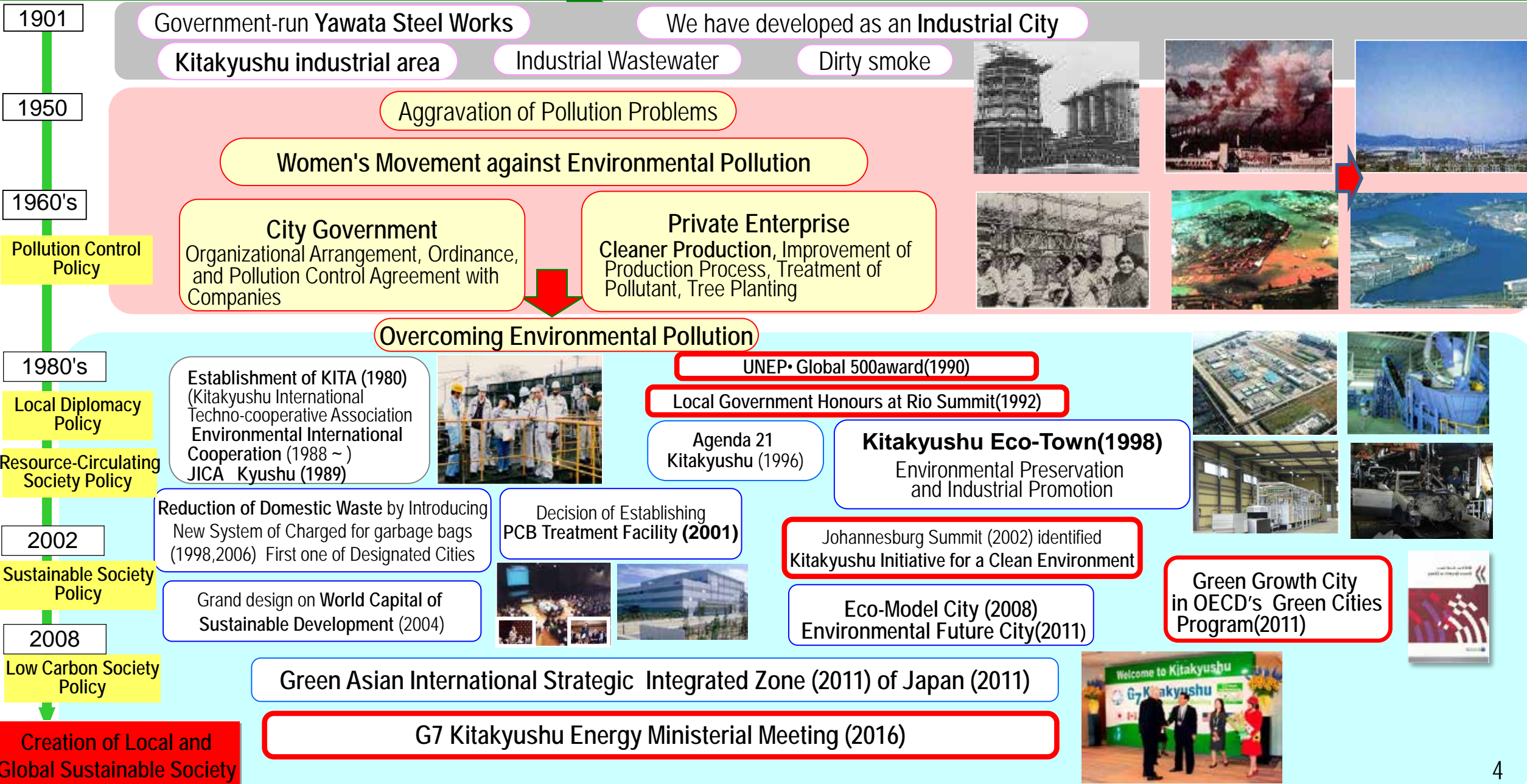
History of Kitakyushu City

Experience in Overcoming Pollution & Environmental Policies

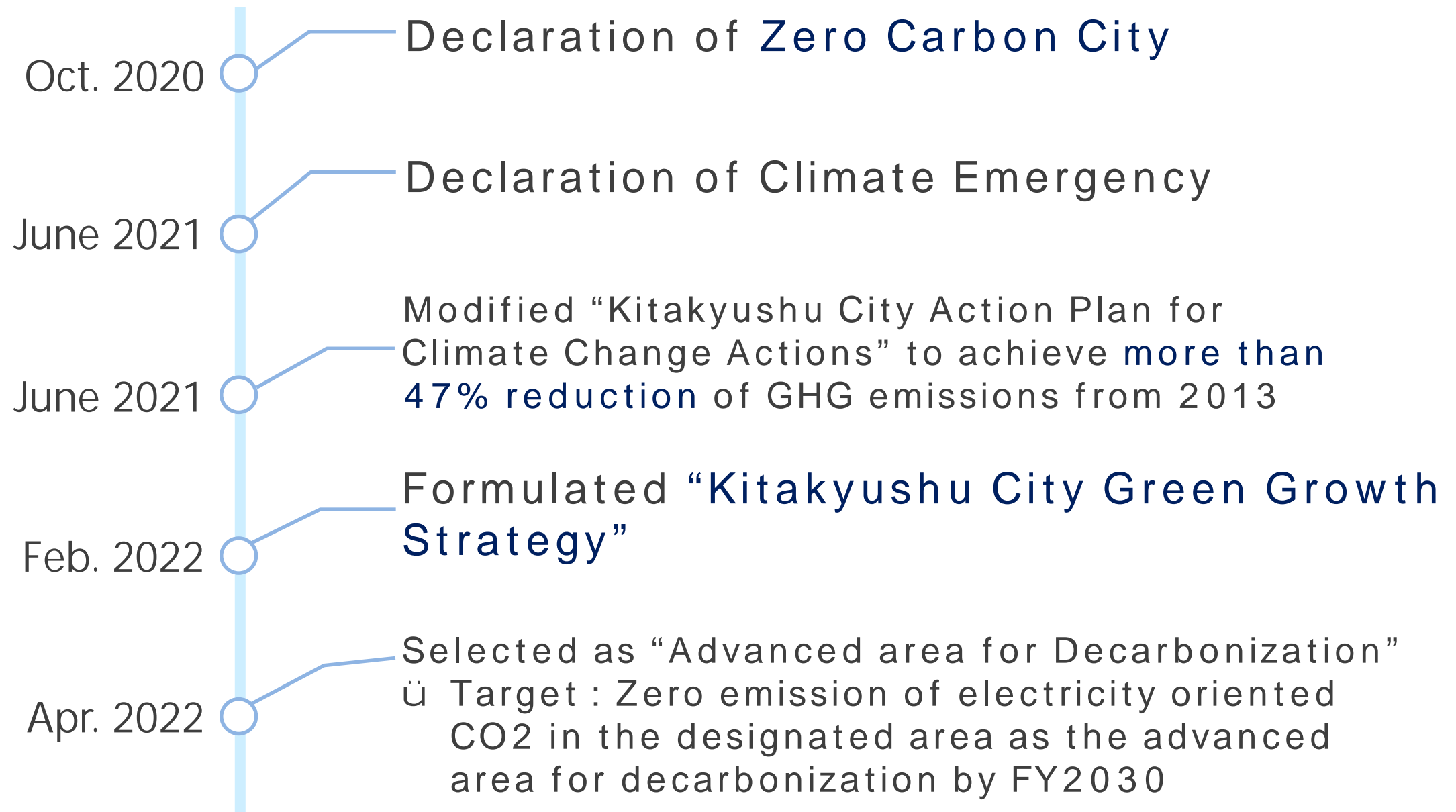


Kitakyushu's Assets for Sustainable Development

Transition of Kitakyushu City's Environmental Policy

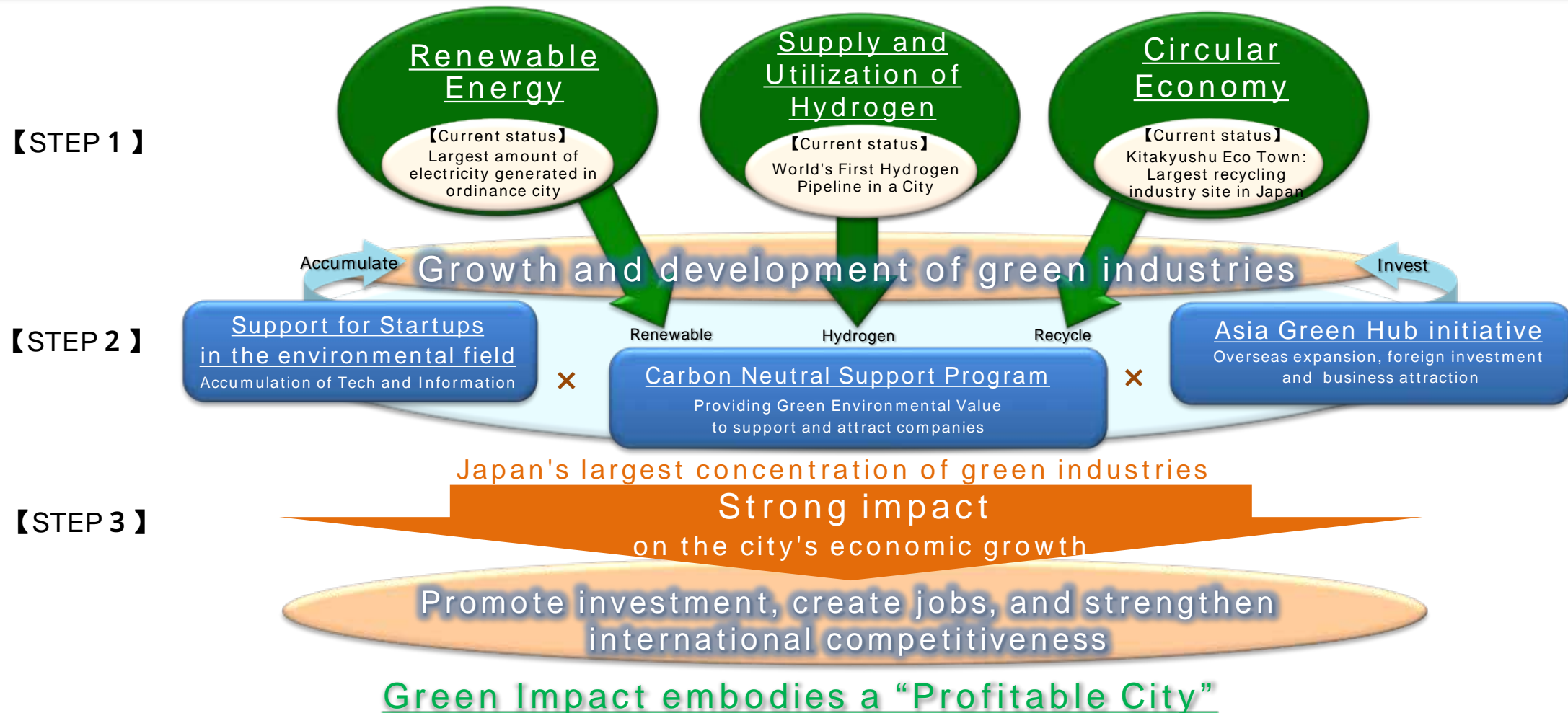


Steps toward a Zero Carbon City



Kitakyushu Green Impact

Aiming for green growth through a virtuous cycle between the environment and the economy;
Further introduction of **Renewable energy** including the formation of a comprehensive hub for wind power generation-related industries
Supply and utilization of **Hydrogen**, a new energy source that is the key to achieving carbon neutrality.
Circular economy that uses resources in a sustainable manner by creating new recycling businesses that deal with social issues.



Renewable Energy (1) Comprehensive wind power generation base

Four functions required for a wind-power generation base

Shipping and construction base function

Final shipping base point for windmills

Logistics base function

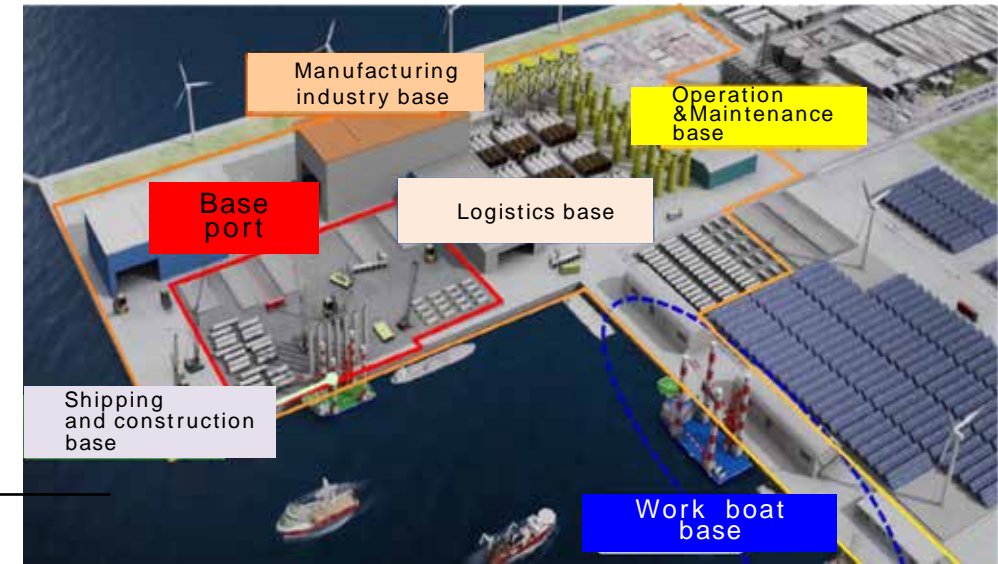
Base point for the import and export of windmill parts

Operation & Maintenance base function

Operate and maintenance point for the windmills

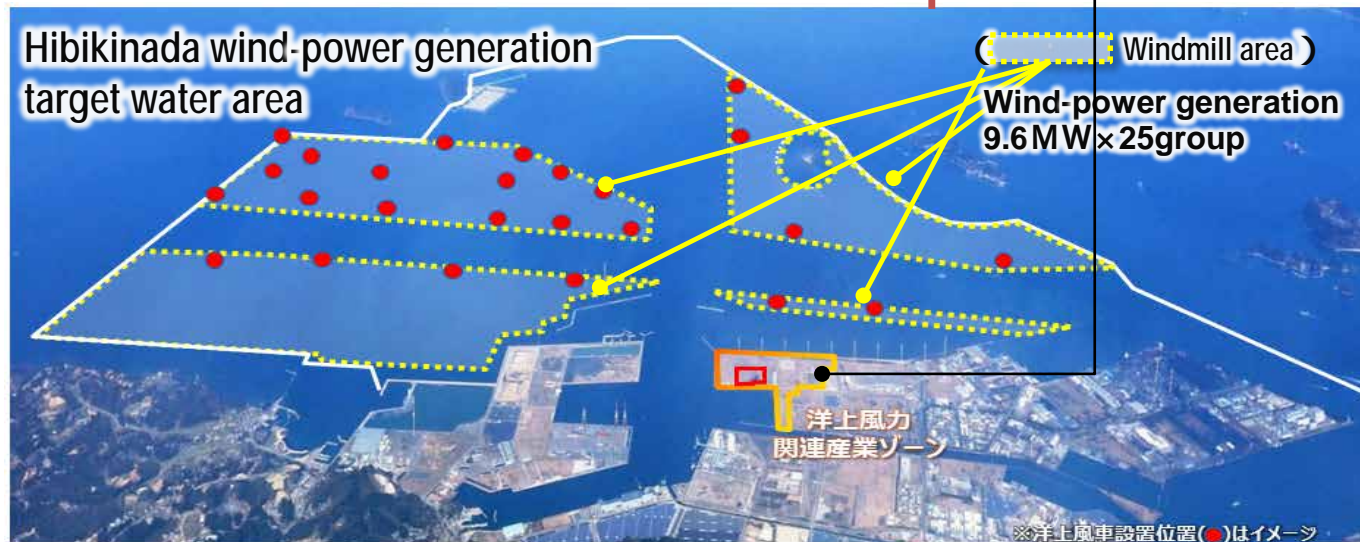
Manufacturing industry base function

Center for wind-power related industry



[Image diagram]

2025 scheduled to start operation



September 2020 Selected as a offshore wind-power base port **only in west side of Japan**

Collaboration with Fukuoka Prefecture to designate the area as a promotion zone under the Renewable Energy Use Law

Renewable Energy (2) Decarbonization leading area

- ∅ A region that will achieve virtually zero CO2 emissions from electricity consumption in the consumer sector toward carbon neutrality in 2050, by implementing leading initiatives toward decarbonization in accordance with regional characteristics, etc.
- ∅ Currently, 73 proposals in 94 municipalities in 36 prefectures across Japan have been selected as model regions for the “decarbonization domino” (as of 2024.3.18).

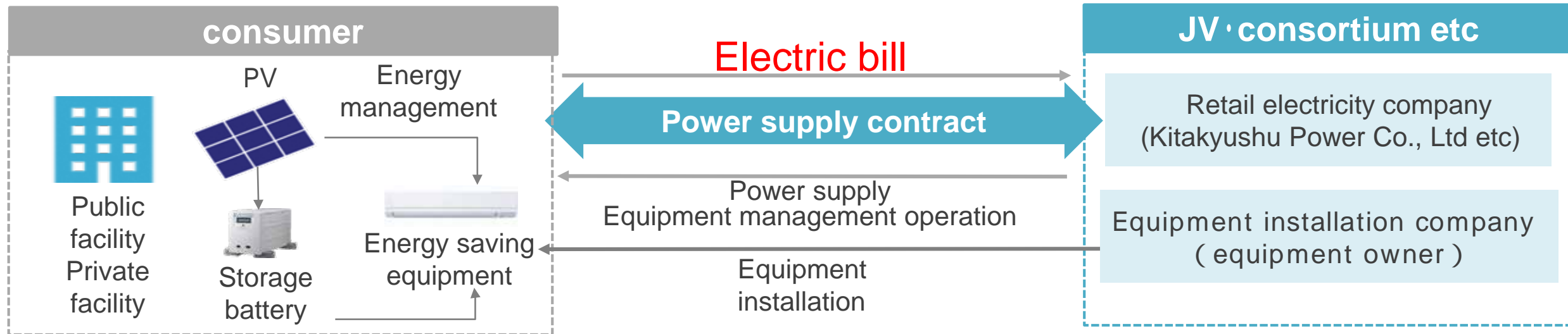
Third party ownership method for solar power / energy saving equipment introduction

Initial cost zero

Introduction speed UP

Reduction total cost by IOT for long life of the goods

Third party method Image



Third party ownership's service fee **include electric bill**

Supply and Utilization of Hydrogen

~ Towards the formation of a hydrogen hub ~

Industry, academia, and government are collaborating to form a large-scale hydrogen supply and utilization base in the Hibikinada coastal area and build an internationally competitive hydrogen supply chain.



Fukuoka Prefecture Hydrogen Hub Promotion Council
(Members: 30 companies/institutions)
Fukuoka Prefecture, Kitakyushu City,
Nippon Steel, Kyushu Electric Power, Seibu Gas, etc.

Circular Economy (1) Kitakyushu Eco-town project

The first and largest recycle factories complex

Amount of direct investment : Approx. **JPY 89 billion**

(JPY 21 billion from National/Prefectural/ City government = 25% of total)

Number of employees : **1,000**

Number of visitors: **100,000** annually, totally 2.00 million
5% are from overseas

* In addition to social studies tours and school excursions, includes visitors from overseas (China, Korea, Southeast Asia, etc.)

Co2 reduction: **447,000 ton** / year



Establishing of next-generation recycling bases

Recycling of solar panel

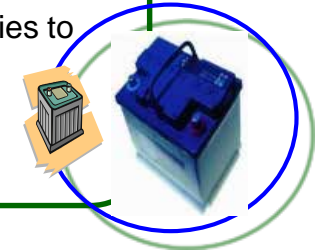
- Recycling of photovoltaic panels that are estimated to account for 3% of the industrial waste in the near future
- Technology that has both the versatility for different kinds of photovoltaic modules and the high recycling rate (99%)
- Commercialization combined with the recycling of CFRP used in aircrafts etc. is under study.

Executing entity: Shinryo Inc.



Recycling of lithium ion batteries

- Collection of rare metals and valuable metals from waste secondary batteries in small-size home appliances and cell phones Production capacity: 2,200 ton/year
- Future commercialization is under study about “batteries to batteries” recycling and recycling of vehicle-mounted lithium-ion batteries
- **Executing entity: Nippon Magnetic Dressing**



Recycled polyester

- “Technology to make clothes from clothes”, re-manufacture of recycled resin, the raw material of polyester fiber, by dissolving and refining polyester fiber that accounts for 60% of clothing
- Production capacity: 2,200 ton/year

Executing entity: JEPLAN, Inc.

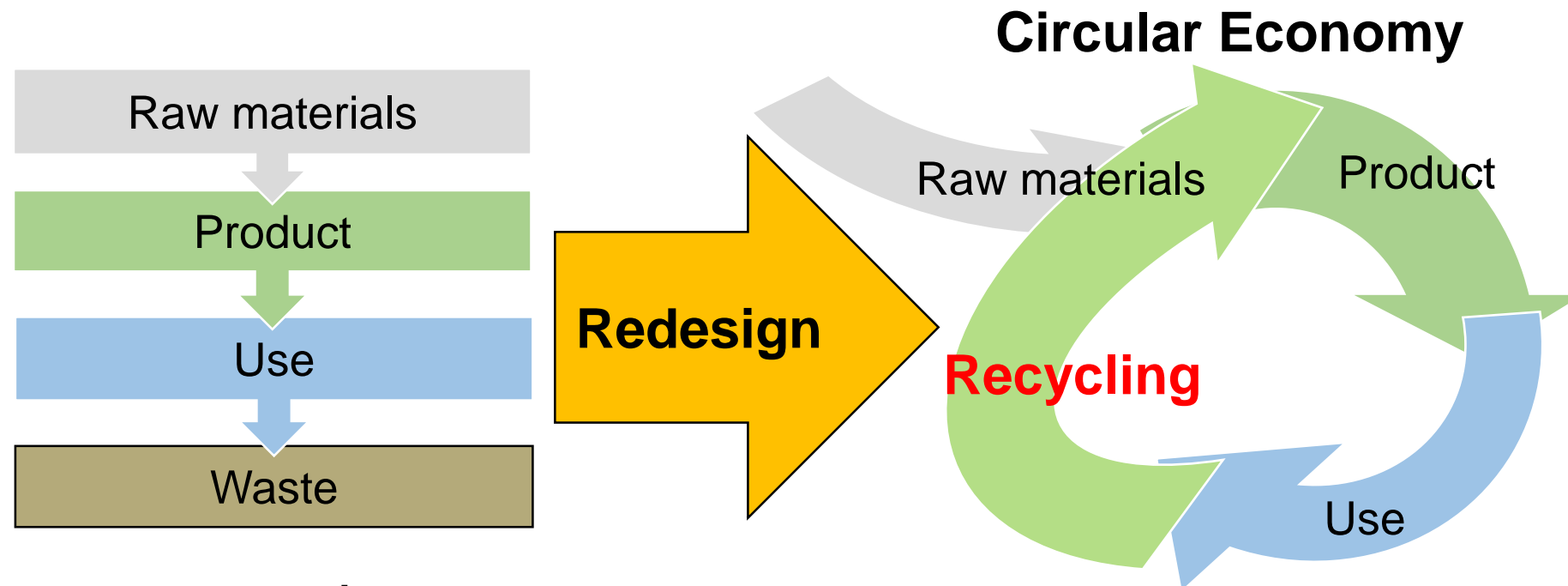


Circular Economy (2) Future of the Eco-town project

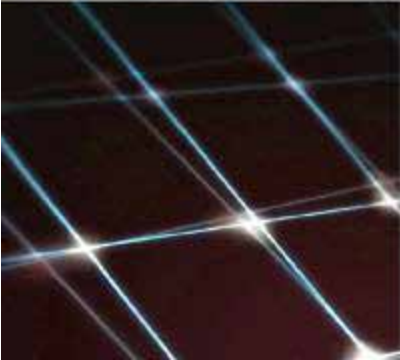
Support for circular economy

Circular economy means that in addition to traditional 3R initiatives, the amount of resource input and While reducing consumption and making effective use of stock, we will create services, etc.

It is an economic activity that creates added value through the maximization of the value of resources and products, the aim is to minimize resource consumption and prevent waste generation.



Document: Netherlands 「A Circular Economy in the Netherlands by 2050 –Government-wide Program for a Circular」



Thank you for your attention

