

## Chapter 7 Response Specific to the Nuclear Disaster

### Section 1 Industrial Agglomeration Centered on the Fukushima Innovation Coast Framework

#### 1. Fukushima Innovation Coast Framework

##### (1) Overview of Fukushima Innovation Coast Framework

###### 1) Overview

With the aim of building a new industrial base in the Hamadori District of Fukushima, the “Fukushima Innovation Coast Framework” was organized by the Fukushima International Research Industry City (Innovation Coast) Framework Association in June 2014 and has since contributed to the concrete implementation of major projects, including the establishment of bases such as the Fukushima Robot Test Field, and has promoted efforts to realize industrial agglomeration, develop education and human resources, improve the living environment, and expand the exchange population.

In May 2017, the Act on Special Measures for the Reconstruction and Revitalization of Fukushima was amended to give the Fukushima Innovation Coast Framework a legal basis, and to strengthen cooperation with the relevant ministries and agencies, local governments, and businesses.

In July 2017, the Fukushima Innovation Coast Framework Promotion Organization was established as the core organization for the promotion of the Fukushima Innovation Coast Framework. The Fukushima Innovation Coast Framework Promotion Organization became a public interest incorporated foundation in January 2019.

###### 2) Organizing the Fukushima Innovation Coast Framework

Work on the Fukushima Innovation Coast Framework began in January 2014, when the Fukushima International Research Industry City (Innovation Coast) Framework Association, consisting of local mayors and experts from industry, academia, and government, was established as a private consulting group for Kazuyoshi Akaba, the then State Minister for Economy, Trade and Industry and Director-General of Nuclear Disaster Local Response Headquarters, Cabinet Office, and the Association studied the construction of a new industrial base in the Hamadori District to restore the industries and jobs lost in the earthquake and nuclear disaster. In June 2014, a report was compiled by the Fukushima International Research Industry City (Innovation Coast) Framework Association.

This report positions ① the challenge of decommissioning nuclear reactors and ② the construction of a new industrial base as the main projects of the Framework, and identifies the following as measures to be taken toward the realization of the Framework: ① construction of strategic processes and systems for the realization of the Framework, ② community development from a broad perspective, and ③ establishment of a system for implementing mid- to long-term efforts.

###### 3) Fukushima Innovation Coast Framework Promotion Council

The “Fukushima Innovation Coast Framework Promotion Council” was established in December 2014 with Yosuke Takagi, the then State Minister for Economy, Trade and Industry and Director-General of

Nuclear Disaster Local Response Headquarters, Cabinet Office, as chairperson and Fukushima Prefectural Governor Masao Uchibori, the mayors of local municipalities, and experts from industry, academia, and government as members, and the Council met a total of eight times until February 2017.

In order to realize the Fukushima Innovation Coast Framework (hereinafter referred to as FIPO), efforts are being made to concretize projects in various fields, such as decommissioning, robots/drones, energy, environment/recycling, agriculture, forestry and fisheries, medical care, and aerospace, and extensive work is being done to prepare the environment through industrial agglomeration, human resource development, expansion of the exchange population, and information dissemination.

#### **4) Legal positioning**

The amendment of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima in May 2017 gave the FIPO a legal basis and stipulated that cooperation should be strengthened among the relevant ministries and agencies, local governments, and businesses.

The Act on Special Measures for the Reconstruction and Revitalization of Fukushima was again amended in June 2020, establishing provisions for accelerating industrial agglomeration that pivoted around promotion of FIPO, including the establishment of a system for dispatching government employees to the Fukushima Innovation Coast Framework Promotion Organization as well as the provision of consulting services and assistance to businesses engaged in demonstration tests of drones and other equipment. Special tax exemptions related to the promotion of the Fukushima Innovation Coast Framework were also established. The amendment of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima was accompanied by the establishment of special tax exemptions related to the promotion of the FIPO in the Act on Temporary Special Provisions of Acts Related to National Tax, in Relation to Victims, etc. of the Great East Japan Earthquake (Act No. 29 of 2011), which came into force in April 2021.

#### **5) Strengthening the promotion system**

In July 2017, the “Inter-Ministerial Council on the Fukushima Innovation Coast Framework” was established, and in November of the same year, the “Subcommittee for the Promotion of the Fukushima Innovation Coast Framework” was established under the “Council for the Reconstruction and Revitalization of Fukushima Following the Nuclear Disaster” to radically strengthen the promotion system.

#### **6) Priority Promotion Plan**

Based on discussions at the meetings of the Subcommittee for the Promotion of the FIPO, Fukushima Prefecture formulated a Priority Promotion Plan that positioned the FIPO as a top priority, and the Plan was approved by the Prime Minister at the Inter-Ministerial Council meeting in April 2018.

#### **7) Fukushima Innovation Coast Framework Promotion Organization**

Fukushima Prefecture established the Fukushima Innovation Coast Framework Promotion Organization in July 2017 as the core organization for the promotion of the Fukushima Innovation Coast Framework. The Organization has been gradually strengthening its structure since April 2018 and was certified as a public interest incorporated foundation in January 2019.

Figure 7-5-1 Fukushima Innovation Coast Framework



Source) Website of the Ministry of Economy, Trade and Industry, “What is the Fukushima Innovation Coast Framework?”  
<https://www.meti.go.jp/earthquake/smb/innovation.html> (browsed November 16, 2022)

## (2) Overview of blueprint for industrial development

### 1) Overview

As a plan for concretizing the Fukushima Innovation Coast Framework’s goal of constructing a new industrial base in the Hamadori District and environs, the “Blueprint for Industrial Development Based on the Fukushima Innovation Coast Framework” delineated the image of autonomous and sustainable industrial development that the region aimed to achieve from a mid- to long-term and wide-area perspective and pointed the direction that the efforts of the national and prefectural governments should take to achieve it, and after repeated deliberations by the Council for Reconstruction and Revitalization of Fukushima Following the Nuclear Disaster, the Blueprint was announced by the Reconstruction Agency, the Ministry of Economy, Trade and Industry, and Fukushima Prefecture in December 2019.

The December 2019 Cabinet Decision entitled “Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake after the “Reconstruction and Revitalization Period” calls for efforts on FIPO to proceed based on this Blueprint.

## 2) Background and purpose

Efforts toward industrial agglomeration, including the decommissioning of the nuclear reactors, the establishment of bases for robots, etc., and the promotion of research and development projects based on the FIPO, were initially pursued to promote the recovery of the industries and employment that had been lost to the nuclear disaster in the Hamadori District of Fukushima Prefecture, but when the need to continue working toward the realization of independent and sustainable industrial development in the Hamadori District became apparent, discussion began to turn toward a future vision for industrial development that revolved around concretization of the FIPO.

After repeated discussions with 15 municipalities, including the Hamadori District of Fukushima Prefecture, the Council for the Reconstruction and Revitalization of Fukushima from the Nuclear Disaster and the Subcommittee for Promotion of the Fukushima Innovation Coast Framework compiled and published the “Blueprint for Industrial Development Based on the Fukushima Innovation Coast Framework.”

This Blueprint will serve as a compass guiding the Hamadori District in the period following reconstruction and revitalization, and it calls upon the national government, prefectures, municipalities, and related organizations to work together to accelerate concrete efforts toward further industrial development of the Hamadori District, including the revision of the Fukushima Prefecture Priority Promotion Plan.

## 3) Key points of the Blueprint

Independent and sustainable industrial development in the Hamadori District will rest upon “improving management and technological capabilities of local companies and developing new businesses” and “attracting new companies, human resources, research, and demonstrations, and expanding the exchange population,” which can be likened to the two wheels of a cart.

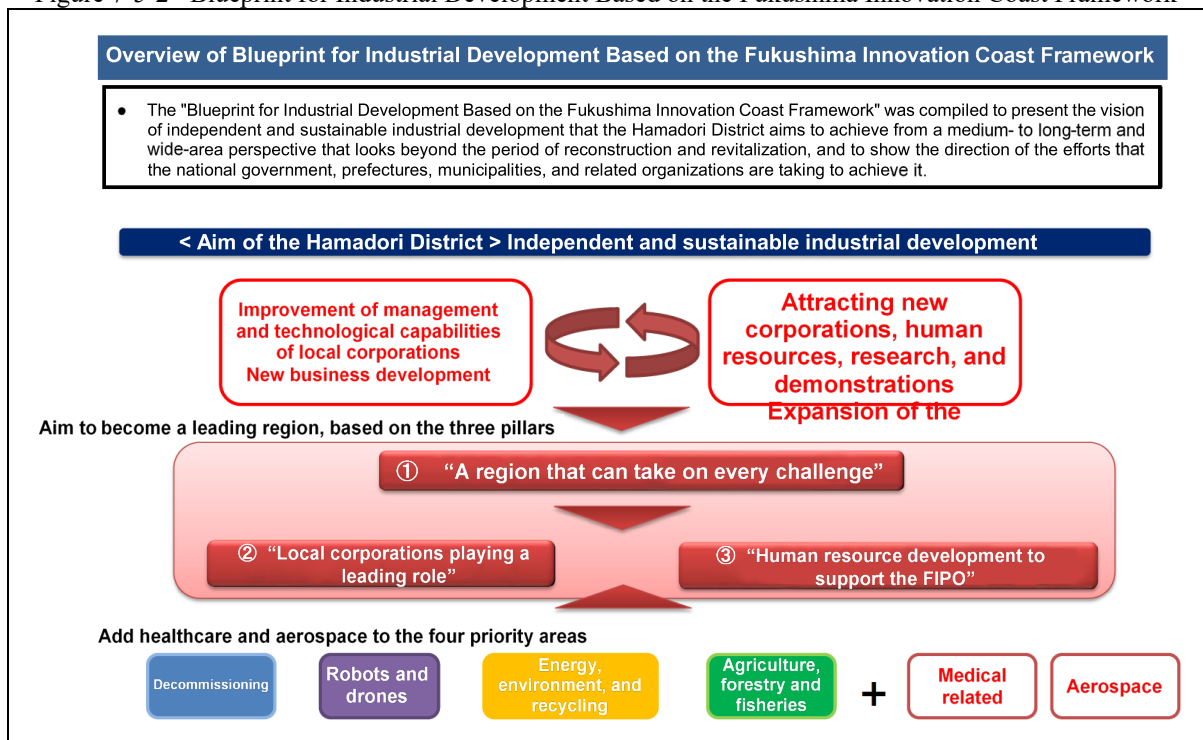
Similarly, Fukushima Prefecture’s plan to transform the Hamadori District into a leading region is like an edifice having three pillars: “A district that can meet all challenges,” “Local enterprises that play the leading role,” and “Human resource development that supports FIPO.”

## 4) Addition of priority areas

To promote more concentrated industrial agglomeration, a fifth and a six priority area (⑤ Medical-related and ⑥ Aerospace) were added to the original four priority areas (① Decommissioning, ② Robots and drones, ③ Energy, environment and recycling, ④ Agriculture, forestry and fisheries).



Figure 7-5-2 “Blueprint for Industrial Development Based on the Fukushima Innovation Coast Framework”



Source) Ministry of Economy, Trade and Industry, “Background for the Compilation of the Blueprint for Industrial Development Based on the Fukushima Innovation Coast Framework (Overview)” (December 9, 2019)  
<https://www.reconstruction.go.jp/topics/m19/12/20191209093131.html> (browsed June 23, 2023)

Figure 7-5-3 Background for the development of the Blueprint for Industrial Development  
 (Reference) Background for the development of the “Blueprint for Industrial Development Based on the Fukushima Innovation Coast Framework”

**< August 9, 2018 Council for the Reconstruction and Revitalization of Fukushima following the Nuclear Disaster >**

- [Masao Uchibori, Governor of Fukushima] This is about securing financial resources and systems after the reconstruction and revitalization period. Seven years have passed since the disaster, but there are still difficult issues and ongoing harsh circumstances, and the reconstruction of Fukushima will be a long battle. Even after the period of reconstruction and revitalization ends, it will be important to maintain a sense of crisis about each issue and continue to take on challenges through various measures. We ask the national government to join together with the prefecture and the municipalities in constructing a vision and concept for reconstruction and in charting a course forward towards reconstruction by conducting the necessary studies and securing sufficient financial resources and systems.
- [Hiroshige Seko, Minister of Economy, Trade and Industry] The governor and Chairperson Matsumoto have said that they would like us to dig deeper so that the Fukushima Innovation Coast Framework can lead to sustainable and autonomous industrial development in Fukushima. In response to this, I would like to draw up a blueprint for mid- to long-term, wide-area industrial development.
- [Fukushima Governor Uchibori (cornered for a comment after the meeting ended)] The fiscal year 2018 marks the halfway point of the five years of reconstruction and revitalization period, and we requested that the government thoroughly discuss the post-reconstruction system and financial resources and create a vision for reconstruction. I believe that the national government will move forward with practical discussions. For instance, in today's meeting, METI Minister Seko stated that he would like to draw up a new blueprint for the industrial development of Fukushima. The cornerstone of the vision is the economy and industry, and as a follow-up to the Minister's statement, we would like to advance discussion and debate on mid- and long-term initiatives so that the disaster-affected area can move forward through sustainable economic development

**< August 5, 2019 Eighth Recommendation by the Ruling Party's Headquarters for Acceleration of Reconstruction Following the Great East Japan Earthquake >**

- In order to realize independent and sustainable industrial development in the Hamadori District, etc., the national government, prefectures, and municipalities should work together to strongly promote initiatives for wide-area regional revitalization and industrial development from a mid- to long-term perspective, based on the “Fukushima Innovation Coast Framework,” which will serve as the major driving force for the reconstruction of Fukushima.

**< Basic policy for the period after reconstruction and revitalization >**

- ④ Industrial clusters centered on the Fukushima Innovation Coast Framework  
 (Future issues)  
Efforts toward autonomous and sustainable industrial development in the Hamadori District, etc., based on discussion of the “Blueprint for Industrial Development Based on the Fukushima Innovation Coast Framework” to be formulated this autumn

Source) Ministry of Economy, Trade and Industry, “Background for the Compilation of the Blueprint for Industrial Development Based on the Fukushima Innovation Coast Framework (Overview)” (December 9, 2019)  
<https://www.reconstruction.go.jp/topics/m19/12/20191209093131.html> (browsed June 23, 2023)

### **(3) Major efforts related to FIPO**

#### **1) Overview**

In order to realize the FIPO, efforts are being made to concretize projects in various fields such as decommissioning, robots/drones, energy, environment, recycling, agriculture, forestry and fisheries, medical care, and aerospace, and extensive work is being done to prepare the environment through industrial agglomeration, human resource development, expansion of exchange population, and information dissemination.

At the end of March 2020, the Fukushima Hydrogen Energy Research Field, one of the world's leading demonstration facilities for the production of hydrogen derived from renewable energy, opened in the Town of Namie, and the Fukushima Robot Test Field, a base for the demonstration of robots and drones used in infrastructure inspection, disaster response, and logistics, fully opened in Minamisoma City and the Town of Namie.

#### **2) Fukushima Robot Test Field**

At the end of March 2020, the Fukushima Robot Test Field, a base for the demonstration of robots and drones used in infrastructure inspection, disaster response, and logistics, fully opened in Minamisoma City and the Town of Namie. This facility is a major R&D center that is unparalleled in the world, and as of the end of March 2023, seventy-one (71) robot-related companies are operating in the Hamadori District and more than 1,050 demonstration experiments have been conducted.

The environment for use of the area as a demonstration field is also being developed, including a September 2020 review of the procedures for permission and approval for drone flights, which made it easier to conduct drone research and development. In addition, some companies are expanding their business into surrounding areas using the Field as the core.

Figure 7-5-4 Fukushima Robot Test Field



Source) Fukushima Innovation Coast Framework Promotion Organization, “Fukushima Robot Test Field”  
[https://www.fipo.or.jp/robot/wp-content/uploads/2020/05/pamphlet\\_public.pdf](https://www.fipo.or.jp/robot/wp-content/uploads/2020/05/pamphlet_public.pdf) (browsed November 16, 2022)

### 3) Fukushima Hydrogen Energy Research Field

In the energy field, the “Fukushima Hydrogen Energy Research Field” was opened in the Town of Namie at the end of March 2020 as an innovation base for hydrogen production from renewable energy, and has started hydrogen production and shipment.

Figure 7-5-5 The completed Fukushima Hydrogen Energy Research Field (FH2R)



Source) New Energy and Industrial Technology Development Organization website, “FH2R, the world’s largest hydrogen production facility using renewable energy, completed” [https://www.nedo.go.jp/news/press/AA5\\_101293.html](https://www.nedo.go.jp/news/press/AA5_101293.html) (browsed on November 16, 2022)

### 4) Other facilities

In order to promote research and development that contributes to the safe and reliable decommissioning of TEPCO Fukushima Daiichi NPS, the Collaborative Laboratories for Advanced Decommissioning Science (Town of Tomioka), the Naraha Center for Remote Control Technology Development (Town of Naraha), and the Okuma Analysis and Research Center (Town of Okuma) were

established by the Japan Atomic Energy Agency (JAEA), and the Great East Japan Earthquake and Nuclear Disaster Memorial Museum was opened in September 2020 as an archive base facility.

### **5) Efforts in the economic and industrial field**

Upon creation of a legal basis for the FIPO by the amendment of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima in May 2017, supplementary projects such as feasibility studies were conducted in FY 2016 and FY 2017. These projects assist prefectural governments, private companies, and others in carrying out surveys necessary for the concretization of projects aimed at realizing the Fukushima Innovation Coast Framework, and over the course of two years, 14 projects were carried out, including “Survey for the Operation of Robot Test Fields and International Industry-Academia-Government Joint Use Facilities” and “Survey for the Development of Information Dissemination (Archive) Bases.”

In addition, since FY 2016, the government has subsidized the cost of practical development in the priority fields of the Fukushima Innovation Coast Framework (decommissioning, robots, energy, environment, recycling, agriculture, forestry and fisheries) by local enterprises or other enterprises in cooperation with local enterprises to support projects that contribute to regional development in the Hamadori District of Fukushima Prefecture, etc. In particular, since FY 2021, priority has been given to projects implemented in cooperation with local governments. So far, 222 proposals have been adopted.

Furthermore, the June 2022 Cabinet Decision entitled “Grand Design and Action Plan for a New Form of Capitalism: Follow-up” indicated that priority support would be provided for the development of demonstration fields and the development of practical applications by startups, with the aim of making the Hamadori District of Fukushima Prefecture into a leading site for the creation of startups in deep tech and other areas.

### **6) Development of human resources to sustain the Fukushima Innovation Coast Framework**

Education and human resource development is one of the priority efforts toward the realization of the Fukushima Innovation Coast Framework, and to this end, the Ministry of Education, Culture, Sports, Science and Technology has been implementing the “Project for Human Resource Development for the Fukushima Innovation Coast Framework” and the “Project to Promote the Fukushima Innovation Coast Framework by Utilizing the ‘Reconstruction Knowledge’ of Universities” since FY 2018.

In accordance with the “Project for Human Resource Development for the Fukushima Innovation Coast Framework,” support was provided to ordinary senior high schools to establish facilities for nurturing the development of top leaders in cooperation with local universities and corporations and to create educational programs in cooperation with universities and corporations; to vocational high schools to introduce facilities and equipment for the development of specialized human resources that can contribute to decommissioning research, robotics, and the fields of agriculture, forestry, and fisheries and to provide educational programs offered in cooperation with companies and research institutes; and to institutions at the level of compulsory education to improve science and mathematics education and promote the development of global human resources to expand the human resources base of the region.

In addition, between FY 2018 and FY 2020, the Ministry of Education, Culture, Sports, Science and Technology supported the organized education and research activities of universities and other institutions and promoted mutual exchanges and networking among universities and researchers through the “Project to Promote the Fukushima Innovation Coast Framework by Utilizing the ‘Reconstruction



Knowledge' of Universities" in order to draw out and accumulate knowledge that can contribute to the reconstruction of Fukushima ("reconstruction knowledge") from universities and other institutions across the country and accumulate it in the Hamadori District and environs, and the "Project to Construct Human Resource Development Infrastructure Utilizing the 'Reconstruction Knowledge' of Universities and Other Institutions" was newly implemented in FY 2021 (number of projects adopted in FY 2021: 21 projects at 17 universities, etc.).

## 7) Efforts in the field of agriculture, forestry and fisheries

In the FIPO, "agriculture, forestry and fisheries" is positioned as one of the major project areas, as elaborated in the following statement: "In order to promote new efforts in agriculture, such as smart agriculture utilizing ICT and robot technology, in and around areas under evacuation orders, it will be necessary to establish agricultural demonstration areas and conduct research and demonstrations in cooperation with local stakeholders."

Reflecting this intention, agricultural projects under the FIPO support development efforts and demonstration research on advanced technologies for labor-saving in the agriculture and forestry industries to strongly promote the return of agriculture and forestry workers and the resumption of farming.

In the field of agriculture, forestry, and fisheries, the "Project for Developing Advanced Technology to Revitalize Food Producing Regions" was conducted from FY 2012 to FY 2017 with the aim of accelerating the reconstruction of areas affected by the Great East Japan Earthquake and revitalizing them as new food production bases. The content of the project was later reviewed, and from FY 2018 to FY 2020, field demonstrations were carried out with an eye toward implementing advanced technologies in the field to address the new issues that were being confronted due to changes in the situation, and the social implementation of applied technology was rapidly and widely promoted through systematic technology introduction centered on the social implementation bases that had been established in the disaster-affected areas. Technologies for which field trials have been completed include "technology for early yield formation in grape cultivation with controlled rhizosphere," "technology for early yield formation using joint V-shape in pear trees," "technology for year-round production of *Eustoma grandiflorum* and other flowering plants," "technology for cultivation of onions by direct seeding," "technology for ayu seed production," and "robot for identifying and harvesting sea urchins." Starting in FY 2021, similar field trials were conducted under the "Advanced Technology Deployment Project for Agriculture, Forestry and Fisheries," and from FY 2023 onward, budget allocation will focus on the Fukushima Institute for Research, Education and Innovation (F-REI).

In addition, under the "Research and Development Project for Advanced Agriculture and Forestry Robots Based on the Fukushima Innovation Coast Framework," R&D on robots that contribute to efficiency, eliminate tasks, and lighten the labor burden in agriculture and forestry operations was conducted in 15 municipalities in the Hamadori District and other evacuation areas in Fukushima Prefecture from FY 2016 to FY 2020. Specifically, support was provided for ① the development and demonstration of a robot tractor, ② the development and demonstration of a weeding robot, ③ the development and demonstration of an assist suit, ④ the development and demonstration of a seedling planting robot, ⑤ the development and demonstration of a robot for measuring soil fertility in decontaminated farmland, ⑥ the development and demonstration of a labor-saving harvesting robot for a horticultural crop (broccoli), ⑦ the development and demonstration of high-quality rice production



management technology, and ⑧ the development of wagyu beef fattening management technology using ICT. Some of the fruits of this project are already on the market, such as robot tractors and assist suits, and others are being popularized, such as wagyu beef fattening management technology.

Figure 7-5-6 Research and Development Project for Advanced Agriculture and Forestry Robots Based on the Fukushima Innovation Coast Framework (FY 2016 to FY 2020)

事業概要



**ロボットトラクタの開発及び実証**  
平成28年～29年度

概要を見る >



**アシストスーツの開発及び実証**  
平成28年～29年度

概要を見る >



**除草用ロボットの開発及び実証**  
平成28年～30年度

概要を見る >



**苗木植栽用ロボットの開発及び実証**  
平成28年～30年度

概要を見る >



**ブロッコリー収穫ロボットの開発及び実証**  
平成30年～令和2年度

概要を見る >



**農地の地力測定ロボットの開発及び実証**  
平成30年～令和2年度

概要を見る >

Source) Website of the Agriculture, Forestry and Fisheries Research Council, “Information Site on the Research and Development Project for Advanced Agriculture and Forestry Robots Based on the Fukushima Innovation Coast Framework (FY 2016 to FY 2020)” <https://www.affrc.maff.go.jp/docs/fukushima/index.html> (browsed November 16, 2022)

## 2. Fukushima Institute for Research, Education and Innovation (F-REI)

### (1) Background

#### 1) Overview

Through the efforts of the Fukushima Innovation Coast Framework, a research and development base for decommissioning has been established, along with demonstration field bases such as the Fukushima Robot Test Field, and in addition, human resource development has been promoted in collaboration with universities and technical colleges, and cooperation between domestic and overseas research institutes has been promoted through the holding of international conferences. However, in light of issues with the FIPO, such as failure to reach the stage where far-reaching efforts were being made through a collaboration of all involved, the Expert Group on the Creation of an International Education and Research Hub in the Fukushima Hamadori District made a proposal to the Reconstruction Agency in June 2020, calling for more concrete discussion on the establishment of an international R&D hub. Furthermore, as a follow-up to the December 2020 decision of the Reconstruction Promotion Council to establish an international education and research hub as a center of excellence for creative reconstruction, the Reconstruction Promotion Council in November 2021 decided that this hub should take the form of a special corporation established by law, and the Basic Concept of the Fukushima Institute for Research, Education and Innovation (hereinafter referred to as “F-REI”) was formulated by the Council in March 2022. In February of the same year, a bill was submitted to the Diet to partially amend the Act on Special Measures for the Reconstruction and Revitalization of Fukushima, including new provisions concerning the establishment of F-REI, and the bill was enacted in May of the same year. In August, the “Basic Plan for Research and Development for the Creation of New Industries,” was formulated based on the Act on Special Measures for the Reconstruction and Revitalization of Fukushima. In September, the Reconstruction Promotion Council decided to locate F-REI in the Town of Namie, and to promote efforts to extend the reach of F-REI’s effects.

#### 2) Final Summary of Opinion on the International Education and Research Hub

On June 8, 2020, the “Final Summary of Opinion on the International Education and Research Hub: Aiming for Reconstruction and Revitalization of the Fukushima Hamadori District” was presented at a meeting of the Expert Group on the Creation of an International Education and Research Hub in the Fukushima Hamadori District, including concrete recommendations on the international education and research hub’s purpose, functions, research fields, organizational form, mechanisms for industry-academia-government collaboration and talent cultivation, necessary living environment and community development, and future construction schedule.

#### 3) “Development of the International Education and Research Hub”

On December 18, 2020, the Reconstruction Promotion Council decided to newly establish the international education and research hub as a “center of excellence for creative reconstruction” from the standpoint of further developing the Fukushima Innovation Coast Framework to take the long-term lead in the reconstruction and revitalization of the Hamadori District and other areas of Fukushima Prefecture that had suffered extensive damage from the nuclear disaster, under the initiative of the national government, aiming to pool the wisdom of experts in and outside of Japan to conduct the research and

talent cultivation necessary in order to build back better, to fulfill Japan's international responsibility as a disaster-stricken country by sharing the experiences and achievements of Fukushima with the world, and to draw upon the knowledge gained from these experiences to strengthen Japan's industrial competitiveness and create innovations that will contribute to solving the problems that Japan shares with the rest of the world.

#### **4) “Corporate form of the international education and research hub”**

At the meeting of the Reconstruction Promotion Council held on November 26, 2021, it was decided that the new entity would take the form of a special corporation established by law, and that the relevant ministers (Minister of Education, Culture, Sports, Science and Technology; Minister of Health, Labour and Welfare; Minister of Agriculture, Forestry and Fisheries; Minister of Economy, Trade and Industry; Minister of the Environment), together with the Prime Minister, would co-manage the business of the new corporation that fell within their jurisdiction as the competent ministers.

#### **5) “Act for Partial Revision of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima”**

In the Bill for Partial Revision of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima submitted to the 208th Ordinary Session of the Diet, the “Basic Plan for Research and Development for the Creation of New Industries” was set forth as the basic plan for research and development to contribute to the creation of new industries and the strengthening of global competitiveness, and F-REI was established as a new corporation that would play a central role in research and development related to the plan. In addition, the bill stipulated that F-REI would carry out research and development, promote industrialization based on R&D results, and develop human capital to support these activities, and that the competent ministers (Prime Minister; Minister of Education, Culture, Sports, Science and Technology; Minister of Health, Labour and Welfare; Minister of Agriculture, Forestry and Fisheries; Minister of Economy, Trade and Industry; Minister of the Environment) would set mid-term (7-year) goals based on the Basic Plan for Research and Development for the Creation of New Industries.

Figure 7-5-7 Act for Partial Revision of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima (Overview)

Act for Partial Revision of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima (Overview)	
[Act No. 54, promulgated May 27, 2022]	
To further promote <u>reconstruction in Fukushima and the Tohoku Region as a whole</u> , and to contribute to the <u>strengthening of Japan's science and technology capabilities and industrial competitiveness</u> , the Act on Special Measures for the Reconstruction and Revitalization of Fukushima (2012 Act No. 25) will be revised to set forth a <u>basic plan for research and development</u> to contribute to the creation of new industries and the strengthening of our industries' global competitiveness, and to <u>establish Fukushima Institute for Research, Education and Innovation (F-REI)</u> as a new entity that will play a central role in research and development related to the plan.	
Overview of the revision	Activities of Fukushima Institute for Research, Education and Innovation
<p>(1) Formulation of the Basic Plan for Research and Development for the Creation of New Industries</p> <p>[1] The <u>Prime Minister</u> will formulate a <u>Basic Plan for Research and Development for the Creation of New Industries</u>, after <u>consulting with the relevant ministries and hearing the opinions of the Council for Science, Technology and Innovation (CSTI) and the Governor of Fukushima Prefecture</u>.</p> <p>[2] The Basic Plan for Research and Development for the Creation of New Industries stipulates that <u>the Fukushima Institute for Research, Education and Innovation (F-REI) will play a central role</u>.</p> <p>(2) Establishment of Fukushima Institute for Research, Education and Innovation</p> <p>[1] <u>The Fukushima Institute for Research, Education and Innovation (F-REI) is established to carry out research and development industrialization of R&amp;D results, and development of the human resources to conduct the R&amp;D, etc.</u></p> <p>[2] The <u>competent ministers</u> (*) will <u>set mid-term targets (seven years)</u> based on the Basic Plan for Research and Development for the Creation of New Industries.</p> <p>* Prime Minister; Minister of Education, Culture, Sports, Science and Technology; Minister of Health, Labour and Welfare; Minister of Agriculture, Forestry and Fisheries; Minister of Economy, Trade and Industry; Minister of the Environment</p> <p>[3] The <u>Fukushima Institute for Research, Education and Innovation (F-REI) will prepare a mid-term plan</u> (for operations that are not R&amp;D related, a business implementation plan for subsidization, etc.) based on the mid-term objectives and obtain the <u>approval of the competent ministers</u>.</p> <p>[4] The competent ministers will <u>evaluate the operational performance</u> of the Fukushima Institute for Research, Education and Innovation (F-REI) after the end of <u>each fiscal year</u>.</p> <p>[5] The competent ministers must listen to the <u>opinions of the CSTI and the Governor of Fukushima Prefecture, etc.</u>, when formulating the mid-term objectives set forth in [2] and conducting the evaluation described in [4].</p> <p>[6] The Fukushima Institute for Research, Education and Innovation (F-REI) will <u>organize a council</u> composed of Fukushima Prefecture, universities, and other research institutes, etc. in order to hold consultations concerning the implementation of research and development, etc.</p>	<p>(1) Research and development: <u>Research and development, etc.</u> that contributes to the creation of new industries and the strengthening of industries' international competitiveness</p> <p>(2) Industrialization: promoting the <u>spread and utilization of the results</u> of research and development</p> <p>(3) Talent cultivation: <u>training of researchers and engineers and improvement of their qualifications; educational activities</u></p> <p>(4) Control tower function: <u>establishment and operation of the council</u> and <u>coordination and cooperation with council members</u></p> <p>(5) Information collection and dissemination: <u>collection, analysis, and provision of information and materials</u> related to R&amp;D</p>
	Features of Fukushima Institute for Research, Education and Innovation
	<p>(1) Control tower function</p> <ul style="list-style-type: none"> <li>Construct the <u>Basic Plan for Research and Development for the Creation of New Industries</u> so that the Fukushima Institute for Research, Education and Innovation (F-REI) will <u>play a central role</u>.</li> <li>Through the <u>establishment and operation of the Council</u>, it is possible to <u>request cooperation such as submission of materials</u> from the members of the Council and other relevant administrative organs and business operators. In addition, the members of the Council have an <u>obligation to respect</u> the agreements reached through discussion.</li> </ul> <p>(2) Flexibility of treatment: When establishing <u>payment standards for remuneration and salaries for officers and employees</u>, consideration will be given to the <u>need to secure human resources with global-class capabilities</u>.</p> <p>(3) Utilizing the vitality of the private sector: <u>Financing and HR and technical assistance</u> will be provided to <u>entities implementing projects that promote the utilization of the results of R&amp;D</u>.</p> <p>(4) Collection of information and data: Members of the Council and other relevant administrative organs and business operators will be asked to cooperate by <u>submitting materials</u>, etc.</p>
	* Approximately eight years after the enforcement of this Act, the government is to review the provisions revised by this Act and take any measures deemed necessary. Effective date : June 17, 2022

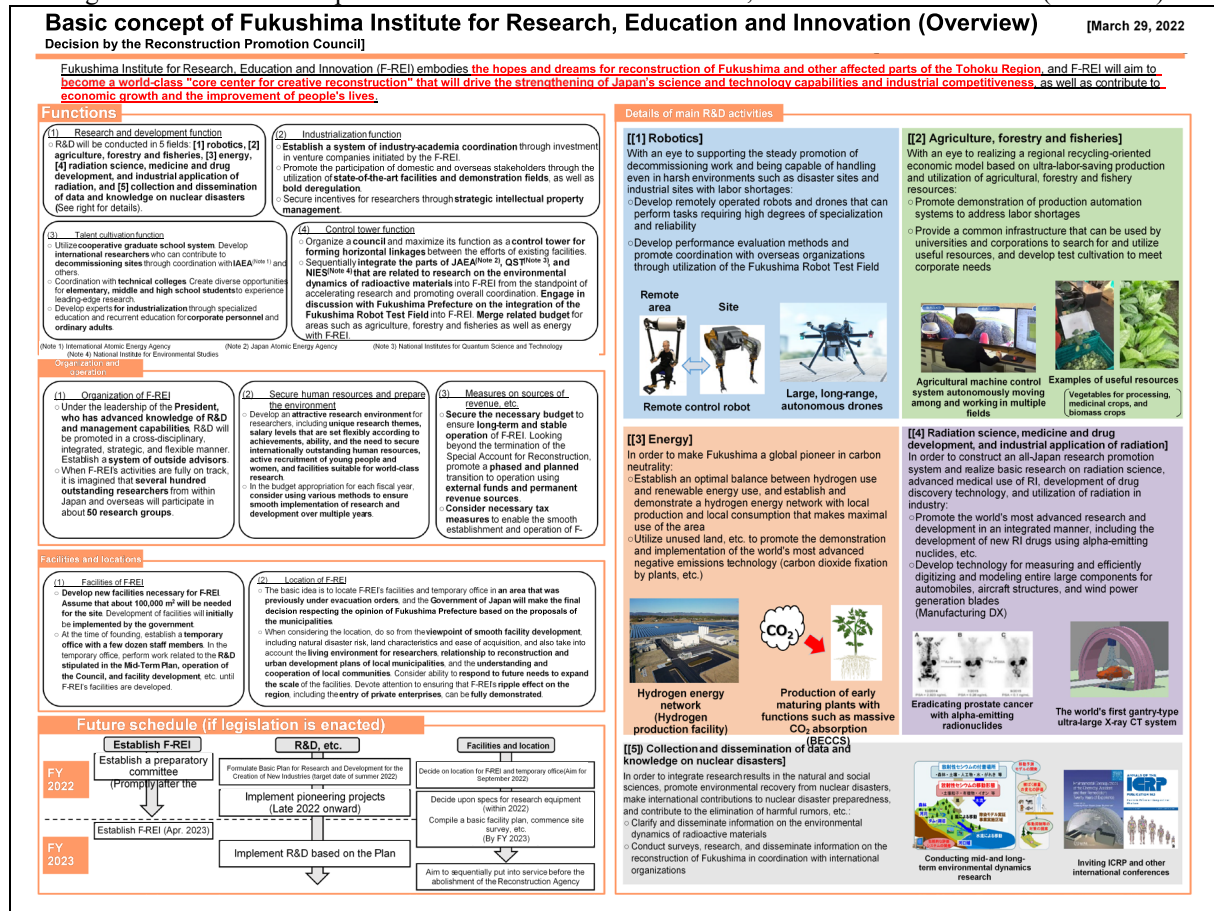
Source) Reconstruction Agency, "Materials for the First Meeting of the Committee to Establish the Fukushima Institute for Research, Education and Innovation" (November 22, 2022)  
<https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-21/20221122140104.html> (browsed December 14, 2022)

## 6) "Basic concept of Fukushima Institute for Research, Education and Innovation"

At the meeting of the Reconstruction Promotion Council held on March 29, 2022, it was decided that F-REI would embody the hopes and dreams for reconstruction of Fukushima and other affected parts of the Tohoku Region, and that F-REI should aim to become a world-class "center of excellence for creative reconstruction" that would drive the strengthening of Japan's science and technology capabilities and industrial competitiveness, as well as contribute to economic growth and the improvement of people's lives, and to this end, the functions, organization, administration, facilities, location, and schedule of F-REI were concretely established.



Figure 7-5-8 Basic concept of Fukushima Institute for Research, Education and Innovation (Overview)



Source) Reconstruction Agency, "Basic concept of Fukushima Institute for Research, Education and Innovation (Overview) [adopted by the Reconstruction Promotion Council on March 29, 2022]"  
[https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-21/sozai/20220329\\_kihonkousougaiyou.pdf](https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-21/sozai/20220329_kihonkousougaiyou.pdf) (browsed November 16, 2022)

## 7) "Basic Plan for Research and Development for the Creation of New Industries"

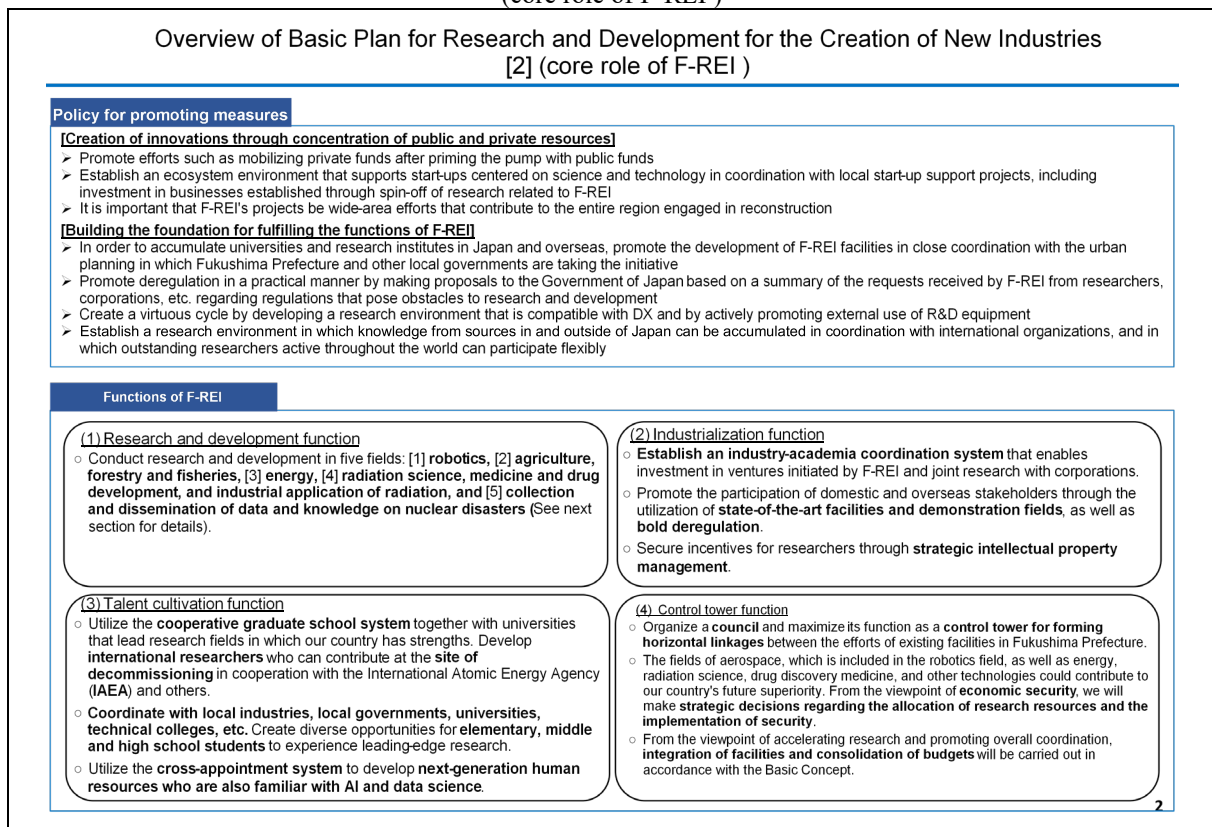
On August 26, 2022, based on Article 90, Paragraph 1 of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima, the "Basic Plan for Research and Development for the Creation of New Industries" was adopted as the basic plan for research and development and the development of human resources to conduct R&D that will contribute to the creation of new industries in Fukushima and the strengthening of international competitiveness of industries, and it was stipulated that F-REI should play a central role in these efforts.



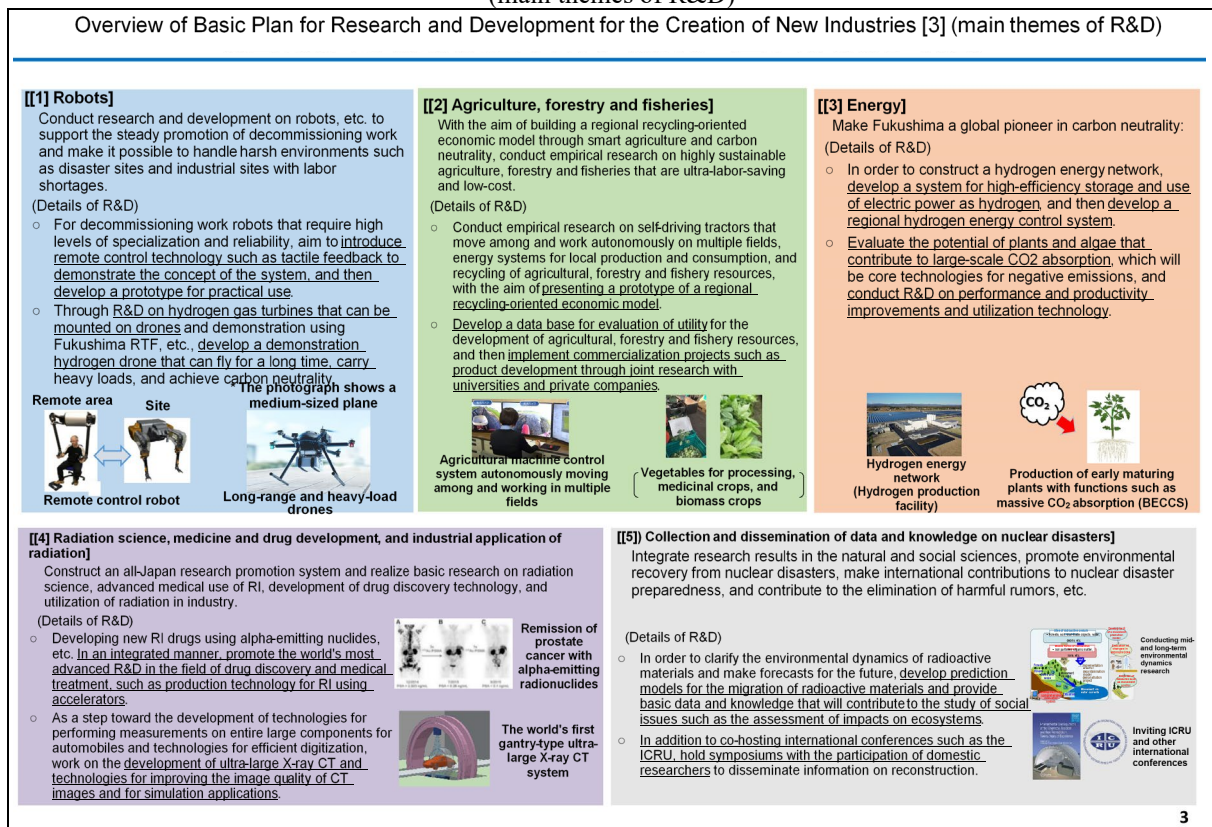
Figure 7-5-9 Overview of the Basic Plan for Research and Development for the Creation of New Industries ①  
(Philosophy)

<b>“Overview of the Basic Plan for Research and Development for the Creation of New Industries [1] (Philosophy)”</b> <b>[Prime Minister’s Decision of August 26, 2022]</b>	
Basic plan concerning the promotion of R&D-related measures, including the creation of new industries, established by the Prime Minister in line with the Basic Guidelines for the Reconstruction and Revitalization of Fukushima based on Article 90, Paragraph 1 of the Act on Special Measures for the Reconstruction and Revitalization of Fukushima (Act No. 25 of 2012).	
<b>Current situation in our country</b>	<ul style="list-style-type: none"> <li>Since the bursting of the economic bubble, Japan has been striving to revive its economy but <b>has been unable to extricate itself from protracted stagnation for more than 30 years</b> amid drastic changes in the global competitive environment and other factors. Now is the time to break through this stagnation, <b>achieve economic growth</b> through bold growth policies centered on innovation, and <b>proceed with major reforms</b>.</li> <li>By way of solution to these issues, Japan is currently promoting digital innovation, green growth strategies, and other policies, but in order for our country to regain its edge in international competition, it will need to mobilize these policies to <b>bring about a turnaround in conspicuously declining science and technology capabilities to elevate them to world’s top level in a short period of time and make them the driving force in Japan’s revitalization</b>.</li> </ul>
<b>Significance of starting from Fukushima</b>	<ul style="list-style-type: none"> <li>In Fukushima, which suffered the greatest damage from the nuclear disaster, reconstruction and revitalization will begin in earnest from this point on.</li> <li>As a result of pioneering efforts under the Fukushima Innovation Coast Framework, technologies that will be the starting point for future innovation have begun to accumulate, such as the Fukushima Robot Test Field and the Fukushima Hydrogen Energy Research Field.</li> <li>By resolving issues related to decommissioning and contamination by radioactive materials, and by exploring areas where we have strengths and disseminating information on the results, we can contribute to solving problems in Japan and in the world at large.</li> <li><b>The efforts in which F-REI will play a core role will be leading projects in the creation of a new Japan, and the Government of Japan will do everything it can to promote them</b>.</li> </ul>
<b>Efforts to enable F-REI to assume a core role</b>	<p><b>[Leadership of the central government]</b></p> <ul style="list-style-type: none"> <li>➢ Top management will be strengthened to ensure flexible and bold management of F-REI, and a system will be put in place to eliminate ministerial sectionalism so that the government can pull together to lend its support.</li> <li>➢ R&amp;D with a mid- to long-term horizon is essential to innovation, and a management system that is long term and stable in terms of both organization and financial resources will be established so that staff can concentrate on research with peace of mind.</li> <li>➢ Under the overall coordination function of the Reconstruction Agency, efforts will be made to launch F-REI as quickly and smoothly as possible by utilizing reconstruction budget, etc.</li> </ul> <p><b>[Development of a system to support mid- to long-term R&amp;D]</b></p> <ul style="list-style-type: none"> <li>➢ In order to smoothly implement R&amp;D over multiple years, various methods will be used to eliminate the negative effects of fixating on annual budgets, and to secure a long-term and stable financial base.</li> <li>➢ Even after the Reconstruction Agency is abolished, the government will continue to function as a control tower to unify the various ministries and agencies, form horizontal linkages among them, and perform an overall coordination role.</li> </ul> <p><b>[Promotion of demonstration and social implementation]</b></p> <ul style="list-style-type: none"> <li>➢ Promote the social implementation of research results, spawn innovations that transform industrial structures and social systems, and attract funds and human resources in Japan and overseas through this cycle.</li> <li>➢ Make maximum use of the diverse demonstration fields that are unique to Fukushima, and promote regulatory reforms that will make possible the kinds of demonstrations that cannot be conducted in other regions.</li> </ul> <p><b>[Securing and developing research personnel]</b></p> <ul style="list-style-type: none"> <li>➢ Realize flexible salary levels based on results and abilities, a well-equipped research environment with the leeway to secure research assistants, and an environment in which young researchers and female researchers can play an active role.</li> <li>➢ Since it will be important for a large number of human resources to lead technological innovation and achieve social reform, talent cultivation for the young generation who will shoulder the future of the region will be promoted by utilizing the cooperative graduate school system, coordinating with technical colleges, and developing educational programs for elementary, middle, and high school students.</li> </ul> <p><b>=&gt; Forming a virtuous cycle in which leading researchers and entrepreneurs come together to autonomously accelerate the creation of innovations</b>  <b>Researchers and entrepreneurs who dream of a new era will gather together in Fukushima, and the results of demonstration and implementation will spread to other regions, leading to the growth of the entire country</b> <b>1</b></p>

Source) Reconstruction Agency, “Overview of the Basic Plan for Research and Development for the Creation of New Industries [Prime Minister’s Decision of August 26, 2022]”  
<https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-21/20220825110933.html> (browsed November 16, 2022)

Figure 7-5-10 Overview of the Basic Plan for Research and Development for the Creation of New Industries ②  
(core role of F-REI )

Source) Reconstruction Agency, “Overview of the Basic Plan for Research and Development for the Creation of New Industries [Prime Minister’s Decision of August 26, 2022]”  
<https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-21/20220825110933.html> (browsed November 16, 2022)

Figure 7-5-11 Overview of the Basic Plan for Research and Development for the Creation of New Industries ③  
(main themes of R&D)

Source) Reconstruction Agency, "Overview of the Basic Plan for Research and Development for the Creation of New Industries [Prime Minister's Decision of August 26, 2022]"  
<https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-21/20220825110933.html> (browsed November 16, 2022)

## 8) Location of Fukushima Institute for Research, Education and Innovation

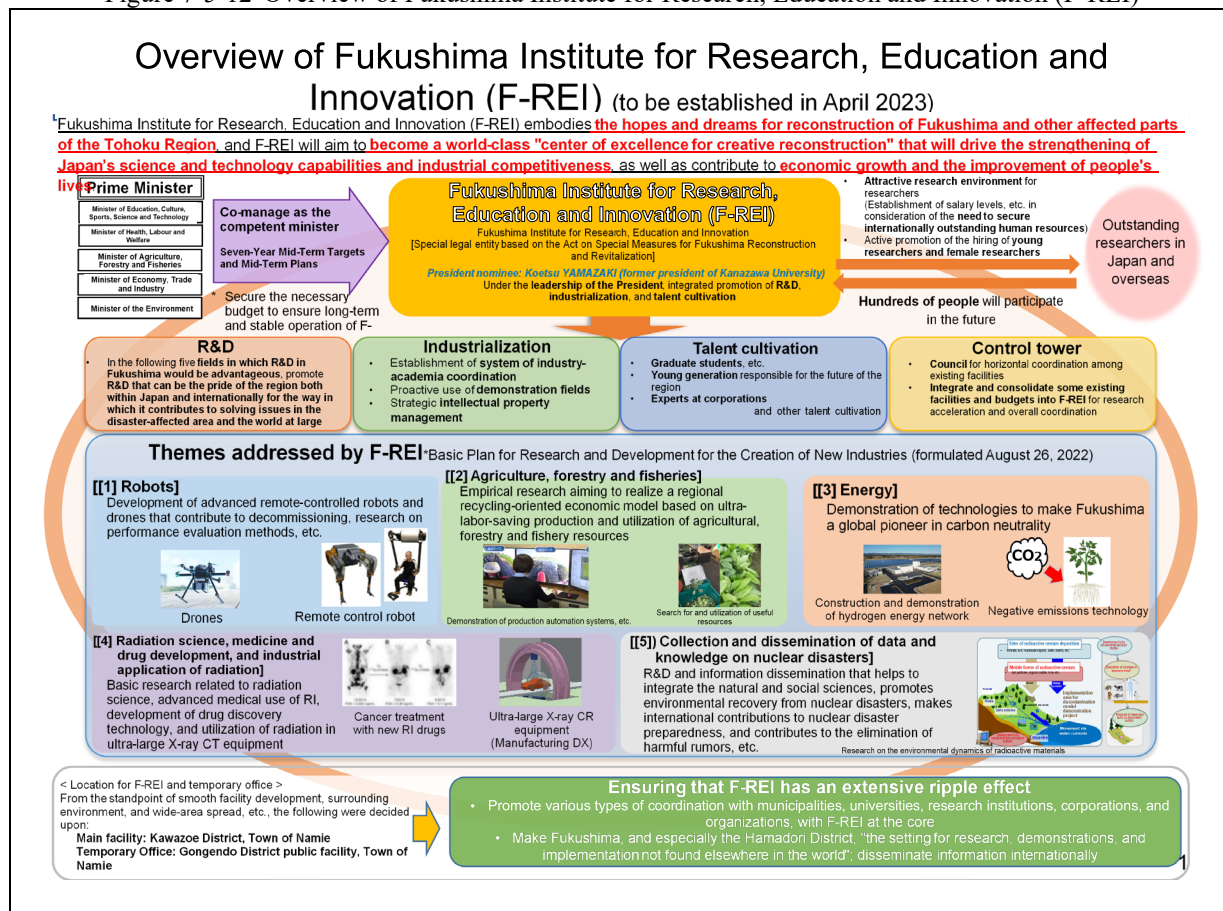
The basic idea was to locate F-REI's facilities and temporary offices in an area that had been under evacuation orders, and the proposals of locations made by municipalities were to be studied by Fukushima Prefecture, the opinion of which was to be respected in the final decision of the Government of Japan. In May 2022, the municipalities expressed their intention to propose locations, and in August of the same year, Fukushima Prefecture responded to the Reconstruction Agency with its opinions on the location. On September 16 of the same year, the Town of Namie was designated as the location for F-REI out of respect for the opinion of Fukushima Prefecture, and the Reconstruction Promotion Council made a decision to promote efforts to extend the reach of F-REI's effects.

## (2) Overview of Fukushima Institute for Research, Education and Innovation

It was decided that F-REI would embody the hopes and dreams for reconstruction of Fukushima and other affected parts of the Tohoku Region, and that F-REI should aim to become a world-class “center of excellence for creative reconstruction” that would drive the strengthening of Japan’s science and technology capabilities and industrial competitiveness, as well as contribute to economic growth and the improvement of people’s lives. In order to contribute to the reconstruction and revitalization of Fukushima following the nuclear disaster, F-REI will engage in research and development, promote industrialization based on R&D results, and cultivate talent to support these activities, while performing a control tower function for horizontal coordination among existing facilities, based on the Basic Plan for Research and Development for the Creation of New Industries.

Research and development will be conducted in five fields: ① robotics, ② agriculture, forestry and fisheries, ③ energy, ④ radiation science, medicine and drug development, and industrial use of radiation, and ⑤ accumulation and dissemination of data and knowledge on nuclear disasters. In the area of industrialization, F-REI will link its research and development to practical application and the creation of new industries by constructing a system of industry-academia collaboration, actively utilizing demonstration fields, and conducting strategic intellectual property management. With regard to talent cultivation, F-REI will aim to develop human capital who will lead reconstruction over the long term by nurturing the development of graduate students, the young generation that will support the future of the region, and specialized personnel at corporations. To exert its control tower function, F-REI will establish and operate a council to promote horizontal cooperation among existing facilities, and some facilities and budgets will be integrated into F-REI and consolidated for the purpose of overall coordination and the acceleration of research.

Figure 7-5-12 Overview of Fukushima Institute for Research, Education and Innovation (F-REI)



Source) Reconstruction Agency, "Overview of Fukushima Institute for Research, Education and Innovation (F-REI) and Status of Preparations for Establishment to Date" (November 22, 2022)  
<https://www.reconstruction.go.jp/topics/main-cat1/sub-cat1-21/20221122140104.html> (browsed December 14, 2022)



### 3. Fukushima Plan for a New Energy Society

#### (1) Overview

On March 5, 2016, when the then Prime Minister Shinzo Abe visited Fukushima Prefecture, he instructed the Minister of Economy, Trade and Industry to set up the “Council for Realizing the Fukushima Plan for a New Energy Society” as a public-private entity, and to begin concrete studies, and accordingly, the “Fukushima Plan for a New Energy Society” was formulated at the third meeting of the Council for Realizing the Fukushima Plan for a New Energy Society, held on September 7, 2016.

In order to accelerate efforts in the energy sector under the Fukushima Innovation Coast Framework and further strengthen support for the reconstruction of Fukushima, the Fukushima Plan for a New Energy Society aims to turn the entirety of Fukushima Prefecture into a base for creating a model that anticipates a future new energy society, and the Plan summarizes the specific efforts to be implemented by the national government, Fukushima Prefecture, and related organizations to realize a new energy society, key among which are “expanding the introduction of renewable energy,” “building a model for realizing a hydrogen society,” and “building a smart community.”

In February 2021, the seventh meeting of the Council for Realizing the Fukushima Plan for a New Energy Society was held in preparation for the second phase of the Plan (fiscal years 2021 to 2030), and based on the new goal of “achieving carbon neutrality by 2050” that was declared by the then Prime Minister Yoshihide Suga, the Plan was revised with the aim of transitioning from the current phase of “introduction and expansion” to a new phase of “social implementation” where the pillars of the plan would be “renewable energy” and “hydrogen.”

#### (2) Council for Realizing the Fukushima Plan for a New Energy Society

On March 27, 2016, the “Council for Realizing the Fukushima Plan for a New Energy Society” was established with the Commissioner of the Agency of Natural Resources and Energy as chairperson, and it met until 2021, convening a total of seven times, with the related ministries and agencies, Fukushima Prefecture, and related organizations as participants.

In this Council, the directionality and issues of the Fukushima Plan for a New Energy Society and the progress status of the various efforts were discussed and shared to advance the Fukushima Plan for a New Energy Society toward realization.

#### (3) Major efforts related to the Fukushima Plan for a New Energy Society

To “introduce and expand the use of renewable energy,” a power transmission company was established on March 15, 2017 in connection with efforts to increase shared power transmission lines. Of the total of 80 km of shared power transmission lines scheduled to be constructed, about 53 km of transmission lines centering around the coastal area of Fukushima Prefecture have already been completed, together with solar power generation facilities (generating about 230 MW in total), and the power transmission began in January 2020. Construction of the remaining shared transmission lines and wind power generation facilities (approximately 360 MW) along the Abukuma Mountain Route will continue.

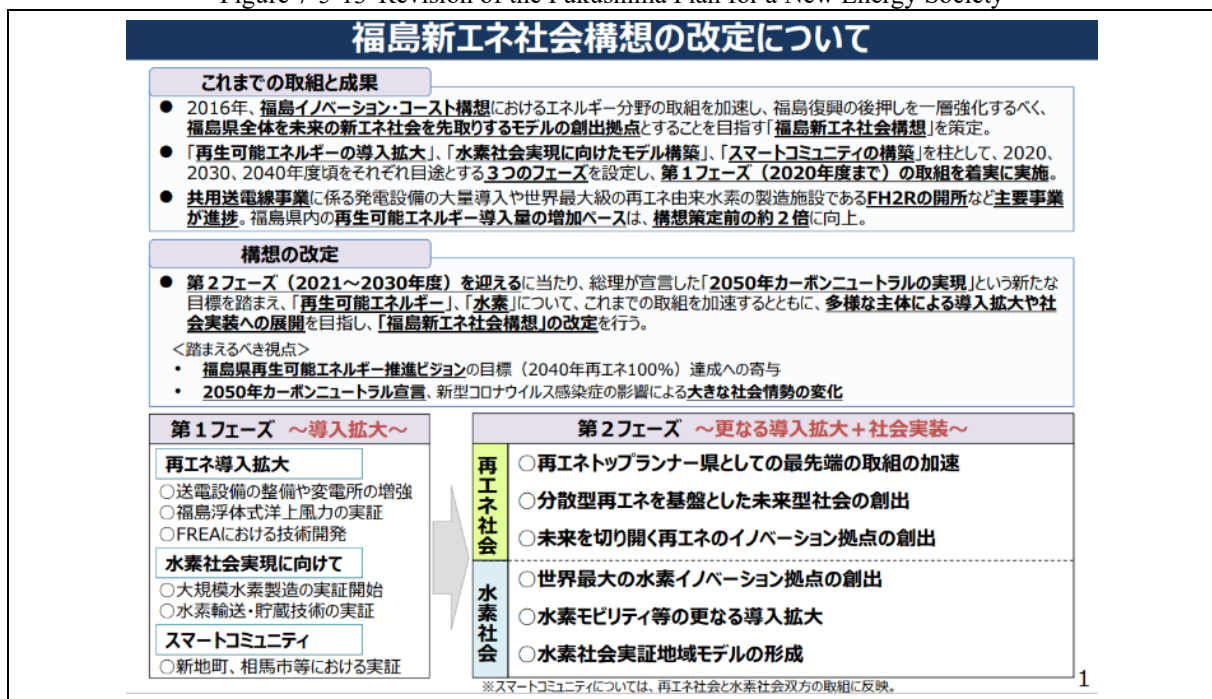
As a step toward the “realization of a hydrogen society,” the Fukushima Hydrogen Energy Research Field, one of the world’s leading 10,000 kW water electrolysis facilities, was opened in the Town of Namie in March 2020 to produce hydrogen from renewable energy and other sources. Hydrogen

produced using renewable energy from Fukushima Prefecture is supplied to hydrogen stations in Fukushima Prefecture, as well as to Azuma Sports Park in Fukushima City and to fuel cells at the Michinoeki Namie shopping complex, and was also used in the Olympic cauldron at the 2020 Tokyo Olympic and Paralympic Games, as well as in some relay torches, and in fuel cells at the Olympic Village.

In addition, progress is being made toward the realization of a hydrogen society, including the construction of six additional hydrogen stations in the prefecture and the start of demonstrations of decarbonization at factories using hydrogen.

In the movement toward “construction of smart communities,” five municipalities (Soma City, Town of Shinchi, Town of Naraha, Town of Namie, and Village of Katsurao) have developed energy management systems using renewable energy and storage battery technologies as of FY 2020.

Figure 7-5-13 Revision of the Fukushima Plan for a New Energy Society



Source) Agency of Natural Resources and Energy, Ministry of Economy, Trade and Industry, “Overview of the Fukushima Plan for a New Energy Society (February 2021 revised edition)”  
[https://www.enecho.meti.go.jp/category/saving\\_and\\_new/fukushima\\_vision/pdf/fukushima\\_vision\\_rev\\_summary\\_ja.pdf](https://www.enecho.meti.go.jp/category/saving_and_new/fukushima_vision/pdf/fukushima_vision_rev_summary_ja.pdf) (browsed November 16, 2022)

Figure 7-5-14 Future efforts to build a renewable energy society in Fukushima Prefecture

福島県における再エネ社会構築に向けた今後の取組	
○再エネトップランナー県としての最先端の取組の加速	
◆ 福島県内の再生可能エネルギーの更なる導入拡大	
➢ 共用送電線の整備等を通じた360MWの風力発電（2020年度比で3倍に）を始めとする再エネの導入量を大幅に拡大	
➢ 系統制約の解決に向けた課題等の検討	
◆ 再生可能エネルギー関連産業拠点の創出	
➢ 関連産業の育成・集積に向けて県内企業のネットワーク構築から、新規参入、人材育成、研究開発、事業化、販路拡大、海外展開まで一体的に支援	
➢ 産学官の連携による風力メンテナンス人材育成・技術開発の県内拠点化	
◆ 小水力・バイオマス・地熱等の地域に賦存する資源を活用した地域型の再エネ導入の促進	
➢ 福島県内地域に賦存する資源を活用した小水力・バイオマス・地熱発電等の事業可能性調査や設置を支援	
➢ 地熱資源の開発に向けた支援	
○分散型再エネを基盤とした未来型社会の創出	
◆ 多様な主体による地域の再エネを活用した分散型エネルギーシステムの構築	
➢ 大規模停電時には自立して電力を供給できる地域マイクログリッド等の構築	
➢ 地域循環共生圏の具現化に向けた域内での経済循環を目指す自立・分散型社会の構築	
➢ 自家消費型の設備導入支援や福島県産再エネ電力のブランド化等による地産地消の推進	
◆ 太陽光を始めとした再エネ発電・熱利用・蓄電池等を組み合わせた再エネ100%工業団地の構築	
○未来を切り開く再エネのイノベーション拠点の創出	
◆ FREAにおける研究開発機能の展開・高度化を通じたイノベーション拠点の機能強化	
➢ 次世代型太陽電池技術を始めとした最先端分野における民間企業との共同研究や人材育成等実施	
➢ 国立再生可能エネルギー研究所（米国）等の世界の最先端の研究機関との共同研究、国際教育研究拠点との連携	

Source) Agency of Natural Resources and Energy, Ministry of Economy, Trade and Industry, “Overview of the Fukushima Plan for a New Energy Society (February 2021 revised edition)”  
[https://www.enecho.meti.go.jp/category/saving\\_and\\_new/fukushima\\_vision/pdf/fukushima\\_vision\\_rev\\_summary\\_ja.pdf](https://www.enecho.meti.go.jp/category/saving_and_new/fukushima_vision/pdf/fukushima_vision_rev_summary_ja.pdf) (browsed November 16, 2022)

Figure 7-5-15 Future efforts to realize a hydrogen society in Fukushima Prefecture

福島県における水素社会実現に向けた今後の取組	
○世界最大の水素イノベーション拠点の創出	
◆ 2021年度以降における福島水素エネルギー研究フィールド（FH2R）の最大限の活用	
➢ 高効率で低コスト、かつ再エネの最大限の導入にも資する水素製造システムの開発を加速	
➢ 水電解装置の更なる大型化・モジュール化に係る技術開発を推進	
◆ 国際的な展開を視野に入れた取組の着実な実施	
➢ 国内外の水電解装置についてシステムとして統一的に性能評価等が可能なプラットフォームの構築を推進	
➢ 国内外の関係機関との研究成果の共有や共同研究の実施等により、国際教育研究拠点を含むグローバルな水素研究ネットワークの構築を推進	
○水素モビリティ等の更なる導入拡大	
◆ 水素STの更なる展開を推進するとともに、FCV・FCバスに加え、開発が進みつつあるFCトラック等の新たな水素モビリティの導入を推進	
◆ 2021年度中に、FCトラック等の大型水素モビリティに対応する水素STの開発に係る実証設備の建設に着手	
○水素社会実証地域モデルの形成	
◆ 公共施設・駅などに燃料電池を導入し、これに水素STやFCバスの導入を組み合わせた水素利活用のモデル形成を、2021年度から一層加速	
◆ 水素・アンモニア等次世代エネルギーの輸入・貯蔵・利活用等を図るカーボンニュートラルポートの形成を推進	
◆ 工場の熱需要等のゼロエミッション化に向け水素ボイラーや水素ガスコジェネ、FCフォークリフトの導入を推進	
◆ 福島ロボットテストフィールドと連携したFCDローンの開発・実証を推進	
◆ 既存の地下の配管等を活用した効率的な水素の供給モデルの確立を推進	
◆ 東京2020オリパラ大会など、福島県産水素の県外での活用等を通じた情報発信	
◆ これらのモデル形成や研究開発等を通じ、水素関連産業の育成・集積を目指す	

Source) Agency of Natural Resources and Energy, Ministry of Economy, Trade and Industry, “Overview of the Fukushima Plan for a New Energy Society (February 2021 revised edition)”  
[https://www.enecho.meti.go.jp/category/saving\\_and\\_new/fukushima\\_vision/pdf/fukushima\\_vision\\_rev\\_summary\\_ja.pdf](https://www.enecho.meti.go.jp/category/saving_and_new/fukushima_vision/pdf/fukushima_vision_rev_summary_ja.pdf) (browsed November 16, 2022)