

Regional Innovation Cluster Policy of MEXT



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1. Background of regional science, technology and innovation in Japan
2. Regional Innovation Strategy Support Program (RSSP)
3. Future direction of regional science, technology and innovation in Japan
4. Activities toward globalization of regional clusters

Quick overview of the history of Science and Technology Basic Plans

S&T Basic Law
(enacted in 1995)

The 1st S&T Basic Plan
(FY1996~2000)

The 2nd S&T Basic Plan
(FY2001~2005)
The 3rd S&T Basic Plan
(FY2006~2010)

The 4th S&T Basic Plan
(FY2011~2015)

● Increase in governmental R&D expenditure

The total budget for governmental R&D expenditure exceeded **17trillion** yen.

● Construction of new R&D system

- Increase in competitive research funds
- Support plan for 10,000 post-doctoral fellows (including Ph.D students)
- Promotion of industry-academia-government collaboration
- Implementation of evaluation system

● Three basic ideas

- Creation of Wisdom
- Vitality from wisdom
- Sophisticated society by wisdom

● Key policies

- strategic priority setting in S&T
 - promotion of basic researches
 - Prioritization of R&D on national/social subjects
- S&T system reforms
 - Doubling of competitive research funds
 - Enhancement of industry-academia-government collaboration
- Total budget of 2nd basic policy **24trillion yen**
 - Total budget of 3rd basic policy **25trillion yen**

● Basic Concept

- Integrated development of “STI policies”
- Further focus on the “role of human resources and the organizations”
- Realization of Policy Created together with Society

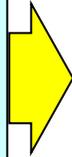
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- Realization of Sustainable Growth and Societal Development into the Future
- Recovery and rehabilitation from the recent earthquake
- Green and Life Innovation
- Enhancing Basic Research and Human Resource Development
- System reform for Innovation

Total amount of the → **25 trillion YEN** government R&D investment

Transition of the measures for regional S&T based on S&T Basic Plan

The 2nd S&T Basic Plan (FY2001~2005)



The 3rd S&T Basic Plan (FY2006~2010)



The 4th S&T Basic Plan (FY2011~2015)

~Start of cluster policy~

- **Formation of the knowledge clusters**
- Smooth deployment of regional S&T measure

~Development of cluster policy ~

- Formation of regional clusters
 - ① **Selective support to regions that have the potential to develop as world-class clusters**
 - ② **Developing clusters with strengths that utilize regional characteristics, however small in scale**

~Building of regional innovation systems~

- For regions which has especially outstanding strategies, **the government will build supporting systems with all measures of relevant ministries** to support the regional activities from fundamental research to commercialization.

MEXT Program

FY2002~

Knowledge Cluster Initiative

Developing into world-class innovative clusters attracting human talent, goods and investment from around the world.

City Area Program

Developing small to medium-size clusters across Japan with strengths that utilize unique regional resources

FY2010

Regional Innovation Cluster Program

FY2011~

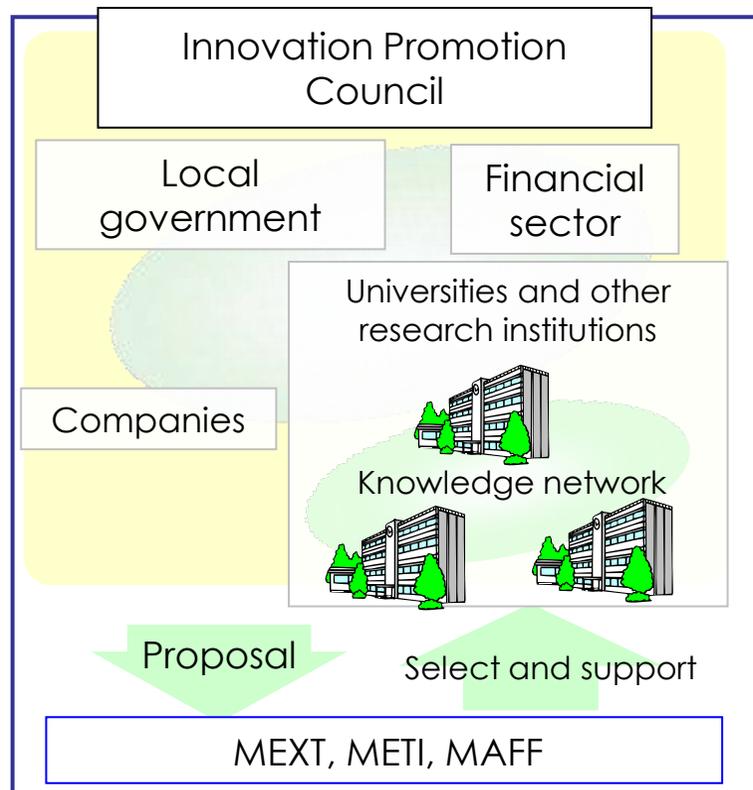
Regional Innovation Strategy Support Program

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“**Regional Innovation Strategy Promoting Regions**” with excellent visions toward the creation of regional innovations as

→ Jointly designated by MEXT, the Ministry of Economy, Trade and Industry (METI) and the Ministry of Agriculture, Forestry and Fisheries (MAFF)

Among these regions, those with especially outstanding strategies will receive seamless support from these ministries to help the regions realize their innovation strategies comprehensively and efficiently.



1. Region-led activities

For promoting region's strategy, region should establish "Innovation Promotion Council" formed by local government, universities, industries and financial sector etc.

- decide on a regional innovation strategy
- self-funding and self-management

2. Select "Regional Innovation Strategy Promoting Regions" by ministries

"Regions focused on strengthening international competitiveness"
"Regions focused on advancement of research function/industrial concentration"

3. Support selected regions with all measures of relevant ministries

MEXT's support menu -Regional Innovation Strategy Support Program (RSSP)

◇Concentration of researchers who play core roles in regional innovation strategies

◇Development and implementation of human resource development programs toward the realization of regional innovation strategies

◇Establishment of knowledge networks of universities and other research institutions

◇Support for sharing of research facilities and equipment among local universities and other research institutions

◇Reinforcement the R&D capabilities of local companies by dispatching researchers

【Other ministries' support menu】

- Ministry of Economy, Trade and Industry (METI) -

◇Formation of business network ◇R&D for business phase

◇Construction for industrial concentration

- Ministry of Agriculture, Forest and Fisheries (MAFF) -

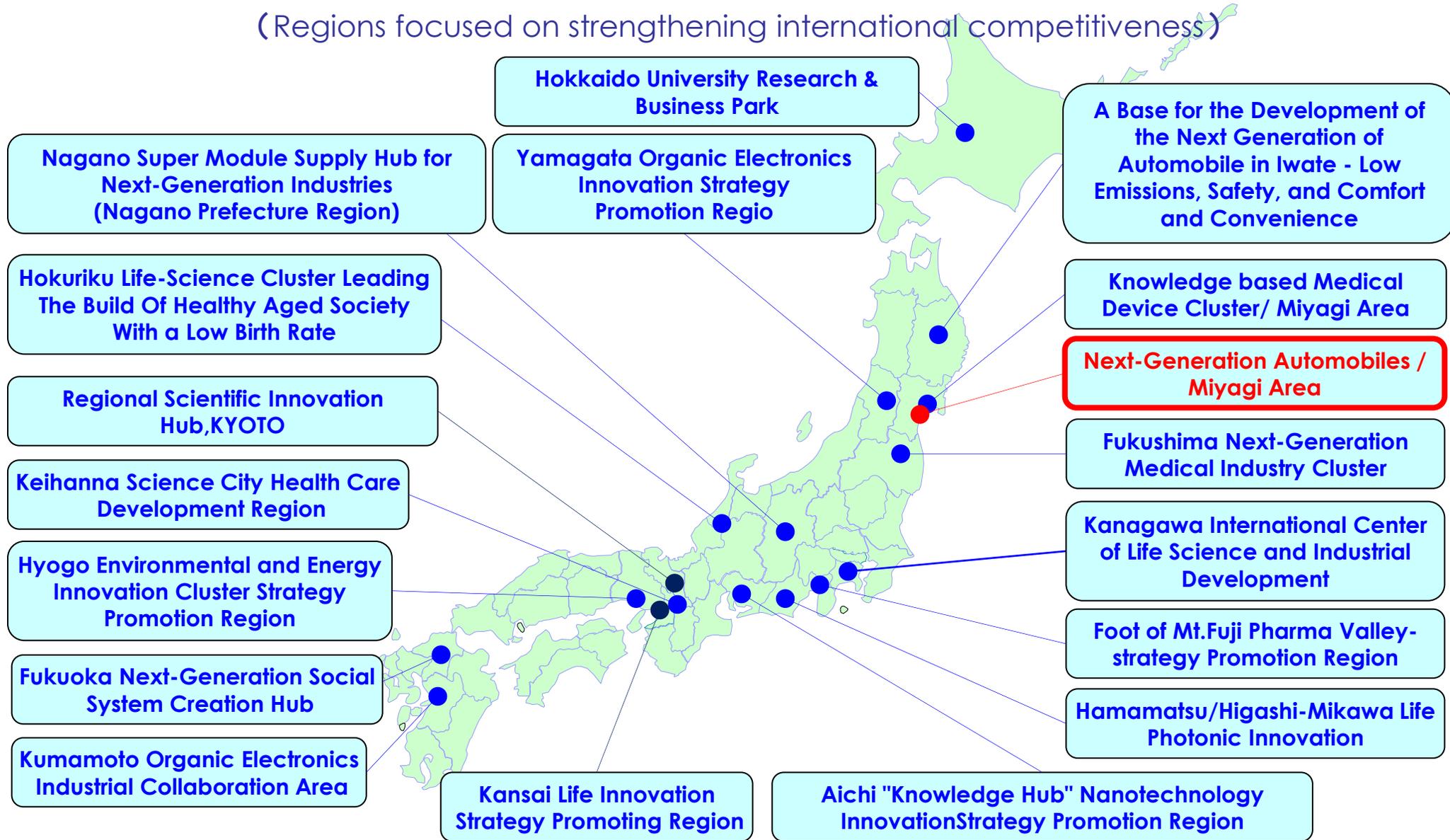
◇R&D for application agriculture, forestry and fisheries

- Ministry of Internal Affairs and Communications -

◇R&D for application ICT

Regional Innovation Strategy Promoting Regions

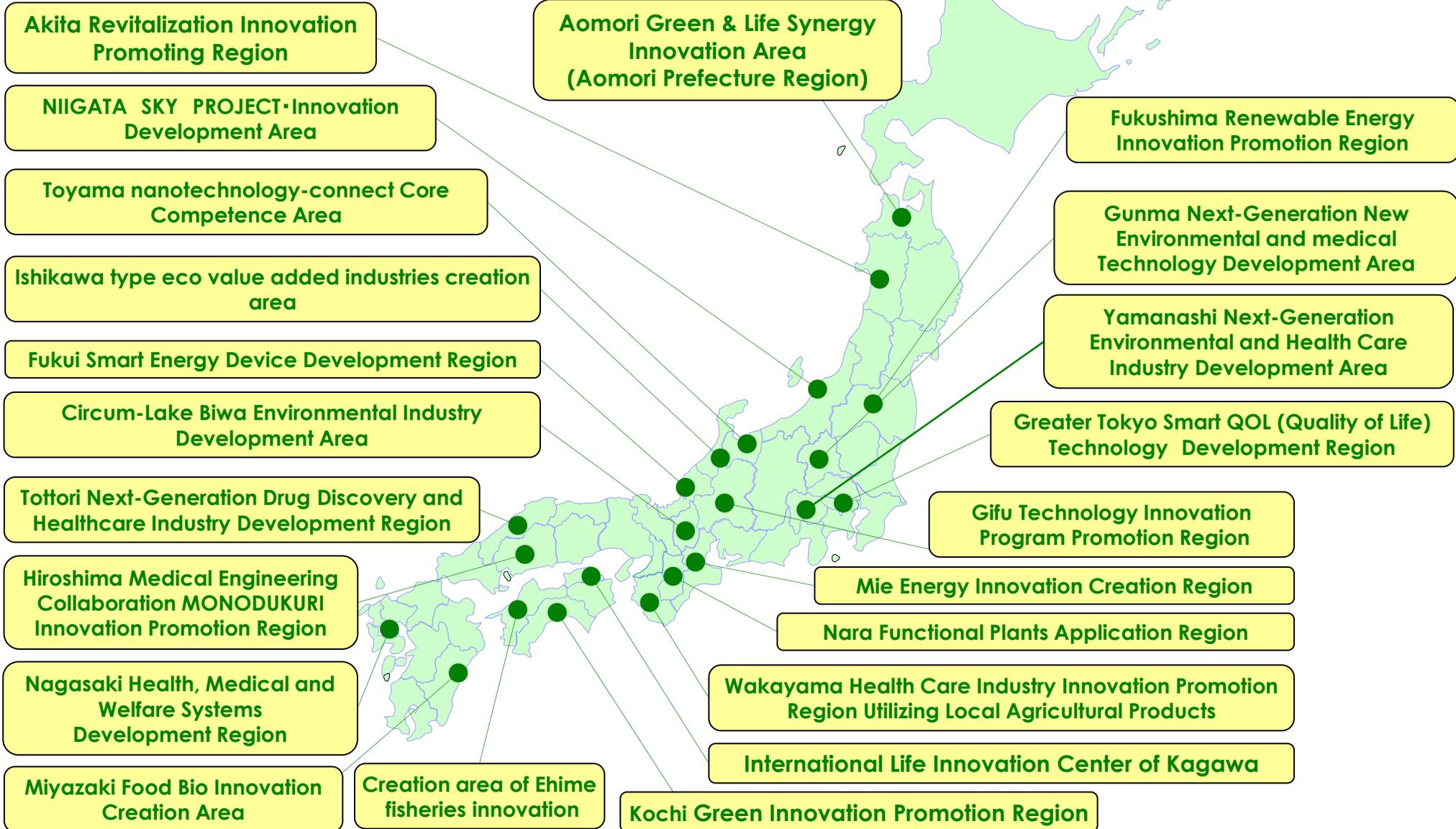
(Regions focused on strengthening international competitiveness)



Regions where local universities possess internationally outstanding technology "seeds" or companies are concentrated to offer powerful potential to attract human resources, materials and funds from all over the world

Regional Innovation Strategy Promoting Regions

(Regions focused on advancement of research function/industrial concentration)



Region where creation of innovations by making use of regional characteristics is expected to offer potential to explore overseas markets in the future

Results of Cluster Initiative by MEXT

Total amount of investment (FY 2002-2012)

○127 Project (75 Regions) 120 billion JPY

Typical Results (FY 2002-2011)

●Global Type (Knowledge Cluster Initiative)

○Patents

Domestic 3,064
International 647

○Practical use

(commercialization, incorporation, etc.)
2,238

○Articles

Domestic 3,501
International 8,320

○Sales of related products

approximately 56.7 billion JPY

●City Area Type (City Area Program)

○Patents

Domestic 1,097
International 124

○Practical use

(commercialization, incorporation, etc.)
1,688

○Articles

Domestic 1,396
International 2,277

○Sales of related products

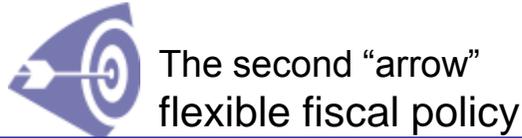
approximately 37.0 billion JPY

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Japan Revitalization Strategy - JAPAN is BACK -

(Cabinet decision on 14th June, 2013)

Overview(ABEnomics)



Through the implementation of the three “arrows,” including this Growth Strategy, among other measures, Japan aims to achieve around 3% nominal gross domestic product (GDP) growth and around 2% real GDP growth, on average, over the next ten years.

Overall Structure (Three Action Plans)

I. Industry Revitalization Plan

1. Accelerating structural reform program (Vitalizing industries)
2. Reforming the employment system and reinforcing human resources capabilities
- 3. Promoting Science, Technology and Innovation**
4. Becoming the world's leading IT society
5. Further strengthening Japan's international competitiveness as a business hub
6. Innovation of small and medium-sized enterprises (SMEs)

II. Strategic Market Creation Plan

Theme 1: Extending the nation's “healthy life expectancy.”

Theme 2: Realizing clean and economical energy demand and supply

Theme 3: Building safe, convenient and economical next-generation infrastructures

Theme 4: Building regional communities that use their unique local resources to appeal to the world

III. Strategy of Global Outreach

Key Points

- Change the way of thinking, and conduct **exit-oriented problem-solving policy management** focusing on the contribution of the results of science, technology and innovation to the realization of an ideal economic society
- Create **“the world’s most innovation-friendly country”**
- Reinforcing headquarter functions of the Council for Science and Technology Policy (CSTP)

Overall Structure

Chapter 1 Toward Establishing a Nation on Science, Technology and Innovation

Chapter 2 Challenges to Be Addressed by Science, Technology and Innovation

I. Realization of a Clean and Economic Energy System

II. Realization of Healthy and Active Aging Society as a Top-runner in the World

III. Development of Next Generation Infrastructures as a Top-runner in the World

IV. Regional Revitalization Taking Advantage of Regional Resources

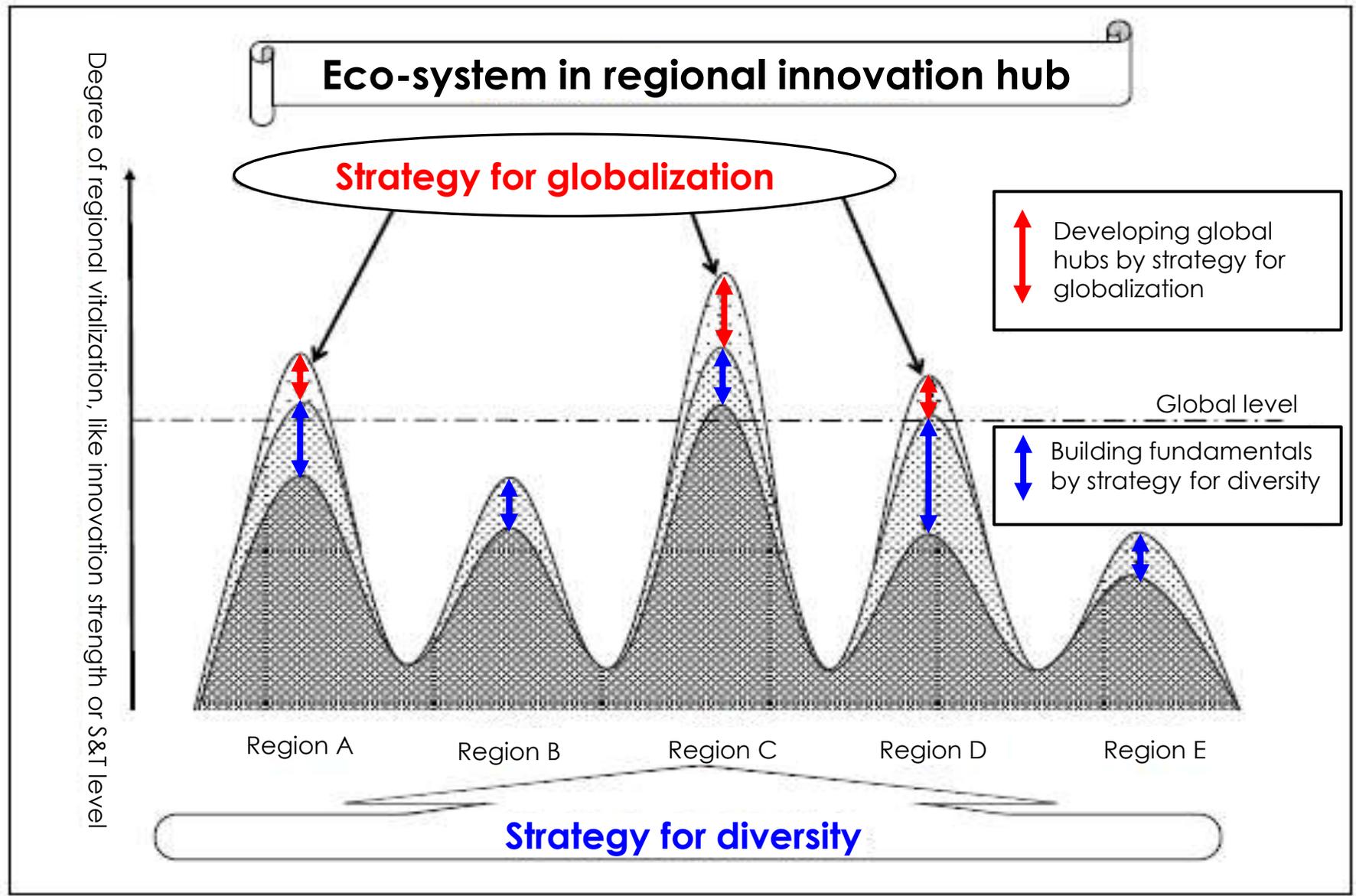
→Developing mechanisms for the creation of innovation coming from regions

V. Early Recovery and Revitalization from the Great East Japan Earthquake

Chapter 3 Creating Environment Suited for Science, Technology and Innovation

Chapter 4 Reinforcing Headquarter Functions of CSTP

The Balance between diversification and focusing



- More expansion/development of regional diversity
- Making a best use of regional resources for national problem-solving
- Strategical goal setting, acquiring global markets and standards
- Matching between seeds/needs for radical innovation
- Sharing experience among deferent fields/countries
- Pursuing win-win relationship

Objectives of the Program

Focuses on vision-led, challenging and high-risk R&D projects, elaborating on the future social visions in next 10 years in such a way to deliberate **“how should we change” or “how should the society change”**.

For realizing the visions, the government takes risk and subsidizes innovative projects which have never been achieved but will generate **great economic and social impacts on our society by disruptive innovation**.

Features of the Program (Vision-led R&D projects)

- ◆ Setting the visions to lead ideal society and lifestyle which come after the latent future needs, and specifying innovative R&D project themes foreseeing 10-year-ahead future.
- ◆ Under the leadership of the highly-specialized management team, striving to break out of the paradigm, and supporting under-one-roof R&D with the collaboration of academia and industry.

Vision1

Realization of Happiness

Vision2

Innovative Thinking

Vision3

Sustainable Urban Development

Vision-led R&D project

Framework

COI STREAM
Governing Committee

Setting Visions

Visionary Team

--Establishing innovative themes
--Monitoring the management of each center

Project Leader from Industry

R&D Leader from Academia

Toward FY2014

【COI Centers】

- Expanding the vision-led COI center
- Newly establishing research tool based COI center

【Regional network centers】

- Newly establishing regional COI centers

Super Cluster Program (New Cluster Program)

【Background】

- Losing opportunities for creating new markets in spite of plenty of cutting edge technologies.
- Weak in integration/ systemization of elemental technologies
- Weak in making global-strategy for marketing.
- Fruits of regional R&D activities are dispersed to be integrated.

【Concept of program】

- Establish the country-led global super-clusters by choosing, focusing and matching the fruits on social and market needs.
- Appoint Strategy-Director (SD) in each cluster. SD implements strategies and manages R&D activities, and makes business model.

Win both in technology and market

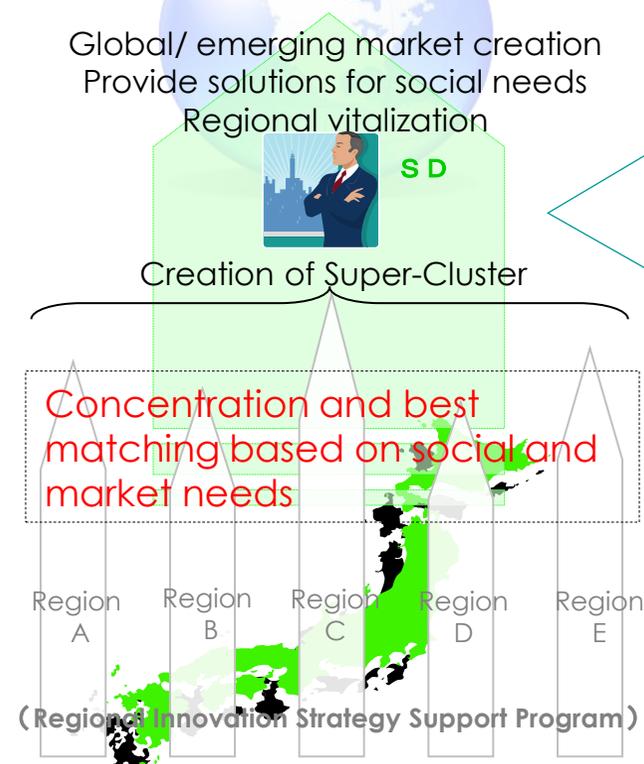
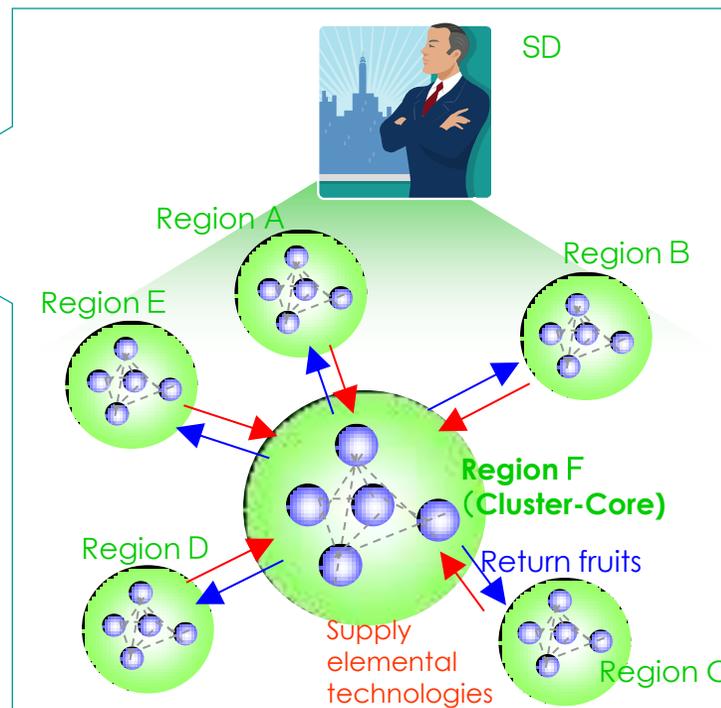


Image of Super-Cluster



【Support from MEXT】

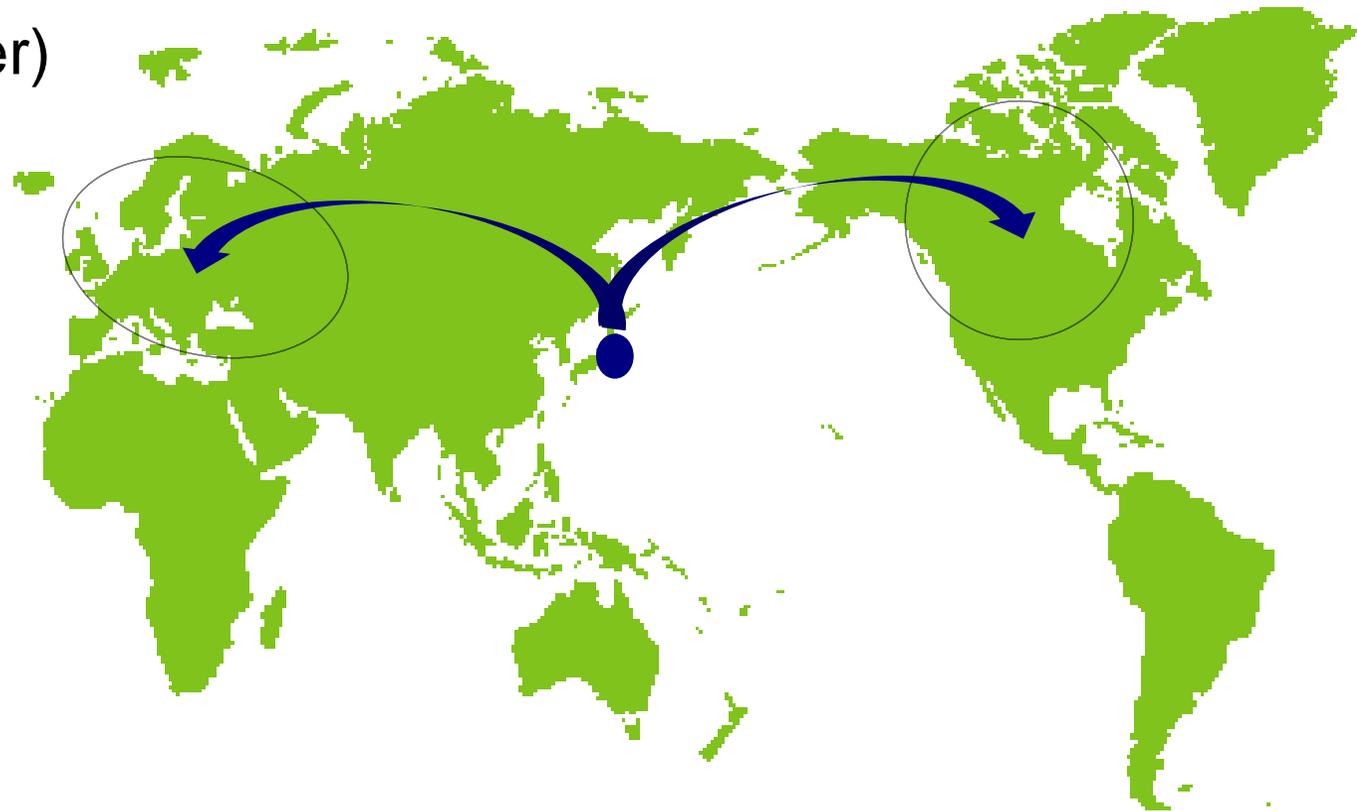
- Invite and accumulate relevant researchers
- Additional research-and-development
- Training program for entrepreneurship and innovation
- International cooperation

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□ Cluster Network for synergy

-domestic

-foreign (sister cluster)



Japan-France Seminar “Clusters : the Ingredients of Success”

MEXT and Embassy of France in Japan held the Japan-France joint seminar in order to share example of success and subjects between clusters of both countries



DATE : 29th November, 2012
PLACE : Embassy of France in Japan, Tokyo,
Main Conference Room



About 50 persons participated.

Through the presentations of cluster policies and cluster activities from each country, we deepened the understanding and built a network for each other. It became a foothold towards future cooperation.

Japan and Canada: Global Cluster Collaboration Forum

MEXT and Embassy of Canada in Japan held the Japan-Canada Collaboration forum in order to share example of success and subjects between clusters of both countries



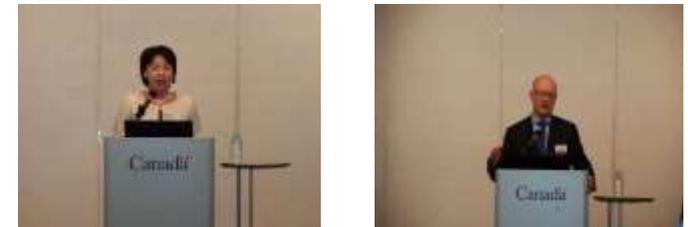
DATE : 5th October, 2012
PLACE : Embassy of Canada in Japan, Tokyo



Opening Remarks



Dialogue I: Present State of Cluster Collaborations - Presentations



Dialogue II: Sector-Specific Clusters – Presentations

- Aerospace
Mr. Mamoru Imuta, Gifu Research & Development Foundation
Dr. André Bazergui, CRIAQ
- Medical/ Biotechnology
Dr. Yoshihiro Yoneda, Osaka University
Dr. Steve West, Nordion
- ICT
Mr. Eisaku Otsuru, Fukuoka Industry, Science & Technology Foundation
Dr. Arthur Carty, University of Waterloo WIN

Discussions – Break-Off Groups in Sectors



Aerospace



Medical/ Biotechnology



ICT

2013 Canada 3.0 Conference

- MEXT and 2 clusters in Miyagi participated
- Meeting and global panel discussion were carried out



DATE: 3rd – 5th May, 2013
PLACE: Toronto and Ottawa



「2013 Canada 3.0 Conference」

Roundtable meeting



Site visit



Prof. A. Miyamoto (Tohoku University) visited Waterloo Center for Automotive Research

Sweden – Japan Cluster Seminar

“Cluster as method to foster and accelerate innovations”

MEXT and Embassy of Sweden in Japan held the Sweden-Japan joint seminar.



DATE : 4th October, 2013

PLACE : Embassy of Sweden in Japan, Tokyo,
Alfred Nobel Auditorium



Contents:

- Presentation about cluster policies
- Q&A to participating cluster leaders
- Short presentations from 10 clusters
- Panel discussion

Switzerland-Japan Symposium

Switzerland - Japan Symposium 2013
“Fostering innovation together”

DATE : 29-30th October, 2013

PLACE : Hotel Belvédère, Spiez, Switzerland

150

Anniversary of Diplomatic Relations
between Switzerland and Japan

日・スイス国交樹立記念



Prof. A. Miyamoto
introduced Miyagi
Cluster at poster
session

Topics of the Symposium :

- Life Science I: Biotech, Pharmaceuticals
- Life Science II: Med. tech./Robotics, Health Food in Context of Ageing Technologies
- Nano-materials and Innovative Surfaces
- Energy: Photon induced processes and Efficacy and New Building Technologies incl. Wood

Thank you for your attention!

URL : <http://www.mext.go.jp>
http://www.mext.go.jp/english/science_technology/1303792.htm