

# ***Second Term Medium-range Industrial Cluster Program***

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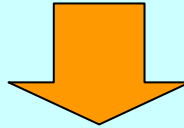
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Government of JAPAN

# Background of the birth of the Industrial Cluster Policy (Changes in Regional Economic Development Methodology)

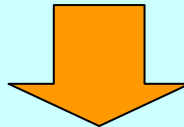
## Industrial decentralization and development of regional core cities (1970s to mid-1990s)

- Decentralizing growing industry fields and promoting balanced growth (attracting enterprises outside of the regional area)



## Prevention of hollowing-out and support for development of new growing fields (since mid-1990s)

- Revitalizing existing industrial clusters
- Organizing comprehensive support systems for creating new businesses



## Support for development of regional competitive industries and enterprises in a global market (since 2001)

### Industrial Cluster Program

Promoting industrial clusters which support regional economy and deploy world-viable new businesses one after another

# Changes in Regional Economic and Industrial Policy

Promoting heavy and chemical industries in coastal areas (postwar recovery period to 1970s)

Promoting decentralization and balanced development (1970s to 1995)

Preventing hollowing out and supporting development of new growing fields (since 1995)

Supporting development of regional competitive industries and enterprises and developing regional industries by utilizing regional resources

Industry Relocation Promotion Law (1972)

◎Relocating and decentralizing factories to regions (repealed in 2006)

Industrial Location Law (1973)

◎Securing green land tracts appropriately

High-tech Industrial Zone Promotion Act (1983)

◎Promoting location of regional high-tech manufacturing industry (repealed in 1999)

Knowledge-intensive Industry Location Act (1988)

◎Promoting location of regional knowledge-intensive industries(repealed in 1999)

Law for Comprehensive Development of Regional Core Cities (1992)

◎Promoting relocation of regional head quarters functions

Law on Temporary Measures for Activation of Specific Regional Industrial Agglomerations (1997)

◎Coping with common concern about the hollowing out of regional industries and accumulating existing industrial clusters

Law for Facilitating the Creation of New Business (1998)

◎Organizing one-stop support system for creating new businesses (The supplementary provision repeals the High-tech Industrial Zone Promotion Act and the Knowledge-intensive Industry Location Act.)

Small and Medium Enterprises' New Business Activity Promotion Law (2005)

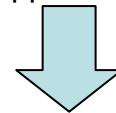
◎Integration of:

- New Business Creation Promotion Law
- Small & Medium Enterprises' Creative Business Activity Enhancement Law
- Small & Medium Enterprise Management Innovation Support Law

**Industrial Cluster Program (since 2001)**

The program promotes industrial clusters which support regional economy and deploy world-viable new businesses one after another:

- Forming and strengthening industry-government-academia collaborations in regions
- Supporting development of technologies by taking advantage of regional strengths
- Enhancing business incubator functions, such as organizing new business support facilities



Since March 2006  
Working out the Industrial Cluster  
Midterm Plan II

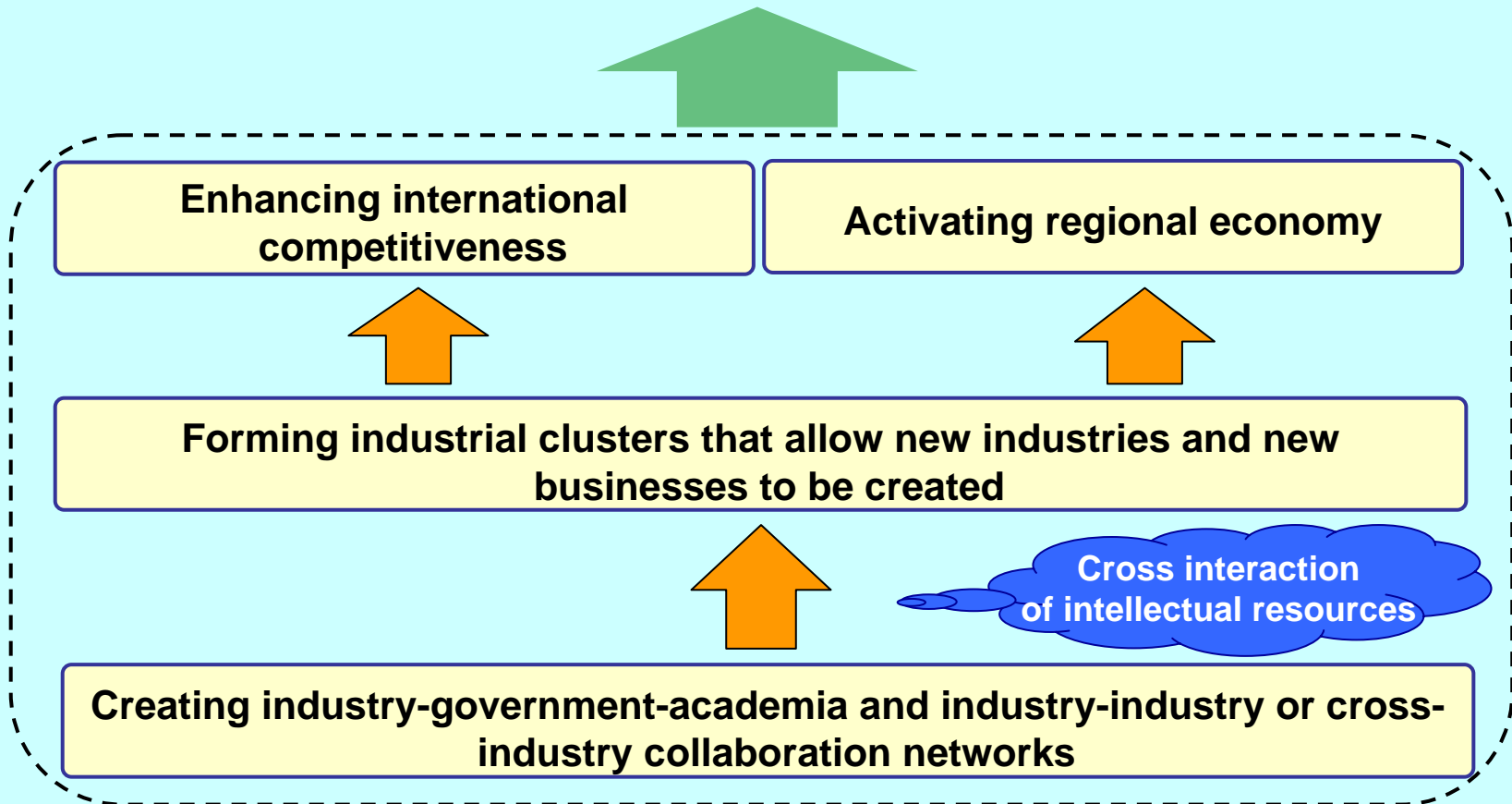
# Framework of Industrial Cluster Policy

## 1. Purpose and objectives

(1) Chain reaction of innovations (circulation and fusion of knowledge and information)

(2) Optimization of industries and enhancement of its tolerability to the economic environment

(3) Acceleration and upgrade of international clustering through enhancing regional brands



# Framework of Industrial Cluster Policy

## 2. Missions

- (1) Organizing business environment for promoting innovations**
- (2) Creating competitive industries in line with the national strategy**
- (3) Yielding synergetic effect on regional development**

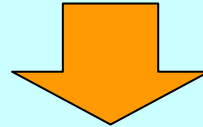
## 3. Basic policy

- (1) Hand-on Implementation based on the actual field needs**
- (2) Strategic utilization & Customization of policies and measures**

# Target Range of Industrial Cluster Policy

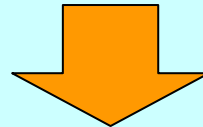
## **Phase I (2001-2005)**

Industrial cluster initiation phase



## **Phase II (2006-2010)**

Industrial cluster growth phase



## **Phase III (2011-2020)**

Industrial cluster self-sustaining Expansion phase

# Overview of Industrial Cluster Project Activities

## (1) Creation of industry-government-academia networks in regions

- Organizing wide-area “transparent human networks” connecting approximately 9,800 small and medium world-market-oriented enterprises across the country and approximately 290 collaborating universities, including technical colleges  
(The numbers are estimated as of the end of December 2005.)

### Contents

- Setting up an organization which promotes formation of clusters, and building up networks with related organizations concerned
- Coordinating among participating enterprises and universities
- Providing information through websites and e-mail magazines
- Holding industry-academia collaboration exchange meetings, symposia, seminars, and workshops
- Building database of enterprises, researchers, and supporters



University-launched bio-venture exchange meeting

# Overview of Industrial Cluster Project Activities

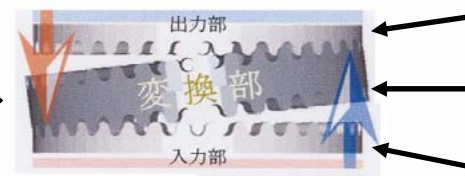
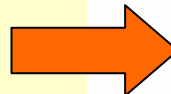
## (2) Promotion of technology development by making use of regional resource

- Deploying technology developing projects by regional industry-academia collaboration (regional research and development projects) → Approximately 300 projects out of completed 1,130 projects have been successful in practical application.
- 80 out of 170 projects approved under the New Collaboration Business Support Project are implemented by enterprises participating in the industrial cluster networks.

### Manufacture and sale of high-precision bearing gears realizing an innovative acceleration and deceleration efficiency

- The manufacturer has developed a unique gear module to be incorporated in a steering wheel, enhancing the steering-wheel operability and running stability. The development is based on the manufacturer's patented technology and the industrial cluster coordination activities.

Conventional  
gears



Output gear

Intermediate gear

Input gear



# Overview of Industrial Cluster Project Activities

## (3) Enhancement of incubation functions, including building of facilities for fostering entrepreneurs

- Promoting creation and development of venture companies
- Supporting small and medium enterprises in launching new businesses

### Contents

- Organizing incubation facilities
  - There are more than 300 incubation facilities across the country, including those supported by Organization for Small & Medium Enterprises and Regional Innovation, Japan (SMRJ).
  - More than 400 incubation managers are assisting entrepreneurs.



Image of the incubation facility of Tokyo Institute of Technology

# Overview of Industrial Cluster Project Activities

## (4) Support for developing new market channels through cooperation with trading firms

- Developing overseas market channels and international exchanges supported by Japan External Trade Organization (JETRO)
  - Exchanges between Technology Advanced Metropolitan Area (TAMA) and Veneto Region, Italia

### Contents

- Organizing Business Matching Events and product exhibitions
- Cooperation with trading firms
- Setting up sales representative systems
- Marketing supported by coordinators
- Supporting cross-industrial cooperation projects
- Promoting trade exchanges with overseas markets



Development and market cultivation for life-care goods

# Overview of Industrial Cluster Project Activities

## (5) Cooperation with financial institutions

- Industrial Cluster Financial Support Conferences set up in 11 blocks across Japan  
(Total 447 banking facilities participated and total 69 meetings have been held.)

### Contents

- Cooperation with regional financial institution
  - Holding industrial cluster support meetings
  - Bridge financing, low-interest financing, etc. through business alliance
  - Establishing venture funds
- Establishing regional venture capitals
- Organizing business plan presentations



Industrial cluster support financing meeting

# Overview of Industrial Cluster Project Activities

(6) Other function (e.g. personnel training required for clusters)

- **Incubation manager training**

Fostering incubation managers (IMs) and improving their skills in a comprehensive and continuous manner, through IM training and IM instructor training.

→ Total 352 people received training from FY2002 to FY2005

- **Industry-Academia Collaborative Core Human Resource Fostering Program for Small and Medium Manufacturing Enterprises**

Developing practical human resource fostering programs responding to the needs of industry-government-academia

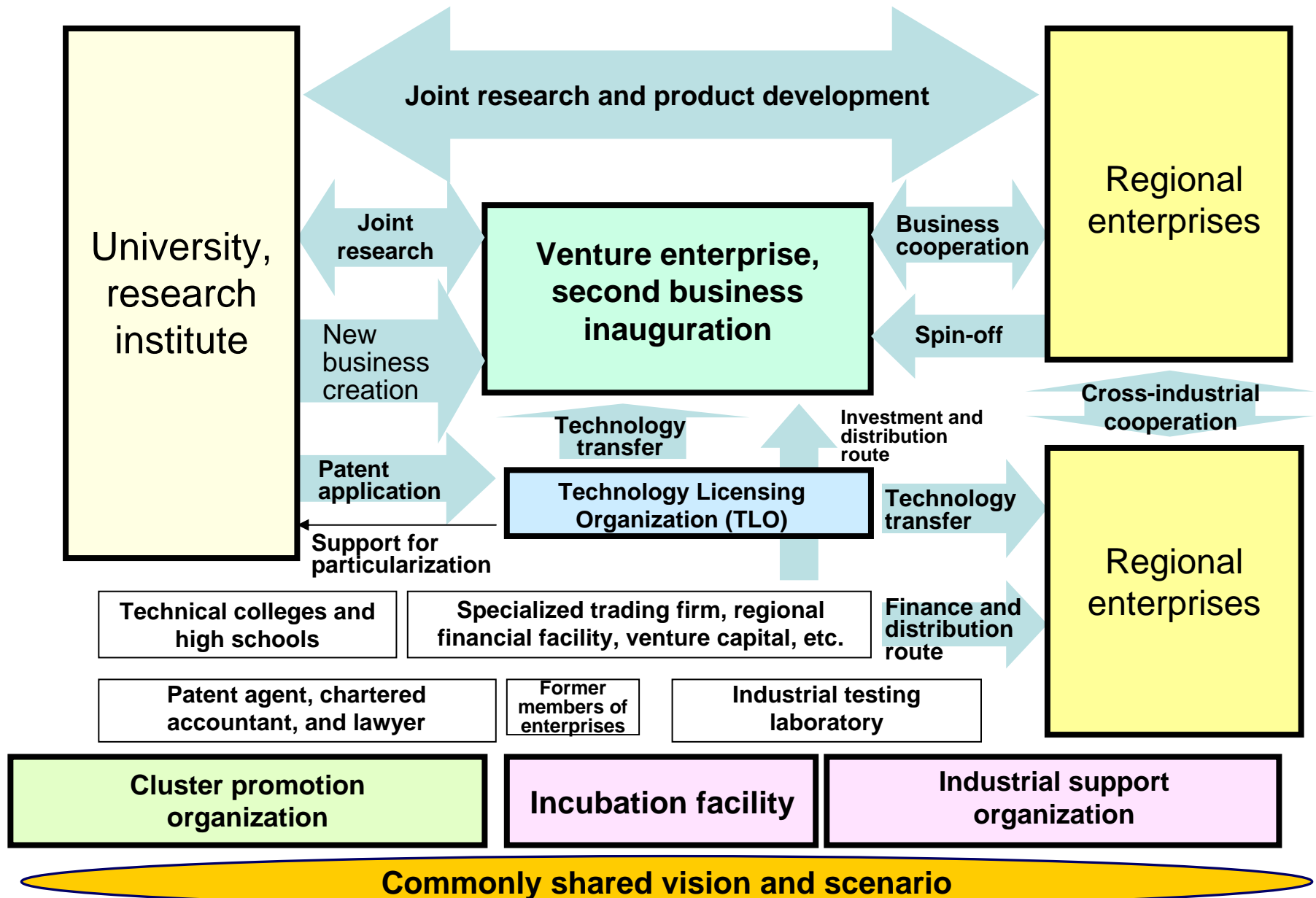
→ Adopted for FY 2006: 10 projects

- **Human Resource Fostering Program for Small and Medium Enterprises by Utilizing Technical Colleges**

Fostering operational human resources for small and medium enterprises by utilizing technical colleges

→ Adopted for FY 2006: 30 projects

# Internal Structure of Industrial Cluster (Players and Business Flows)



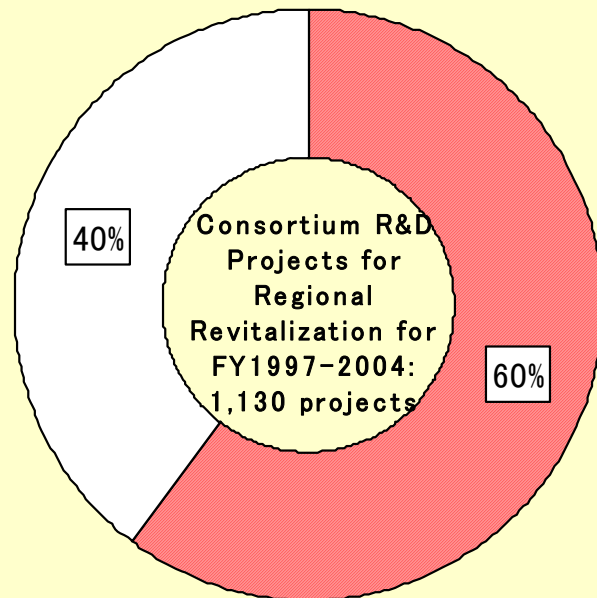
# Results of Phase I

1. **Networking: approx. 9,800 companies and 290 universities participated in the networking** (as of December 2005)

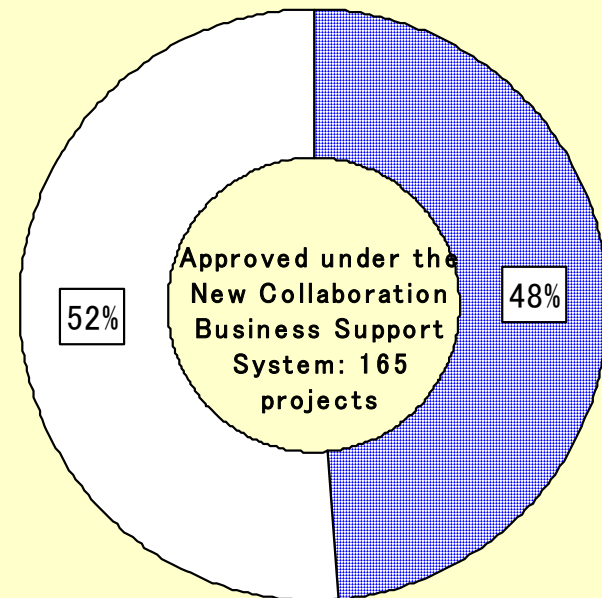
2. **New businesses created: approx. 40,000 businesses (expected)**

3. **percentage of enterprises participating in the industrial clusters**

(1) Approx. **60%** of “Consortium R&D Projects for Regional Revitalization”



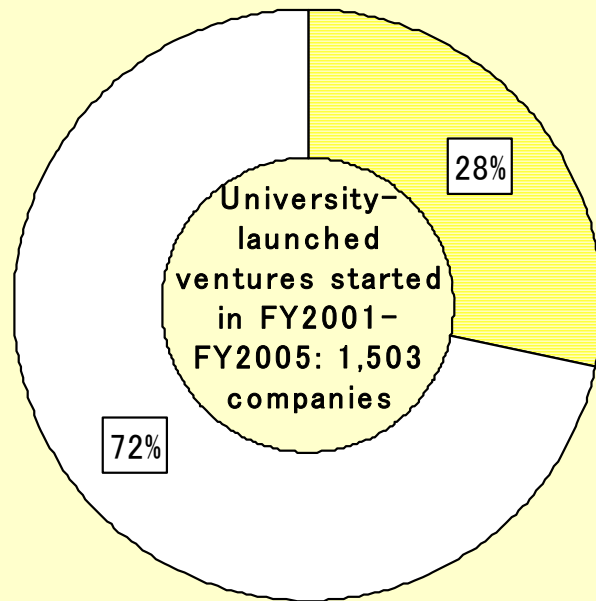
(2) Approx. **50%** of the projects approved under “New Collaboration Business Support System”



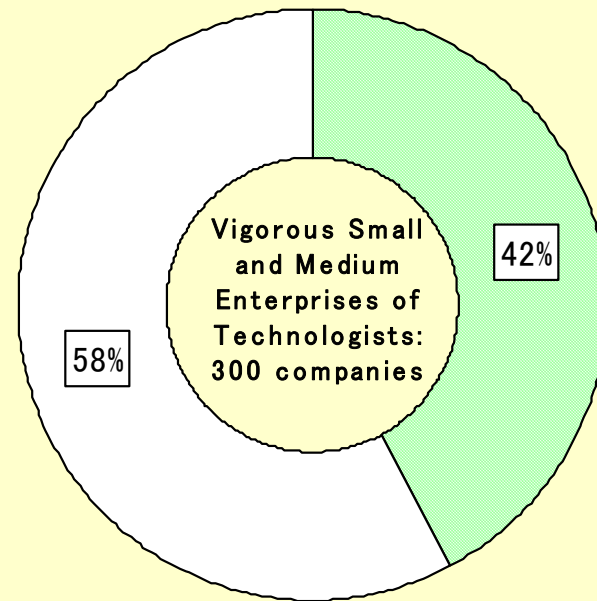
# Results of Phase I

## 3. percentage of enterprises participating in the industrial clusters

(3) Approx. 30% of university-launched ventures

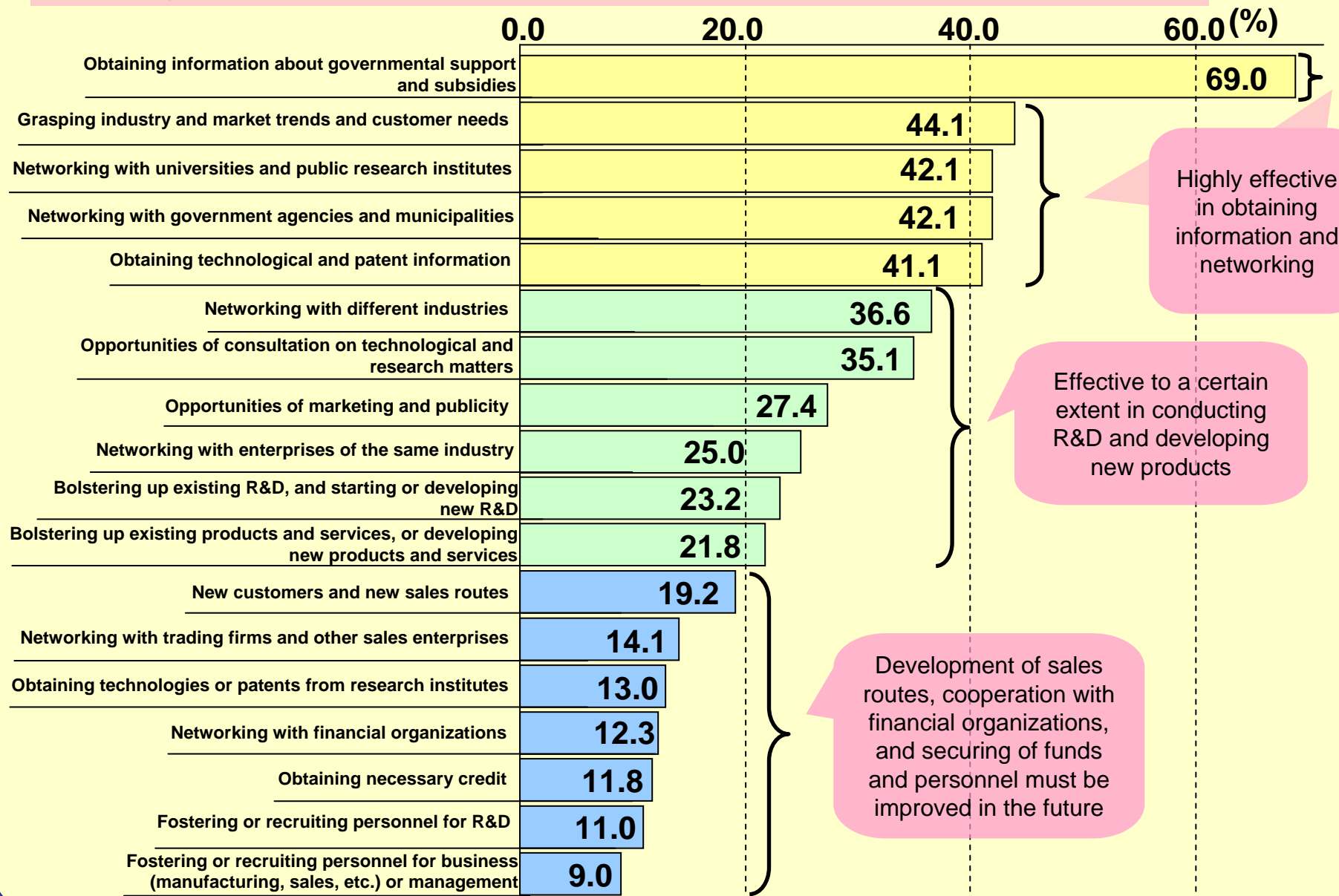


(4) Approx. 40% of 300 Vigorous Small and Medium Enterprises of Technologists



# Monitoring Survey 1

## Percentage of affirmative opinions



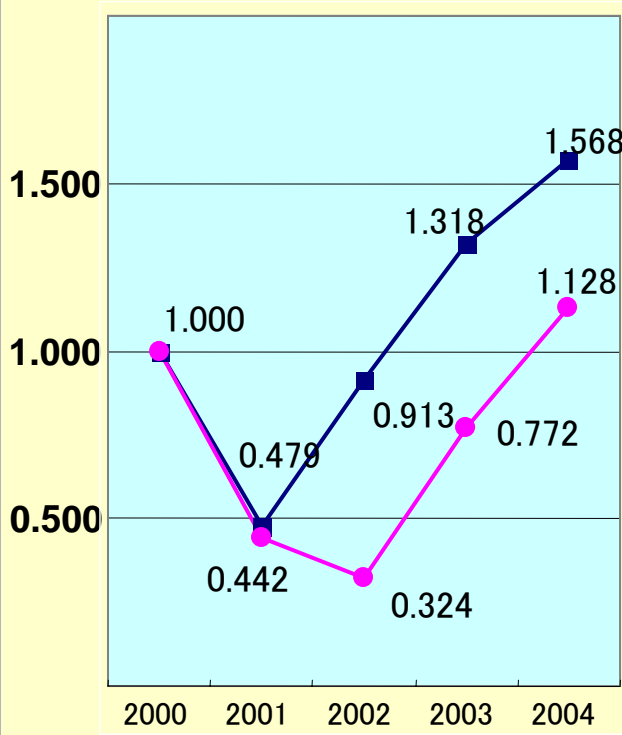


# Monitoring Survey 2

## Changes in business performance of participants (except large corporations)

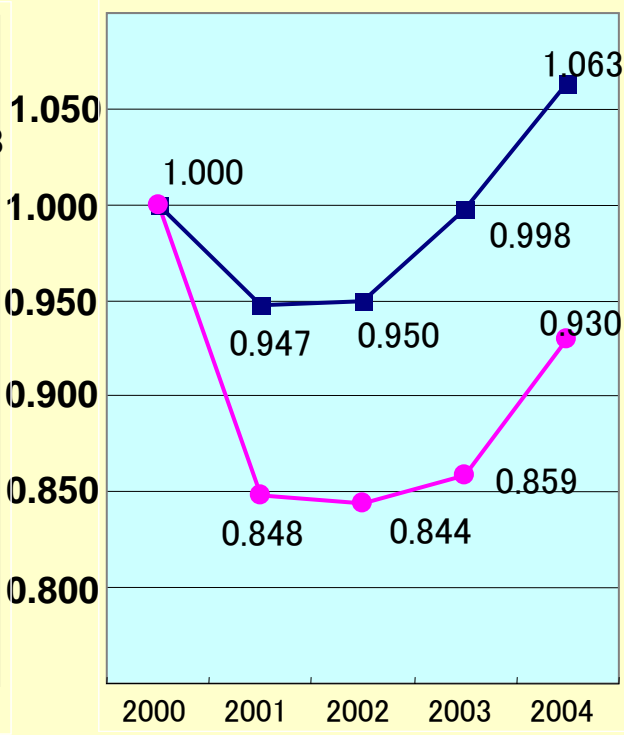
- Small and medium enterprises participating in clusters
- Annual Statistics Report on Incorporated Enterprises (corrected, except electrical industry)

Current net profit

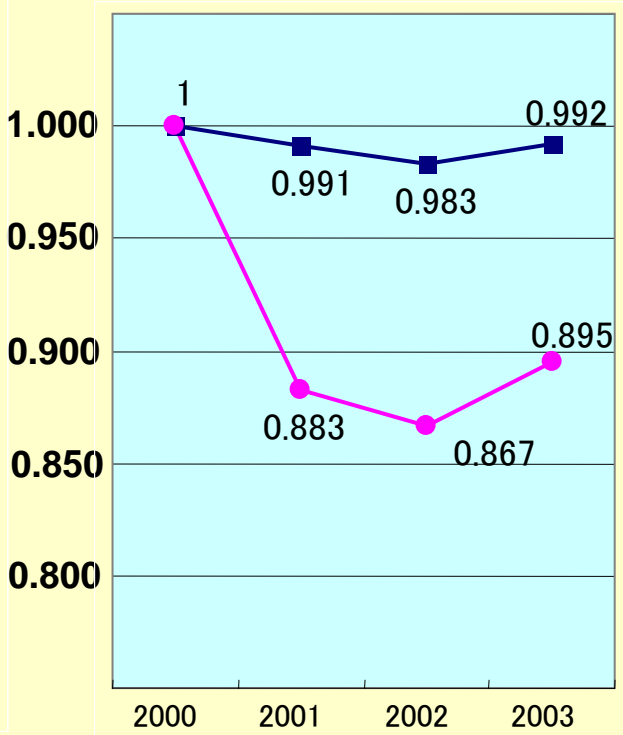


From "Industrial Cluster Plan Monitoring Survey for FY2005"

Sales



Number of employees



From "Industrial Cluster Study Group Report"

Note: Data on the "small and medium enterprises participating in clusters" covers enterprises that provided data for four consecutive terms. Figures in the "Annual Statistics Report on Incorporated Enterprises" have been corrected so that the composition of industrial categories in the report equals that of the enterprises participating in the industrial cluster program. Data sources: COSMOS2 from Teikoku Databank and "Annual Statistics Report on Incorporated Enterprises" for several years from Ministry of Finance

# Overview of Industrial Cluster Program Phase II

## Project period

April 1, 2006 through March 31, 2011

## Numerical goal

New business creation: 40,000 businesses (cumulative total)

## Basic policy

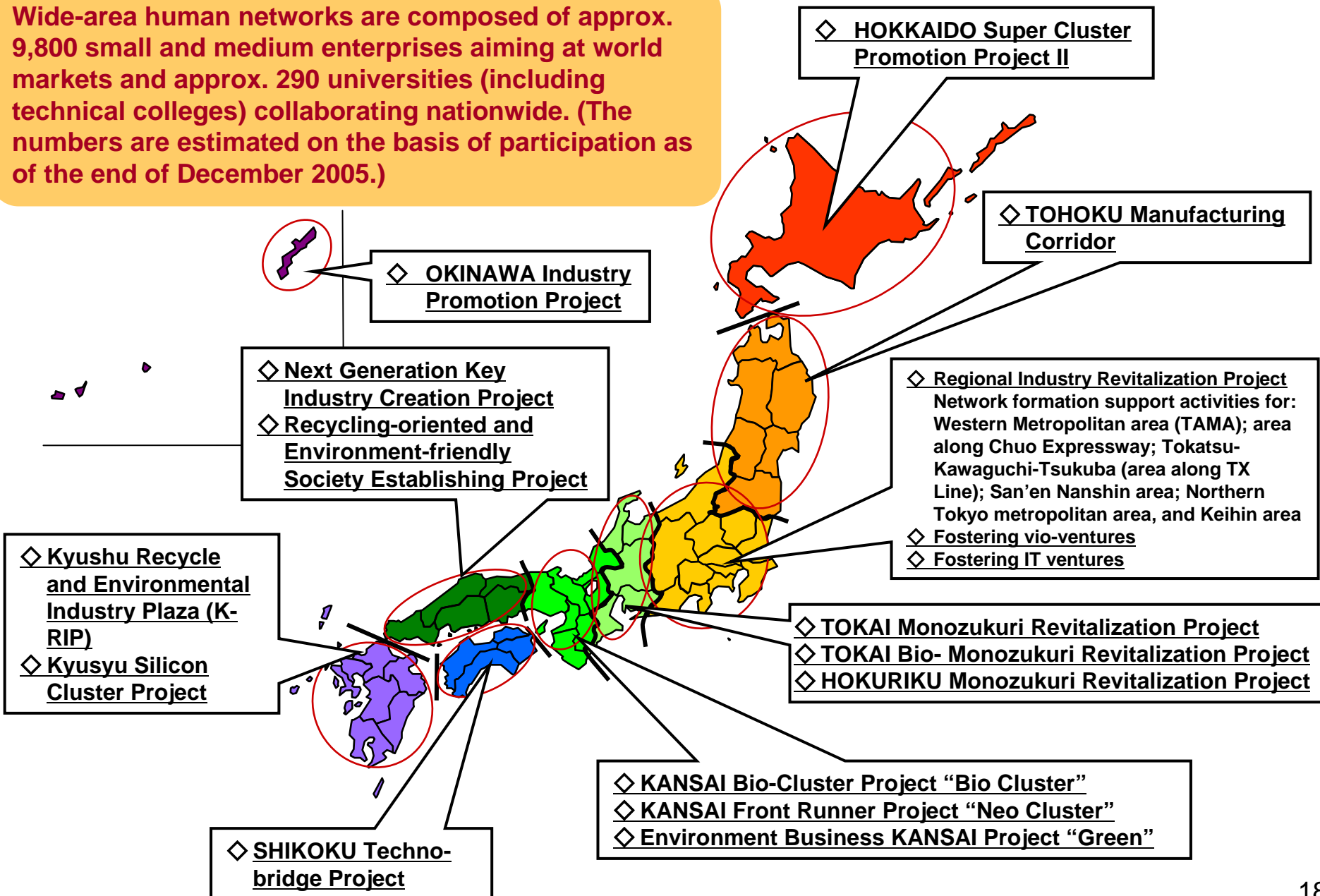
- Continue efforts for creating “close human network.”
- Strive to yield specific results.
- Cooperate with government agencies and organizations concerned as well as with policies related, strive for international deployment and self-sustaining activities.
- Implement the Plan-Do-Check-Act cycle.

## Reorganization of existing projects

Thoroughly review the existing 19 projects and reorganize them into 17 projects.

# Industrial Cluster Program Phase II: 17 projects

Wide-area human networks are composed of approx. 9,800 small and medium enterprises aiming at world markets and approx. 290 universities (including technical colleges) collaborating nationwide. (The numbers are estimated on the basis of participation as of the end of December 2005.)



# Overseas Operations of Industrial Cluster Plan (1)

## (1) Examples of exchanges between companies that belong to industrial clusters

### ① TAMA and Veneto, Italy

The TAMA Industrial Vitalization Association and the Veneto Chamber of Commerce and Industry conducted a business exchange program between manufacturing companies.

Concrete contracts have already been exchanged.

### ② TAMA and Hanyang University (Ansan City, South Korea), and Korean Industrial Complex Corp. (Kuryong City)

-Office that supports partnerships between Japanese and Korean companies was opened within Hanyang University.

-Companies belonging to the TAMA Industrial Vitalization Association and those introduced by Korean Industrial Complex formed a joint ordering organization.

## (3) Participation in Overseas Exhibitions by Businesses in the Hokkaido Cluster

-From fiscal year 2004 on, businesses in the Hokkaido cluster started to participate in overseas exhibitions (in the category of biotechnology, involving the world's largest biotechnology-based business conference).



## (4) Examples Taking Advantage of JETRO Projects

-Under the Hokkaido Super Cluster Development and Promotion Strategy, a public-private delegate for an exchange including representatives from IT companies was sent to Shenyang in China.

-Through the international exchange activities of the Greater Nagoya Initiative, a German automaker opened its subsidiary and branch offices in Japan.

# Overseas Operations of Industrial Cluster Plan (2)

## (2) Examples of Activities under the Industrial Cluster Plan between Japan and France

Sept. 2005: The 20<sup>th</sup> Japan-France Industrial Cooperation Committee was held.

Nov. 2005: Mr. Loos, Minister for Industry in France met Mr. Nikai, Minister of Economy, Trade and Industry in Japan.

Nov. 2005: Minister Loos delivered a speech at the “National Cluster Forum” organized by Nihon Keizai Shimbun.

Mar. 2006: Three Japanese experts for Nano-tech and Bio-tech in Japanese Clusters visited to some of French industrial clusters.

May 2006 : Some French experts will visit Japanese industrial clusters.



# Basic Policies for Economic and Fiscal Management and Structural Reform 2006 (Extract)

Cabinet Decision (July 7, 2006)

## Chapter 2. Efforts to Enhance the Growth Potential and International Competitiveness

### **1. Enhancing the growth potential by promoting the Economic Growth Initiative (3) Revitalizing local economies and small and medium-sized enterprises (SMEs) (community revitalization strategy)**

#### **(i) Revitalizing local management**

- The Government will advance the development of new technology using local resources, tourism promotion through the creation of industrial tourist attractions, ecotourism, utilizing culture, art and sports, promotion of community businesses, and local consumption of local products. In addition, the Government will develop local core business to promote the creation of 1,000 new businesses in five years.  
(abbreviation)
- The Government will promote innovations using local resources as well as collaboration between the knowledge cluster initiative and the industrial cluster program to create 40,000 new businesses in five years.  
(abbreviation)

# Economic Growth Initiative (Extract)

Council on Economic and Fiscal Policy Decision (June 26, 2006)

## **Chapter 3. Revitalizing local economies and small and medium-sized enterprises (SMEs) (community revitalization strategy)**

### **1. Revitalizing local management**

#### **(1) Development of local industry using local resources**

The Government will strongly promote the development of tourism promotion through the creation of industrial tourist attractions, ecotourism, utilizing culture, art and sports, promotion of community businesses and others, as well as the development of new products and markets using local resources related to agriculture, forestry and fisheries, and manufacturing that is related to people's daily lives such as food, fabrics, and wood products. In addition, the Government will promote local consumption of local products as well as support retailing providing region-developed products for consumers directly.

The Government will develop local core businesses, and provide efforts as well as support measures for small- and medium-sized companies to create 1,000 new businesses in five years.

#### **(6) Regional R&D and industry-academia-government collaboration**

The Government will implement regional research and development as well as enhancement/concentration of industry-academia-government networks to create 40,000 new businesses in five years in regions/fields on which emphasis is placed on the new industrial cluster program. In addition, promoting further collaboration between the knowledge cluster and industrial cluster, the Government will work to form the "Regional Science and Technology Clusters."

Collaborating with regional universities to contribute to regions as regional bases of knowledge, the Government will support regional development of technology for applications based on the mechanisms whereby innovation to use the most of local resources for manufacturing that is related to people's daily lives could occur continuously, so that the Government will develop 1,000 cases of new businesses, new products, and patents and others in five year.



## 3. Stimulation of Regional Economies (Regional Industrial Strategy) METI (June 9, 2006)

### (1) Policy for revitalizing regional economies

#### 3. Future regional industry measures

##### (1) Promotion of stage II “industrial cluster program”

... With a focus on seven strategic fields in the “New Economic Growth Strategy,” the industrial cluster program aims at launching new business continuously by the development of collaborations between companies and industry-academia-government collaborations through the formulation of networks by companies, universities, and research institutions in each region, while collaborating with regional science and technology development policies of related ministries and agencies, such as the knowledge cluster initiative. Therefore, expanding the distribution of companies to support Japan’s international competition will be expected in each region.

In stage II “industrial cluster program,” the prior 19 projects were reorganized and integrated into 17 based on the evaluation of stage I (2001-2005) (5 prior projects were terminated/integrated, and 3 projects were newly established). In addition, the Government set numeric targets such as sales and the number of new companies established in each project as well as the cross-project target for the creation of 40,000 new businesses in five years. Furthermore, subject fields of each project are the priority fields set in the “Strategy for Creation of New Industries,” such as fuel cells and robots, and subject themes of the project are the themes which belong to each priority fields and which collaborate with priority fields, such as the development of advanced medical instruments. Furthermore, broad/international collaborations between clusters will be promoted.

To promote the industrial cluster program, revision of systems to boost further reach of commercialization will be implemented concerning the Regional Consortium Research and Development Project and the Regional Subsidy Program for the Development of New Business Creation Technology which is utilized in the plan.

## 4. Cross-sectoral policy

### (4) Skills: Technical innovation

#### (1) Promotion of innovations

##### OPromotion of stage II “industrial cluster program”

- In light of the results achieved and lessons learned from the stage I “industrial cluster program” currently implemented, the 19 projects across the nation should be reviewed, and the entire Program will be reorganized into 17 projects.
- On such occasion, in addition to the common objectives of the project, such as creating 40,000 new businesses in five years, numerical targets such as sales and the number of new companies established should be set for each project.
- Prioritize the subject themes, mainly in focused fields designated in governmental strategies, such as the New Economic Growth Strategy, namely fuel cells, robots, environment/ energy and others.
- The Local Regeneration Consortium Program for Research and Development and the Regional Subsidy Program for the Development of New Business Creation Technology, which are the major measures utilized in the Industrial Cluster Program, will be improved into an even more effective system through a further increase in the rate of commercialization.



# Third Science and Technology Basic Plan (Extract)

Cabinet Decision (March 28, 2006)

## **(4) Building regional innovation systems and creating vital regions**

As the promotion of S&T in regions contributes to building regional innovation systems and creating vital regions, thus enhancing the sophistication and diversification of the S&T of Japan as a whole, and the competitive edge of the innovation systems, the government will actively encourage such promotion. Moreover, the government will promote broad-ranging activities as something that will contribute to achieving safe, secure and quality lives for local residents, and producing creative and appealing regions and culture.

### **(i) Forming regional clusters**

Formation of regional clusters not only needs R&D by industry-academia-government collaboration, but also requires various activities such as facilitation of finance, support of new business creation, development of the market environment and building of cooperative networks. As such, the government will proceed with long term efforts based on the strategic initiative of regions and the collaboration of relevant organizations.

The government will continue to provide competitive support for cluster forming activities carried out under local initiatives. In so doing, the government will provide selective support to regions that have the potential to develop as world-class clusters, by assessing the global competitive edge of each region according to the progress of cluster formation and develop clusters across Japan with strengths that utilize regional characteristics, however small in scale.

# Comprehensive Strategy for Creating Innovation (Extract)

Council for Science and Technology Policy Decision (June 14, 2006)

## 2. Enhancing Systems to Bring up Innovations from Seeds to Fruits

### (2) Enhancing Regional Innovations

○The government will strongly promote independence of regional innovations, and in addition, enhance systems to bring up regional R&D seeds to fruits as well as networks between people, systems, and types of business while evaluating the results of previous regional cluster projects and other. Furthermore, the government will promote innovations to allow the full utilization of regional resources while developing tighter collaborations between local governments/companies and universities as a base of knowledge.

## Intellectual Property Promotion Plan 2006 (Extract)

Intellectual Property Strategy Headquarters Decision (June 8, 2006)

### Chapter 3 Exploitation of Intellectual Property

#### IV. Developing Local Areas with the Use of Intellectual Property

##### 2. Promoting Industry-Academia-Government Collaboration through Enhanced Local Human Resource Networks

###### (1) Promoting the Activities of Regional Intellectual Property Strategy Headquarters

- ii) In FY2006, for the activities of regional intellectual property strategy headquarters, the GOJ will further develop cooperation among them with the aim of making their joint efforts more effective, by building human resource networks that are linked with the intellectual property cluster project and the industrial cluster program.