HAKODATE TECHNOPOLIS

1. Basic Idea

The aim of the construction of Technopolis Hakodate is to build a technology accumulated city in the Hakodate region which is the central urban area in southern Hokkaido.

And its construction will give great effect to all Hokkaido which is aiming at the creation of the unique community, corresponding to the advancement of technology and internationalization.

On the base of the excellent conditions the Hakodate region has, we are making our best efforts to promote the development of local industry's high technology and introduction of new advanced industry, and to form a high-technology industry complex with an emphasis on the marine-related industry.

And we also are aiming at creating various unique systems of production and living, making the best use of the characteristics of the northern land.

2. Concrete Objectives

(1) Industry Complex

The Hakodate region has developed since its early days, manufacturings sach as shipbuilding, fishing-relatedmachines, fishing materials and marine products processing.

On the base of these industries, we aim at forming a high technology marine-related industry complex. To realize this purpose, it is important to make up a organic relations between local industries and newly introduced ones.

(2) City planning

To promote the industrial development in the Hakodate region, we are making efforts to establish the traffic foundation formed by the arrangement of the airport facilities and principal road network, the residential space well-matched with natural environment, and the education to bring up future manpower, which will result in the creation of a charming city.

3. Summary of Development Program

(1) Program for developping local industry's technology

① Technopolis Hakodate Technology Promotion Association

- Debt guarantee and low-interest loans for the research and development by the local enterprises.
- Training and guidance to bring up manpower
- Research and study of new social system etc.

② Hokkaidō Industrial Technology Center

- Research and development based on the needs of the local industries
- Diffusion of high technology to local industries

(2) Program for introduction of advanced industry

- Expansion of favorable treatment for location of industry
- Arrangement of industrial sites

4. Progress

In the Hakodate region, local industries have a remarkable tendency to try to raise their technology standards. And after the designation as a technopolis area, the number of high technology enterprises such as electronics or precision machimery industry have located or decided to locate in this area.

Also, Hokkaido Industrial Technology Center has just started its business and the project to bring up advanced experts of information technology has been set about.

Thus, the construction of Technopolis Hakodate is making a steady progress towards the twentyfirst century.

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AOMORI TECHNOPOLIS

1. Basic Idea

The Technopolis in Aomori Region lies in the region where a network of high speed transportation is fast developing. They include Tohoku Expressway, Aomori Airport,which is now jet operational,Seikan Tunnel,(under the seabed) and Tohoku Shinkansen—a bullet train service between Tokyo and Aomori already in operation halfway to Aomori.

Centering around Aomori City where these access means crisscross, We are going to build an important spot for development of technology. To do this,we plan to attract advanced high—tech industry that use and apply biotechnology and mechatronics. Thus we are striving to realize a "city stabilized with high—tech industry in the northern Japan "by developing a comfortable and convenient environment for living.

2. Concrete Objectives

(1) Industrial Complex

We have rich natural resources to consider for these projects. These include the resources in the agriculture, forestry, fishery, mining, and energy exploitation. We also have the existing businesses in lorge number, and the land where we can possibly attract new industry. Therefore, we are proceeding with developing our industry along with the following five fields:

a. Biotechnology—applied industry.
b. Mechatronics industry.
c. Electronics—related industry.
d. New material developing industry.
e. Software and system developing industry.

(2) Urbanization.

In order promote our industry based on high technology, we believe it is important to make a living condition egreeable for those people such as researchers, and highly skilled technitians. Therefor ,we are going to construct an highly attractive living enviroment where they can enjoy a city life, convenience to move about,and comfortable living.

For the future, we are planning to develop a model city (called Cell Compact City)that would overcome the problems such as the limited range of activity and stagnant life of people during the season of extremely cold and heavy snowfalls. To develop this Anti—Snow City,we plan to integrate a variety of sectors in the area. These are shopping arcades,community facilities, educational institutes, hospitals, and parks.

3. Summary of Development Program

(1) Promotion of the regional industry to become high—tech industry.
   a. Establish Aomori Technopolis Development Organization(a foundation) and intensification of its functions.
   b. Establish Aomori Prefectural Industrial Technology Development Center etc.

(2) Program for introduction of advanced high—tech industry.
   a. Develop the lands for a influx of new industry etc.

(3) Program to better city facilities.
   a. Development of the Anti—Snow Model City(Cell Compact City)

4. Progress

Following project are in good progress.

— Establishment of Aomori Technopolis Development Organization(A foundation)
— Enforcement or the joint studies on the government and industrial levels to cope with industrialization.
— Procument of the land for new industries.
— Construction and related work for the Tohoku Expresway.

AKITA TECHNOPOLIS

1. Basic Idea

Akita has the advantages, in addition to beautiful nature, the wide area available for the industry, abundant water resources and plenty of working population, as well as the largest airport in Tohoku District. The ideal integration has also developed among industries, academic institutions and urban functions in the center city, Akita.

In this respect, Akita is the appropriate place for the creative high-tech industry which leads our country, as well as for the people who want to live a rewarding life.

Making the most of these advantages, Akita Technopolis aims at advanced industry of our prefecture by developing and applying the high technology, tries to put abundant resources to practical use and intends to realize "Creative Town Planning" suitable for the snowy country. Akita Technopolis should be the center which leads creative technological innovation and activities for "research and development", trying to produce a good effect on all over the prefecture.

2. Concrete Objectives

(1) Making Industrial Complex

① Electronics, Mechatronics ② New Materials

③ Resources, Energy ④ Biotechnology

(2) Making Complex of Institutions for Research and Development

A well co-ordinated research system is established, consisting of industries, academic institutions and administration. The leading parts are played by Mining Engeneering and Medical Department of Akita University, Akita Technical Center, Brewery Research Center and Cerebral Vascular Research Center.

(3) "Creative Town Planning" with High-Tech Industries

Considering the regional feature of the snowy town, urban functions — education, medical care, welfare, culture, sports and recreation facilities— are adequatly arranged. Industrial area and residential area are functionaly dispersed mainly on the tableland.

3. Summary of Development Program

(1) Program for the high-tech enhancement of the local industry

① Establishment of Akita Technopolis Development Foundation

a. Trainings and guidance for qualified workers b. Loan guarantees c. Research and investigation

② Establishment of the organization for the coorporative study of industrial academic and administrative sectors in the various fields

③ Establishment of Biotechnological Institure affiliated to Akita Prefectural Agriculture College etc.

(2) Program for introduction of high-tech industry

① To apply the supportive and financial system to the established enterprises

② Preparations of airport-side industrial parks

(3) Program for completing the functions of the city

1. Akita New City Development Enterprise

2. Highway Mapping

4. Progress

With the support of prepared infrastructures and functional airport, several factories has implanted to Akita Technopolis dealing with semiconductors, software and precision instruments, greatly contributing to enhance the industry of the prefecture.

Through preparation for the triunion research system and information service system to meet the demands of high-tech epoch, Akita Technopolis is on the way to one of the representative academic cities on the Japan Sea coast, where advanced technologies are highly integrated.

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NAGAOKA TECHNOPOLIS

1. Basic Idea

The concept of Nagaoka Technopolis is to create an integrated complex of industrial sites, academic institutions and housing. In terms of industries, the traditional metal-working and machine-industries should be upgraded by introducing technologies. The Technological University of Nagaoka takes an important role for basic applied research and in machinery and metal industries. The residential area of Nagaoka New Town is reserved for incoming talented technicians. Nagaoka Technopolis can afford a wealth of opportunities for creative young technically motivated people and valuable information from every corner of the world.

2. Concrete Objectives

(1) System industrial complex of high level

The development into a mechatronics industry is planned by promoting research actives of the existing machine and metal industries. Along with this, a system industrial complex of high level is planned as a core industrial complex in which the relating advanced industries is phased.

(2) Urban business complex

Thanks to easy acces to the metolopolitan area, integration of the information, new service, design, engineering and fashion industries should be encouraged.

(3) New agri-industrial complex

Formation of the new agri-industrial complex is also should be encouraged. In which the new agriculture and the brewery industries are activated, and the developmnt of the brewery into biotechnological industry and the application of the mechatronics to agriculture are to be promoted in the future.

By coordinating the mentioned above, three industrial complexes, a new industrial complex will be brought out and the entire local factories will be technologically upgraded.

3. Summary of Development Program

(1) Measures for promoting innovative technology in regional industries are :

① Main projects of the Nagaoka Technopolis Foundation

* Loan guarantes for medium-sized companies
* Technical assistance and advice
* Training of technical staff
* Technological information service

② Promotion of the cooperative project in the Technology Development Center of Nagaoka Region

③ To tighten government, industry, university

(2) Introduction of high-tech industries

(3) Advancement of Techno-Valley Inteligent-Core project

4. Progress

Technical assistance and advice of innovatives factory has practiced between government, industry and university at the Technology Development Center of Nagaoka Region. Last year, 150 advisers both from the Technological University of Nagaoka and Industrial Research Institute of Niigata Prefecture, lectured over 1,800 engineers of regional factories in total to cultivate talented people. We are proud to say that research and development activities at the Technology Development Center of Nagaoka Region.

Also the Nagaoka Technopolis aims at building an affluent international city with cultural assets. Urban renewal around Nagaoka Station and construction of a new library are in progress.

UTSUNOMIYA TECHNOPOLIS

1. Basic Idea

We promote Utsunomiya-Technopolis to construct a city for people and based on excellent natural environment, advanced enterprises and new regional culture.

We also propel to further an independent economy, based on balancing agriculture, industry and commerce.

2. Concrete Objectives

(1) Industry and R&D complex

Making the most use of the accumulation of technologies about ultra precision manifacturing, Mass-production and assembly our objects are to develop mechatronics and electronics industries in a short term, and to develop fine-chemical in a midlle term.

Furthermore, our objects are to develop exotic materials.

The target of Utsunomiya Technopolis construct is changing to "an information center" from "a production center".

So, we are going to locate and carry on the function of private and administration research laboratories.

And we are going to progress abilities of research and development in technopolis area with linking the basic research function of the Tsukuba Science City.

Also we are going to carry on the higher educational organization in area or suburban area.

(2) City Planing

We will construct the function of the city on schedule of Prefecture, City and Town.

About public transport system we are going to carry on a main city on North Kanto region by construct of expanding transport network.

3. Summary of Development Program

(1) Program for developping local industry's high technology.

We are trying to expand the function of the Prefecture Center for Industrial Technologies and the Tochigi Industrial Technology Association, which was established to stimulate interaction among small local industries, venture business and high-tech industries.

Then this assosiation works as an incubator for small local industries and venture business.

- Guarantee of funding
- Tranning for engineers
- Information service
- Survey on new social system
- Research and Technology transfer

(2) Program for introduction of advanced industry.

We are promoting to lure mechatronics, electronics, and software industries.

And we are inviting to institute private research laboratories.

(3) Program for completing the function of the city.

The scheme is as follows.

- Extension of educatoin, culture, welfare, consumer life, sports and recration.
- Institute of the function of the city mainly district, such as the Technopolis Center.
- Construct of all kinds of establishment for control, meeting and accomodaition, shopping commerce, exhibitant.

4. Progress

By now, the number of advanced enterprises have located in technopolis area which effectuate growing of economy.

Also projects of the Tochigi Industrial Technology Association are carrying on steadily, and enterprises in Technopolis area is eager to progress of tech-

TOYAMA TECHNOPOLIS

1. Basic Idea

Toyama Technopolis is aiming for a city which is accessible to the rest of the world, full of independent originality, where international competitive power is assured by getting the most out of local industries.

we are making steady efforts to develop "a solid industrial complex" by utilizing our accumulated highly scientific and technological knowledges, which accounts for one of the most industrialized districts on the Sea of Japan. We are also planning an integrated space of R&D, production and housing of higher sophistication, while at the same time exploring such frontier industries as the development of biotechnology and new materials.

2. Concrete Objectives

(1) Building an industrial R&D complex

Based on the present accumulation of science and technology in the area, we are creating an industrial structure of the 21st century, which corresponds to long–term social changes, and ongoing dynamic inovation of industry, with the following three leading industries specifically referred to as the core:

① Mechatronics industry

② New materials industry

③ Biotechnolgy industry

(2) Developing infrastructures relative to industry and life

(3) Arranging social functions in a highly integrated city

3. Summary of Development Program

(1) A project for upgrading state of the art technology of local industries

① Founding a core organization for promoting the project

We founded the Toyama Foundation for the Development of Technology, as a joint venture by the prefectural government, the academia and local industries. Our aim is that the Foundation, as a core organization, boost the development of the Toyama Technopolis. We also plan to carry out the operation of the Foundation.

- A program for assisting various technological R&D
- A program for funding and financing high–tech industries, including liquidating their liabilities, if necessary

② A program for instructing and training persons involved in the R&D of high technology

③ Technological exchange and joint research among the prefectural government, the academia and local industries

④ Fulfillment of a project for R&D and implementation of advertising and publicity to boost the technological demand etc.

(2) A project for constructing various infrastructures

We are creating and planning factory sites, cultural, sports and recreational facilities, while fully considering the suitability of land use in relation to the needs of the local environment.

4. Progress

An increasing number of newcomers operating in the pioneering technological fields are establishing themselves in Toyama Prefecture. Local industries are also developing technological and engineering R&D toward higher sophistication through technological exchange and joint research.

For the purpose of building a core of R&D, the Science and Technology Center Laboratory has been established and we have been continually concentrating our energy on the construction of a Machatronics R&D Center

HAMAMATSU TECHNOPOLIS

1. Basic Idea

Applying with the rapid advancement of industrial technologies, the Hamamatsu region has steadily developed by advancing the technological innovation and endeavoring to transform the industrial structure from a firm base, and it forms the present local industrial area.

The Hamamatsu region has a tradition for high industrial integration. A firm industrial base, its outstanding natural environment, excellent living environment and large numbers of academic and research institutions make it an ideal location for the development of a technopolis. Capitalizing on the traditional progressive spirit for industrial and technological revolution and the creative social base, which have made this area a home of musical instruments, textile, and motorcycle industries, the Hamamatsu area seeks to further develop high-tech industries and new technologies and products. While actively pushing forward elaborate city planning to promote industry, the Hamamatsu Technopolis is endeavoring towards the coming 21st century. Hamamatsu is aiming to be a model for regional development and the center of advanced technology. One which is able to respond to all the demands of this country and aims to compliment a strong technological base.

2. Concrete Objectives

(1) Industrial Complex

1. Optical Technologies Industries
2. Advanced Precision Mechanics and Electronics, and Systems Technologies
3. Home Audio Product Manufacturers
4. Home Video Equipment Manufacturers
5. New Type of Small and Medium Enterprise

(2) City Planning

The focus of this quest is to establish the basic functions which Hamamatsu, as mother city of the Hamamatsu Technopolis, must provide to its citizens. — to establish excellent living conditions, leisure facilities, and academic and research facilities, enhancing urban functions as well as promoting the development of land for industry and housing, so that it can be the industrial base of advanced technology.

3. Summary of Development Program

(1) Program for enhancing advanced technology

With the Association for Local Technologies founded in 1981 as the steering body, the Technopolis promotes the following five guidelines.

- Active cultivation of R & D-oriented companies
- Supply of technical information etc.

The following two organizations are the supporting bodies to help promote specific programs of the Hamamatsu Technopolis.

* Research Institute for Electronification of Mechanical Engineering
* Nippon Information Technology College

(2) Program for completing the function of the city

- Creation of new industrial development sites
- Integration of R & D-oriented companies
- Invitation of universities in the technological field etc.

4. Progress

Hamamatsu Technopolis is characterized by the companies of advanced sectors with the strength of their own independent technology. Positive efforts have been made to invite the companies and research institutions needed for further development of this area. The sites for software industries, universities, research institutions, industrial complexes of R & D-oriented companies have already been fixed, and some of the construction work has already started.

NISHI-HARIMA TECHNOPOLIS

1. Basic idea

The Nishi-Harima Technopolis(NHT) is considered as one of the most critical projects to form a new feature of the Hyogo prefecture in the 21st. century. The NHT aims to create a health and welfare oriented society and to construct a city complex of science and technology so it can be the center of the highly advanced technology in Hyogo, coordinating the most advanced scientific technology with nature.

2. Concrete Objectives

(1) Industry Complexes

The NHT persues to form a couple of types of industry complexes: one is centered on by the highly technological machinery industry and the other is featured by the medical welfare industry. The former can be created by making better use of the research and development functions of the existing industries in the Nish-Harima district such as machinery, electronics, new ceramics, chemicals, highly synthesized materials, and so forth.

The latter is concerned with the industries which are not dominant in this part of the prefecture. For instance, biotechnology, medical electronics, super minute processing technology, and the like.

(2) Advanced Research Facilities

The NHT is planned to introduce an energy producing synchrotron radiation device, what we call "the 6GeV-SR (6 giga electron-volt synchrotron radiation), claimed to be the most powerful in the world, to set up "the Center for Highly Advanced Technological Research and Development (CHATRD),.

(3) Construction of a new city

One of the most vital characteristics in the NHT project is to construct a new city.

3. Summary of Development Program

(1) Program to Raise the Technology Level of the Existing Industries

The Nishi-Harima Technopolis Foundation of Industry and Technology (NHTFIT) carries out the measures as follows.

- Program for personnel training in the Nishi-Harima
- Program for research and development
- Program for technology and information exchanges
- Program for financial supports and low interest loans

(2) Program to Attract Highly Advanced Industries to the Nishi-Harima

The following efforts are going to be implemented by the project:

- To improve the subsidy system for the attracted firms etc.

(3) Program for Urban Functions

- To create a new city etc.

4. Progress

A construction of a new city which will be vital to the NHT is now just under way. Its ground breaking ceremony was held on October 1st, 1986. Industries and research institutes are planned to start being built in the parts of a new city from 1988.

The new Research Institute of Fundamental Technology has already been attached to the Himeji University of Technology since 1985. And the special task force has been working on planning the CHATRD. With regard to the 6GeV-SR device, not only government officials but also business people and scholars as well have made tremendous efforts to bring it in and it appears to be promising. As a result, every program on the NHT project is now steadily moving forward pretty well.

KIBI-KOGEN TECHNOPOLIS

1. Basic Idea

Okayama Prefecture is about to make a rapid progress.In1988 the Seto Bridge connecting Chugoku and Shikoku, and the new Okayama Airport will be completed at the same time.Furthermore, in order to use this bridge and airport, the construction of Sanyo Expressway and Chugoku Expressway are making steady progress.Thus, we are seeing a new are a where Okayama Prefecture emerges as an important position for the traffic in the western Japan.

Kibi Highlands Technopolis is trying to realize a new type of industry for Okayama Prefecture fit for the new era, developing high-tech industry and revitalizing the local industry. Thus, it will spread the resulting effects throughout the prefecture under the cooperation of industrial, academic, and government circules as one body.

2. Concrete Objectives

The high technological industry to be introduced.

a. Biotechnology industry.

b. Medical equipment manufacturing industry

c. Electronics industry

3. Summary of Development Program

(1) preparation of the basic ground.

a. Mother city-Okayama city

Consolidate and expand the city functions of economic, culture,education,infomation.

b. Kibi Highlands City

Proceed with creatting a city where people can live in good harmony with others as well as the nature. Also prepare various institutions of research and development in Kibi Highlands City.

c. Ozu Industrial Complex

As the center of the inland and airport-linked industries, we will preserve a site-scale area of 54.7haatfirst phaseifor construction of factories.

d. New Okayama Airport

As the main point to promote the airport-linked industry, this airport will have a 2000 meter runway which is jet-operational(1st phase) constructed by 1988.

(2) Promotion of consolidated technology through cooperation of industrial, academic, and governmental circles.

Establish Okayama Prefectural New Technology Promotional Foundation

1. Establish credit grant provisions for venture businesses, etc

3. Prepare the facilities for small and medium size businesses to improve technological capacity.

a. Kibi Highlands New Science Hall, where the display of advanced technology, training functions and R & D for biotechnology support functions are also available.

b. Biotechnology Laboratory

Other facilities such as "laboratory (or research room) for rent" and "billeting facilities" will be constructed in Kibi Highlands City.

4. Progress

Since 1984 when the development plan was approved, the development programs were carried out steadily. In addition to introduction of biotechnology and electronics industries, the promotion of high technology by the concerted efforts of the industrial, academic, and governmental circles has come to show its effect. With the completion(March 1987) of development of Ozu Industrial Complex South District (24.8ha) and the opening of the new airport, the progress of development plan for Okayama Highlands Technopolis is expected to accelerate remarkably.

HIROSHIMA-CHUŌ TECHNOPOLIS

1. Basic Idea

Holding a central position between the Chugoku and Shikoku regions, Hiroshima Prefecture is blessed with mild climate and abundant nature

In the north, the Chugoku Mountain Range can be found stretching from east and west, the southern region is covered with several basins and plateaus, forming an expensive coastline where it meets the Seto Inland Sea.

Hiroshima Prefecture distinguishes itself from the other prefectures with its high population of approximately 2,820,000 and the high volume of shipment of manufactured goods and wholesale and retail sales further contributes in the economic sphere to Hiroshima central position in the Chugoku and Shikoku Regions' social and economic importance.

In light of the above factors, we propose construction of the "Hiroshima Central Technopolis." The plan aims to establish a high level of cooperative effort between Hiroshima (father city) and Kure (mother city), with the city of Hiroshima playing a pivotal role in the region.

We hope to promote the formation of the Kamo Academic Town, which features University of Hiroshima.

The creation of this educational and test/research institutes, in addition to the activation of local industries, will be linked to the establishment of high technology research and development base for the whole western Japan, is our fundamental goal.

2. Concrete Objectives

The "Hiroshima Central Technopolis" is aimed at the formation of a technological development base for the 21st century by the introduction of new high-tech industries which leads to higher technology and activation of regional industry. Concurrently, the "Hiroshima Central Technopolis" is promoing the internal technological development of the region's industries along with the accumulation of regional industries such as steel making, ship building and industrial machine manufacturing.

3. Summary of Development Program

(1) High technology program of regional industry

① Establishment of strategic research and development field—Mechatronics, new materials, electronics, bio-technology, new energy

②Planning for high technology introduction and technology transfer system

(2) Introduction program for test and research institutes and new high-tech industries

Establishment of an international material science research center and an innovative technology center as a central research institute

(3) Program for the establishment of city function

Promotion of the formation of the Kamo Academic Town and construction of "Innovation Park"

4. Progress

Along with the perfection of the enterprise location promotion system, the advancement of industrial parks as well as the idential areas and enterprise locations centerd upon electronic-related industries are all progressing satisfactorily.

Various plans, such as New Hiroshima Airport scheduled to open in 1993 and Higashi Hiroshima Station for Bullet trains, scheduled to open in 1987, are being devised for realization.

Also, establishment of a road network which will link the Technolopolis region internally and externally is making steady progress.

Industry/University/Goverment joint research and regional enterprise technological innovation projects including a promotion of interchange of different industries are being implemented under the assistance of the "Hiroshima Prefecture Industrial Technology Promotion Institute" and the satisfactory results are gradually coming.

UBE TECHNOPOLIS

1. Basic Idea

Yamaguchi Prefecture is promoting the creation of "Yamaguchi full of vitality and richness" based on our ultimate goal of"Creation of warm-hearted hometown Yamaguch". However, in order to make a rapid progress in developing our region, we will have to tackle the following basic development projects.

(1) Develop the industrial structure peculiar to the region.

(2) A drastic promotional measure for the local mining area extending to fourteen cities and towns in Yamaguchi Prefecture.

(3) Formation of a city capable of fulfilling the role of the central leadership for the entire prefectural areas.

As one of the strategic steps to solve the structual problems in the region,we have introduced the vitality of the advanced high technology, with which we have developed a new city called "Ube Phenix Technopolis".

2. Concrete Objectives

(1) Industry and R&D Complexes.

① Electronics ② Mechatronics ③ Newly developed and polymer materials

④ Fine chemicals ⑤ Biotechnology

⑥ Marine resources development

⑦ Energy development

⑧ Software davelopment

(2) Creation of cities.

For the formation of industrial and R&D complexes, recruitment of manpower is important. With this reason in mind, we plan to form "a town where everyone wants to live" which are complete with high level facilities, for education culture, medical care, information, consumers' needs as well as various employment opportunities.

3. Summary of Development Program

(1) Programs for developing the local industrial technology.

The Yamaguchi Industrial Technology Development Organization was established as the prefecture's nerve center for developing local technology. This organization promotes the following enterprises:-R&D facilities and equipment leasing

① Personnel training ② Information service

③ Research and studies, etc.

(2) Program for introducing advanced high-tech industry.

Extention of supplementary and loan system to the incoming businesses.

(3) Program for substantial city functions.

Promotion of Ube local commercial areas modernization plan, and preparation of living facilities for such project as construction of Ube new city.

4. Progress

Since the development plan of technopolis was approved,we have seen a satisfactory progress in term of volume and quality. This is verified by as many as 46 companies who have relocated into Yamaguchi Prefecture, including Yamaguchi Nihon Electric Company, THK, T.U.Electronics, Fuji-tsu Yamaguchi System Engineering.

Also there came other advanced technology companies who began to operate in the 8 kings of industrial categories which Ube Technopolis promotes.

We are also making a steady progress in creating the industrial foundations and R&D principal point by achievingestablishment of Yamaguchi Prefectural industrial Technology Development Organization, invitation of Tokyo University of Science and Engineering, construction of Mechatronics Engineering Center, Yamaguchi Techno-Park,developments of Tohki industrial complex, and Miyo Industrial complex, and preparatory work for Techno-road.

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KAGAWA TECHNOPOLIS

1. Basic Idea

In Kagawa Prefecture, we are currently carrying out three large scale projects, constructing the gigantic bridge for Koshima-Sakaide route to link Honshu and Shikoku island, Shikoku Expressway, and new Takamathu Airport. In addition, we have a variety of other construction projects both on the industrial and city levels. Thus Kagawa Prefecture stands at an important time today when we must plan to make a big step forward into the 21st century.

With these in the background, Kagawa Technopolis will make the best use of the good natural environment and the rural areas of Setouchi. Using the effect of Seto Grand Bridge as much as possible, we are planning to develop a bridge-associated manufacturing, agricultural, and fishing industry in good harmony.Thus we are aiming at creating a city which is full of activities and attractiveness.

2. Concrete Objectives

(1) Formation of industrial and R & D complex

① Biotechnology ② Mechatronics

③ New materials ④ Software

(2) Formation of Rural Culture City

In addition to the functions of the highly developed city of Takamathu, which is the core of the local cities, and those of the central cities in the local areas such as Marugame, Sakaide Zentsuji and other cities, a new project has been in progress at Utatsu-machi, which will become a center for advanced technology development. The project is for creation of a new town that integrates the whole areas for housing, business, service, and monufacturing.

While these plans make the services of a high-leval city easily accessible,we can make best use of the areas rich with the green,and create a living environment in harmony with the functions such as education, research, recreation, culture,and welfare. Thus we are aiming at realizing a rural culture city surrounded by the scenic and rich nature of Seto-inland sea.

3. Summary of Development Program

(1) Programs for developing the regional industry into high-tech industry.

- Finantial credit grant from Kagawa Prefectural Industry Technology Promotional Foundation.
- Interest supplementary project.
- Training and guidance program.
- Research and study project.
- Launching various promotional policies to attract R & D type businesses. etc.

(2) Programs to attract advanced technology industry.

- Develop various protective industrial policies to promote advanced technology factories. etc.

(3) City function reinforcement program.

- Development of new Utatsu city.

4. Progress

To bring up our regional technology up to a much higher level, Kagawa Prefectural Industry Technology Promotion Foundation, and Prefectural Technology Center are positively carrying out various projects such as seminars on different high technologies, and training classes.There are also other related activities such as various meetings to exchange technical information, joint study groups, and establishing and operating information exchangs meetings participated by people from different industry.

In addition, a number of high-tech businesses of new material and softwares have come to establish one after another. The development of New Utatsu City, the three large scale projects, and the construction of the seaside industrial highway are making satisfactory progress.

KURUME-TOSU TECHNOPOLIS

1. Basic Idea

The fundamental ideology of the Kurume-Tosu Technopolis plan is to develop a community based on humanity, culture and technology. The plan is intended to create a promising new community on an international scale aimed at the 21 st century. The Kurume-Tosu area is composed of two prefectures, Fukuoka and Saga. The Chikugo River, the largest river in Kyushu, and the famous Chikugo fields are located in this area. Kyushu's largest city, Fukuoka, is very near, and abundant technological and human resources are available. Kurume-Tosu also serves as the central hub of Kyushu's extensive public transportation network; including trains, buses and highways.

All of these factors are ideal to form the foundations of a technopolis. In order to this plan to progress as quickly as possible, industry, the education system and government must work together. For only with these combined creative resources and knowlege can create a technological foundation, supported by the development of industry for the next generation of Kyushu. The society we seek has abundant human energy as well as the serenity of nature.

2. Concrete Objectives

〔1〕 Establish a technology development foundation to support industry development for the next generation of Kyushu.

〔2〕 Exploit the full potential of the Kurume-Tosu area to become a large modern city within the sphere of Fukuoka.

〔3〕 Develop a means by which the people who are supporting the foundation will not forget the cultural heritage of the area, because before new technology can be developed, the foundation must be secure in the area's traditions and culture.

(1) Research and Industry objectives

Although the Kyushu National Testing Laboratory, universities and industries are already here, we would like to have more factories, research and technical services come here in the future.

(2) City-planning

To promote industrial development with high technology, we must have secure manpower force. Therefore, we promote city-planning that includes not only factory sites but also irrigation, transportation and residence planning.

3. Summary of Development Program

(1) Technological development and Information Gathering

The main points of the plan is to set up the Kurume-Tosu Technopolis Center to develop local industry technology are as follows:

〔1〕 New technopolis industry development

〔2〕 Liability funding and low-financing

〔3〕 Training manpower

〔4〕 Technical development

(2) Program completion develop

To complete the development program, we want to contact another technopolis and set up a transportation system between them, thus expanding our resources.

4. Progress

In recent years, advanced enterprises that develop software and other related enterprises, especially in the area of medicine, keep increasing. In Kurume, for example the new telephone information system can provide many services which were not available previously. This includes things such as unlisted and hidden telephone number services.

Also, last November, the Kurume-Tosu Information Company was established. Progress is the core of research and development.

KAN-ŌMURAWAN TECHNOPOLIS

1. Basic Idea

We are looking foward to building a New Nagasaki Prefecture, which is compatible with her own strong character, specific geografical and historical conditions.

Especially for the industrial development of the prefecture, the Nagasaki technopolis project is being stepped up as one of the most important enterprises.

Nagasaki technopolis project aims at improving and diversifying the industrial structure of Nagasaki prefecture by accelerating new moves, with major emphasis on the technopolis reagion, and spreading the effects of the new industrial structure to all parts of Nagasaki prefecture.

2. Concrete Objectives

As a concrete step to diversify the industrial structure in this area, the prefecture is to induct and foster such industries as electronics, mechatronics and new materials. It also aims at inducting and developing the industries for manufacturing marine development equipment in the 21st century, with mechatronic as the core.

It is expected that shipments of manufactured goods will increase to ¥669.5 billion (2.5 times as large as those in 1980) and that the number of industrial workers will increase by 7,000, to about 35,000, in 1990.

Also,the population of the technopolis area is expected to increased to 478,000 人, or about 37,000 more than that in 1980.

3. Summary of Development Program

To attain the goal of the Nagasaki technopolis projects, the prefecture will step up both hard and soft measures with major emphasis on the induction and development of high technology, industries and the improvement of the technological level of local enterprises.

As one of the steps to improve the technological level of local enterprises, the Nagasaki Industrial Technology Development Center was founded in July 1979.

This center is to be the major organ to establish measures for local enterprises. It will engage in such activities as guaranteeing debts, advancing low-interest-bearing loans and guiding over study activities.

Also, the prefectural industrial and ceramic experiment stations will reorganize to strengthen their functions.

On the other hand, the prefecture will step up the construction of industrial zones and improve the supply of water for industrial use, housing and road networks, in order to induct high-technology industries into Nagasaki prefecture.

Especially, the construction of road across Kyushu (Omura to Ureshino) has vital importance of the technopolis project. So, the profecture aims at completing it in 1989.

4. Progress

In recent years, the construction of infrastructures, such as Nagasaki Airport, a road cutting across Kyushu (Tarami, Nagasaki to Omura) and Isahaya Industrial zone, made progress in the area on the eastern coast of Omura Bay, situated between the cities of Nagasaki and Sasebo.

Such big enterises as Nippon Fairchild K-K and Komatsu Electoronic Metals, and high technology Takachiho Mfg., have advanced into thir area in succession.

Local enterprises too are endeavoring to improve their technological level on the basis of the accumulated shipbuilding technology to extricate themselves from the dependence on shippbuilding. Nagasaki technopolis is making good progress.

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KENHOKU-KUNISAKI TECHNOPOLIS

1. Basic Idea

The key word of the "Toyonokuni (Province of Abundance) Technopolis" is local initiative. In another words, each community is to take the initiative in promoting industries and activating the community by making the best use of its peculiarities.

Three principles are derived from this key concept:

(1) Decentralization of industries —— in order to ensure far-reaching effects of the project

(2) Co-existence of agriculture and high-tech industries —— so that both can develop together

(3) Fostering of human resources —— for the acquisition of a skilled, active laborforce

2. Concrete Objectives

(1) Industrial Complexes

As for the formation of industrial complexes, not only high-tech industries are invited to operate in the area but also local medium and small-sized industries are encouraged to get involved in high-tech industries. it is also important to apply high advanced technology to primary industries.

In addition to the IC and IC-related industries which have reached a fairly good concentration, we encourage the operation of various high-tech industries such as electronics, mechatronics, biotechnological and software industries.

(2) Improving the Living Conditions

The northern part of the Prefecture including Kunisaki Peninsula where the Technopolis is being constructed is blessed with beautiful nature and abundant historical and cultural assets.

We encourage the improvement of the living environment and urban facilities from a wide viewpoint so that residents can lead a comfortable and fulfilling life.

3. Summary of Development Program

(1) Programs to make local industries attain a high-tech level

* Establishment of the Oita Prefecture Advanced Technology Development Research Institute
* Projects by the Oita Prefecture Regional Technology Promotion Foundation, the establishment of and the various training programs offered by the Human Resources Center
* Construction of Soft Park as the information hub etc.

(2) Program to Invite High-Tech Industries

* Decentralized distribution of high-tech industries to meet their needs

(3) Programs to Improve Urban Facilities

* Activating communities in a large area through the designation of five technopolis areas etc.

4. Progress

More and more electronics and mechatronics industries have begun to operate according to the airport-based industrial zone project, even after the approval by the national government of the technopolis development plans in 1984.

As a result, both the industrial amount shipped and the number of industrial workers have shown a considerable increase.

On the other hand, research activities have been showing smooth development with the establishment of the electronics section of the Oita Prefecture Industrial Development Laboratory and the Oita Prefecture Advanced Technology Development Research Institute.

MIYAZAKI TECHNOPOLIS

1. Basic Idea

Miyazaki Sun Technopolis combines the natural beauty and moderate climate of Miyazaki with the convenience of internationally focussed resort facilities. The central theme is, "a beautiful city blesscd with sunshine invites people which in turn invite industry." We are currently proceeding with projects aimed at expanding this new city, guided by the three elements of Science, Urbanity, Nature.

Miyazaki Sun Technopolis is both an international and local city, which functions as a resort city as well as a center of high-tech industry making it the first of its type in Japan.

It plays a very important role in spreading development effects throughout the entire prefecture, promoting the development of overall industry. Miyazaki Sun Technopolis is strategically located so as to help to build Miyazaki into "Japan's Best Place to Live"

2. Concrete Objectives

(1) Industrial complex for research and development

① Industrial complex

- Leading high-tech industrial groups
- Local high-tech industrial groups
- Urban high-tech industries

② Complex for research and development

- Independent research ···
- Joint research and development

(2) City planning

To take advantage of this beautiful resort city and its centralized resort facilities, we will proceed to make Miyazaki City more attractive by the following 3 projects.

- To build Miyazaki New Town for Education and Research.
- To develop a residential area which will cover a total area of 1,200 hectares.
- To expand the synthetic traffic networks such as Miyazaki Harbor and expressways and Miyazaki Airport etc.

3. Summary of Development Programs

(1) Regional frontier technology development project

We joint research, develop and exchange technological information between industry, universities and government. Subsidies information, training, guidance and other services are provided through the Foundation for Miyazaki Prefectural. Technology Information.

(2) Program to advance high-tech industry

- Improving elements such as the promotion of high technology, research and development, and the development of manpower.
- Increasing subsidy systems for location of high-tech industry.

(3) Program to improve city facilities

- Constructing a synthetic culture park
- Completing an advanced telecommunications network

4. Progress

Large scale development began with the construction of high-tech enterprises and their subsidiaries companies producing V L S I (very large-scale integrated circuit), precision machine etc. In addition there has been considerable expansion of plants by firms already in the area.

Steadily the effects of building technopolis are appearing. Companies closely associated with industries within the technopolis block are moving to locate their operations in the areas outside the block. As the result of the expanding industry around them, the business of local firms is steadily increasing, too. Corporation within the block have experienced a yearly increase in orders of 50%

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KOKUBU-HAYATO TECHNOPOLIS

1. Basic Idea

In the last days of Tokugawa syogunate, Kagoshima prefecture ("Satsuma" was the name in those days) introduced the results of the Industrial Revolution for the first time in Japan, and played a great part in the civilization and enlightenment of Japan.

In recent years, taking the opportunities of the successive construction and opening of the Kagoshima Space Research Center, the Sendai Atomic Power Station, the Kagoshima International Airport and the Kyushu Expressway, not only the advanced industries which develop semiconductor and new materials, but also their co-oporative subcontract factories are budding, and forming one of the bases of Silicon Island Kyushu.

To offer employment opportunities, to make local economy and industry active and also to contribute to the economic progress of our country that aims to be supported by high technology, the Kokubu Hayato Technopolis ultinately aims to construct the "International industrial city adjacent to the airport with bright sunshine, blue sea and greenery", making the best use of excellent natural environment, easy access to the Kagoshima International Airport, the southern gateway of our country, accumulation of the advanced industries, high-grade function of Kagoshima city and so on.

2. Concrete Objectives

To make our prefectural economy and industry active, we promote industrial development with high technology by carrying out various positive enterprises, which are summed as follows.

(1) Upgrading the local industries' technology
(2) Introduction of advanced industry
(3) Development of infrastructure

To carry out these enterprises effecively, it is also important for industry, academic world and administration to be in a body.

3. Summary of Development Program

(1) Program for developping local industry's high technology
  i) Promotion of the Kagoshima Industrial Technology Association (KITA)'s project
  Its project is as follows ;
  - Provide subsidies to the enterprises
  - Consign researches to the universities and academic institutes
  - Guarantee credits and supply low-interest loans etc.

  ii) Completeness of the research and development (R&D) facilities
  - Prefectural General Center for Industrial Technology
  - Research and Development Institute for Fine Ceramics Products etc.

  iii) Manpower training
  iv) Development of the information facilities
(2) Program for introduction of advanced industry
  i) Construction of the Kokubu-Uenohara Techno-Park as a core of the industrial site
  ii) Extention of financing and assistance program for industries etc
(3) Program for developping infrastructure

4. Progress

In the Kokubu-Hayato Technopolis area, the projects, such as bring-up of business enterprises involved in R&D activities by KITA, development of the R&D facilities, and consolidation of the cooperative system by industry, academic world and administration, are being smoothly propelled.

Also the Kokubu-Uenohara Techno-Park and the Prefectural General Center for Industrial Technology, which are the most important projects of the Technopolis construction, are now under promotion.

KUMAMOTO TECHNOPOLIS

1. Basic Idea

We are going ahead with support for our country by developping high technology industry and an information oriented society for the 21st century. We are taking an important role by promoting propel Technopolis constraction in the area around Kumamoto city. It is at the heart of our prefectural natural and human resourses with Industry and science University, that we can accumulate information resources and promote internationally open technology and an information city. Industry, the academic world and administration are incorporated on excellent terms while the excellent natural environment and accumulation of technical colleges and advanced enterprises, help promote industrial development wich high technology, industrial activity which can stand international competitin. Moreover we are planning to change our city to one in which people can live in the unconstrained and cultural environment.

2. Concrete Objectives

(1) Industrial inferiority complex

We develop strategic industry with the four high technological fields shown below as the core.

1. Applied machine industry
2. Bio-technology industry
3. Electronic appliances industry
4. Information systems industry

(2) City planning

This is the most important thing for promoting industrial development with high technology and secure manpower. Therefore we put overall residential environment including education, medical treatment, culture and welfare in order.

3. Summary of Development Program

(1) Program for developping local industry's high technology

The Kumamoto Technopolis Foundation was established as the core of a project for developping local technology. Then it's project is as follows.

* Technical development
* Information service
* To train manpower
* Liability funding and low-financing

(2) Program for introduction of advanced industry

* Extension of financing and assistance programs for industries

(3) Program for completing the function of the city

* Constraction of a distribution industry center in Kumamoto

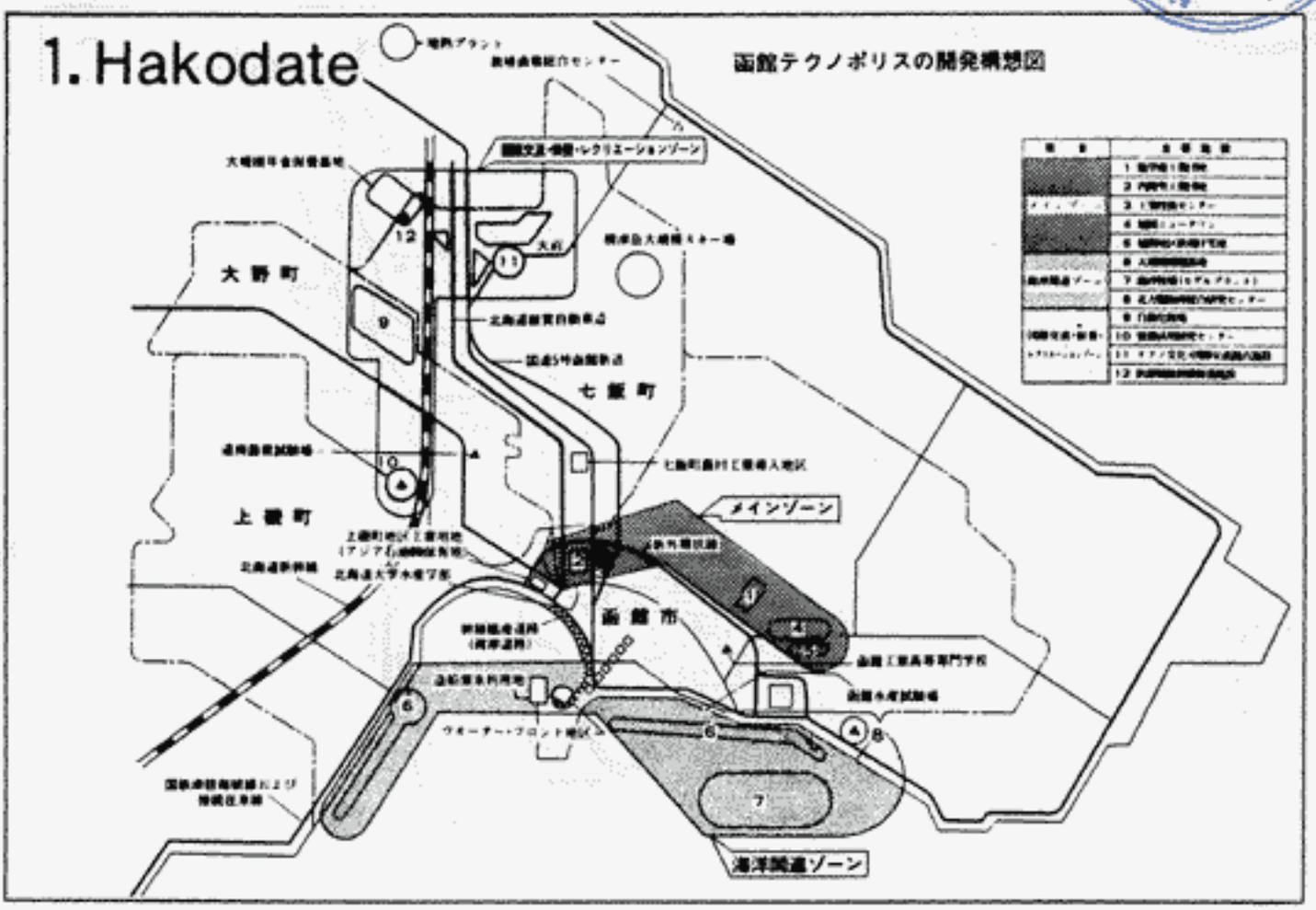
4. Progress

In recent years, advanced enterprises which develop semiconductors and software have relocated in our prefecture. Since Kumamoto was designated as a technopolis the number of the enterprises which are located in the technopolis area have gone on increasing, especially the number of the information related enterprises.

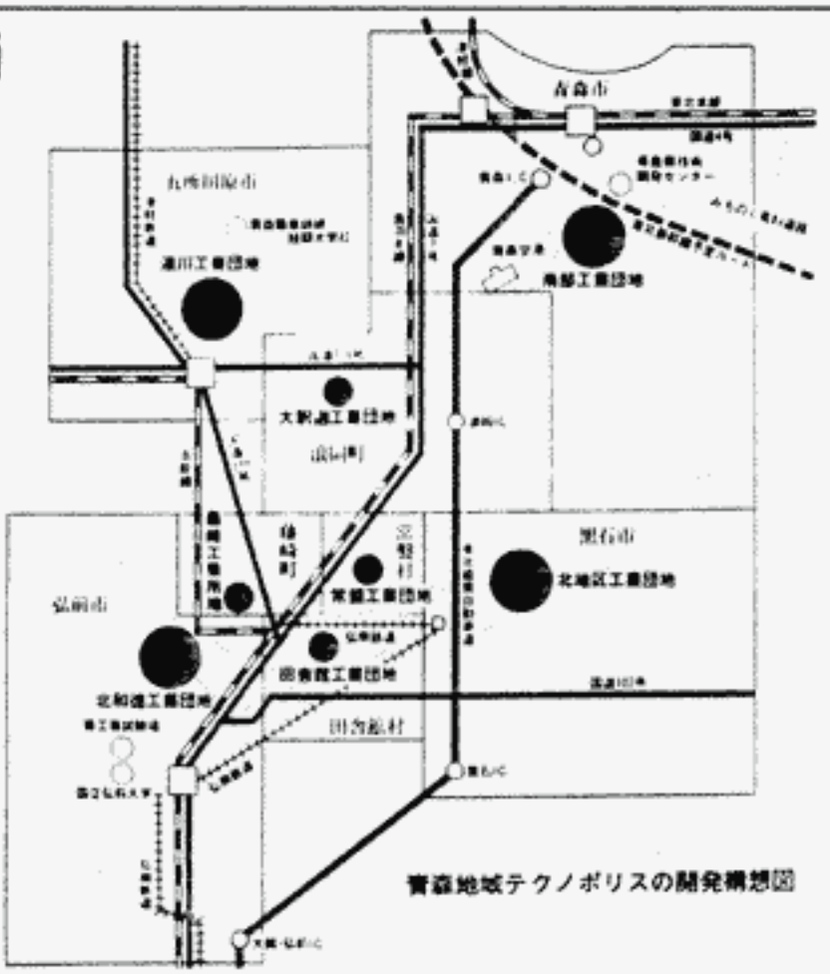
Also the Techno research park, the most important project of the Technopolis construction is under promotional. The applied electronics research center was already opened and the Technopolis Center is complete, thus the core of research and development construction is making good progress.

■ILLUSTRATION

1. Hakodate

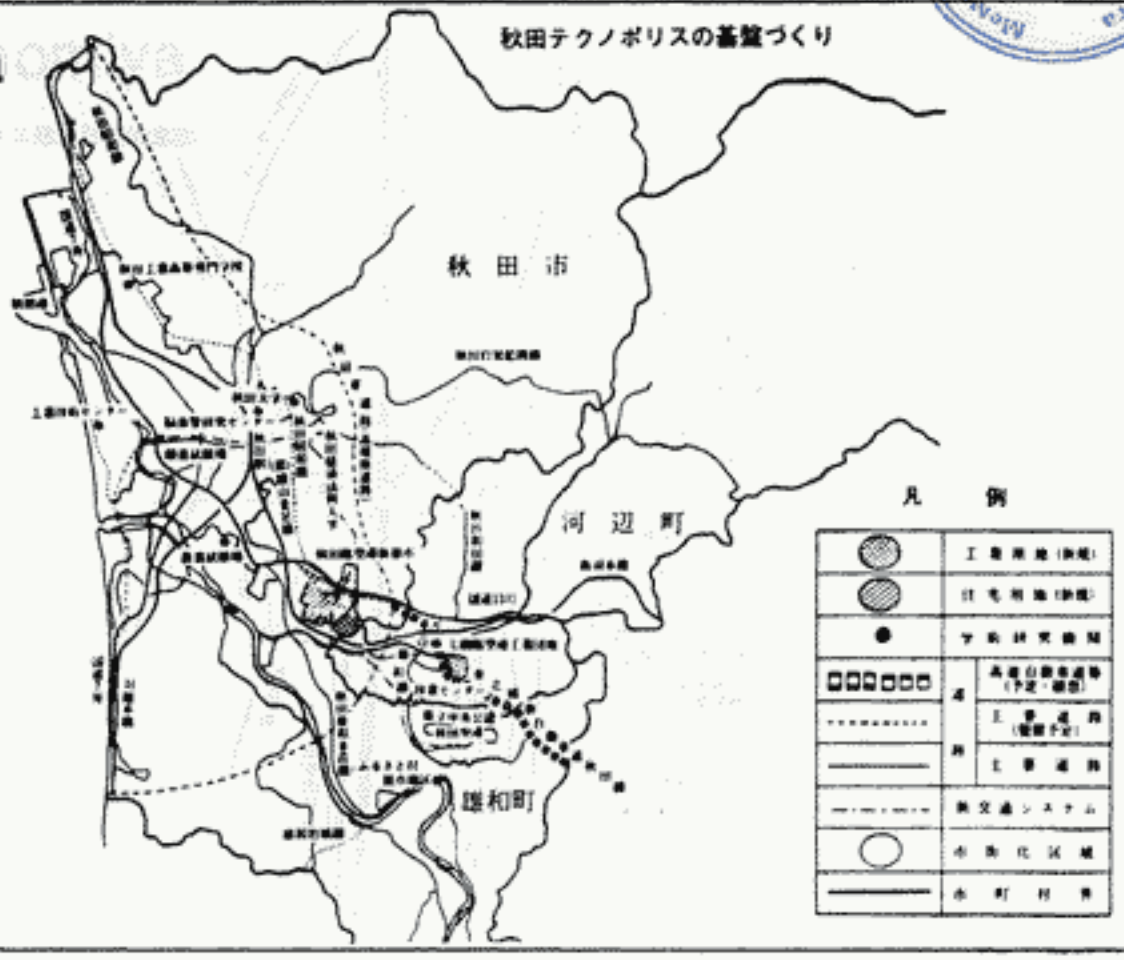


2. Aomori

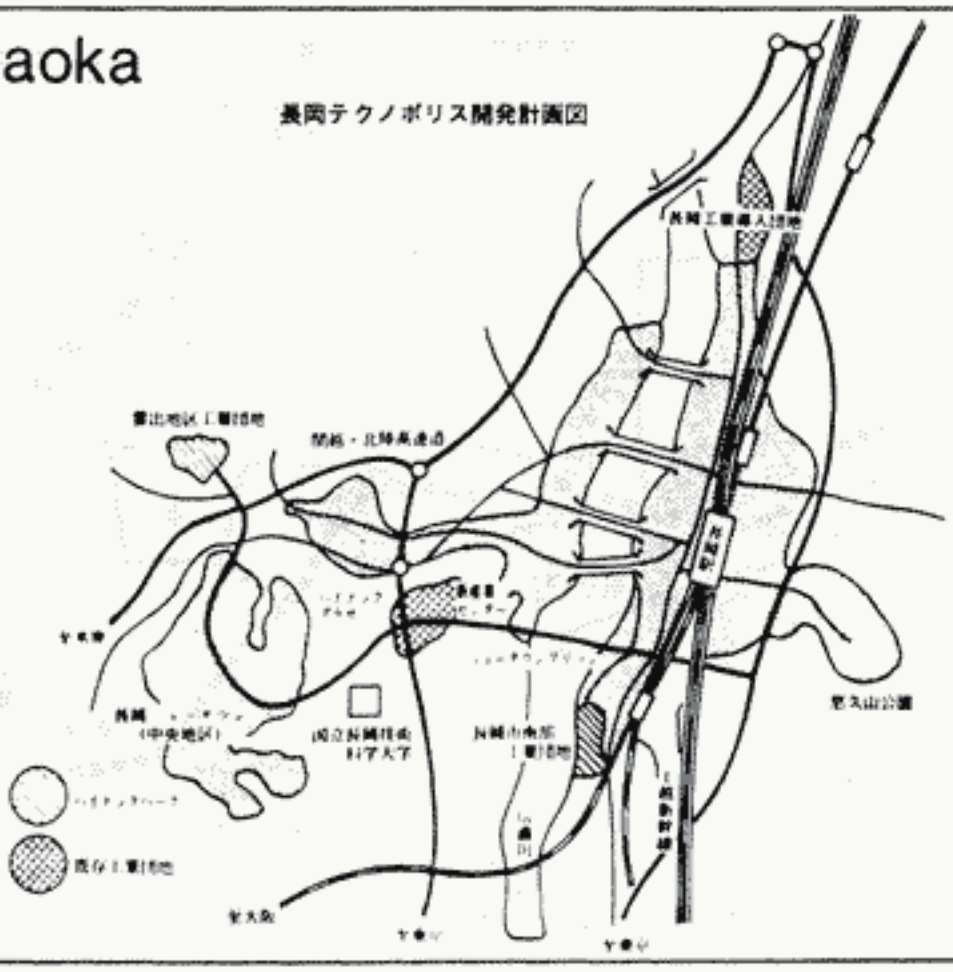


青森地域テクノポリスの開発構想図

3. Akita



4. Nagaoka



■ILLUSTRATION

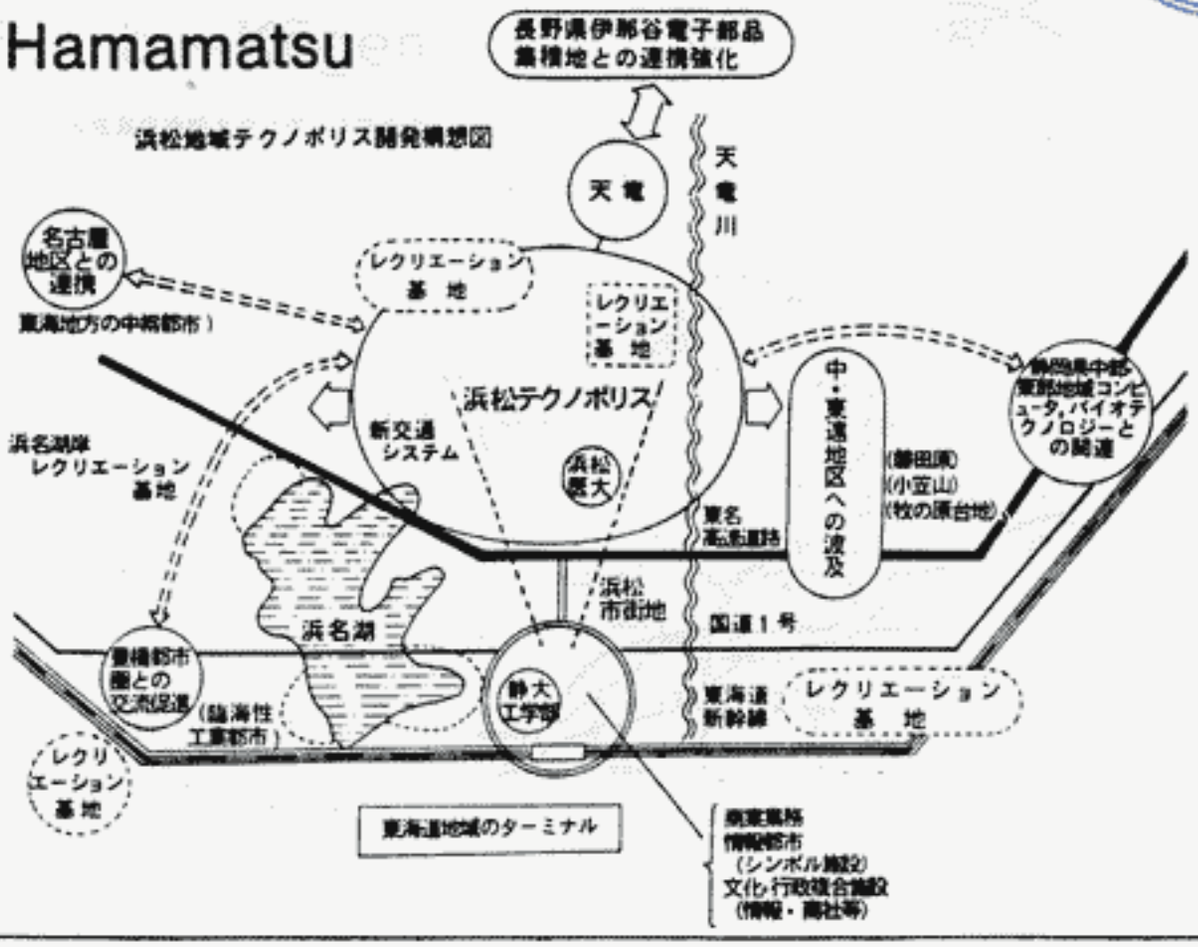
5. Utsunomiya

宇都宮テクノポリス開発計画概念図

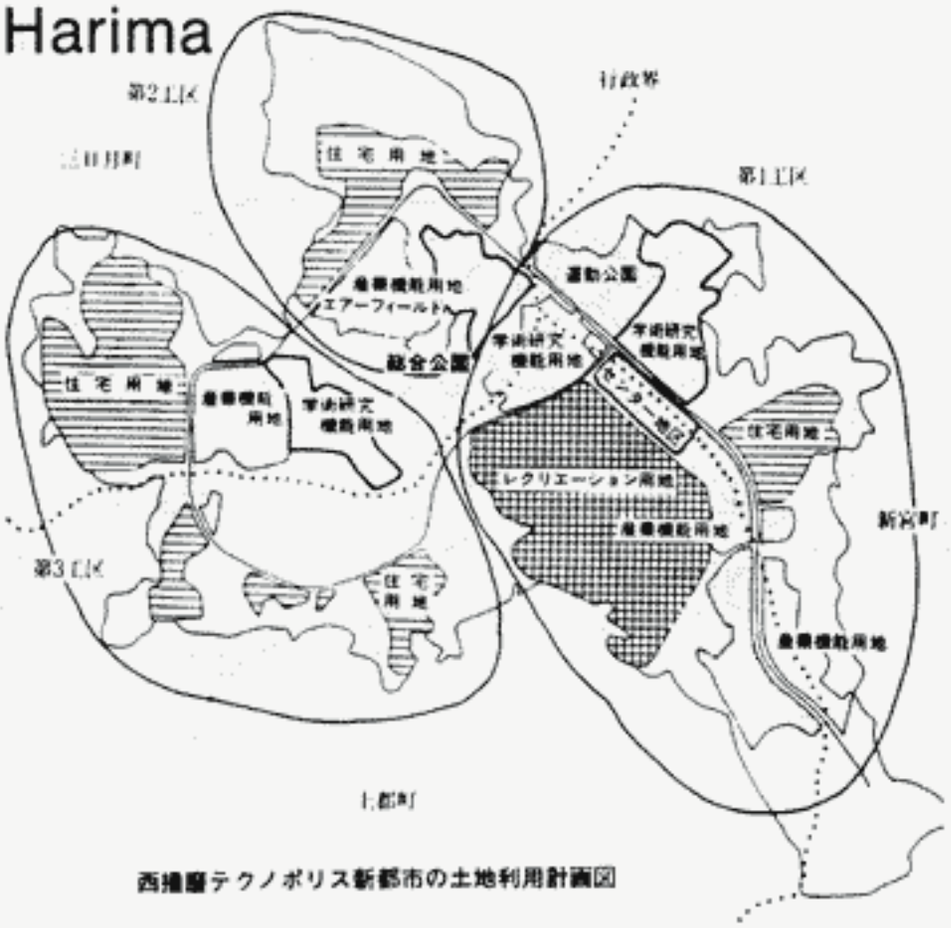
6. Toyama

富山テクノポリス開発計画図

7. Hamamatsu



8. Nishi—Harima



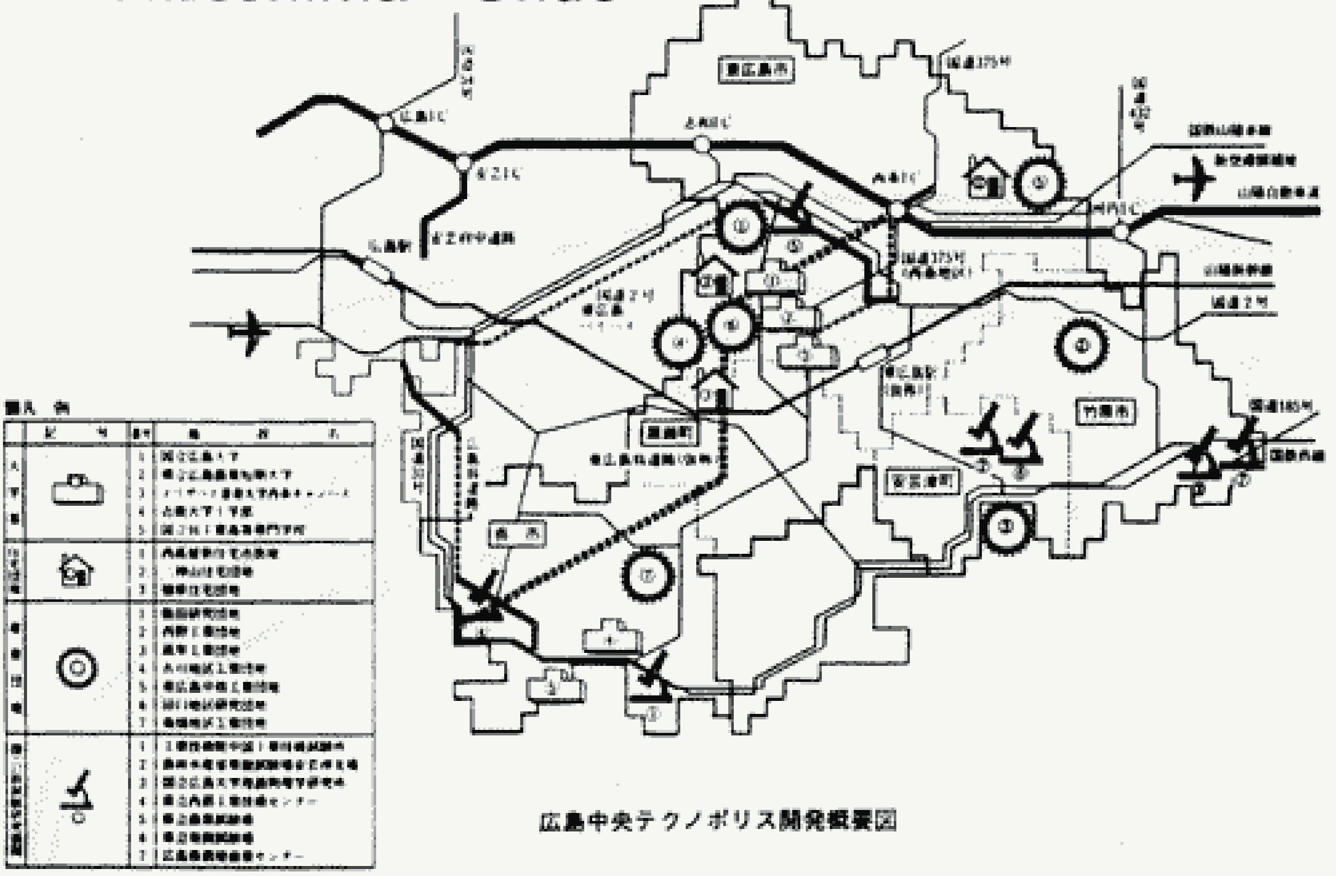
西播磨テクノポリス新都市の土地利用計画図

■ILLUSTRATION

9. Kibi—Kōgen

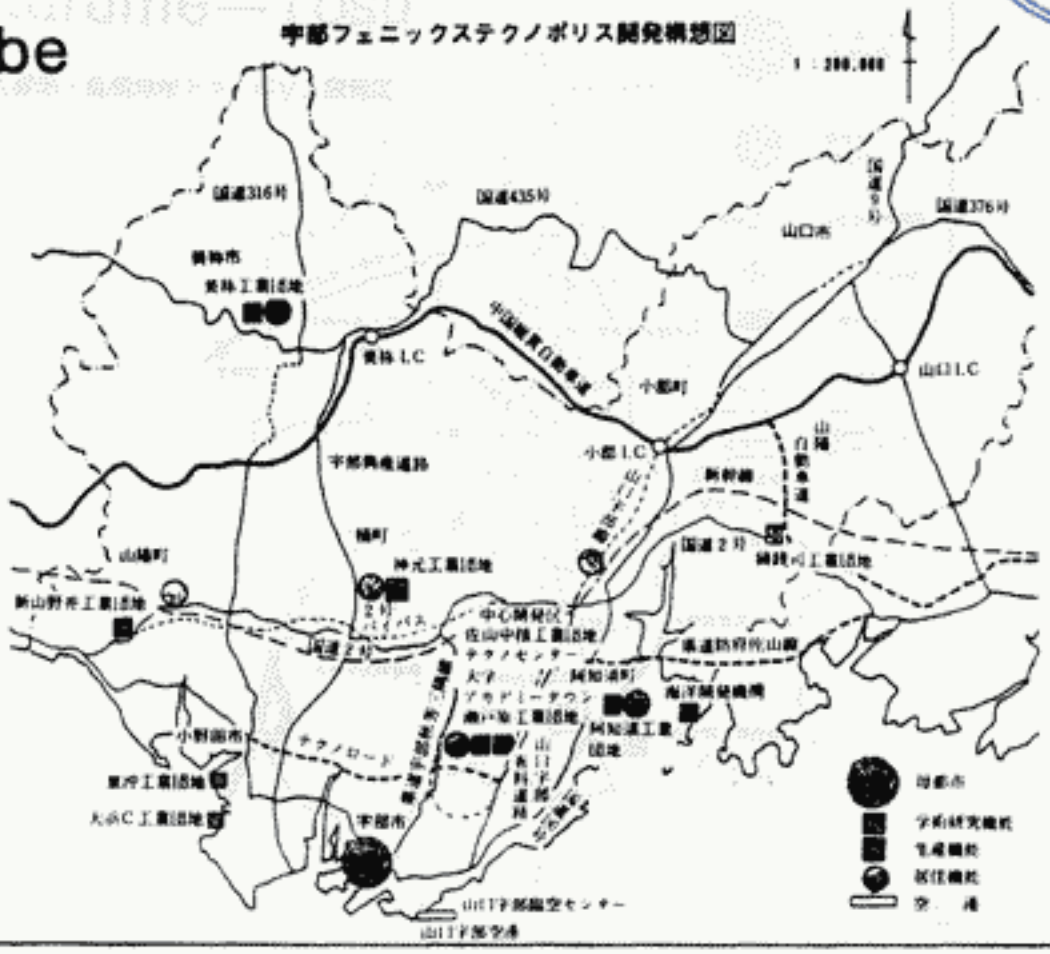
吉備高原地域テクノポリス概念図

10. Hiroshima—Chuō

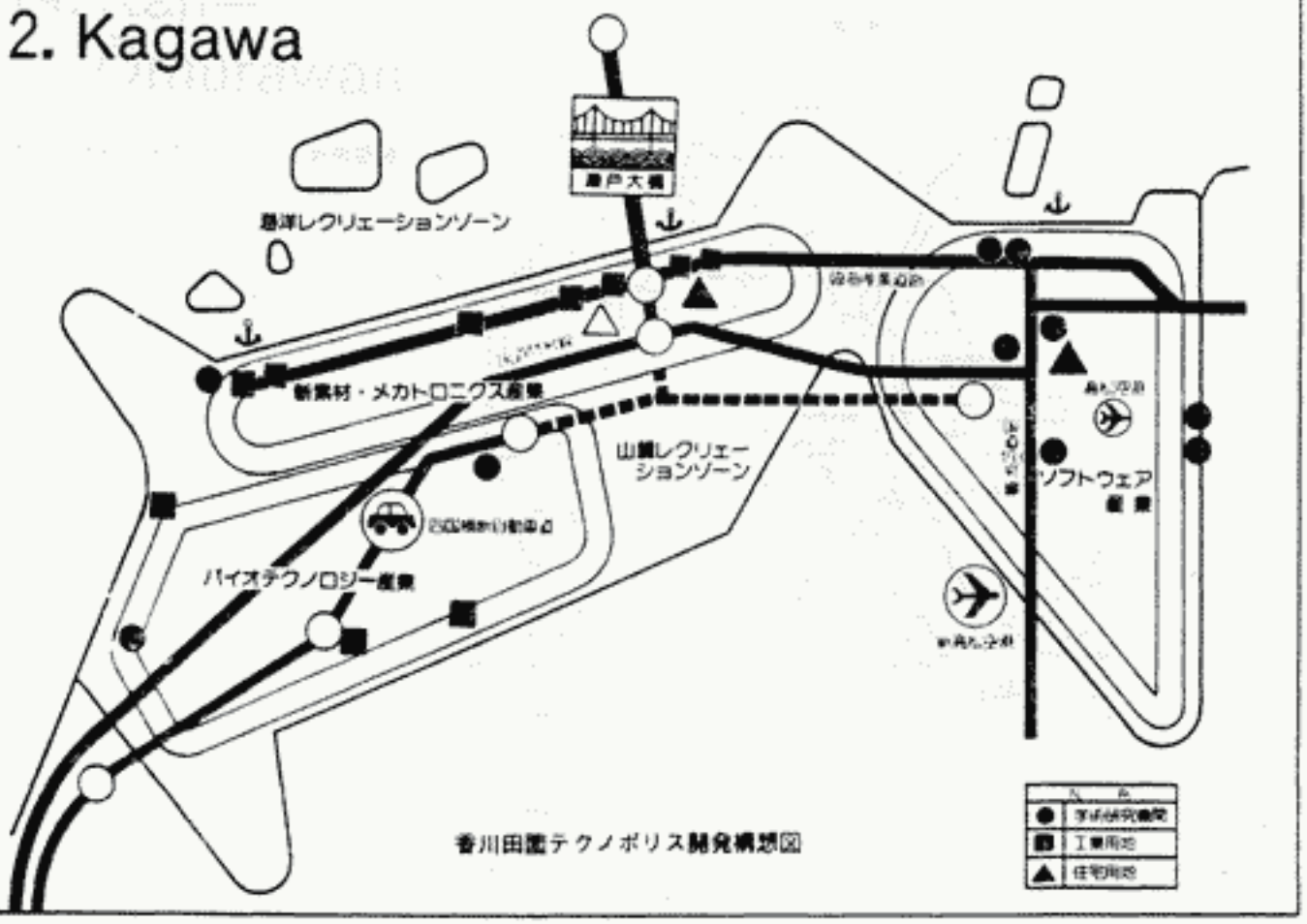


広島中央テクノポリス開発概要図

11. Ube



12. Kagawa



香川田園テクノポリス開発構想図

■ILLUSTRATION

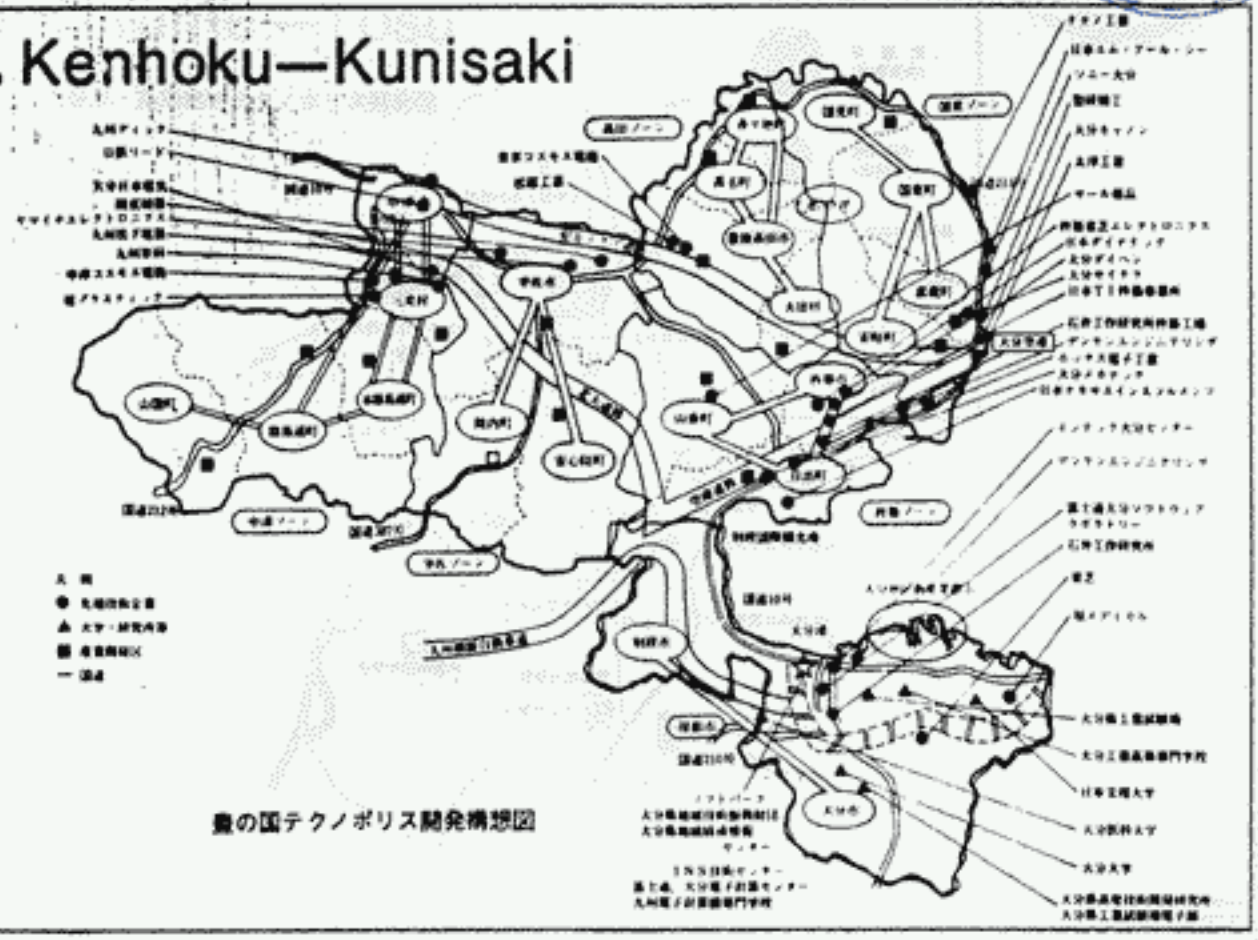
13. Kurume—Tosu

久留米・鳥栖地域テクノポリス開発図

14. Kan— Ōmurawan

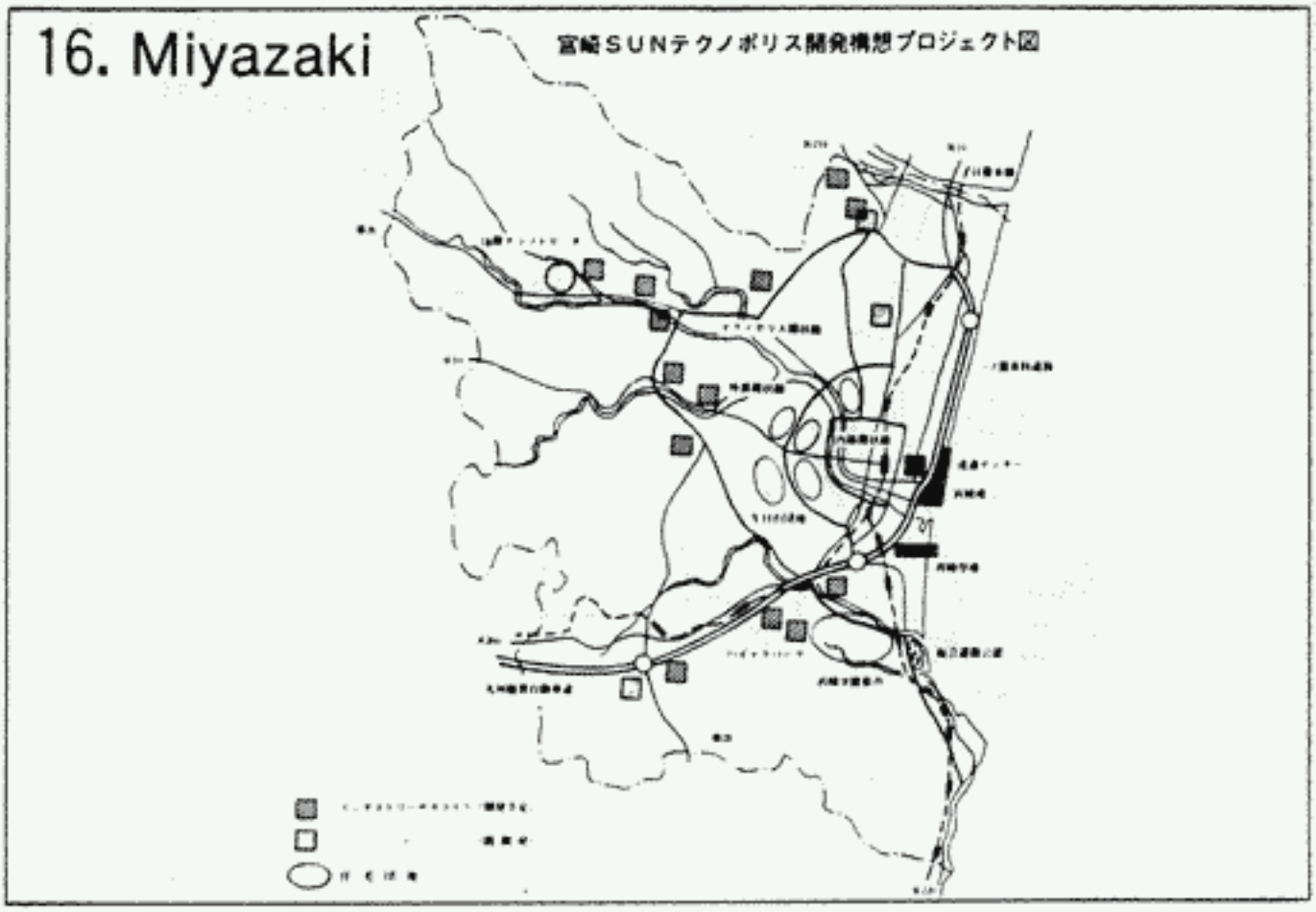
ナガサキ・テクノポリス開発構想図

15. Kenhoku—Kunisaki



豊の国テクノポリス開発構想図

16. Miyazaki



宮崎SUNテクノポリス開発構想プロジェクト図

■ILLUSTRATION

17. Kokubu—Hayato

国分隼人テクノポリス開発計画図

18. Kumamoto

熊本テクノポリス開発構想図