

Chapter 7 Outline of the Action Plan



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7.1 Structure of the Action Plan

7.1.1 Classification of Projects and Programs by Subsector

The action plan for promotion of industrial development (particularly SMEs) in the target region is proposed as a set of projects and programs. As shown in Table 7.1-1, a total of 38 proposals are contained in the action plan. In the final stage of the third field survey, more than 60 projects/programs were proposed and evaluated by the study team in terms of feasibility, imperative, rationale and effectiveness. In the evaluation process, the study team received comment and advice (including major issues) from organizations and personnel who will be affected by each proposal. Finally, 38 projects/programs were selected and 10 proposals (Project No.1 through 10) which received high scores in the evaluation are attached as the Annex to this report. Other projects/programs are outlined likewise.

While this study deals with industrial promotion of the four provinces including Nakhon Ratchasima, many of the proposed projects/programs are applicable to other regions or areas; they can be customized to a particular region or area by taking into account local conditions peculiar to each area. Table 7.1-1 classifies the 38 proposals by subsector and field of support, as indicated by symbols on the right column (also refer to the matrix table in Table 7.1-2a). For instance, the project marked "all A" means that it can be applied to all the six subsectors under the study and covers support for market development. Note that there is no proposal covering market development for the chemical industry and production technology related to textile and shoes industries, because the plan envisages that these subsectors will be promoted by attracting investment from outside, and thus investing companies are assumed to have necessary capabilities.

Table 7.1-1. PROJECTS/PROGRAMS LIST

Project No.	Project Title	Target Field
1	Establishment of Regional Industrial Development Office	all H
2	Introduction of One Village One Product Movement	6A & B
3	Establishment of Provincial Industrial Development Fund (PIDF)	all C & H
4	Food / Agro-processing Applied Research and Business Development Center Project	1A & D
5	Introduction of Top Executive Seminar Program	all B
6	Diagnostic Scheme for Production Center	6A, B & E
7	Expansion of PRID Programs	5B & F
8	Promotion of Two Step Contract	2A & 3A
9	Establishment of the Marketing and Design Center	2A, D & 6A, D
10	Establishment of Inland Container Depot	all F & G
11	Issuance of the Recommendation Letter by the Provincial Community	all C
12	Establishment of Nakhon Ratchasima International School	all F & H
13	Development of Entrepreneur Fostering Programs (EFP)	all E & F
14	Development of Buri Ram Industrial Estate	all F & G
15	Establishment of Rural Incubation Center	6F
16	Construction of the New Indochina Highway	all G
17	Local Products Quality Warranty System	all H
18	High-tech Human Resource Development Program in Nakhon Ratchasima	all E
19	Establishment an Investment Information System in Each Province	all F
20	Establishment of an International Flight Company	2G
21	E-commerce Development Project in the Provinces	3A & 6A
22	Construction of Natural Gas Pipeline	4G
23	Establishment of a Brand Fashion Outlet Center in Buriram	5A
24	Development of Chemical and Science Industrial Park	4F & G
25	Consulting program for textile and apparel industries	5E
26	Green & Clean Province Campaign	5F
27	Establishment of the Design Department in SUT	6A
28	Strengthening of Micro Scale Finance Schemes	6C
29	Cooperative Development Project for Promoting Indigenous Industries	6H
30	BOI Rural Industries Promotion Project	6F
31	Introduction of Small Scale Cooperate Relief Funds	6C
32	Establishment of Regional Steel Material Center	2D & 3D
33	Sales Channel Match-making Scheme for Indigenous Industries	6A
34	Establishment of a SI Promotion Center Nakhon Ratchasima	3A
35	Establishment of Paktongchai Silk Center	5B & C
36	Management Transformation Program for Small Scale Company	6B & E
37	Worker Education Program	all B
38	Tapioca-Ethanol Processing Project	1D

Table 7.1-2 (a) PROJECT/PROGRAM MATRIX

Supporting Field \ Sub-Sector	1. Agro/Food Processing	2. Electrical/ Electronics	3. Machinery/ Metal Working	4. Chemical	5. Garment/ Footwear	6. Traditional/ Indigenous
A Market Development	1A	2A	3A	4A	5A	6A
B Human Resource Development	1B	2B	3B	4B	5B	6B
C Finance	1C	2C	3C	4C	5C	6C
D Production/Process Technology	1D	2D	3D	4D	5D	6D
E Management	1E	2E	3E	4E	5E	6E
F Investment Promotion	1F	2F	3F	4F	5F	6F
G Infrastructure	1G	2G	3G	4G	5G	6G
H Institution/Regulation	1H	2H	3H	4H	5H	6H

Table 7.1-2 (b) PROJECT/PROGRAM MATRIX

Supporting Field \ Sub-Sector	1. Agro/Food Processing	2. Electrical/ Electronics	3. Machinery/ Metal Working	4. Chemical	5. Garment/ Footwear	6. Traditional/ Indigenous
A Market Development	4	8, 9	8, 21, 34		23	2, 6, 9, 21, 27, 33
B Human Resource Development	5, 37	5, 37	5, 37	5, 37	5, 7, 35, 37	2, 5, 6, 36, 37
C Finance	3, 11	3, 11	3, 11	3, 11	3, 11, 35	3, 11, 28, 31
D Production/Process Technology	4, 38	9, 32	32			9
E Management	13, 18	13, 18	13, 18	13, 18	13, 18, 25	6, 13, 18, 36
F Investment Promotion	10, 12, 13, 14, 19	10, 12, 13, 14, 19	10, 12, 13, 14, 19	10, 12, 13, 14, 19, 24	7, 10, 12, 13, 14, 19, 26	10, 12, 13, 14, 15, 19, 30
G Infrastructure	10, 14, 16	10, 14, 16, 20	10, 14, 16	10, 14, 16, 22, 24	10, 14, 16	10, 14, 16
H Institution/Regulation	1, 3, 12, 17	1, 3, 12, 17	1, 3, 12, 17	1, 3, 12, 17	1, 3, 12, 17	1, 3, 12, 17, 29

7.1.2 Relationship between the Action Plan and Existing Measures

The 38 projects/programs are proposed for future implementation or detailed planning/design. They are classified into the following three types according to their relationship with existing projects: (1) those which capitalize on or utilize existing projects; (2) those which are based on projects that have previously been considered; and (3) those which are newly proposed under this study. As shown in Table 7.1-3, new projects account for nearly one half. Needless to say, existing projects and those which have been considered have high levels of need and/or viability, and these factors have been taken into consideration in the evaluation process. Importantly, existing projects are proposed with the intent to reinforce them in terms of viability and effectiveness. For instance, the PRID program is budgeted until March 2001 and no plan is specified afterwards. The study proposes the program to extend not only its duration but its geographical coverage.

The above classification is difficult to make for some projects that are considered to be borderline cases between a new project and an already considered one. For instance, the establishment of the Regional Industrial Development Office is a ramification of the proposal to reorganize the IPC, which has been discussed for some time. It is considered to be essential in developing and maintaining a formal system to drive industrial development efforts in the region. On the other hand, the project related to the fostering of the chemical industry in Chaiyaphum depends on the progress of the ASEAN potash mining project. It will not move forward unless the primary project is commercialized.

Similarly, the local SME promotion measures, which strategic direction is recommended in JICA's Final Report on the Follow-up Study on Supporting Industries Development and the Mizutani report, have been used as the basis of the respective proposal under the action plan. The report correctly pointed out the major issues related to the development of SMEs in rural areas, namely the provision of an effective promotion system and the development of human resources. In particular, it emphasized the importance of and the difficulty in supporting and fostering

Table 7.1-3. PROJECT/PROGRAM CLASSIFICATION

<i>Projects/Programs which have been already implemented</i>	
No. 2	Introduction of One Village One Product Movement
No. 7	Expansion of PRID Programs
No. 14	Development of Buri Ram Industrial Estate
No. 25	Consulting program for textile and apparel industries
No. 37	Worker Education Program
<i>Projects/Programs which have considered before, but not implemented</i>	
No. 1	Establishment of Regional Industrial Development Office
No. 6	Diagnostic Scheme for Production Center
No. 10	Establishment of Inland Container Depot
No. 13	Development of Entrepreneur Fostering Programs (EFP)
No. 15	Establishment of Rural Incubation Center
No. 16	Construction of the New Indochina Highway
No. 17	Local Products Quality Warranty System
No. 19	Establishment an Investment Information System in Each Province
No. 21	E-commerce Development Project in the Provinces
No. 22	Construction of Natural Gas Pipeline
No. 24	Development of Chemical and Science Industrial Park
No. 29	Cooperative Development Project for Promoting Indigenous Industries
No. 35	Establishment of Paktongchai Silk Center
No. 36	Management Transformation Program for Small Scale Company
No. 38	Tapioca-Ethanol Processing Project
<i>Projects/Programs which are newly proposed</i>	
No. 3	Establishment of Provincial Industrial Development Fund (PIDF)
No. 4	Food / Agro-processing Applied Research and Business Development Center Project
No. 5	Introduction of Top Executive Seminar Program
No. 8	Promotion of Two Step Contract
No. 9	Establishment of the Marketing and Design Center
No. 11	Issuance of the Recommendation Letter by the Provincial Community
No. 12	Establishment of Nakhon Ratchasima International School
No. 18	High-tech Human Resource Development Program in Nakhon Ratchasima
No. 20	Establishment of an International Flight Company
No. 23	Establishment of a Brand Fashion Outlet Center in Buri Ram
No. 26	Green & Clean Province Campaign
No. 27	Establishment of the Design Department in SUT
No. 28	Strengthening of Micro Scale Finance Schemes
No. 30	BOI Rural Industries Promotion Project
No. 31	Introduction of Small Scale Cooperate Relief funds
No. 32	Establishment of Regional Steel Material Center
No. 33	Sales Channel Match-making Scheme for Indigenous Industries
No. 34	Establishment of a SI Promotion Center Nakhon Ratchasima

small enterprises. The proposal in the action plan attempts to address these issues. Most SME promotion measures proposed in the report, except for financial support, are incorporated into the action plan. As for financial support, the study team agrees with the report's conclusion that the strengthening and expansion of the SIFC and the SICGC is required in rural areas, and efforts are actually made in that direction. In reality, however, small enterprises in rural areas are often not eligible for the SIFC/SICGC programs, so that the study team believes that they should be taken care of under a different framework other than traditional SME promotion policies and programs. It is therefore proposed to enhance the micro-finance system by establishing the funds for fostering small enterprises and providing them through various channels, such as the SIFC, the BAAC, and a new regional development body (RIDO) proposed under this study.

Among the proposed projects/programs, the following nine projects can be implemented by the private sector alone or under its leadership. It is recommended that a local FTI or the chamber of commerce take initiative in cooperation with related organizations.

- Project 5 Introduction of Top Executive Seminar Program
- Project 8 Promotion of Two Step Contract
- Project 12 Establishment of Nakhon Ratchasima international School
- Project 13 Development of Entrepreneur Fostering Programs (EFP)
- Project 20 Establishment of International Flight Company
- Project 23 Establishment of a Brand Fashion Outlet Center in Buri Ram
- Project 32 Establishment of Regional Steel Material Center
- Project 36 Management Transformation Program for Small Scale Company
- Project 38 Tapioca-Ethanol Processing Project

7.1.3 Relationship between the Action Plan and Development Effects

A leading part in the proposed projects/programs in the institutional build-up and human resource development for regional industrial development. Though all projects/programs take considerable time to start up and require long-term responses, they are requested as a project that should be started as early as possible.

In view of operational realities when some of the projects are in the same supporting field or implemented by the same body, they may be started at different times.

Finally, the relationship between the results of program analysis under this study and projects/programs proposed to address them is reviewed. At the first step, key issues related to industrial development, as identified at the workshop on each province, and their direct causes are summarized below.

Key issues and direct causes	Area
Key issue for Nakhon Ratchasima: "Local products are not competitive" Direct causes: <ul style="list-style-type: none"> a) Poor marketing capability b) High production cost c) Insufficient production skills d) Non-compliance of product quality with international standards e) Insufficient government support for R&D activities f) Failure to use appropriate technology 	A D D D H D
Key issue for Buri Ram: "Entrepreneurs lack knowledge to develop existing or new business" Direct causes: <ul style="list-style-type: none"> a) Entrepreneurs cling to traditional business style. b) Lack of opportunity to learn new knowledge c) Lack of effective government support a) Entrepreneurs are unable to find industrial information. e) Entrepreneurs are not interested in learning management know-how with their own efforts. 	B B H F B
Key issue for Surin: "Entrepreneurs lack sufficient knowledge and understanding of industries they are operating" Direct causes: <ul style="list-style-type: none"> a) Entrepreneurs are unable to find industrial information. b) Lack of experts on specific subsectors c) Local people do not know the way to learn management know-how. d) Local people are not willing to learn new knowledge. e) Entrepreneurs do not want to cooperate with each other. 	F B B B E
Key issue for Chaiyaphum: "Lack of coordination between the public and private sectors" Direct causes: <ul style="list-style-type: none"> a) Chaiyaphum's industrial development plan does not show a clear direction. b) The government does not motivate investors. c) There is no one-stop source of obtaining information on local conditions and investment procedures. d) Entrepreneurs are reluctant to cooperate with each other. 	H F F E

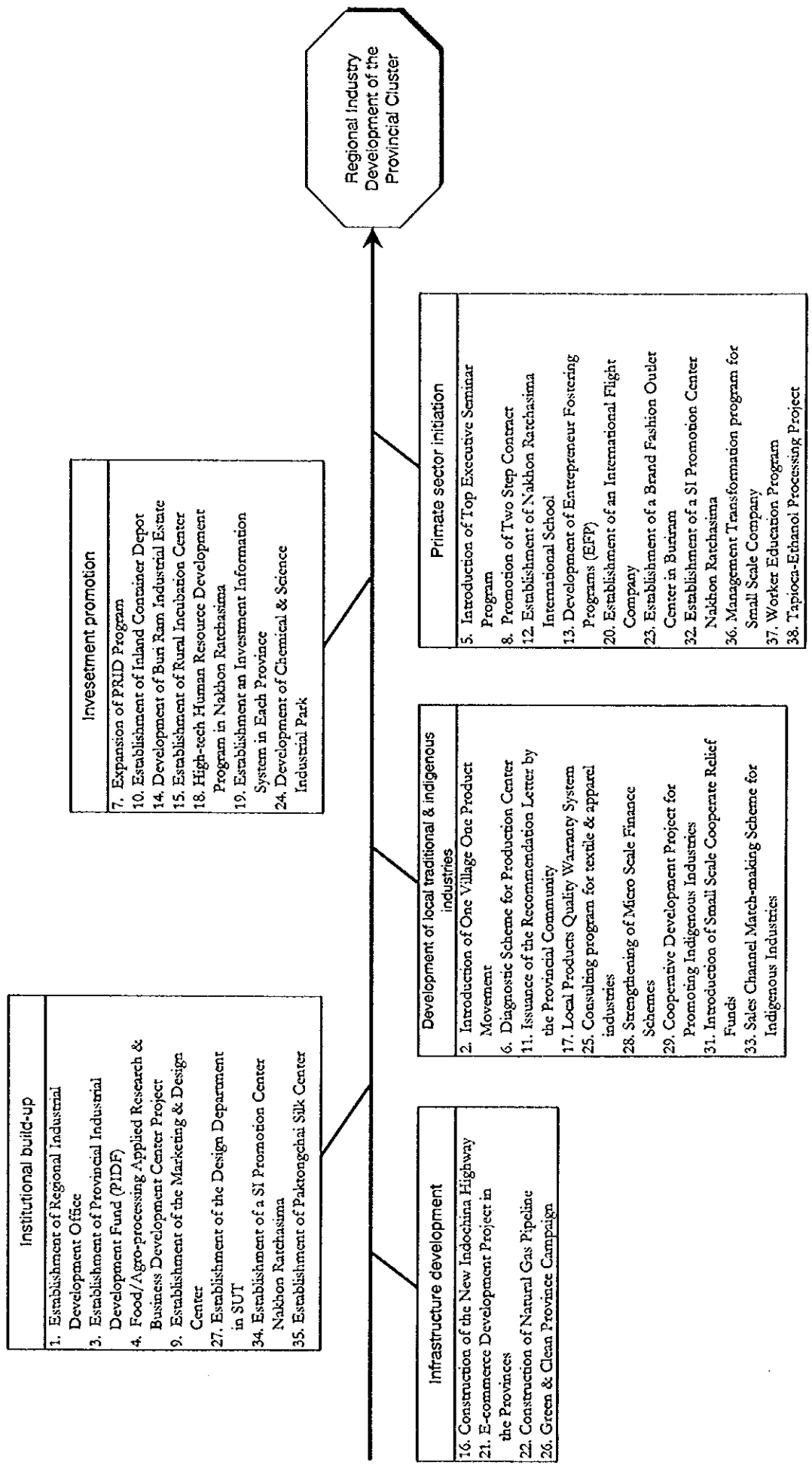
The direct causes identified above are classified according to the supporting field in Table 7.1-2(b). Six items, largest in number, are classified to the field

of human resource development, followed by four items each related to production/process technology and investment promotion. In contrast, there is no item related to finance and infrastructure. This is because these factors are indirectly related to the industrial development process. It should be noted that four items (direct causes) related to production/process technology were all identified at the Nakhon Ratchasima workshop, reflecting the fact that the province is most advanced in industrial development among other provinces. This means, these items are not considered as direct causes commonly seen in the four provinces. Moreover, a large number of support projects/programs related to production/process technology are implemented under the Industrial Restructuring Program (IRP). In consideration of these factors, this study focused on proposal of the projects/programs related to human resource development and the build-up of a formal organization and system including investment promotion.

Needless to say, it takes a relatively long period of time until human resource development and organizational/system development efforts take effect. For this reason, it is important to start the action plan as early as possible. In this sense, projects based on the existing ones and those viable under the private initiative are expected to produce results in the short term. Also, extrinsic development efforts will bring significant benefits within a relatively short period of time, so that an emphasis should be placed on attraction of investment from outside, which should be started from mobilization of necessary resources, including the provision of the information management system, the organizational setup to provide effective information service.

In conclusion, extrinsic development efforts to attract investment from outside will start concurrently with intrinsic development efforts including human resource development and the fostering of local industries accompanied by institutional reforms. Then, the former will produce social and economic effects earlier than the latter. As pointed out earlier, the major issue facing the target provinces is to shift their industrial base from agriculture to manufacturing. To induce the process, the region should attract factories that will help generate the industrial culture. It is important to build and operate a large number of factories, regardless of type, including labor-intensive light industries looking for cheap labor. Thus, the first important step is to have an organization, a system and resources to launch investment promotion activities.

Figure 7.1-1. PROJECT/PROGRAM COMBINATION



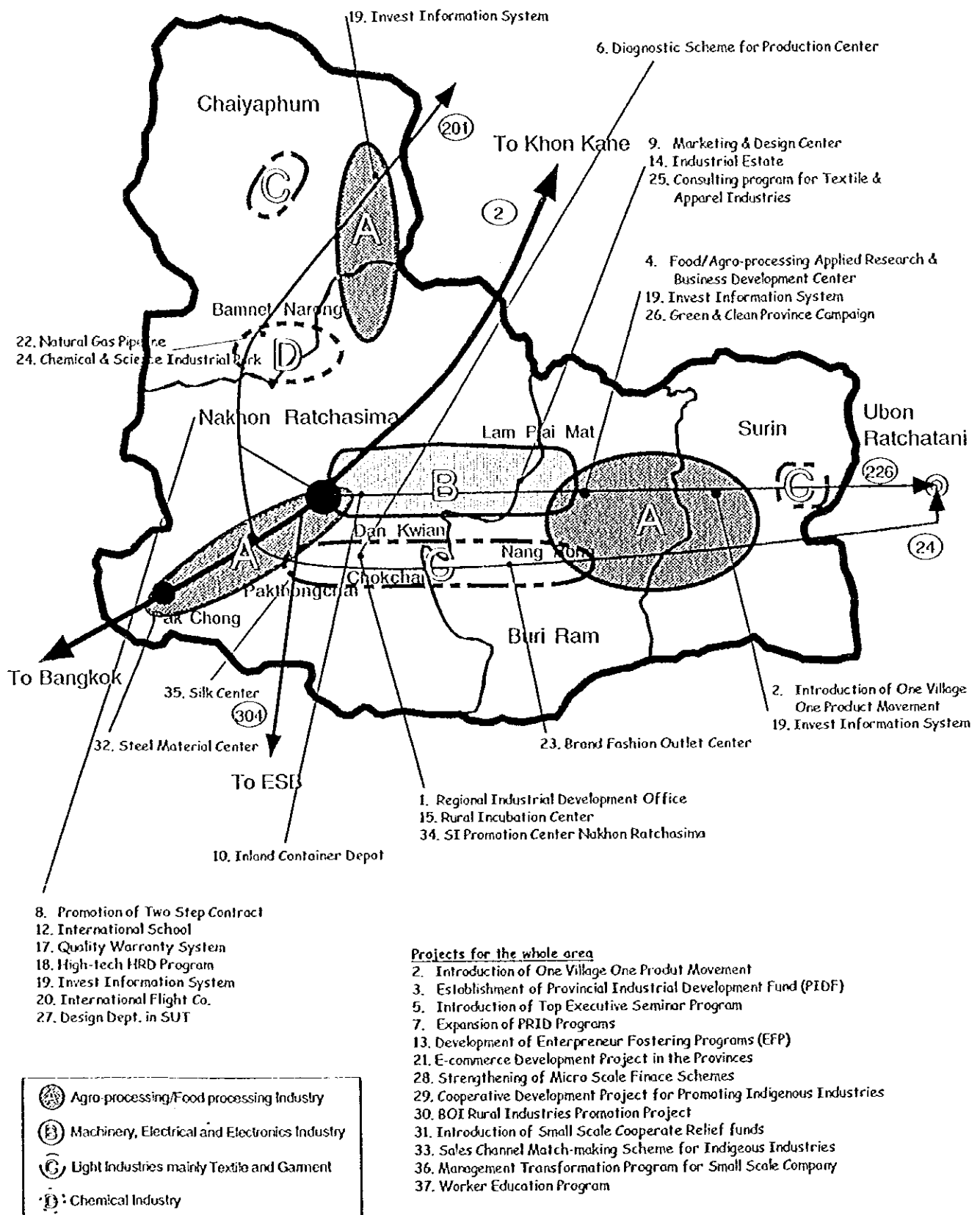


Figure 7.1-2. PROJECTS/PROGRAMS IN THE TARGET CLUSTER

ANNEXES



1. Project Title:	Establishment of Regional Industrial Development Office (RIDO)
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2. Responsible Agency: Leading agency: Ministry of Industry (OIE, DIP, and PSO)

3. Ratoinal

First of all, there is lack of a regional industrial development master plan in Thailand. Since the Joint Public-Private Consultative Committee (JPPCC) of Provincial-level was established in 1983, each province has been usually held once two months chaired by the provincial governors and compromise members from government sector and representatives from major private association such as the Federation of Thai Industries (FTI) and Provincial Chamber of Commerce (PCC). The JPPCC, however, is not so functional in recent year because members tend to discuss the present topics in stead of looking over the middle and long term regional development plan, so that the committee can not reach a consensus on the direction of regional development. And a conclusion usually comes to a problem of no responsible agency and no budget. As for regional industry development, formulation of a master plan on the regional industry development is indispensable in response to the wishes and needs of the regional people.

Apart from public and private cooperative, the Thai administrative system is characterized by a highly centralized decision-making or top-down system in other word. This is also reflecting to the local administration system. For instance, each province has a MOI Provincial Industrial Office (PIO), which comes under the authority of the Office of the Permanent Secretary but stuffs of PIO are dispatched from each department of MOI where they are belong to, and responsible for their department's duties in the province. Eleven Industrial Promotion Centers (IPC) under the DIP are responsible for DIP's duties that is to provide technical services, such as training, advice, information and finance, to industrial enterprises in the regions, but they do not work for other department of MOI. As far as the present administrative system is concerned, it should be realized the limitations of ability to promote the overall regional industry development. There is an urgent need for powerful nucleus body to promote the regional industrial development under supervising of MOI.

Moreover, there is lack of the investment promotion work from the regional-level. In spite of the Thai Government encourages the decentralization policy of industry, there is no system of promotion work by a provincial or regional level for new investment from outsiders. Of course, six regional offices of BOI are "window" of investment promotion but those offices are following a policy, which is prepared in Bangkok. They cannot make own promotion strategies and measures, which are based on regional development needs. Consequently, they have a few regional promotion seminar in the Bangkok Metropolitan Region (BMR) and never happened in the foreign countries represent by the regional community. The decentralization of existing industries and the promotion of new enterprises away from BMR should be promoted not only by the central government but also by regional community.

There is strong needs to establish newly an organization to cover the above activities in the region. Thai is creation of regional promoter for industry development.

4. Objective

- (1) To upgrade and enhance operation capability of regional industrial development organization.
- (2) To coordinate relevant institutions of regional industrial development
- (3) To develop and incubate local entrepreneurs
- (4) To provide production facilities for the entrepreneurs
- (5) To promote regional investment

5. Project Focus Group

- (1) All manufacturing sector
- (2) Local entrepreneurs

6. Outcome

- (1) Definite and unified industrial development direction and measures in the region
- (2) Increasing number of establishments and employees
- (3) Establishment of small scale industrial estates and factory building
- (4) One stop service center

- (5) Diversification of regional industry

7. Activities

- (1) Thai Government organizes national level RIDO Committee.
- (2) (The Government enacts the Regional Industry Development Act).
- (3) To establish the Regional Industrial Development Office (RIDO) 6 (which is a tentative name) based on the existing Industrial Promotion Center (IPC) 6 and IPC 7 of MOI under cooperation of NESDB, SMEPO, BOI, IEAT, FTI, TCC and regional administration. New office will be a semi-governmental corporation, however, the chairperson will be assigned from the private sector. Organization chart of the office is shown in Figure 1. This Corporation becomes the first RIDO of the total 14 RIDO in Thailand.
- (4) The corporation formulates a regional industrial development policy and strategy.
- (5) RIDO 6 will be organized the following department (centers).
 - 1) One-stop Service Center
 - 2) Regional Incubation Center
 - 3) SMEs Development Center
 - 4) Investment Promotion Center
 - 5) Traditional & Indigenous Industry Development Center
 - 6) Regional Entrepreneur Fostering Center

8. Coverage Area

Whole the country, however, the establishment of RIDO will be started from Nakhon Ratchasima Provincial Cluster.

RIDO 6 covers the provinces of Nakhon Ratchasima, Buri Ram, Surin and Chaiyaphum.

9. Project Duration

The project will be started as early as possible.

It is expected to need twelve months for preparation.

10. Project Results

A detail of target figures should be fixed after established RIDO, however, the final goal is economic development in the region.

11. Financial Plan

It is expected to establish the fund for regional industrial development and operation of RIDOs around 5 billion bahts. This is the same amount of the SMEs Promotion Fund.

1. Project Title:	Introduction of One Village One Product Movement
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2. Responsible Agency: Ministry of Interior

Cooperating Agency: Ministry of Industry, Non-Governmental Organization

3. Rationale

A major factor for impeding industrial development in rural regions is the lack of spontaneous action by local people who have been living under the highly centralized government system that exerts strong power over local initiatives. While this study is expected to create local-initiated/participatory development plans, the actual planning and implementation processes are mostly led by the MOI and other public organizations. At the same time, local people have little idea about the way to promote development of rural industries as they fail to attract investment from outside so far.

In fact, the situation is widely seen in many countries. In Japan, many rural areas have lost vitality and growth potential as young people migrate to urban areas for employment. After some unsuccessful attempts to revitalize rural communities, an initiative taken by a prefecture in the southern island of Kyushu produced notable results and attracted much attention in and outside of Japan. The Oita prefecture launched a long-term campaign to encourage individual towns and villages to create an innovative product that becomes a local specialty by using resources, skills and knowledge that are available or accessible in each community. This intrinsic approach to regional development is called the "one village/one product movement." On the surface, the movement appears to be one form of product development that is characterized by spontaneous efforts of local people. In reality, however, it has ingeniously created an opportunity for local people to develop a variety of skills that are required for product development. Thus, the movement has dual purposes (and effects) of promoting regional industrial development and turning local people into creative and productive human resources.

Clearly, experience in this industrial development project (initiative by local government) serves as an inspiring example for the future development efforts in the

target region. In fact, the one village/one product project has been introduced by a Japanese NGO, MINSAL Center, to Thailand and is currently implemented in the Northeast region. The Department of Regional Development, the Ministry of Interior, acts as the counterpart of the project. According to a report published by MINSAL Center, the project outline was presented to the Thai counterpart at the First Thai-Japan Local Government-Initiated International Cooperation Conference that was held in 1998. Then, the second conference was held in Udonthani in October 1999 for the purpose of establishing closer ties between local governments of the two countries. This year, it is planned to promote the exchange between individual local government bodies in order to learn and launch actual efforts.

The project proposed here is to expand the project initiated by MINSAL in terms of scale and scope, both in Thailand and Japan, and to introduce it to the target region as a major vehicle for regional industrial development.

4. Objective

The project will essentially consist of activities to create marketable products using local resources under the leadership of local people. These activities should be designed to provide opportunities for development of human resources and skills as well as the raising of awareness and enthusiasm of local people toward active participation in product development that can lead to regional development. The ultimate goal is to create the new local culture that helps maintain the movement and supports sustainable growth of entrepreneurship.

5. Project Focus Group

Rural villagers and community leaders

6. Outcome

- (1) To create marketable products in each local area
- (2) To create a leader who can lead to regional development
- (3) To create vital local society (community)

7. Activities

Essentially, the project is based on the ongoing international cooperation project, jointly conducted by the Japanese NGO (MINSAL) and the Ministry of Interior, which is a ramification of the one village/one product movement originated in Japan. The project will attempt to implant the movement and its spirit in Thailand, with a view to evolving it to a sustainable nationwide movement. The project will proceed as follows:

- (1) The Ministry of Interior and the provincial office of the Ministry of Industry organize a working group to promote the one village/one product movement.
- (2) The working group establishes collaborative relationships with MINSAL and local governments in Japan.
- (3) The working group invites local residents and groups in the target region to participate in the one village/one product movement.
- (4) The working group selects, by interviewing and classifying organizations who have expressed interest in the movement, the first group of organizations (areas) to start activities. The number of participating organizations is limited to a manageable size to ensure customized support and assistance of the Japanese counterpart.
- (5) Development goals are established for each area.
- (6) Local governments participated in the project from the two countries send their missions to others in order to learn about local conditions, the progress of the one village/one product movement, and major issues and obstacles faced by them.
- (7) The working group calls for the Thai government including local governments to participate in the movement through an organization capable of providing support in the areas of R&D, design and product development. Also, the working group provides support for exhibitions, sales promotion targeting urban areas, and the establishment of antenna (test marketing) shops.

- (8) The working group holds periodical meetings to report activities and results of the one village/one product movement.
- (9) The working group encourages and supports the establishment of a workshop to disseminate the concept of the movement and educate leaders and facilitators (learning-by-doing organization).
- (10) The movement is ready to be spread into other areas.

Each organization (area) launching the movement is responsible for securing financial resources required for its activities. The government is responsible only for costs and expenses incurred by the working group. Naturally, the participating organizations (areas) can obtain public support in terms of product development, channel development and financing, and the working group serves as an intermediary between the participating and supporting organizations.

Roles of the working group

- a) Dissemination of the concept of the one village/one product movement throughout Thailand
- b) Coordination of activities related to the movement
- c) Consultation and guidance for planning, implementation and management of the movement
- d) Support for marketing and sales of products that are created from the movement.

8. Coverage Area

The project will ultimately be implemented throughout the country. It will be first launched in Northeast including the provincial cluster.

9. Project Duration

Japanese experience indicates that it takes at least ten years before a product developed from the movement is accepted by the market and produces a tangible effect on regional development. Some areas in Northeast have already started activities and are expected to produce results in the foreseeable future. Nevertheless, it is important to understand that patience and persistent efforts are required to realize benefits from this type of movement.

10. Project Results

- (1) Commercialization of a local specialty product using local resources
- (2) Development of human resources contributing to local development
- (3) Effective networking and revitalization of local communities
- (4) Contribution to local economy
- (5) Retainment of working population

11. Financial Plan

Basically, the project will be implemented under the leadership of local residents, and the government will essentially give moral support and does not need to spend much money for promotion. The entire project cost depends on the scope and objective of activities set forth by each organization (area) which actually leads the movement.

The government is expected to allocate the budget for the working group's activities. While the PIO staff is expected to provide assistance as part of their ordinary work, the Ministry of Interior will need to appoint full-time staff within the Department of Regional Development. Nevertheless, the effective use of support by NGOs, the Japanese government and local governments will result in the project cost that can be maintained at the minimum required level.

12. Benefits

It is a great advantage for the project that the one village/one product movement has been initiated in the Northeast region. In addition, various rural areas have experienced royal projects to develop products using local resources and skills. The one village/one product movement emphasizes spontaneous efforts of local people and can be evolved into a unique movement that takes into account local conditions and experiences.



1. Project Title:	Establishment of Provincial Industrial Development fund (PIDF)
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2. Responsible Agency: Provincial Administration Office, Provincial Administration Organization (PAO),
Sub-district Administration Organization (SAO)

3. Rationale

It is provincial community to be able to enjoy the most benefits through provincial industrial development. Provincial community, therefore, needs to make proper efforts and take initiatives for provincial industrial development, if it wants provincial development.

In Thai society, especially in the rural area, human relation is seen quite important and to maintain good human relations is said indispensable to live in the related provincial society. In such a society cooperation and support extended by provincial society can be expected to get and it simultaneously comes to put mental pressure upon the related project owner. Therefore, it is considered important to work out such organizations or systems.

While, the provincial administration office representing provincial community has never taken any financial measures to support provincial industrial development so far and has kept waiting for implementation of the measures decided and taken by the central government. If such policy and stance continued to be taken, it is considered to take long for materialization of provincial industrial development.

The provincial government recognizes necessity of provincial industrial development but it pointed out lack of fund as one of the causes why it has never taken any financial support. It is advised for the provincial government to think what it can do for provincial industrial development under the given conditions. That is to say, to think out the ways to make and secure financial resources and to use it for provincial industrial development.

The central government is now implementing some measures for establishment of de-centralization and the provincial / local governments are considered to be requested to decide and implement measures for de-centralization by themselves. This concept can be said the concrete movement for de-centralization from the provincial side.

4. Objective

To set up Industrial Development Fund in each province and to financially support the good projects expected to contribute to provincial industrial development.

6. Activities

(1) To build up consensus about this concept among the provincial community

Upon building up consensus, the following items are necessary to be fully discussed by the local administration bodies comprising the province and the discussion be reflected to this concept.

- 1) That the provincial community is necessary to organize its own supporting system and to positively promote this measure, because it can enjoy the most benefits through provincial industrial development.
- 2) That it is necessary to secure fund to organize the supporting system, to begin with.
- 3) To decide the target amount of the fund for the time being (for instance, 100~200 million Baht. It depends on the size of public finance and can be increased in the future).
- 4) To decide that the necessary fund should be raised from local finance in each FY and in the following manners;
 - a) To deliver some rate of general subsidy to the Fund every FY (for example, 10%).
 - b) To deliver some rate of savings to the Fund every FY (for example, 20%). It should be noted that the provincial government will make the best effort to save costs in the provincial expenditures for this purpose. As this may reduce quantity and quality of the public service, the provincial community should co-operate with this cost savings.
 - c) To discuss and decide the other possible ways of fund raising to the Fund.
- 5) To decide to welcome the fund raising from the private sector like FTI, TCC, TBA and so on to the Fund and from the superior enterprises in the province as well.

- 6) To discuss the ways to utilize the Fund like interest subsidy, small financing, partial guarantee and finally direct investment to the potential project).
- 7) To set up Regional Industrial Development Office (RIDO) when the Fund amount reached at a certain amount (for example, half of the target amount) and to appoint a proper person as a president of the Office from the private sector.
Before the Office sets up, the below-mentioned committee is thought to be able to administer and manage the Fund.
- 8) The following consideration should be taken into
 - a) To give the priority to the project contributory to the provincial industrial development
 - b) To care not to incline toward the specially-fixed area,
 - c) To exclude the political consideration upon selection of the project,
 - d) To let the provincial community know anything about the Fund,

(2) Organization

- 1) Before setting-up of Regional Industrial Development Office (RIDO) (before the Fund amount reaches half of the target amount)
There are many committees in the Provincial Administration Organization. Out of these existing committees it is better to utilize a "Committee" which activities are thought very close to this concept.
And the Committee is considered essential to be joined by the following person who has strict relations with the provincial industrial development. The members of the existing committee, therefore, may be partly increased or decreased
 - a) Regular member of the Committee
 - Governor of the province,
 - Director of IPC,
 - Chief of POI in the province,
 - Chairman of TCC in the province,
 - Chairman of FTI in the province,
 - Chairman of TBB in the province,
 - Chief of the Provincial Administration Office in the province,

➤ Chief of the Planning and Policy Department of the Provincial Administration Office where the related project is scheduled to be located,

➤ Others, if any.

b) Non-regular member of the Committee

➤ Chief Officer of the District /Minor-district Administration Office where the related project is scheduled to be located,

➤ Chief Officer of the Sub-district ("Kamnan" in Thai) where the related project is scheduled to be located,

➤ Observers Representatives from SFIs

The members of sub-ordinate committee in each District / Minor District and Sub-district are composed of the related person with provincial industrial development, not to mention the above b. a) and b). And they attend the Committee when potential projects emerge from the that area.

2) After setting-up of the Regional Industrial Development Office (RIDO)

The members of the Committee become members of Board of Directors of RIDO and remain responsible for the operation of RIDO. And the practical business shall be done by the specialists in the fields of accounting, financing and project evaluation, who are sent over by the mother's body of the above Board members and can be recruited from the other institutions.

The operation unit of RIDO should be a group of small in number and picked persons and always pursue for business efficiency.

(3) Duties of the Committee and/ or RIDO

The duties done by the Committee and/ or RIDO are as follows;

- 1) To select the project considered to be contributory to the provincial industrial development,
- 2) To decide that the provincial community will fully support the project,
- 3) To carry out the support decided by the Committee, (in addition to the above, after RIDO set up,)
- 4) To decide the form of financial supports (interest subsidy, small financing, partial guarantee and direct investment) and to carry out them

7. Issuance of Provincial Law or Regulation by the Governor

At present the Governor has no power to issue the provincial law or regulation, even if the consensus was built up among the community. The governor, therefore, needs to request Prime Minister to issue Executive Regulation that authorizes the governor to issue the provincial law or regulation to realize the specific purpose as mentioned above.

(Note) There is another way of issuing the provincial law or regulation by the governor. The study team got an advice from the high-official of Ministry of Interior that the above is the most simple and fastest way for the governor to be authorized to issue the provincial law or regulation.

8. Reference (The scope of business by RIDO)

The scope of business to be performed by RIDO shall be explained for reference as follows;

(1) Interest subsidy;

Under the current system, there is no financial institutions to extend loans for industrial development with cheaper interest rate and longer repayment period. The project owners or entrepreneurs who borrow the necessary fund from the financial institutions have to bear the heavy burden of interest payment. In this case, the project is possible to financially come to a deadlock even if it is good and feasible. This, therefore, is a system that RIDO bear some part of the interest payment for provincial industrial development.

Concretely speaking, if the project approved by the financial institutions, RIDO will bear some part of interest payment (for example, 1/3) to enlighten the borrower's burden of high interest payment.

(2) Partial guarantee;

When the financial institutions extend loans to a small-scale enterprise in the rural area, their credit risk is very high. On the other hand, these small-scale enterprise can not submit collaterals to them. This is a system that RIDO will underwrite some part of risk to mitigate financier's credit risk on the related project for provincial industrial development.

(3) Small financing;

The SMEs or entrepreneurs who are considered to contribute to provincial industrial development suffer from fund raising. This is a system that RIDO extends small amount of loan (for example, 500 thousand Baht) to the related good project with cheaper interest rate and longer repayment period.

(4) When RIDO became an organization with many experiences of financial supports for provincial industrial development and is equipped with financial strength, it is better to start the contribution business to the good and feasible project (it depends on RIDO's judgment how much amount shall be contributed). Through this business operation RIDO can take part in management of the project and be directly involved in provincial industrial development.

1. Project Title:	Food / Agro-processing Applied Research and Business Development Center (ARBDC) Project
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2. Responsible Agency: KAPI (Kasesert Agro Processing Institute), MOAC, Foreign Bio-technology Research and Laboratory.
(Promote group research and business development between academics and private sector. Invite trainee, researchers, and sales persons from private sectors.)

3. Rationale

As project area has a plenty of agricultural resources, applied technology for processing those resources and the business application of them are not well developed yet. For that, Food / Agro-processing Applied Research and Business Development Center (ARBDC) is established for leveling up processing technology, developing new products, and applying the new technology and products into business.

As the processing for many processed products in Project area is still first level one, it is needed to develop value-added products more. Because R & D and business development function does not exist in the area, it is difficult for the processing factories to find some consulting institutions for developing new products, technology, and its business development now. To support and accelerate development of value added products and its application to business, establishing each center is an urgent issue.

4. Objective

- (1) To improve current agro/food processing technology
- (2) To develop new agro/food processed products
- (3) To apply developed new technology and products into business.

If this project, succeed, ARDBS's research and business development function will attract attention of agro/food processing industry locating outside project areas.

5. Project Focus Group

Private sector

Rice milling, Rice use industry, Tapioca, Sugar, Vegetable & Fruits processing, Food Industry

Public sector

Academics, University researchers, Government research center and laboratory, Foreign researchers.

Invite trainee, researchers, and sales persons from private sectors.

Promote group research and business development between academics and private sector.

6. Activities

6.1 Structure and Functions

The ARBDC will have two units.

Those are: "Applied Research Unit" and "Business Development Unit"

Applied Research Unit will have 5 sub sections:

- Section 1 Applied research for tapioca products
- Section 2 Applied research for byproducts (Rice husk, rice bran, Baggase, Mud etc.)
- Section 3 Development new products for vegetable and fruits processing
- Section 4 Development for rice use products
- Section 5 Development of biodegradable products (Corn fiber, Polyethhtel)

The unit will research above five fields. Developed technology and products will be transferred to local processing factories through Business Development Unit in cooperation with sales and marketing activity. Both units will invite researchers and sales persons from private sectors.

Developed technology and products will have fruitful results through selling those products in real market.

Common dogma for five fields is

- (1) Not ready-made but specific research for developing new product and technology based on the local materials
- (2) Apply developed technology and products into real business
- (3) Subsidize R&D cost for processing factories, which try to develop new technology and products by themselves
- (4) Have both functions product development and sales & marketing of new technology and products

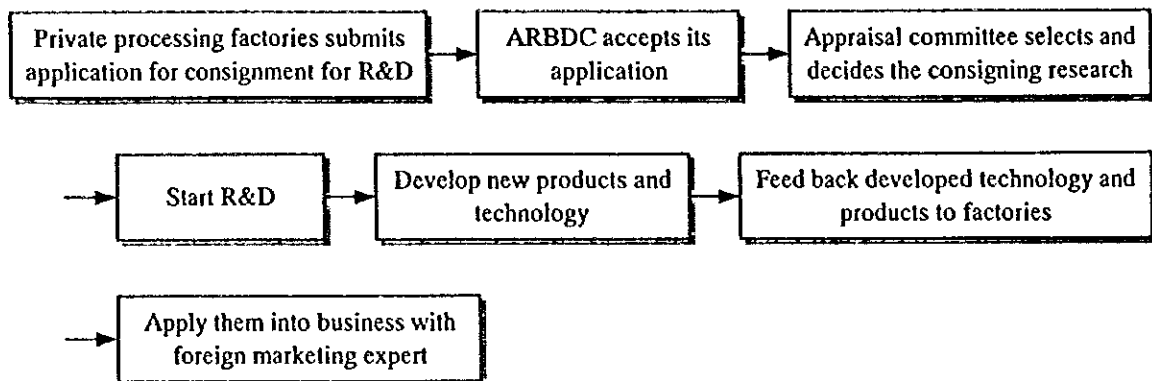
Also this center accepts requests for product development and consignment of research and product development from processing factories in case they are judged to be worth for doing.

The function of the center should be tied up with that of KAPI. The center will invite internationally renowned academics and researchers. The shortage of researchers and academics will be expected. As knowledge for business application of product that private sectors have and one for advanced research and new technology that academics have are often scattered into pieces, those will be well put in order and integrated.

6.2 Process of R&D and Its business application

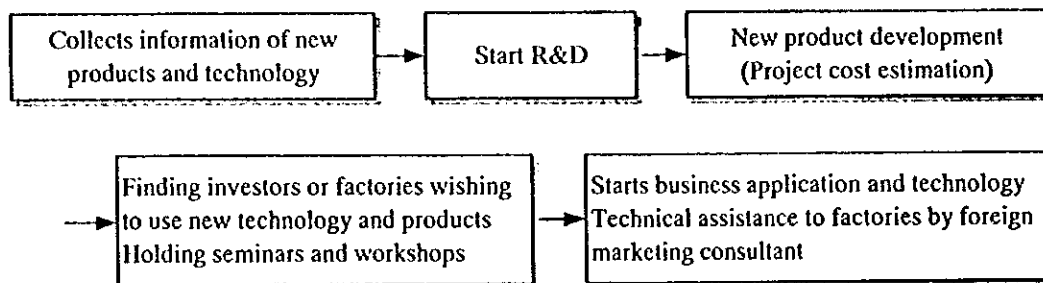
6.2.1 Process of consigning research and product development from processing factories

Process of consigning research and product development from processing factories is as follows.



6.2.2 Process of research & product development and its business application

Process of research & product development and its business application is as follows.



6.3 Details of activities of each unit program

Pro- Cess	1.Tapioca use products development Unit	R & D			Business development			Sub- total
		Thai		Foreign	Thai		Foreign	
		Private	Govern- ment		Private	Govern- ment		
1	Collect information of existing products					1		1
2	Research and Development (Fluctose, Glucose, Glutamin acid sodium etc.)	2	2	2				6
3	Cost estimation for business application				1	1		2
4	Findings factories or investors wishing to use technology and products					1		1
5	Introduction of those technology and products through seminars and workshops					1		1
6	Business application and technical assistance to factories				2	1	2	5

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2. Byproducts development Unit								
1	Collect information of existing products to arrange possible products to develop					1		1
2	Research and Development (Rice husk, rice bran, Baggase)							
	Rice husk as a stable fuel source	1	1	1				3
	Rice bran as oil, bran paste products, fermentation	1	1	1				3
	Baggasse as fiber, particleboard	1	1	1				3
3	Study advanced use at overseas (As byproducts development usually requires huge facility to research, need to look for cooperation with other research Institute.							
4	Cost estimation for business application				1	1		2
5	Findings factories or investors wishing to use technology and products					1		1
6	Introduction of those technology and products through seminars and workshops					1		1
7	Business application and technical assistance to factories				2	1	2	5

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3. Vegetable and Fruits processing research Unit							
1	Collect and arrange information of existing processing products (powdered, canned, powdered, dried etc.)					1	1
2	Research and Development (As Thai's processing industry has well advanced technology, better to ask cooperation to private processing companies for R&D.)	2	2	1			5
3	Cost estimation for business application				1	1	2
4	Findings factories or investors wishing to use technology and products					1	1
5	Introduction of those technology and products through seminars and workshops					1	1
6	Business application and technical assistance to processing factories				2	1	2
							5

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4. Rice use products development Unit							
1	Collect and arrange information of existing processing products (rice cracker, snack foods, rice noodle etc.)					1	1
2	Research and Development	2	2	1			5
3	Cost estimation for business application				1	1	2
4	Findings factories or investors wishing to use technology and products					1	1
5	Introduction of those technology and products through seminars and workshops					1	1
6	Business application and technical assistance to processing factories				2	1	2
							5

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5. Biodegradable products development Unit							
1	Collect and arrange information of existing processing products (corn fiber, genetically modified products etc.)					2	2
2	Research and Development (As this unit research requires highest technology, need to invite excellent foreign researchers. Thailand should learn research methodology.)	2	2				4
3	Cost estimation for business application					1	1
4	Findings factories or investors wishing to use technology and products					1	1
5	Introduction of those technology and products through seminars and workshops					1	1
6	Business application and technical assistance to processing factories					1	1
7							2

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7. Project Area

Nakohn Rachasima, Burirum, Surin, Chaiyaphum

8. Project Implementation Schedule

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Detail planning of project	█									
Building construction		█								
Equipment purchase		█								
Gathering researchers		█								
Collecting information			█	█	█					
Research & Development			█	█	█	█	█	█	█	█
Cost Estimation				█		█		█		█
Finding investors or factories					█		█		█	
Business application					█	█	█	█	█	█

9. Financing Plan

(1) Building Construction \$ 5 million

(2) Purchase of equipment and machine \$ 12 million

Tapioca products development	\$ 2 million
Byproducts (Rice husk, rice bran, Baggase, Mud etc.)	\$ 3 million
Vegetable and fruits processing Development	\$ 2 million
Rice use products Development	\$ 2 million
Biodegradable products Development	\$ 3 million

(3) Working capital 76 researchers \$ 11 million

Detail cost of working capital is on next page.

(4) Contingency \$3 million

Total \$31 million

Process of project	Person in charge	Year Duration
Collecting information	Information manager	3
Research & Development	Researcher	7
Cost Estimation	Financial Specialist	2
Finding investors or factories	Investment matching coordinator	2
Business application(1)	Seminar organizer	6
Business application(2)	Business development specialist	6

1. Tapioca use products development Unit	\$10,000	\$70,000	Annual Cost for Working capital			Total Cost for Working capital
	Thai	Foreign				
Information manager	1		\$10,000	\$0	\$10,000	\$30,000
Researcher	4	2	\$40,000	\$140,000	\$180,000	\$1,260,000
Financial Specialist	2		\$20,000	\$0	\$20,000	\$40,000
Investment matching coordinator	1		\$10,000	\$0	\$10,000	\$20,000
Seminar organizer	1	2	\$10,000	\$140,000	\$150,000	\$900,000
Business development specialist	3		\$30,000	\$0	\$30,000	\$180,000
					Sub-total	\$400,000
						\$2,430,000
2. Byproducts development Unit	Thai	Foreign				
Information manager	1		\$10,000	\$0	\$10,000	\$30,000
Researcher	6	3	\$60,000	\$210,000	\$270,000	\$1,890,000
Financial Specialist	2		\$20,000	\$0	\$20,000	\$40,000
Investment matching coordinator	1		\$10,000	\$0	\$10,000	\$20,000
Seminar organizer	1		\$10,000	\$0	\$10,000	\$60,000
Business development specialist	3	2	\$30,000	\$140,000	\$170,000	\$1,020,000
					Sub-total	\$490,000
						\$3,060,000
3. Vegetable and Fruits processing research Unit	Thai	Foreign				
Information manager	1		\$10,000	\$0	\$10,000	\$30,000
Researcher	4	1	\$40,000	\$70,000	\$110,000	\$770,000
Financial Specialist	2		\$20,000	\$0	\$20,000	\$40,000
Investment matching coordinator	1		\$10,000	\$0	\$10,000	\$20,000
Seminar organizer	1		\$10,000	\$0	\$10,000	\$60,000
Business development specialist	3	2	\$30,000	\$140,000	\$170,000	\$1,020,000
					Sub-total	\$330,000
						\$1,940,000
4. Rice use products development Unit	Thai	Foreign				
Information manager	1		\$10,000	\$0	\$10,000	\$30,000
Researcher	4	1	\$40,000	\$70,000	\$110,000	\$770,000
Financial Specialist	2		\$20,000	\$0	\$20,000	\$40,000
Investment matching coordinator	1		\$10,000	\$0	\$10,000	\$20,000
Seminar organizer	1		\$10,000	\$0	\$10,000	\$60,000
Business development specialist	3	2	\$30,000	\$140,000	\$170,000	\$1,020,000
					Sub-total	\$330,000
						\$1,940,000
5. Biodegradable products development Unit	Thai	Foreign				
Information manager	2		\$20,000	\$0	\$20,000	\$60,000
Researcher	2	2	\$20,000	\$140,000	\$160,000	\$1,120,000
Financial Specialist	1		\$10,000	\$0	\$10,000	\$20,000
Investment matching coordinator	1		\$10,000	\$0	\$10,000	\$20,000
Seminar organizer	1		\$10,000	\$0	\$10,000	\$60,000
Business development specialist	1	1	\$10,000	\$70,000	\$80,000	\$480,000
					Sub-total	\$290,000
						\$1,760,000

All projects

Information manager	6	0		60000	180,000
Researcher	20	9		830000	5,810,000
Financial Specialist	9	0		90000	180,000
Investment matching coordinator	5	0		50000	100,000
Seminar organizer	5	2		190000	1,140,000
Business development specialist	13	7		620000	3,720,000
	58	18	Sub-total	\$1,840,000	\$11,130,000



1. Project Title: Introduction of Top Executive Seminar Program

2. Responsible Agency: FTI, CC, IPC, DIP in cooperation with SUT/ISMED

3. Rationale

In Nakhon Ratchasima, investment inflows for factory relocation from the Bangkok area as well as new foreign direct investment are increasing. In spite of that, business relationships have not been well developed between companies moving in Nakhon Ratchasima and local (or indigenous) companies. For example, parts supply contracts of local companies to the factories of foreign companies in Suranaree Industrial Zone are still limited. The reasons for such undeveloped business relationships include difficulties in quality assurance for the parts produced by local companies, gaps in the attitudes for doing business particularly in the aspects of product delivery, quality and cost between foreign companies and local ones and so forth. In order to develop and/or increase business relationships between local and foreign companies, local companies must adjust their ways of business to international ones. The first step for adapting local companies themselves to international business practices is to expose themselves to and learn such practices.

In Buriram, Surin and Chaiyaphum, there have been few new business development activities and direct investment inflows. Investment promotion activities targeting for outside investors are proposed by other projects. Measures for assisting indigenous people with entrepreneurial spirits are also desired in the provinces. To be an entrepreneur, one needs to have an emotion to start a new business, a vision and strategic thoughts, in addition to management knowledge and techniques. Management knowledge and techniques can be taught in schools but real behaviors of corporate executives cannot be learnt in the classrooms. In this regard, opportunities for learning real life business cases are indispensable. Such opportunities are also useful for executives of local companies as stimulus for developing their visions.

Due to the above mentioned reasons, an executive seminar program for learning real life business cases is needed in both Nakhon Ratchasima and the other three provinces.

4. Objective

- To introduce international business practices to local business executives;
- To have executives open their eyes to the external market including the Bangkok area and overseas;
- To raise awareness that local companies are in the competitive market in which rivals are making efforts to improve their operation day by day and to satisfy their clients; and
- To help local business executives develop their own corporate visions.

5. Project Focus Group

Corporate executives of local companies and entrepreneurs in Nakhon Ratchasima, Buriram, Surin and Chaiyaphum

6. Outcome

Participants of the program will: (1) Learn international business practices, various business philosophies, examples of both successful and unsuccessful business decisions and activities through real life business cases; (2) Become aware of importance of making continuous efforts for customer satisfaction; (3) Become aware of importance of training employees; (4) Develop personal business channels and networks; and (5) Develop their own visions and business ideas.

Consequently, management levels of local companies will be improved, new business development activities will be increased, business relationships between local companies and foreign companies will be developed.

7. Activities

7.1 Administration

- (1) Assign administrative staffs for program operation.
- (2) Form a program development committee with the participation of representatives from FTI, CC, DIP (IPC), ISMED, SUT, EEI and AI.
- (3) Promote the program to the public and invite participants.
- (4) Plan the annual program schedule including half-day seminars, domestic study trips and an overseas study tour.

- (5) Conduct the program.

7.2 Preparation of lecturers

Topics of the lectures include various kinds of real life cases such as:

- corporate philosophy and management,
- marketing strategies and activities,
- production management and upgrading including quality issues,
- accounting and tax measures,
- financial measures and operations,
- procurement including outsourcing,
- personnel management and training,
- international business rules including ISO,
- information technology uses and so forth.

At least 9 seminars are planned in a year on the monthly basis excluding the months for study trips and tours. Each lecture must be followed by discussions among the participants with the lead of the lecturer.

- (1) List prospective lecturers along with the themes of case studies to be presented in the seminars from among the topnotch business leaders in Thailand including local and foreign.
- (2) Select or prioritize appropriate lecturers from the list for negotiation.
- (3) Contact and negotiate with selected lecturers.
- (4) Set the date and conditions for each lecture.
- (5) Issue official invitation letters to the lecturers.

7.3 Preparation of domestic study trips

The purpose of domestic study trips is to watch real life business operation of topnotch companies in Thailand. Two domestic study trips are planned annually. A study trip report must be prepared by the participants after each trip.

- (1) Select topics for each trip in connection with the seminar topics conducted before the trip.
- (2) Contact with appropriate companies and institutions for visits.
- (3) Set the date and conditions for study visits.

7.4. Preparation of an overseas study tour

The purpose of the overseas study tour is to understand and recognize international market in particular the Asian market. The focus should be on the Indo-Chinese market. Preliminary study meetings with the attendance of all participants must be held for each tour. A study tour report must be prepared by the participants after each tour.

- (1) Select topics for the tour in connection with the seminar topics conducted up to the tour.
- (2) Select countries to visit along with the topics.
- (3) Contact with companies and institutions for visits.
- (4) Arrange the trip.

7.5 Experts needed

- (1) Foreign or domestic experts in business education program are required.
- (2) The program development committee will consult with the experts on the program development.
- (3) The experts will transfer the expertise in developing business education programs to the committee.

7.6 Cost sharing of the program

The government and participants share the costs of the program with some contribution from FTI and CC.

8. Coverage Area

Nakhon Ratchasima, Buriram, Surin and Chaiyaphum

9. Project Duration

Tentatively for 5 years, October 2000 – September 2005. See proposed annual schedule (Table P1).

TABLE P1 PROPOSED ANNUAL PROGRAM SCHEDULE

Month	Month 1 Oct	Month 2 Nov	Month 3 Dec	Month 4 Jan	Month 5 Feb	Month 6 Mar
Program	Seminar 1	Seminar 2	Seminar 3	Dome. Trip 1	Seminar 4	Seminar 5
Schedule	Half day	Half day	Half day	2 days	Half day	Half day
Place	Buriram	Surin	Chaiyaphum	Bangkok area	Nakhon Ratchasima	Buriram
(Trip report)						
Month	Month 7 Apr	Month 8 May	Month 9 Jun	Month 10 Jul	Month 11 Aug	Month 12 Sep
Program	Seminar 6	Dome. Trip 2	Seminar 7	Overseas Tour	Seminar 8	Seminar 9
Schedule	Half day	2 days	Half day	5 days	Half day	Half day
Place	Surin	Bangkok area	Chaiyaphum		Nakhon Ratchasima	Buriram
(Trip report)			(Tour report)			

10. Project Results

(1) Participants of seminars

50 for each, 9 times a year Total 450 participants a year

(2) Participants of domestic study trips

20 for each trip, twice a year Total 40 participants a year

(3) Participants of overseas study tours

20 for each tour, once a year Total 20 participants a year

(4) Expertise in business education programs is also accumulated in the program development committee.

11. Financial Plan (See Table P2)

Year 1:	1.7 million Bahts
Year 2:	1.7 million Bahts
Year 3:	1.7 million Bahts
Year 4:	1.7 million Bahts
<u>Year 5:</u>	<u>1.7 million Bahts</u>
Total:	8.5 million Bahts

Table P2 PROJECT COST ESTIMATION

Basis for Calculation

	Persons	Times or Months	Unit cost
Committee cost	8	4 Times/Year	1,200 Bt./Person-Time
Lecture fee	1	9 Times/Year	20,000 Bt./Person-Time
Lecture room fee	50	9 Times/Year	200 Bt./Person-Time
Trip cost (Transportation and Stay)	10	2 Times/Year	2,400 Bt./Person-Time
Tour cost (Transportation and Stay)	10	1 Times/Year	40,000 Bt./Person-Time
Administration Cost		12 Months/Year	10,000 Bt./Month
Domestic Expert fee	2	5 Months/Year	40,000 Bt./Person-Month

Annual Cost Estimation

(Unit: Bt.)

	Month1	Month2	Month3	Month4	Month5	Month6	
Committee cost	9,600						9,600
Lecture fee	20,000	20,000	20,000			20,000	20,000
Lecture room fee	10,000	10,000	10,000			10,000	10,000
Trip cost (Transportation and Stay)				48,000			
Tour cost (Transportation and Stay)							
Admini. Cost	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Dome. Expert fee	80,000	80,000					80,000
	129,600	120,000	40,000	58,000	40,000	129,600	
	Month7	Month8	Month9	Month10	Month11	Month12	Annual Total
Committee cost					9,600	9,600	38,400
Lecture fee	20,000		20,000		20,000	20,000	180,000
Lecture room fee	10,000		10,000		10,000	10,000	90,000
Trip cost (Transportation and Stay)		48,000					96,000
Tour cost (Transportation and Stay)				800,000			800,000
Admini. Cost	10,000	10,000	10,000	10,000	10,000	10,000	120,000
Dome. Expert fee	80,000					80,000	400,000
	120,000	58,000	40,000	810,000	49,600	129,600	1,724,400

Project Cost Estimation (Unit: Bt.)

	Annual Cost
Year 1	1,724,400
Year 2	1,724,400
Year 3	1,724,400
Year 4	1,724,400
Year 5	1,724,400
Total	8,622,000

12. Benefits

12.1 Economic benefits

Not calculated. However, as a result of the program, management levels of local companies will be improved and financial improvements in the companies are expected in the long run.

12.2 Environmental and social benefits

New business development and growth of local companies will create new employment in the four provinces. Corporate executives learn various environmental negative impacts of business operations through the case studies. As a consequence, awareness for environmental pollution is raised.



1. Project Title:	Diagnostic Scheme for Production Center
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2. Responsible Agency: MOI, BSID, Technology Production Association (TPA)

3. Rationale

The economic crisis in Thailand has prompted the realignment of the industrial production structure in the Asia/Pacific area, which is currently underway in a visible form. As the situation subsides, the auto industry in the country is showing some signs of recovery. Similar to the auto industry, the electronics industry, which principal component consists of foreign-owned manufacturers and suppliers, serves as the bellwether of the recovery process.

In contrast, production centers of traditional products are facing difficulties as they feel competitive pressure from outside. Traditional industries operating in these areas do not possess expertise or technology to develop new products. The project is designed to evaluate selected local industries and their current status in order to identify major issues facing them and find a strategic direction for their future growth in response to the changing business environment.

4. Objective

The diagnostic scheme will cover selected groups of local industries in particular subsectors and their related industries to analyze fundamental issues facing them. In particular:

- (1) To analyze the current state of their economic activities and understand their major characteristics and issues;
- (2) To identify a strategic direction for their future growth, which enables them to adapt themselves quickly to structural changes in the business environment surrounding them and geographical areas they operate;
- (3) To propose possible measures for management efficiency of individual enterprises (or family operations) in each production group, the improvement of production techniques and skills, and effective cost control; and
- (4) To serve as an intermediary for relating public support programs to producing centers according to the actual needs.

The final goal is to raise the economic status of the producing centers.

5. Project Focus Group

Diagnosis will be carried out for the following two categories:

- (1) Traditional production centers and their industries
- (2) Selected industries operating in each prefecture

The former represents a group of local industries operating in a traditional production center, which are characterized by traditional production techniques, products and raw materials and are operated as the family or near-family industry. The latter group represents industries other than the traditional ones, which operate in a specific area or prefecture.

6. Outcome

Diagnosis will start from identification of common issues, followed by evaluation of priority items:

- (1) Fundamental issues
- (2) Production and technology
- (3) Demand and distribution
- (4) Labor relations
- (5) Organization
- (6) Others

A set of advice will be issued on the basis of the diagnostic results, focusing on management efficiency and revitalization of the producing centers.

As a result of diagnosis activities, revitalization of a local production center will be promoted.

7. Activities

An expert team responsible for the diagnostic scheme will be organized under the MOI. It seems to be most appropriate to incorporate the TAP as the core unit, which is involved in education of diagnosis personnel in the country. The new organization will be responsible for development of the diagnosis program. The diagnosis process is generally outlined as follows:

(1) Current analysis

- 1) Changes in the business environment surrounding the production center
 - 2) General profiles of the production center
 - 3) Industrial and employment structures
 - 4) Current state of a support mechanism for the production center
 - 5) Others
- (2) To identify key issues in consideration of problems and potential of the production center.
- (3) To identify problems facing individual enterprises (or family operations) and the entire production center through the questionnaire survey.
- (4) Detailed interview surveys
- (5) To propose a future direction for development of the production center on the basis of analysis of the survey results.
- (6) Reporting of the diagnostic results and recommendations
- (7) Follow-up activities

8. Coverage Area

Production centers and respective subsectors in the four provinces subject to the diagnostic scheme are tentatively selected as follows (shown by circle). The table requires the review and updating from time to time.

Prefecture

Subsector

- | | |
|-----------------------------|-----------------------------------|
| (1) Farm product processing | |
| (2) Food processing | |
| (3) Electrical/electronics | |
| (4) Ceramics and porcelain | |
| (5) Silk fabric and textile | |
| (6) Machinery and metal | Including machine repair |
| (7) Chemicals | Including rubber products |
| (8) Leather | Including shoes |
| (9) Household goods | Including bamboo baskets and toys |
| (10) Others | |

9. Project Duration

October 2000 – March 2001	Organizational setup and resource mobilization Selection of production centers to be diagnosed
April 2001 – March 2004	Targeting 10 production centers over three years 4-6 months per center

10. Project Results

Major items for recommendation are listed below, although they should be adjusted according to the production center and industry.

(1) Items related to fundamental issues facing the production center

- Establishment of objectives and policies
- Awareness as the production center
- Structural improvement
- Enhancement of local processing

(2) Items related to production and technology issues

- Product development
- Technology development
- Raising of technology levels
- Raw materials sourcing
- Quality improvement
- Modernization of production equipment
- Education of engineers and technicians

(3) Items related to demand and distribution

- Product modification and realignment in response to the changes in demand structure
- Exploration of new sales channels
- Market expansion and other issues

(4) Items related to labor relations

Securing of work force

Improvement of working conditions to lower the turnover rate

(5) Items related to organization

Enhancement of organizational activities

Promotion of joint projects

(6) Others

Cooperation with government organizations responsible for administrative guidance

Use of government financial institutions

11. Financial Plan

(1) Organization of the diagnostic group

① Team members: 3 - 7

② Work period: 3 - 6 months, depending upon the scope of activity

(2) Cost

The labor cost is a principal item, while other costs and expenses are also incurred, including those related to field surveys, report preparation and printing.

12. Benefits

The project will contribute to the development of production centers in the four provinces, and ultimately industrial development in the country as a whole.



1. Project Title: Expansion of PRID Programs

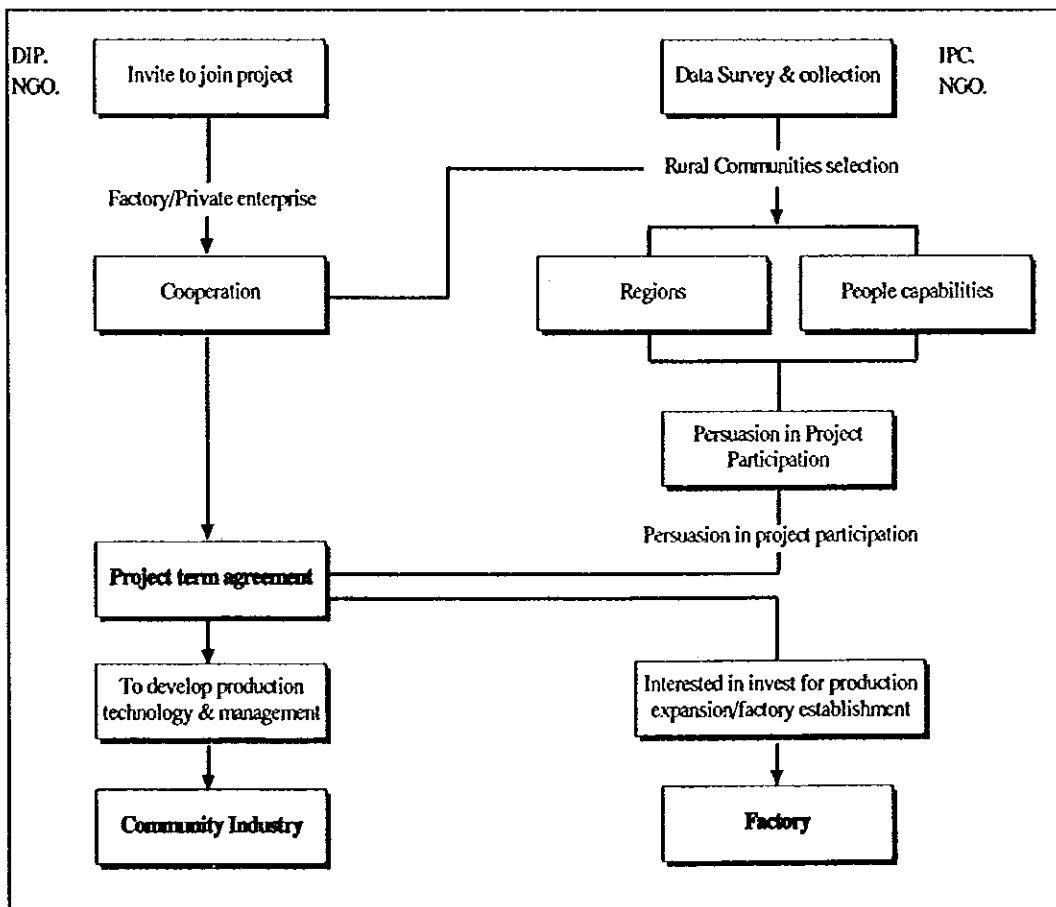
2. Responsible Agency: Department of Industrial Promotion (Ministry of Industry)

Cooperating Agency: Non-Governmental Organization

3. Rationale

The MOI is successfully implementing the Promotion of Rural Industrial Development (PRID) Project as part of its efforts to attract industries to rural areas from BMR. The PRID project is operated as follows (see Figure A).

Figure A. Promotion of Rural Industrial Development Project (PRID)の概要



The MOI invites manufacturers operating in the BMR to relocate their factories to rural areas or outsource some processes or products. It then find potential partners and help develop human resources required to accommodate relocating manufacturers or foster suppliers. The MOI may ask NGO for cooperation in coordinating local efforts. In the process, the manufacturer finds a specific area that offers the most favorable conditions and builds a factory to employ local work force. Note that the factory is built by either the manufacturer or the local community. As a result, industrial decentralization is promoted while creating jobs in rural areas.

In the target region, IPC6 has been implementing 17 PRID projects (as of September 1999) and IPC 7 has 29 projects. Each project has created an average of 100 jobs and the PRID project has brought a few thousand jobs to the region.

The PRID project is positioned as the tripartite cooperation scheme involving private enterprises operating in the BMR, local residents (rural villagers) and the MOI/NGO retained by the MOI. Under this arrangement, the MOI serves as the project coordinator and the intermediary between private enterprises and local residents. As the PRID project is designed to and has been proven to provide benefits for each of the key stakeholders (private enterprises, local residents and communities), it should be fully utilized as a major vehicle for industrial promotion in the target region, particularly Buri Ram, Surin and Chaiyaphum. Among the three provinces, Buri Ram has high potential to promote industrial development using the PRID project, i.e., the establishment of the brand fashion outlet center, because it can expect support from a NGO (e.g. Population and Community Development Association) that is an active advocate of the PRID project and has three branch offices in Buri Ram, while the province accommodates apparel manufacturers and related factories.

At present, the PRID project is under the control of the Bureau of Industrial Promotion Administration (BIPA) of the MOI. It is financed by financial assistance from the World Bank and the Japanese government (Miyazawa Fund), in addition to the MOI's budget. However, financial assistance by the World Bank and the Japanese government is scheduled to terminate in next March, and no arrangement has been made afterwards. The study team believes that the PRID project should continue in an expanded form by making necessary improvement to

address various issues (shortcomings) that were raised so far and securing larger financial assistance. For this reason, the project is proposed as a key element to promote regional industrial development.

4. Objective

To expand the PRID project in terms of geographical coverage and function in order to achieve the objectives of promoting factory relocation from urban to rural areas, the productive use of human resources in rural areas, and creation of employment opportunities.

In Buri Ram, the PRID project will be used as a major vehicle to develop the international apparel production center.

5. Project Focus Group

Private enterprises who are operating in the BMR and local residents in the rural area.

6. Outcome

- (1) To realize many investment in the rural area.
- (2) To increase job opportunity for local residents (villagers)
- (3) economic contribution to the provinces

7. Activities

- (1) To formulate a four-year PRID implementation plan by the BIPA, starting in March 2001.
- (2) To draft a budget to support the implementation plan.
- (3) To request financial assistance to the Thai government and the Japanese government in order to supplement the budget.
- (4) To implement the PRID project according to the established procedures.
- (5) To advertise and promote the PRID approach to foreign firms.

8. Coverage Area

The project will be implemented throughout the country and NGOs will play an important role in supporting smooth implementation.

9. Project Duration

The project will be implemented between April 2001 through May 2005. As it will be implemented by continuing the ongoing projects in an expanded form, there will be no preparation period to start up the project. The number of individual projects to be implemented will amount to 150 - 200 annually, far exceeding the previous pace (less than 100 annually). The number of new projects is targeted to account for around one half of the total.

10. Project Results

- (1) Job creation in local community
- (2) Development of the skill base by local education and training initiatives
- (3) Revitalization of local communities and creation of the industrial culture and norm
- (4) Contribution to local economy
- (5) Retainment of working population

11. Financial Plan

The PRID project has been operated under the annual budget of around 100 million bahts. On the other hand, the project startup cost was an average of 5 million bahts (covering factory construction or equipment installation). This means, 250 million bahts will be required to start up 50 projects per year. Thus, the annual budget will be increased to 250 million bahts to achieve the target level of implementation, totaling 1 billion bahts over four years. This will address a major issue related to the previous PRID projects that required financial contribution by local residents; there were some projects that failed to materialize because local residents could not afford to make necessary contribution. To ensure smooth implementation of the PRID project, additional measures should be taken to minimize financial burdens of local residents and communities.

12. Benefits

Experience in the previous PRID projects, including lessons learned, can be used by NGOs and other related organizations in future project implementation.



1. Project Title:	Promotion of Two Step Contract
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2. Responsible Agency: MOI

3. Rationale

Manufacturers who operated in the area to make import substitutive products (particularly, those in the electrical and electronics industry) have shifted to export production since 1997 as they cannot expect a swift recover of the national economy from the crisis. As a result, local suppliers who serve the domestic-oriented manufacturers suffer from a dramatic drop in job order. Thus, while their customers (assembly manufacturers) are successfully expanding their business by taking advantage of the weaker baht as they refocus on production of export items, local suppliers, who have totally depended upon the domestic market, are unable to explore new customers, i.e., export markets. They grew side by side with rapid development of the national economy and are now suffering from the still-staggering economy.

Many of them are willing to learn international standards and practices related to quality management, productivity improvement and production management through commercial transaction with Japanese manufacturers operating in the area. In reality, however, only one or two local suppliers deliver parts to Japanese customers for incorporation into export products. The manufacturers are allowed to import most of parts with duty free from Southeast Asian countries. Many of them have already established procurement channels from a large number of sources and do not need to find local sources. Most Japanese manufacturers believe that the development of a local supplier base takes considerable time and cost that is clearly beyond the ability of a single company and hope a technical assistance and consultation program to be established in a way to be utilized by many companies.

Thus, the lack of linkage between assembly manufacturers and local suppliers has been present from the beginning, originated in the technological gap between them. It is very difficult to develop the local supplier base unless the technological gap is narrowed. This means, it is difficult to nurture supporting industries as one of the primary objectives in the industrial development process.

4. Objective

- (1) To foster local SMEs.
- (2) To promote local procurement of parts by assembly manufacturers of export products.
- (3) To develop international competitiveness of local manufacturers in terms of quality, price and delivery.
- (4) To improve trade balance of the country as a whole.

5. Project Focus Group

Electrical and Electronics Industry, Machinery and Auto-parts Industry.

6. Outcome

- (1) To renovate the parts supply system between Japanese manufacturers and local SMEs.
- (2) To assist Japanese manufacturers in increasing their added value through local procurement.
- (3) To foster local suppliers and create employment opportunities.
- (4) To provide tax incentives through the fostering of local suppliers.

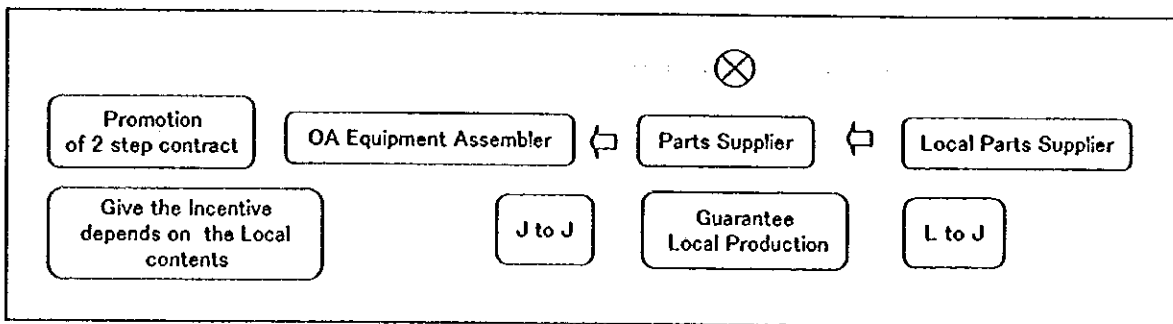
7. Activities

Promotion of the two step contract

Large manufacturers from Japan and the United States are operating in the area, but they do not contribute much to local industrial development as they import more than 90% of parts they consume for export production. There are Japanese suppliers who deliver to Japanese manufacturers operating in Bangkok, Ayutthaya and other industrial estates, whereas local suppliers have still to supply their products to Japanese customers because they have not reached the international levels of procurement requirements in terms of safety, delivery schedule, price and quality, which are key factors for manufacturers to compete in export markets. Under the present circumstances, it is difficult to improve the ability of local suppliers to meet the strict procurement requirements unless a special program (scheme) for industrial promotion is initiated to promote local procurement under technical assistance of Japanese manufacturers.

The two step contract system is proposed to constitute a core part of such scheme. Under the system, local suppliers deliver their products to Japanese suppliers who assure their quality and deliver them to Japanese assembly manufacturers. In other words, Japanese suppliers are responsible for quality assurance by providing necessary technical assistance for local suppliers, in exchange for various incentives (e.g., reduction of business tax). In fact, two Japanese suppliers are successfully operating the similar scheme, Takahashi (plastics) and Tanakhorn.

To ensure that the scheme expands into a wide range of companies, tax incentives should be provided according to the level of local procurement by foreign manufacturers and suppliers. In Europe, the scheme has made a great success by reducing or exempting a commodity tax on the basis of local content.



First phase (study period)

- (1) To gather data on production resources of local SMEs, including facilities and equipment, engineers and technicians, production capacity and engineering technology.
- (2) To identify those who have potential to supply their products to foreign suppliers and are ready to receive technical assistance and learn production techniques required to obtain international competitiveness.
- (3) To conduct detailed research and study on local suppliers and build a database.

Second phase (technical assistance period)

- (4) To select candidate suppliers and foreign suppliers who are interested in providing technical assistance from the database.

- (5) To fully evaluate production capabilities, skills and practices of the selected local suppliers and analyze major issues related to their improvement.
- (6) To select a few local suppliers per foreign supplier who will provide technical assistance.
- (7) To select a total of 30-40 local suppliers, outline the nature and scope of technical assistance, agree on major issues with suppliers, and start on-site guidance and consultation service.
- (8) To adjust the frequency of visit according to the level of progress at each factory and willingness of management.
- (9) To send experts to each supplier on a periodical basis, point out selected issues to be overcome and check corrective measures taken in order to help develop the corporate culture to identify and tackle with various issues under their own initiatives.
- (10) Major areas of technical assistance preferable for the Khorata area include:
Molding, metal, die and mold making, wire harnesses, power cords, coils, transformers, battery chargers and SMTA.
- (11) To promote immediate results, it is desirable for local suppliers to concentrate on parts that are required by foreign suppliers and their customers to procure locally.

Third phase (production management improvement period)

- (12) To provide technical assistance in the area of production management, including process control, productivity and quality control, and help the supplier to establish and upgrade a self-autonomous production management system on an ongoing basis.
- (13) To teach production management techniques to analyze various issues.

Fourth phase (marketing support period)

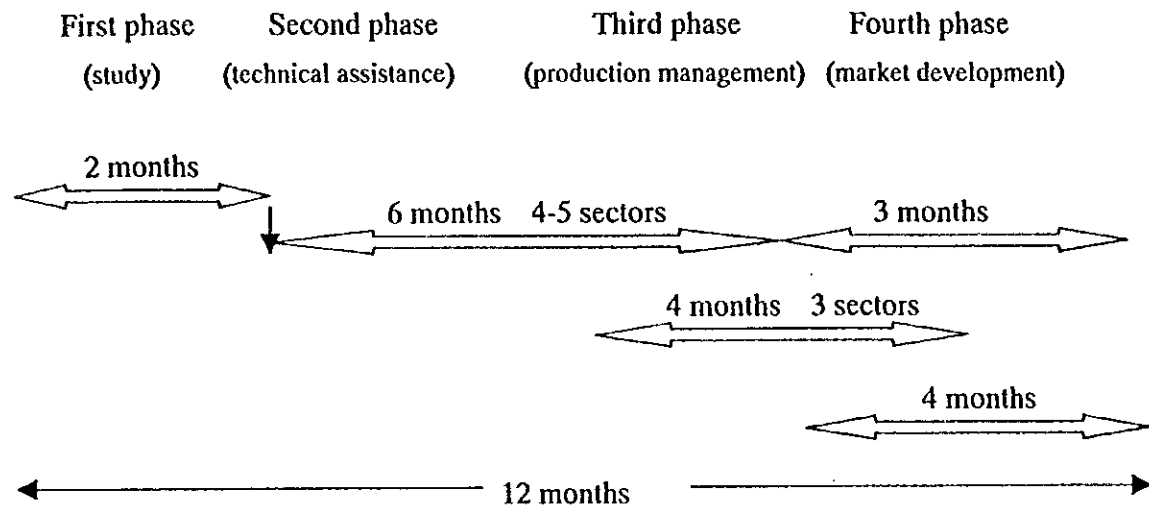
- (14) The local supplier will learn a marketing approach, method and know-how through practical experience in domestic marketing. If successful, it is feasible to export to Malaysia, Singapore and other neighboring countries. Then, a final goal will be set in market expansion through systematic marketing efforts.

8. Coverage Area

Whole country

9. Project Duration

Schedule of 2 Step Contract



10. Project Results

- (1) An increasing number of foreign suppliers uses local suppliers and establishes a production sharing system adaptable to variation of production volume, thereby to thrust the industrial development process in a mutually beneficial manner.
- (2) The move spreads beyond the electrical and electronics industry to apparel, leather and other labor-intensive industries that face intensive competition in international markets, subcontracting portions of their work to suppliers.
- (3) The two step contract system has double benefits of promoting rationalization of the parts supply industry and decentralization of industries into rural regions.

11. Financial Plan

First phase

Experts in machinery and electrical/electronics 4 2 months

Second phase (to select items for which Khorat manufacturers show competitiveness and provide technical assistance for product upgrading)

Experts in machinery
(transformers, coils, harnesses, STMA, battery chargers) 2-3 6 months
Experts in electrical/electronics
(molding, press, casting, automotive parts) 2-3 6 months

Third phase (production management)

Experts in process control
(productivity, inventory and process layout) 2 4 months
Experts in quality control
(raw materials, finished products, process quality, management techniques) 2 4 months

Fourth phase (marketing)

Experts in machinery and electrical/electronics marketing 2 4 months
(domestic market, neighboring markets (Malaysia, Singapore) and other markets)

$$4 \times 2 + 4 \times 6 + 4 \times 4 + 2 \times 4 = 56 \text{ person-months}$$

12. Benefits

- (1) Reduction of inventory as a result of local procurement
- (2) Reduction of paperwork and other administrative work related to customs clearance, including manpower
- (3) Increase in value added within the country
- (4) Promotion of local employment
- (5) Incentives through local content (reduction of business or local taxes)

1. Project Title:	Establishment of the Marketing and Design Center
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2. Responsible Agency: MOI

3. Rationale

Major industries in Briram, Surin and Chaiyaphum are food processing, woodworking, silk textile, ceramics, and leather, which are dominated by microenterprises and family industries that make products on a contract basis. Thus, their production varies greatly over time and employment is not stable. Basically, they make the same products continuously over a few years and lack the willingness and the ability to upgrade product designs or incorporate the market needs, resulting in a steady decline in job order over time. Each industry is generally capable of supplying products acceptable to its market, but it is unable to explore new markets due to the lack of design capability, while little marketing study has been carried out to discover the market needs. Food, wood, silk, ceramics and porcelain, and leather products need to be developed with designs appealing to general consumers and/or tourists. Their markets can be developed over a relatively short period of time by developing designs and product mix based on the results of research and study on economic conditions, history, culture, custom and taste of consumers in target markets. What is needed now is the design and marketing center that can be used by these industries. The machinery and electric/electronic industries face the similar situation. They do not have marketing know-how to sell their products to export industries that operate within the area and consume large amounts of parts. Thus, they also require the design and marketing center that transfer marketing know-how to local suppliers and assist them in exploring the domestic markets.

4. Objective

- (1) To foster local SMEs.
- (2) To promote local procurement of parts by assembly manufacturers of export products.
- (3) To increase production through marketing drives targeting neighboring countries.
- (4) To promote regional industrial development and employment.

5. Project Focus Group

- (1) Food, silk textiles, leather products, ceramics and porcelains, machinery and electrical/electronics

6. Outcome

- (1) Product improvement
- (2) Fostering of local industries and employment promotion
- (3) The strengthening of international competitiveness of local industries

7. Activities

While its final goal is to cover a full range of industrial products, the Marketing & Design Center will initially support traditional areas of silk, ceramics, woodworking and food processing.

Operation and management of the center

Manufacturing enterprises in the four provinces are dominated by small-scale, family-operated and handcraft industries. Most of their owners do not understand the market including their competitors and have little knowledge on marketing. However, food, textile, woodworking and apparel industries are required to develop products that are tailored to local conditions peculiar to a specific market, i.e., these products must use different colors, shapes, patterns and other design features in different countries or markets. In the initial stage, the center's activity should focus on design and marketing efforts to achieve product differentiation in each of the target markets.

In addition, as the industrial machinery and electronic equipment industries emerge in the Khorat area, it is time to provide proper education and training for design and marketing in these areas. The marketing and design centers for these industries will be initially operated under the government budget and will gradually charge fees to secure their own income sources. The leading agency will be the export promotion department of the MOI (equivalent to Japan's JETRO) which will be able to fully cooperate with private enterprises.

First phase (study period)

- (1) To identify immediate areas of improvement such as packaging, labeling and packing, followed by improvement in color, shape and other design features.
- (2) To upgrade product packaging and design for the household appliance and machinery industries to raise the product's value.
- (3) To study the relationship between final assemblers and suppliers in each industry and evaluate feasibility of developing the local supplier base.

Second phase (technical assistance period)

- (4) To help produce product catalogs and company profiles that can be used as effective sales tools.
- (5) To teach the method for developing distribution channels by using sales tools and visiting potential customers.

Third stage (production management improvement period)

- (6) To use experts to visit 5-10 local suppliers each (machinery and electrical/electronic parts), provide technical assistance and homework in order to check the rate of progress and the willingness of management.
- (7) To study the needs of the machinery and electrical/electronics industries, i.e., which part they wish to procure locally to maintain competitiveness in export markets, and select local suppliers.
- (8) To identify major issues facing local suppliers and their products and send experts to provide on-site guidance and promote learning by doing.

Fourth phase (marketing support period)

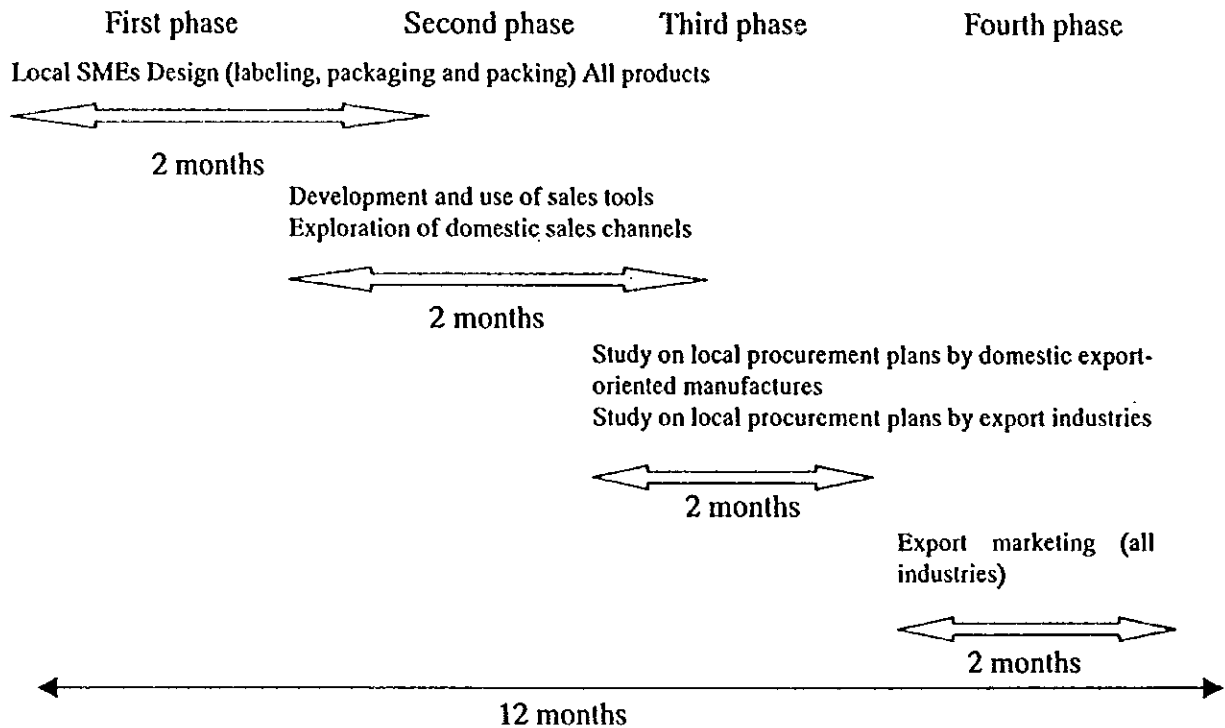
- (9) To study and explore overseas markets.
- (10) To provide assistance and guidance for the product development process.

8. Coverage Area

The Center will be established in Nakhon Ratchasima, and start providing service in Nakhon Ratchasima and the vicinity.

9. Project Duration

Schedule of Two Step Contract



11. Financial Plan

First phase (study period)

Design expert	2	2 months	4 person-months
Machinery and electrical/electronic designer (product)			
Food, wood furniture, apparel designers (mainly packaging, labeling and pattern)			
Marketing	1	2 months	2 person-months
Machinery expert	1	2 months	2 person-months
Electrical/electronics expert	2	2 months	4 person-months

Second phase (to select items for which Khorat manufacturers show competitiveness and provide technical assistance for product upgrading)

Marketing expert	1	2 months	2 person-months
Machinery expert	1	2 months	2 person-months

Electrical/electronics expert	2	2 months	4 person-months
Third phase (management techniques)			
Design expert	2	2 months	4 person-months
Marketing expert	1	2 months	2 person-months
Machinery expert	1	2 months	2 person-months
Electrical/electronics expert	2	2 months	4 person-months
Fourth phase (marketing)			
Marketing expert	1	2 months	2 person-months
Design expert	1	2 months	2 person-months
Machinery expert	1	2 months	2 person-months
Electrical/electronics expert	1	2 months	2 person-months
All the periods			
Macroeconomic expert	2	8 months	16 person-months
Total			52 person-months

12. Benefits

The project allows various industries in Thailand to learn market development know-how and build their own management systems capable of timely responding to the market changes.



1. Project Title:	Establishment of Inland Container Depot
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2. Responsible Agency: Main Agency

State Railway of Thailand (SRT), or Private organization

Other Agencies

Custom House

Quarantine Offices

Other offices

3. Rationale

Since the North-East region does not hold a seaport, smooth connection with a seaport outside of the region has the vital role in industrial development. As the Laem Chabang Port in the Eastern Seaboard region grows, the Northeastern region depends on the port more than ever. In the Bangkok Metropolitan Region, the growing volume of containerized cargo has been handled in several inland container depots (ICD) outside of the port area since late 1990s. The ICDs around Bangkok have contributed to smoothen the cargo flows in the region.

A Feasibility Study(#1) was conducted on three ICDs in the North-East region. Three sites are Khon Kaen, Nahon Ratchasima and Ubon Ratchathani.

(#1 "Feasibility Study for the Development of Inland Container Transport System." Parson Brinckerhoff etc. August 1998)

4. Objective

This project is intended to establish a full service container handling facilities, inland container depot, in the Nakhon Ratchasima region.

5. Project Focus Group

This project focuses all importers and exporters who use containers. In addition, this project focuses also exporters and importers whose cargoes are less than a full container.

The bulk cargo exporters such as tapioca and raw sugar are out of target of this project.

6. Outcome

- (1) Rationalization of container flows between the North-East region and Laem Chabang port.
- (2) Promotion of international trade from the North-East region.
- (3) Improving custom clearing time

7. Activities

The ICD should include the following activities:

7.1 Custom clearance of containers

A customhouse is necessary to provide permission for import and export cargoes. The introduction of Electric Data Interchange (EDI) system is also required for prompt custom operation. Several custom brokerage agents should be located on the site.

7.2 Transfer of containers between various modes

Between Laem Chabang and Nakhon Ratchasima, the basic transportation mode will be by trucks. In addition, railway transportation will be necessary. The railway siding needs to have 4 x 500m rail lines for one train which consists of 34 bogie container flat wagons.

7.3 Temporary storage of containers and cargoes

The exporters prepare their containers to meet the shipping date of their vessels. In order to avoid the congestion of container yard at Laem Chabang Port, the temporary storage at the ICD is an important function.

7.4 Charging and discharging of containers

For less than container load (LCL) shipments, it is necessary to organize the cargoes for the unit of container load of 20ft or 40ft. A Container Freight Station (CFS) can provide the service to charge and discharge of the LCL cargoes. A CFS is a platformed warehouse accessible by both container truck and ordinary truck.

7.5 Consolidation of LCL cargoes

To facilitate CFS service, consignees need to consolidate the LCL cargoes depending on their destination.

7.6 Positioning of containers

Identification and tracking of the containers on the depot are necessary for prompt handling of containers.

7.7 Maintenance and repair of containers

The damaged container cases need to be repaired on the depot.

7.8 Module Specification

The ICD consists of several operating modules. For example, one module occupies area of 250 x 400 m. Each module should have the following facilities on the site:

Container Freight Station (CFS) :	40 x 120 m
Office building (4 stories) :	31 x 14 m x 4 stories
Access area:	26 x 30 m
Workshop:	30 x 20 m
Canteen:	24 x 14m
Washing apron:	20 x 25 m
Container yard:	240 x 400 m
Parking area etc.:	25,998 sq.m
Reefer plugs:	48 plugs

Security fencing to customs standards around the bonded area
Terminal perimeter fencing
Gatehouse

7.9 Other official services

The following official service on the cargo is necessary on the site.

Plant quarantine
Animal quarantine

Fisheries quarantine
Wild life conservation division
Food and drug control division

8. Coverage Area

This ICD can serve the all importers and exporters in the whole North-East region. The location of this ICD is best if situated at the gateway of the region. Thus, Pakthongchai is the best location although it has no rail connection. Outside Pakthongchai, the triangle area of Nakhon Ratchasima, Sikhiu and Pakthongchai is the second best location.

9. Project Duration

The following schedule expresses the earliest case of project progress.

August 2000 – June 2001: Feasibility study and detailed design
(Based on the previous Feasibility Study, it can revise the scale of the project.)
July – August 2001: Bidding and procurement
September 2001 – August 2002: Construction
Revision of module concession contract: Every 5 years

10. Project Results

10.1 Project Results for the First Year Operation

Throughput 50,000 TEUs per module

10.2 Project Results for the Fifth Year Operation

Throughput 100,000 TEUs per one module

11. Financial Plan

The Private Finance Initiative (PFI) scheme can be introduced in this project. Based on the government program, a private investor acquires and develops a site suitable for the ICD. The investor splits the yard into a couple of modules. Each module is to be conceded to private operators or shippers. The investor can charge

the freight rate based on TEU. The rate should be around B900 per TEU, almost same level in the Bangkok Area.

Because this PFI scheme should be attractive to potential investors, the internal rate of return should be more than 10 - 15%. It is possible to achieve such profitability by adjusting the number of modules by demand.

12. Benefits

12.1 Economic benefits

Establishment of this ICD leads to stimulate the import and export in the whole North-East region in more efficient manner.

12.2 Environmental and social benefits

The establishment of ICD can eliminate unnecessary container transportation, especially blank containers. In addition, by using railway transportation between the ICD and Laem Chabang Port, the project can reduce the emission from the container trucks on the road.



<Project No. 11>

1. Project Title:	Issuance of the Recommendation Letter by the Provincial Community
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2. Responsible Agency: Provincial Community represented by each Municipality, District / Minor District and Sub-district where the potential project may emerge

3. Outline of the Project

When some businessman or entrepreneur is going to start business, people in the related area know well about what he is and his past performance and is considered to be in the position to sensitively perceive whether his new business will go well or not under such a society. To let the financial institutions know this perception is useful to make up for lack of information of the financial institutions. Moreover, once the related project decided to be given full support from the community, he will get mental prop and feel pressure from the decision made by the community. And if this fact was written on the paper and dispatched to the financier under the name of Recommendation Letter, it will give mental assurance to the financiers.

The Committee for regional financing support will be established and discuss the following items upon selection of the project.

- 1) On the project executor (including entrepreneur) to clarify what he is, his family and relatives, his management ability, his past business performance, his popularity in the area and so on and to check whether he is reliable or not.
- 2) Possibility of the project implementation
- 3) Possibility of the project realization
- 4) Merit and demerit to be brought about by the project
- 5) Possible measures the Committee can take

When the Committee reached such agreements through discussion that the related project is useful for industrial development in the province, that it will bring about much merit to the province and it is worth getting full support from the community, the local community makes decision that it will fully support the project.

The Committee issues the recommendation letter to the financier, when the related project needs loan from the financial institutions. The followings will be described in the recommendation letter.

- 1) The Committee's opinion that the related project is considered good.
- 2) The reasons why the related project was concluded to be good.
- 3) The expression of assurance that the provincial community will support the related project as much as possible and will keep the close contact with the financial institution, like reporting the progress of the project in every three months.

<Project No. 12>

1. Project Title:	Establishment of Nakhon Ratchasima International School
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2. Responsible Agency: International school in Bangkok, CC of foreign countries, FTI and foreign companies in the Nakhon Ratchasima provincial cluster

3. Outline of the Project

This project is a measure that improves the investment climate of the provincial cluster in terms of the educational environment of corporate managers' children. If an international school is opened in Nakhon Ratchasima, many corporate managers of foreign companies in Nakhon Ratchasima can live with their families.

The capital and operational costs of the school have to be covered with contributions by CC of foreign countries, FTI, foreign companies operating in the Nakhon Ratchasima provincial cluster and the Nakhon Ratchasima province. Students also have to pay tuition fees for their classes. The actual operation of the school may be done by the international school in Bangkok.

<Project No. 13>

1. Project Title:	Development of Entrepreneur Fostering Programs (EFP)
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2. Responsible Agency: FTI, Chamber of Commerce (CC) in cooperation with IPC

3. Outline of the Project

This program is a measure that gives indigenous young people opportunities to work closely with cutting edge business leaders in Thailand. To be an entrepreneur, one needs to have an emotion to start a new business, a vision and strategic thoughts, in addition to management knowledge and techniques. Management knowledge and techniques can be taught in schools but real philosophies and behaviors of corporate executives cannot be learnt in the classroom. In this regard, work experience with corporate executives in real life companies will help those who have intentions to start their businesses, to a significant extent.

In this program, FTI or CC works as a coordinator. Young prospective entrepreneurs are invited and selected by the coordinator. The method of selecting candidates is review of application forms and interviews. Since this program is not a job placement service, prospective entrepreneurs will be given 5 years of learning period in real life companies at longest. After the learning period, they need to go back to their home provinces to start up their own businesses or succeed their family businesses.

<Project No. 14>

1. Project Title:	Development of Buri Ram Industrial Estate
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2. Responsible Agency: The IEAT is responsible for development and management of the project

3. Outline of the Project

The project aims to promote economic growth, to raise income, and to increase employment in Buri Ram. The project is now in progress. It has a total area of 1,072 rais, 58.5 % of which are allocated to factory lots. It also has a green zone of

133 rais, reservoirs, and a treatment center for organic waste water. The project invites domestic and foreign manufacturers engaged in agricultural products processing and light industries which will not be threatened with environmental disruption.

<Project No. 15>

1. Project Title: Establishment of Rural Incubation Center

2. Responsible Agency: Ministry of Industry (MOI), and newly established Regional Industrial Development Office (RIDO)

3. Outline of the Project

The Rural Incubation Center is positioned as a unit of Regional Industrial Development Office that is proposed as a new organization to foster and support entrepreneurs in rural areas. The RIDO will provide an integrated service for selected entrepreneurs (including cooperative organizations of rural industries) from education to the support for business startup. The project will be led by the Bureau of Industrial Enterprise Development (BIED) and the Bureau of Industrial Sectors Development (BISD) that will, in cooperation with each IPC, support the startup of local SMEs by: (1) implementing the ongoing entrepreneur fostering program in a form customized to local conditions; (2) enhancing and providing consultation service (e.g., financing, marketing); (3) making available physical facilities (such as office and warehouse) on a rental basis; and (4) providing management consulting service for three years after the establishment.

<Project No. 16>

1. Project Title: Construction of the New Indochina Highway

2. Responsible Agency: Department of Highways, MOTC

3. Outline of the Project

The new international relationship with surrounding country implicates a new role of the North-East region. One of such new role is to connect between the Bangkok Metropolitan Area and Danang Port in the central Vietnam. This New Indochina

Highway is planned to connect the two major ports in the Indochina and will work as a landbridge in the region. The idea of the project is discussed in several reports including JICA study in 1993 and Noruconsultant Study in 1998. The Department of Highway, however, is reluctant to include the planned route into its long-term plan due to the mountainous topography between Buri Ram and Sakaew. The Second Mekong Bridge at Mukdahan, expected to open in 2003, will enhance the necessity of the establishment of the route.

<Project No. 17>

1. Project Title:	Local Products Quality Warranty System
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2. Responsible Agency: IPC of the Ministry of Industry is responsible for development and management of the project, in cooperation of the manufacturer associations of local products in the provincial cluster.

3. Outline of the Project

The project aims to encourage the production of the traditional products made in the provincial cluster by giving them a public warranty for their quality. In this system, some local products can carry the trademarks authorized by the government (IPC).

<Project No. 18>

1. Project Title:	High-tech Human Resource Development Program in Nakhon Ratchasima
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2. Responsible Agency: FTI, IPC in cooperation with SUT

3. Outline of the Project

This program is aiming at creating attitude of continuous technological improvement among engineers in Nakhon Ratchasima. Currently, technology levels employed by companies in Nakhon Ratchasima are more advanced than that of companies in and around Bangkok, because of the nature of products produced. Therefore, companies in Nakhon Ratchasima cannot absorb new and advanced technologies from the companies in and around Bangkok.

On the other hand, companies in Nakhon Ratchasima must improve their technology levels continuously so that they can maintain their competitive strengths. For this purpose, engineers in the companies must be motivated to make efforts in learning, modifying the existing technologies and applying new technologies to their current systems.

This program works as a trigger for the engineers to explore advanced technologies. Major activities of the program are technological study tours to advanced countries such as Japan and the United States and exchange of opinions with engineers in advanced countries in the form of technology seminars in Nakhon Ratchasima.

<Project No. 19>

1. Project Title:	Establishment an Investment Information System In Each Province
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2. Responsible Agency: The BOI Korat takes the initiative in constructing a computer network for investment information in each province. The network covers the BOI Korat, the PIOs in each province, the IPC 6, the IPC 7, and the provincial offices of the Ministry of Commerce, and the NESDB (Khon Kaen).

3. Outline of the Project

The project aims to promptly offer investment information to entrepreneurs in each province and potential investors outside. In the project, several information sources from the government are linked with one another via communication lines, which enables the entrepreneurs and potential investors to gain easier access to investment information they need.

<Project No. 20>

1. Project Title:	Establishment of an International Flight Company
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2. Responsible Agency: Private organization, Airport Authorities

3. Outline of the Project

The Nakhon Ratchasima Airport has been designated as a custom airport since its commencement. This means that the airport can accept any international flights in both departure and arrival. However, current scheduled flight operation is limited to domestic flights to Bangkok only. Despite the substantial potential demand on international flight, it has not been realized. One of the reason is the lack of core operating body and marketing effort.

Present international passenger and freight flows from/ to the four provinces depend on Bangkok Metropolitan Region. It is important for the region to hold its own international gateway.

This project intends to utilize the airport by operating international flight from/ to Nakhon Ratchasima. Beginning from unscheduled chartered flights, the company can attract frequent users such as expats working in the region and homecoming Thais from abroad. It is not necessary to own an aircraft but the company can ask its flight operation to Thai International Airways or Bangkok Airways. In the initial stage, the destination of the flights will be Hongkong and Singapore, which are other international hub airports.

<Project No. 21>

1. Project Title:	E-commerce Development Project In the Provinces
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2. Responsible Agency: Ministry of Industry (MOI), and each Provincial Industrial Office (PIO)

3. Outline of the Project

For business enterprises based in rural areas, a major challenge is to expand their business to urban areas and/or export markets. The project is designed to make up

for the locational disadvantage faced by rural enterprises by deploying e-commerce through the building of the enterprise's web site. In fact, most enterprises operating in urban areas use PCs widely for business purposes and many have started e-commerce initiatives. On the other hand, the PC ownership is very low among rural enterprises, particularly SMEs (estimated to range between 20% and 30%). The project will therefore focus on infrastructure development for the startup of e-commerce by rural enterprises. In this conjunction, the MOI has been making investment in rural infrastructure to build integrated information networks, including PIOs. Also, it is about to start IT education for local entrepreneurs through ISMED's program. The project will leverage these ongoing programs to raise recognition and understanding of e-commerce among rural SMEs and will provide support for planning and implementation of e-commerce initiatives.

<Project No. 22>

1. Project Title:	Construction of Natural Gas Pipeline
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2. Responsible Agency: PTT Gas, APM Corporation

3. Outline of the Project

Natural gas field in the Siam Bay has promoted many heavy industries along the Eastern Seaboard region. Currently, the pipeline is expanding to Ratchaburi and Wang Noi. However, there is no gas pipeline in the North-East. Because the main consumers of natural gas are power generator and heavy industrial sector, the pipeline will not be constructed until the complete chemical complex is constructed around the ASEAN Potash Mining (APM) Project in the Chaiyaphum Province. Without the chemical complex, the current demand forecast in the North-East does not support the feasibility.

The total length of the new pipeline is as follows:

Wang Noi – Nakhon Ratchasima	24-inch diameter	182km
Nakhon Ratchasima – APM	24-inch diameter	78km

In addition, several block valve stations will be required.

<Project No. 23>

1. Project Title:	Establishment of a Brand Fashion Outlet Center in Buri Ram
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2. Responsible Agency: Office of the Governor of the Buriram province

3. Outline of the Project

This project is to create an image of the Buriram province as a production center for brand fashion items by establishing a factory outlet center in the province. The factory outlet center consists of shops of various reputed brand-fashion manufacturers, restaurants and coffee shops with large parking lots. The province provides the land, and the province and a management company of the outlet center invest in the building. The management company invites tenants at suitable tenant fee rates. Shuttle buses are also operated by the management company among the center and the Buriram airport.

This project will increase inflows of tourists into Buriram from the Bangkok area, if air service in the Buriram airport and hotel facilities in Buriram are upgraded.

<Project No. 24>

1. Project Title:	Development of Chemical and Science Industrial Park
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2. Responsible Agency: Ministry of Industry (MOI), Department of Mineral Resources (DMR), Industrial Estate Authority of Thailand (IEAT)

3. Outline of the Project

A potash mining project in Bamnet Narong (southern Chaiyaphum) is currently under planning. As the area has a large amount of rock salt deposits to make the development of the chemical industry using kali and salt and feasibility study has been carried out for production of various chemicals. Coupled with availability of large land (500rai) reserved for industrial use and the prospect for a natural gas pipeline project, the project has a high level of feasibility. As Chiyaphum abounds in farmland and forests, industrial development requires careful environmental

consideration, the project aims to attract research-oriented industries including environmental engineering and biotechnology, in addition to chemical industries. The project should start from feasibility study of the industrial park project itself under the assistance of a foreign aid organization, which has not been carried out so far.

<Project No. 25>

1. Project Title:	Consulting program for textile and apparel Industries
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2. Responsible Agency: IPC, SUT/ISMED and TI

3. Outline of the Project

This program is a measure that improves textile and apparel industries in the project area. The program covers raw materials, production process, marketing, quality issues, and environmental technologies. The focus is on SMEs rather than large-scale companies. IPC invites applicants from among the companies in the project area. The consulting service is provided in cooperation with foreign and domestic experts in textile and apparel industries.

<Project No. 26>

1. Project Title:	Green & Clean Province Campaign
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2. Responsible Agency: Buriram Provincial Administration Office,
District Administration Offices in Buriram,
Provincial Administration Organization,
Sub-district Administration Organization,
and Department of Tourism

3. Outline of the Project

The strategic direction for industrial development in Buriram includes the development of a fashion industry center (a production base for apparel manufacturers) by attracting light industries including textiles and shoes. At the same time, Buriram is an agricultural province and a verdant land. Also, there are

extensive Khmer ruins in the south of National Highway No.24, which can become a major tourist attraction. To develop these two industries as an economic base of the province, the project will promote it to create an attractive public image. Provincial and local administration offices will establish a joint promotion committee to plan and implement infrastructure development, public education for local residents, joint initiatives with business enterprises, beautification contests, and media campaigns. In particular, the project will be started in the areas along Highway Nos.24 and 236 and in and around Lampaimart, Nang Rong, Buriram, and Prakhonchai, which are positioned as key areas of the campaign.

<Project No. 27>

1. Project Title: Establishment of the Design Department In SUT

2. Responsible Agency: SUT

3. Outline of the Project

This project establishes a new design department in SUT. The department focuses on fostering industrial designers for the companies in the provincial cluster. Target sub sectors in the industry are electric (or consumer) products and machinery. Since the provincial cluster is in a good location to do business with the Indochina market, the department's focus is on product design for the Indochina market. The logic behind this project is that one of the major factors influencing competitiveness of products is product design. R&D activities of the companies are materialized only when R&D results are incorporated into designs of new products. However, if designs are not attractive to consumers or clients, R&D results are not effectively utilized as a result. In order to strengthen product competitiveness, local companies need to develop their creative design capability.

<Project No. 28>

1. Project Title:	Strengthening of Micro Scale Finance Schemes
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2. Responsible Agency: Ministry of Finance (MOF), SIFC, IFCT

3. Outline of the Project

IFCT and SIFC, aiming at industrial development and SMEs development respectively, cannot respond to requirements of micro-scale enterprises, because their minimum loan amounts are set to be 500 thousand Baht per case. BAAC and GSB are extending loans amounting less than 100 thousand Baht in the form of group financing and group guarantee. However, BAAC is limited to extend loans to only farmers and agricultural cooperatives and GSB can extend loan only to depositors up to five times of their saving amount. Moreover, their interest rate to be applied are too high for industrial development because of being set based on their MLR (as of Feb., 2000, BAAC's MLR is 9.0%p.a. and GSB's 7.75%p.a.).

On the other hand, the revolving fund implemented by IPC and PIO cannot fully respond to these fund demands due to the limited financial resources of 340 million Baht.

What is the most desirable is to newly set up "Specialized Financial Institution for Micro Enterprises" and to prepare the either finance scheme of ①Micro enterprise can get loan with cheaper interest rate and longer repayment period, or ②Micro enterprise borrowed fund from other financial institution can get interest subsidy to mitigate the burden of paying high interest rate.

The second best measure is to revise the current finance schemes as follows;

- 1) To bring down minimum loan amounts of IFCT and SIFC so that they can extend loans to even Micro enterprise. In particular, SIFC's minimum loan amount of 500 thousand Baht, which was established a Specialized Financial Institution for SMEs, is considered too big from the view point of its purpose. It is better to be brought down to the average amount SMEs' need.
- 2) To change the condition imposed by GSB from "up to 5 times of the saving amount" to "depositors having saving accounts in GSB for some years", thereby the loan amount to SMEs by GSB is expected to increase.
- 3) To be fixed the interest rate to be applied to Micro enterprise and reduce it up to 5~6%p.a

- 4) To raise the capital amount of the revolving fund operated by IPC and PIO so that more Micro enterprises can utilize this scheme.

<Project No. 29>

1. Project Title:	Cooperative Development Project for Promoting Indigenous Industries
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2. Responsible Agency: Ministry of Industry (MOI), Bureau of Industrial Enterprise Development (BIED), Bureau of Cottage and Handicraft Industries Development (BCHID), Local Chamber of Commerce

3. Outline of the Project

The project is designed to encourage small enterprises (particularly local industries in rural areas) to jointly conduct commercial business in the form of a beneficial association. Each business will be organized by small enterprises who will make collective efforts in various business activities including the purchase, production and sales. This way, an attempt will be made to ensure equal opportunities for economic activities among members. As the project needs to be authorized by law to support the collective activities, the MOI will lead legislative efforts, followed by promotional activities and technical assistance by the MOI in cooperation with local chambers of commerce and industry. In addition, incentives for rural enterprises to participate in the cooperative development process will be provided, including tax relief, favorable loan conditions and public services.

<Project No. 30>

1. Project Title:	BOI Rural Industries Promotion Project
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2. Responsible Agency: Board of Investment

3. Outline of the Project

To become eligible for investment incentives as the BOI promotion project, the minimum amount of investment is set at 1 million baht, regardless of type of industry (not including land cost and working capital). As a result, most of

projects in rural areas are not eligible for tax and other incentives. Nevertheless, these investment projects contribute with varying degrees to the creation of employment opportunities in rural areas and the increase in personal income, not to mention their important role in the regional industrial development process. From the viewpoint of encouraging small investment projects (less than 1 million baht), separate approval criteria should be established according to the type of industry preferred in less industrialized areas, industry size, sales, employment and consumption of local materials. The less industrialized area is designated as a subdivision of conventional zoning.

<Project No. 31>

1. Project Title:	Introduction of Small Scale Cooperate Relief funds
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2. Responsible Agency: MOF and MOI

3. Outline of the Project

The project is essentially a benevolent fund operated by small enterprises under the spirit of mutual beneficial, functioning as small-scale financial service.

- (1) To provide funds for eligible members who have paid their contribution for more than six months in order to meet a variety of financial needs, including general purpose, emergency loan (disease or disaster), business startup/conversion loan, and relief loan to prevent small business bankruptcy.
- (2) To set forth an amount of monthly contribution in consideration of affordability of each enterprise (family), with minimum and maximum levels being defined.
- (3) To provide the relief loan in amount equivalent to ten times the total amount actually contributed, or the amount of credit that cannot be recovered, whichever smaller.

<Project No. 32>

1. Project Title:	Establishment of Regional Steel Material Center
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2. Responsible Agency: Ministry of Industry (planning) and distributors of steel products (implementation)

3. Outline of the Project

In the Khorat area, key steel materials must be imported from the BMA or overseas, depending on the type of product. As a result, their costs are directly affected by market conditions and it takes considerable time to procure products.

Clearly, this constitutes a major obstacle for machinery industries in the area to gain competitiveness in the outside markets.

The regional steel material center will keep stockpiles of steel materials demanded by machine shops and cut them into dimensions specified by a factory for immediate supply. One center in the area is expected to serve demand in the four provinces within a much shorter period of supply. The establishment of the center will require acquisition of land and construction of warehouse and machining facilities.

<Project No. 33>

1. Project Title:	Sales Channel Match-making Scheme for Indigenous Industries
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2. Responsible Agency: DIP,IPC

3. Outline of the Project

This project is to develop a new matchmaking scheme which connects indigenous industries with strong retailers in Bangkok. Since many of indigenous industries do not have brand loyalty and product credibility, customers presently hardly pay attention to their products without special promotion activities. If strong retailers in Bangkok start selling products produced by indigenous industries, customers will pay attention to such products thanks to the brand royalty of the retailers. In this

scheme, IPC acts as a coordinator for matchmaking between indigenous industries and retailers in Bangkok. IPC contacts with strong retailers with lists of indigenous industries and their products. Once channels between indigenous industries and retailers are established, further business contracts are directly made between the two parties. This scheme will be strengthened by the Local Product Quality Assurance Scheme also proposed by the team.

<Project No. 34>

1. Project Title:	Establishment of a SI Promotion Center Nakhon Ratchasima
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2. Responsible Agency: The IPC 6 is responsible for implementation and management of the project, in cooperation with the Bureau of Supporting Industries Development of the DIP.

3. Outline of the Project

The project aims to develop the supporting industries in the provincial cluster. The SI promotion center has provided the manufacturers of electronics and automobile components with technical guidance, training, testing and trial manufacturing services. It also offers them information services for match-making with assemblers.

<Project No. 35>

1. Project Title:	Establishment of Paktongchal Silk Center
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2. Responsible Agency: Ministry of Industry (MOI), Department of Industrial Promotion (DIP), Department of Tourism (DOT)

3. Outline of the Project

Thailand has four sericulture research centers, but it has no technical assistance organizations in the fields of silk processing and product development. Silk producers rely on traditional know-how and techniques and lack the willingness or the ability to develop new products. The project will use a vacant building in

Paktongchai, which was constructed by the DOT, as a center for silk technology research and product exhibition to support. The center will be operated jointly by a local sub-district administrative office and the cooperative of silk procedures under the assistance of the DIP and the DOT. The research center will be financed by the budget of the MIO. The exhibition center will, under the assistance of the DOT, sell silk products for visitors at low prices by promoting the place as a tourist attraction, together with demonstration of the silk production process.

<Project No. 36>

1. Project Title:	Management Transformation Program to Small Scale Company
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2. Responsible Agency: DIP, IPC, SUT/ISMED

3. Outline of the Project

This program is to upgrade micro scale companies to small scale ones by training company owners on how to modernize their companies. The program is focusing on providing micro-scale business owners with basic concepts of corporate management through a comprehensible guidance.

The subjects to be taught are:

- a) What increases profits? – Quantity of sales, Price, Productivity, Tax deduction
- b) How money is used? – Reward, Production expenditure, Investment
- c) How employees are hired? – Wages and salaries; Job instruction, Work rules, Control and management, Educating employees
- d) How problems are solved? – Problem solving, Creativity, Observance of rules, Information sharing, Education and training
- e) How management plans are developed?

The program is about 7 full days in the classroom. Instructors work as a team to teach basic management concepts.

<Project No. 37>

1. Project Title:	Worker Education Program
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2. Responsible Agency: DIP, IPC, SUT/ISMED

3. Outline of the Project

This program is to upgrade workers by training on critical requirements for working in the factory and a good way of work through a comprehensible guidance.

The subjects to be taught are:

- a) What is required for safety? -- Work rules and regulations
- b) How are tasks organized and proceeded? -- Organization, Responsibility, and Demarcation
- c) How does work process improvement benefit to workers? -- Safe, Correct, Easy and Quick ways
- d) What are 5S? -- A good way of conducting and improving assigned tasks

The program is about 10 full days in the classroom and factory. Instructors work as a team to teach basic concepts of factory management.

<Project No. 38>

1. Project Title:	Tapioca-Ethanol Processing Project
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2. Responsible Agency: Ministry of Science, Technology and Environment (MSTE), Ministry of Industry (MOI), Private companies

3. Outline of the Project

This project aims to utilize surplus tapioca to ethanol fuel. The target area has been producing plenty of tapioca, but it has limited uses so far. On the other hand, consumption of gasoline by automobiles has a tendency to increase year by year in Thailand. Biomass ethanol has not been given its rightful economic value, however, the processing technology of making ethanol from tapioca was already developed and used practically in some countries such as Brazil and USA. In Thailand, MSTE has developed applied processing technology and ready to commercial use. Private companies under cooperation with MSTE and MOI shall initiate this project. In order to strengthen cost competitiveness compare with that of gasoline, it is recommendable to provide some incentives by BOI for the project.