

III-5-2. Programme for Reinforcement of Human Resources Development

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1. Background of Project Proposal

Malaysia aims at becoming an "independent" industrialized nation by 1995. In her Industrial Master Plan, which establishes the scenario for this, current problems and measures for their resolution so as to reach this "goal" are analyzed in detail and proposed. And it is stressed that one of the most important points is the development of human resources, in particular, the training of R&D personnel, engineers and technicians, and skilled workers in the manufacturing sectors.

On the other hand, the results of the interview and questionnaire surveys of the related organizations, private companies, etc. in the various industries covered by this Development Study again showed that the development of human resources, in particular the necessity for further advancement of skill-level of skilled workers and technicians and the improvement of management, was a matter seriously considered as a bottleneck in industrial development.

Behind this interest shown in human resources development is the fact that Malaysia has achieved a certain degree of economic development and, as a result, has begun to move in the direction of an industrialized nation. Therefore, at the present time, Malaysia must change from production of industrial products for the domestic market only to the production of products acceptable on the global market, that is, industrial products of a high quality and precision and having international competitiveness. To seek such quality and precision, superior technicians and skilled workers would be necessary. With the present level of skills and methods for development of human resources, it has been clear that this goal cannot be sufficiently achieved.

Based on this viewpoint, various measures for the development of human resources required by Malaysia at present and in the near future have been put together into a programme for reinforcement of human resources development as follows.

2. Needs for Human Resources Development in the Electronics Industry and Problems in Development

(1) Summary

The electronics industry is the largest sector of Malaysian industry and new investment in this field is continuing even today, so a questionnaire survey and field interview survey were conducted so as to obtain the needs for human resources development particularly in this field and to clarify their problems as well. A summary of the results is given below. (Details of the findings of the questionnaire survey are provided in the Annex of the 3rd Year Report.)

(2) Summary of Findings of Questionnaire Survey

[1] Supply and demand of labour force

- Out of the 119 electronics related companies, 19 responded that labour shortages were a serious problem and 69 responded that shortages were somewhat of a problem. Together, this means 70 percent of all companies considered that the labour supply and demand situation in Malaysia was a difficult one.
- By job, shortages of labour are becoming problems in, first of all, technician-level workers, followed by line workers and engineers. The same order applies in the future (in the coming 5 years) when worker shortages by job are projected.

[2] In-house training

- Of the 119 companies, 95, or 80 percent, were offering in-house training even now.
- The primary method of training was on the job training (OJT), followed by dispatch of workers to the parent company and use of public and private training schools.

[3] The technical fields in which expansion of training programme in public and private training schools would be desired are as follows:

- Line worker class
Machine operation, quality control, casting, pressing, plastic molding, metal working
- Supervisor class
Quality control, instruction know-how, electronic engineering, plant engineering
- Technician class
Electronic engineering, electrical engineering, quality control

[4] Necessity for establishment of government-industry joint technical training institution

- 110 companies, or 92 percent of 120, responded that this type of training institution would be necessary.
- As for the class of workers to be trained, there were strong calls for training of technicians followed by training of supervisors.
- In terms of cooperation from companies to the training institution, up to 87 of the 110 companies responded that they were willing to cooperate. As for the form of cooperation, 45 companies indicated that they could dispatch instructors, 28 that they could provide funds, 17 that they could provide

training materials and appliances, and 2 that they could offer training facilities (space).

(3) Summary of Findings of Field Interview Survey

The Study Team ran a field interview survey on individual companies, existing training facilities, and related government organizations in Malaysia. From the findings of the survey, the following may be pointed out as current problems in human resources development:

- [1] Insufficient teaching know-how of instructors of public sectors derived from instructor training system
- [2] Low awareness of management needs by top and middle managers
- [3] Difficulties of training for skilled workers in small and medium scale enterprises due to insufficient funds and manpower
- [4] Shortage of practical training programmes which meet the needs of industrial sector in training organizations (e.g. QC education etc.)
- [5] Difficulties of companies in accumulating technology and skills due to prevalence of job hopping
- [6] Shortage of technical books and production manuals
- [7] Insufficiency of detailed consultancy services meeting company needs provided by public organizations

3. Present Vocational Training System in Malaysia

(1) Training Facilities

The following are the key public training facilities in Malaysia which provide pre-employment training and advanced training:

- [1] Pre-employment training facilities
 - Industrial Training Institute (ITI)
 - Institute Kemahiran MARA (IKM)
 - Youth Training Centre (YTC)
 - Secondary Vocational Schools
 - Polytechnics

Of the above, the ITI, IKM, YTC, and secondary vocational schools usually offer two years of pre-employment training to graduates of lower secondary schools and aim at producing semi-skilled and skilled workers. On the other hand, the polytechnics offer two to three years of training to persons completing technical schools and aim at development of technicians.

- [2] Advanced training facilities
 - Centre for Instructor and Advanced Skill Training (CIAST)

The CIIAST was established with the cooperation of the Japanese government and mainly aims at training instructors for polytechnics and other public training organizations. Further, it functions as an organization for human resources development not only for Malaysia, but for ASEAN countries as well.

(2) National Vocational Training Council (NVTC)

The NVTC was established in May 1989 with the aim of building a new vocational training system meeting industry needs. It is organized as shown in Fig. III. 5-3. At the present time, the NVTC is proceeding with the job of preparing uniform curriculums for pre-employment training, which is now being offered individually in the ITI, IKM, and YTC.

Along with the establishment of the NVTC, a Planning and Training Development Division was newly formed in the Ministry of Human Resources as NVTC's secretariat. The organization chart of vocational training in the Ministry of Human Resources is as shown in Fig. III. 5-4.

Fig. III.5-3 National Vocational Training Council (NVTTC)

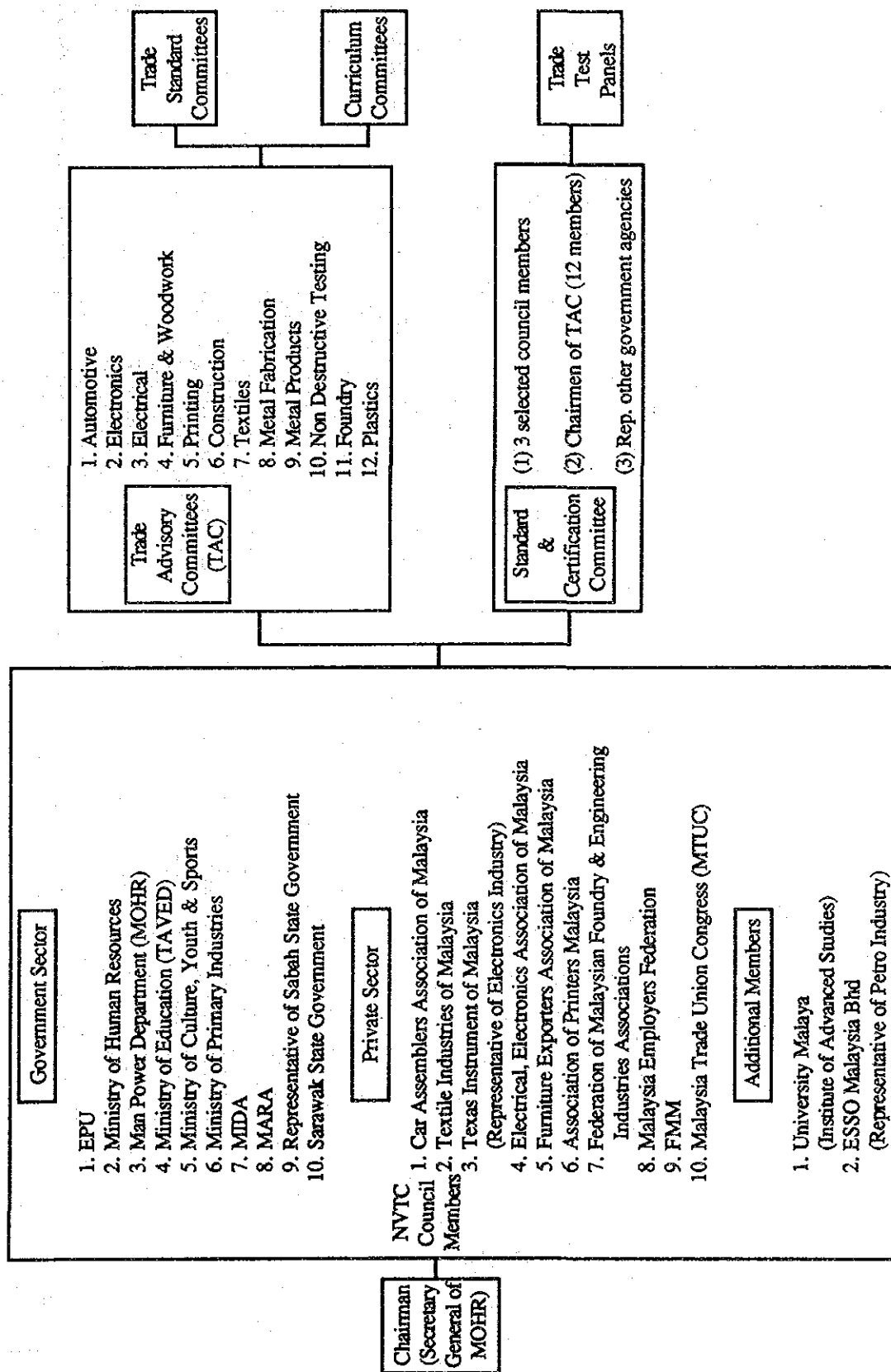
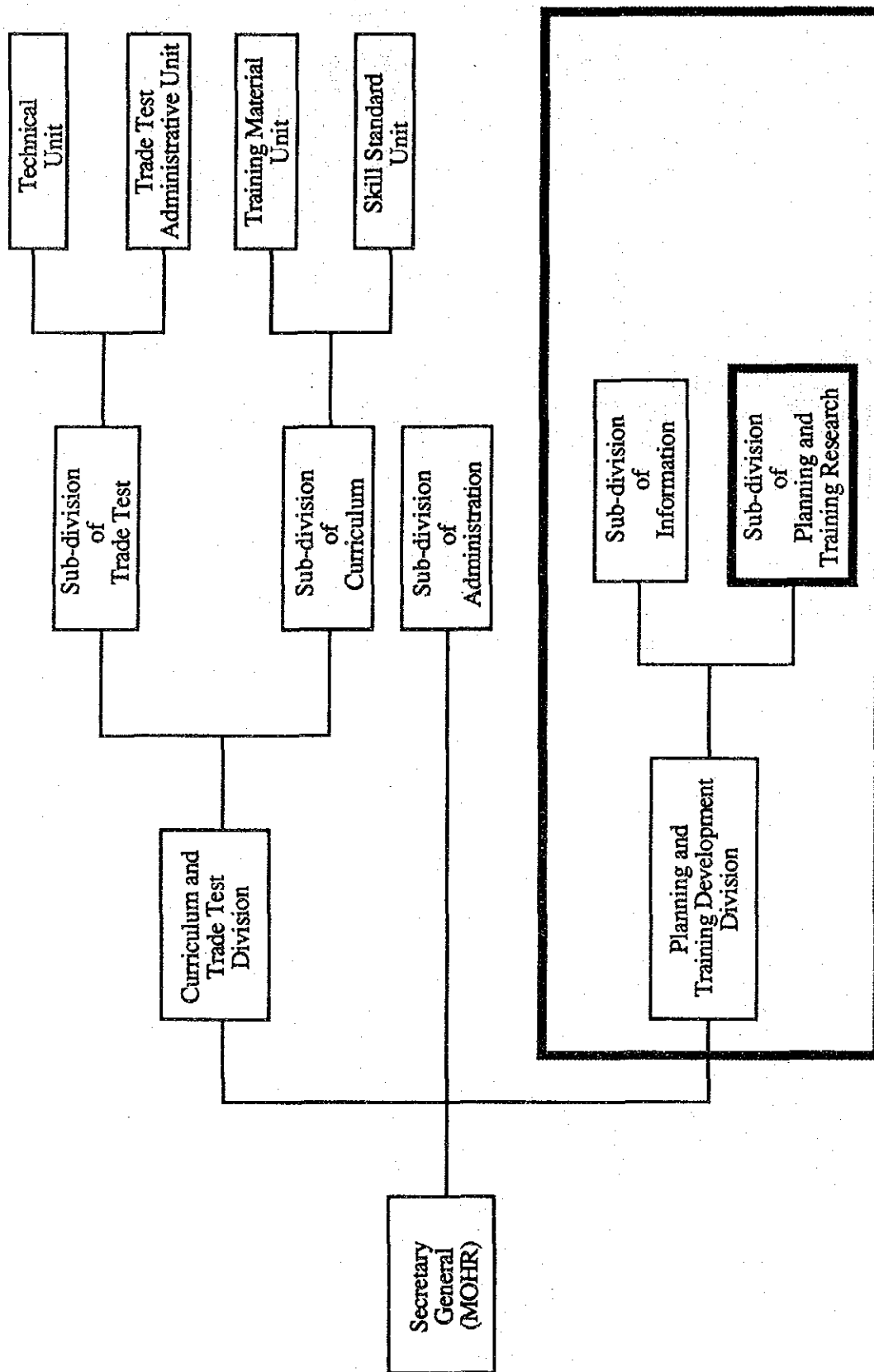


Fig. III. 5-4 Organization Chart of Vocational Training in the Ministry of Human Resources (MOHR)



 NVTC Secretariat

4. Proposal of Comprehensive Programme for Human Resources Development

(1) Summary

In order to draft a strategy for human resources development so as to attain the "goal" of industrialized nation in Malaysia, it is necessary to give full consideration to measures for development at the following four levels:

- [1] Pre-employment training for development of line workers
- [2] Highly advanced pre-employment training for development of technicians
- [3] Advanced training for improvement of the technical/skill level of currently employed workers
- [4] Education and training of corporate managers and key management staff

Which of the above four levels should be stressed differs according to stage of industrial development and national conditions of the country concerned, but in Malaysia where new investment is rushing from abroad, it is necessary to promote measures for human resources development at all levels in parallel. From this viewpoint, in this section, first a summary is given of the measures for development at these four levels. A detailed explanation will be given after this of the plans for establishment of a government-industry joint technical training institution for advanced training for raising the technical/skill level of workers who are currently employed and engaged in actual work, which is of particular urgency in Malaysia.

(2) Pre-employment Training for Line Workers

1.) Background and Objectives

Under the current education system, Malaysians first have the chance for vocational training when completing lower secondary school education and proceeding on to the ITI, IKM, YTC, and secondary vocational schools. These four types of training schools give opportunities of vocational training from introductory stage of skill training up to semi-skilled level, but the content of the training is not necessarily uniform. The NVTC has been established to unify the training curriculum in these training organizations, in particular the ITI, IKM, and YTC, and to make it suitable for industry needs. The establishment of the NVTC is of extreme significance in unifying the vocational training, which previously had been performed in diverse ways by the various supervising authorities, however, its activities up until now have not been that remarkable in comparison with the importance of the objective of its establishment. It is considered necessary to obtain cooperation from abroad, such as experts, and to manage its activities effectively.

2.) Content of Proposal

With the cooperation of foreign experts, the NVTC (Secretariat: Ministry of Human Resources, Planning and Training Development Division) would proceed with the following programmes:

[1] To review and evaluate of existing educational materials, curriculum, training materials, etc. in present public pre-employment training facilities (ITI, IKM, and YTC) and to establish a uniform training curriculum which meets industrial requirements.

[2] To establish an effective public training system by means of conducting survey to obtain qualitative and quantitative grasp of present and future labour force distribution in industry. And also to set up expansion plan of public training facilities so as to meet each regional vocational training needs by means of survey on regional industrial features.

[3] To review present National Trade Test and to establish new Trade Test System suitable to industrialized nation.

(3) Highly advanced Pre-employment Training for Technician Level Workers

1.) Background and Objectives

There is a large demand for workers in the large, foreign capital companies and also in small and medium scale domestic companies in Malaysia. It is becoming difficult for private companies to satisfy their demand for skilled workers and technician level workers through their in-house training only. To make up for this, it would be desirable to expand the public training facilities providing advanced pre-employment training. At the present time, the ITI is offering the National Apprenticeship Scheme (NAS) which provides systematic, three-year training to young workers sent from companies, but this is aimed at training skilled workers of an elementary or intermediate level. It would be desirable to establish "a highly advanced pre-employment training course" for graduates who have successfully completed basic vocational training at the ITI, IKM, YTC, and secondary vocational schools, and with financial support from the interested private cooperating companies.

2.) Content of Proposal

There is no need for creating a new organization for the proposed establishment of highly advanced pre-employment training course. This should be realizable by active use and expansion of existing organizations and training materials. The existing organizations being provisionally considered are as follows:

[1] Centre for Instructor and Advanced Skill Training (CIAST)

CIAST has well-equipped training materials, individual curriculum and educational materials for training in advanced skills, so it is considered that these facilities may be utilized for setting up comprehensive training programme of two years or so, including industrial experience course. In the preparation of the programme, full

consideration must be given to the needs of private companies. The programme must also be run flexibly, giving consideration to the requirements of the cooperating companies.

[2] Institute Kemahiran MARA

The IKM offers basic vocational training for young Malays and has a plan for establishment of higher level vocational training facilities offering the more advanced training meeting industry needs in cooperation with private companies. The plan is still in the conceptualization stage at present, so a survey for making the plan more concrete would be desirable.

(4) Advanced Training for Raising Technical/Skill Level of Currently Employed

1.) Background and Objectives

Advanced training for raising the technical/skill level of currently employed workers is being offered by public training organizations too, such as CIIAST, but the central role in this is performed by private companies, so called "in-house training". This in-house training in private sectors has the advantage not obtainable in a public training organization of being able to be flexibly changed in accordance with individual needs of companies and the constant changes in technological evolution. As such, it would be desirable to make continued use of this advantage and lighten the load on individual companies by organizing companies as members and obtaining support from public organizations to establish a government-industry joint technical/skill training institution. In the questionnaire survey run in the current study, 110 of the 120 responding companies indicated that they recognized the need for such a training facility. Eighty seven companies indicated they might provide cooperation by the dispatch of instructors, provision of funds, provision of materials and equipment, etc.

2.) Content of Proposal

It is proposed to organize companies as members and obtain support from public organizations to establish a National Technological Development Centre (NTDC, provisional name) to serve as a government-industry joint technical training institution. A summary of this is given in detail later.

(5) Education and Training of Corporate Managers and Management Staff

1.) Background and Objectives

A major reason for the weak linkage between large scale foreign assembly companies and domestic subcontractors in Malaysia is, as is often pointed out, the delays in modernization of management by small and medium scale domestic companies and the low awareness of quality control. To deal with this, a "revolution in awareness" of managers of small and medium scale domestic companies is necessary. This change in thinking on the part of managers would lead to a recognition of the need for training and

education of workers and promote the development of human resources in Malaysia as a whole.

2.) Content of Proposal

"A manager/supervisor training course" for training corporate managers and management staff would be established in the National Productivity Centre (NPC). The curriculum would desirably include guidance in financial management, labour management, production control, quality control, sales control, inventory control, and other modern management and control techniques and also field training consisting of practical experience in general diagnosis of the management of specific companies.

5. Summary of Proposed National Technological Development Centre (NTDC)

(1) Objective

The objective would be the advancement of the overall technical/skill level of workers of member companies and other Malaysian companies through the following activities:

- [1] To sponsor various seminars and training courses for improvement of the level of technology and skill.
- [2] To collect and distribute of technical related materials and information
- [3] To establish foreign language training and overseas study courses as preparation for overseas training
- [4] To promote technical exchange activities among companies

(2) Organization

A management committee composed of representatives of companies in Malaysia supporting the establishment of the centre, Malaysian government and cooperating international organizations, and subcommittees for each activity would be established. A secretariat comprised of the following divisions and sections would be established:

Administration Division

General Affairs Section

Accounting Section

Language Training Division

Language Training Section

International Cultural Training Section

Information and Publication Division

Industrial Information Support Section

Publication Section

Library and Reference Section

Education and Training Division

Seminar Section
 Industrial Equipment Section
 Quality Control Section
 Computer Section
 Others

The organization chart envisioned would be as shown in Fig. III. 5-5.

(3) Necessary Funds

It is impossible to calculate the funds required for establishment of the Centre without clarifying the number of participating companies and the activities required by those companies. Further, the training equipment and materials do not all have to be installed from the very start, but preferably could be gradually installed with the support from the participating companies and cooperating organizations.

Rough estimate of initial expenses for establishment of the Centre would be as follows.

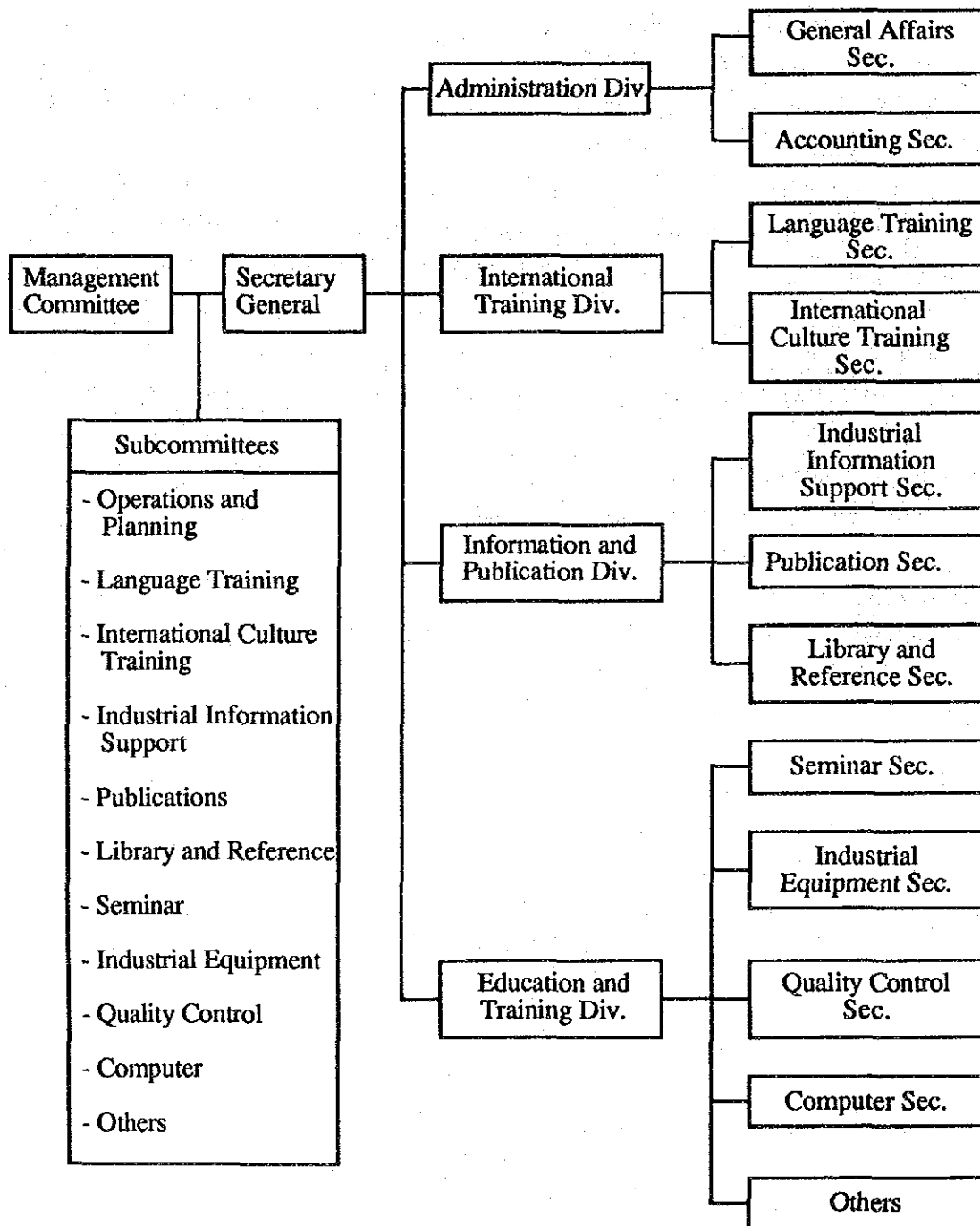
Land, approximately 6000 m ²	Provided by Malaysian government
Buildings, approximately 3500 m ² :	M\$2.3 million
Interior, wiring, air-conditioning:	M\$1.0 million
Set of office equipment:	M\$0.5 million
Training equipment and materials:	M\$1.2 million
<hr/>	
Total	M\$5.0 million

(4) Fund Procurement

The following may be considered as means for raising the funds for the establishment and operation of the Centre:

- | | |
|------------------------------|--|
| Malaysian government: | <ul style="list-style-type: none"> ·Provision of land ·Partial subsidization of funds for establishment of the Centre other than land ·Partial subsidization of operating costs of the Centre |
| International organizations: | <ul style="list-style-type: none"> ·Cooperation in dispatch of experts from overseas ·Partial grant of training materials |
| Companies in Malaysia: | <ul style="list-style-type: none"> ·Partial provision of funds for establishment of the Centre other than land ·Partial provision of training materials ·Partial sharing of operating costs of the Centre (by payment of membership fees, etc.) |

Fig. III. 5-5 Organization Chart of National Technological Development Centre (NTDC)



(5) Activities of the Centre

[1] Language training

In introducing technology from the advanced countries, language is extremely important as media for communications. Therefore, Malaysian workers participating in overseas training programmes or working in foreign capital companies would learn the language of the country concerned and, further, foreign staff working in Malaysia would be given the chance of learning Bahasa.

[2] Training in International Culture

An understanding of the industry and culture of the advanced countries concerned is extremely important in introducing technology from them. From this viewpoint, Malaysian workers participating in overseas training programmes or working in foreign capital companies would be provided study course of culture of the country concerned and foreign staff working in Malaysia would be taught about Malaysian culture.

[3] Industrial information support

A grasp would be obtained of the technical information required by Malaysian companies, that information would be collected, and the same given individually to domestic small and medium scale enterprises requiring the same through consulting etc.

[4] Publications

The technical information required by domestic Malaysian companies and the same distributed periodically to domestic member companies and other companies requiring the information.

[5] Library service

A library would be established housing technical information and materials available for viewing by member companies and other domestic companies desiring to use the same.

[6] Seminars

Various seminars would be planned and held in accordance with the needs of Malaysian industry.

[7] Industrial equipment training

Courses would be established for training technician level workers of domestic companies in the basic maintenance of manufacturing equipment, methods of use of various types of measuring equipment, etc.

[8] Quality control training

The concept of quality control would be spread among participating companies by seminars and training courses, and a place would be provided among participating companies for the exchange of quality control experience and knowhow .

[9] Computer training

Training courses in microprocessors and microcomputers (hardware and software, theory and practice) would be established and training provided for a wide spectrum of persons from company technicians to managers.

[10] Others

When there are requests from participating companies for establishment of permanent training courses etc., these requests would be flexibly dealt with and new activities established.

6. Areas in which Assistance from Overseas is Anticipated

(1) Invitation of Experts to NVTC Secretariat (Planning and Training Development Division, Ministry of Human Resources)

- | | | |
|-----|-----------------------|--|
| [1] | Number invited: | 2 persons |
| [2] | Period of assignment: | 1 to 2 years |
| [3] | Service: | <ul style="list-style-type: none">·Advice for unifying training curriculum, training materials and facilities, and educational materials in ITI, IKM, YTC, and other organizations·Survey of feasibility of new establishment of highly advanced pre-employment training course in IKM and other public training organizations·Evaluation of existing National Trade Test and advice for new Trade Test System |

(2) Invitation of Survey Mission for Enabling Additional Use of CIIAST Facilities

- | | | |
|-----|-----------------------|---|
| [1] | Number invited: | Several members |
| [2] | Period of assignment: | 1 to 2 months |
| [3] | Service: | <ul style="list-style-type: none">Discussions with related Malaysian organizations about the way of additional utilization of CIIAST, e.g., on "highly advanced pre-employment training course" meeting the needs of private companies, |

using existing CIAST training facilities or
expansions of the same

**(3) Support to Promotion of Scheme for National Technological Development Centre
(NTDC)**

- [1] Invitation of survey mission for promotion of establishment of the Centre**
- [2] Invitation of long term and short term experts in various fields after
establishment of the Centre**

III-5-3. The Study for the Construction of an Industrial Park for High Value-added Industries

III-5-3. The Study for the Construction of an Industrial Park for High Value-added Industries

1. Background of Project Proposal

The Malaysian manufacturing sector, especially large-scale and export-oriented manufacturing industries, is rapidly shifting from the stage of simple assembly to more comprehensive and high-value-added types of processing operations. In the process of the field interview survey conducted by the Study Team, however, the following factors which tend to prevent the above shift were identified:

- 1) In some of the existing high-tech industries in Malaysia, such as IC manufacturers, the problem of industrial wasted water treatment or sludge disposal has become serious. Further, the unstable electric supply is one of the factors to prevent the shift from the simple assembly of ICs to full process production;
- 2) For the new establishment of large-scale manufacturing plant, such as CRT plants, which require massive chemical treatment procedures, the initial investment costs or the daily treatment costs of industrial waste water would become very high due to the lack of public waste water treatment facilities; and
- 3) From both the growing concern with environmental protection and the expansion of their operations, some of such supporting industries as plating or casting industries are faced with the necessity to take some strong countermeasures for environmental protection.

Based on the above findings, the establishment of an industrial park for high value-added industries, in which are installed all of the necessary infrastructure facilities required of high value-added industries, was proposed.

2. Basic Concept of the Proposed Industrial Park

(1) Outline of the Concept

The basic concept of the proposed industrial park for high value-added industries is briefly summarized as follows:

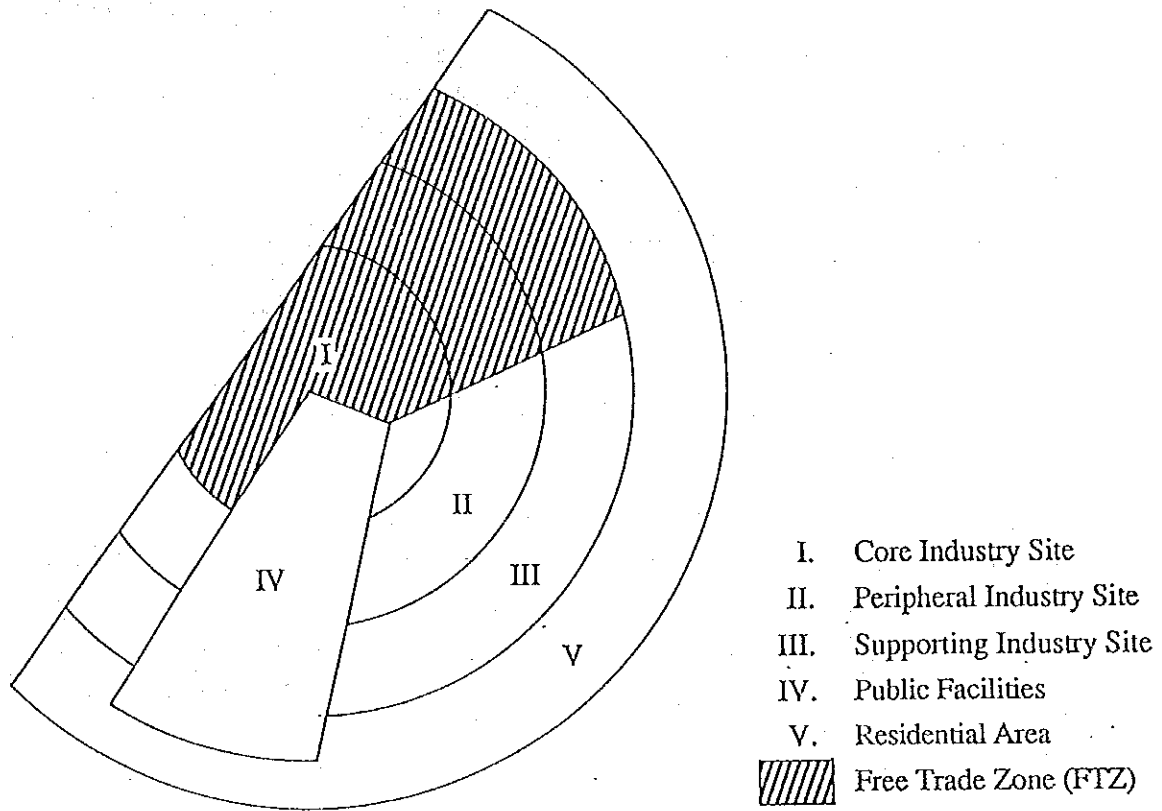
- 1) Because the proposed industrial park is to include all of the necessary infrastructure required by industry, it would largely contribute to new

investment in Malaysia by both foreign and domestic manufacturers in high-tech and high value-added industries, and they would form the future core industry groups;

- 2) The industrial site for peripheral industries should be developed jointly with the site for core industries in the same park or in a neighbouring area of the park. This would make the invitation of core industries easier, for one, and would contribute to the maximum use of the industrial development inducement effect of the core industries, for another;
- 3) The industrial site for supporting industries for core assembly industries and their peripheral industries would be developed in the same park or in a neighbouring area of the park;
- 4) A residential area which would supply a sufficient number of workers to the industrial area would be developed in the same park or in a neighbouring area of the park; and
- 5) Because mainly export-oriented industries are expected to locate in the core and peripheral industrial sites, a part or all of the industrial park is to be designated as an FTZ area.

The concept of the industrial park is briefly illustrated in Fig. III. 5-6.

Fig. III. 5-6 Basic Concept of the Proposed Industrial Park



(2) Industries Expected to Locate in the Core Industry Site

The industries which are expected to locate in the core industry site are large-scale and export-oriented assembly industries. These industries have a large impact on the development of a wide range of related and supporting industries, and are expected to play the leading function for the future industrial development of Malaysia. Some example industries are as follows:

- IC through processing
- Office electronic equipment manufacturing
- Micro computer manufacturing
- Paper and pulp manufacturing

(3) Industries Expected to Locate in the Peripheral Industry Site

The industries which are expected to locate in the peripheral industry site are the suppliers of peripheral products to the assembly industries located in the core industry site. However, they themselves are also large-scale and export-oriented industries, and have a development inducement effect on supporting industries. Thus, they have the nature of being a sub-core industry group in the park. Some example industries of these are as follows:

- Display units for micro computer manufacturing
- Key boards for micro computer manufacturing
- Printer manufacturing
- CRT manufacturing
- Silicon wafer manufacturing for semi-conductors'
- Ceramic IC package manufacturing

(4) Industries Expected to Locate in the Supporting Industry Site

The industries which are expected to locate in the supporting industry site are those which have a strong linkage with the core and sub-core industry group and supply parts and supporting services to them. Most of them are presumed to be small and medium scale in size, but are expected to have high technology. Some of the examples of these industries are as follows:

- Mould and die processing
- Precision casting
- Metal plating

- Metal press-working
- Machining
- Precision plastic moulding
- Heat treatment servicing
- Precision metal parts manufacturing

(5) Public facilities to be Installed in the Proposed Industrial Park

It is necessary that the proposed industrial park have all of such basic infrastructure as roads, communication network, power supply or water supply, which is commonly installed in the existing industrial estates in Malaysia. In addition to the above basic infrastructure, however, the proposed industrial park should especially have installed the following public facilities:

1) Stable electric supply facilities

In order to secure a stable electric supply eliminating the trouble of short-time stoppages or fluctuations of power, such common use facilities as a spare generator or transformers should be installed. It is also desirable to have a public power supply system having two power supply sources, one from the national grid system and another directly from a public power station.

2) Public waste water treatment facilities

Public waste water treatment facilities would be installed in the proposed industrial park. Because various kinds of industries are to be located in the park, the primary treatment should be conducted by each manufacturing plant. However, the industrial waste water after primary treatment would be centralized into a public waste water treatment facility and discharged outside of the park after secondary treatment. The most effective use of these public waste water treatment facilities would be increased by covering not only the industrial park but also the neighbouring residential areas.

3) Temporary sludge storage facility

The sludge including hazardous and other materials would be finally carried out of the park. However, a common use sludge storage site would be installed in the park for the temporary holding of the sludge.

4) General administration building of the park

5) Bonded warehouses and customs office building

6) Vocational training facilities

3. Possible Location of the Proposed Industrial Park

(1) General

The potential candidate site for the proposed industrial park should satisfy the following conditions:

- 1) Convenience in transportation
 - Near main highways
 - Near major ports
 - Near major airports
- 2) Accumulation of related industries in the neighbouring area
 - Development of supporting industries in the neighbouring area
 - Enough space for the development of supporting industries in the neighbouring area
- 3) Ease of access to various kinds of public supporting facilities
 - Near testing and inspection facilities
 - Near such R&D facilities as universities or SIRIM
- 4) Sufficient supply of power and water

From the above, the Klang Valley area in the State of Selangor, the Penang area and the Johor area, in which the stage of industrial development is shifting from simple assembly to more value-added types of thorough processing, were considered to be the most possible areas for the proposed industrial park to be located. Further, after a brief review of existing land area available and development plans of industrial sites in the above area, an area of 1,500 acres (607 hectares) in Mukim Padang Cina, Kulim in the State of Kedah was identified as one of the potential sites in which the construction of the proposed industrial park could be implemented. Although the identified site is located in the State of Kedah, it is considered to be a part of the Penang economic area due to its geographical location.

The selection of the above site is not necessarily based on the detailed site selection study, and it would be possible to identify other candidate areas for the construction of the proposed industrial parks in many parts of Malaysia. Because the construction of more than one industrial park based on the proposed concept is considered necessary in the near future in Malaysia, further detailed study for the identification of the potential industrial site areas would be needed.

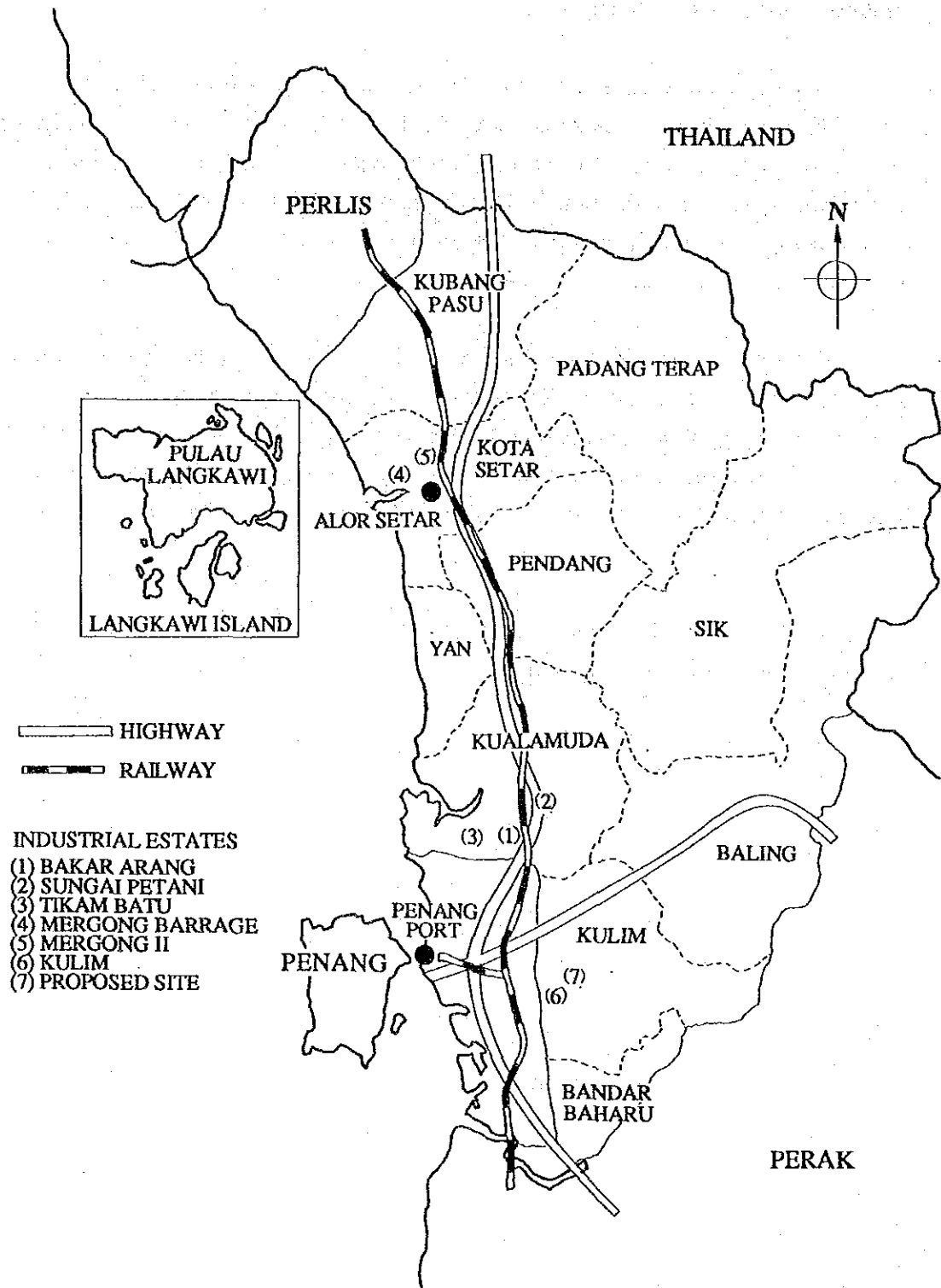
(2) Present Status of the Proposed Site

An area of 607 hectares in Mukim Padang Cina, Kulim has been identified by the State of Kedah as one of the candidate areas for the development of a high-tech industrial park. The area is adjacent to the existing Kulim Industrial Estate, and has been used as rubber and palm oil plantations. Under the financial support from the Federal Government, the State Government has already acquired the whole area for future industrial-use development.

The proposed area is situated 103 km south of Alor Setor, the capital city of the State of Kedah, and 26 Km east of Pulau Pinang. After the completion of the proposed 4 lane East-West Highway, the access of the area to Butterworth, as well as to Bayan Lepas International Airport, is expected to be improved considerably. The existing Kulim Industrial Estate is 174 hectares in total size, and to date 52 factories have been located there.

The location of the proposed area, as well as the existing industrial estates in the State of Kedah, is shown in Fig. III.5-7.

Fig. III 5-7 Location of Existing and Proposed Industrial Estates in the State of Kedah



4. Outline of the Proposed Feasibility Study

(1) Objective of the Study

The objectives of the Study are (1) to clarify the basic concept of the industrial park for high value-added industries, which would constitute the core industry group of the future Malaysian industrial development, and (2) to propose a practical implementation schedule for the establishment of the park.

(2) Target Area

The major target area would be the planned Phase III area of North Klang Straits Industrial Estate. However, some other alternative candidate areas should be included.

(3) Scope of the Study

The Study would mainly cover the following items, and the flow of the Study is shown in Fig. III. 5-8:

- 1) Review of the contents and progress of the existing industrial development plans both in total Malaysia and in the states of candidate sites;
- 2) To project future industrial structure and to identify the potential investors needed to be invited in order to realize the future industrial development plans both for the total Malaysia and for the states of candidate sites;
- 3) Identification of the requirements for the facilities and services that the proposed industrial park could offer, and the clarification of the major characteristics of the park;
- 4) Design specification of the proposed industrial park;
 - Location
 - Scale
 - Transportation
 - Power
 - Water supply
 - Public wastewater treatment facilities
 - Other common facilities
 - Management of the industrial park
 - Planning of investment promotion strategies and pricing policies

5) Financial and economic evaluation of the establishment of the proposed industrial park.

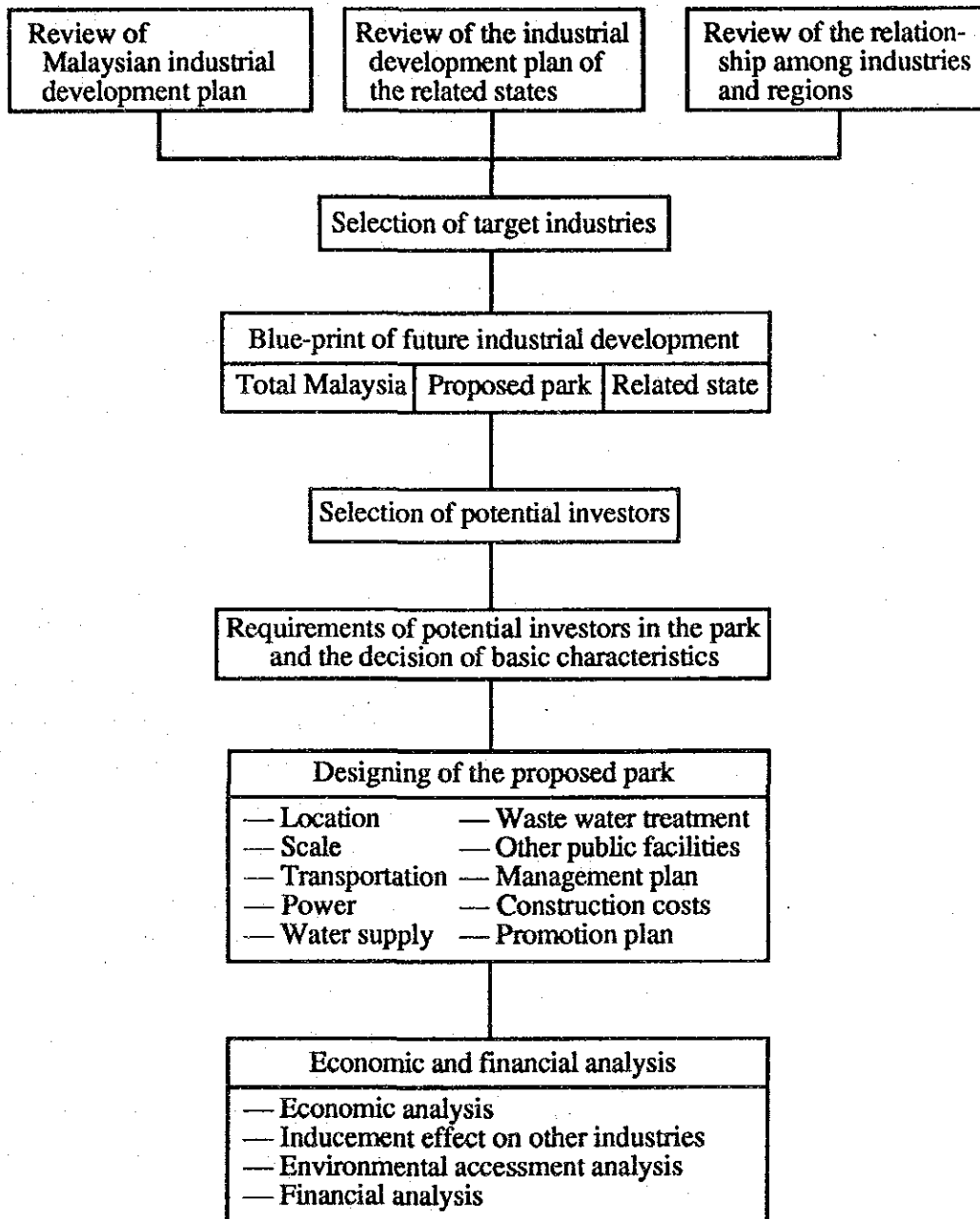
- Economic evaluation
- Indirect industrial development inducement effect
- Environmental impact analysis
- Financial evaluation

(4) The Study Team members

The conduct of the study by the study team consisting of the following experts would be expected;

Team leader	1
Industrial development policy	1
Expert in electronics industry	1
Expert in metal industry	1
Experts in other industries	2
Expert in industrial infrastructure (power)	1
Expert in industrial infrastructure (water)	1
Expert in industrial infrastructure (other)	1
Industrial site development expert	1
Environmental assessment expert	1
Economic and financial analysis expert	1
<hr/>	
Total	12

Fig. III.5-8 Flow Chart of the Proposed Study



(5) Duration of the Study

6-12 months

5. Areas in which Assistance from Overseas is Anticipated

The assistance from overseas in the following areas would be desired for the successful implementation of the proposed subject:

- 1) Implementation of the pre-feasibility study for the construction of the proposed industrial park by inviting an overseas expert group
- 2) Supply of soft-term loans for the construction costs of the proposed industrial park

6. Some Factors to which Special Attention should be Given

In proceeding with the proposed project, special attention should be given to the following factors:

- 1) Industrial estates are developed with various purposes such as to promote regional economic development, to strengthen environmental protection, to promote the development of small and medium sized industries or to support the development of R&D intensive industries. The major objective of the development of the proposed industrial park is to support the development of high value-added industries, which would lead the future industrial development of Malaysia. In order to achieve this objective, the blue-print of future industrial development both in total Malaysia and in the region has to be clearly drawn in advance of the planning of the basic concept of the industrial park.
- 2) The success of the proposed industrial park largely depends on the successful invitation of desired potential investors. The requirements of these industries have to be thoroughly investigated, and the selection of the location and the planning of common facilities have to be conducted based on that understanding.
- 3) Malaysia has enough experience and know-how in the establishment of general industrial estates, but has not much experience in the construction of industrial estates specializing in the establishment of high value-added types of core

industries. Accordingly, it is desirable to receive the assistance of international agencies fully experienced in this field in conducting the feasibility study on the proposed industrial park.

4) In order to achieve the development of high value-added types of industries in Malaysia, the construction of the proposed industrial park would not be sufficient. In addition to the construction of the industrial park, the following various kinds of political measures would have to be taken:

- to lower the sales price of the industrial park by making use of soft-term loans from international financing agencies for construction costs;
 - to designate all or part of the industrial park as an FTZ
 - to lower the burden of the maintenance costs on each resident manufacturer regarding the common facilities installed in the park;
- and
- to alleviate the investment procedures of the potential investors in the park through the managerial support by the administration office of the park.

**III-5-4. Credit and Credit Guarantee Expansion Project
for Small and Medium Scale Manufacturing Enterprises**

III-5-4. Credit and Credit Guarantee Expansion Project for Small and Medium Scale Manufacturing Enterprises

1. Background of Project Proposal

The majority of supporting industries for electronics, automobile and other major industries, such as mould and die manufacturers, casting product manufacturers or automotive metal parts manufacturers and many resource-based industries, such as ceramic manufacturers or rubber footwear manufacturers, are locally-based small and medium scale enterprises.

Through both the field interview survey and results of the questionnaire survey conducted by the Study Team, it was revealed that one of the largest managerial problems that those enterprises are facing is the lack of financial resources. The major factors for this financial constraint were identified as follows:

- 1) Small and medium scale enterprises have difficulty in approaching public financial institutions due to their lack of both collateral and the capability to present sufficient financial data necessary for credit applications.
- 2) Existing institutional financing schemes for small and medium scale enterprises in Malaysia are mostly not satisfying the capital requirement of manufacturing enterprises.

Based on the above findings, this credit and credit guarantee project for small and medium scale enterprises has been proposed.

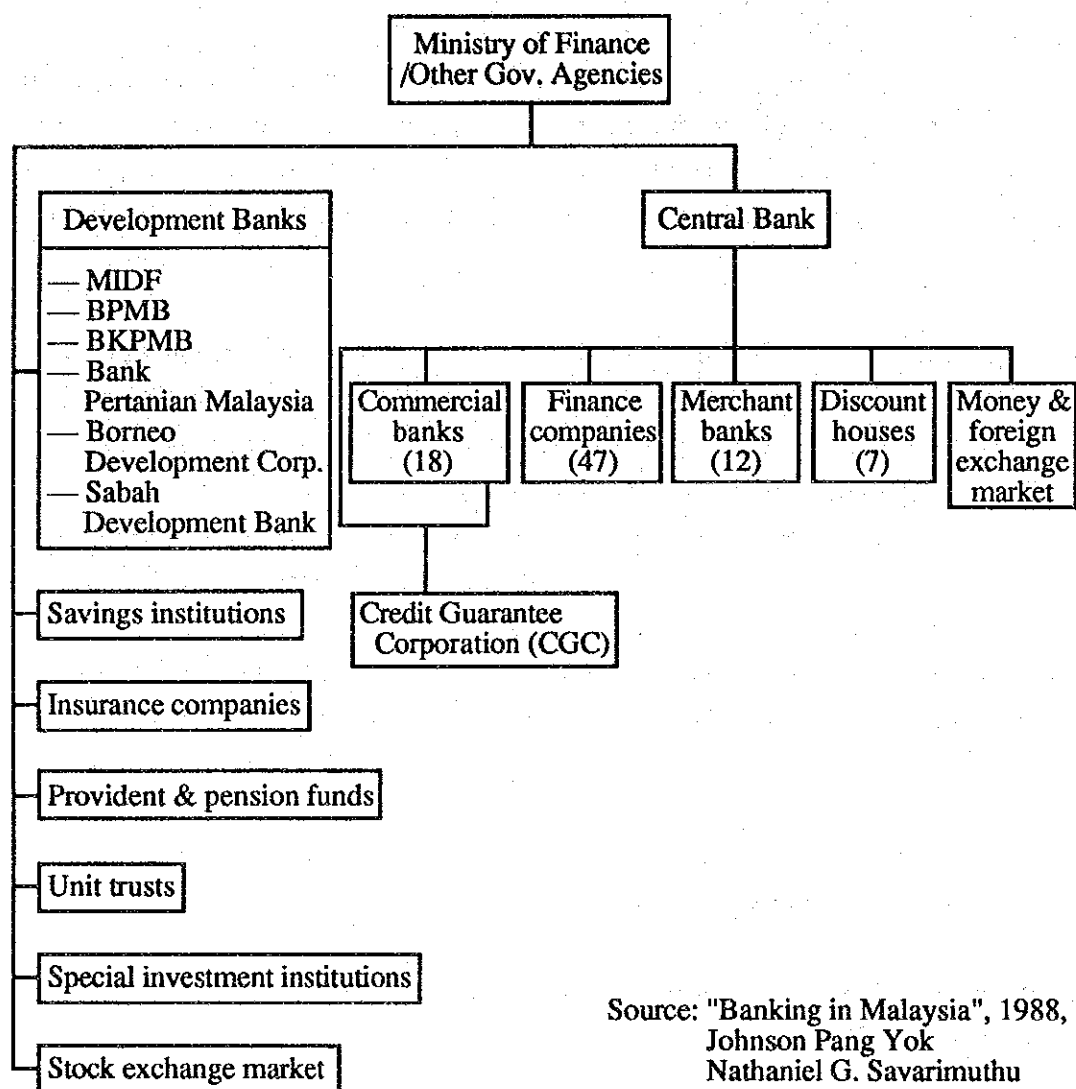
2. Outline of the Existing Financing System for Small and Medium Scale Enterprises in Malaysia

(1) Financing System in Malaysia

Fig. III. 5-9 illustrates the outline of the financing structure in Malaysia.

38 commercial banks, 47 finance companies, 12 merchant banks and 7 discount houses are under the supervision of the Bank Negara (Central Bank), and are called banking institutions. Other non-banking financing institutions such as Government affiliated development financing institutions, savings institutions or provident and pension funds are under the control of the Ministry of Finance, the Ministry of Trade and Industry and other government agencies.

Fig. III. 5-9 Outline of Financing Structure in Malaysia



Source: "Banking in Malaysia", 1988,
Johnson Pang Yok
Nathaniel G. Savarimuthu

Major lending Institutions in Malaysia are commercial banks, finance companies, merchant banks and Government affiliated development financing institutions. At end of 1988, the total outstanding loan amount dispatched through these institutions reached M\$78.67 billion. The largest lending sector was commercial banks which occupied 72% of the total outstanding loans, followed by finance companies, 20%. Of the total outstanding loans, M\$12.80 billion was loans for the manufacturing sector, of which 87% was provided by commercial banks and 6% by finance companies. Government affiliated development financing institutions are comprised of Malaysian Industrial Development Finance Bhd. (MIDF), Development Bank of Malaysia, Industrial Development Bank of Malaysia, Agriculture Bank of Malaysia, Borneo Development Corporation and Sabah Development Bank. These 6 development banks play an important role of supplying long-term loans for industrial development in Malaysia. However, their shares in total outstanding loans are still small. At end of 1988, the total share of these 6 development banks was only 2.2% of the total outstanding loans, and 5.4% of the loans for the manufacturing sector.

Total Outstanding Loans by Institution in Malaysia (End 1988)

(Unit: M\$ million)

Institution	Total Loans	(%)	For manuf. Sector	(%)
38 Commercial banks	56,432	(71.7)	11,099	(86.7)
47 Finance companies	15,864	(20.2)	718	(5.6)
12 Merchant banks	4,682	(6.0)	289	(2.3)
6 Development banks	1,696	(2.2)	689	(5.4)
Total	78,674	(100.0)	12,795	(100.0)

Source: Annual Report 1988, Bank Negara

(2) Existing Financial Supporting Schemes for Small and Medium Scale Enterprises and Their Problems

The Malaysian government put a high priority on financial support for small and medium scale enterprises, and the following various kinds of measures were taken:

1) Guideline policy of the central bank for priority sector loans

As for loans through commercial banks and finance companies, which are the major lending institutions in Malaysia, the Central Bank announces a set of lending guidelines for priority sectors. The loans for Bumiputera enterprises, for housing and for small-scale enterprises (including CGC loans) are regarded

as priority sector loans, and a minimum lending amount is set by the Central Bank for each sector and for each bank.

Small scale enterprise loans are those for enterprises having net shareholders' funds of up to M\$500 thousand. At FY1988, commercial banks in total are requested to extend over M\$300 million, and finance companies are over 15% of the total outstanding loans as at end of FY1987 (M\$677 million) to small scale enterprise loans. Of the small scale enterprise loans through commercial banks, further, a minimum M\$150 million is required to be extended to the new commitment for Bumiputera enterprises and a minimum M\$150 million to SLS loans (one of the CGC schemes). The performance of priority sector loans excluding housing loans as of end FY1988 was as shown in the following table.

Outstanding Priority Sector Loans at End FY1988

(Unit: M\$ million)

Sector	Commercial banks	(%)	Finance companies	(%)
Total Loans	56,432	(100.0)	15,864	(100.0)
Bumiputera	16,403	(29.1)	5,062	(31.9)
Small-scale enterprises	831	(1.5)	2,301	(14.5)
CGC/SLS	572	(1.0)	-	(-)

Source: Annual Report 1988, Bank Negara

As for FY1988, the priority sector loans, as a total of all commercial banks and finance companies, satisfied the lending guidelines, mainly due to the modification of the definition of small-scale enterprises from those having net shareholders' funds of up to M\$250 thousand to those having net shareholders' funds of up to M\$500 thousand. However, the share of small-scale enterprise loans to the total loans was as small as 1.5% in commercial banks and 14.5% in finance companies. Further, individually the performance of commercial banks and finance companies in complying with the lending guidelines was reported to be mixed. A relatively large number of banks do not yet satisfy the guidelines, and their equivalent amounts of shortfall are deposited to the Central Bank interest free.

The major reasons that commercial banks and finance companies are not positive to small-scale enterprise loans are (1) the high risks involved and (2)

the low margin of small scale loans. Especially, for loans under CGC guarantee, the margin is small because the lending rates are politically set, and the lending risk is still high due to the low reliability of the guarantee by CGC.

2) CGC- Principal Guarantee Scheme (PGS)

Since April 1989 CGC has started a new scheme called Principal Guarantee Scheme (PGS) by unifying the two old schemes of General Guarantee Scheme (GGS) and Special Loan Scheme (SLS). Under PGS, enterprises having net shareholders' funds of up to M\$500 thousand could receive loans of a maximum limit of M\$500 thousand under the CGC credit guarantee.

With the start of PGS, the maximum amount for guarantee has been raised from M\$200 thousand (M\$100 thousand for non-Bumiputera) to M\$500 thousand. However, this loan amount limit is considered to be still insufficient for the needs of enterprises in the manufacturing sector. Although the effect of the raise of the maximum loan amount is not yet measurable, the share of the loans to the manufacturing sector was only 9.1% in the total outstanding loans under CGC schemes at the end of FY 1988.

Outstanding Loan Amount by Sector under CGC Schemes at End FY 1988

(Unit: M\$ million)				
Sector	Number of Loans	(%)	Outstanding amount	(%)
Commerce	5,198	(91.5)	47.4	(81.9)
Agriculture	289	(5.1)	5.2	(9.0)
Industry	191	(3.4)	5.3	(9.1)
Total	5,678	(100.0)	57.9	(100.0)

Source: 1988 Annual Report, Credit Guarantee Corporation

3) World Bank Special Loan Scheme

In 1985, the World Bank Special Loan Scheme (SLS) was started. Under the SLS, the maximum amount of M\$3.0 million would be loaned to enterprises having paid-up capital of up to M\$1.5 million. Initially, the disbursement of the loans under the scheme was slow because the users were limited to Bumiputeras. After the extension of the scheme to non-Bumiputeras, the disbursement has rapidly progressed. By the end of FY 1988, a total of 1,022

loans valued at M\$202.4 million had been approved. The major problems of the scheme for small and medium scale manufacturers at present are as follow:

- The scheme would be difficult to approach for those enterprises having low credibility and insufficient collateral and for those requiring both investment and working capital.
- By the end of FY 1988 96% of the initially allocated funds were already approved, and only a very limited amount is left for new approval.

4) Loan Schemes under ASEAN-Japan Development Fund (AJDF)

Based on the bilateral agreement between Malaysia and Japan for the AJDF Plan, a total amount of M\$895 million (M\$687 million from OECF and M\$208 million from Ex-im Bank of Japan) has been offered to 4 development banks in Malaysia (MIDF, BIMB, BPMB, BPM). The funds are so called two-step loan funds, and are scheduled to be offered from 4 development banks to small scale and other enterprises in Malaysia with privileged loan terms. The details of the loan schemes are summarized in Table III. 5-2.

Loan Schemes under AJDF in Malaysia have just started from January 1988, and the achievement of the schemes is not yet clear. However, from the viewpoint of the financing scheme for small and medium scale manufacturers, the schemes are considered to have the following problems:

- Because the users are not restricted to small and medium scale enterprises, the users are projected to tend to be relatively large and medium scale manufacturers.
- Handling banks are limited to 4 development banks, and their branch office network is not large enough to cover a large number of small and medium scale enterprises which are dispersed nation-wide.
- As with the World Bank SLS, the schemes are difficult to approach for those small and medium scale enterprises which lack collateral or need both investment and working capital.

Table IILS-2 Outline of AJDF Loan Schemes

Lending organization	Malaysia Industrial Development Finance Bhd. (MIDF)	Bank Kemajuan Perusahaan Malaysia Bhd. (BKPMB)	Bank Pembangunan Malaysia Bhd. (BPMB)	Bank Pertanian Malaysia (BPM)
Fund source	OECF	EXIM Bank	OECF	OECF
Total Fund	M\$187 million	M\$83 million	M\$110 million	M\$125 million
Lending conditions				
• Maximum loan limit	Below M\$5 million	Below M\$20 million	Below M\$20 million	Below M\$2 million
• Interest rate/year	6.5%	7.85% (at Jan. 1989)	6.5%	7.85% (at Jan. 1989)
• Repayment period (grace period)	Within 15 years (Within 3 years)	Within 15 years (Within 3 years)	Within 15 years (Within 5 years)	Within 15 years (Within 3 years)
Target industry	Food & beverages, tobacco, textiles, rubber products, plastic products, non-iron metal products, metal engineering, others	Food & beverages, tobacco, textiles, lumber, wood products, plastic products, non-iron metal products, metal engineering, paper, printings, chemical products, others	Metal engineering • Castings • Forgings • Bogie assembly • Diecasting • Machinery assembly	Basic metal industry, facility and equipment for metal products manufacturing, wood products, foods, chemical, plastics, coal, rubber products, tourism, others
Use of funds	Fixed capital expenditure (including factory construction costs, excluding land costs)	Fixed capital expenditure (including factory construction costs, excluding land costs)	Fixed capital expenditure (including factory construction costs, excluding land costs)	Fixed capital expenditure (including factory construction costs, excluding land costs)
Others conditions	Loan limit is a 75% of total investment costs.	Loan limit is a 75% of total investment costs.	Loan limit is a 85% of total investment costs.	Loan limit is a 80% of total investment costs.
User industry size	Paid-up capital: below M\$5 million	Paid-up capital: below M\$20 million	Gearing ratio: below 1/3.5	Paid-up capital: below M\$5 million
				Cooperatives and each individual farmers

(3) Outline of the Credit Guarantee Corporation (CGC)

1) General

The CGC was established in 1972 with the objective of providing guarantees for finance aimed at small and medium scale enterprises with low credit ratings. The Central Bank owns 20% of its shares, with the remaining 80% being held by 38 commercial banks. The total number of staff members at November 1989 was 46. Under a General Manager and an Assistant General Manager, there are 6 departments: Accounting/ Financial Management Department (total number of staff is 9), Personnel/ General Administration Department (8), Computer Department (7), Guarantee Department (8), Claims Department (6), and Research/Business Development/ Public Affairs Department (7).

During the period from 1973, when it started operation, through to the end of March 1989, the CGC granted credit guarantees worth a total of M\$2.8 billion to approximately 158,000 small and medium scale enterprises. But despite its record, the activities of the CGC have not necessarily been adequate. Although in line with the central bank regulations Malaysian commercial banks must lend a minimum amount of funds to small and medium scale enterprises through the CGC schemes, it is reported that there a fair number of commercial banks which are not able to fill this quota. Furthermore, it has been announced that there are difficulties in recovering up to M\$240 million, or 41% of the CGC's current balance of guaranteed loans.

2) CGC's New Guarantee Scheme

In the past there were the following three schemes for loans based on CGC guarantees. The guarantee fee for all three of these schemes was 0.5%, and the CGC guaranteed up to 60% of the amount of loans made by commercial banks.

i) General Guarantee Scheme (GGS)

The scheme was started in 1973. The maximum amount for loans was M\$200 thousand for Bumiputeras and M\$100 thousand for non-Bumiputeras. It also covered clean loans worth less than M\$30 thousand.

ii) Special Loan Scheme (SLS)

The scheme was launched in 1981. It offered clean loans of less than M\$50 thousand with a capital of less than M\$250 thousand and a total credit limit of less than M\$250 thousand.

iii) Hawkers and Petty Traders Loan Scheme (HPT)

Starting in 1986, this scheme was launched in order to make it possible for unemployed people to commence business as street vendors, etc. The maximum was small at M\$2 thousand, and conditions for the loans consisted of a 4% annual interest rate, repayment to be made over a three-year period, and that the loans be unsecured

Since 3 April 1989 the two schemes of GGS and SLS have been combined into a new scheme called the Principal Guarantee Scheme(PGS). The main revisions which have been made to PGS compared with the two original schemes are as follows:

- i) The definition of eligible users has been changed from enterprises having net shareholders' funds of up to M\$250 thousand to those having net shareholders' funds of up to M\$500 thousand;
- ii) The maximum amount of loans for guarantee has been raised from the former limit of M\$200 thousand for Bumiputeras and M\$100 thousand for non-Bumiputeras to the limit of M\$500 thousand for all enterprises irrespective of race;
- iii) The percentage of guarantee cover has been increased from 60% to 70%; and
- iv) Screening by the CGC at the time of awarding loans would be strengthened.

At the same time as launching the new schemes mentioned above, the CGC has been reorganized in line with the following two objectives :

- i) The provision of a business development service and a technical extension service aimed at strengthening the activities of small and medium scale enterprises; and
- ii) The establishment of a credit information system to facilitate a prompt and comprehensive check of the credit standing of each small and medium scale enterprise.

3) Current Problems

The major problems which the CGC is currently facing are as follows:

- i) Because of the low credibility and hence the high risks involved in such loans, banks are rather reluctant to lend to small and medium scale enterprises even with a CGC guarantee.
- ii) Most of the small and medium scale enterprises do not have a good track record of financial data, which makes it difficult for them to approach

- public financial institutions. This lack of financial data creates a difficulty for banks or the CGC to evaluate each loan application project.
- iii) The default rate of small and medium scale enterprises is usually high due to their lack of managerial skills.
 - iv) Due to the various kinds of financial support measures taken by the Malaysian Government for Small Enterprises, many small enterprises tend to consider institutional financing systems as a kind of subsidy, and to feel low obligation for repayment.
 - v) Participation in the CGC schemes is viewed by the banks rather negatively as a kind of social cost to conduct banking business in Malaysia. Hence, many commercial banks are rather reluctant to expand such loans.
 - vi) The CGC has no capability to collect deferred or non-performing loans directly from borrowers. As a result, it usually takes a very long time for banks to recover bad debts even with a CGC guarantee.

3. Objective of the Proposed Project

The Credit and Credit Guarantee Expansion Project for Small and Medium Scale Manufacturers has been proposed from the Study Team with the following major objectives:

- 1) To establish an institutional financing system which supports small and medium scale industries to establish a linkage with large scale of export-oriented assemblers and to promote exports through such measures as the modernization of facilities and others;
- 2) To make it easier for small and medium scale industries that have low credibility or insufficient collateral to approach public financing institutions by expanding the credit guarantee capability of the CGC; and
- 3) To reserve a fund which would be exclusively directed for targetted small and medium scale enterprises.

4. Contents of the Proposed Project

(1) General

After a few steps of preparatory work, the following two institutional financing schemes should be established. The details of the schemes would have to be decided based on future detailed studies.

- i) Special Loan Scheme for Export-oriented Small and Medium Scale Manufacturing Enterprises
- ii) Special Loan Scheme for the promotion of Trade Sub-contracting by Small and Medium Scale Manufacturing Enterprises

Both of the above loans would be disbursed through commercial banks which have the largest office network in Malaysia, and a credit guarantee by the CGC would be given for all loans. In order to soften the final lending conditions, such as interest, to small and medium scale enterprises, the funds for loans would be supplied either from the Malaysian Government or international financing agencies to commercial banks with privileged conditions.

The preparatory steps which would be needed before launching the proposed financing schemes would be as follows:

- i) Expansion of the capability of the CGC in both the evaluation of credit applications and business promotion for the identification of eligible potential user enterprises;
- ii) Conduct of a feasibility study for the establishment of the above proposed new institutional financing schemes;
- iii) Detailed planning of the CGC's credit guarantee system which would be associated with the new financing schemes; and
- iv) Detailed planning of the management of new financing schemes.

(2) The Expansion Plan of the Capability of the CGC

In order to meet the financial needs of the manufacturing sector, the limit for maximum loans under a CGC guarantee has to be increased, for which the risks involved in the loans have to be lowered by strengthening the capability of the CGC to evaluate each loan application, for one, and the project finding capabilities of the CGC have to be strengthened, for another. For the above purposes, the following measures are to be promoted with the assistance of foreign experts in the field:

- i) The credit information system for small and medium scale enterprises, which is currently promoted by the CGC, should be established as early as possible. This would contribute both to increasing the capability of

commercial banks and the CGC to evaluate each loan application and to promoting the sense of obligation for loan repayment on the side of loan users.

- ii) The present project evaluation system of the CGC should be reviewed, and a more precise evaluation system should be established.
- iii) Within the CGC, a consulting service section should be established which would identify potential users by business promotion, would give consulting services both in technology and management and would further conduct follow-up supporting activities for existing user enterprises. The activities of this section should have close contact with other related government agencies or related projects such as those proposed by the Study Team as the Technical Support Project for Small and Medium Scale Manufacturing Enterprises. (Refer to section III-5-5 for detail)

(3) Outline of the Feasibility Study for the Establishment of New Institutional Financing Schemes

The implementation of the following feasibility study for the establishment of new institutional financing schemes for small and medium scale manufacturing enterprises in Malaysia is recommended.

1) Contents of the Study

- a. Review of the whole financial system presently operating in Malaysia for small and medium scale enterprises
- b. Estimation of the amount of demand for funds from targeting industries in targeting purposes
- c. Designing a system for the execution of the proposed loan schemes
- d. Review of the CGC's current guarantee activities and the designing of a system for the execution of the proposed credit guarantee scheme
- e. Formation of a plan for consulting services
- f. Financial analysis of the project
- g. Socio-economic evaluation of the entire project

2) Study Team Members

- Team leader	1
- Financial system expert	1
- Small scale credit expert	1
- Credit guarantee expert	1
- Industrial technology expert	1 for each target industry
- Business administration expert	1
- <u>Project evaluation expert</u>	<u>1</u>
Total	10 - 12

3) Study Period

Approximately one year

(4) Outline of the Proposed Institutional Financing Scheme for Small and Medium Scale Manufacturing Enterprises

1) Target enterprises

The users of the proposed scheme would be small and medium scale manufacturing enterprises having paid-up capital of up to M\$2.5 million. By industry, the following would be selected:

- the industries that supply parts for major assembly industries, such as metal processing, electric / electronics parts manufacturing or automotive parts manufacturing
- the export-oriented small and medium scale industries such as wood processing, rubber products manufacturing, ceramics or food processing

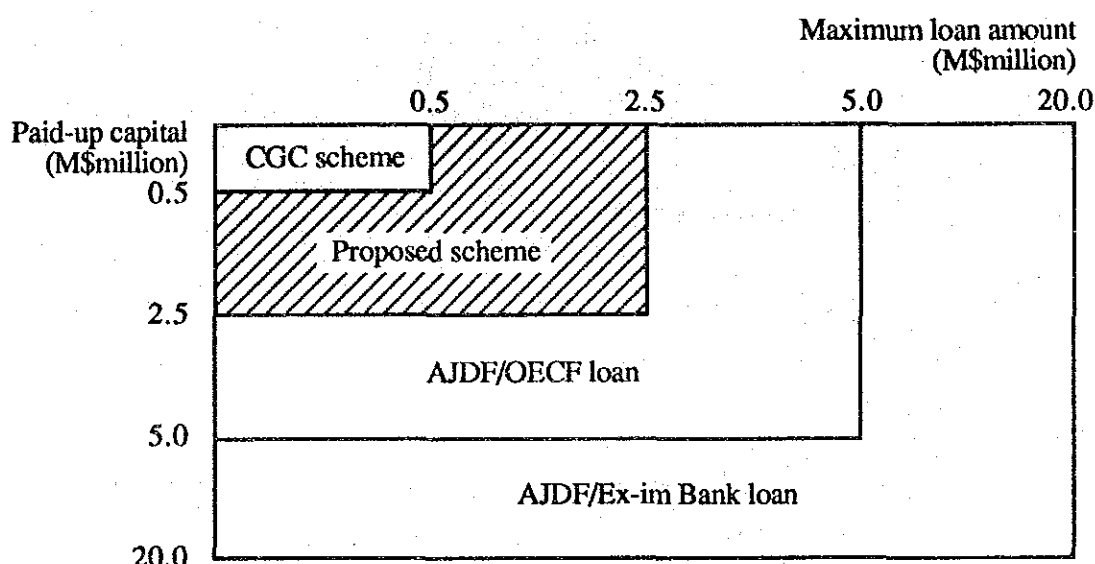
2) Use of the funds

The use of the funds loaned based on the proposed scheme would be limited to the following:

- investment capital for introducing new plant and equipment or for modernizing existing facilities that would be made with the purpose of either establishing a linkage between assemblers and parts suppliers or promoting exports of small and medium scale manufacturers
- working capital that would be needed in association with the above capital investments

3) Maximum loan amount

The maximum loan amount of the proposed scheme would be set at around M\$2.5 million, which would meet the capital requirements of small and medium scale manufacturing enterprises for introducing modern equipment and facilities. The positioning of the proposed scheme in existing institutional financing schemes is illustrated as follows.



4) Loan handling organizations

Application for loans and issuing of loans are to be handled by all the main and branch offices of commercial banks. Initially, a limited number of commercial banks would be selected as handling banks based on their application evaluation capabilities, but eventually the number of handling banks would be expanded.

5) Lending conditions

With a view toward politically supporting the development of targetted small and medium scale industries, the interest rate, including the CGC credit guarantee fee, to final loan users would be set at the same as or a little lower than the Base Lending Rate (BLR). A repayment period of 5 - 10 years would be tentatively recommended.

6) Related organizations and their roles

The organizations related to the proposed scheme and their roles are briefly summarized in Fig.III.5-10. The roles of related organizations except for commercial banks are as follows:

i) Malaysian Government (or the Central Bank)

- To receive soft-term loans from international financing agencies and to refinance the funds with preferential terms to the commercial banks participating in the scheme
- To protect commercial banks from the foreign exchange risks associated with borrowing from international agencies
- To give financial and technical support to the CGC in order to minimize the managerial risks of CGC induced by the expansion of credit guarantee schemes

ii) The Credit Guarantee Corporation (CGC)

- To give the credit guarantee to all loans based on the scheme so that the target enterprises of low credibility could approach the scheme
- To give technical support for the participating commercial banks in their finding of good potential users and in their evaluating the applications
- To give follow-up technical and managerial support services for loan users

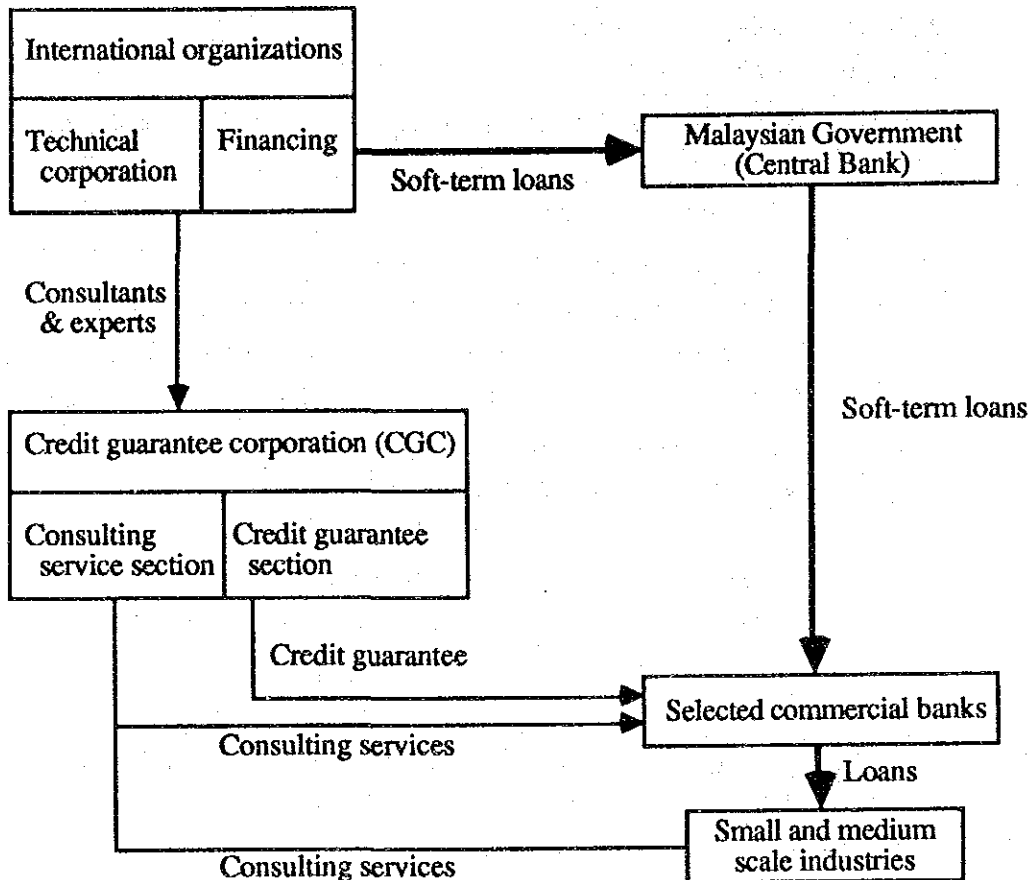
iii) International financing agencies

- To provide the soft-term financial resources for loans under the guarantee from the Malaysian Government

iv) International technical assistance agencies

- To dispatch foreign consultants and experts who could give support in raising the evaluation capabilities of loan applications both in the CGC and the participating commercial banks
- To dispatch foreign consultants and experts to the CGC consulting service section

Fig.III.5-10 Outline of System for the Implementation of the Project



(5) Outline of guarantee activities

1) Loans eligible for guarantees

The CGC is to provide credit guarantees for all loans made under the proposed scheme.

2) Guarantee cover rate

The rate of guarantee cover to the total value of loans issued would be increased from the present 70% to 80% in order to lessen the risk of the participating commercial banks.

3) Security

The participating commercial banks are not to receive security from loan user enterprises more than is required to cover their own risks.

5. Areas in which Assistance from Overseas is Anticipated

The assistance from overseas in the following areas would be desired for the successful implementation of the proposed project.

(1) Technical Support for the CGC

1) Short-term foreign experts

It is desirable to strengthen the function of the CGC by receiving the assistance of following foreign experts:

- An expert in the credit information system for small and medium scale enterprises ; 3 man-months
(Presently Bank Negara has an established credit information system, but this does not cover small and medium scale enterprises.)
- An expert in the evaluation of loan applications from small and medium scale enterprises ; 6 - 12 man-months

2) Overseas Training of the CGC staff

The overseas training of the staff of the CGC in the following areas would be desired:

- Overseas credit guarantee systems ; 1 man. 3 months
- Overseas loan application evaluation systems ; 1 man. 3 months

(2) Implementation of a Preliminary Survey

A pre-feasibility study for establishment of the proposed scheme is recommended to be implemented by a study team consisting of foreign experts. The details of the study are shown in the above section 4 (3).

(3) Supply of Soft-term Loans from International Financing Agencies

In order to soften the final lending conditions to small and medium scale enterprises, soft-term loans should be supplied from international financing agencies.

6. Future Actions to be Taken

(1) Implementation Schedule

The tentatively suggested implementation schedule of the proposed scheme is as shown below:

Step	1st year	2nd year	3rd year	4th year
Strengthening of the function of the CGC				
— Credit information system				
— Application evaluation system				
— Consulting service system				
Pre-feasibility study				
Detail design of a new financing scheme				
— Loan system				
— Guarantee system				
— Start of operation				

(2) Some Factors to which Special Attention should be Given

- 1) Present capability of the CGC would not be sufficient for establishing a new scheme which is launching a new credit guarantee system associated with a loan system to the manufacturing sector having a higher limit for maximum lending amount. Strengthening of the function of the CGC should precede the start of the proposed loan scheme.
- 2) The proposed new institutional financing scheme is still at the level of conceptual design and has to be adequately firmed up from the practical operational standpoint. In order to promote the project, the implementation of a preliminary study for both the elaboration of the proposed scheme and the investigation of other alternative schemes to expand the financing scheme to small and medium scale manufacturers are to be conducted.
- 3) The expansion of the institutional financing scheme for small and medium scale manufacturers has to be implemented together with the strengthening of technical support service schemes. For the successful implementation of the proposed financing scheme, not only the expansion of the consulting service function of the CGC but also the mobilization of other public technical supporting schemes for small and medium scale enterprises including the Expansion Project of the Technical Support for Small and Medium Scale Manufacturing Enterprises proposed by the Study Team and shown in section III-5-5 has to be achieved.

**III-5-5. Technical Support Project for Small and
Medium Scale Manufacturers**

III-5-5. Technical Support Project for Small and Medium Scale Manufacturers

1. Background of Project Proposal

For the development of export-oriented electronics industries such as office electronics equipment or computer industries, the development of local small and medium scale industries which are able to supply parts that are sufficiently competitive by international standards in terms of both quality and price is identified as essential. In spite of the above, the linkage between large scale assemblers and small and medium scale parts suppliers in Malaysia is considered still very weak. From the results of the field interview survey conducted by the Study Team of such supporting industries as mould and die manufacturers, casting product manufacturers or automotive metal parts manufacturers, a number of factors which hinder the establishment of inter-industry linkages were identified. Among them, the lack of technical information, accumulated technical experience, managerial know-how or marketing capabilities in local small and medium scale manufacturers, along with other factors such as insufficient financing capabilities or lack of skilled workers, were identified as the major causes, for which technical support from an outside organization would be needed.

Not only in supporting industries but also in many of the resource-based industries, the lack of technical experience, managerial know-how or marketing capabilities was identified as one of the major reasons which prevent the growth of local small and medium scale manufacturers as export-oriented industries. Those ceramic product or rubber footwear manufacturers which utilize the local resources have a large potential capability to export. Except for a limited number of foreign affiliated companies, however, most of the local small and medium scale manufacturers serve only the domestic market of a limited scale, and are not yet succeeding in penetrating into export markets.

For the up-grading of the technical level, for the modernization of management and for the strengthening of marketing capabilities of local small and medium scale manufacturers, technical support from outside organizations would be desired. From the smallness of their operations, however, it was observed that most of these firms do not have enough manpower to send a part of their workers to outside training institutions. Further, it was also considered that the execution of other various kinds of supporting measures such as financing or tax incentives along with technical support would be indispensable for the achievement of the above purposes.

Based on the above findings, this Technical Support Project for Small and Medium Scale Manufacturers was proposed.

2. Present Status of Small and Medium Scale Manufacturers and the Outline of Their Development Policies in Malaysia

(1) Present Status of Small and Medium Scale Manufacturers in Malaysia

There is no distinct definition of small and medium scale manufacturers in Malaysia, and different organizations tend to adopt different definitions according to their respective purposes. Further, there are no reliable data on small scale manufacturers. The most reliable data presently available are the results of the "Census of Small and Medium Scale Manufacturers" conducted by MTI in 1981, which are already very obsolete. Based on the understanding of the importance of small and medium scale manufacturers, MTI conducted the "Census of Small and Medium Scale Manufacturers" in 1989 for the first time in 8 years, but the results have not yet been announced.

By the number of employees, manufacturing enterprises in Malaysia could be classified into the following main categories:

- 1) Tiny-Scale industries(TSI) that employ four persons or less;
- 2) Small scale industries(SSi) that have between 5-49 employees;
- 3) Medium scale industries(MSI) that have between 50-199 employees; and
- 4) Large scale industries(LSI) that employ more than 200 persons.

Regarding the enterprises above categorized into 1) to 3) as small and medium scale manufacturers, the total number of them was 19,958 in 1981, according to the results of the Census, which occupies up to 97.7% of all manufacturing enterprises. The total number of employees of these small and medium scale manufacturers was 323 thousand, which occupied 55.8% of the total employees of all manufacturing enterprises.

Manufacturing Enterprises in Malaysia by Size of Employees, 1981

Size of firms, by employees	No. of Establishments	(%)	Total No. of Employees	(%)
Below 5	8,816	(43.2)	20,816	(3.6)
5 - 19	6,910	(33.8)	65,034	(11.2)
20 - 49	2,552	(12.5)	77,697	(13.4)
50 - 199	1,680	(8.2)	159,710	(27.6)
200 and above	464	(2.3)	255,395	(44.2)
Total Manuf. Enterprises	20,422	(100.0)	578,682	(100.0)

Source : Census of Manufacturers, 1981

By amount of capital, the manufacturing enterprises with net shareholders' funds of less M\$500,000 are generally regarded as small scale manufacturing enterprises. For reference, the users of CGC scheme loans are limited to the enterprises in this category. The manufacturing enterprises with net shareholders' funds of M\$500,000 to M\$2.5 million are regarded as medium scale industries. Based on the definition of the Industrial Coordination Act 1975 (amendment in 1986), those enterprises having net shareholders' funds of less than M\$2.5 million and employing less than 75 persons are regarded as small and medium scale industries, and they are exempted from the requirement of acquisition of manufacturing licences. According to the survey results conducted by the Institute of Developing Economies, the total number of those small and medium scale manufacturing enterprises in Malaysia was 15,068 in 1985, and their classification by sector was as follows:

Small and Medium Scale Industries by Sector (1985)

Sector	No. of firms (units)	Share (%)
Food processing	2,758	18.3
Wood and rattan-based	2,410	16.0
Light engineering	4,461	29.6
Construction materials	569	3.8
Others	4,810	32.3
Total	15,068	100.0

Source : "Changes in the Industrial Structure and the Role of Small and Medium Industries in ASEAN Countries: The Case of Malaysia", Institute of Developing Economies, February 1987

(2) Political Supporting Measures for the Development of Small and Medium Scale Manufacturing Enterprises in Malaysia

The major political measures which would support the development of small and medium scale manufacturing enterprises in Malaysia are briefly summarized as follows:

1) Investment Incentives

In order to promote the investments by small scale enterprises that have net shareholders' funds of less than M\$500,000, the following incentive package has been offered in the Promotion of Investment Act, 1986.

- Pioneer status would automatically granted as long as they meet specified criteria;
- Import duties on raw materials, components, machinery and equipment would be exempted; and
- Double deduction would be allowed on costs of training at NPC, SIRIM, MARA Institute of Technology and MARDI.

2) Financial Support

The details of financial support for small and medium scale manufacturing enterprises are described in Section III-5-4, which are listed by name as follows:

- Guideline policy of the Central Bank to commercial banks and financing companies related to the minimum loan amount to priority sectors;
- CGC loan schemes directed to those small scale enterprises having net shareholders' funds of less than M\$500,000;
- World Bank Special Loan Scheme directed to those enterprises having paid-up capital of up to M\$1.5 million (Handling banks are MIDF, BPMB and etc.);
- AJDF loan schemes directed to those enterprises having paid-up capital of up to M\$5.0 million (Handling banks are MIDF, BKPMB, BPMB and BPM) ; and
- MARA small loan schemes with maximum lending limit of M\$50,000 which would support the development of Bumiputra entrepreneurs.

3) Greater Market Accessibility to Small and Medium Scale Manufacturers

In order to establish the inter-industry linkages and to expand the domestic market for small and medium scale parts manufacturers, the tax reform in 1989 announced the start of incentives for large scale manufacturers which procure

parts from domestic small scale manufacturers. Those manufacturers that procure parts from small scale manufacturers based on the Registered Government Programme are allowed the abatement of income tax of the amount of either 5% of adjusted income or the total costs of procurement, whichever is lower. Further, the government procurement policy is required to favour small and medium scale manufacturers by the Treasury Instruction.

4) Public Technical Support Organizations

As public organizations that would give the technical supporting services to small and medium scale enterprises in the fields of managerial skills or entrepreneurship development, there are following organizations:

- National Productivity Centre (NPC)
- MARA, Entrepreneurial Development Division
- SIRIM, Industrial Extension Unit, Division of Consultancy and Technology Transfer
- MIDF Industrial Consultants (MIDFIC)

Further, the following organizations are implementing technical services in the fields of manufacturing technology, quality control or R & D:

- Various divisions and centres of SIRIM
- Food Technology Division (FTD), MARDI
- FRIM
- RRIM

5) Export Promotion Measures

The following organizations are supporting export promotion of Malaysian enterprises, but their activities are not limited to the support for small and medium scale manufacturers:

- MEXPO
- Malaysian Timber Industry Board (MTIB)
- Federal Agricultural Marketing Authority (FAMA)
- Malaysian Handicraft Development Corporation (MHDC)

6) Others

In the 1990 Budget, the setting up of an Industrial Technical Assistance Fund for small and medium scale industries has been proposed. This Fund, with the initial year's fund allocation of M\$50 million, intends to provide grants on a matching basis to specific industries to help in feasibility studies and R & D.

(3) Outline of the Major Organizations in Charge of the Industrial Development of Small and Medium Scale Manufacturers

There are a large number of governmental, sub-governmental and private organizations in Malaysia that contribute to the development of small and medium scale enterprises. Out of them, the major organizations that have a close connection with the proposed project were selected, the outlines of which are as follows:

1) Small and Medium Scale Enterprises Unit, Industrial Development Division, the Ministry of Trade and Industry (MTI)

It is reported that the public organizations that are involved in the development programmes of small and medium scale manufacturers are diversified into 9 ministries and 30 agencies. As a coordinating agency of these diversified activities, the Small Enterprise Division (SED) was established within MTI in 1981. SED was temporarily transferred to the Ministry of Primary Industries in 1986. In 1986, however, SED was again shifted to MTI and renamed as the Small and Medium Scale Enterprises Unit in the Industrial Development Division. The organization chart of the Small and Medium Scale Enterprises Unit is shown in Fig. III. 5-11.

The Small and Medium Scale Enterprises Unit is divided into 4 sections: (1)Policy Section, (2)Marketing Section, (3)Technology Section and (4)International Cooperation Section. The Policy Section includes the Database section which controls the information on small and medium scale enterprises, and a research section which undertakes a variety of industrial surveys by sector. The Marketing Section is further divided into 2 sections: the Government Procurement section and the Trade Sub-contracting section. As of November 1989, the total number of staff members in the Small and Medium Scale Enterprises Unit was 42, consisting of 18 officials and 23 assistant staff personnel.

2) Technology Transfer and Consultancy Division in SIRIM

The Technology Transfer and Consultancy Division (formerly named the Technology Transfer Centre) in SIRIM was established in 1986 under the support of the World Bank. The major aim of the establishment of the Division was to support new business development by Malaysian entrepreneurs and to continue the follow-up technical assistance to these new businesses. The major area of the technical services is the extension of quality control measures, and the consulting services are usually continued up to the time that the recipient factories would be given the QIP (Quality Improvement Practice) certificate.

As of November 1989, the Division has a staff of 13 professionals (excluding assistants), and consists of 2 sections: (1) Industrial Extension, and (2) Technology Dissemination.

3) National Productivity Centre (NPC)

The National Productivity Centre (NPC) was established as a joint project by the United Nations Special Foundation (UNSF) and the Malaysian government with the International Labour Organization (ILO) as the executing agency. With the enactment of the National Productivity Council Incorporation Act in 1966, the Centre became an independent organization under the authority of MTI. The National Productivity Council is responsible for the operation of the NPC and comprises representatives from MTI, EPU, MOL, MOF, MOA, institutions of higher education, commerce, industry, finance organizations and labour and management groups. The NPC is a non-profit organization, with approximately 80% of its working budget coming from annual government grants and the rest made up from the Centre's own revenue. The basic objective of the establishment of the NPC is to increase the industrial productivity in Malaysia through management training. Its main functions are 1) to instruct in, to promote and to disseminate the concept of productivity, 2) to train local experts in techniques for productivity, management and entrepreneurship and 3) to develop manpower. The NPC is currently engaged in a wide variety of activities through the following 11 units and 5 branch offices that are located in Kuantan, Penang, Johore Bahru, Kuching and Kota Kinabalu.

- Management development (Personnel development and industrial relations)
- Industrial engineering and low-cost automation
- Sales and marketing
- Hotel and tourism management
- Entrepreneurship development
- Productivity promotion
- Support services
- QCC
- Consultancy
- Staff development

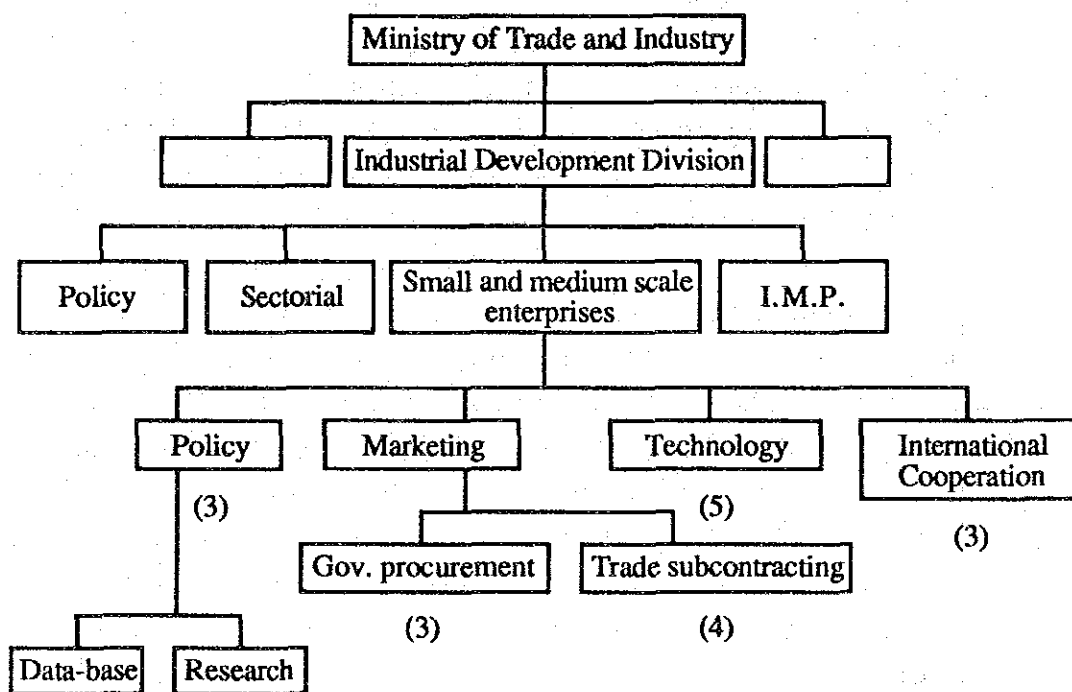
4) MIDA

Refer to Section III-5-1.

5) MEXPO

Refer to section III-5-8.

Fig. III-5-11 Organization Chart of Small and Medium Scale Enterprises Unit



3. Outline of the Proposed Project

(1) Objective of the Project

The major objectives of the proposed project are as follows:

- 1) To create a linkage between assemblers and local small and medium scale parts suppliers through the provision of guidance in regard to production technology, management and marketing by sending experts to each individual small and medium scale manufacturer which does not meet the requirements of the assemblers;
- 2) To increase the export capability of those small and medium scale resource-based enterprises that have a large potential capability to export but do not succeed due to the lack of export market information or to insufficient production capabilities; and
- 3) To formulate a comprehensive policy for the development of small and medium scale enterprises with major emphasis on the development of both supporting industries and local export-oriented industries, and to coordinate all of the activities of the various related public organizations concerned in order to put this policy into effect.

(2) Activities of the Project

The activities of the proposed project are briefly illustrated in Fig.III.5-12. The practical activities at each stage are as follows:

- 1) Identification of both market needs and technical support target enterprises
By expanding in and making more effective use of those existing schemes as (1) Trade Sub-contracting Scheme handled by the Small and Medium Scale Enterprises Unit, MTI, (2) RICOM handled by MIDA or (3) Trade Inquiry Services handled by MEXPO, the needs of both domestic and overseas market for products of local small and medium scale manufacturers would be identified, and the candidate enterprises for the implementation of technical support services would be selected.
- 2) Coordination of supporting measures among related organizations
The contents of technical support services and their implementation organizations are discussed and coordinated among related public organizations

in charge of technical services to small and medium scale enterprises. When necessary, requests would be made to international technical cooperation agencies for sending overseas experts to relevant Malaysian organizations.

3) Implementation of technical supporting services

- Factory visits to selected small and medium scale enterprises for guidance would be made through the cooperation of the staff from the Small and Medium Scale Enterprises Unit, MTI, and the staff of SIRIM and other technology-related public organizations with the purpose of raising production and quality control technology levels. The cooperation of foreign experts would also be sought in this activity.
- Visits to selected small and medium scale enterprises for guidance would be made through the cooperation of the staff from the Small and Medium Scale Enterprises Unit, MTI, and the staffs of NPC, MEXPO and other similar organizations in order to upgrade management and marketing technology levels. The cooperation of foreign experts would also be sought where necessary.

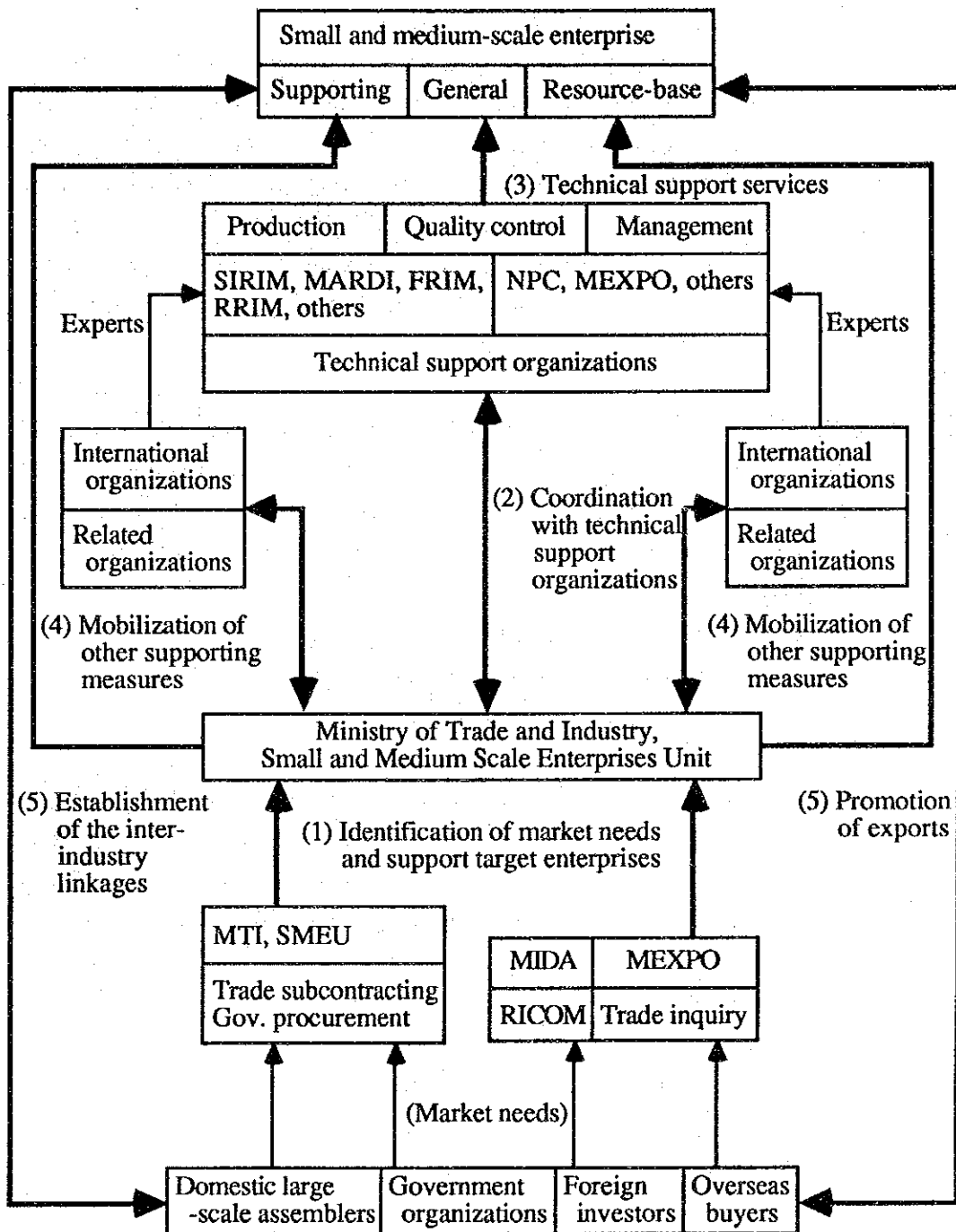
4) Implementation of follow-up supporting activities

The follow-up technical support services would be continued, and the actions of other organizations for the mobilization of financial and other supporting measures would be requested as necessary.

5) Establishment of a comprehensive development policy of small and medium scale manufacturing enterprises.

In order to secure the smooth and well-organized implementation of all of the above activities, a comprehensive industrial development policy for small and medium scale manufacturers would be established, and the activities of the various related organizations would be coordinated.

Fig. III.5-12 Outline of the Project



(3) Organization Structure for the Implementation of the Project

1) The major organization in charge of the Project

The Small and Medium Scale Enterprises Unit, Industrial Development Division, MTI would be the major organization to implement the proposed project. For the smooth implementation of the project, the following two committees should be established, and the secretariat office of these two committees should be set up within the Small and Medium Scale Enterprises Unit, MTI. The head of the secretariat office would be expected to work as a coordinator of all activities related to the proposed project.

2) Steering committee

The function of the steering committee is to coordinate activities of all government departments and technical support agencies involved in this project. All of the political matters involved in the implementation of the project would be discussed at this committee. The members of the committee would be representatives of the following organizations:

- Economic Planning Unit (EPU)
- Implementation Coordination Unit (ICU)
- Ministry of Trade and Industry (MTI)
- Other related government departments and agencies

3) Technical committee

The function of the technical committee is to coordinate the activities of organizations that are directly involved in the implementation of technical support activities. The secretariat office is established in the Small and Medium Scale Enterprises Unit, and the head of the office would also play a key role in the total coordination of all activities concerned.

The members of the committee would be representatives of the following organizations:

- Small and Medium Scale Enterprises Unit, MTI
- SIRIM
- MARDI
- FRIM
- PORIM
- NPC
- MIDA
- Other technical service related organizations

4. Areas in Which Assistance from Overseas is Anticipated

1) Invitation of experts

The cooperation from overseas by sending the following experts would be desired:

- Small and medium scale enterprise policy adviser; 1 person

A foreign expert who would give advice for the establishment of development policies and the coordination of the proposed project should be received at the Small and Medium Scale Enterprises Unit, MTI.

- Quality control expert; 1 person

An expert in quality control should be stationed at the Technology Transfer and Consultancy Division, SIRIM.

- Sector experts; 1 - 3 persons per sector

Experts in various sectors who could give advice on production, marketing and business administration technologies should be received at related organizations that would be in charge of the implementation of technical support to each individual small and medium scale manufacturer. The sectors would cover the following; moulds and dies, castings, automotive metal parts, ceramics, rubber footwear, food processing, wood products and others.

2) Required qualifications for experts

- Small and medium scale enterprise policy adviser;

a university graduate who has had at least 10 years experience in policy formulation for small and medium scale enterprises

- Quality control experts;

a university graduate who has had at least 10 years experience in the actual implementation of or in the guidance to company quality control system buildings.

- Sector experts;

a university graduate who has had at least 5 to 10 years practical experience in the specific industry and in guidance of one of the areas of production technology, marketing and business administration.

3) Terms of assignment

- Small and medium scale enterprise policy adviser; 2 - 3 years
- Quality control experts; around 2 years

- Sector experts; each 2 weeks to 1 year according to the contents of respective assignment required

5. Future Action to be Taken

The proposed project does not necessarily recommend the establishment of a new independent project but rather recommends the integration of various kinds of existing technical support schemes in Malaysia into one comprehensive project. As a preparatory work for proceeding with the project, the expansion and coordination of such existing schemes as the Trade Sub-contracting Scheme under the control of MTI, the RICOM scheme under MIDA or the Trade Inquiry Services under MEXPO would be needed. The technical assistance programme for the development of small and medium scale enterprises which is now under planning between the Malaysian government and the Japanese government is also expected to play a key role in the implementation of the proposed project.

The core organization for proceeding with the proposed project would be the coordination section or the secretariat office of recommended committees to be established in the Small and Medium Scale Enterprises Unit, MTI. The early establishment and start of the activities of such core section, by receiving the assistance of experts to be sent from overseas, is recommended.

**III-5-6. Expansion Project for the Mould and Die
Section of the SIRIM Advanced Manufacturing
Technology Centre (AMTC)**

III-5-6. Expansion Project for the Mould and Die Section of the SIRIM Advanced Manufacturing Technology Centre (AMTC)

1. Background of Project Proposal

The mould and die industry is an important supporting industry for numerous manufacturing sectors including electronics, plastic moulding, metal processing such as automotive parts and rubber processing, etc. The industrialization of recent years and a significant increase in foreign investment have brought about rapid growth in demand for moulds and dies.

As the result of the three-year industry study conducted by the present Study Team, it became clear that, with the exception of a few large foreign-affiliate corporations with high technical standards, the overwhelming majority of mould and die companies in Malaysia are small businesses with fewer than 20 employees. There is also a shortage in the absolute number of skilled workers and designers, and many firms lacked basic metalworking-related know-how and techniques, such as the proper use of equipment.

Resolution of these problems will require continued instruction tours and technical training at individual companies by experts. In the medium and long term, however, the training of skilled workers and designers and the upgrading of current levels of technology will prove to be even more important.

In light of the urgent need for the training of skilled workers and designers, it has been suggested that the R&D and training facilities of SIRIM and other existing government organizations be utilized together with the Industrial Training Institutes (ITI) of the Ministry of Human Resources.

Falling under the Ministry of Science, Technology and Environment, SIRIM has already adopted the latest machinery and facilities in the Mould and Die Section of the Metal Industry Development Centre (MIDEC) and been active in the development and dissemination of technology in the areas of mould and die fabrication and design. The Mould and Die Section was moved to the newly-established Advanced Manufacturing Technology Centre (AMTC) in 1990, and it was recognized that the utilization and expansion of existing facilities and manpower would be the most realistic and effective means of developing and disseminating technology, and of training AMTC officers and skilled machine operators and mould and die designers at private companies.

Taking all of these factors into consideration, the present expansion project was proposed for the Mould and Die Section of the SIRIM Advanced Manufacturing Technology Centre (AMTC).

2. SIRIM Mould and Die Section Activities

Aware of the importance of providing smaller companies in the industry with metal processing technologies, SIRIM established the Metal Industry Technology Centre (MITEC) in 1981 with technical assistance from the Japanese government. This organization was then merged with the Metal Industry Research and Development Centre (MIRDC) to form the Metal Industry Development Centre (MIDEC) in 1986.

(1) MIDEC Mould and Die Section Activities

As of December 1989, MIDEC consisted of five units — the Engineering Design Unit (EDU), the Machine Shop Services Unit (MSSU), the Metal Forming and Finishing Unit (MFFU), the Metallurgical Services Unit (MSU), and the Foundry Technology Unit (FTU) — with a staff of 35 research officers. Of these, however, only the EDU (five members for mould and die design) and MSSU (three members for mould and die manufacture) were directly related to the mould and die sector, and these 8 officers had achieved a certain degree of prowess as the result of numerous overseas training programmes.

The MIDEC Mould and Die Section (part of the EDU and MSSU) is equipped with the latest machinery and facilities, including wire cut EDM and CNC machining centres, and it is engaged mainly in offering technical consultations and helping smaller companies with the design, fabrication, and repair and maintenance of press dies and plastic moulds. Totals for these various activities as of the end of 1988 were as follows: plastic/diecast moulds, 17 firms; press dies, 90 firms; repair and maintenance of moulds and dies, 35 firms; and technical consultations, 8 firms. This section has also organized a total of 33 seminars and courses with the object of providing local companies with technical know-how.

The use of MIDEC facilities by small mould and die companies is expected to increase in the future. Urgent tasks for MIDEC include (1) the training of officers in the design and fabrication of high-precision and large moulds and dies, (2) the introduction of more advanced CNC machine tools, which are currently unavailable, and other measures for the expansion and strengthening of training programmes for skilled workers and designers.

(2) Transfer of the Mould and Die Section to AMTC

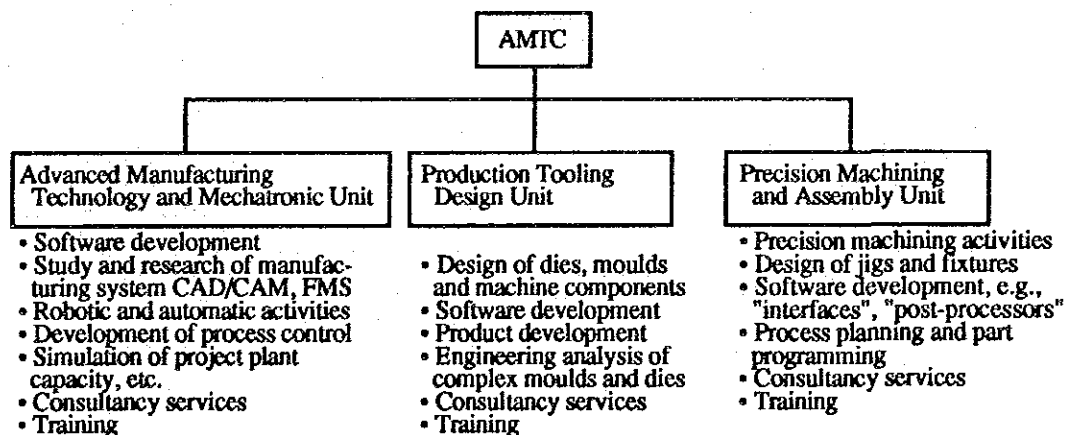
As part of the structural reforms undertaken by SIRIM in 1990, the Advanced Manufacturing Technology Centre (AMTC) was established alongside MDEC as part of the Industrial Research Division. The Mould and Die Section, previously under MDEC, was then transferred to AMTC.

The objective behind the establishment of AMTC was to support efforts by private companies to upgrade their production technologies and hence their competitiveness on the international market. Three units — the Advanced Manufacturing Technology and Mechatronic Unit (AMTMU), the Production Tooling Design Unit (PTDU), and the Precision Machining and Assembly Unit (PMAU) — were established in the Centre with a staff of 17 research officers, and the additional 4 officers will be allotted in 1990. Of these, 4 officers in PTDU and one officer in PMAU are directly involved in the mould and die sector, and 2 more officers will be added to PTDU in this year.

The AMTC organization is illustrated in Fig. III.5-13.

The functions of AMTC are as follows: (1) to engage in research and development activities in advanced manufacturing technologies; (2) to design product toolings such as moulds and dies, jigs, as well as machine tool components; and (3) to provide consulting services and technical training for the industry. The transfer of the Mould and Die Section to AMTC is seen as evidence of the government's intention to utilize the latest computer technologies such as CAD and CAM in improving the technological levels of the mould and die industry to the point where manufacture of micron-order precision metal dies becomes possible.

Fig. III.5-13 Organizational chart for the SIRIM Advanced Manufacturing Technology Centre (AMTC)



3. Outline of the Proposed Project

(1) Project objectives

The main objectives of the proposed project are as shown below.

- a) To establish a technical training and service system capable of meeting the needs of the private sector in terms of both quantity and quality by training AMTC officers in more advanced, specialized mould and die-related technologies.
- b) To utilize AMTC facilities to hold advanced training courses and seminars for engineers from private companies and to train skilled machine operators and mould and die designers.

(2) Project details

1) Introduction of equipment and facilities

The following equipment would be introduced to supplement existing facilities.

- a) Latest CNC wire cut EDM
Work size: 600 x 400 mm class 1
- b) Latest CNC EDM
Work size: 650 x 350 mm class 1
- c) CAD system and accessories compatible
with the above two pieces of equipment 1
- c) Latest CNC milling machine
Work size: 1,000 x 700 mm class 1
- e) CNC forming grinder and accessories 1
- f) Surface grinding machine 1
- g) Milling machine 1
- h) Tabletop drilling machine 1
- i) Ordinary lathe 1
- j) Tool set 1
- k) 50-tonne high-speed press, transport unit, accessories 1

The project expenditure schedule for investment and operating expenses is as shown below.

(Unit: ¥million)

	1st year	2nd year	3rd year	Total
Capital investment				
Facilities and equipment	300	0	0	300
Operating expenses				
Personnel	20	20	20	60
Supplies and materials	50	50	50	150
Special service costs	10	10	10	30
Total	380	80	80	540

2) Invitation of foreign experts

The number of foreign specialists required for technological development and technical instruction is as shown below.

- a) Design and CAD
(press dies, plastic moulds): 2 persons (with at least 15 years of experience)
- b) Mechanical processing and assembly
(press dies, plastic moulds): 2 persons (with at least 15 years of experience)
- c) Period: 3-5 years

3) Dispatch of SIRIM officers for overseas training

- a) Officers in charge of mould and die design, and fabrication: 2 persons (1 each for design and fabrication)
- b) Period of training: 3 months each

4) Project activities

- a) Promotion of metal die technology R&D and the dissemination of technology to private companies.
- b) Training of AMTC officers and technical staff of private companies in advanced technology through the invitation of experts from abroad. Considering the present rapid growth of the Malaysian mould and die industry, each company has very little room to send technical staff to AMTC. In addition, there is a possibility that sending valuable company technical staff for a long period will become a hindrance to company activities. Therefore, it

is necessary to conduct some sort of short-term practical training and to establish incentive systems which will contribute to some degree to Malaysian companies.

- c) Holding of technical seminars for private companies with the assistance of foreign experts using ATMC facilities.
- d) Continued overseas training opportunities for AMTC officers.
- e) Collection of technical information contributing to the upgrading of technical standards and distribution to private companies.

4. Areas in which Assistance from Overseas is Anticipated

- (1) Introduction of the latest CNC machine tools and facilities
- (2) Invitation of long term experts from overseas
- (3) Dispatch of SIRIM•AMTC officers for overseas training

**III-5-7. Project for Promotion of Industry Association
Activities**

III-5-7. Project for Promotion of Industry Association Activities

1. Background of Project Proposal

The supporting industries (moulds and dies, castings, etc.) and resource-based industries (chinaware, rubber footwear, etc.) studied in the present survey also consisted mainly of small local firms. As a group, these companies suffer from numerous problems, including low technical standards and delayed management modernization. It is clear from the experiences of such countries as Japan, South Korea, and Taiwan that the creation of industry associations by small and medium scale companies in each industry and the development of various activities around these associations would be effective in promoting industry development.

In Malaysia as well, there is an increasing awareness of the important role played by these associations, and in several cases such associations have participated in task forces for follow-up studies of the Industrial Master Plan (IMP) and otherwise acted as a link between government and the private sector. In comparison with Japan and the Asian NIEs, however, association activities in Malaysia remain limited.

Particularly in the moulds and dies and rubber footwear industries, there are no such industry associations which cover those specific industries only and very little activity of any sort. It has been pointed out that this is hindering benefits of industrial promotion policy and of foreign technical assistance for the private sector and for small businesses in particular.

Industry-initiated efforts represent the first step in any programme to improve the technical and quality standards throughout the industry. Exchanges with sister industries in other countries would not only make a direct improvement in technical standards but could also lead to tie-ups with foreign corporations, thereby speeding up the transfer of technology.

Industry association activities are also important from the standpoint of export promotion. In addition to cooperating with government organizations to reduce costs, improve quality standards, and develop high value-added products, the industry associations should carry out overseas marketing surveys, help companies to improve products for export, and gather information regarding new products and technologies in overseas markets.

At present in Malaysia, plans are being promoted for construction of industrial estates for the casting industry (in Selangor and Perak) and for the ceramics industry (in Perak) with the objective of expanding the production infrastructure for existing small and medium scale companies in these fields. These facilities offer numerous merits for

financially-strapped small businesses, including the shared use of testing and research facilities, the introduction of a joint purchasing system for raw materials, and opportunities to participate in seminars for the training of technicians and managers. It is therefore suggested that inter-corporate linkages and cooperation be strengthened and that industries act in unison to promote plans for construction of these industrial estates.

Against this backdrop, a project to promote the revitalization of industry association activities was proposed.

2. Outline of Activities of the Related Industry Associations in Malaysia

(1) Castings

Among the industry associations representing the Malaysian casting industry are the state-level Foundry and Engineering Industries Associations (FEIA) and the national Federation of Malaysian Foundry and Engineering Industries Associations (FOMFEIA). This section will introduce the activities of FOMFEIA along with the Foundry and Engineering Industries Associations in Selangor (SFEIA) and Perak (PFEIA).

1) Federation of Malaysian Foundry and Engineering Industries Associations (FOMFEIA)

8, (1st Floor) Jalan 1-77B, off Jalan Changkat Thambi Dollah,
P.O. Box 6183, Pudu 55720 Kuala Lumpur

i) Organizational outline

FOMFEIA is a national organization established in January 1977 and consisting of Foundry and Engineering Industries Associations at the state-level. Its membership currently includes industry associations from the following nine states in peninsular Malaysia: Selangor, Perak, Negeri Sembilan, Malacca, Kedah, Pahang, Penang, Kelantan, and Johor.

Individual corporate members of FOMFEIA come from a wide range of industries, such as foundry, engineering works, steel fabrication, metal and welding works, machinery, precision engineering, trailer assembly, and the repair and maintenance of motor vehicles, tractors. The number of related companies amounts to 1,831 (based on the 1987 directory).

The FOMFEIA organization includes six sub-committees which are divided by industry. The foundry subcommittee consists of 79 firms specializing in casting, with many of these firms belonging to the Selangor (38), Perak (22), and Penang (12) FEIAs.

ii) Main activities

- Participation in the Task Force on Machinery and Engineering Industry, established to implement various recommendations of the IMP
- Dispatch of market research mission teams abroad
- Sponsoring of casting-related seminars and exhibitions
- Participation in planning for construction of the foundry industrial estates
- Dispatch of representatives to various SIRIM committees
- Holding of dialogues with government agencies
- Publication of directory

2) Selangor Foundry and Engineering Industries Association (SFEIA)

Address is same as FOMFEIA.

i) Organizational outline

The SFEIA was established in 1935 and as of the end of 1989 consisted of 220 member companies.

The association has five subcommittees, and among them the foundry subcommittee comprises 48 firms specializing in casting.

ii) Main activities

- Participation in the Subcommittee on Foundry/Moulds and Dies of the IMP Task Force on Machinery & Engineering Industry
- Cooperation in the revision of the syllabi at vocational training schools
- Sponsoring of lectures by speakers from government organizations, etc.
- Requests to government for industrial land for small scale industries and participation in planning for construction of the foundry industrial estates
- Observation tour at related domestic organizations (CIAST, SIRIM, etc.) and dispatch of market research mission teams abroad
- Publication of the association bulletin (*Berita SFEIA*)

3) Perak Foundry and Engineering Industries Association (PFEIA)

103B, Jalan Bendahara, 31650 Ipoh,

Perak Darul Ridzuam

i) Organizational outline

Established in 1933, PFEIA is the oldest industry association in the Malaysian casting industry. At the end of 1989, it had a membership of 82 firms. Association officials say that approximately 35% of all related firms in Perak are members.

It is unclear how many of these companies are engaged only in casting-related operations, but a survey of the 1987 directory suggests the number to be 22.

ii) Main activities

- One of the constituent associations of FOMFEIA, PFEIA's activities are virtually identical to those of the Selangor association (SFEIA).
- The item of greatest concern at present is the plan for construction of the Foundry and Engineering Industry Complex within the Pengkalan II Industrial Park being promoted by the Perak SEDC, whose first phase of construction will involve an area of approximately 32 ha. 40 casting-related firms (39 of which are PFEIA members) are scheduled for entry into the industrial park. The PFEIA will be responsible for management of the common facility centre in the Industry Complex, and greater cooperation between companies is being sought.

(2) Moulds and Dies

Because mould and die manufacturers are included in the Subcommittee on Precision Engineering, one of the subordinate organization of the FOMFEIA, there is no industry association dedicated to the mould and die industry only, and their activities in FOMFEIA are accordingly limited.

According to the 1987 FOMFEIA directory, there are 53 mould and die and precision equipment manufacturers located across Malaysia, with 26 of these belonging to the Selangor FEIA, 15 to the Penang FEIA, and 7 to the Johor FEIA.

(3) Automotive Metal Parts

The Malaysian Automotive Component Parts Manufacturers' Association (MACPMA) represents the metal auto parts sector.

Malaysian Automotive Component Parts Manufacturers' Association
(MACPMA)

c/o Malaysian Sheet Glass Berhad

21 KM, Sungai Buloh, 47000 Selangor D.E.

Although the association includes a few producers of motorcycle components, most of the firms are automobile parts manufacturers, and together they account for more than half of the leading companies in the field. Fully 90% of the member firms supply parts to PROTON.

MACPMA has declared six specific objectives, but in general it works toward expansion of markets for parts manufacturers. It also participate in the IMP Task Force on the Road Transport Equipment Industry.

(4) Chinaware

The Malaysian Ceramic Industry Group (MCIG), consisting mainly of tile manufacturers, has very few members from the tableware and ornament sectors. Although chinaware manufacturers are scattered across the country, the chinaware industry association in Perak is relatively active.

1) Malaysian Ceramic Industry Group (MCIG)

c/o Federation of Malaysian Manufacturers
17th Floor, Wisma Sime Darby
Jalan Raja Laut, 50350 Kuala Lumpur

This organization, with a membership of 28 firms (mostly tile manufacturers), is under the FMM umbrella of operations. Its activities are aimed at promoting cooperation between local ceramic manufacturers and dialogues between government and the private sector. It is also a participant in the IMP Task Force on the Non-Metallic Mineral Products Industry.

2) Perak Ceramic Industry Association

145-A, Ipoh Grove, Jalan Kuala Kangsar,
Ipoh, Perak

This association has as its members 30 of the 50-60 manufacturers of ceramic products, including flower vases, pots, and clay pipes, in Perak.

The Perak Ceramic Industry Association is engaged in various activities including the dispatch of market study teams to Japan and other countries. Its main area of concern at present is the transfer of member company operations to the Chemor Ceramic Industry Park (1st phase: approximately 83 ha), being promoted by the Perak SEDC and scheduled for completion at the end of 1990. At present, 32 firms, including one Japanese company, have applied for entry in the park. In addition to SIRIM research facilities, the park will be provided with an association office and common facility centre, and as such, greater inter-company cooperation centering around industry association will be needed.

(5) Glassware

The Glass Manufacturers Association of Malaysia (GMAM) represents the glass industry.

Glass Manufacturers Association of Malaysia (GMAM)
c/o Malaysian Sheet Glass Berhad
21 KM, Sungai Buloh, 47000, Selangor D.E.

Established in 1979, this association has a membership of six firms, including manufacturers of both sheet glass and glass bottles.

Its main activities include attendance at the ASEAN Federation of Glass Manufacturer Conference and the AFGM Council Meeting as well as participation in the Task Force on the Non-Metallic Mineral Products Industry.

(6) Rubber footwear

The nation's only industry association for the rubber footwear sector is the rubber footwear subcommittee at the Malaysian Rubber Products Manufacturers' Association (MRPMA). There is no specific association dedicated to the rubber footwear industry alone, and so their activities in MRPMA are accordingly limited.

Malaysian Rubber Products Manufacturers' Association (MRPMA)

No.52-B Jalan SS 21/58, Damansara Utama,

47400 Petaling Jaya, Selangor D.E.

i) Organizational outline

Established in October 1977, the MRPMA is very active as a member of the Federation of Malaysian Manufacturers (FMM). It has a current membership of 120 firms, including manufacturers of dipped latex goods, industrial rubber products, rubber footwear, and tire tubes, which are estimated to constitute about 50% of the entire industry.

The rubber footwear subcommittee is one of the four subcommittees under MRPMA, and it has 10 member firms.

ii) Main activities

The main rubber footwear-related activities of the MRPMA are as follows:

- Dispatch of market study teams and export promotion missions abroad, participation in overseas trade fairs
- Sponsoring of seminars in corporate management and export promotion
- Participation in the IMP Task Force on Rubber Industrialization and promotion of cooperation and dialogues with the government as a representative of rubber industry
- Publication of *MRPMA Industry and Export Directory*

3. Outline of the Proposed Project

(1) Objectives of the Project

The main objectives of the proposed project are listed below.

- 1) To strengthen industry associations and revitalize their activities, thereby bringing about improvements in industry-wide production technology and quality control standards, and to modernize management through education of managers.
- 2) To protect the profitability of member firms and work towards improvement of the industry's status, and to cooperate with the government in policy dialogues, surveys, and research works
- 3) To promote industry cooperation towards the early construction of the industrial estates currently planned for small and medium scale industries in various industries and to participate in joint operation of these industrial estates.

(2) Activities of the Project

<First phase>

- 1) Survey of industry associations and selection of target industries for assistance

Surveys are to be conducted in the targeted fields (i.e., supporting and resource-based industries) to determine the presence/absence of industry associations, the ratio of industry firms belonging to these associations, and the scope of their activities. In addition, industry needs are to be determined with an eye on organizing and revitalizing.

The results of these surveys are to be used in selecting specific industry sectors for assistance.

<Second phase>

- 2) Establishment of programmes for the revitalization of industry association activities and fine-tuning with the help of related organizations

Concrete proposals for the revitalization of industry association activities are to be drawn up and meetings held with related organizations to discuss methods of implementation and make appropriate adjustments.

- 3) Guidance and consulting by experts

Foreign experts are to be invited as necessary to implement the following activities:

- Case studies of small businesses abroad are to be prepared as part of an education campaign to illustrate the need for and effectiveness of industry association activities
- Industry leaders of the next generation are to be sought out and information exchanged with the objective of creating personnel networks

- For those industries in which firms are concentrated in specific regions, inter-regional exchanges are to be deepened and a sense of unity fostered. In addition, guidance is to be provided in the task of proper organization.
- A public relations magazine is to be published with the objective of disseminating guidance and advice of the foreign experts invited, and introducing government aid policies and cooperation schemes offered by overseas economic organizations.

4) Promotion of exchanges with related industries abroad

To improve the efficiency of industry association activities and promote mutual understanding, industry activities in other countries are to be observed and talks held with foreign experts.

5) Dispatch of industry leaders overseas

Industry leaders are to be dispatched overseas to observe the role and management of industry associations and government policies for industrial promotion in foreign countries, and to contribute to greater industry association activities in Malaysia.

<Third phase>

6) Industry association-initiated activities for the promotion of small and medium scale industries

The following types of activities for the promotion of small and medium scale industries and promotion of exports are to be carried out under the initiative of the industry associations. This method of industry association initiative could expect more effective and productive implementation of various activities and promotion of membership application by non-member firms.

- Company visits and consultancy services by experts, and organizing of management and technical seminars
- Collection and distribution of information on overseas markets and technologies
- Exchanges of personnel, information, etc. with overseas industry associations through dispatch of market study teams and export promotion missions

It would be desirable that industry associations in the target industries also take the lead in implementing various activities proposed in the Technical Support Project for Small and Medium Scale Manufacturers (III-5-5), and in the Expansion of Export Promotion Activities in the Malaysian Export Trade Centre (MEXPO) (III-5-8).

(3) Implementation of the Project

1) Implementing organization

The Malaysian Industrial Development Agency (MIDA) will be primarily responsible for implementing the Project. MIDA is one of the government agencies in Malaysia which has the closest ties with the private sector. In particular, the task forces established for follow-up of the IMP also include private companies and have served as links for cooperation and dialogues between government and the private sector. When Malaysian government attempts to attract more foreign-affiliate companies in the future, closer links with local industry will be required. One effective means of achieving this would be for MIDA to take the lead in strengthening industry organizations and revitalizing association activities.

2) Fine tuning with related government agencies

In order to allow the efficient implementation of this Project, a committee consisting of the following government agencies and small businesses promotion organizations is to be set up within MIDA to make deliberations and carry out fine tuning of implementation methods, etc.

- Small and Medium Scale Enterprises Unit, Industrial Development Division, Ministry of Trade and Industry
- MIDA
- MEXPO
- SIRIM
- CIAST
- NPC
- Other industry-related promotion organizations

4. Areas in which Assistance from Overseas is Anticipated

All of the revitalization programmes described above can be carried out by Malaysia's own power. If the following types of assistance from overseas were available, however, the effectiveness of the proposed projects would be significantly increased.

- (1) Invitation of experts to conduct surveys on industry association activities and industry needs
- (2) Invitation of experts to strengthen industry organizations, provide guidance in the revitalization of their activities, and offer consultations
- (3) Dispatch of Malaysian industry leaders abroad in order to study the activities of overseas industry associations and carry out exchanges with industries in other countries

**III-5-8. Expansion of Export Promotion Activities
in the Malaysian Export Trade Centre (MEXPO)**

III-5-8. Expansion of Export Promotion Activities in the Malaysian Export Trade Centre (MEXPO)

1. Background of Project Proposal

The development of export markets through the collection of overseas market information and overseas marketing activities is one of the major policies for promotion of the ceramics, glassware, rubber footwear and other resource-based industries which are the subject of the current development study.

The Malaysian Export Trade Centre (MEXPO) was established in 1980 as an organization under the Ministry of Trade and Industry in order to collect and supply information from overseas markets and to introduce Malaysian products overseas. Its export promotion efforts have received favorable evaluations from both local and overseas firms, and use of MEXPO services has been growing on a yearly basis. MEXPO has been forced to operate with a smaller staff and budget than similar organizations in neighboring countries, however, and expansion of its services and activities is badly needed.

In response to such calls from inside and outside Malaysia, the Malaysian government is currently preparing to establish a new trade promotion organization to replace MEXPO. The new organization, which will absorb the existing MEXPO and take over all export promotion activities currently being implemented by the latter, is set to begin operation as soon as the second half of 1990.

Based on the recognition that the export marketing capabilities of local enterprises will play an increasingly important role in the promotion of exports, the Study Team has proposed a programme for the expansion of export promotion activities at MEXPO and the new organization taking into account the first- and second-year study reports.

2. MEXPO Activities and Establishment of the New Trade Promotion Organization

(1) Outline of MEXPO

1) Establishment

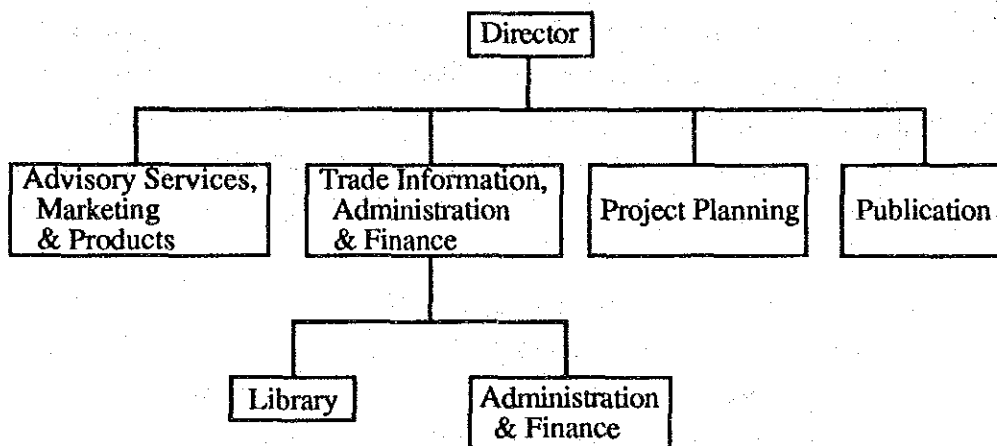
The Malaysian Export Trade Centre (MEXPO) is a national export promotion agency established in 1980 as one of eight units under the International Trade Division of the Ministry of Trade and Industry.

MEXPO operates a permanent trade exhibition hall at its office and offers ordinary businessmen access to its trade library. It is headquartered not within the parent ministry but rather in a building in the Kuala Lumpur business district.

2) Organization

MEXPO currently maintains a staff of 39. Previously there were seven assistant directors, but this was reduced to four as the result of budget cuts. Fig. III. 5-14 is a chart of the MEXPO organization.

Fig. III. 5-14 Chart of MEXPO Organization



At present MEXPO does not have any domestic branch offices. Trade commissioners in thirty locations worldwide are engaged in the collection of information and the handling of business negotiations and trade inquiries.

(2) Outline of MEXPO activities

1) Services

MEXPO provides the following services as part of the export promotion efforts of the Ministry of Trade and Ministry.

1. Trade inquiry service
2. Trade information
3. Company registry
4. Exhibition centre
5. Advisory services

6. Business appointments (introduction of Malaysian corporations to overseas importers)

7. Trade fairs and missions

2) Record of MEXPO activities

Figures for recent MEXPO activities are as shown below. The great increase in demand for MEXPO services is easily surmised.

(a) Visitors to MEXPO

	1985	1986	1987	1988	1989
Local	3,626	9,379	8,826	10,812	7,992
Overseas	174	274	732	772	803
Total	3,800	9,653	9,558	11,584	8,795

(b) Trade inquiries received

	1985	1986	1987	1988	1989
From local firms	712	1,531	1,753	1,562	2,143
From overseas firms	581	907	1,591	1,720	2,160
Total	1,293	2,438	3,344	3,282	4,303

(c) Appointments for business negotiations

	1986	1987	1988	1989
No. of appointments	57	272	396	141
No. of local companies introduced	365	1,364	1,985	832

(d) Participation in local exhibitions and dispatch of trade missions

	1986	1987	1988	1989
Total	8	8	20 (16)	1 (18)
No. of participants	53	67	145 (125)	37 (160)

Note: Figures in parentheses in 1988 and 1989 indicate overseas exhibitions and trade missions.

(e) Sponsoring of seminars, workshops, and lectures

	1986	1987	1988	1989
Seminars/workshops	17	9	13	14
Lectures	12	23	21	7

(f) Permanent exhibition hall

MEXPO operates a permanent exhibition hall on a 1,000m² space on the ground floor of the PKNS Bldg. that serves as its headquarters. Products from 290 companies are displayed, and foreign buyers are able to browse at leisure. When an inquiry is made concerning a product, the prospective buyer is introduced to a representative from the

manufacturer. Exhibition is free of charge, and companies are allowed to change their displays every six months.

MEXPO is also responsible for selection of the products which are displayed at the Malaysian exhibition booth of the ASEAN Centre in Japan.

(g) Trade Library

Located on the second floor of the PKNS Bldg., the Trade Library is open to ordinary businessmen. The collection includes 15,000 trade- and overseas market-related materials and publications as well as a microfilm collection. The trade statistics can also be accessed from the library via computer terminal. These resources are utilized by 50-60 individuals on a typical day.

(h) Publications

MEXPO publishes the following periodicals for local exporters and foreign importers.

- *Malaysian Trade News* (designed to promote Malaysian products overseas; published quarterly)
- *Intisari Dagang* (an export digest; published quarterly)
- *Peluang Dagang* (product inquiry information and commerce-related announcements; published every three weeks)

Other special publications include an exporter directory and reports containing market and product information.

(3) Plan for establishment of the new trade promotion organization

1) Background

In 1989 the Malaysian government announced as part of its export promotion policy a plan for establishment of a new trade promotion organization, tentatively christened the Malaysian Trade Development Corporation (MTDC). Establishment of the MTDC was first made public in the *1988 EPC Annual Report* by Trade and Industry Minister on September 15, 1989 and was carried in the daily newspapers as well. At the "Third Asian Forum for Trade Promotion Organizations," held in Singapore in late July 1989, Malaysia announced that it was studying the establishment of an export promotion organization comprising individuals from both public and private sectors, and it is believed that plans for establishment of the MTDC already existed at this point in time. Furthermore, the need for expansion of MEXPO functions had already been pointed out by the Export Promotion Council (EPC) as noted in the first of these study reports.

In recent years the percentage of industrial product exports as a portion of total exports has grown significantly. By 1988 roughly half of all export value was accounted

for by industrial products. These products, however, have been concentrated in specific areas such as electrical and electronics products and components, textiles, etc. As a result, one of the export promotion goals for the 1990s is to broaden the base of Malaysian exports. Establishment of the MTDC was necessary in order to expand current MEXPO functions because the existing MEXPO organization was deemed insufficient for the implementation of export promotion activities.

2) Outline of the plan

Details on MTDC publicly announced and reported in September, 1989 are given below.

It appears, however, that discussion continues on the important items, with those concerned in no particular hurry to establish the new organization. Possible directions include a provisional increase in the present MEXPO staff and budget.

- (a) Establishment: By the end of 1989, with activities to begin in 1990.
- (b) Status: Autonomous organization. Whether it will be designated a statutory body or a limited company by guarantee, however, remains undecided.
- (c) Name: Newspapers have referred to the new organization as the Trade Development Organization (TDO) and the Malaysian Trade Development Corporation (MTDC). The official name remains undecided.
- (d) Budget: To be collected from importers and exporters.
- (Operating expenses) The export tax will be collected in an export promotion fund to be presided over by the new organization.

General opinion appears to be that the MTDC must be an autonomous and flexible organization capable of business-like activities. Hence, staff with specialized knowledge and skills will be necessary. The private sector is seen to be very hopeful on this point.

3) Main activities of MTDC

The Export Promotion Council (EPC) indicated the following as the main activities of the MTDC.

- (a) Development of export promotion strategies and action programmes for specific markets and products

- (b) Development of services necessary for exporters to establish themselves on overseas markets
- (c) Cooperation with other organizations providing export promotion services
- (d) Organizational flexibility, to avoid duplication of services
- (e) Work as a medium for assistance in trade promotion by international or foreign government aid organizations

At the time of the current study, the Ministry of Trade and Industry had already worked out specific details concerning MTDC organization and activities, and establishment was expected to come as soon as the first half of 1990, but the schedule has yet to be announced.

In addition to establishment of the new trade promotion organization, the Ministry of Trade and Industry has plans to construct an international trade promotion centre building on a 1.28-hectare site in Kuala Lumpur's Changkat Pavilion to serve as a home for MEXPO and other public and private trade promotion groups as well as the offices of overseas trade promotion organizations. Construction on the new facility is scheduled to begin as early as 1991.

3. Suggestions Concerning the Organization and Activities of the New Trade Promotion Organization

(1) Basic plan

A look at trade promotion organizations in neighboring countries and regions shows that establishment of a body with an organization and scope of activities exceeding those of the current MEXPO is an appropriate measure for the strengthening of Malaysia's export promotion activities.

It is hoped that the following points will be taken into consideration during preparations for establishment of the new organization.

i) Organization

- (a) That it be solely responsible for carrying out the government's export promotion policy.
- (b) That it maintain close ties with government agencies even if it takes the form of a private corporation.
- (c) That it maintain existing ties with industry and product groups.
- (d) That it be provided with necessary personnel and staff.
- (e) That it expand its organizational network both within Malaysia and abroad.

ii) Activities

- (a) That it not only assist large corporations already capable of exporting on their own but also help small local businesses with the desire to export.
- (b) That its activities cover all processed goods, including industrial products and primary goods.
- (c) That it respond appropriately to demand for activities and services.

iii) Funding

- (a) Some type of government assistance is needed for stable operation at the new organization.
- (b) The private sector (i.e., user firms) should be required to bear an appropriate burden.

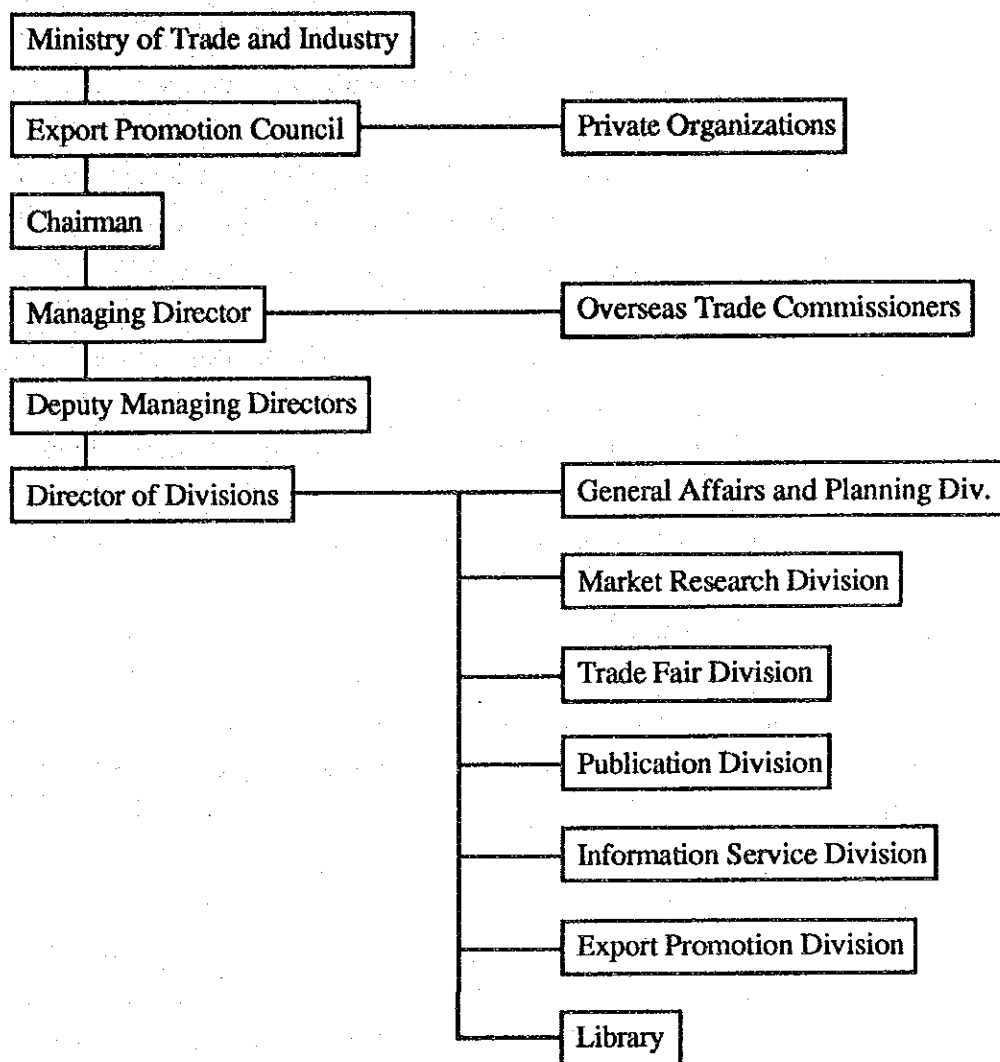
(2) Organization

In order to smoothly and effectively carry out trade promotion activities, the following types of divisions should be provided in addition to General Affairs, Accounting, and other administrative divisions.

Division (proposed)	Main activities
(a) Market Research Division	
Regional research section	(Collection and analysis of overseas information)
Industry research section	(Collection and analysis of domestic and foreign industry-related information)
Statistical analysis section	(Various types of statistical analysis using computers)
(b) Information Service Division	
Information service section	(Window for business negotiations from exporters, collection of materials on domestic and foreign export/import programs)
Trade Inquiries section	(Processing of inquiries from abroad, arrangement of appointments for business negotiations)
Reference section	(Management of the trade library)
(c) Trade Fair Division	
Permanent display section	(Management of the permanent display)
Trade mission section	(Participation in and sponsoring of overseas exhibitions)
(d) Publication Division	
Public relations section	(Editing of PR materials for Malaysia and abroad, other public relations activities)
Publication section	(Preparation and sale of publications)
(e) Export Promotion Division	
Product improvement section	(Guidance on improvement of products for export)
Educational activities section	(Planning and holding of seminars, study courses, and consulting activities)

The suggested organization for the new body is as shown in Fig. III. 5-15.

Fig. III. 5-15 Suggested Organization Chart



It is also suggested that branch offices be established in Penang, Johore Bahru and other major cities to uncover local products suitable for export and to assist small local businesses in their export efforts.

(3) Reshuffling of personnel

A glance at trade promotion organizations in neighboring countries shows staffs of more than 600 in Japan, Korea, and Taiwan and of 300-400 in Singapore, Indonesia, and Thailand. This compares to the current figure of 39 at MEXPO, clearly insufficient to respond to the increasing needs of private enterprise. Increases in staff are badly needed,

beginning with the neglected marketing division, (The comparison of trade promotion organizations in 8 Asian countries & regions is provided in the Annex of this Report.)

The status of the present MEXPO is as an extraministerial office under the direct control of the International Trade Division of the Ministry of Trade and Industry. As a result, frequent personnel transfers are unavoidable, making it difficult to retain trade-related know-how and specialized expertise within the organization. It is hoped that the new organization will give priority to the training of personnel with both practical experience and specialized knowledge and implement training programmes both in Malaysia and abroad. The acceptance of transferees from the Ministry of Trade and Industry and other government organizations as well as private industry associations would be one effective means of building up an accumulation of specialized knowledge.

In light of the new organization's role as a leader of private industry in the field of trade promotion, it is hoped that high-ranking government bureaucrats (whether active or retired), corporate presidents, and other influential individuals with high social status be appointed as representatives.

Furthermore, one effective means for building close ties with the government would be to "loan out" officials from the Ministry of Trade and Industry in a series of personnel exchanges. Personnel exchanges with other government organizations like MTIB and MHDC would be also very important from the viewpoint of personnel training of the new organization.

(4) Outline of proposed activities

The basic objective of the various activities proposed for the new trade promotion organization is simply the expansion of MEXPO efforts. The main activities are outlined below.

i) Greater information collection and market analysis

(a) Establishment of a market research division

A market research division should be established to collect and analyze information on overseas markets and products. This division should further be divided into two sections, one for analysis of overseas markets (regions) and one for specific industries (products). The former will provide broad coverage of economic and trade-related information for each nation, while the latter section will provide an industry-by-industry analysis of the world market together with product trends in local industries. In support of these research activities, a statistical analysis section should be provided for the

processing of trade statistics and various other domestic and foreign economic statistics by computer.

(b) Strengthening of information collection activities

Materials to be collected include statistics, magazines, newspapers, books, directories, and tariff schedules, and it is suggested that a sufficiently large budget be provided to allow their organized and continuous collection. Statistics, tariff schedules and other basic resources are particularly important, while information on foreign trade fairs and overseas business directories are also critical to export promotion activities.

Trade commissioners should be asked to help in the acquisition of free materials and periodicals published by economic groups and industry associations in other countries.

ii) Greater information distribution activities

(a) Expansion of the trade library

In addition to the expansion of resource materials described above, specially-trained librarians should be hired to assist users in finding required materials. It is also suggested that corners be set up to answer inquiries concerning trade procedures and provide audio-visual information.

(b) Enrichment of publications

The current exporter directory should be supplemented with more corporate outlines.

iii) Expansion of the permanent exhibition hall

Overseas visitors to MEXPO are increasing on a yearly basis. The new organization expects further increases in the number of foreign guests, and expansion of the permanent exhibition hall would be one effective means of increasing individual business opportunities.

In light of this, the currently designated space should be increased to allow more exhibits, and displays should be designed so as to attract the attention of foreign importers. The hiring of specialists for instruction in display design and decoration could be an effective tool.

Care should also be taken to provide viewers with information about the displaying manufacturer and relevant materials such as product catalogs and price lists.

The creation of an inquiry counter or a business negotiation area for use by private companies should be considered.

Display method and decoration should also be re-emphasized in the display corners for Malaysian products in overseas embassies, and appropriate budgetary measures should be studied.

Finally, publicity for the permanent exhibition hall is still insufficient. Possible solutions might be the creation of posters and colour-printed pamphlets to be displayed at MIDA, which is visited by numerous foreign businessmen, and various hotels located in Kuala Lumpur.

iv) Strengthening of inquiry and business negotiations service

There are said to be 3,000 Malaysian exporters and 7,000 overseas buyers registered on a computer data base at MEXPO. Further increases in the number of registered companies should be accompanied by more information about each. In addition, relevant materials and information should be prepared and the staff expanded in order to provide quick, accurate responses to inquiries and support for business negotiations. This in turn will require the computerization of information services, to be discussed below.

v) Greater participation in overseas trade fairs

Participation in overseas trade fairs is useful not only for setting up export-related business negotiations but also for learning about new product development by companies in other countries and obtaining some idea of their export strategies. The distribution of information concerning overseas trade fairs and increased assistance for participation in these events would be one effective means of boosting exports.

vi) Greater guidance on improvement of products for export

The design of products suited to overseas markets would be greatly aided by the invitation of experts to conduct seminars and on-site guidance in the areas of design, style, colouring, and functionality. This type of instruction should be expanded to cover the development of new markets as well.

4. Proposed Individual Programmes for Export Promotion

(1) Computerization of trade information services

Computer-based systematization of trade information is needed to improve the collection of overseas information, establish an efficient information services system, and provide quick, accurate introductions to individual companies for product inquiries and

business negotiations. Currently, MEXPO maintains corporate information for 3,000 Malaysian exporters and 7,000 overseas buyers on a data base for use in product inquiries and business negotiations, but future development of its economic and trade-related activities is expected to bring about increasingly diverse information needs from the public and private sectors both inside and outside Malaysia. In order to respond to these needs with a limited staff and budget, the new trade promotion organization should undertake computerization of its information services as soon as possible.

Some concrete suggestions are provided below.

i) Collection of trade information

(a) Corporate data

The corporate information data base already being used for the processing of inquiries is the most frequently used of all the services. Consequently, the number of registered companies should be increased and the quality of the information improved.

(b) Overseas trade statistics

Trade statistics data bases for Japan, the U.S., Britain, France, West Germany, Italy, and other European nations should be periodically acquired and used as sources of information when mapping out export strategies for specific countries and regions.

(c) Overseas trade fair information

This information has been collected on data bases in Britain and Japan and could be effectively used in export promotion activities.

One effective method of collecting trade-related information is the mutual exchange of data bases between trade promotion organizations in different nations. Another effective tool would be active cooperation with TISNET (Trade Information Service Network), set up by the International Trade Commission at the United Nations, and ATRAIN (Asian Trade Promotion Activities Information Network), established by the Asia Forum for Trade Promotion Organizations in May 1987 as a network for information exchange among Asian countries.

Japan in recent years has been particularly active in its import promotion efforts, and it is thought that a data base for Malaysian trade information would be utilized in Japan as well.

ii) Development of an efficient information services system

Development of trade information services involves not only information collection but also the introduction of computers and communications technology and the

training of required personnel. Experts should be invited from abroad to study the Malaysian situation and assist in the gradual process of computerization.

In the future, the information system at the new body should be transformed into an online system capable of being accessed in real-time from anywhere in the organization. Furthermore, external services useful for those with an interest in overseas economic and trade-related information and the development of online exchange systems with the Ministry of Trade and Industry, the Department of Statistics, the Royal Customs and Excise Department, and the Central Bank should be studied.

(2) Strengthening of overseas market research

The conducting of market surveys for Malaysian products on foreign markets is an extremely effective tool in export promotion, and a certain degree of success has been achieved with reports from trade commissioners and cooperation from Japan and other nations. In the future, the opportunities for organization staff to travel abroad for market research should be expanded, with staff members being trained in market research techniques.

At the same time, from the twin standpoints of making private corporations aware of the need for market research and cultivating an export awareness, a "Small Business Overseas Market Research Programme" that entrusts overseas market research to industry associations with small businesses should be established. Under this programme, one person from each industry association, for a total of five people each year, would be dispatched to specific foreign markets for a given period (approximately 30 days), with the government to subsidize 50% of all costs. The dispatched individual (ordinarily the manager of a small business) would then be asked to present a report on the results of his research. Such a programme would also help to alleviate the expected shortage of personnel at the new trade promotion organization.

(3) Greater assistance for industry association-initiated export promotion activities

Assistance is to be provided to export promotion activities in each industry with an emphasis on industry associations having small businesses among their members.

(a) Guidance in product improvement

The design of products better suited to overseas markets would be greatly aided by the invitation of experts for seminars and on-site guidance in the areas of industrial design and packaging. A system of awards should be established for design improvements in export products.

(b) Exporter awareness activities

Small businesses should be provided with introductory materials on overseas markets, training in export marketing and trade procedures, explanations of export incentives, and export guidebooks to increase interest in exports among local businesses. Experts should be invited from overseas, and staff members themselves should serve as instructors in the future.

(4) Hiring of foreign trade promotion advisors

For one year starting in November 1988, a trade promotion advisor from Japan was stationed at Malaysia's Export Promotion Council (EPC). The continued invitation of foreign trade promotion advisors is thought to be necessary for the time being as the new trade promotion organization is launched and export promotion activities are expanded. Suggested roles for these advisors are provided below.

(a) Advice concerning the activities of the new trade promotion organization

Advice should be given concerning the new organization, preparation of operating schedules, education and training of staff for various activities, collection of materials for the trade library, and the management of exhibition hall.

(b) Export consulting for specific countries

The foreign specialists should offer marketing advice to Malaysian exporters concerning export promotion in specific countries and supervise translation of product catalogs in that country's language.

Furthermore, they should provide market introductions for their country at export promotion seminars in local areas of Malaysia.

(c) Greeting of importers and buying missions

In the future, further increases are expected in the number of trade missions from local areas in other countries (sponsored by local governments and chambers of commerce) and buying missions from large firms. It would be extremely effective for an expert versed in both the internal affairs of Malaysia and the industrial and economic situation of the specific nation to be on hand to greet these groups.

5. Areas in which Assistance from Overseas is Anticipated

The strengthening of export promotion activities by MEXPO and the new trade promotion organization described above can be carried out by these organizations under their own power. During implementation of the proposed individual programmes,

however, the following types of overseas assistance would further increase their effectiveness.

(1) Computerization of trade information services

- Study on information system development and data base creation (invitation of short-term experts)
- Mutual exchange of trade data bases

(2) Hiring of foreign trade promotion advisors

- Invitation of long-term experts as trade promotion advisors

(3) Greater assistance for industry association-initiated export promotion activities

- Invitation of experts in the fields of industrial design, packaging, and marketing

(4) Overseas training of MEXPO staff

III-5-9. Project for Promotion of Industrial Standardization and Quality Control

III-5-9. Project for Promotion of Industrial Standardization and Quality Control

1. Background of Project Proposal

Malaysia has been engaged in a programme of industrialization of the export oriented type in recent years. To maintain international competitiveness in quality at the export destinations, it is becoming very important to promote standardization of products and quality control.

Foreign capital companies are helping to promote standardization in some products of the export industries, but some strong initiative on the part of the country itself is necessary to establish a balanced standardization system for the country as a whole. Therefore, the government organization SIRIM is engaged in various types of activities for the promotion of standardization and quality control, but the growing needs of the private sector are resulting in a pileup of work and so it is urgent to ensure sufficient numbers of personnel and improve their quality.

As pointed out in the studies on moulds & dies and castings, company standardization is essential for companies to effectively control quality. SIRIM launched a project for promotion of standardization in small and medium sized enterprises in 1988, but the ideas of standardization and quality control have still not sufficiently been implanted in the companies and so discussion is being made of strengthening of the SIRIM system and stronger activities for pushing these ideas in the small and medium scale enterprises.

Along with industrialization, business is booming not only in the metropolitan area where the SIRIM headquarters is located, but also in Penang, Ipoh, Johore, and other local cities. In accordance with this, there is a rising need for strengthening the activities of the SIRIM branches in these regions. In particular, it is urgent to improve and augment the testing and inspection facilities in SIRIM for providing technical support in testing, inspection, and measurement in the field of servicing to local small and medium scale enterprises.

This project for the promotion of industrial standardization and quality control is proposed from the above viewpoint.

2. Summary of Industrial Standardization System and Institutions in Malaysia

(1) Organization of SIRIM Standards Division

The organization in charge of standardization in Malaysia is SIRIM, which is under the jurisdiction of the Ministry of Science, Technology, and the Environment. SIRIM has the functions of a certification and standards formulating organization and plays a central role as a testing and inspection organization.

As of 1989, SIRIM's Standards Division was organized as shown in Fig. III. 5-16 and had a senior staff of 46. SIRIM reorganized in 1990 and the Standards Division is now organized as shown in Fig. III. 5-17. Details of the duties of the new units, the staff allocations, etc. are not known yet.

(2) Establishment of Malaysian Standards (MS Standards)

The MS standards were established as national standards under the Standardization Law enforced 1966. As of the end of 1989, there were 1520 standards established.

The MS standards are deliberated on by technical committees which comprised of government organizations, academic societies, commercial and industrial associations, and the consumer representatives, but the industry associations are still underdeveloped and therefore currently play only a small role in the process of formulation of standards. Further, the MS standards are often based on international standards and other leading foreign standards. Harmonization with international standards is becoming important.

(3) Certification System

There are two systems of marking for certification of products: [1] the Standard Mark System (certifying conformity with the MS standards) and [2] the Conformity Mark System (certifying conformity with foreign standards). The SIRIM mark used in the first of the two systems was changed to the MS mark in September 1989. There will be steps taken to change the Conformity Mark to be in line with the new MS Mark.

As systems for certification established for promotion of exports, there are, in addition to the above Conformity Mark System, the Assessment and Registration of Quality System (ARQS) and the Technical Services for Exporters Program (TEXPRO).

ARQS evaluates the quality management system of factories based on the ISO 9000 series. From its launching in 1988 to the present, it has assessed and registered 15 factories producing retreaded tires, auto parts, sheet glass, ICs, and food. TEXPRO offers to exporters services such as introduction and translation of the regulations and technical information of the importing countries and voluntary export inspections. It was just launched in May 1989 with a staff of two, however, and has not been sufficiently publicized, so cannot be said to be sufficiently used at the present. SIRIM was considering introducing a full-scale system of export inspection as a form of technical support for the new trade promotion organization expected to be established in 1990.

Certification systems other than the above include the SIRIM Laboratory Accreditation Scheme (SILAS), which assesses the capabilities of private sector testing and calibration organizations, and the Quality Improvement Practice (QIP), which improves the quality capabilities of small and medium scale enterprises. Both were launched in 1987.

(4) Testing, Inspection, and Measurement Systems

A precondition for judgement of the compliance with standards for the smooth implementation of a certification system is testing and inspection work. SIRIM functions as the central testing and inspection organization for this and does much every year in terms of services in the field of mechanical and electrical equipment.

At the present time, only the SIRIM headquarters in Shah Alam have testing and inspection facilities, but the need for testing and inspection services is rising in the five branches of the country along with industrialization. In particular, in Penang, Johore, and Ipoh (in which a sixth branch is scheduled to be established in 1990), it is desirable to improve and augment testing and inspection facilities for the industrial fields characterizing those regions (for example, the casting industry in Ipoh) so as to give technical support in the field of testing and inspection to the small and medium scale enterprises constituting the supporting industries.

On the other hand, the SIRIM Metrology Department serves as the managing organization under the Weights and Measures Act and engages in the maintenance and management of national standards and calibration services under the guidance of the Weights and Measures Department of the Ministry of Trade and Industry. The measuring equipment now on hand mostly was provided under technical cooperation from Japan (1981 to 1985) and is somewhat out dated. Further, the fields of measurement handled are limited. Therefore, there are requests for continued cooperation from Japan in the more advanced industrial measurement equipment required for private companies.

Further, the calibration service for measuring equipment is now offered only by the SIRIM headquarters, but is scheduled to be offered by the Penang branch as well in 1990. Together with the above-mentioned testing and inspection facilities, it will be necessary to establish and augment the infrastructure for calibration and measurements in the local SIRIM branches.

Fig. III 5-16 SIRIM Standards Division Organization Chart 1989

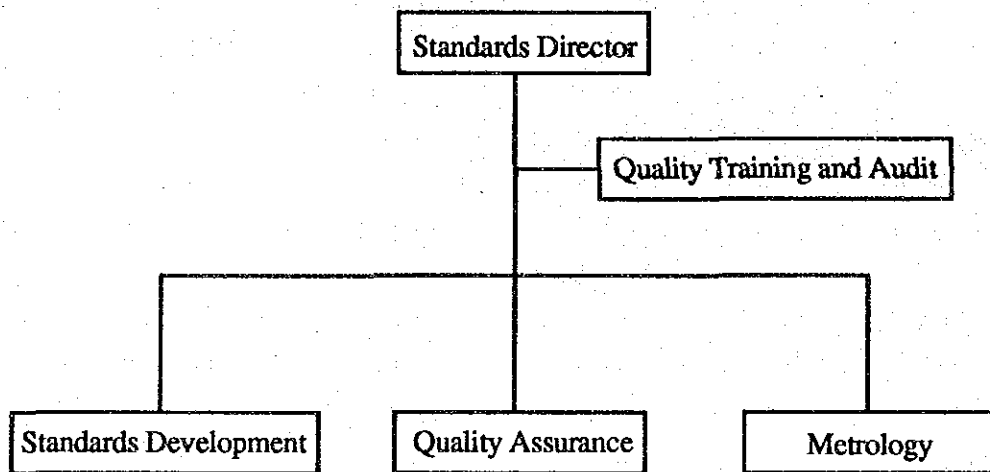
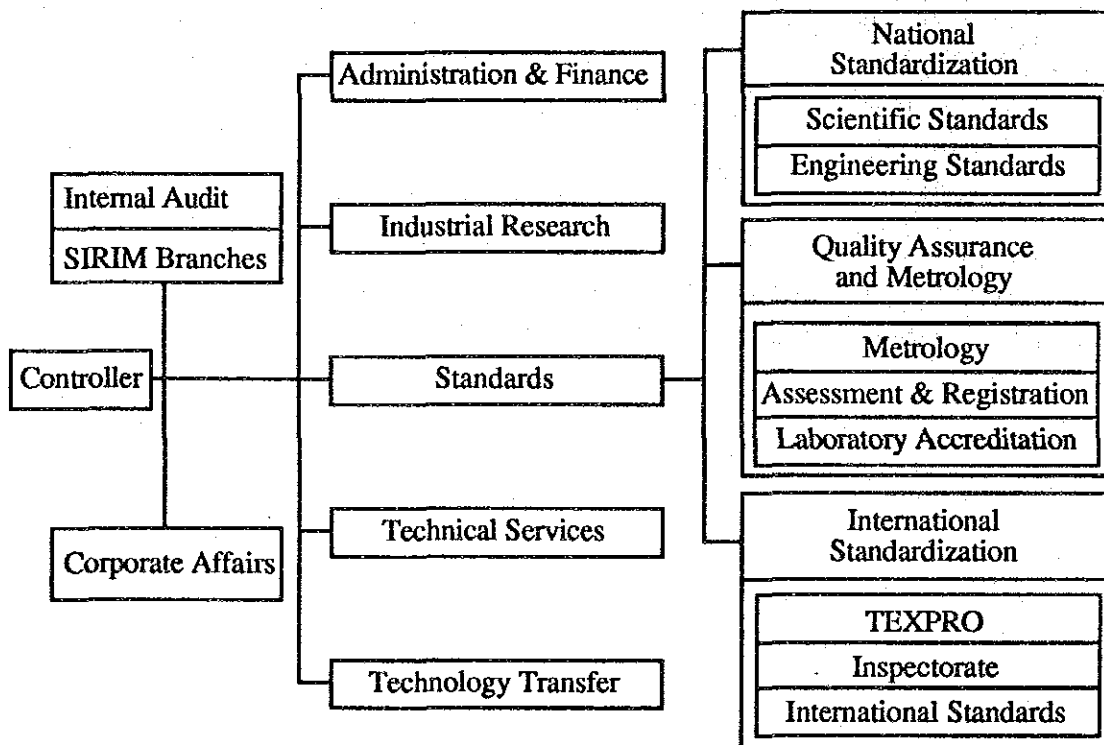


Fig. III 5-17 SIRIM Organization Chart 1990



3. Outline of the Proposed Project

(1) Implementation of Comprehensive Survey for Promotion of Industrial Standardization and Quality Control

1.) Objective of Survey

The objective of the survey is to prepare a master plan for the establishment and spread of an industrial standardization system for improving the quality of Malaysia's industrial products and thereby contributing to industrial development and export promotion.

2.) Main Items Surveyed

- [1] History and state of advancement of industrial standardization policies**
 - National standardization promotion organizations
 - Quality control promotion organizations
- [2] History of establishment of national standards**
 - State of standardization of product specifications
 - Standardization of measurement, evaluation, and analysis methods etc.
 - State of standardization of control methods
 - Existence of standards regarding manufacturing processes
- [3] National foundation for promotion of standardization and quality control**
 - Education in standardization and quality control
 - Promotion of standardization and quality control
- [4] Certification systems**
 - State of operation of certification systems
- [5] State of national system of measurement**
 - State of national observance of standards
 - Measurement and analysis organizations
 - Measurement related organizations
- [6] Assessment of quality manufacturing capabilities of domestic industry**
 - General
 - Quality manufacturing capabilities in key industries
 - Level of indigenous technology, control technology, and development capabilities (separately for foreign capital companies and domestic capital companies and for medium scale enterprises and small scale enterprises etc.)
- [7] Survey of individual companies**

3.) Composition of Survey Mission

(1) The members envisioned for the survey mission are experts in the following:

Team leader	1
Industrial development economy	1
Industrial development policy	1
Export promotion programme	1
Small and medium scale enterprises development	1
Company management	1
Systems and promotion activities	1
Standards and standard systems	1
Standard and certification systems	1
Quality control	1
Inspection system and institutional development	4

Total	14
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4.) Duration of the Survey

9-12 months

(2) Overseas training of SIRIM officers

1.) Officer in charge of:

- company standards	5 persons
- quality assurance	5 persons
- measurement	5 persons
- export inspection:	2 persons
Total	17 persons

2.) Training period 2-3 months each

4. Areas in which Assistance from Overseas is Anticipated

- (1) Implementation of a comprehensive survey by inviting experts from overseas
- (2) Dispatch of SIRIM staff for overseas training