

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
MINISTRY OF INDUSTRY, THE REPUBLIC OF INDONESIA

THE STUDY
ON
HUMAN RESOURCE DEVELOPMENT FOR SMALL-and
MEDIUM-sized ENTERPRISES (SMEs) FOCUSED ON
MANUFACTURING INDUSTRIES
IN
THE REPUBLIC OF INDONESIA
(PHASE 2)
FINAL REPORT

FEBURUARY 2008

JAPAN INTERNATIONAL COOPERATION AGENCY

UNICO INTERNATIONAL CORPORATION

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Preface

The Government of Japan, in response to the request by the Government of Indonesia, decided to conduct a development study relating to the formulation of a human resource development plan for SMEs in the country, and entrusted the undertaking of the development study to Japan International Cooperation Agency (JICA).

JICA organized a study team led by Mr. Toru MORIGUCHI of UNICO International Corporation and consisting of UNICO's staff members, which visited Indonesia for field surveys, totaling six times between September 2006 and January 2008.

The study team held extensive discussions with personnel of Indonesian government ministries and organizations, in addition to field surveys. It compiled this report as a result of documentation and other works conducted in Japan after the field surveys.

I sincerely hope that this report will contribute to promotion of SME-centric human resource development policy in Indonesia, and then to the furtherance of friendly relationships between the two countries.

Finally, I would like to express my deep appreciation to those who have provided cooperation and support for the study and its smooth implementation.

February 2008

Seiichi Nagatsuka

Vice President

Japan International Cooperation Agency

February 2008

Mr. Seiichi Nagatsuka,
Vice President
Japan International Cooperation Agency

Dear Mr. Nagatsuka,

Letter of Transmittal

We would like to respectfully submit this report upon completion of “The Study on Human Resource Development for Small-and Medium-sized Enterprises (SMEs) Focused on Manufacturing Industries in the Republic of Indonesia (Phase 2)”.

This study is the ramification of the technical cooperation project “The Study on Human Resource Development for Small-and Medium-sized Enterprises (SMEs) Focused on Manufacturing Industries in the Republic of Indonesia (Phase 1)” as well as ongoing relevant project for SME consultant (Shindan-shi). These projects have provided opportunity for the Ministry of Industry (MOI) to renew its awareness of importance of direct consulting for SMEs, leading to the startup of a SME diagnosis consultant training course in 2006. Based on the results of these technical cooperation projects and against a backdrop of decentralization in progress, the present study was carried out to develop a set of proposals for institutional and organizational buildups as well as programs for implementation of effective human resource development policy for SMEs by provincial governments.

The study was commenced with field surveys covering various industrial human resource development programs conducted by public and private organizations in East and West Java, together with interview surveys of SMEs that belong to supporting industries. Then, the study team conducted model programs featuring diagnosis and advisory services of SMEs, jointly with Shindan-shi of East and West Java who had completed the SME diagnosis consultant training course.

In the course of these surveys to examine the current state of the ongoing industrial human resource programs, the study team came to know the MOI’s new initiative to establish a special unit to provide direct consulting service by local government, called

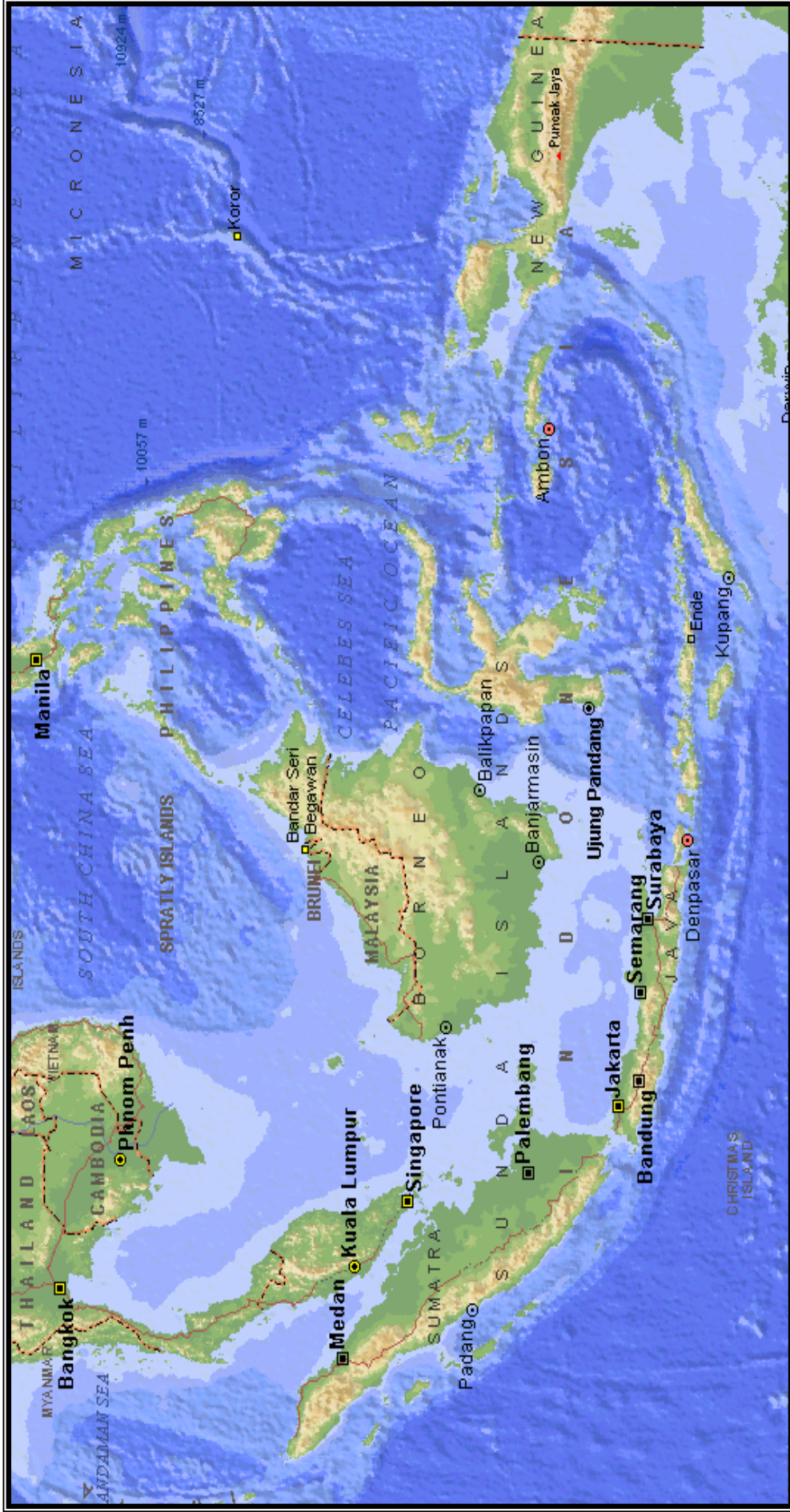
UPL-IKM. In parallel to the implementation of the model programs, the study team interviewed stakeholders relating to UPL-IKM and its activities and reviewed relevant reports and other documents. As a result, the study team concluded that the UPL-IKM initiative had an adequate objective and implementation scheme, while its implementation plan seemed to satisfy the needs of local SMEs. The study team has developed and proposed, therefore, action plans that focus on the enhancement of UPL-IKM and the continuation of its activities by capitalizing on the results of the current state surveys and lessons learned from the model programs.

We hope that UPL-IKM's organization and activity will be widely adopted and produce favorable results, thereby developing as core of industrial human resource development activity on a local level.

Finally, I would like to express my gratitude, on behalf of the study team, for broad support extended by Japan International Cooperation Agency, the Ministry of Foreign Affairs, the Ministry of Economy, Trade and Industry, and Japanese Embassy in Indonesia in the course of the present study. Also, I deeply thank personnel of the Indonesian counterpart and other relevant organizations, in particular the MOI, Industry and Commerce DINASs in East and West Java, and human resource development organizations in the public and private sectors, for extensive cooperation given to the study team.

Very truly yours,
UNICO International Corporation

Toru Moriguchi
Team Leader, the Study on Human Resource
Development for Small-and Medium-sized
Enterprises (SMEs) Focused on Manufacturing
Industries in the Republic of Indonesia (Phase 2)



Map of Indonesia

Abbreviations

AIMC	Association of Indonesian Management Consultants
AMDI	Astra Management Development Institute
APBD	Anggaran Pendapatan dan Belanja Daerah (Regional income and expenditure)
APBN	Anggaran Pendapatan dan Belanja Negara (National income and expenditure)
APP	Akademi Pimpinan Perusahaan (Leader academy of company)
ASPEP	Assosiasi Permesinan dan Pengerjaan Logam (Association of Metal Industry)
ASPILOW	Assosiasi Pengusaha Industri Logam Waru (Association of Metal Industry in Waru)
BALAI BESAR	National Research Center
BANK JATIM	Bank Jawa Timur (East Java Bank)
BAPPENAS	Badan Perencanaan dan Pembangunan Nasional (National Development and Planning Agency)
BARISTAND	Balai Riset dan Standarisasi (Research and standardization institution)
BDI	Balai Diklat Industri (Industrial Training Institute)
BDS	Bisnis Development Service (Business Development Service)
BDS-P	Bisnis Development Service Provider (Business Development Service Provider)
BNSP	Badan Nasional Sertifikasi dan Profesi (National profession certification agency)
BPPI	Balai Penelitian dan Pengembangan Industri (Agency for Research and Development of Industry and Trade of MOI)
BPR JATIM	Bank Perkreditan Rakyat Jawa Timur (Public bank in East Java Province)
BPTI	Balai Pelayanan Teknis Industri (Industrial technique service center)
BUMN	Badan Usaha Milik Negara (National Enterprises)
CAD	Computer Aided Design
CAM	Computer Aided Manufacturing
CEFE	Creation of Enterprises Formation of Entrepreneurs
DAKA PIM	Dakabalarea Pembinaan Industri Manufaktur (Manufacturing Development)
DANA BERGULIR	Name of revolving fund
DINAS	Industry and Trade Office of Provincial Government
DIP	Department of Industrial Promotion (Department of Industrial Promotion)
EI	Enterprises Improvement
EPA	Economic Partnership Agreement
GDP	Gross Domestic Product
GRDP	Gross Regional Domestic Product
GTZ	German Technical Cooperation/ Deutsche Gesellschaft fur Technische Zusammenarbeit
IDKM	Industri Dagang Kecil Menengah (Director General of Small and Medium Industry and Trade of MOI)
IETC	Indonesian Export Training Center
IKM	Industri Kecil Menengah (General Office of SME)
IMF	International Monetary Fund

ISO	International Standard Organization
ITB	Institut Teknologi Bandung (Bandung Technology University)
ITS	Institut Teknologi Surabaya (Surabaya Technology University)
IVC-S	Industry Value Chain Strength
JABODETABEK	Jakarta, Bogor, Depok, Tangerang, Bekasi
JICA	Japan International Cooperation Agency
JIT	Just in Time
KADIN	Kamar Dagang Indonesia (Indonesian Chamber of commerce and industry)
KIK	Kredit Industri Kecil (Small Industry Loan)
LDP	Lembaga Diklat Profesi (Professional training organization)
LPB	Lembaga Pengembangan Bisnis (Business development body)
LPB WARU	Lembaga Pengembangan Bisnis Waru (Waru business development body)
LPPM	Lembaga Pendidikan dan Pembinaan Manajemen (Management of business administration institution)
LPSM	Lembaga Pengembangan Sumber Daya Manusia (Human Development Institute under YPMG)
LPT-INDAK	Lembaga Pembinaan Terpadu Industri dan Dagang Kecil (Development institute of small industry and trade)
LSP	Lembaga Sertifikasi Profesi (Profession certification body)
MINISTRY OF BUMN	Kementerian Badan Usaha Milik Negara (Ministry of National Company)
MOI	Ministry of Industry
MONE	Ministry of National Education
MTAP	Medium Term Action Plan
NPO	Non Profit Organization
OEM	Original Equipment Manufacturing
PFPP	Pejabat Fungsional Penyuluh Perindustrian dan Perdagangan (Extension officer of industry and trade)
POLBAN	Politeknik Negeri Bandung (Politechnic in Bandung)
POLMAN	Politeknik Manufaktur Negeri Bandung (Politechnic in Manufacturing)
PPM	Pusat Pengembangan Manajemen (Center for Management Development)
PRASETYA	Business School Name (Name of Business School)
PROPENAS	Program Pembangunan Nasional (National Development Program)
PUSDIKLAT	Pusat Pendidikan dan Latihan Industri (Center for Education and Training)
PUSDIKLAT-IND	Pusat Pendidikan dan Latihan Industri (Center for Education and Training of Industry and Trade)
QS	Quality System
R/D	Research Development
RENSTRA	Rencana Strategis (Strategic Planning)
SENTRA	Center
SIAP	The Strategic Investment Action Plan
SKKNI	Standart Kompetensi Kerja Nasional Indonesia (National standard for profession competency)

SME	Small Medium Enterprise
SNI	Standart Nasional Indonesia (Indonesian Standard)
STMI	Sekolah Teknik Menengah Industri (Industrial Technical School of middle level)
TOR	Term of Reference
TS	Technical Specification
UKM	Usaha Kecil Menengah (Small and Medium Enterprises)
UPL	Unit Pelayanan Langsung (Direct Service Unit)
UPT	Unit Pelayanan Teknis (Common Service Facilities)
YBMB	Yayasan Bina Mitra Bakrie (BINA MITRA BAKRIE Foundation)
YDBA	Yayasan Dana Bhakti Astra (DHARMA BHAKTI ASTRA Foundation)
YPMG	Yayasan Pendidikan Matsushita Gobel (MATSUSHITA GOBEL Education Foundation)

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Chapter 1 An Overview of the Study

Chapter 1 Overview of the Study

1.1 Background of the Study

1.1.1 Indonesia after the Asian Financial Crisis

Indonesia was one of the countries hit hard by the Asian Financial Crisis that broke out in 1997 and suffered serious damages in terms of economy, industry and people's lives. In fact, the crisis went far beyond the economic turmoil to a national crisis and led to the collapse of the Suharto government in 1998, which had lasted for 32 years. The subsequent administrations – Wahid and Megawati – were unable to present a clear vision for sustainable economic recovery inside and outside of the country due to political instability. As a result, the country continued to face foreign currency outflow while other damaged Asian countries saw the recovery of foreign capital inflow, and it suffered sluggish investment and the rise in the unemployment rate.

Meanwhile, the Indonesian government established a national development plan, called PROPENAS (Program Pembangunan Nasional) 2000 – 2004, which was announced by BAPPENAS (Badan Perencanaan dan Pembangunan Nasional) in 2000 as a development policy outline. PROPENAS did not play a leading role in the actual policy implementation because the prospectus made in consultation with the IMF¹ took precedence. However, it was significant in that it listed the improvement of local government capacity as one of the policy frameworks to provide economic opportunities for the needy, which led to the enactment of the Local Government Act in 2001. At the same time, PROPENAS addressed the need for SME promotion, for which the “Mid-Term Action Program (MTAP)” was formulated in 2002. MTAP set forth capacity buildup for SME human resource development as a priority area.

After the inauguration of the Yudhoyono government in 2004, the Indonesian economy shows some signs of recovery, despite the damages inflicted by the major earthquake that occurred off the coast of Sumatra in December 2004. The country's latest economic indicators are presented at the beginning of this report.

In 2005, the Yudhoyono government announced the long-term national development plan for 2005 – 2025 and adopted the medium-term national development plan for 2004 –

1 International Monetary Fund

2009, which would succeed PROPENAS. Again, this plan emphasizes the need of the focused development in manufacturing industries, the strengthening of SMEs, and human resource development so that the country can build globally competitive national economy through the development of science and technology. Note that, under the Yudhoyono administration, the Ministry of Commerce and Industry (MOCI) was divided into the Ministry of Industry (MOI) and the Ministry of Commerce (MOC).

Based on the medium-term national development plan, ministries formulate strategies for specific policy agenda and sectors (Rencana Strategis, RENSTRA). For instance, MOI's RENSTRA, which was developed on the basis of the medium-term plan made by the Yudhoyono administration, sets forth the promotion of industrial human resource development and industrial consulting service to develop the business environment.

1.1.2 Japan's Assistance in SME Human Resource Development in Indonesia

(1) Recommendations, strategies, and action plan

Japan's ODA (official development aid) policy for Indonesia designates development support for the private sector as a strategic area, assuming it would contribute to sustainable economic development. In particular, strategic focus has been placed on the fostering of supporting industries, especially through human resource development for small manufacturers.

In July 2000, the Japanese government made a comprehensive policy recommendation entitled "Policy Recommendation for SME² Promotion in the Republic of Indonesia" (generally referred to as "Urata Report") to the Indonesia government.

The "Indonesia-Japan Private-Public Sectors Joint Investment Forum," which was founded to improve Indonesia's investment climate, established the "Industrial Competition and SME Working Group" in November 2004 to seek for possibilities in the area of economic cooperation, including promotion of supporting industries. It sets ten priority agenda to work with, which contains a series of strategies and policy recommendations for the improvement of industrial competitiveness and the fostering of specific industries. Among them is "strategy for development of supporting industries."

2 Small Medium Enterprise

The two governments share the mutual recognition that sustainable economic development fueled by investment is essential to poverty reduction and job creation. In 2005, they announced a new initiative to promote foreign investment in Indonesia, especially investment by Japanese companies, entitled “The Strategic Investment Action Plan (SIAP).” The SIAP addresses four areas, namely taxation and customs, labor force, infrastructure, and industrial competition and SME promotion. For the fourth area, the establishment of human resource development centers was proposed as a part of strategy to develop supporting industries.

In August 2007, the two countries signed the long-awaited Economic Partnership Agreement (EPA), which is scheduled to become effective in early 2008.

(2) Preliminary studies and technical assistance projects by Japan International Cooperation Agency (JICA)

JICA’s policy recommendations are roughly divided into financial and non-financial ones. Non-financial recommendations are centered on industrial human resource development as well as cluster approach. A major problem relating to SMEs in the Indonesian manufacturing sector, as often pointed out, is the shortage of human resources, especially those with management knowledge and the recognition of its importance. To promote the knowledge dissemination of management techniques and improved application of them, the establishment of the SME Human Resource Development Center that provides education and training for SME managers and consultants was proposed.

Based on the policy recommendation, the Indonesian government decided to set human resource development as a core of its national development policy under the recognition that the manufacturing industry assumes an important position in the context of economic recovery and industrial development after the financial crisis. Then the government requested cooperation and support to the Japanese government. In response, the following study and project were conducted in the field of human resource development.

1) SME human resource development planning study (“Phase I Study”) (2003 – 2004)

In Phase I Study, which was conducted jointly with IDKM³ of the then MOCI, the human resource development needs in the Indonesian manufacturing sector were assessed by focusing on the supply and demand gap in specific technologies and skills. The most significant gap identified by the study was found in management technology, or soft technology, in particular basic production management technology that is essential to improve a factory line. In fact, this had already been pointed out in “Policy Recommendations.” The study included workshops on soft technology for government employees and staff in government support organizations. In the final stage, the study proposed to establish a human resource development board under participation of the MOCI’s relevant departments, which would serve as the parent body for the “SME Human Resource Development Center.” The board was formally organized at the end of the study.

2) Technical assistance project

In parallel to Phase I Study, a technical assistance project was also launched with IDKM being the counterpart in order to establish the SME consultant certification system. It started in 2003 under the leadership of resident experts, whose activities have been inherited in a three-year technical assistance project consisting of: a) establishment of the SME Human Resource Development Center; b) support for the Human Resource Development Board; and c) holding of SME consultant training courses. The project still continues. The first SME consultant training course was held in 2006 and the second in 2007.

Thus, the MOI’s activities relating to industrial human resource development are in line with “Policy Recommendations” as well as recommendations by the joint investment forum and SIAP’s strategy.

1.1.3 Positioning of the Study

The action plans proposed in the final report of Phase I Study include local deployment of SME support activities as one of the approaches to promote transition from the Human Resource Development Board to the SME Human Resource Development Center. In particular, the plan designed to use persons certified under the SME consultant system, which was launched under the technical assistance projects, for the

3 Industri Dagang Kecil Menengah

purpose of improving competitiveness of local SMEs. On the Indonesian side, the next to do is to build a mechanism for continuous SME support activities led by the certified consultants on a local basis.

Meanwhile, Indonesia has been actively pursuing the decentralization process since 2001 and each local government is in a position to plan and implement local industry development programs under its leadership. In reality, however, sometime local governments are facing various problems and constraints and have still to implement effective policies and programs relating to SME human resource development. For effective program implementation, it is important to improve capacities of the Industry and Trade Office (hereinafter referred to as “DINAS”) of provincial governments.

Under these circumstances, the Indonesian government made a formal request to the Japanese government for support relating to the implementation of effective SME human resource development policies which also take into account the decentralization process.

Figure 1-1 summarizes the background and positioning of the present study (the Study) in relation to the preliminary study and projects. As shown in the right column, participated in the workshops conducted as a part of the preliminary study and the SME consultant training courses which is currently underway, were staff in the central and local (provincial, prefectural/municipal) governments. Orange arrows shows the plan that the participants in the training courses start SME support activities at their respective organizations.

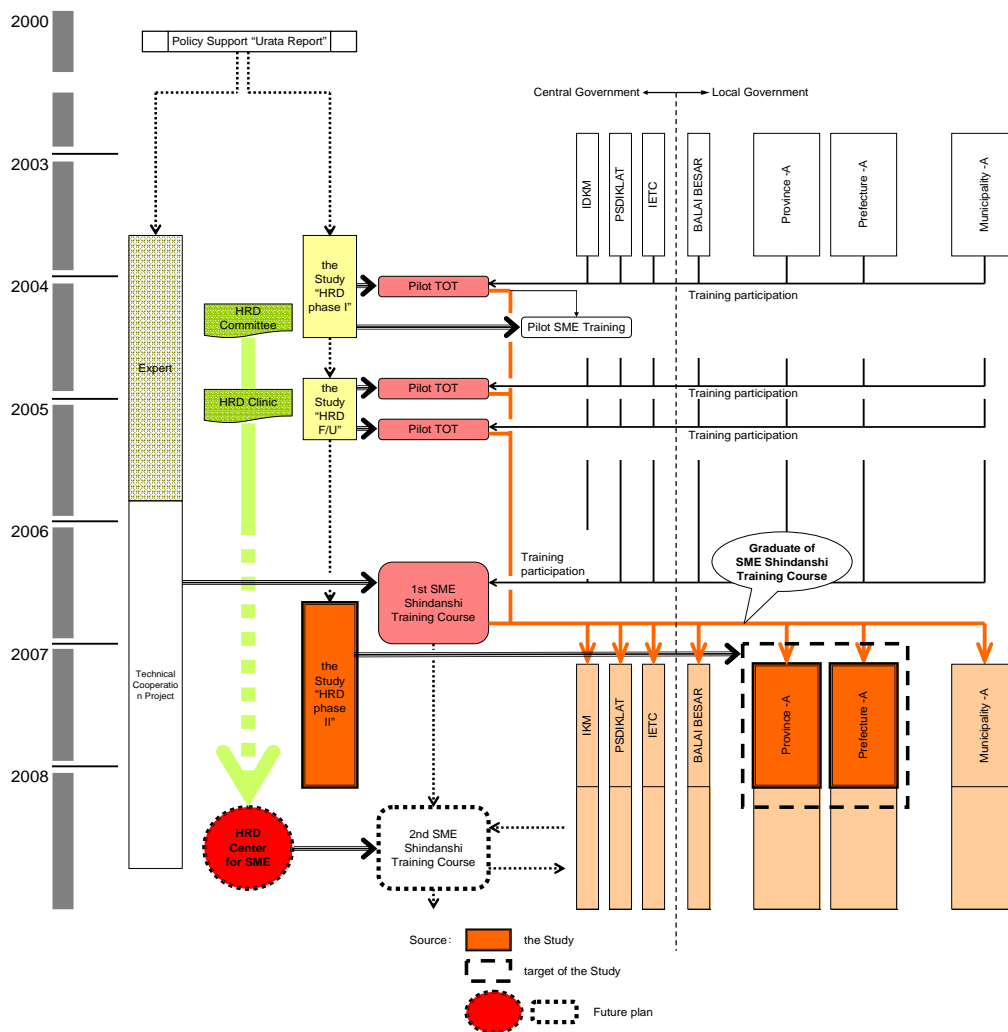


Figure 1-1 Relationship between the Proceeding Study/ Projects and this Study

1.2 Objective of the Study

<Overall Goal>

Strengthening the human resource development system for SMEs in the Republic of Indonesia.

<Project Purpose>

The study aims at conducting fact-finding surveys concerning human resource development policies for SMEs with MOI and provincial governments in the Republic of Indonesia being the objects, and recommending concrete policies and/or an organization system to them so that provincial governments can implement effective human resource development programs both under their own leadership and in collaboration with MOI in the era of decentralization.

<Output>

- To grasp the current situation and problems at sub-national levels concerning human resource development of SMEs
- To define the roles of MOI and DINASs for effective human resource development of SMEs
- To propose human resource development programs for SMEs which provincial DINASs provide

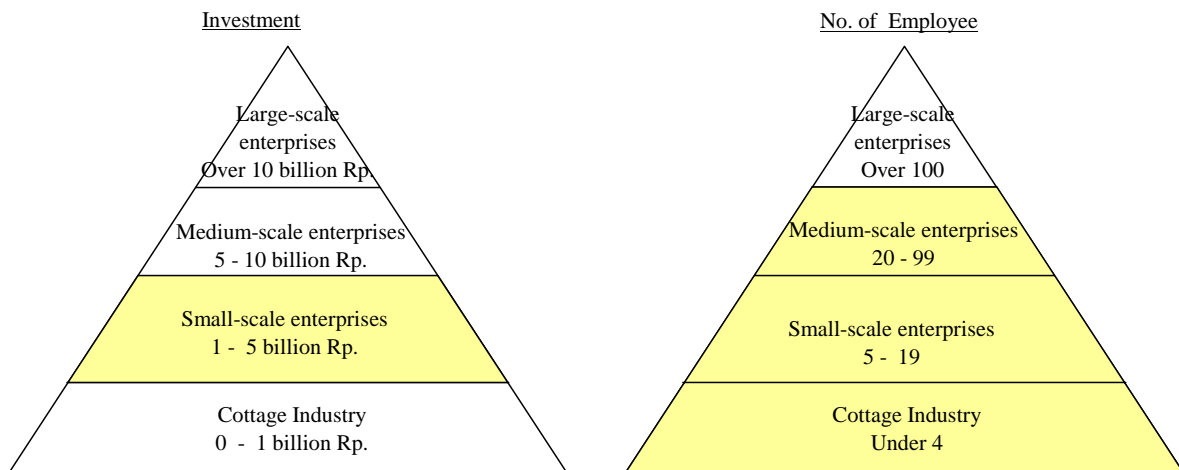
More concretely, the Study aims to propose a scheme to promote human resource development programs for the industrial sector at sub-national levels in concert with the progress of SME Diagnosis Consultant training courses in the Technical Corporation Project and the following establishment of human resource development center for SMEs.

1.3 Target Sector and Enterprises of the Study

The Study targets the parts industry in the manufacturing sector, which forms supporting industries for assemblers. The study team particularly focuses on SMEs⁴ or 2nd and 3rd tier suppliers of parts/components, which have the potential to become a stable parts/components supplier but have not become so due to the lack of opportunity to receive training programs by assemblers.

MOI classifies the scales of enterprises based on the amount of investment (excluding land and buildings) and the number of employees (Figure 1-2). Therefore, the main target group of the Study is the enterprises which have invested between 1 billion and 10 billion Rp or those with less than 100 employees.

4 The definition of a SME in Indonesia is a company whose investment except for land and buildings is under 10 billion Rp. or one whose number of employees is under 100.



Source: MOI and BPS

Figure 1-2 Target Group of the Study

1.4 Scope of the Study

The Study covers the central government and provincial governments in Indonesia. Concerning the former, the study team focuses on the Ministry of Industry (MOI). Concerning the latter, the targets are provincial DINASs in East Java and West Java. The study team picks the two provinces because targeted enterprises concentrate in them.

1.5 Study Framework

Below is the chart showing the Study's basic flow. Three stages form the Study.

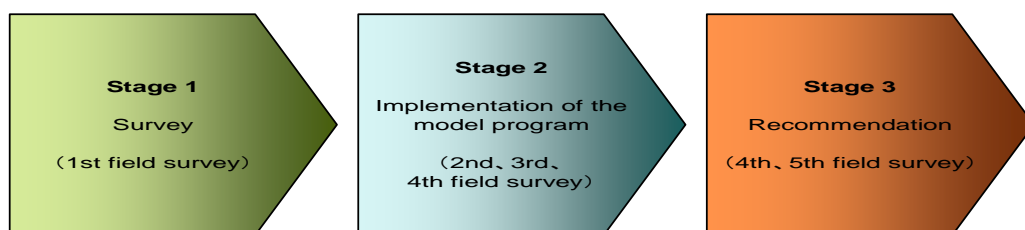


Figure 1-3 Basic Flow of the Study

Stage 1: Study of the current situation

The study team collects and analyzes relevant information with reference to the existing study and recommendation. Then, the team visits the government organizations concerned (central and local) and SMEs in order to grasp the current situation concerning human resource development of SMEs.

Stage 2: Implementation of model program(s)

Based on the study results at stage 1, the study team conducts model programs in East and West Java with the provincial DINASs being the counterpart.

Stage 3: Formulation of recommendation

Reflecting the findings and results of the model programs, the study team formulates final recommendation consisting of a list of action plans.

1.6 Work Description of Study Team Members

Table 1-1 shows the members of the study team and the areas in charge, and Figure 1-4 shows the organization chart of the study team.

Table 1-1 Formation and Business for Which One is Responsible of Study Team

Specialties	Name	Areas in Charge
Leader / Small-and medium-sized enterprises promotion policies	T. Moriguchi	Supervision of the Study, and SME development
Sub-leader / Supporting industry promotion policies / Local administration	H. Imaizumi	Support of the supervisor, and Promotion of supporting industry, Local administration
Small-and medium-sized enterprise human resource development	Y. Izuhō	Human Development Policy and System of SME
Small-and medium-sized enterprise management	O. Fukaya	Implementation / management of the model program
Production management	T. Seki	Implementation / management of the model program

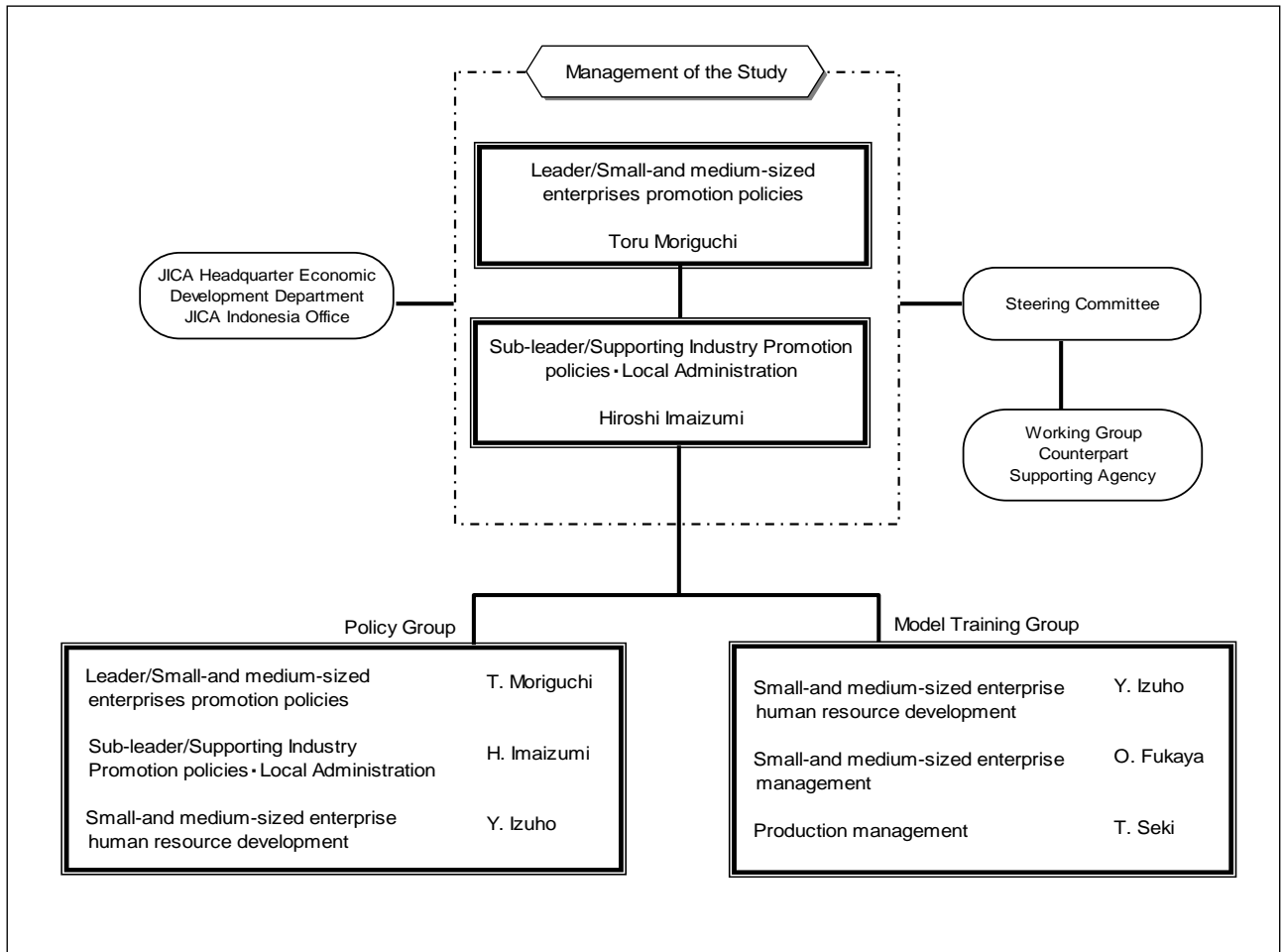


Figure 1-4 Organization Chart of the Study Team

1.7 Field Work Schedule

Table 1-2 shows the field works conducted during the Study.

Table 1-2 Field Study Schedule and Activities

Field Study		Main Activities of the Study Team
First Field Work (I)	September 17 to October 8, 2006	Fact-finding survey (IKM of MOI, Provincial government organizations for SME promotion in East and West Java)
First Field Work (II)	January 24 to February 26, 2007	Fact-finding survey in East and West Java (SMEs), Model Program Planning
Second Field Work	May 13 to July 19, 2007	Model Programs, Supplementary field study
Third Field Work	August 1 to September 18, 2007	Model Programs, Supplementary field study
Fourth Field Work	November 11 to December 24, 2007	Model Programs, Supplementary field study, Recommendation formulation
Fifth Field Work	January 20 to January 28, 2008	Final workshop, Collections of reactions to the recommendation

1.8 Workshops

Table 1-3 shows the workshops conducted during the field survey period.

Table 1-3 Workshops during the Survey Period

Title	Month/ year held	Place	Participants	Instructors/leaders	Subject
Introduction of the SME human resource development study	Jan-07	Jakarta	Central and local governments in Indonesia, trade associations, and private companies in the manufacturing sector	Study team, IKM, East Java provincial DINAS, West Java provincial DINAS	Publication of the purpose of the study
PR of the model programs and progress report	Aug-07	Bandung	Central and local governments in Indonesia, trade associations, and private companies in the manufacturing sector	Study team, SME consultants ⁵ , West Java provincial DINAS	Public relations on SME consultant system and UPL-IKM, progress report of the model program
Progress Report on the model programs	Aug-07	Surabaya	Central and local governments in Indonesia, trade associations, and private companies in the manufacturing sector	Study team, SME consultants, East Java provincial DINAS	Public relations on SME consultant system and UPL-IKM, progress report of the model program
Training relating to jigs and tools	Sep-07	Bandung	SMEs in West Java	Study team	Jig design
Report on the model programs	Dec-07	Bandung	Central and local governments in Indonesia, trade associations, and private companies in the manufacturing sector	Study team, SME consultants, West Java provincial DINAS, companies participating in a model program	Overall evaluation of the model programs
Report on the model programs	Dec-07	Surabaya	Central and local governments in Indonesia, trade associations, and private companies in the manufacturing sector	Study team, SME consultants, East Java provincial DINAS, companies participating in a model program	Overall evaluation of the model programs
Final report on the Study results	Jan-08	Jakarta	Central and local governments in Indonesia, trade associations, and private companies in the manufacturing sector	Study team, IKM, East Java provincial DINAS, West Java provincial DINAS	Final report on the Study

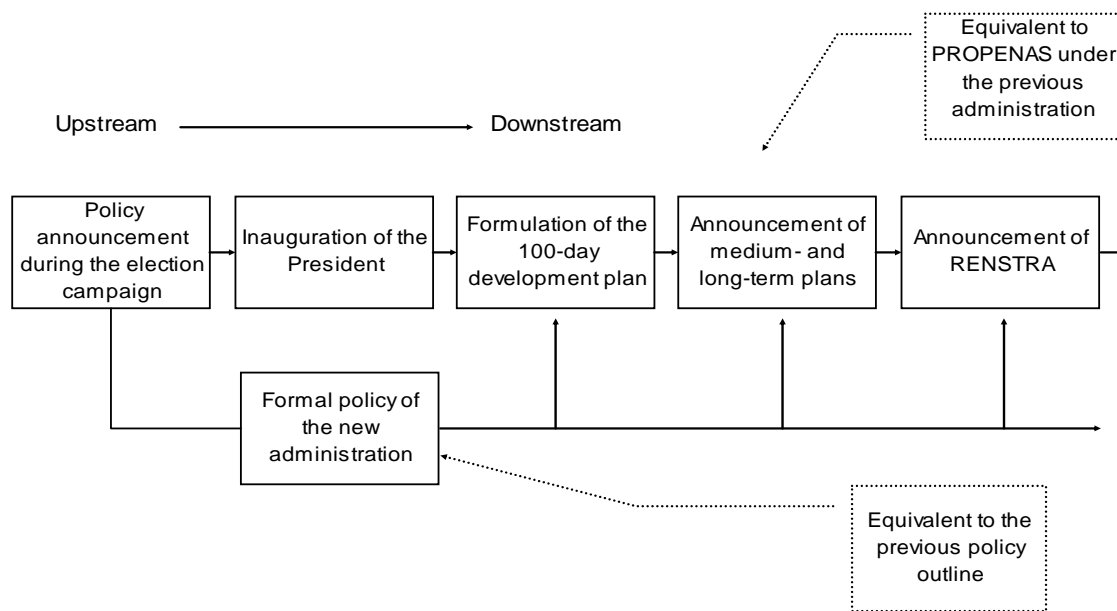
⁵ SME consultants here refer to the participants who completed the first “SME diagnosis consultant training course.”

Chapter 2 National Development Plan and SMEs Promotion Policy in Indonesia

Chapter 2 National Development Plan and SMEs Promotion Policy in Indonesia

2.1 The National Development Plan and Its Positioning

A national development plan in Indonesia follows a development guideline announced during the presidential election campaign, called the Presidential Message, based on which national development projects, strategies and other plans are formulated. Figure 2-1 illustrates the structural relationship among development projects, policies and strategies.



Source: JICA Study Team

Figure 2-1 Positioning of National Development Plan in Indonesia

2.2 100-day Development Plan

Soon after inauguration, the President Yudhoyono directed ministries to develop and implement a “100-day development plan on each policy agenda shown in the government’s policy guideline, for the purpose of demonstrating both its firm commitment to national development and the ability to execute quickly. MOI quickly announced and implemented its own 100-day development plan in 2005, as outlined below.

2.2.1 Industry groups covered by MOI's 100-day development plan

The 100-day development plan by MOI focuses on the following two industry groups.

- Industries that can absorb large labor
- Industries that are highly competitive in the export market

2.2.2 Outcomes expected from MOI's 100-day development plan

MOI expects the following three outcomes by implementing the 100-day development plan.

- Job creation and decrease in unemployment
- Vitalization of market competition
- Fostering of new industry sectors

2.2.3 SME Promotion in MOI's 100-day development plan

The number of small enterprises (SEs) and microenterprises (MEs) in the country has been growing at an annual average rate of 11.2% since 1998, reaching 3 million units. However, their contribution to the industrial sector measured by GDP share is only 8%. This seems to be closely associated with the constraints in the following two factors.

- 1) Market access
- 2) Financial access

To overcome the above obstacles, the following measures need to be taken.

- Introduction of credit service requiring no security
- Optimized utilization of funds obtained from financial institutions and state enterprises
- Optimization of credit guarantee institutions for SMEs
- Establishment of Trading House Indonesia to encourage exports of SMEs' industrial products in cooperation with the private sector and trade-related state enterprises
- Development of supporting industries as well as SMEs which serve as the driving force of local economy
- Improvement of linkages with large enterprises and multinationals in assembly industry, food industry, and other industries with a large market

2.3 Medium-term and Long-term National Development Plans

2.3.1 Medium-term national development plan (2004 – 2009)

Based on the President guideline that constitutes the most upper stream of national planning, Mid-Term Development Program 2004- 2009 (Government Regulation No.7/2005) was formulated and enacted on January 26, 2005. The program serve as the official national development guideline for the next five years (up to the end of the President's first term of office), and thus it also does as the most upper stream program of the mid-term SME promotion policies. In the last administration, PROPENAS was equivalent to the program.

The program sets three objectives with quantitative and qualitative goals, namely improvement of economic environment, increase in economic production, and expansion of purchase power of the population. It assumes that the country can achieve the goals by building adequate infrastructures, revitalizing the local economy, focusing on the agriculture and manufacturing sectors, strengthening SMEs, and securing legal certainty for business activities.

The target figures of major economic indicators are shown below (Table 2-1).

Table 2-1 Numerical Goals in the Mid-Term Development Strategy

Goals at the Mid-Term Development Plan (2004 - 2009)

Unit: %

Indicators	Actual				Estimate	Target figure				
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Real Economic Growth (GDP at 2000 price)	4.9	3.8	4.3	4.5	5.0	5.5	6.1	6.7	7.2	7.6
Consumption	2.0	3.9	4.7	4.5	5.5	4.7	6.0	5.7	6.1	6.3
Private sector	1.6	3.5	3.8	3.9	6.0	5.0	5.0	5.1	5.4	5.6
Public sector	6.5	7.6	13.0	10.0	6.7	2.6	13.9	9.9	11.2	10.9
Investment	16.7	6.5	2.2	1.9	11.7	13.6	14.8	15.0	14.3	13.1
Export	26.5	0.6	-1.0	6.6	11.4	6.8	7.2	9.3	10.4	12.0
Import	25.9	4.2	-4.0	2.8	24.2	11.8	10.2	11.8	12.1	12.4
Manufacturing Industry	6.0	3.3	5.9	5.0	5.5	5.9	6.9	7.8	8.6	9.5
Unemployment against T.workforce	6.1	8.1	9.1	9.5	9.7	9.5	8.9	7.9	6.6	5.1
Inflation (CPI)	9.4	12.5	10.0	5.1	6.0	7.0	5.5	5.0	4.0	3.0
Real exchange rate	6.8	11.0	-15.5	-10.9	0.1	-4.5	-4.3	-2.8	-2.9	-0.9

Source: BAPPENAS : RENCANA PEMBANGUNAN JANGKA MENENGAH(PJM) 2005- 2009, BAB34

2.3.2 Long-term national development plan (2005 – 2025)

The Indonesian government drafted a long-term national development plan for 2005 – 2025 period in March 2005, which shows future visions and expectations, including the safe and peaceful country, the stable economy, and the environment-friendly society. The following summarizes the plan.

(1) Vision

Self-growing, independent, and fair Indonesia

(2) Seven missions to realize the visions

- 1) “To realize competitiveness” means to strengthen the national economy based on each region’s characteristics. The country strives to attain it by building linkages of nationwide production and distribution system/service; by giving priority to human resource development to produce quality and competitive workforce; by developing and utilizing science and technology; by developing infrastructures; and by reforming the legal system and government organizations. The ultimate goal is to gain competitiveness.
- 2) “To realize democratic Indonesia based on law” means to build a more sound and matured democratic organizations; to reinforce the role of ordinary citizens; to improve the quality of local administration; to develop mass media to communicate information relating to the public interests while guaranteeing freedom of press; to improve the legal structure; and to establish a fair legal system that weighs citizens’ interests.
- 3) “To realize safe, peaceful and unified Indonesia” means to reinforce the armed forces with the minimum required power to show the presence in the regional and international community; to improve the national police in terms of professionalism and ability to protect people, prevent crimes and solve them effectively; to build the ability of the intelligence organization to ensure national security; to secure defense-related parts; and to raise the level of contribution by the domestic defense industry to the national defense system.

- 4) “To realize more uniform and equal development” means to improve rural development; to reduce social inequality by favoring marginalized population and regions to fight against poverty; to secure equal access to social services and economic infrastructures; and to eliminate discrimination in various aspects, including gender.
 - 5) “To realize beautiful Indonesia” means to promote harmonized spatial use for housing, social and economic activities and promote energy saving; to utilize natural resources and environment on a sustainable basis; to manage natural resources and environment to support quality of life and provide aesthetics and comfort for daily life; to protect the functionality of the environment as the basic development capital through the maintenance and utilization of biodiversity; and to improve development management for comfortable life at present and in future through balancing the use and maintenance of natural resources and environment.
 - 6) “To realize the moral, ethical and cultural society” means to reinforce the identity and character of the population based on the faith in but one God; to enforce the compliance with laws; to maintain harmony between different religions; to develop social capital; to incorporate traditional values; and to take pride in building the basis of spiritual, moral and ethical development.
 - 7) “To realize Indonesia that assumes an affirmative role in the international stage” means to improve diplomatic skills to win the national interest; to continue the commitment to international/regional integration and identity building; and to promote bilateral and interregional collaboration as well as cooperation between people in different countries and between organizations in various fields.
- (3) Direction of SME development in the framework of the long-term development plan (2005 – 2025)

SMEs have the potential to play an important role to the economic development. To fulfill the role, they have to develop to the level at which they can provide services and goods needed by the population by winning against imports in the domestic market. SME development policy focuses on the following.

- Creation of the sound business environment by the government, and improvement of SME's adaptability to the market demands
- Capacity building through the utilization of available technologies and innovations, and strengthening of the business base
- Improvement in productivity

The government is to take an integrated approach for SME promotion through the fostering of industrial clusters, the streamlining of technology transfer, and human resource development.

2.4 SMEs Development Strategy

Upon the publication of Medium-Term Development Plan 2004-2009, each Ministry in the central government formulated a more concrete (issue-based and sector-based) development strategy, RENSTRA 2004-2009. This section outlines the SME development strategy in the RENSTRA by MOI.

2.4.1 Issues to tackle for industrial development under RENSTRA

Major issues to tackle are;

- High unemployment rate and poverty
- Low economic growth
- Insufficient competitiveness in the global market
- Weak infrastructural base
- Low technological levels

2.4.2 Two pillars of RENSTRA

- (1) **【Basic strategy】**
 - (a) Reinforcement of industrial networks among supporting industries, infrastructure/utilities industries, and other related industries
 - (b) Reinforcement of industrial productivity, efficiency and diversity, and utilization of recyclable resources
 - (c) Securing the resources to implement relevant policies

(2) **【Implementation strategy】**

(a) Industrial promotion through cluster development and identification of priority industry groups

- Priority industries in the transportation equipment sector: Automobiles and shipbuilding
- Priority industries in the ICT sector: Computer hard-wares and soft-wares, and communications equipment
- Priority industries in the parts industry and the capital goods industry: Electrical machinery and equipment, and agricultural machinery and equipment

(b) Priority development of the islands except Java, especially lagging areas in the east region

(c) Development of the business environment

- Promotion of human resource development for the industries in the technology and business management fields
- Promotion of industrial experiments, and Research and Development (R&D) services
- Promotion of industrial consulting service
- Reinforcement of infrastructure development in the regions with high potential for industrial development

(d) Reforms and capacity building in management to promote industrial R&D and technological development

2.4.3 Goals for industrial development

Long-term development goals as well as mid-term ones based on the RENSTRA are summarized below.

<p style="text-align: center;"><u>Mid-term (2005 – 2009) goals</u></p> <ol style="list-style-type: none"> 1. Industries that can create a large number of jobs to be developed 2. Programs for industrial revitalization, consolidation and reconstruction to be effectively executed 3. Domestic markets to be optimized so that local parts industry and industries processing natural resources can develop 4. Competitiveness of export-oriented industries to be strengthened 5. Industrial sectors that are a potential driving force of the development to be raised 6. Infant industries to be fostered. In particular, accelerated growth of semi-developed industries (three times the pace of development of infant industries) 	<p style="text-align: center;"><u>Expected performance</u></p> <ol style="list-style-type: none"> 1. Amelioration of the unemployment problem in the industrial sector 2. Recovery of the industries hit hard by the economic crisis 3. Increase in local procurement, especially in terms of raw materials and parts 4. Increase in export 5. Building of future industrial pillars 6. Reinforcement of the industrial structure
<p style="text-align: center;"><u>Long-term (2010 – 2020) goals</u></p> <ol style="list-style-type: none"> 1. Manufacturing base to be bolstered so that world-class industries can be born 2. Industrial sector to be strengthened as a major driving force for economic growth 3. SMEs to be developed to contribute more to GDP 	<p style="text-align: center;"><u>Expected performance</u></p> <ol style="list-style-type: none"> 1. Indonesia to be recognized as a newly industrialized country which demonstrates innovative industrial concepts

2.4.4 Development concept in RENSTRA for the nurturing of manufacturing sector in general and relevant sectors in the Study

The development of manufacturing sector is the center of implementation strategy in RENSTRA. The following is the concepts for the development of prioritized sub-sectors in RENSTRA.

(1) Strengthening of backbone industries

Industry groups that form the backbone of the manufacturing industry have a potential to increase the value added in the national economy. They need to be supported from the viewpoint of improving national welfare. It is critical to eliminate impediments for their upgrading their own capabilities in the technology and R&D fields.

(2) Direction of manufacturing base strengthening

To strengthen the manufacturing base, the government supports the following areas:

- Restructuring, and strengthening of competitiveness
- Increase in investment
- Strengthening and multi-layering of the industrial structure
- Augmentation in production capacity

(3) Priority sectors for strengthening competitiveness of the manufacturing base

- Sectors to meet local demand: Household appliances, textile and garment, footwear, ceramics and porcelain
- Parts and capital goods sectors: Electrical machinery and equipment, machine tools, factory equipment, agricultural machinery

(4) Framework for industrial promotion concerning the targeting priority sectors which are related to the Study

Below is the general framework to promote targeting priority sectors which are related to the Study (household appliances, electrical machinery and equipment, machine tools, factory equipment, automobile industries).

[Household Appliance Industry]

Supporting industries: Glass, chemical, cable, plastics, paint, parts, rubber	Related industries: Office supply, household goods, entertainment
Mid-term (2005 – 2009) goals	Long-term (2010 – 2020) goals
<ol style="list-style-type: none"> 1. Total investment of US\$2.5 billion, including development of supporting industries 2. Increase in export value from \$2.3 billion to \$5.5 billion 3. Creation of 150,000 jobs 	<ol style="list-style-type: none"> 1. Local supporting industries become the backbone of the household appliance industry. 2. Investment of \$4.5 billion, export of \$9.5 billion, and creation of 300,000 jobs 3. Development of world as well as local brands
Strategy	
Sector: Promotion of supporting/parts industries; improvement of investment in the household appliance industry; and protection of the domestic market	
Technology: Improvement of technology integration capability through assistance of multinationals; and improvement of the local R&D bases	
<u>Mid-term action plan (2005 – 2009)</u>	<u>Long-term action plan (2010 – 2020)</u>
<ol style="list-style-type: none"> 1. Building of local household appliance, parts, and supporting industries through collaboration with principal/multinationals 2. Introduction of SNI (standard) and technical regulation for protection of industry and domestic market 3. Promotion of the establishment of the electrical industry center 4. Building of the household appliance industry in Indonesia as a major world production base 5. Give Incentives to industries to promote technology transfer, research and development, and local brand production 	<ol style="list-style-type: none"> 1. The local parts industry becomes a major sector to support self-sufficient operation of the local household appliance industry. 2. Emergency of the local household appliance industry capable of supplying locally designed products to the export market
Support elements	
<u>Technology upgrading steps</u>	<u>Human resources</u>
<ol style="list-style-type: none"> 1. Introduction period (2005 – 2009): Licensing 2. Rapid development period (2011 – 2015): Technological upgrading and integration 3. Maturing period (2016 – 2020): Industrial upgrading 	<ul style="list-style-type: none"> • Human resource training and improvement of design capability for ISO 9000
<u>Market</u>	<u>Infrastructure</u>
<ol style="list-style-type: none"> 1. Building of international market network 2. Brand development 	<ol style="list-style-type: none"> 1. Promotion of investment in industrial estates 2. Tax incentive for investment in industrial estates

Source: RENSTRA

[Electrical machinery and Equipment industry]

Supporting industries: Machinery industry, engineering support, steel plates, pipes, boilers, pressure vessels, heat exchangers, molding	Related industries: Electrical machinery and equipment parts, cable industry, factories, thermal/combined cycle power generation, power transmission and distribution networks, EPC service, power plants
<p style="text-align: center;"><u>Mid-term (2005 – 2009) goals</u></p> <ol style="list-style-type: none"> 1. Increase in local content relating to power generation 2. Increase in electrical machinery and equipment exports 	<p style="text-align: center;"><u>Long-term (2010 – 2020) goals</u></p> <ol style="list-style-type: none"> 1. Establishment of technical capability to build power plants by using local design and engineering resources 2. Increase in use of local electrical machinery and equipment for construction of 30MW or smaller power plants
<p>Strategy</p> <p>Sector: Improvement of quality of electrical machinery and equipment</p> <p>Technology: Improvement of machine design and engineering capabilities</p>	
<p style="text-align: center;"><u>Mid-term action plan (2005 – 2009)</u></p> <ol style="list-style-type: none"> 1. Increase in use of local electrical machinery and equipment for construction of 50MW or smaller power plants 2. Formulation of technical standards for 30MW or smaller power generation, electrical machinery and parts 3. Building of parts supply and supporting industries for electrical machinery and equipment 	<p style="text-align: center;"><u>Long-term action plan (2010 – 2020)</u></p> <p>Strict enforcement of technical standards</p>
<p>Support elements</p>	
<p><u>Technology upgrading steps</u></p> <ol style="list-style-type: none"> 1. Introduction period (2005 – 2008): Licensing 2. Rapid development period (2011 – 2015): Upgrading and integration of production technologies 3. Maturing period (2016 – 2020): Industry upgrading <p><u>Market</u></p> <ul style="list-style-type: none"> • Development of electrical machinery and equipment export markets (ASEAN, Middle East, Africa) 	<p><u>Human resources</u></p> <ul style="list-style-type: none"> • Upgrading of skills in the production technology field <p><u>Infrastructure</u></p> <ul style="list-style-type: none"> • Incentive for use of locally manufactured electrical machinery and equipment for local power generation and distribution projects

Source: RENSTRA

[Production equipment / machine tool industry]

Supporting industries: Steel plates, design, pipes and tubes, welding rods, production equipment and parts	Related industries: Production facilities and equipment, thermal power generation, combined cycle power generation ; EPC
<u>Mid-term (2005 – 2009) goal</u>	<u>Long-term (2010 – 2020) goals</u>
<ol style="list-style-type: none"> 1. Rise in capacity utilization rate of production equipment industry, at least 75% 2. Promotion of R&D on local production technology 3. Shift of local EPC contractor' s role from subcontractor to principal contractor 4. Augmentation of machine tool related investment 	<ol style="list-style-type: none"> 1. The industry becomes capable of manufacturing a variety of production equipment and machine tools according to a wide range of specifications. 2. Improvement of export capacity
<p>Strategy</p> <p>Sector: To make oil & gas, energy, mining and infrastructure development as the basis of promoting the local production equipment industry.</p> <p>Technology: Improvement of design and engineering capabilities relating to production equipment and licensing from foreign companies</p>	
<u>Mid-term action plan (2005 – 2009)</u>	<u>Long-term action plan (2010 – 2020)</u>
<ol style="list-style-type: none"> 1. Cooperation with foreign companies for promotion of industries manufacturing production equipment and parts, and machine tools 2. Upgrading of R&D centers relating to production equipment design and engineering 3. Development and introduction of SNI for production equipment for the purpose of protecting the local market 4. Indication of industrial investment locations in the entire country 	<ol style="list-style-type: none"> 1. The industry becomes capable of manufacturing a wide range of production equipment required by the manufacturing sector. 2. Use of collaboration initiatives with foreign companies for increase in market access
Support elements	
<p><u>Technology upgrading steps</u></p> <ol style="list-style-type: none"> 1. Introduction period (2005 – 2008): Licensing from foreign companies 2. Rapid development period (2011 – 2015): Modification and integration of production technologies 3. Maturity period (2016 – 2020): Industry upgrading <p><u>Market</u></p> <ul style="list-style-type: none"> • Strengthening of promotion to Asia and Africa within the framework of non-block, South/South cooperation 	<p><u>Hunan resources</u></p> <ul style="list-style-type: none"> • Upgrading of skills in the manufacturing field <p><u>Infrastructure</u></p> <ul style="list-style-type: none"> • Promotion of incentive for factories and supporting industries that conduct R&D activities

Source: RENSTRA

[Automobile industry]

<p>Supporting industries: Engines and parts, transmissions and parts, suspensions, car bodies and parts, universal components, iron and steel, glass, plastics parts, accessories, rubber, and carburetors</p>	<p>Related industries:</p> <ul style="list-style-type: none"> • Maintenance and repair service • Sales and dealer service • Transportation service
<p style="text-align: center;"><u>Mid-term (2005 – 2009) goals</u></p> <ol style="list-style-type: none"> 1. Production of motor vehicles, totaling 4,750,000 units per year to meet 90% of local demand, with annual export growth of 10% 2. Annual motorcycle production of 5 million units, with annual export growth of 10% 3. Production capacity to meet 80% of parts demand for assembly of motor vehicles, implementation of in-house engineering of motorcycle parts, with parts export growth of 10% per year 	<p style="text-align: center;"><u>Long-term (2010 – 2020) goals</u></p> <ol style="list-style-type: none"> 1. The industry has automotive product design and engineering capabilities. 2. The industry can contribute to world class design and engineering activities.
<p>Strategy</p> <p>Sector: Promotion of production bases for commercial vehicles, small vehicles, and motorcycles, and advancement of production technology for the parts industry</p> <p>Technology: Full manufacturing development, design and engineering capabilities for motorcycles</p>	
<p style="text-align: center;"><u>Mid-term action plan (2005 – 2009)</u></p> <ol style="list-style-type: none"> 1. Improvement of investment in the 2nd and 3rd tier supplier industries 2. Upgrading of the parts industry's capability through the systematic learning of production technology and techniques 3. Improvement of productivity and quality of the parts supplier and assembly industries 4. Improvement of SME industry's capability and linkage with assembly industries 5. Phased introduction of the gas fuel discharge system 6. Eradication of pirate / illegally copied automotive parts in the aftermarket 	<p style="text-align: center;"><u>Long-term action plan (2010 – 2020)</u></p> <ol style="list-style-type: none"> 1. Construction of Automobile R&D Center 2. Improvement of collaboration among the automobile, raw materials supply industries, and advanced education and training institutes 3. Improvement of collaboration with major auto industries in the world 4. Utilization of global sales networks for automotive parts
<p>Support elements</p>	
<p style="text-align: center;"><u>Technology upgrading steps</u></p> <ol style="list-style-type: none"> 1. Motorcycles <ol style="list-style-type: none"> a. Rapid development period (2005 – 2009): Full manufacturing, motorcycle design and engineering b. Maturity period: Local brand development and industry upgrading 2. Motor vehicles <ol style="list-style-type: none"> a. Investment (2005 – 2010): Parts design and engineering in the country b. Maturity period (2011 – 2020): Design and engineering of assembled cars (commercial vehicles and small vehicles), full manufacturing <p style="text-align: center;"><u>Market</u></p> <ol style="list-style-type: none"> 1. Increase in export to ASEAN countries 2. Improvement of collaboration with parts suppliers <ol style="list-style-type: none"> a. Reinforcement of global sales networks b. Development of parts trade centers 	<p style="text-align: center;"><u>Human resources</u></p> <ol style="list-style-type: none"> a. Upgrading of skills for advancement of production technology and skills b. Upgrading of skills in the management and engineering fields <p style="text-align: center;"><u>Infrastructure</u></p> <ol style="list-style-type: none"> a. Construction of an automobile export/import port b. Harmonization of tariff c. Provision of tax allowance for new investment and expansion d. Tax credit and incentive for promotion of human resource development and R&D e. Construction of Automobile R&D Center f. Upgrading of testing organization's capability for skill certification g. Provision of incentive for priority areas

Source: RENSTRA

2.5 SME Promotion Policies and New Economic Policy Package

On June 12, 2007, Coordinating Minister for the Economy Budiono announced the “Presidential Decree on Policies to Accelerate Development of Real Economy, Promote Growth of MEs and SMEs, and Enable Them to Function as a Vehicle to Reduce Unemployment and Poverty” (generally referred to as the “New Economic Policy Package”).

The policy package consists of four elements, namely the improvement of the investment climate, financial sector reforms, acceleration of infrastructure development, and the functional strengthening of MEs and SMEs. The fourth element is described in the following.

SME promotion policy in the new economic policy package aims primarily to improve productivity of MEs and SMEs and promote activities that lead to functional strengthening and the improvement of program effectiveness. Also, implementation of the package is expected to help to improve the business environment of MEs and SMEs, to use funds provided by financial institutions and government organizations for ME and SME support, and to nurture entrepreneurship through invention and technological development that can contribute to the improvement of international competitiveness.

Specifically, the policy package covers 29 items in the following four fields: (1) improvement of access for MEs and SMEs to financial sources; (2) entrepreneurship and human resource development; (3) expansion of potential markets for products made or supplied by MEs and SMEs; and (4) regulatory reforms.

Key items in each field are as follows.

<p>(1) Improvement of access for MEs and SMEs to financial sources</p> <ul style="list-style-type: none"> ● Development of investment loan schemes for MEs and SMEs ● Functional enhancement and effective use of financial consultants who are allied with banks ● Promotion of the land certificate system for reinforcement of credit insurance ● Increase in taxable value for land and building acquisition taxes ● Improved functioning of a public cooperation for enterprise development and PT. Askrido as credit guarantee organizations and government investment to them ● Development of the warehouse security system as a new means of financing ● Use of the government budget as revolving fund as a complement to bank financing ● Partnership at state enterprises: use of Environmental Management Program (PKBL) fund
<p>(2) Entrepreneurship and human resource development</p> <ul style="list-style-type: none"> ● Development of business development service provider (BDS-P) and improvement of university's role ● Formation of an inter-ministerial team to be prepared for the establishment of the ME/SME Innovation Center
<p>(3) Expansion of potential markets for products made or supplied by MEs and SMEs</p> <p>Entrepreneurship and human resource development</p> <ul style="list-style-type: none"> ● Drafting of the Minister of Industry's decree on the strengthening of ME/SME cluster and agglomeration promotion on the basis of the one-village/one product approach ● Expansion of market access for products of MEs and SMEs using hotels ● Development and fostering of traditional markets and modern shopping centers ● Provision of information on water transportation service for MEs and SMEs ● Development of a market integrating a fringe market, a key market, and a traditional market
<p>(4) Regulatory reforms</p> <ul style="list-style-type: none"> ● Decree on income tax incentive for MEs and SMEs ● Submission of a draft microenterprises and small and medium-sized enterprises act to the parliament, including redefinition of MEs and SMEs

Chapter 3 Decentralization and SME Promotion

Chapter 3 Decentralization and SME Promotion

3.1 Decentralization and SME Promotion

3.1.1 Decentralization and SME promotion policy

(1) Local administration units

In Indonesia, there are two concepts representing local administration units, namely Daerah and Wilayah. Daerah refers to an area administered by local government and Wilayah is generally recognized as an administrative unit that performs on behalf of the central government.

Before decentralization, Daerah represented provinces, prefectures and municipalities, whereas Wilayah corresponded to provinces, prefectures, municipalities or counties. The relation was hierarchical; prefectures and municipalities were under the control of the province where they are located, and counties were under the control of the department or municipality in the same way.

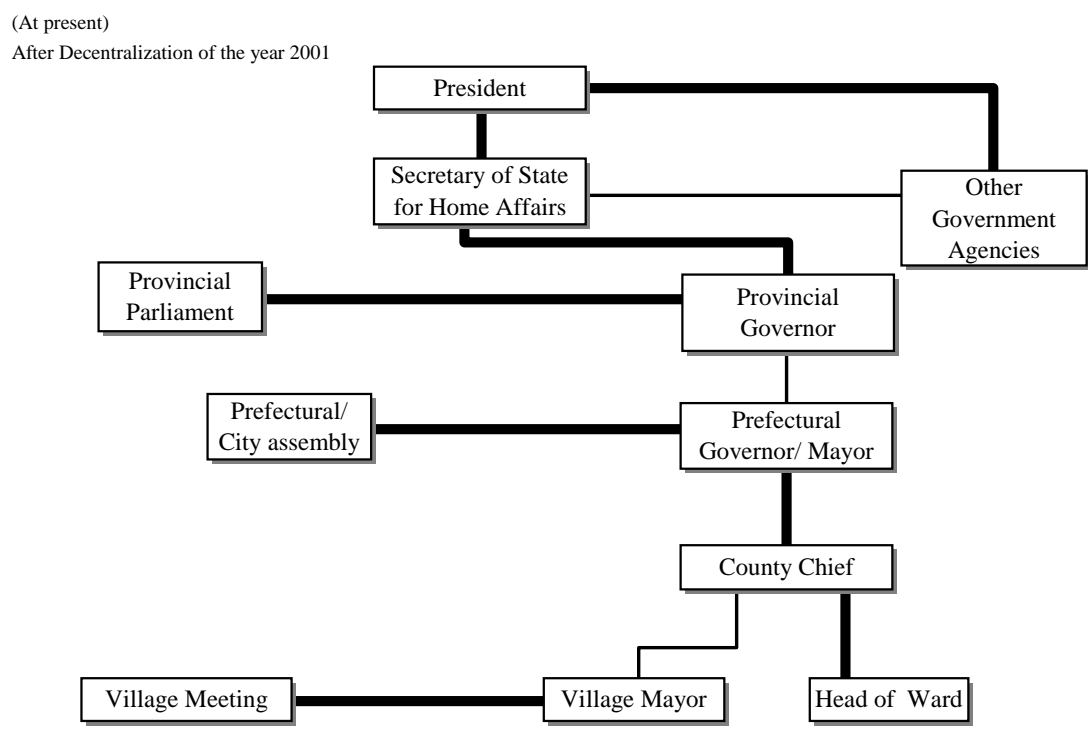
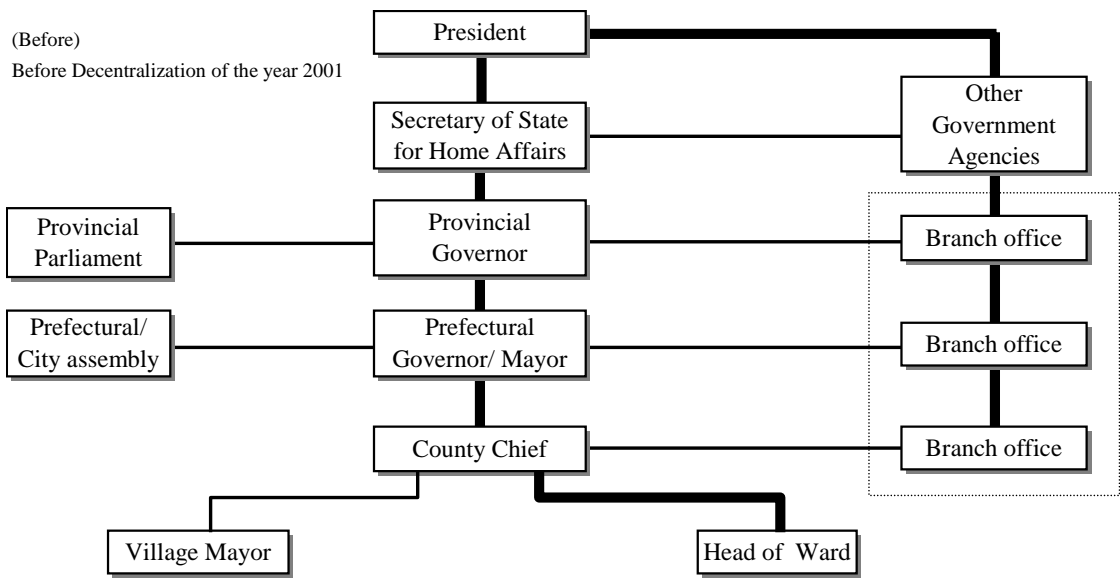
Under the Local Administration Law enacted after decentralization, Daerah still represents provinces, prefectures and municipalities, but Wilayah now refers to only provinces with the previous hierarchical structure being terminated. In other words, while a province is responsible for matters that cover multiple prefectures and/or municipalities in the jurisdiction, it ranks alongside the prefectures and municipalities. At the same time, the province that serves as Wilaya is still in a position to supervise the prefectures and municipalities in specific functions on behalf of the central government.

In the previous centralized administration system, therefore, Wilayah dominated Daera in the concept of public administration, but the relationship has changed as a result of decentralization¹.

¹ As a result, prefectures and municipalities came to claim power and authority as a local government, and the central and provincial governments had difficulty in knowing the current state of local administration at the prefectural and municipal levels. To improve the situation, Law No.32 of 2004 was enacted to delete the provision declaring that provinces, prefectures and municipalities are not in a hierarchical relation. In reality, however, the hierarchical relationship before decentralization has not been fully restored.

Before decentralization, heads of local governments were in a hierarchical (vertical) relationship. The head of a village was held accountable to the head of the country where it is located. The county head was then accountable to the prefectural governor or a mayor, then to the provincial governor, and finally to the President (Minister of Interior). This structure has virtually disappeared (Figure 3-1).

Basically, the decentralization made clear the separation of administration and legislation at local level. The head of a local government is held accountable to the local assembly. It should be noted, however, that provinces that also serve as Wilayah are accountable to both respective provincial parliaments and the President as they have dual faces as a local government and central government agency.



Note: Bold lines indicate a hierarchical relation accompanying accountability; and thin lines indicate a non-hierarchical relation.

Figure 3-1 Transition of the relationship between the Central Government and Local Governments in Indonesia

(2) Local Public Finance

Decentralization promotes not only the decentralization of local administration but also that of financial base. Before decentralization, there were persistent complaints about “the exploitation of local governments by the central government without equitable benefits.” In fact, concurrently with the start of decentralization, the central government enacted the Central and Local Government Finance Equalizing Law to address the complaints.

The law classifies financial sources of local governments in internal source, equalizing fund, loan, and others. Before decentralization, the central government provided subsidies according to population size and other indices, but equalizing fund has replaced them. Under the law, local governments endowed with natural resources can secure larger financial resources than before, but those with poor resources may face a more difficult financial situation.

3.1.2 Evolution of government organization relating to SME promotion policy implementation as a result of decentralization

(1) Institutional setup relating to SME promotion and decentralization

Figure 3-2 compares government organizations responsible for SME promotion in West Java before and after the decentralization in 2001. It should be noted that local organizations had different names but their functions were more or less the same.

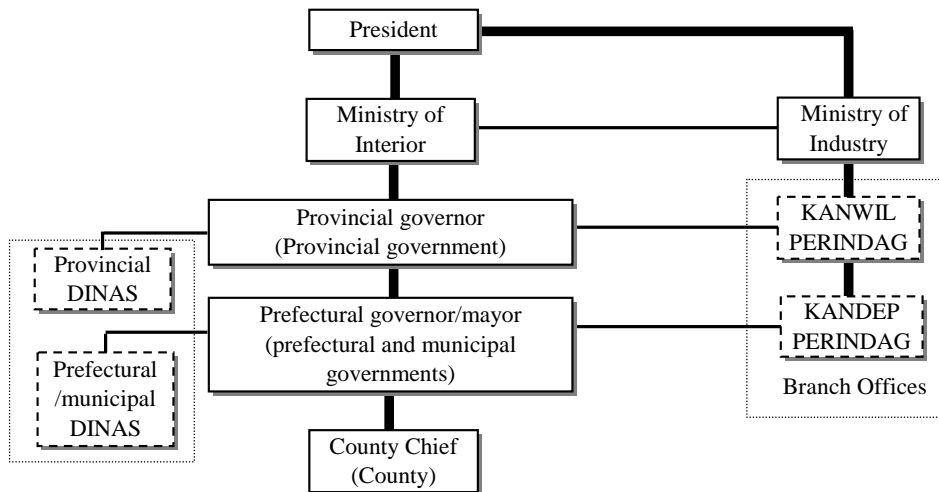
Before the decentralization in 2001, the Ministry of Industry had branch offices, namely KANWIL PERIINDAG at the provincial level and KANDEP PERINDAG at the prefectural and municipal levels. In addition, DINASs operated under provincial and prefectural/municipal governments were engaged in SME promotion.

After decentralization, KANWIL PERIINDAG and KANDEP PERINDAG were dissolved and integrated into DINASs at local government levels, provincial and prefectural/municipal respectively. Accordingly, most staff of KANWIL PERIINDAG and KANDEP PERINDAG moved permanently to respective DINASs. As a result, their payrolls were transferred from the central government to local ones.

(2) Post-decentralization organization spearheading SME promotion policy implementation

As a result of the organizational reform described in (1) above, regional offices of IDKM² under the MOCI, which used to lead SME promotion, now belong to DINASs in provincial governments.

Government Organization Relating to SME Promotion in West Java before Decentralization



Government Organization Relating to SME Promotion in West Java after Decentralization

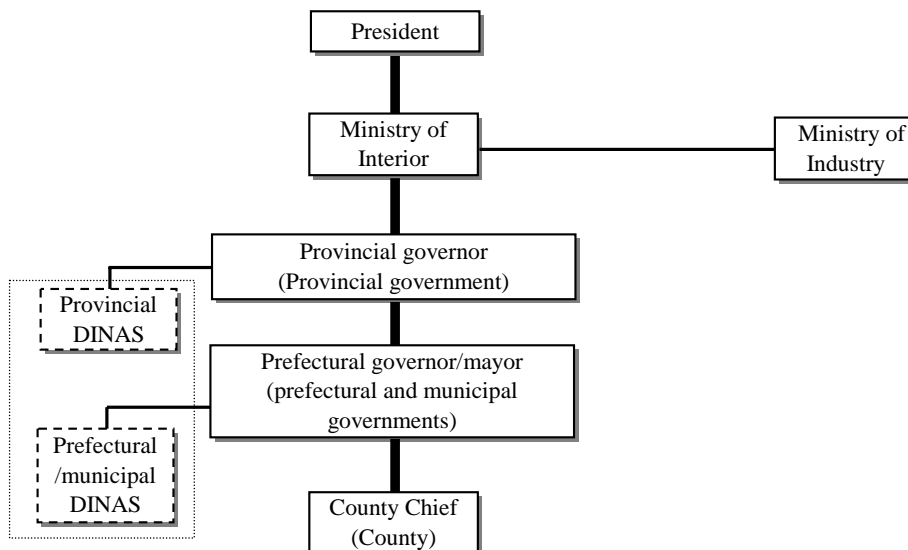


Figure 3-2 Comparison of SME Promotion Related Government Organizations before and after Decentralization

2 Industri Dagang Kecil Menengah

The annual budget of IKM³ was Rp481 billion in 2007, of which 28.8% were allocated to DINASs in 33 provincial governments and 4.15% went to prefectural/municipal DINASs. Basically, SME promotion programs implemented by a DINAS were managed at the DINAS's discretion, and IKM is said to have a limited control over them, i.e., control only through the coordination of financial support. In reality, however, as MOI funds a major portion of DINASs' operations, IKM may play a more important role than the coordinating function.

UPTs (Common Service Facilities), which had been established for the purpose of providing technical support for local SMEs throughout the country and have become local organizations under provincial DINASs, are unable to renew or upgrade facilities and equipment due to the difficulty in local government finance and are not capable of meeting the needs of SMEs.

The relationship between MOI and provincial DINASs in the area of SME promotion after decentralization is defined as follows: "the central government (MOI) is responsible for the formulation of basic policy, based on which each provincial DINAS prepares an action plan in consideration of their province's potential. The budgetary source is also transferred from the central government to the respective local governments. Furthermore, in the field of human resource development, educational institutes under the central government (such as BDI⁴) are responsible for rendering related services."

On the other hand, concerning the relationship between a provincial DINAS and prefectural/municipal DINASs, strong autonomy of the latter characterizes it, and the former performs the coordinating function only. In fact, there are many prefectures and municipalities over which the provincial DINAS has no control.

3 Industri Kecil Menengah

4 Balai Diklat Industri

3.1.3 Public SME loan program

(1) Public financial institutions to provide SME support

In Indonesia, provincial banks, national banks, and state enterprises provide financial support for SMEs. For instance, state enterprises (BUMN⁵) provide SME loans whose line of credit ranges between Rp50 – 70 million per case (interest rate of 6% per year). On the other hand, state and provincial banks extend loans with line of credit between Rp50 million and Rp1 billion (interest rate of 15% - 18% per year). Loans by state enterprises seem to be for working capital, whereas state and provincial banks supply funds for capital investment and thus serve as the major provider of financial support for SMEs.

(2) Role of DINAS in SME loan

Prior to decentralization, provincial DINASs provided intermediary service between banks or state enterprises and SMEs, which is now rendered only by prefectural and municipal DINASs. The service includes support for preparing loan application documents (e.g., business plan) when requested by a SME.

3.2 SME Promotion Policy by East Java Government

3.2.1 Renstra in East Java

Development strategy and policy up to 2008 in East Java emphasize economic development, especially the promotion of SMEs (UMKM) and the securing of basic rights. In particular, the provincial government sets the following seven development priorities (2006 – 2008). Among them, DINAS puts an emphasis on “measures to reduce poverty and unemployment, improvement of employment, and encouragement of entrepreneurship”.

- 1) Improvement of social contribution through religious teaching
- 2) High level education and improvement of access to good medical service
- 3) Measures to reduce poverty and unemployment, improvement of employment, and encouragement of entrepreneurship
- 4) Economic development and infrastructure construction
- 5) Management of natural resources, environmental preservation, and spatial management

5 Badan Usaha Milik Negara

- 6) Maintenance of public order, legal compliance, and respect for human rights
- 7) Promotion of decentralization and local autonomy through improved provision of social service and government reforms

Taking into account the regional characteristics, DINAS designates seven priority areas for development. Among these priority areas, it chooses four areas in the northern region, namely Gresik, Lamongan, Tuban, and Madura for industrial development. The chosen areas are in the following.

Gerbangkertasuisila
 Tuban and its vicinities
 Madiun and its vicinities
 Kediri and its vicinities
 Jember and its vicinities
 Banyuwangi and its vicinities
 Probolinggo and its vicinities

The government also designates the following priority industrial sectors together with respective priority areas.

- 1) Gold and silver (accessories): Surabaya, Sidoarjo, Malang and Pacitan
- 2) Supporting industries (metalworking, automotive and motorcycle parts): Sidoarjo, Pasuruan, Gresik and Surabaya
- 3) Use of wastes from sugar production: Madiun, Malang, Bojonegoro, Situbondo and Banyuwangi
- 4) Shoes: Sidoarjo, Ponorogo, Mojokerto and Magetan
- 5) Food processing: Pasuruan, Probolonggo, Jombang and Sidoarjo

3.2.2 Industry and Trade DINAS in East Java

In East Java, three DINASs are engaged in SME promotion. They are Industry and Trade DINAS, SME and Cooperative DINAS, and DINAS under the jurisdiction of the Ministry of Interior (MOI-attached DINAS)

- Industry and Trade DINAS: It had been under the direct supervision of MOI and the MOC, but it became a local government division in 2001 after decentralization. It is in charge of the industry and commerce development in

the province as a whole, and serves for companies of every size. As for technical support, it collaborates with the other DINASs' programs.

- SME and Cooperative DINAS: It covers small enterprises and MEs and primarily supports MEs for the formulation of cooperatives and their activities.
- MOI-attached DINAS: It is mainly engaged in village development.

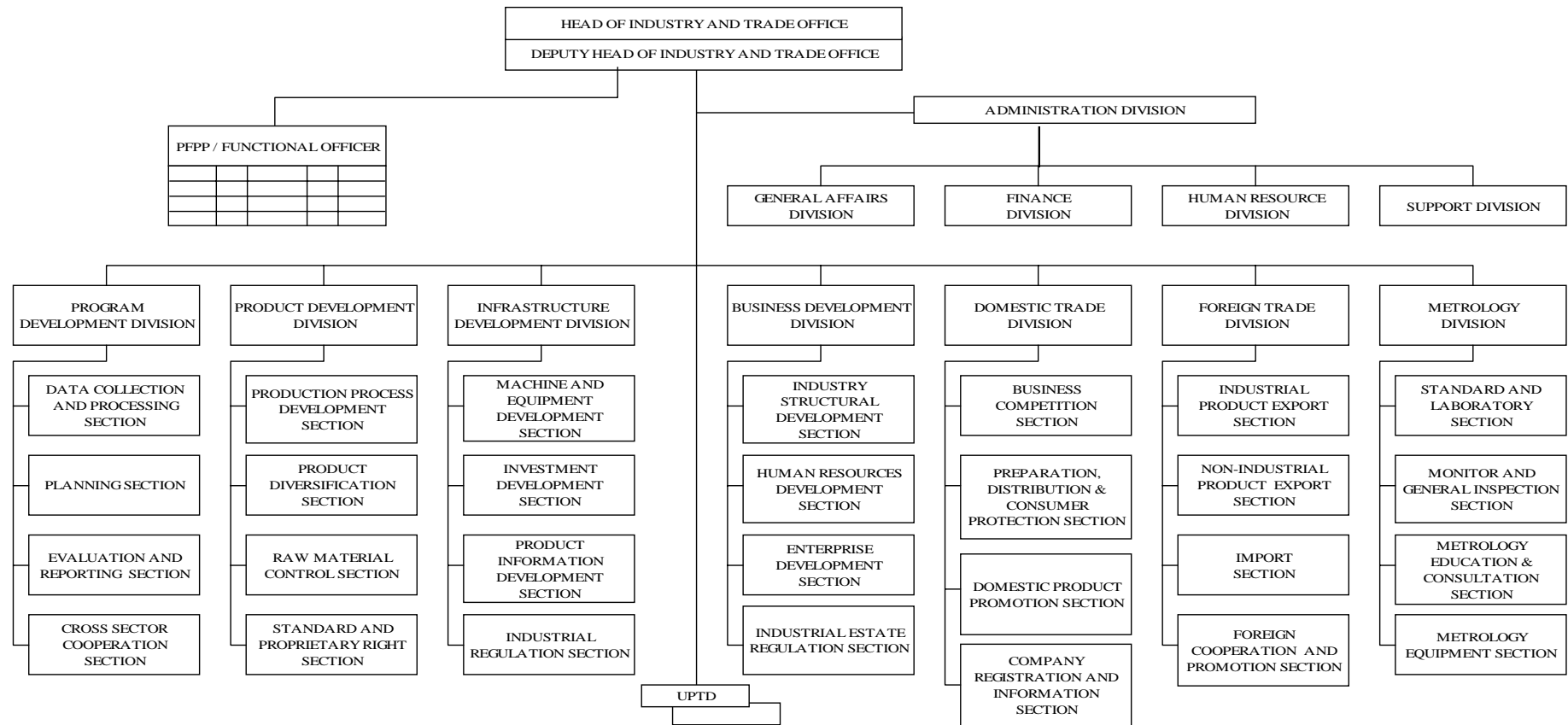
Industry and Trade DINAS, which is responsible for SME promotion in the manufacturing sector, operates under the mission “to foster SMEs to overcome poverty.” It assumes the following functions.

- 1) Preparation of development plans for the manufacturing and commerce sectors
- 2) Support relating to industrial equipment
- 3) Support for development of industrial products and pollution control measures at factories
- 4) Promotion of domestic trade
- 5) Promotion and support for exports and imports
- 6) Support for activities in the field of metric
- 7) Testing and certification of product quality
- 8) Other miscellaneous support in the manufacturing and commerce sectors
- 9) Promotion of intergovernmental cooperation in the manufacturing and commerce sectors
- 10) Fostering and operation of UPTs

Figure 3-3 shows the organizational chart of Industry and Trade DINAS in the provincial government. It has approximately 550 employees, including those working at 23 UPTs.

The employees are either managerial (Structural), general, or professional staff (PFPP, or Fungsional). General staff can be promoted to managerial staff by passing a promotional test or can become a professional staff by passing a promotional test or obtaining a certification for skills required for a specific profession, whereas there is no career path from professional staff to managerial staff. Professional staff do not have any subordinate and their remuneration depends much on evaluation of their performance in a specific project or program.

As shown in Figure 3-3, all professional staff report directly to the head of DINAS. At present, the DINAS has nine professional staff in the manufacturing area (industry advisors), who cooperate in technical support implemented by SME and Cooperative DINAS and MOI-attached DINAS. Such cooperation includes exhibition, training, cluster strengthening and loan.



Source: Industry and Trade DINAS in East Java Province

Figure 3-3 Organization Chart of Provincial Government of East Java

Table 3-1 shows the annual budgets of Industry and Trade DINAS in East Java in 2005 and 2006. During the period, the provincial government funded approximately 60% of them, and the central government (MOI and MOC) did the rest. The total budget less labor and fixed equipment costs was for SME promotion activities (manufacturing and commerce). Then, around 30% of the SME promotion budget (manufacturing and commerce) was for trainings, which accounted for a major portion of SME promotion programs.

Table 3-1 Fiscal Budget of Industry and Trade DINAS in East Java

Fiscal 2005	60 billion Rp.	(including personnel cost, 15 billion Rp)
Fiscal 2006	70 billion Rp.	(including personnel cost, 18 billion Rp)

Figure 3-4 shows the details of 2007 budget and Figure 3-5 the preliminary budget for 2008.

In 2007, the dependency rate on the central government is slightly below 16%, which dropped sharply from 60% during 2005 and 2006. One reason is the increase in direct grants from the central government to prefectures and municipalities. The grants from MOC are smaller than that from MOI because the former has made a slower progress in decentralization. The provincial government finances the labor, fixed equipment and related costs, while the grants from the central government are entirely for SME promotion activities. The province distributes to the commerce sector 58% of the budget for SME promotion activities or 70% of its self-financed source allocated to SME promotion after setting aside labor, fixed equipment and related costs. According to an official in charge, the emphasis on the commerce sector reflects the provincial government policy that gives priority to market development. In particular, the provincial government has to support export promotion, because prefectural and municipal governments do not set aside their budgets to it.

The budget of UPL-IKM⁶ activities in 2007 is entirely funded by MOI and covers diagnosis and consulting services for individual companies, including those by four consulting firms under contracts to provide consulting service for the companies diagnosed by SME diagnosis consultants. The 2007 budget allocates no money to the development of industrial cluster areas (Sentra). Financially, trainings account for staggering 80% of the SME promotion activities in the manufacturing sector, which cover

6 Unit Pelayanan Langsung-Industri Kecil Menengah

companies inside and outside of Sentra. UPL-IKM was established according to the direction by IKM, but it is currently a provisional unit. Thus, it does not appear in Figure 3-3.

MOI will fully finance the UPL-IKM activities in 2008 too, but the grant from MOI to UPL-IKM will further decrease (Figure 3-5). The decrease reflects the increase in the direct grants from the central government to prefectural and municipal UPL-IKMs. In East Java, prefectural and municipal DINASs will be in charge of Sentra promotion after 2008, and MOI will fully finance the activities. However, provincial DINAS will keep providing diagnosis and consulting services and trainings for companies in Sentra.

For the manufacturing sector, there is no grant from provincial to prefectural or municipal governments, and prefectures and municipalities fund their activities by their own financial sources together with the direct grants from the central government.

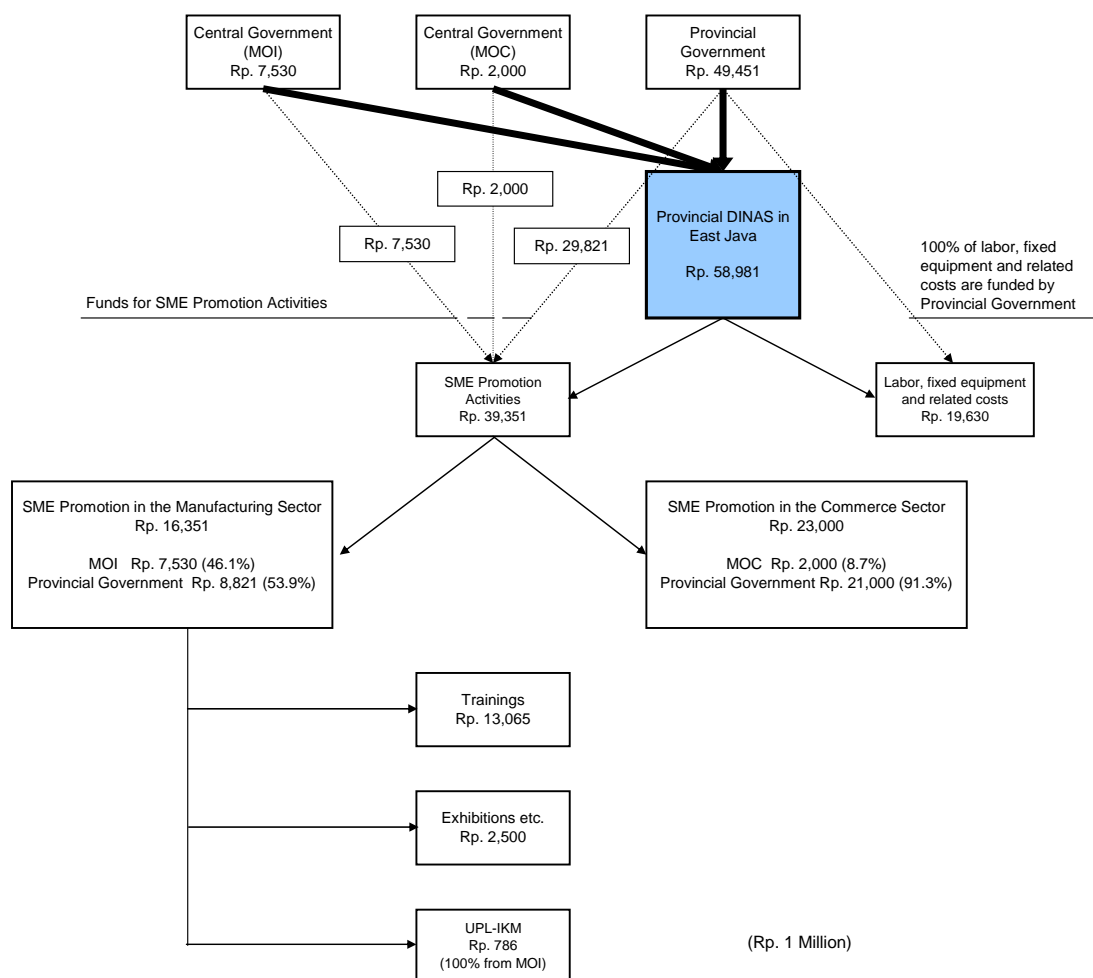


Figure 3-4 Budget of Provincial DINAS in East Java, Fiscal Year 2007

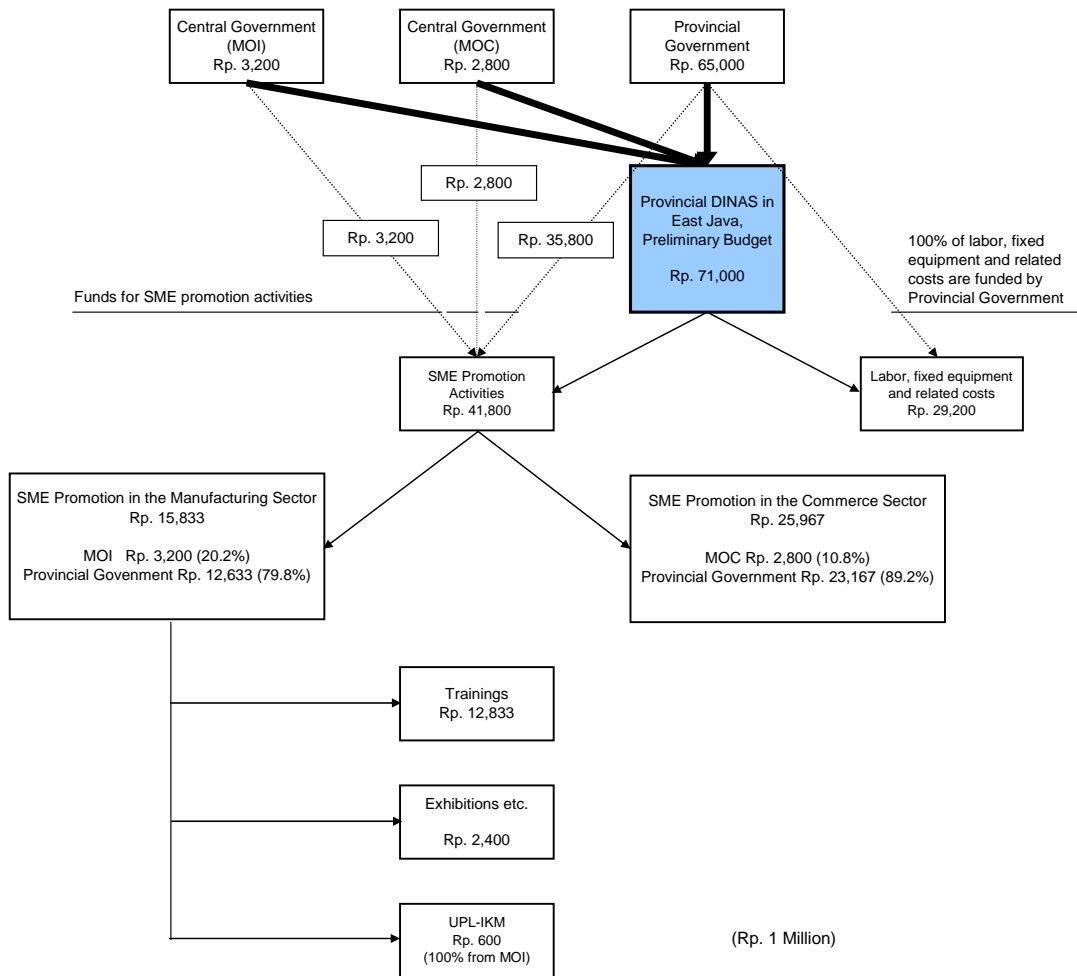


Figure 3-5 Preliminary Budget of Provincial DINAS in East Java, Fiscal Year 2008

Under the decentralization framework, the relationship between the provincial government and prefectural/municipal governments in the context of SME promotion is not very clear in East Java. The blue area in Figure 3-6 (total investment – excepting land and buildings – ranging between Rp1 – 5 billion) represents the size of companies which the promotion programs by provincial DINAS mainly cover, and the orange area (total investment – excepting land and buildings – less than Rp1 billion) by prefectural/municipal DINASs. According to Industry and Trade DINAS in East Java, its programs cover eligible SMEs within the province, but it has to notice the prefectural or municipal DINAS concerned each time it provides services.

Meanwhile, MOI classifies companies into large, medium, and small enterprises according to the amount of investment excepting land and buildings. The classification is as follows.

- Large enterprises: Rp10 billion or over
- Medium enterprises: Rp200 million to less than Rp10 billion
- SMs (including MEs): Less than Rp200 million

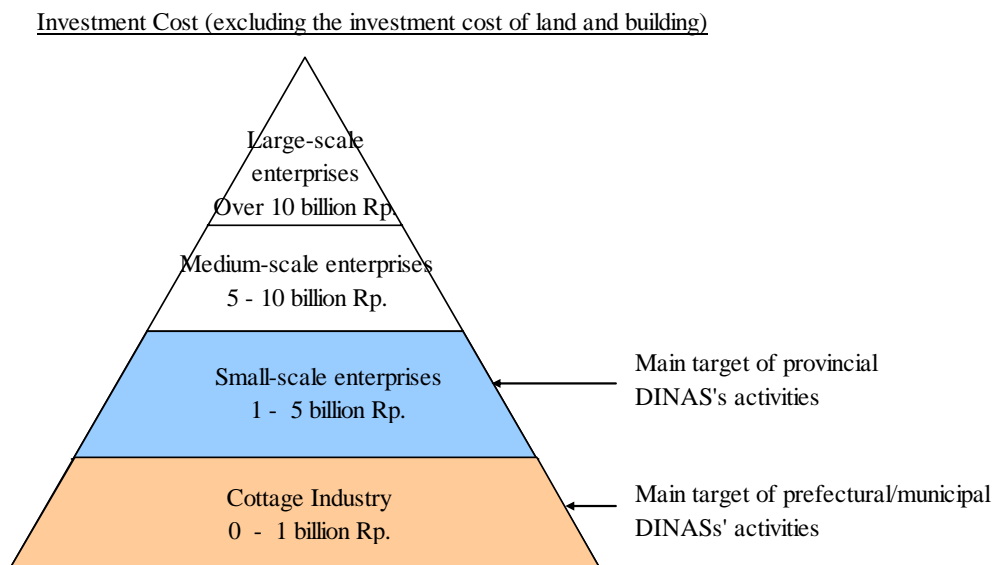


Figure 3-6 Target Enterprises of Local DINASs

3.2.3 Public SME loan programs in East Java

(1) The provincial government's SME loan schemes

There are two SME loan schemes operated under the provincial government's budget, namely KIK (Kredit Industri Kecil) and UKM (Usaha Kecil Menengah). Provincial DINAS accepts loan applications for both schemes, and provincial banks (BANK JATIM and BPR JATIM) give loans.

1) KIK

This scheme is primarily for MEs and SEs in the manufacturing sector, with the maximum amount of loan being set at Rp50 million. Non-registered enterprises may also be eligible if they have obtained a permit for business activity from their district chief. A loan application should specify the amount of loan required, intended use,

repayment period, business description, and collateral/security. Upon the receipt of an application, DINAS confirms that the applicant is in the manufacturing sector, and relays it to a provincial bank. The bank conducts its own preliminary check on the application and reports the result to DINAS. The bank executes the loan after the head of DINAS approves it. The interest rate is 6% per year.

Table 3-2 tabulates the number of loan applications made to KIK and the number of loans executed in the past three years, by industry sectors. Table 3-3 shows the total amount of loan in each of the three years. Approximately 95% of the companies that have received a KIK loan are in the local industry sector and the average amount of loan is Rp30 million. The intended use is primarily working capital.

Table 3-2 Numbers of KIK Loan Applications and Accepted Loans

Sector	2004		2005		2006	
	No. of applications	No. of loans	No. of applications	No. of loans	No. of applications	No. of loans
Shoes	34	18	27	20	16	13
Handicraft	67	42	86	51	72	57
Wood furniture	91	70	82	71	76	49
Food and beverage	19	17	24	19	29	21
Other	6	5	7	4	11	9
Total	217	152	226	165	204	149

Table 3-3 Total Amount of New KIK Loans

	(Unit:Rp 1,000)		
	2004	2005	2006
Annual total amount of loans made by KIK	4,560,000	4,950,000	4,470,000

2) UKM

UKM loans are extended to SMEs in the manufacturing and commerce sectors. Unlike KIK, UKM does not cover non-registered companies. UKM, whose annual budget amounts to around Rp5 billion, sets the line of credit at Rp200 million per loan. A loan application should specify the amount of loan required, intended use,

repayment period, business description, and collateral/security, and should be accompanied by a DINAS's business permit, certificate of registration with tax office, and financial statements. DINAS examines it jointly with a bank and an economic officer of the provincial governor's office. Reviewed items are as follows.

- Registration
- Membership of a trade association
- Loans borrowed from other banks and state enterprises
- Operating status
- Production (process, operating rate, facilities and equipment, and sourcing of raw materials)
- Finance (assets, profit planning, etc.)

If joint examination finds the application acceptable, the economic officer issues a permit for loan to the bank. The interest rate is 6% per annum. Table 3-4 summarizes the loans amounting to Rp50 million or less per case made to SMEs in the manufacturing sector, between January and August 2007. The average amount of loan is Rp24 million.

Table 3-4 UKM Loans in the First Half of 2007

(Unit: Rp 1,000)

Month	No. of applications	Total amount of loan applied	Total amount of loan made
January	11	525,000	330,000
February	39	2,085,000	995,000
March	36	2,045,000	817,000
April	-	-	-
May	50	2,610,000	1,085,000
June	-	-	-
July	-	-	-
August	25	1,262,000	768,000
Total	161	8,527,000	3,995,000

Finally, provincial banks have their own SME loan schemes covering registered enterprises only. The interest rate is relatively high at 12 - 17%. They do not set any line of credit, but most loans are Rp500 million or less each. In addition,

provincial banks operate special schemes for non-registered companies subject to the approval of the district chief. The line of credit is Rp50 million.

(2) SME loans by prefectures and municipalities

Prefectures in East Java have SME loan schemes (Dana Bergulir). As an example, the following overviews the Dana Bergulir operated in Pasuruan Prefecture.

The loan scheme targets MEs and SEs in the manufacturing and commerce sectors with the credit ceiling being set at Rp50 million and the interest rate of 6% p.a. Eligibility is generally limited to registered companies, but non-registered MEs can obtain a loan if they have a district chief's permit for business activity. The prefectural government funds Dana Bergulir (Rp3 billion in 2007), and the current operating fund is Rp4 billion.

The actual work associated with Dana Bergulir loans is handled by a national bank (to be changed to a provincial bank in the future), which accepts an application from companies. Prefectural DINAS examines it, and the bank sets up a security or a guarantee. Each year, around 50 companies apply for a loan and 80% of them are manufacturers. Of total, around 10 companies obtain a loan and the total value of loans is Rp500 million. According to an officer of Pasuruan DINAS, around 40% of the borrowing companies have some problems in repayment. Prefectural DINAS also provides information on KIK and UKM for the applicants.

Note that DINAS in Pasuruan City previously operated a similar loan scheme under the municipal budget. However, it discontinued it due to default problems, and it has no plan to resume it. It only introduces the existing schemes by the province, prefecture and banks to individual companies as required.

(3) LPT-INDAK⁷

After the economic crisis in 1997, MOI implemented, through IKM and branch offices, a financial support project for SMEs between 1998 and 2000. The project consisted of two programs (financial assistance – 70% of the total project budget; and loans – 30%) and MOI established LPT-INDAKs in 15 provinces. Although the project terminated upon the enactment of the Local Government Act, LPT-INDAKs in six provinces (Central Java, East Java, Bali, West Sumatra, West Nusa Tenggara, and

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Lampung⁸) are still active. LPT-INDAKs in other nine provinces are inactive, although they continue to exist.

LPT-INDAK in West Nusa Tenggara is now a provincial government organization, whereas those in other five provinces serve as MOI's attached organizations. Some of them are partially funded by the provincial government. In addition to the lending function, a LPT-INDAK serves as an information center to provide local SMEs with information on various support schemes as well as markets. Note that LPT-INDAK's loans require a final approval of the head office (in MOI) and local LPT-INDAKs have to report quarterly while they give loans.

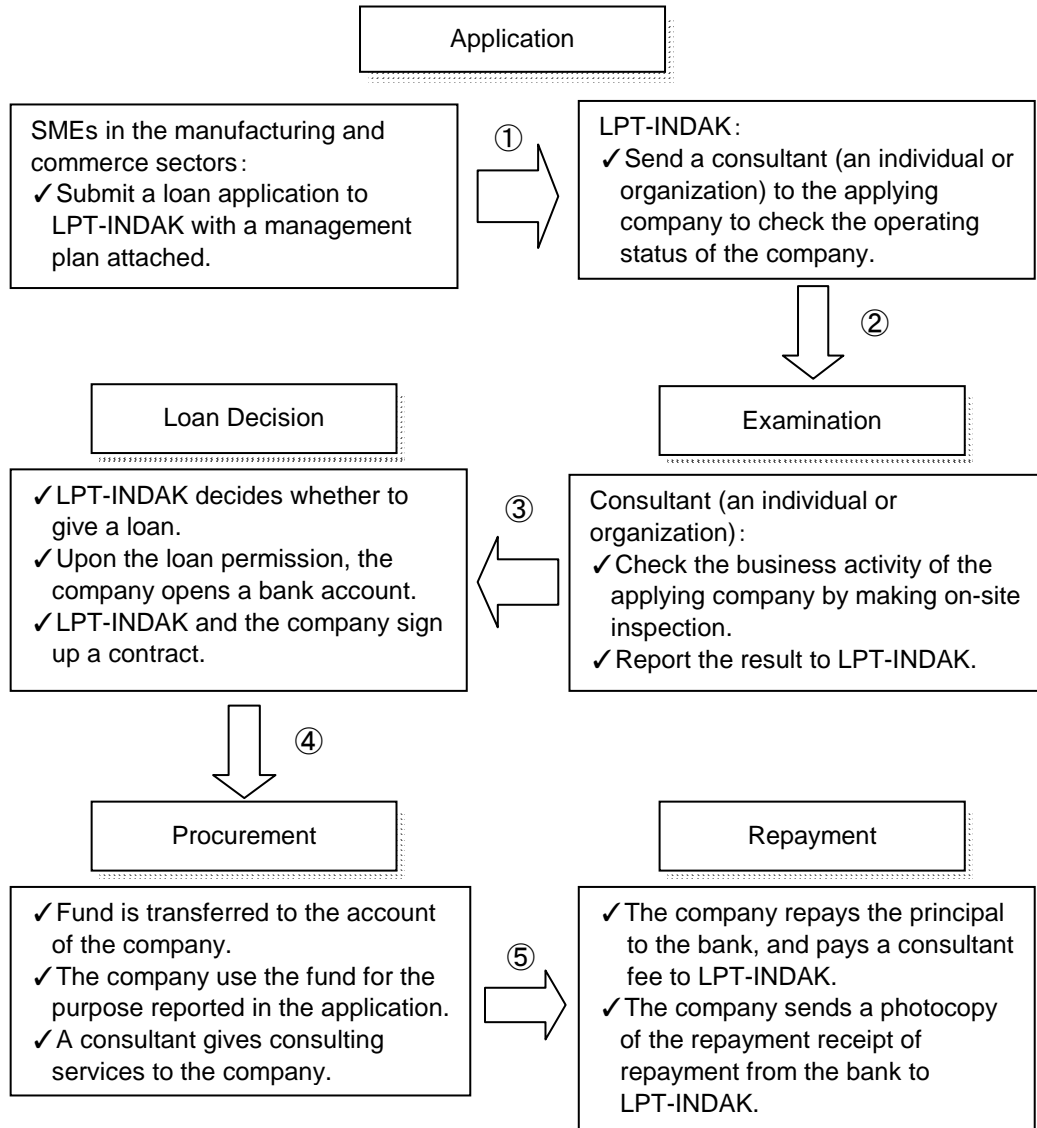
The following are activities conducted by the LPT-INDAK in East Java. LPT-INDAK keeps the operating fund totaling Rp26 billion, which came from the MOI's loan program (repayment) prior to the decentralization. It became a MOI's attached organization in 1999. Since then, it has not received any support from the central and local governments. It started formal activities in 2000, which mainly consist of loans and related services. In particular, LPT-INDAK provides the borrowers with consulting services that are integrated into the loan scheme, i.e., a LPT-INDAK's consultant renders corporate diagnosis and consulting services by visiting each borrower once per month during the loan period (two years at maximum for manufacturers). A borrowing company pays a consulting fee (10% of the total amount of loan) as it repays the loan, instead of interest. Thus, LPT-INDAK's operation and management is financed by the revenues from its consulting service.

LPT-INDAK's loan scheme covers companies in the manufacturing and commerce sectors. Although company size is not specified, eligible companies must be registered and in operation for more than one year after the foundation. Also, they are expected to receive LPT-INDAK's consulting services. Note that lending to the same company is limited to twice.

LPT-INDAK receives loan applications from around 300 companies each year. Since 1999, loans have been made to as many as 940 companies, with the average amount of loan being Rp50 million. Credit line is set at Rp75 million and security (e.g., real estate, automobiles, motorcycles) is taken.

⁸ They are in order of the present level of activities, from high to low (according to the MOI's LPT-INDAK head office).

Figure 3-7 shows a general work flow of the loan service at East Java LPT-INDAK.



Source: LPT-INDAK brochure

Figure 3-7 LPT-INDAK's Work Flow Relating to Loan Service

At present, LPT-INDAK retains six in house consultants and hire outside consultants as required. The six consultants include former government or bank employees as well as active business owners, who are experts in a variety of fields, including factory operation, finance, marketing, and export promotion. A business owner who works as a LPT-INDAK consultant explains that a major advantage of his service lies in the opportunity to build up business networks.

3.3 SME Promotion Policy by West Java Government

3.3.1 RENSTRA in West Java

The West Java government has set forth the following five missions toward the year 2010.

West Java Provincial Government's Missions

- Mission 1: Improvement of human resource quality and productivity
- Mission 2: Development of the regional economic structure
- Mission 3: Strengthening of local administration
- Mission 4: Keeping the viability of development
- Mission 5: Improvement of the quality of life

Among these missions, DINAS supports Mission 2 “Development of the regional economic structure.” In this conjunction, it has announced its strategic plan, RENSTRA 2006 – 2010 as the successor of the former strategic plan for 2000 – 2005. The plan sets forth strategic goals and the means to achieve them in the order of visions, missions, objectives and strategies, and policies and programs.

First of all, it identifies the problems the industrial sector faces, namely the lowness in competitiveness of products, production techniques and productivity, quality of workforce, and capacity of local government staff. Then, DINAS defines the vision for 2006 – 2010 as “improvement of competitiveness.” Under the vision, DINAS set the following four missions for the five-year plan period.

Mission 1: Strengthening of the industrial structure through improvement of productivity and product value

- Strengthening of linkages between subsectors, between large enterprises and SMEs, and between industrial areas, together with strengthening of SMEs' roles and contribution

Mission 2: Development of domestic markets and consumer protection

- Promotion of four key clusters, i.e., textile and garment, shoes, machine parts, and furniture

Mission 3: Promotion of trade

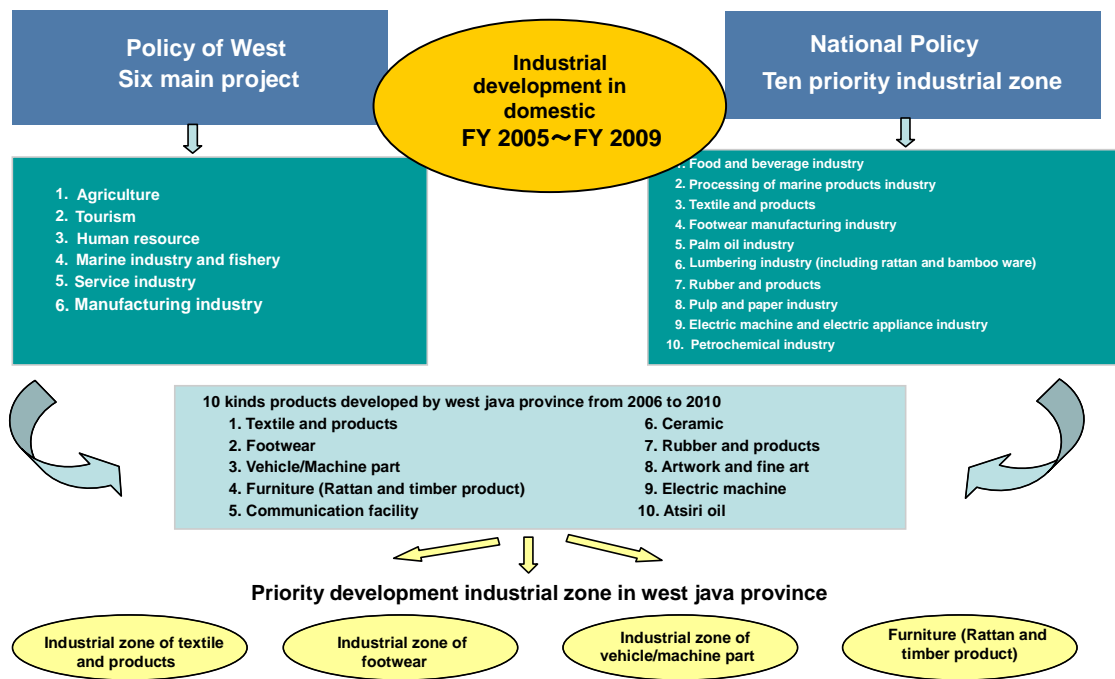
Mission 4: Capacity building of DINAS

- Improvement of employees' skills and capabilities, the upgrading of facilities and equipment, and information system development

Prior to the formulation of strategies based on the above missions, RENSTRA analyzes internal and external environments of the industry and commerce in West Java. Among various problems identified, the following three findings have bearing on the present study.

- Adverse effects to the industrial development of poor coordination between the central and local governments in the decentralization process
- Ineffective linkage between industry and other sectors, as well as among the industrial sectors (between large enterprises and SMEs)
- Inactive R&D and limited access to relevant information and services

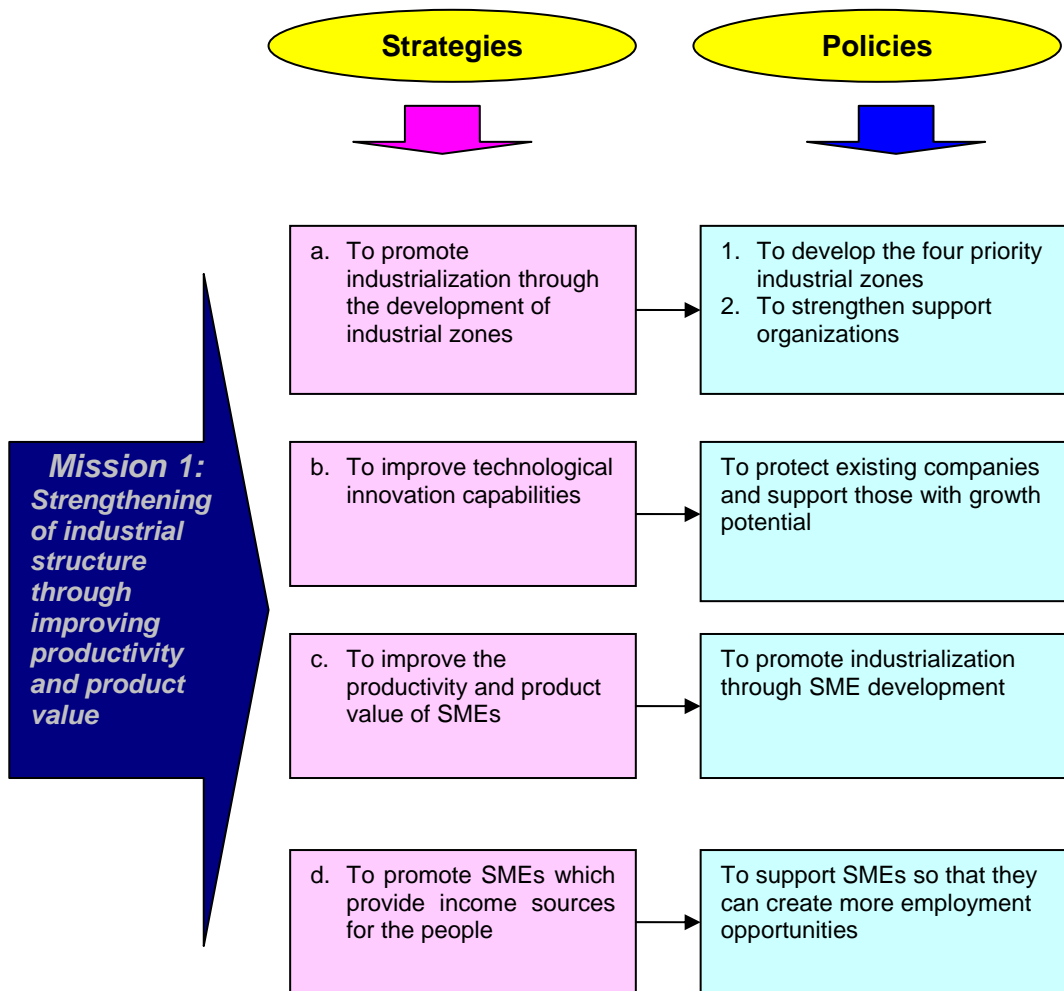
Figure 3-8 lists the priority sectors and industrial areas in West Java, which appear to be consistent with the priority sectors identified for the country.



Source: RENSTRA

Figure 3-8 Priority Sectors and Priority Industrial Zones in West Java

Figure 3-9 summarizes the strategies and policies for SME promotion, which is a part of Mission 1. RENSTRA lists programs and activities, but does not mention the deployment of corporate diagnosis and consulting services.



Source: RENSTRA

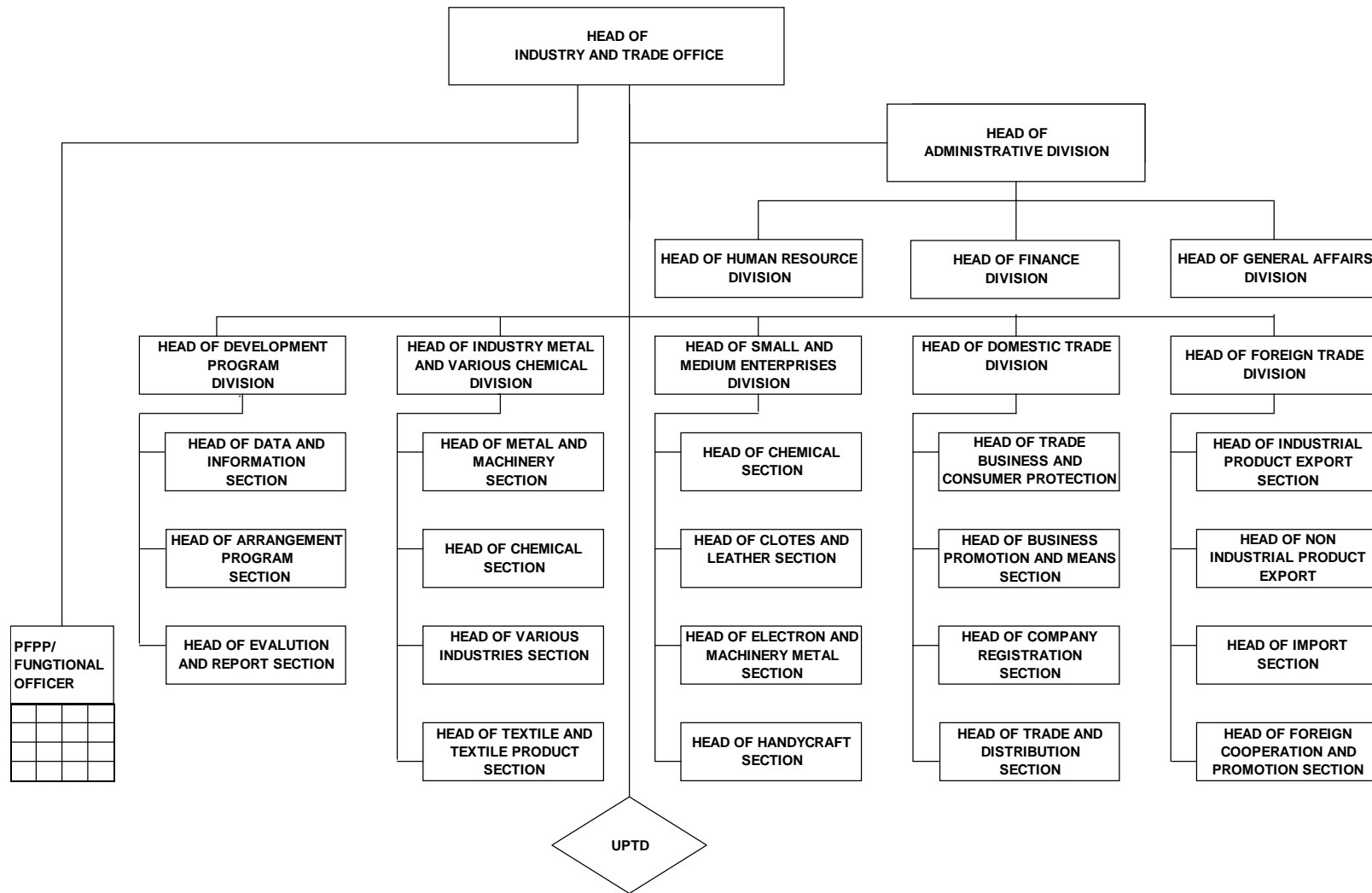
Figure 3-9 Strategies and Policies for SME Promotion

3.3.2 Industry and Trade DINAS in West Java

(1) Organization

Figure 3-10 shows the organizational chart of Industry and Trade DINAS. Small and Medium Enterprises Division is the counterpart of the study team. The Industry Development Group and the Metrics Group shown in Figure 3-11 directly report the Director General, and each has UTPs and PFPPs. At present, there are 11 UPTs under Industry Development Group, and 13 PFPPs are assigned to each UPT.

STRUCTURE ORGANIZATION OF INDUSTRY AND TRADE OFFICE (DINAS) WEST JAVA



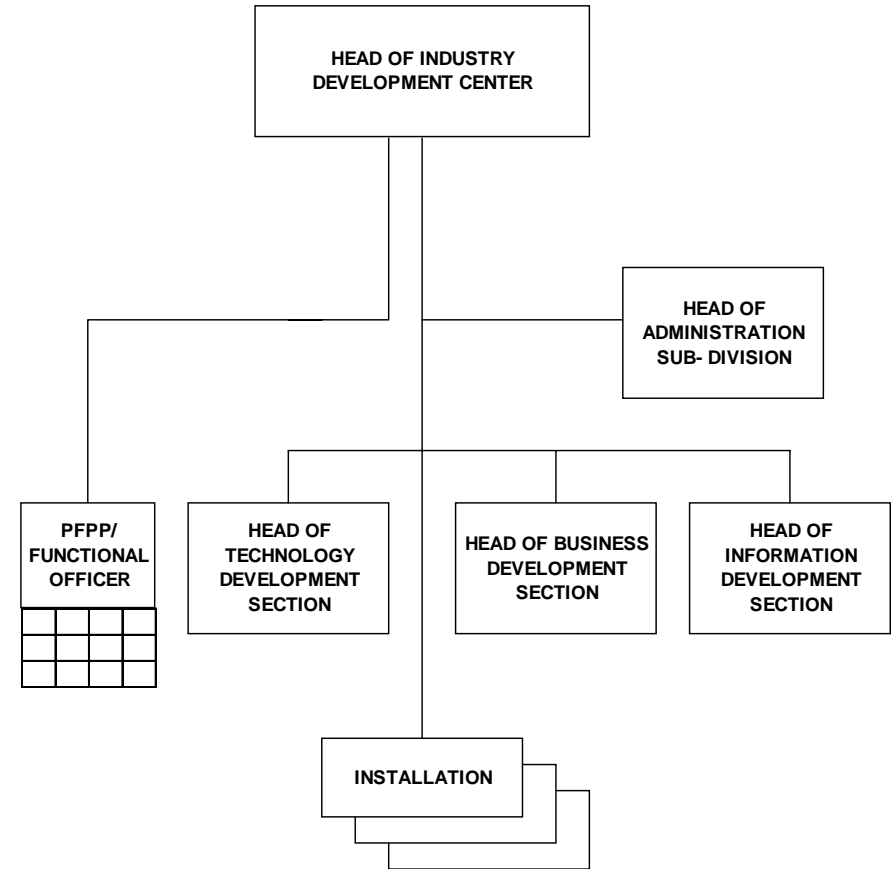
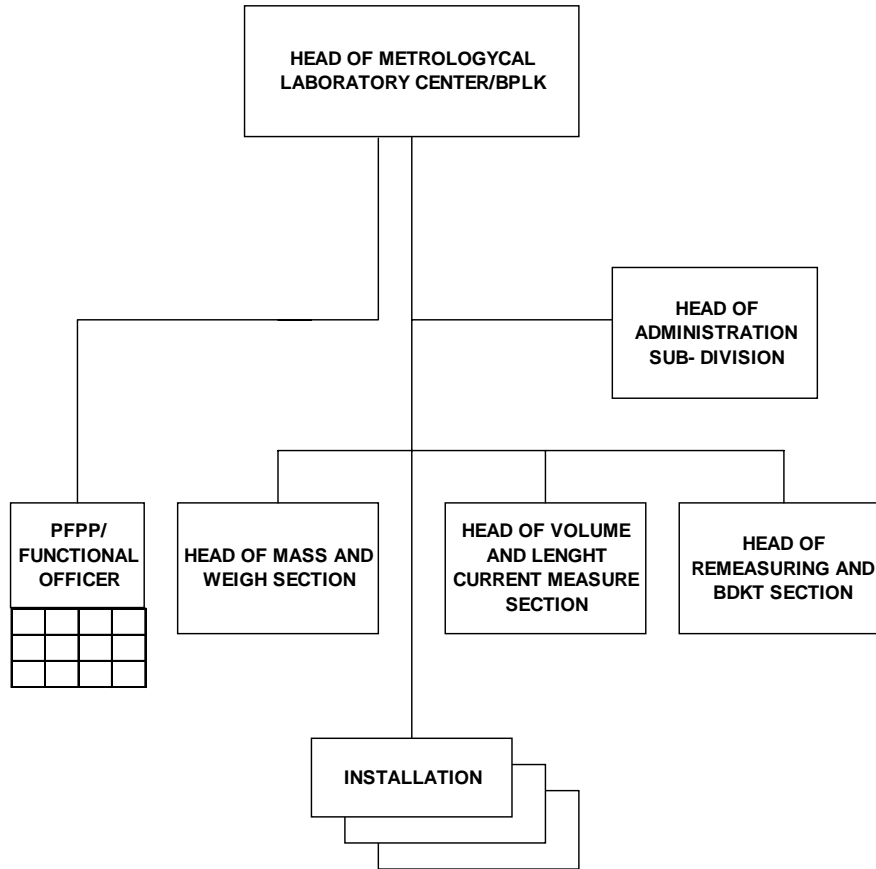
2 - 25

Source: Industry and Trade DINAS in West Java Province

Figure 3-10 Organization Chart of DINAS in West Java Province (1)

STRUCTURE ORGANIZATION OF METROLOGYCAL LABORATORY CENTER

STRUCTURE ORGANIZATION OF INDUSTRY DEVELOPMENT CENTER



2 - 26

Source: Industry and Trade DINAS in West Java Province

Figure 3-11 Organization Chart of DINAS in West Java Province (2)

PFPPs are primarily responsible for free consultation and guidance services. DINAS assigns them as PFPPs according to the age and other criteria like a participation in relevant seminars. Relevant work experience is not prerequisite although some are engineers or experts in specific fields.

RENSTRA's internal environment analysis indicates a concern about the impacts on industrial development of the poor coordination between the central and local governments in decentralization. While prefectural and municipal governments used to receive the central government's policy instructions via the provincial government, they now receive them directly. In West Java, it has become apparent that there are a limited number of PFPPs with a SME Consultant certificate or equivalent experience and/or expertise, so that the effective functioning of the direct consulting system depends much on their coordination and collaboration efforts over organizational boundaries. In this recognition, the provincial government plans to build a mechanism in which the provincial government's UPL-IKM controls the activities of UPL-IKMs at the provincial and prefectural/municipal levels.

(2) Budget

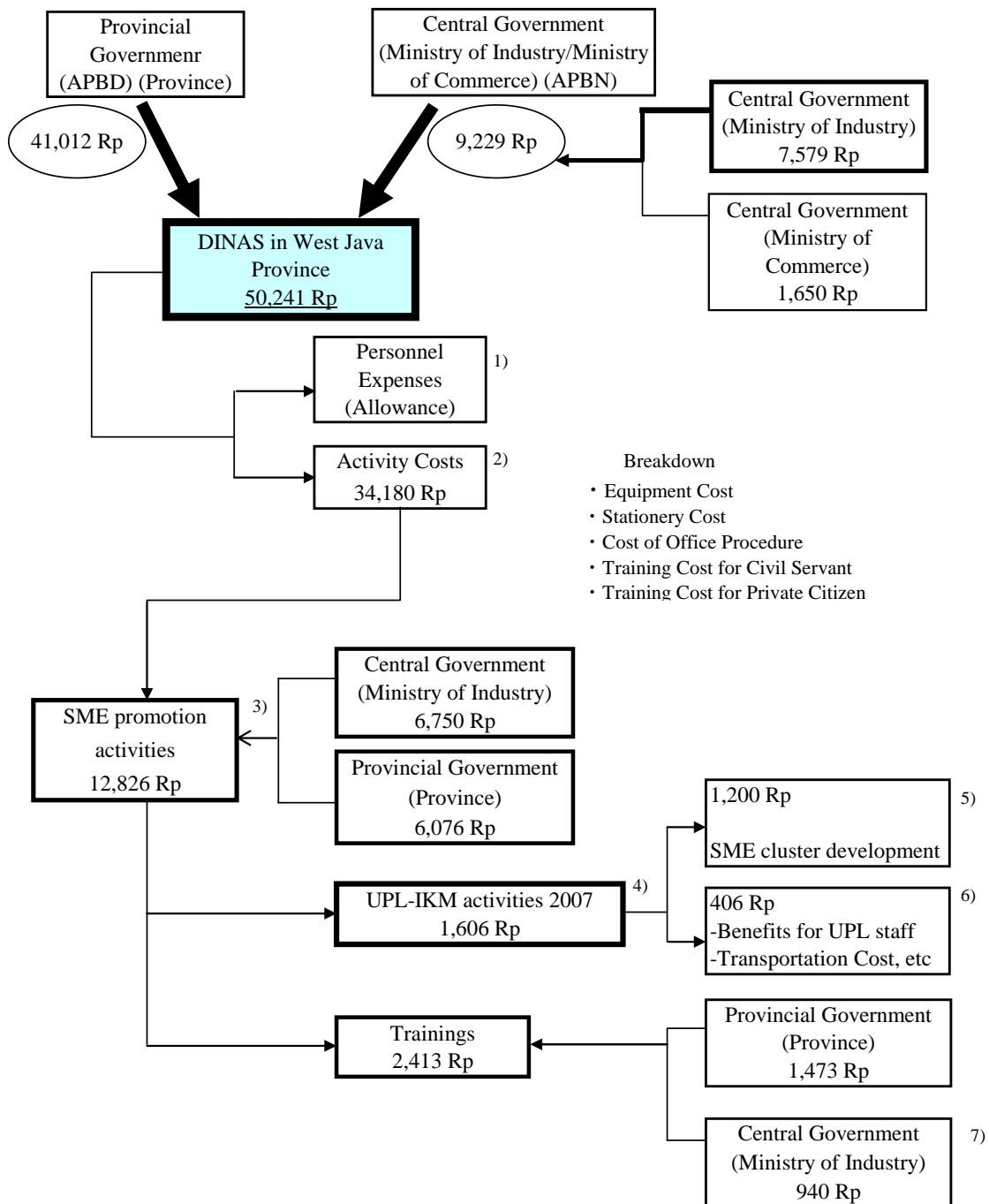
Figure 3-12 overviews the budget of provincial DINAS in West Java in 2007. The provincial government finances approximately 81% of it, and 15% and 3.2% are the transfers from MOI and MOC respectively. At first glance, it seems that fiscal decentralization has progressed. Concerning the activity costs, however, the transfers from MOI and MOC are not negligible, and the DINAS still relies much on them for activities.

Personnel costs account for around 32% of the whole budget and the rest is for activities⁹. About 37.5% of the activity costs are allocated to SMEs promotion. More than half of them, approximately 52.6%, come from MOI, and the rest is from the provincial government.

Looking into the details of the budget for SME promotion activities in the industrial sector, DINAS allocates approximately 12.5% of it to those by the UPL-IKM, and 18.8% to SME training programs. MOI funds all activities at present. Concerning the SME training programs, the provincial government finances about 61% of the costs, and the central government finances the rest. MOI funds all the costs related to "SME diagnosis consultants training programs".

⁹ The rest is spent for activities for SME promotion other than UPL-IKM and trainings.

(Unit: Million Rp)



- ** 1) All allowance of DINAS staff comes from the budget of provincial government basically.
 2) Approximately 73% of activity cost comes from the budget of provincial government, and about 27% of activity cost comes from the budget of central government
 3) SME promotion cost here is for the industrial sector only, and includes the budget for cluster development
 4) All UPL-IKM activities are financed by MOI at present
 5) Expenses to employ private consultants for the SME cluster development
 6) Benefits and Transportation Costs for activity of SME Consultant
 7) "SME Consultant Training Course" is funded by the central government.

Figure 3-12 Budget of Provincial DINAS in West Java in 2007

3.3.3 Public SME loan program in West Java

(1) SME loan scheme (DAKA PIM)

The West Java provincial government operates a SME loan program, called DAKA PIM.

Outline of the loan program

Period: 2001 – 2008

Eligibility: Companies in the manufacturing sector

Under the provincial government's budget, a provincial bank extends a loan to an applying manufacturer according to the general work flow shown in Figure 3-13. Prefectural/municipal DINASs accept the loan applications.

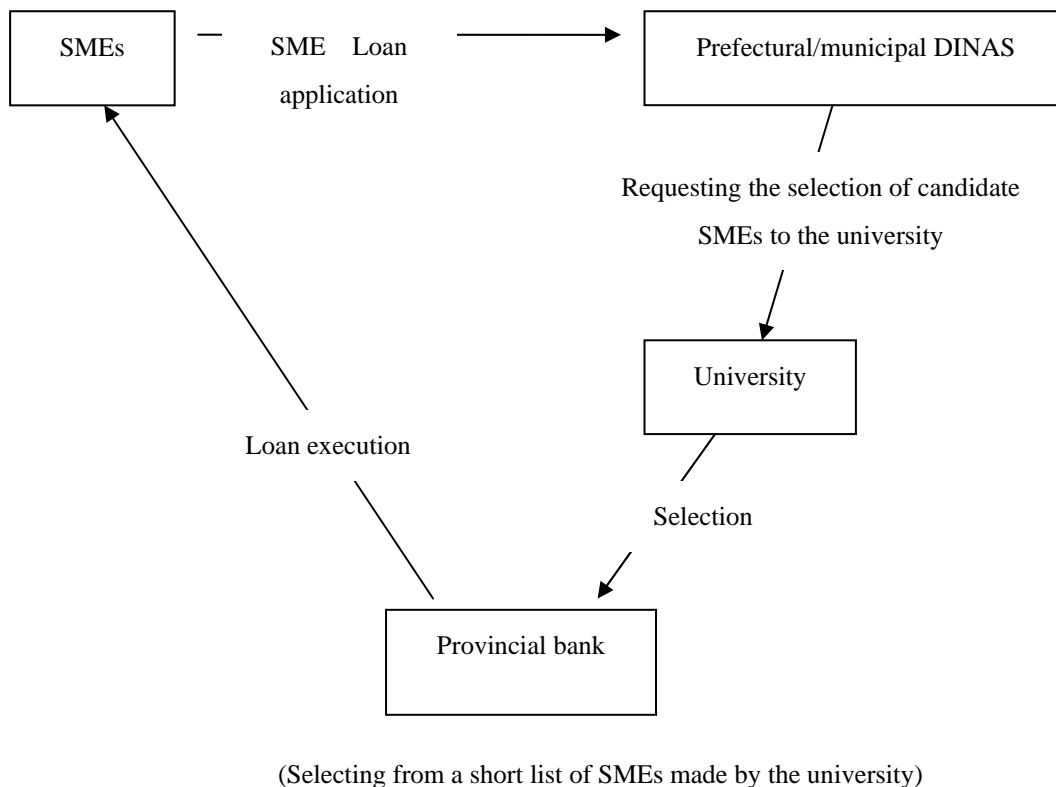


Figure 3-13 DAKA-PIM Scheme

SMEs can apply a DAKA PIM loan for either working capital or capital investment.

A loanee repays monthly the amount which is one-twelfths of the sum of loan principal and 20% of yearly business profit. It repay the principal to the provincial bank, while the 20% portion are distributed to provincial DINAS, prefectural/municipal DINAS, and the provincial bank, which monitor the repayment status.

(2) Status of public SME loans in West Java

Table 3-5 shows public SME loans made under the DAKA-PIM scheme in FY2006.

Table 3-5 Public SME Loans in FY2006

	Amount of loan	Number of borrowing SMEs	Average amount of loan per company
Kota. Bandung	900,000,000	58	15,517,241
Kab Bandung	750,000,000	67	11,194,030
Kab. Sumedang	750,000,000	27	27,777,778
Kota. Cimahi	150,000,000	9	16,666,667
Kota. Cirebon	750,000,000	23	32,608,696
Kab. Cirebon	750,000,000	41	18,292,683
Kab. Indramayu	750,000,000	36	20,833,333
Kab. Kuningan	600,000,000	58	10,344,828
Kab. Majalengka	600,000,000	42	14,285,714
Kab. Karawang	600,000,000	39	15,384,615
Kab. Subang	600,000,000	30	20,000,000
Kab. Bekasi	600,000,000	29	20,689,655
Kota. Bekasi	600,000,000	16	37,500,000
Kab. Purwakarta	600,000,000	33	18,181,818
Kab. Tasikmalaya	2,100,000,000	128	16,406,250
Kab. Ciamis	900,000,000	56	16,071,429
Kab. Garut	900,000,000	57	15,789,474
Kota. Bogor	750,000,000	13	57,692,308
Kab. Bogor	750,000,000	28	26,785,714
Kota. Sukabumi	750,000,000	22	34,090,909
Kab. Sukabumi	1,500,000,000	52	28,846,154
Kab. Cianjur	750,000,000	38	19,736,842
Kota. Depok	600,000,000	15	40,000,000
	18,000,000,000	917	19,629,226

Judging from the total amount of the loans (Rp18 billion), the number of borrowing companies (917), and the average amount of loan per company (Rp19 million), the DAKA-PIM scheme supplies a relatively small sum of money to a wide variety of companies for their working capital.

Chapter 4 Human Resource Development for SMEs and Supporting Program

Chapter 4 Human Resource Development for SMEs and Supporting Program

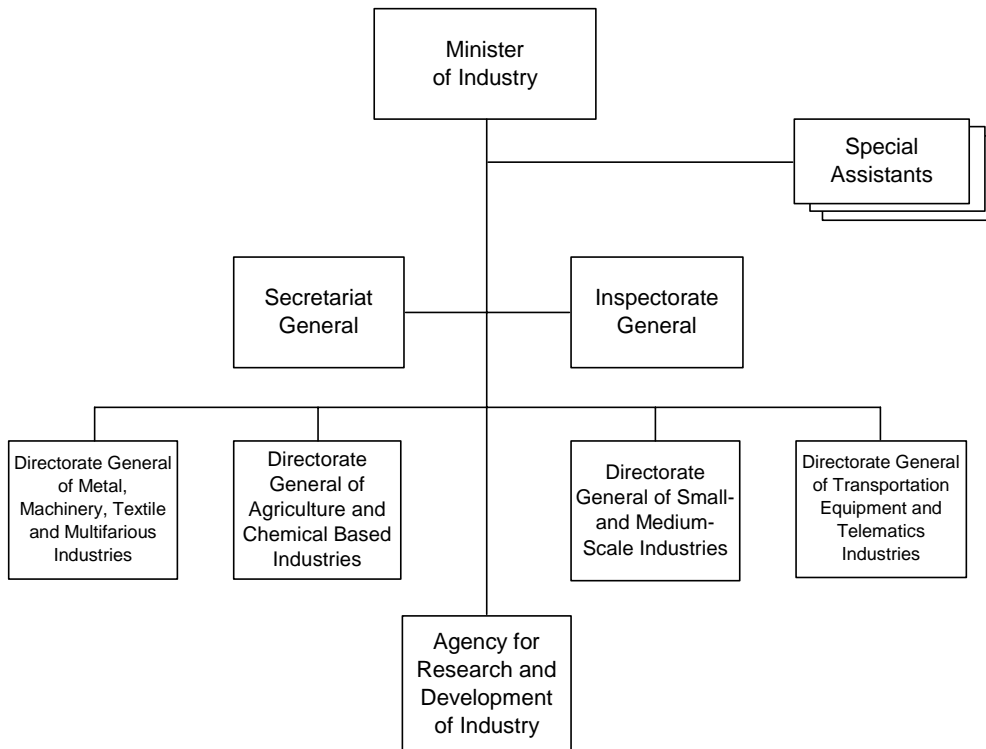
4.1 Human Resource Development for SMEs of the Ministry of Industry (MOI)

Two approaches promote SME development. One is social development approach taken for poverty alleviation and job creation, and the other is industrial approach for industrialization. Based on the former in Indonesia are the vocational training programs by the Ministry of Manpower and Transmigration for job-seekers and policies by the Ministry of Cooperatives and SMEs (MOCSME). SME promotion by the Ministry of Industry (MOI) corresponds to the latter approach, and the Study also focuses on it.

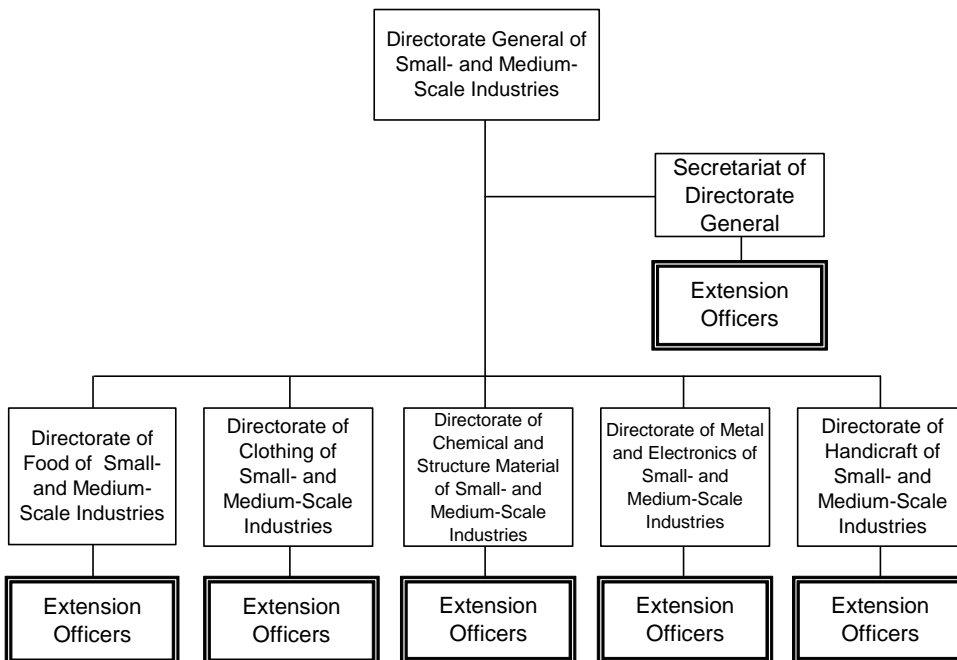
MOI is responsible for the promotion of SMEs in the manufacturing sector as a part of national industrial policy. MOI defines the following four types of SMEs as priority groups for development together with four product groups.

- SMEs leading local economies
- SMEs in supporting industries
- Export-oriented SMEs
- Innovative SMEs

The sector-based demarcation of responsibilities for SME promotion between MOCSME and MOI is not clear. As the former primarily covers cooperatives and MEs, there seems to be not much duplication with the service coverage of MOI, except for some SEs that may be covered by both ministries. The Figure 4-1 shows the organization chart of MOI.



Organization Chart of MOI



Organization Chart of IKM

Source: MOI

Figure 4-1 MOI Organization Chart

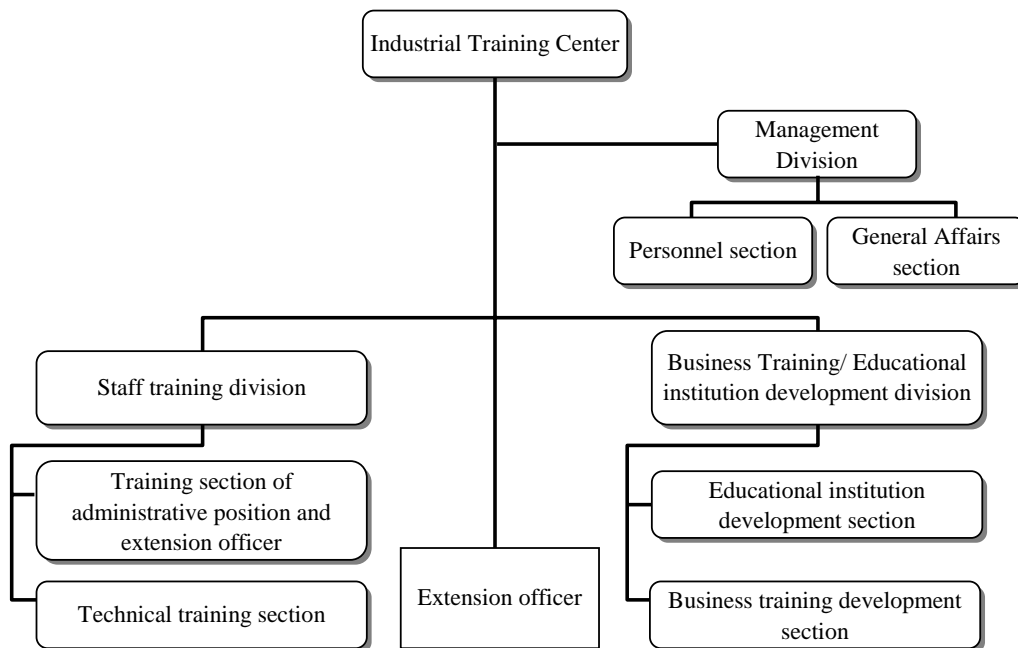
Regarding the human resource development for SMEs of MOI, PUSDIKLAT-INDA, IKM (also shown in Figure 4-1), and BPPI are mainly responsible for it. Below is the overview of them.

4.1.1 PUSDIKLAT-IND

PUSDIKLAT-IND provides an academic education and trainings for the private sector as well as the staff in ministries and state-owned companies. PUSDIKLAT-IND runs 17 academic schools, namely 9 vocational schools, including STMI¹ and APP², and 8 colleges.

Figure 4-2 is the organization chart of PUSDIKLAT-IND. PUSDIKLAT-IND is under the control of the Secretary General (Figure 4-1). There are two training centers with accommodations in Jakarta, and seven regional training centers called BDI³ in Medan, Padang, Jakarta, Surabaya, Yogyakarta, Denpasar, and Makassar. BDIs primarily train employees of state-owned companies. Trainings which are supplementally provided for the private sector are mainly for MEs and SEs.

1 Sekolah Teknik Menengah Industri
2 Akademi Pimpinan Perusahaan
3 Balai Kiklat Industri



Source: PUSDIKLAT-IND

Figure 4-2 Organization Chart of PUSDIKLAT-IND

In 2006, PUSDIKLAT-IND provided 60 training programs for the staff in ministries and state-owned companies and those from the private sector. Among them, thirteen programs were for ministry staff, and 10 were training of trainers (TOT).

Most of the training programs at the main school and two branch schools in Surabaya and Bandung deal with general management and basic production technologies for local industries. There were no courses tailored for the manufacturing industry especially for supporting industries.

The number of participants in a training is about 30 at least. They do not open a course for a specific people partly to promote grassroots exchanges among staff in ministries and state-owned companies and those in the private sector. Many participants are from SMEs.

For the selection of training themes, they used to conduct a nation-wide need assessment survey for 20 to 25 SMEs each in six cities every year. Now they do it every two year. Regarding the training themes for workers in state-owned companies,

PUSDIKLAT-IND has a regular contact with the person in charge of each company.

PUSDIKLAT-IND has about 22 inhouse instructors, 10 of whom are experts in production technologies. PUSDIKLAT-IND also invites outside instructors from universities or private training institutions as required.

The budget consists of routine budget and project budget. Routine budget is for the fixed costs including salaries for the permanent staff. Project budget amounts to 40 billion Rupiah for both 2006 and 2007. Out of the project budget, 60% is for the training programs, and the rest for the maintenance of the facilities. Programs for the private sector, in which most participants are from MEs and SEs, are for free.

4.1.2 Directorate General of Small-Medium Scale Industries (IKM)

IKM is primarily responsible for policy formulation for the development of SMEs and supporting industries. As other sections do, IKM provides training programs, too. Table 4-1 lists the training programs held by IKM in 2007. Although IKM's extension officers teach some programs, most of the instructors are from the outside. Also, it often commissions other agencies to implement a program. Main subjects of the programs are staff in local DINASs and those in the private sector. Many of them are for a week with 20 to 30 participants, and they are usually free of charge.

Table 4-1 Training Programs of IKM in 2007

	Training Program
1	Training Facilitator for Group of Women Small Business
2	Training of Marketing
3	Training of Silver Costing
4	Training of Design of Jewelry
5	Training of Plaimtmatt Design & Production
6	Training of Pottery Design & Production
7	Training of Embroidery Design & Production
8	Training of Ikat Woven Design & Production
9	Training of Food Production
10	Training of Fruit Processing
11	Training of Cacao Production
12	Training of Wood Finishing
13	Training of CAD/CAM
14	Training of Diversification of Product of Metal
15	Training of Pesticide Organic
16	Training of QS 9000
17	Training of ISO/TS 16949
18	Training of ISO 9000
19	Training of CEFE
20	Training of Website
21	Training of GMP (Good Manufacturing practices)
22	Training of HACCP (Hazard Analytical Critical Control point)
23	Training of Packaging
24	Training of Cleaner Production
25	Training of Production Control
26	Training of Food Safety
27	Training of AMT (Achievement of Motivation Training)
28	Training of Natural Color for Textile Industry
29	Training of taming Processing
30	Training of Industrial Clusters
31	Training of Rattan Processing
32	Training of Wood Processing
33	Training of Bamboo Processing
34	Training of Accounting System
35	Training of Shindan
36	Training of Information Technology (IT) for SMEs
37	Training of Web-Management
38	Training of Technique and Design of Shoes Product

4.1.3 Agency for Research and Development of Industry and Trade (BPPI)

BPPI⁴ has 9 technical centers called Balai Besar and 13 regional offices, BARISTAND-IND.

Center for Chemical and Packaging – Jakarta
Center for Agro-based Industry – Bogor
Center for Material and Technical Product (B4T) - Bandung
Center for Pulp and Paper – Bandung
Center for Ceramic – Bandung
Center for Textile – Bandung
Center for Leather, Rubber and Plastic – Yogyakarta
Center for Handicraft and Batik – Yogyakarta
Metal Industries Development Center (MIDC)

Secretariat of BPPI controls the budget of Balai Besars and BARISTAND-INDs. The center formulates overall policies and then each Balai Besar and BARISTAND plans detailed activities by their own.

Balai Besars have their respective specialty areas, and own necessary equipment and machinery. BARISTANDs concentrate on providing technical support for the special products of respective regions, and many clients are MEs. They often implement programs at the request of a provincial DINAS. BARISTANDs' operating under the control of BPPI, however, there is not any institutional cooperation mechanism with DINASs.

4.2 SME Consulting System and UPL-IKM

4.2.1 SME Consulting System

(1) Minister of Industry Decree

Indonesia decided to establish a new SME consulting system with reference to the Japanese “Shindan-shi” system, which was envisaged in “Minister of Industry Decree on Development of SME Consulting Service” (37/M-IND/PER/6/2006) that was enacted in June 27, 2006.

4 Balai Penelitian dan Pengembangan Industri

The decree is based on the following two premises: 1) consulting services to help them find their problems is necessary to promote the fostering and development of SMEs; and 2) a solid training mechanism is essential to get hold of skilled SME consultants. It classifies SME consulting services into diagnosis service and specialty service. The former is defined as problem identification and diagnosis, and the latter as problem analysis and consulting for improvement. Accordingly, SME consultants are classified into diagnosis consultants and specialty consultants.

1) SME diagnosis consultants

SME diagnosis consultants make comprehensive analysis and diagnosis of SMEs to identify their problems.

2) SME specialty consultants

SME specialty consultants analyze specific problems a SME faces, propose solutions, and assist it in implementing specific improvement measures.

Both consultants must possess a certificate of capability and be registered with IKM. Specific skills and capabilities required for each consultancy should accord with the National Professional Skills Standard (SKKNI⁵), and a professional certification organization (LSP⁶) issues the certificate. National Professional Certification Bureau (BNSP⁷), which comes directly under the President, accredits the LSP. Note, however, that until the establishment of SKKNI covering SME consultants, an alternative standard proposed by the Director General of IKM will be used.

The decree designates IKM in MOI at the central government level and DINASs at local levels to the coordinating organizations of SME consultants. In addition, it specifies that companies using the SME consulting service are entitled to receive an incentive pay equivalent to 90% of the total consulting service fee.

(2) SME consulting system

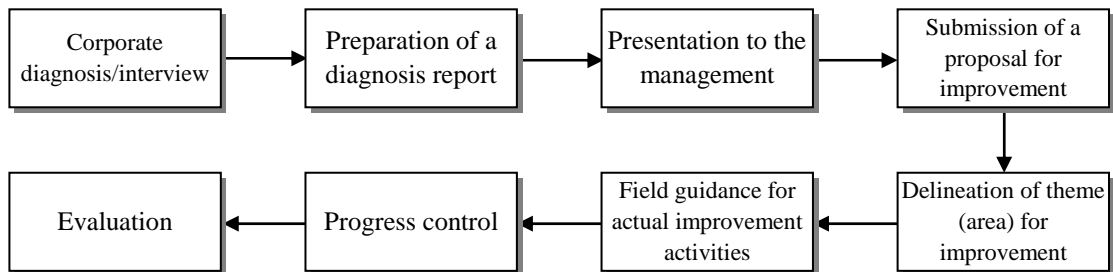
The SME consulting system is a mechanism to support SMEs, which consists of series of services ranging from corporate diagnosis by a SME diagnosis consultant to the

5 Standart Kompetensi Kerja Nasional Indonesia

6 Lembaga Sertifikasi Profesi

7 Badan Nasional Sertifikasi dan Profesi

development of a specific proposal for improvement, and consulting service based on the proposal. Figure 4-3 shows key activities undertaken under the SME consulting system.



Source: Prepared by the study team on the basis of a brochure introducing the SME consulting system produced by Human Resource Development Clinic, MOI

Figure 4-3 General Flow of the SME Consulting System

The SME consulting system is assumed to have the following benefits for SMEs, governments, and financial institutions⁸.

SMEs:

- Opportunity to identify their own weaknesses and problems
- Development and implementation of improvement measures for problem solving and productivity improvement
- Improvement of employees' motivation
- Use of diagnosis results for the basis of examination of loan application by a financial institution
- Use of diagnosis results for evaluation of an application for public support

Government:

- Accurate understanding of the current state of SMEs
- Basis of SME promotion program formulation
- Coordination of various public human resource development programs

Financial institutions:

- Accurate understanding of the current state of borrowing SEMs
- Mitigation of loan-related risks

⁸ From the brochure introducing the SME consulting system published by the Human Resource Development Clinic.

(3) SME diagnosis consultant training course

The first SME diagnosis consultant training course was held in Puncak, West Java, between April and October 2006, under the sponsorship of the Human Resource Development Clinic established within IKM. It received 283 applications from local DINASs (including PFPPs) and the institutions under the central government (Balai Besars, BDIs, and BARISTANDs), and allowed 100 persons of them (72 men and 28 women) to participate after the two-step selection (a document screening followed by a written test). Selection criteria included educational background (college graduate or D4 certification), English language skills, and age. The average age of the participants was 35.

The six-month course consisted of classroom lectures (88 days in total) and field training of corporate diagnosis (50 days). Table 4-2 shows the subjects taught in the lecture sessions. As shown in the table, the lectures on production management and field training at factories occupied 40% of the entire course period.

Table 4-2 Subject List of the SME Diagnosis Consultant Training Course

SME policy/basic knowledge	5 days
Basic management	8 days
Financial management	9 days
Production management	35 days
Sales management	9 days
Labor management	9 days
Administration	5 days
Management innovation planning	8 days

The course covers relevant areas where SME diagnosis consultants need to have a thorough knowledge, including management, finance, production, procurement, sales and marketing, Human Resource (HR) management, and information technology. The participants had opportunities to receive field training (corporate diagnosis) at selected companies in addition to lecture, discussion, case study, and presentation. Note that MEs with ten employees or less are among the selected companies. They carried out corporate diagnosis exercises five times, about ten days each. Up to the fourth exercise, they focused on the diagnosis of production management, and diagnosed all areas in the fifth exercise. Participants took tests for the individual subjects during the course and

final tests for the seven subjects below at the end of the course. They also took a field test to evaluate diagnosis capability..

- Financial management
- Job management
- Process control/industrial knowledge/cost control
- Quality control
- Procurement management
- Sales management
- Labor management

In 2007, the Human Resource Developmnt Clinic sponsored second diagnosis consultant training course in Puncak with the participation of 97 government employees. It is now considering opening the course to non-government employees in the future.

Participants in the first course from East Java and West Java counted five and nine, respectively, and two and four in the second course.

(4) Professional certification for SME diagnosis consultant (Konsultan Diagnosis IKM)

MOI has started consultation with BNSP to make “SME diagnosis consultant” a formally certified profession.

BNSP will establish a professional skills certification system for SME diagnosis consultant, which includes SKKNI, LSP, and diagnosis consultant training organization (LDP⁹).

SKKNI for SME diagnosis consultants was established in February 2007. It defines professional skills required for a diagnosis consultant in terms of knowledge, skills, and an attitude. As for knowledge, it specifies seven categories (financial management, job management, production management, process control, procurement management, sales management, and labor management). LDP and LSP have still to be accredited. In August 2007, MOI held the first meeting to establish LSP as a vehicle to certify diagnosis consultants.

9 Lembaga Diklat Profesi

Meanwhile, having conducted the two SME diagnosis consultant training courses, the Human Resource Development Clinic of IKM in MOI is the provisional LDP. BNSP has inspected the two training courses, and accredited assessors have conducted certification tests in three aspects (knowledge, skills, and an attitude) by using a sampling method.

The participants in the past two training courses who had taken the respective final tests have received a certificate of completion from the Director General of IKM, which represented a provisional certification for Konsultan Diagnosis IKM. Conclusion of details on the formal certification and its establishment need to be finalized, and discussion continues as to how to reflect the results of the tests conducted by BNSP in the formal certification and how to treat the provisional certification.

4.2.2 UPL-IKM

Concurrently with the certification of new SME diagnosis consultants, IKM is working to establish a UPL-IKM in each local government.

According to its plan, a UPL-IKM is responsible for corporate diagnosis and consulting services by its own staff and outside experts, and the management of UPTs. IKM will make each of 33 provinces and all prefectures and municipalities establish a UPL-IKM. The central government (Deprin IKM) finances the operations, and allocates funds to each province, then from provinces to prefectures and municipalities. UPL-IKM's personnel appointment is at the discretion of each local government.

So far, the following are documents relating to the establishment of UPL-IKM.

- Integrated Strategy for Development and Fostering of SMEs in 2007 – IKM (2006)
- Directive to establish a UPL-IKM by the Director General of IKM, issued to each province, prefecture and municipality
- Decision by the Director General of IKM concerning the UPL-IKM team
- IKM Director General Regulation No.55/IKM/PER/8/2007

(1) Integrated Strategy for Development and Fostering of SMEs in 2007 – IKM (2006)

In this document, IKM shows SME support strategies in 2007 to provincial, prefectural, and municipal DINASs.

It starts with recognition that, while reiterating the importance of SME promotion for the national economy, SMEs in Indonesia have difficulty in increasing exports and competing with imports in the domestic market due to the general lack of international competitiveness. To improve the situation, IKM proposes the following six strategies that are interrelated to each other with expectation to create synergetic effects.

- 1) Strengthening of SME promotion programs
 - Cluster SME development in promising and priority industries
 - Development of local specialty products for SMEs
- 2) Human resource development
 - HR development of SMEs by means of training and field guidance
 - HR development of staff in public organizations including PFPPs by means of training and field guidance
 - Use of competent outsiders as facilitators
- 3) Strengthening of organizations
 - Establishment of UPL-IKMs by provincial, prefectural and municipal DINASs
 - Establishment of SME clinics by local DINASs, which deal with design, packaging, intellectual property, cost management, sales, and HR
 - Revitalization of UPTs
- 4) Enhancement of the SME consulting system
 - Increase in the budget for SME consulting services by PFPPs and UPL-IKMs
 - Use of outside organizations and experts for SME consulting services
- 5) Reinforcement of professional networks
 - Establishment of cluster forums at the central and local government levels as well as in each cluster area
- 6) Strengthening of the budget base
 - Securing of the budget required to implement the above strategies

The strategies emphasize cluster development and direct consulting services to SMEs. In particular, the primary goal is to ensure coordinated efforts of UPL-IKMs and local branches of central government agencies (such as Balai Besars and BDIs) in order to provide integrated services to local cluster SMEs.

- (2) Directives to establish a UPL-IKM by the Director General of IKM, issued to each province, prefecture and municipality

The Director General's letter in May 2006 (325/IKM/V/06) directed provincial DINASs to establish a UPL-IKM for the purpose of improving the quality of consulting

service to local clusters and SMEs. UPL-IKM members consist of PFPPs and other designated persons in charge of field consulting services. At the same time, the letter recognizes the shortage of government staff to meet the demand of consulting services, and emphasizes the need for collaboration with private consulting firms, universities and BDSs (Business Development Services), particularly in the areas of production management and corporate management.

Then, the next letter in November 2006 (717/IKM/1/11/2006) directed prefectural and municipal DINASs to establish a UPL-IKM. At least three members are in each UPL-IKM, and a PFPP has to lead the unit. If no PFPP is available, any person who has received a diagnosis consultant training, or if not, any person who has experience in SME consulting services would suffice.

As described above, IKM has directed provincial, prefectural and municipal DINASs to establish a UPL-IKM, while requesting them to report its formal establishment by specific dates so as to secure the UPL-IKM activity budget in 2007.

The letter in June 2007 (329/IKM/6/2007) required provincial DINASs to report activity results by the end of June.

(3) Decision by the Director General of IKM concerning the UPL-IKM team

This decision (34/IKM/KEP/5/2007) specifies members of the UPL-IKM team to be formed in IKM, together with their responsibilities, in recognition that the team will be needed to implement the Minister of Industry Decree on Development of SME Consulting Service (37/M-IND/PER/6/2006). The team will be responsible for research and study, development, guidance, supervision, and evaluation relating to provincial, prefectural and municipal UPL-IKMs. Its main activities are as follows.

- 1) Research and study on formation and appointment of the UPL-IKM team members by the heads of provincial, prefectural and municipal DINASs
- 2) Development of a database on SME diagnosis and specialty consultants
- 3) Regulation to distinguish services by SME diagnosis and specialty consultants

(4) IKM Director General Regulation No.55/IKM/PER/8/2007

This regulation sets forth a general guideline for the establishment and operation of UPL-IKMs, which was prepared when IKM launched the SME diagnosis consultant system and began promoting the establishment of UPL-IKMs. Specifically, it serves as

an operational guideline (PEDOMAN¹⁰) for the staff in IKM and local DINASs including PFPPs and UPL-IKM managers.

So far, consulting services provided by MOI are continuous SME consulting services by PFPPs and consulting services by sector-based departments to SMEs which manufacture selected products. In the future, the following three consulting services will be added:

- Analysis and recommendation by SME diagnosis consultants
- Consulting service in specific fields by SME specialty consultants
- Consulting service by private consulting firms chosen through tendering and contract awarding procedures

UPL-IKMs will be responsible for overall control and supervision of the above consulting services. The regulation consists of the following three volumes.

Book 1 Guideline for the Establishment of UPL-IKM

Book 2 Guideline for SME Diagnosis and Specialty Consulting Service

Book 3 Guideline for Procurement of Consulting Service for Development of SME Cluster Areas

1) Book 1 Guideline for the Establishment of UPL-IKM

A UPL-IKM that is being formed in local governments will take charge of supporting SMEs' HR development, and is closely associated with the objective of the Study and recommendations made therein. A general outline of this guideline is as follows.

10 PEDOMAN refers to rules or regulations.

Chapter 1 Introduction

- A. Background
- B. Intent and Objective
- C. Definition

Chapter 2 Organization of UPL-IKM and Work Procedures

- A. Role of UPL-IKM
- B. Organization of UPL-IKM
 - Central UPL-IKM
 - Provincial UPL-IKM
 - Prefectural/Municipal UPL-IKM
- C. Mechanism and Operation of UPL-IKM's Consulting Service
- D. Conditions for the Establishment of UPL-IKM

Chapter 3 Elements Relating to UPL-IKM's Support

Chapter 4 Conclusion

Items in this guideline relevant to the Study are summarized as follows.

- a) While consulting is one method of SME support, consulting activities so far have not produced expected results and thus their reinforcement is necessary. UPL-IKM will coordinate activities of industry advisors for their effective use. (Chapter 1 A)
- b) SME is defined as a company whose investment (excepting land and buildings) is less than Rp10 billion. (Chapter 1 C)
- c) Industrial cluster is an aggregation of companies or organizations that are located in close proximity and belong to a specific industrial field and that are interlinked through knowledge sharing and complementary relationship. (Chapter 1 C)
- d) Sentra (SME cluster area) is an aggregation of SMEs, which make, sell or use the same products, materials and/or process and that are located in the same area. (Chapter 1 C)
- e) Direct consulting is a comprehensive and continuous consulting activity conducted by industry advisors for SMEs. (Chapter 1 C)
- f) Industry advisor is a PFPP and/or extension officer who has received relevant training including the diagnosis consultant course, or a SME consultant that is a natural or legal person. (Chapter 1 C)
- g) Central UPL-IKM is the work unit directly reporting to the Director General of IKM, and supervises the activities of local UPL-IKMs. A local UPL-IKM is an unit

- directly reporting to the head of its provincial, prefectural or municipal DINAS and supervises consulting activities. (Chapter 1 C)
- h) Diagnosis is the activity to identify a SME's problems and make recommendations for problem solving. (Chapter 1 C)
 - i) A SME diagnosis consultant is a consultant performing corporate diagnosis, while a SME specialty consultant is responsible for in-depth analysis and consultation in a specific field on the basis of the results of the diagnosis. (Chapter 1 C)
 - j) UPL-IKM's role is not limited to the consulting which assist SMEs in the problem solving process. It also serves as an intermediary of information and financial sources as well as a motivator/innovator for SMEs. (Chapter 2 A)
 - k) Central UPL-IKM's responsibilities include the training, capacity development, and registration of industry advisors, and the development of guidelines relating to consulting services. (Chapter 2 B)
 - l) Figure 4-4 shows the central UPL-IKM's organization. (Chapter 2 B)

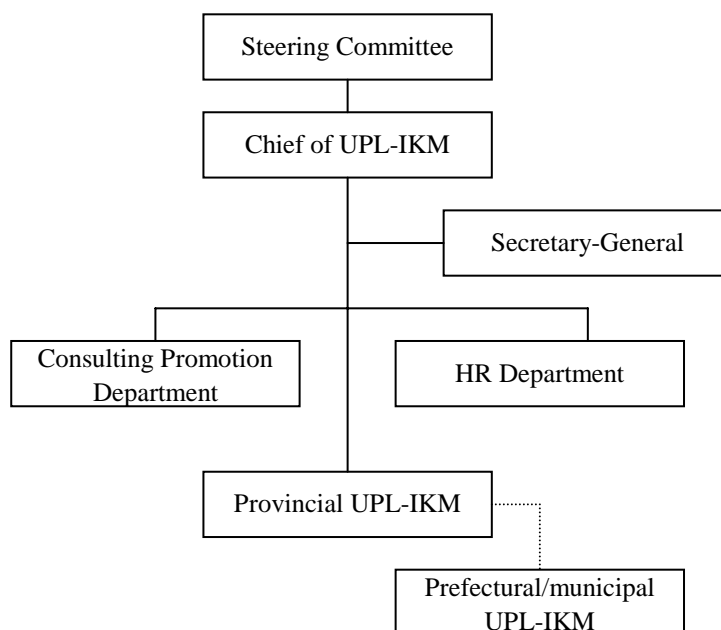


Figure 4-4 Organizational Chart of the Central UPL-IKM

Director General of IKM will serve as the chairman of Steering Committee. The chief of UPL-IKM, Secretary-General, and all members of Consulting Promotion and HR Departments will not be managerial (structural) staff but PFPPs who have received relevant training including the diagnosis consultant course, or general staff. Note that non-government employees can work for Consulting Promotion or HR Department if they have received adequate training.

m) Figure 4-5 represents the organization of a provincial, prefectural or municipal UPL-IKM. (Chapter 2 B)

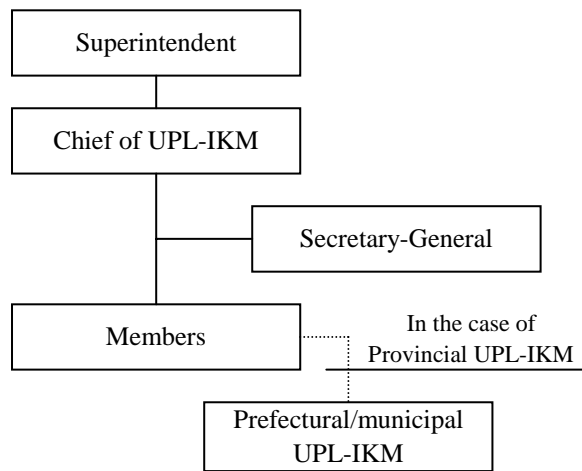


Figure 4-5 Organizational Chart of a Provincial/Prefectural/Municipal UPL-IKM

Provincial/prefectural/municipal UPL-IKMs will be responsible for implementing activities at provincial/prefectural/municipal levels in collaboration with other UPL-IKMs, coordinating with financial and other related institutions, and developing capacities of industry advisors.

The head of a local DINAS will serve as the superintendent. The chief of a UPL-IKM, secretary-general and members will not be managerial (structural) staff but PFPPs who have received relevant training including the diagnosis consultant course or general staff. Note that non-government employees can be a member of the unit.

n) UPL-IKM's consulting mechanism will be in the following three forms. (Chapter 2 C)

- Direct consulting service to be provided by industry advisors under the guidance of the UPL-IKM chief
- Diagnosis service to be provided by SME diagnosis consultants under the guidance of the UPL-IKM chief
- Consulting service for SMEs in cluster areas (focusing on problem solving) to be provided by a consulting firm under a contract awarded by the chief of UPL-IKM

o) Organizations supporting the activities of UPL-IKMs will include Balai Besars, BARISTANDs, BDIs, UPTs, the institutions of higher education and vocational schools under the supervision of the MOI (Chapter 3).

2) Book 2 Guideline for SME Diagnosis and Specialty Consulting Service

This book gives a guideline for SME diagnosis consultants and other industry advisors, who perform SME consulting services. A general outline of this guideline is as follows.

Chapter 1 Introduction

A. Background

B. Intent and Objective

Chapter 2 SME Diagnosis Consulting

A. Diagnosis Mechanism

B. Diagnosis Report

Chapter 3 SME Specialty Consulting

A. SME Specialty Consulting

B. Mechanism of SME Specialty Consulting

Chapter 4 Conclusion

Chapter 2 states that industrial advisors or SME diagnosis consultants provide diagnosis services. For a company to receive corporate diagnosis, it must meet specific requirements such as a commercial registration as a legal entity. The client company bears 10% of the consulting fee of the diagnosis service.

The guideline further specifies diagnosis procedures, schedules, scope of services, and report forms. It is noted that the end of the diagnosis report should indicate the need for a follow-up activity by a specialty consultant for problem solving.

Chapter 3 states the qualifications for SME specialty consultants, including professional knowledge and skills together with the prescription concerning the official certification and ID card, of which determination of details and effectuation have still to be made. It specifies a set of procedures taken prior to the implementation of a SME specialty consulting service, including the confirmation of the needs in the diagnosis report, selection of a specialty consultant, consent of the client company including to its bearing 10% of the consultant fee, and a consulting contract with the client company. The guideline requires an individual consultant to be retained

through tender procedures, specifying the details on various types of procedures, namely open tendering, restrictive tendering, direct tendering, and selecting tendering. 90% of the consulting fee will be paid by IKM. Sample formats including contracts, instructions, and reports are attached.

3) Book 3 Guideline for Procurement of Consulting Service for Development of SME Cluster Areas

In the country, SMEs often develop in a specific area to form a cluster. IKM has provided a variety of support for SME cluster areas, including technology transfer, knowledge dissemination, market development, and consulting service. This guideline provides standard procedures to render consulting service for companies in SME cluster areas under the existing laws and regulations. A general outline of this guideline is as follows.

Chapter 1 Introduction

A. Background

B. Intent and Objective

Chapter 2 Use of Consulting Service for Fostering of SME Cluster Areas

A. Mechanism

B. Tendering Process

C. Report on Fostering of SME Cluster Areas

Chapter 3 Conclusion

Actual services are provided by consulting firms, which are retained by the procurement group of provincial, prefectural and municipal governments. After analyzing and identifying the problems companies in a specific cluster area face, the chief of a UPL-IKM prepares a TOR (Term of Reference) for retaining of a consulting firm. The retained consulting firm has to submit reports showing progress and results of the consulting service to the chief of the UPL-IKM.

4.3 Human Resource Development by Private Sector

There are various private organizations for human resource development nationwide. Human resource development by the private sector is classified into 3 categories: (1) Non-profit Organization (2) Management Institutions (3) Polytechnic manufacture (POLMAN).

4.3.1 Non-profit organizations

Representative NPOs supporting human resource development are YAYASAN PENDIDIKAN MATSUSHITA GOBEL (YPMG), YAYASAN DHARMA BHAKTI ASTRA (YDBA), and YAYASAN BINA MITRA BAKRIE (YBMB).

(1) YAYASAN PENDIDIKAN MATSUSHITA GOBEL (YPMG)

YPMG is an independent non-profit private organization established in 1979 for human resource development of the public at large. To be concrete, Human Development Institute under YPMG (LPSM¹¹) provides non-academic training programs, which cover production techniques and management mainly in the electrical and electronics fields. It offers custom made programs and seminars/workshops together with regular sessions. As required, it uses the training facilities and equipment of affiliated manufactures for the program.

(2) YAYASAN DHARMA BHAKTI ASTRA (YDBA)

YDBA is a member of ASTRA Partnership headed by ASTRA Group¹². While providing technical trainings for ASTRA affiliated companies, it supports MEs and SMEs in terms of production technology, management techniques, market cultivation, and financial management. YDBA has permanent instructors who specialize in financing or repair/maintenance of automobiles for SME assistance. It contracts out the programs on the other fields.

(3) YAYASAN BINA MITRA BAKRIE (YBMB)

YBMB is a non-profit foundation to provide various support programs for the firms in Bakrie group. Recently, it started the following services to non-affiliate SMEs to fulfill its corporate social responsibility:

- BDS for small scale farmers
- Business matching
- Community development to nurture entrepreneurship
- Training and auditing in production technology
- Management technology training (marketing, trading, financing, environmental protection)
- Credit guarantee

11 Lembaga Pengembangan Sumber Daya Manusia

12 ASTRA Group: Astra Mobil, Toyota Astra Motor, Astra Heavy Industry, Astra Honda Motor, Astra Otopart and Astra Agro Lestari

4.3.2 Management institutions

There are many private management institutions nationwide, some of which are operated by consulting firms to provide a variety of services for the industrial sector. At the same time, there are private management schools specializing solely in human resource development. Well known are PPM, AMDI, and PRASETIYA¹³.

(1) PPM (Pusat Pengembangan Manajemen): Center for Management Development

PPM is one of the oldest management schools. Founded in 1967, it has nurtured promising managers. The programs aim to educate generations of managers in every industry and specialists in management.

(2) ASTRA MANAGEMENT DEVELOPMENT INSTITUTE (AMDI)

AMDI is an institute opened only for the employees in ASTRA affiliate companies. It has a strong presence and influence in the industrial sector. The four cores of the curriculum are;

- Leadership competence
- Functional competence
- Basic competence
- In house training

(3) PRASETIYA

Just like PPM, PRASETIYA is a business management school opened for all industries. The training program focuses on practical knowledge required for business activities rather than pure business theories. However, production control and production technology are not in the program.

13 PRASETIYA refers to a business school.

4.3.3 POLMAN (Manufacturing orient polytechnic)

POLMANs, ranked as higher education institutions by the Ministry of National Education (MONE), have had a reputation for providing practical education programs. Some of them were founded by foreign assistance about 30 years ago, and featured is European-style craftsman training program which concentrates on production techniques at the real manufacturing process. Concerning the training programs opened for the industrial world, it prepares them upon request. Therefore, the levels of the courses range from basic to advanced.

4.4 Major organizations relating to the fostering of supporting industries in East Java

In Surabaya, the state capital of East Java, there are a number of educational institutions including Institute of Technology Surabaya (ITS) as well as research organizations and training institutes that support the industrial technology base. Among them, there is a unique support organization that was jointly established by ASTRA Foundation, ITS, and Buana Cooperative of Waru, Sidoarjo. It specializes in technical support and guidance for SMEs.

Figure 4-6 shows a general image of SME support organizations in East Java.

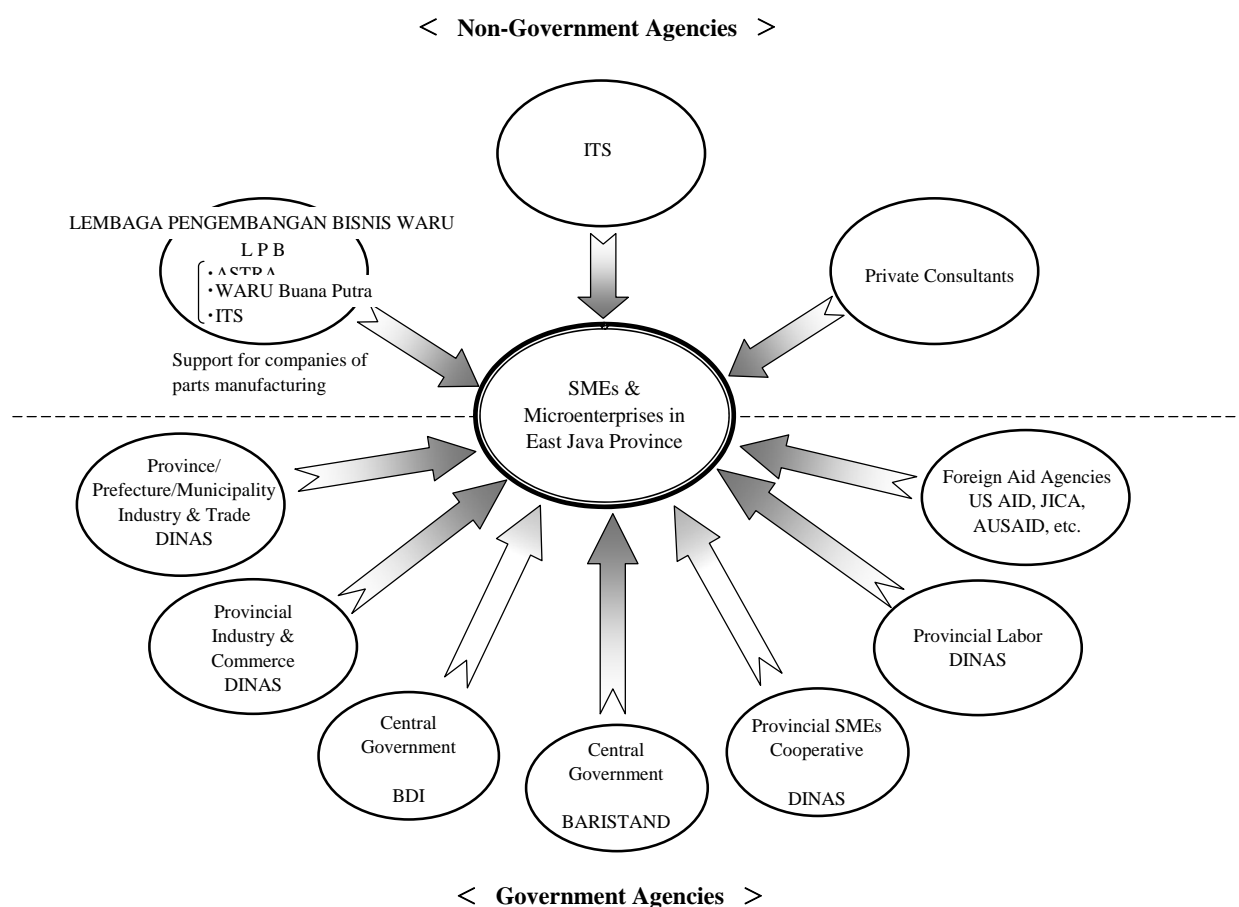


Figure 4-6 SME Supporting Institutions in East Java Province

4.4.1 Industry and Trade DINAS in East Java

(1) UPL-IKM

Under the instruction of the Director General of IKM, Industry and Trade DINAS in East Java established five district UPL-IKMs and a UPL-IKM in the DINAS as a coordinating organization. However, provincial, prefectural and municipal governments have still to coordinate activities relating to the establishment of UPL-IKMs. In East Java, there are five SME diagnostic consultants who had obtained a certification in the training course in 2006, and they have served as the principals of five UPL-IKMs. The composition of these UPL-IKMs is summarized as follows.

Table 4-3 Member Structure of UPL-IKMs in East Java Province

UPL-IKM in the provincial DINAS	
Chief	PFPP
Member	Structural/General - 4 persons

Kabupaten Pasuruan UPL-IKM	
Chief	SME Diagnosis Consultant
Member	Structural/General - 4 persons

Kabupaten Megetan UPL-IKM	
Chief	SME Diagnosis Consultant
Member	Structural/General - 4 persons Functional Staff 1 person

Kabupaten Sidoarjo UPL-IKM	
Chief	SME Diagnosis Consultant
Member	Structural/General - 3 persons Functional Staff 1 person

Kota Pasuruan UPL-IKM	
Chief	SME Diagnosis Consultant
Member	Structural/General - 4 persons

Kabupaten Mojokerto UPL-IKM	
Chief	SME Diagnosis Consultant
Member	Structural/General - 4 persons Functional Staff 1 person

Source: Material of DINAS of Industry and Commerce in East Java Province

In May 2007, Industry and Trade DINAS held a UPL-IKM joint meeting, and they decided to conduct diagnosis activities in the following sectors as the first activity phase. SME diagnostic consultants are to conduct these activities in parallel to the participation in the model project of the present study.

Kabupaten Sidoarjo	UPL	Food & Beverage	4 companies
		Metal	2 companies
		Shoemaking	1 company
Kabupaten Pasuruan	UPL	Lumber	2 companies
		Silver	1 company
Kota Pasuruan	UPL	Metal	4 companies
		Lumber	1 company
Kabupaten Magetan	UPL	Leather	4 companies
		Food & Beverage	1 company
Kabupaten Mojokerto	UPL	Shoemaking	5 companies

While IKM earmarks the budget for the establishment of local UPL-IKMs and bears the cost relating to the activities by the SME diagnostic consultants, local governments have to finance activities by the other staff.

For the SME diagnostic consultant training course in 2007, provincial DINAS sent two personnel and prefectural DINASs did three.

(2) Expert groups

Industry and Trade DINAS formed four expert groups (shown in Table 4-4) in 2006, which conduct various activities including periodical meetings. Most of the members are DINAS staff (in a managerial or general position), but two are from BPTIs which were formerly UPTs (discussed later).

Table 4-4 Specialist Groups in Industry and Trade DINAS of East Java Province

Standardization Group	8 members	Standardization and Publication of ISO ^{*)} , Guidance of ISO Certificate acquisition
Productivity Improvement Group	19 members	Guidance of 10 companies with 5-10 employees (Food, Metal, Stove) and 4 BPTIs, and other 22 enterprises (Shoemaking, sandal) Target enterprises to be selected from the enterprise list at DINAS Three-month guidance in soft-technology like a “QC” to be offered free of charge.
Energy saving group	4 members	Investigation of 4 large enterprises together with JETRO in 2006
Design group	4 members	—————

Note: *) International Organization for Standardization

4.4.2 BPTI Logam (BALAI PELAYANAN TEKNIS INDUSTRI LOGAM)

In East Java, there were more than 20 UPTs before the decentralization, which were controlled by the central government. Then the provincial government took over 14 UPTs. Five specialize in manufacturing, seven in measuring and weighing, and two in agriculture. The government changed the name of the first five to BPTIs, each specialized in metal, ceramics, wood, leather, and handcraft respectively. BPTI Logam is the one specializing in the metalworking and had expanded its facility and equipment under the assistance of the Indian government.

BPTI Logam has 104 staff, of which nine are full-time employees and 95 contract workers. It provides technical support and training in metalworking as well as vocational training for high school graduates. It trains students in its own facility and does not send its instructors to companies. Its training covers machining, surface treatment, and

production management techniques. It provides training for companies inside and outside the province. Its main revenues are from producing parts (delivered to Philips and ASTRA) while the training fee accounts for the minimal portion.

BPTI Logam has one SME diagnostic consultant certified in 2006 but does not send its employee to the training course in 2007. At present, it does not have its own plan or program to provide corporate diagnosis and consulting service.

However, it is generally enthusiastic about technical assistance and training for local SMEs. In fact, it has enough resources including equipment and technicians that allow it to provide various services if it wishes. It is willing to send specialty consultants to UPL-IKMs and cooperates in the development of DINAS's specialty consultant database.

4.4.3 BDI (Balai Diklat Industri)

BDI is one of the seven local training institutes under PUSDIKLAT of MOI and serves East Java, East Kalimantan, and South Kalimantan. BDI's training program are for both the government officials and people in the private sector. Between 2001 and 2005, the beginning years of the decentralization process, the proportion of the programs for the private sector increased because the number of those for public officials temporarily decreased. The programs for government staff began increasing after that, and it started programs specifically for local government employees in 2006. Those for public employees are mainly for PFFPs. Concerning those for the private sector including management courses, it provides them at its own facility, and does not dispatch its instructors to individual companies. It is planning to conduct a joint training program with BPTIs, which covers both technology and management..

BDI has seven instructors, and provides a TOT (training of trainers) program for around 30 persons twice a year. It is happy to send specialty consultants to UPL-IKMs and help to develop DINAS's consultant database.

It has one SME diagnostic consultant who has obtained a certification in the 2006 training course but no one participated in the 2007 course.

4.4.4 BARISTAND (Balai Riset dan Standarisasi)

BARISTAND is a local standardization center under BPPI of MOI, and is actively sending instructors to companies to promote standardization.

In addition, BARISTAND also provides local industries with training and technical guidance in other areas such as food processing, metalworking and machining, environment management, and electricity and electronics. It trains a group of companies at a leased facility and does not send instructors to individual companies. In the metalworking and machining field, BARISTAND focuses on engineering, while BPTI Longam does on vocational training.

It has one SME diagnostic consultant certified in 2006 but does not send any employee to the training course in 2007. It is ready to cooperate in sending specialty consultants to UPL-IKMs and developing DINAS's consultant database.

4.4.5 LPB Waru (LEMBAGA PENGEMBANGAN BISNIS WARU)

ITS, ASTRA Foundation, and Buana Cooperative (Waru, Sidoarjo) jointly established LPB Waru in 1993. Its mission is to integrate various SME support activities which was managed with no adequate coordination so that it can improve the efficiency of SME support activities. However, the direct motive is to foster parts suppliers to ASTRA in Surabaya. ASTRA Foundation funds the establishment and operation of LPB Waru, while ITS leads its activities. It hires four part-time consultants but retains instructors from universities and the private sector as needed.

LPB Waru's technical support and guidance aim to help SMEs in East Java to be OEM suppliers for large manufacturers. At present, it teaches management, technology, accounting, and sales to SMEs in Waru District, especially the six firms in metalworking with around 50 employees each. They are members of ASPILOW (Assosiasi Pengusaha Industri Logam Waru). The support includes field guidance. For SMEs at large, it holds workshops in technology, management, accounting, and so forth. For the training courses that require specific facilities and equipment, it uses ITS or BPTIs. Also, it sponsors events that intend to match SMEs and large enterprises. In addition to part suppliers, LPB Waru has begun to cover firms in textile and other sectors.

As for the relationship with DINAS, LPB Waru receives company data from it and takes charge of DINAS's support programs a few times a year. It also agrees to send specialty consultants to UPL-IKMs.

4.4.6 ITS – AIMC's Surabaya Chapter

AIMC is a management consulting association in Indonesia with around 60 member companies. They are mainly in Jakarta. It located AIMC's Surabaya Chapter within ITS three years ago. The chapter has 20 consultants, most of whom specialize in accounting. Note that AIMC's management support does not incorporate production management. Medium and large enterprises account for a large part of the client firms.

Every university in Indonesia has a department providing consulting service for outside organizations (LLPM). The person in charge of SME support at ITS's LLPM is the president of LPB.

4.4.7 KADIN (Kamar Dagang Indonesia)

KADIN is a private organization established in each state under statute. Its membership is voluntary and covers all sectors. Surabaya KADIN is led by the president, under which there are 16 vice presidents, including the one in charge of the SME sector. However, member companies are largely handicraft and furniture manufacturers, while there is a small number of companies in metalworking.

4.4.8 East Java SME & Cooperative DINAS

SME & Cooperative DINAS promotes and supports the formation of cooperatives by SEs and MEs in the manufacturing and commerce sectors.

Generally, 30 to 50 MEs with 5 – 10 employees form a cooperative. Cooperatives assist member companies in securing loans from the Ministry of SMEs and Cooperatives. They also disseminate market information and provide a variety of "kaizen" activity services through BDSs.

First established in 2002, there are 117 BDSs throughout the province. Upon the establishment of a BDS, SME & Cooperative DINAS conducts a one-week free guidance program to it. Each BDS has a few staff members and visiting consultants including those hired from universities under the long-term contract. The DINAS also opens a

BDS facilitator training program. It does not offer standardized training courses for companies, but they are mainly on 5S activity when it does. It collects fees for the courses.

4.4.9 East Java Labor Department DINAS

Labor Department DINAS conducts vocational training for employment expansion, while actively carrying out training activities for local SEs and MEs on 5S promotion and entrepreneurship.

The central government funds the 5S-related training, technical assistance, and dissemination activities. In 2006, the DINAS staff taught at five one-week training courses. A training course consists of classroom lecture and field guidance at a factory.

East Java Labor Department DINAS represents East Java in the Asia Productivity Organization (APO) and has hosted annual 5S-related award (Piagam 5R) since 2001 under the funding of the central government¹⁴. The award is for the five fields (management, environment, production, maintenance, and warehousing) and it chooses winners through two-stage reviewing process (documents and on-site inspection). There are no such awards in the other provinces. Most candidate companies are medium and large enterprises in the manufacturing sector, and some are foreign. In 2006, 81 companies applied for the award and their workforce ranged from 50 to 2,900. 32 companies received the award in the year.

Indicated in the fact that medium and large enterprises amount to a majority of applicant enterprises as well as winners is that MEs and SEs in East Java are far from being eligible to receive the award. Meanwhile, the Ministry of Labor hosts a nationwide productivity award (Shida Karya) for SEs and MEs in the manufacturing sector.

14 The award was “for a good TQC practice” at first, but changed to “for a good 5S practice.”

4.5 Major Organizations Relating to the Fostering of Supporting Industries in West Java

Bandung, the state capital of West Java, is the country's leading academic center. It accommodates educational institutions such as Institute of Technology Bandung (ITB), government organizations specialized in R&D, inspection and standardization, and vocational training institutes. The study team conducted interview surveys of these organizations to examine how they are involved in technical support and HR education and training for small and medium manufacturers.

Figure 4-7 shows a general image of SME support organizations in West Java.

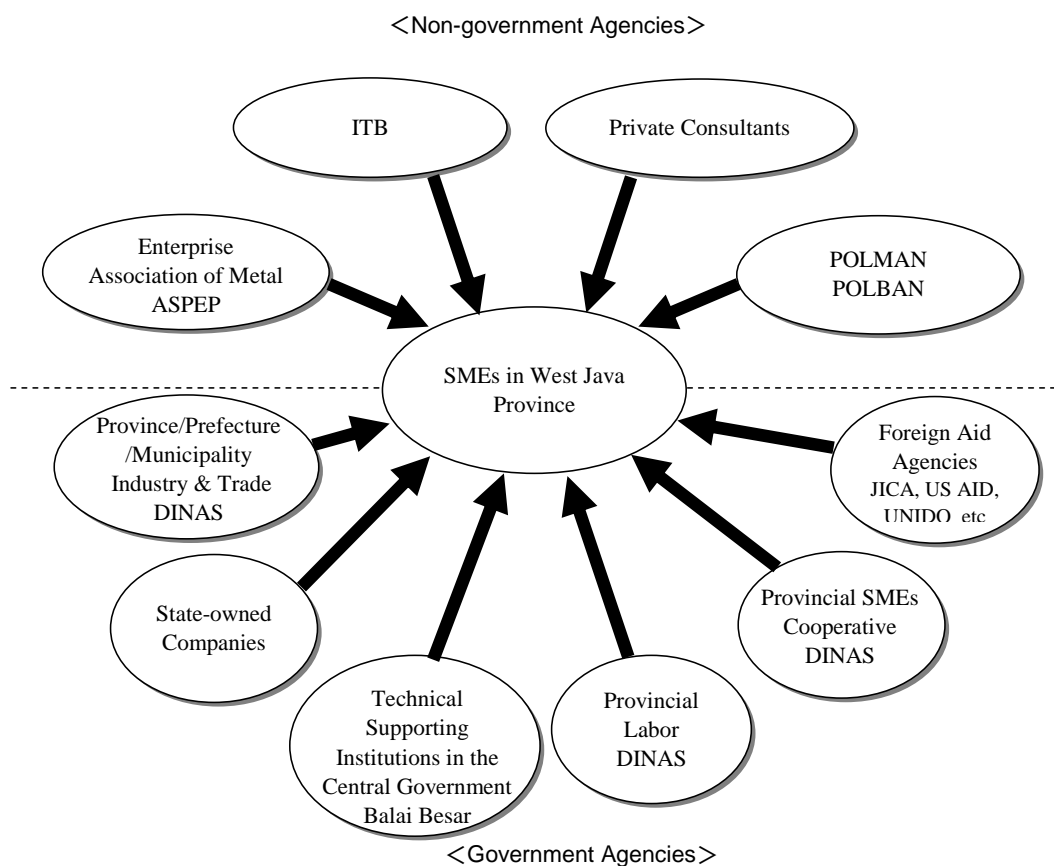


Figure 4-7 SME Supporting Institutions in West Java Province

4.5.1 Industry and Trade DINAS in West Java

(1) UPL-IKM in West Java

Under the instruction of the Director General of IKM, Industry and Trade DINAS in West Java established five district UPL-IKMs and a UPL-IKM within the DINAS as a coordinating organization. Figure 4-8 shows in which prefectures and municipalities UPL-IKMs are located, and Table 4-5 does the line-up of them. In West Java, there are fourteen SME diagnostic consultants who have obtained a certification in the training course in 2006. However, two principals of the district UPL-IKMs are PFPP personnel.

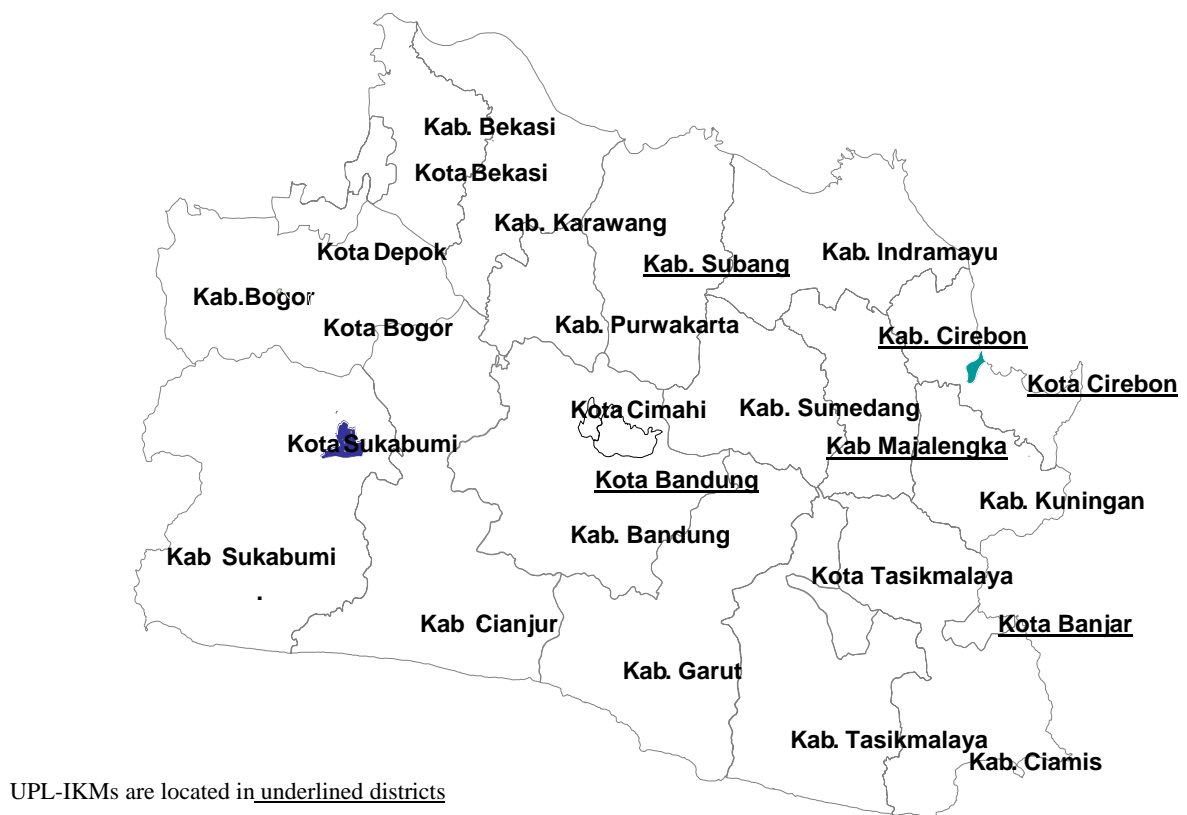


Figure 4-8 Locations of UPL-IKMs in West Java Province

Table 4-5 Member List of UPL-IKMs in West Java Province

DINAS UPL-IKM of industry and commerce in west java province	
Chief	PFPP
Secretary	PFPP (SME diagnosis consultant)
Members	2 PFPPs (SME diagnosis consultants)
Kabupaten Cirebon UPL-IKM	
Chief	PFPP
Secretary	PFPP (SME diagnosis consultant)
Members	3 PFPPs
Kota Cirebon UPL-IKM	
Chief	PFPP
Secretary	PFPP
Members	2 PFPPs including a SME diagnosis consultant
Kabupaten Subang UPL-IKM	
Chief	SME diagnosis consultant
Secretary	PFPP
Members	3 PFPPs
Kabupaten Majalengka UPL-IKM	
Chief	SME diagnosis consultant
Secretary	PFPP
Members	3 PFPPs
Kota Banjar UPL-IKM	
Chief	SME diagnosis consultant
Secretary	PFPP
Members	3 PFPPs

Source: Material of DINAS of Industry and Commerce in West Java Province

In May 2007, Industry and Trade DINAS held a UPL-IKM joint meeting, where they agreed on an activity plan for FY2007 (Table 4-6 below). They also determined the industries to be covered according to the RENSTRA of the province, prefectures and municipalities. SME diagnostic consultants are to perform corporate diagnosis, guidance and evaluation according to the plan.

In West Java, the UPL-IKM in Industry and Trade DINAS will be primarily responsible for the supervision and coordination of the UPLs in the province, and will also serve medium sized enterprises who investmented more than Rp 200 million (excluding land and buildings). Prefectural and municipal UPL-IKMs will serve those with plant and

equipment investment less than Rp 200 million.

Table 4-6 Action Plan of UPL-IKMs in West Java Province in 2007

UPL-IKM in Industry and Trade DINAS in WestJava Province	69 companies (9 companies in JICA model program: enterprises producing machine parts, car and motorcycle parts, and textile. 60 companies: 10 companies are founders. The other 50 companies are those producing anything else.
Kabupaten Cirebon UPL-IKM	3 companies (Manufacturing company of “Batik”, Rattan, Furniture)
Kabupaten Subang UPL-IKM	3 companies (Sweets, Woodwork, Shoes)
Kota Cirebon UPL-IKM	3 companies (Body of small boats, Furniture(Chair), Rice crackers)
Kabupaten Majalengka UPL-IKM	3 companies (Rattan, Rattan, Motorcycle parts)
Kota Banjar UPL-IKM	3 companies (Red bricks, Rice crackers, House wares made by aluminum)

Source: Material of DINAS of Industry and Commerce in West Java Province

IKM funds the UPL-IKM’s activities by SME diagnostic consultants, but local governments have to finance the activities by other members than SME diagnostic consultants and all labor costs.

(2) UPT (Common Service Facilities)

UPTs are designed to make available to small manufacturers machinery and equipment that are infrequently used or too expensive to purchase. They still have personnel and a standard set of machine tools, which are leased for a charge or used for their own production on commission. Nevertheless, most equipment is obsolete or broken, and UPTs can no longer attain the original purpose. As for HR development, some UPTs barely conduct trainings of machine operation.

4.5.2 Balai Besar

BPPI under MOI has nine technical support organizations called Balai Besar and thirteen district offices (BARISTAD-INDAG). Among them, six Balai Besar centers are in West Java, and the following five are in Bandung.

Metal Industries Development Centre (MIDC)
Technical Centre for Material and Technical Product (B4T)
Technical Centre for Textile
Technical Centre for Ceramic
Technical Centre for Pulp and Paper

As their names imply, these centers specialize in research on the specific fields, namely casting and machining, materials, textile, design, ceramics and pulp and paper. They also train the employees in private firms and counsel individual companies according to the plans and budgets by MOI and provincial DINAS.

Three of them have qualified SME diagnostic consultants, but they have still to plan their own corporate diagnosis and consulting services.

4.5.3 Politeknik

Instead of finding a job, high school graduates can go on to either a university (academic course) or an advanced vocational institute (professional course). Politeknik is an advanced vocational training institute under the Ministry of National Education, two of which are in Bandung.

(1) Politeknik Manufactur (POLMAN)

Established in 1976, POLMAN is the first Politeknik institute for the manufacturing industry in Indonesia. It specializes in metal-related technology, including die and mold designing and making. In 1995, it founded Mechatronics department. POLMAN offers a three-year training program, and new students are 19 years old on average. The number of new students is around 250 per year, 20% of whom are female. Students can obtain Diploma II at the end of the second year and Diploma III after completing the third year. They can obtain Diploma III by working for a company, too. Three-year work experience is necessary to advance to one-year Diploma IV program. POLMAN's curriculum focuses on practical training, which accounts for 65% of the whole course work. Nearly 100% of the graduates find employment with an enterprise.

POLMAN provides industrial training for company employees and offer approximately 200 training modules. However, they are for medium and large enterprises, and few of them are about soft technology. POLMAN also renders consulting services on a fee basis and BDS supported by the Swiss government, i.e.

serving as an intermediary between SMEs and large enterprises. It has conducted a few joint programs with MIDC, but not at all with DINAS so far. And yet, it is interested in working in cooperation with DIAS, including providing information on local SMEs.

(2) Politeknik Bandung (POLBAN)

Founded in 1982, POLBAN teaches a wide range of subjects, not only engineering but commerce, business administration, accounting, marketing, finance and banking, tourism, and computer science. It accepts about 1,200 students per year, 70% of whom major in engineering technology. Like POLMAN, the institute offers a three-year diploma program and issues Diploma II upon the completion of the first two years and Diploma III at the end of third year. The program allows students to receive practical training in a company for six months at maximum. Graduates either find employment, move to one-year Diploma IV program, or pursue study overseas.

There are 487 instructors, 70% of whom are in the engineering fields. Instructors used to take six-month to one-year TOT programs conducted under the assistance of Swiss Contact or the U.K. government. Today, it trains them by its own, and also accepts participants outside POLBAN in the internal TOT programs.

The institute also opens one-week to one-year training courses for company employees, 50% of which are about engineering. It used to send instructors to companies selected by GTZ (German Technical Cooperation) or Swiss Contact but admits a lack of close relationship or communication with the private sector. It expects DINAS's workshops as opportunities to establish contact with potential clients, and is happy to send instructors for on-site corporate counseling under a joint program.

4.5.4 State enterprises

Under the policy of the Ministry of BUMN, state enterprises have to spend a certain percentage of the profit for SME promotion.

In Bandung, there are 24 state enterprises, but only one of them, which is an arsenal, carries out SME support in the manufacturing sector. It operates a support center and its support activities range from technical training to marketing support such as sponsoring exhibitions. However, a major emphasis is on low-interest loans. It opens free training courses which are primarily related to metalworking, such as heat treatment, machining, welding, and machine design. Although in-house engineers teach some courses, it

usually contracts out teaching. Management and accounting are also in the courses, though marginally.

The support program is mainly for its suppliers, but other companies (e.g., suppliers of automotive or other machine parts) are eligible for the support upon registration. The conditions required for the registration are: an applicant enterprise is 1) a small- or medium-sized manufacturer; 2) with annual sales of Rp 10 billion or less; and 3) with equity capital of Rp 200 million or over. At present, 268 companies in West Java are registered, and receive support in finance, marketing and technology. Note that participants in a training program have to be 55 years or younger with a minimum work record of two years at the dispatching company.

The company has provided trainings upon DINAS's request, and is capable of counseling local enterprises in cooperation with DINAS.

4.6 Current State of SME Promotion by Other Donor Organizations

4.6.1 US AID's SENDA Project

US AID has carried out SENADA¹⁵ project in the country since 2006. SENADA aims to enable them to expand production, improve productivity, and increase employment through technical assistance for SMEs in the manufacturing sector.

The project is in force in 4 areas, namely in Jakarta, Bandung, Surabaya, and Semarang. Table 4-7 shows the target sectors chosen on location basis. Automotive parts, shoes, and textile and garment in Bandung, West Java are also in the Cluster Development Program of West Java. Priority sectors in Surabaya are shoes and furniture.

15 SENADA: Indonesia Competitiveness Program

Table 4-7 Target Sectors of US AID and its Activity Areas

Sector	Jakarta	Bandung	Surabaya	Semaran
Automotive parts		●	●	
Footwear		●	●	●
Furniture			●	
Textile/Garment		●	●	●
ICT	●	●		
Ceramic				

Source: US AID SENADA Project Office

The project takes the following two approaches.

(1) Macro level approach (Industry Value Chain Strength Approach: IVC-S)

In IVC-S approach, they analyze and identify the impediments to SME growth in government agencies, trade associations (such as Kadin) and others, and propose recommendations to deal with them.

For instance, in order to support the automotive parts sector, they help second- and third-tier suppliers to augment their brand power, thereby to enable them to expand their business in the OEM market and aftermarket. Major activities include: 1) market study; 2) business planning training; and 3) research on demand and supply for trainings.

(2) Micro level approach (Enterprises Improvement Approach: EI)

In enterprises improvement approach, they give individual companies direct advice and guidance which constitutes a major part in the project. They choose client companies according to the following criteria.

- 1) Doing business in the target sectors
- 2) Having annual sales between US\$50,000 and US\$10 million (ranging from SEs (upper level) to large enterprises (lower level) by Indonesian standard)
- 3) Being a purely private enterprise
- 4) Local capital accounting for 51% and more of the total
- 5) Having a strong motivation to participate in the program
- 6) Agreeing to disclose corporate data

They teach “business and management technology” below. They do not give guidance in so-called “hard technology”

- 1) Strategic management
- 2) Marketing management
- 3) Trade promotion management
- 4) Financial management
- 5) Operation quality improvement

This approach aims to provide technical guidance services for 50 companies a year in each area. To recruit client companies, they hold a promotion seminar every month. Also, they ask trade associations and local governments for cooperation.

The project usually assigns four full-time consultants (Innovation Consultant) per area, and they hire foreign consultants as needed. They insert invitations of application in newspapers, and value relevant experience.

4.6.2 US AID’s SENADA Project in local areas

(1) US AID’s SENADA project in Surabaya

US AID launched the SENADA project in Surabaya (East Java) in September 2006, and currently providing technical guidance for 44 companies. These companies are largely in Surabaya and Sidoarjo, but some are in Mojokert, Pasuruan, and Malang (Figure 4-9). Client enterprises in the automotive parts sector are mainly in Sidoarjo and Pasuruan.

A team of three consultants and four specialists (including two financial specialists) is at work.



Figure 4-9 Project Activity Areas of US AID SENADA

(2) US AID’s SENADA project in Bandung

Target sectors selected for the SENADA project in Bandung overlap with those selected for the West Java provincial government’s Cluster Development Program, namely automotive parts, shoes, and textile and garment.

They teach “business and management technology” that covers the following themes. They give the highest priority to strategic management, because it serves as a guideline for the remaining four themes.

- 1) Strategic management
- 2) Marketing management
- 3) Trade promotion management
- 4) Financial management
- 5) Operation quality improvement

In Bandung, the project started in May 2006 and is currently serving 41 companies. At present, four full-time consultants (Innovation Consultant) are working in Bandung, but they hire foreign consultants as needed. The consultants visit every client company once a week and monitor the progress monthly. The program aims to provide technical guidance for 50 companies every year. They recruit client companies through promotion seminars held every month.

Chapter 5 Supporting Industries in Indonesia

Chapter 5 Supporting Industries in Indonesia

5.1 General Outline and Major Issues of Supporting Industries in Indonesia

5.1.1 General outline of supporting industries in Indonesia

(1) Circumstances surrounding supporting industries in Indonesia

National consumption in Indonesia remains strong recently. The number of new automobiles sold reached five hundred thousands and that of motorcycles reached 3.9 millions in 2006. These sales volumes are fast-growing, and they increased by 37 % and 38% respectively relative to last year. Similarly, national consumption of home appliances runs in high gear. The following are expected domestic market scales of main consumer electronics of the 2010 year¹:

- Color-TV: Eight million units
- Refrigerator: Two million six hundred thousands units
- Air conditioner: One million seven hundred thousands units
- Washing machine: One million seven hundred thousands units

There are great hopes that domestic market domestic market remains strong from now on.

Production in the automobile and motorcycle sector in Indonesia used to be for the domestic market but it is now for export. Electric and electronics sector also needs to increase the international competitiveness of their products, especially of promising ones, in order to take the same path. Concerning the strengthening of the production base, it is necessary to respond to the increasing domestic demand. As the globalization of economy progresses, however, increasing the international competitiveness is a pressing issue.

(2) QCD² levels as criteria to evaluate supporting industries

From the viewpoint of assemblers, the most concerned matter when to choose a supplier is its QCD level. In general, the ability of a manufacturer used to be purely about its technical capabilities. However, it now incorporates more elements as management environment of enterprises changes; it is more like a complex of various

1 Information from KADIN "Visi2010."

2 QCD refers to quality, cost, and delivery.

elements including technical capabilities. For example, as seen in the car industry which simultaneously launches new models worldwide, suppliers around the world nowadays have to adapt to “diversified small-quantity production” and “frequent low-volume deliveries” as the economy is getting globalized and market competition more competitive. Even in developing countries, more and more enterprises in the supporting industries begin introducing so-called Just-In-Time inventory strategy. Therefore, it is said that the gap between developed countries and developing countries in production system has been narrowing³.

Technically, more enterprises introduce various multi-use automated machines to minimize investment costs for a specific purpose. Also promoted are devising machines and equipment and improving/standardizing operations so that they can shorten the time for machine set-up. In terms of operation management, thorough observance to operation standard and workers’ active involvement in improving operations are necessary to attain a high QCD level and improve it further.

(3) Overview of QCD levels

Figure 5-1 represents the distribution map of parts suppliers to automobile and electronics industries (foreign and local) in Indonesia. They are largely classified to three groups, namely companies which strive to meet the requirements of QCD standard by clients, (Group A and B) and those which do not (Group C). In general, Japanese-affiliated enterprises occupy a large part of Group A, while other foreign affiliated firms (Korean, Taiwanese etc.) and some local enterprises compose Group B. The bulk of local enterprises fall into Group C, which accounts for a large proportion of the whole.

As a 1st tier supplier, Group A firms provide assemblers with Sub-Assy products⁴ and outsource a part of production to Group B and C. Some enterprises in Group B are a 1st tier supplier, but most of them are in 2nd tier. Group C enterprises are those in 2nd tier and below, or those with equivalent technical skills. Local enterprises in Group B share the same business attitude with assemblers and 1st tier firms, namely they are

3 See "Report of Basic Research regarding a development of supporting industry in Asean region" by JICA, for example.

4 Sub-Assy product refers to a semi-processed product delivered from a 1st tier firm to an assembler. Delivering and accepting semi-processed products have an advantage for both sides and has been introduced in the industries in which there are a lot of production processes, such as automobile and electronics. From the parts supplier's perspective, it is easier to coordinate the accuracy of their products. For the assembler, it enables to reduce the number of production processes and thus can concentrate on assembling.

willing to upgrade their technical skills, and thus their QCD levels have been improving. On the other hand, some Group C firms just do not want transactions with clients if requirements are tough relative to their current technical capacities.

Looking at the economic condition in Indonesia, it has been recovering since around 2000, which makes the demand for parts relatively strong especially in the aftermarket. Such an economic environment enables them to sell their products at the aftermarket, and Group C firms have not been in trouble with the business management even with their low QCD levels. As a result, their views in terms of technical upgrading and operational goal setting are in contrast with those of Group A and B firms. Group C enterprises fail to meet the minimum QCD standard, and the technical gap between Group C and other two groups are expanding.

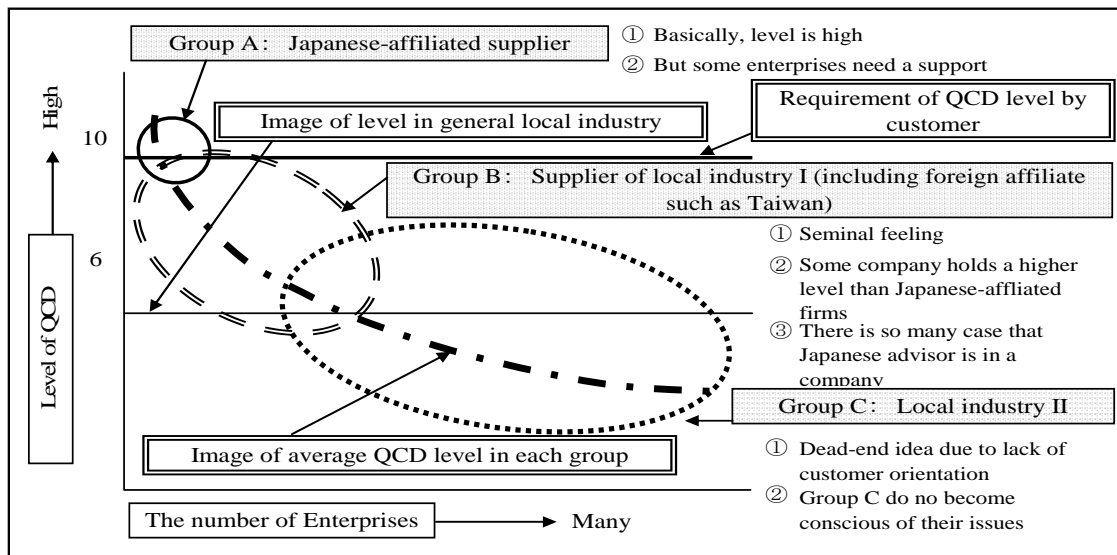


Figure 5-1 Conceptual View Representing the Positioning of Supporting Industries⁵

In general, assemblers and Japanese-affiliated firms do not have discriminatory transaction rules based on the ownership of suppliers when they contract out a product. They rather consider important whether a candidate firm has an aspiration to upgrade its technical skills continuously to meet stricter requirements. To such an enterprise, these firms have given technical assistance as a potential supplier in the future. To Group C firms, however, they have not offered anything, because they can expect nothing from them even from the long-term perspective.

⁵ Study Team made this figure based on the JICA "Report of Basic Research regarding a development of supporting industry in ASEAN region".

Irrespective of the nationality of employees, assemblers and other firms affiliated with Japanese enterprises give trainings for productivity improvement to them by themselves or at other group firms. Indonesian employees there often have as high technical capacities as a Japanese equivalent, and therefore such firms do not consider the assistance from outside necessary. Related to the public technical assistance by Japan, some interviewee firms said they were happy to give technical assistance on the condition that they see better cooperation between aid agencies to assure them that such assistance is effective.

Often raised as factors resulting in low QCD levels in Group C firms are work ethics, business practice, and capacities of the Indonesian. However, we should also keep in mind that some local enterprises have met a high QCD standard, although the number of such enterprises is limited⁶.

(4) Parts supplier in Indonesia

While the management style based on the “customer comes first” philosophy, i.e., making continuous efforts to improve customer satisfaction is the best way to lead the company to prosperity, is getting firm hold as a worldwide business norm, the majority of suppliers in Indonesia belong to Group C, of which managers opt to turn their eyes away from the norm and insist on the traditional “self-interested management” style. Typically, they have failed to recognize the need for improvement and/or tended to divert efforts in a wrong direction (Figure 5-1).

A company’s ability to improve its production and/or management depends much on the quality of human resources it has. However, suppliers in Group C have failed to train adequate human resources. Corporate culture is said to be governed by the manager’s management attitude and philosophy, and companies in Group C need to change the manager’s mindset first.

On the other hand, there are a small number of managers who try to read new trends of the economy and management style and respond quickly and effectively to the changing environment. They actively promote employee education and strive to improve QCD levels. For a company with such a manager, client companies are willing to provide support. Furthermore, assemblers struggle to secure the supply from

⁶ See "Report of Basic Research regarding a development of supporting industry in ASEAN region" by JICA.

such enterprises, because such excellent SMEs (Group B and upper 10% of Group C) constitute only a minority share of supporting industries in Indonesia.

For foreign assembly manufacturers operating in the country, including Japanese ones⁷, fostering of local supporting industries is a primary concern, as important as the improvement of investment/business environment (particularly labor relations) and the development of industrial infrastructure. Japanese assemblers and other 1st tier suppliers buy parts based on the global procurement strategy, and the purchase from the ASEAN member countries is quite widespread because they consider it almost same as local procurement. Recently, however, they wish to purchase parts from nearest possible suppliers, because fierce competition has spurred flexible diversified small-quantity production. This is particularly true in the home appliance industry. Also, as the procurement from foreign suppliers is getting increasingly costly, assemblers see more need to find suppliers nearby.

5.1.2 Major issues of supporting industries in Indonesia

The following are major issues of supporting industries based on the interviews with the government officials, industrial associations, and procurement staffs in the assemblers.

(1) Dependence on imports for basic industrial materials

Basic materials industries (steels, resins, aluminum, and chemicals) which are integral to supporting industries have underdeveloped in Indonesia, which makes the country highly dependent on imports for these goods. In order to improve the global competitiveness in the finished product markets in terms of price and quality, Indonesia needs to consider introducing some incentive measures to promote investment in the areas, so that she can improve the proportion of local materials usage and thus strengthen the base of national production.

(2) Low QCD levels in 2nd and 3rd tier suppliers

In Indonesia, enterprises which are equipped with advanced machinery and technologies and thus able to satisfy the QCD standard dominate the supporting industries, but such enterprises are quite few. The QCD levels of enterprises in 2nd tier and below, of which domestic firms occupy a large part, are low relative to 1st tier suppliers in which Japanese-affiliated firms account for a large proportion. These local

⁷ According to JETRO, the number of Japanese-affiliated 1st tier suppliers seem to be not very large (estimated at around 160). Thus, the local supplier base serving them is presumably limited.

enterprises supply cheap products but many of them fail to meet the requirement of 1st tier enterprises in terms of quality and delivery. As a result, 1st tier enterprises have been had to rely on imports for many parts. While 1st tier suppliers have improved the operational capabilities thanks to the technical assistance from their parent companies, suppliers in 2nd tier and below do not have any opportunity to receive such assistance and therefore human resources are underdeveloped.

(3) Fragile die and mold industry

Among the supporting industries, die and mold industry, which is indispensable to strong manufacturing sector, is immature. As a result, firms have imported most of dies and molds. Raising the technical skills of local enterprises in the industry is urgent through engineer training programs.

5.1.3 Organizations responsible for fostering of supporting industries in Indonesia

The Indonesian government's policy relating to the fostering of supporting industries places importance on the promotion of local SMEs. Ministries responsible for SME promotion are MOI and the State Minister for Cooperatives and SMEs. Presidential Decree No.201 of 2001 defines the latter as an organization responsible for SME-related policy making and the overall coordination of SME policies among related ministries. In reality, however, it has yet to establish the coordinating function. Also, as it was originally created as the Ministry of Cooperatives and SMEs, its SME policy has strong bearing on social welfare and development aspects.

On the other hand, MOI's SME promotion policy focuses on the development of supporting industries, which IKM and ILMEA spearhead. The former is at work from the standpoint of SME promotion, and the latter from industrial policy perspectives.

IKM announced the "Master Plan for Small and Medium Industry Development 2002-2004" in 2002 to show a course of action for the development of supporting industries. The plan classifies SMEs into the following four categories and sets forth target industries and products, development policies and strategies, and priority areas.

- (1) Local industries
- (2) Supporting industries
- (3) Export-oriented industries
- (4) Promising industries

In fact, MIDC is the sole government organization in Indonesia which specializes in providing direct support for supporting industries. Neither ILMEA nor the Ministry of Cooperatives and SMEs has a technical support organization taking care of supporting industries.

MIDC is said to take into account its present capability and the actual needs of supporting industries (particularly MEs and SEs), and emphasize technical guidance services relating to production technology. As seen in the above background, however, both IKM and MIDC target local SMEs as a whole, and few of them supply OEM parts or possess production techniques and skills close to those of OEM parts suppliers. As a result, the current programs are primarily for the local SMEs that manufacture low-priced parts in the aftermarket or parts and components for agricultural machinery and other industrial machinery. Excepting a handful of local companies producing parts for Japanese agricultural machinery, they are backward in terms of management and technology relative to the enterprises which form the supplier base for the automobile and electrical/electronics industries.

5.1.4 Technical support projects and programs relating to development of supporting industries

(1) MIDC Supporting Industry Development Plan in Foundry Technology

This project has been implemented by JICA since April 1999, with a primary aim to transfer key foundry technologies to MIDC.

Objective: To develop supporting industries capable of supplying parts which satisfy the quality and precision requirements from assembly industries through helping them to improve foundry technologies, thereby to contribute to the reinforcement and sophistication of the country's industrial structure.

Activities: To conduct technology transfer to the counterpart organization through various OJT-intensive activities, such as prototype production, field guidance, and seminars, as well as direct guidance service for local, small foundries.

- Casting method and technique
- Model making
- Molding
- Core making
- Inspection

Target companies: Local SMEs engaged in foundry

Area of technological assistance: Key foundry technologies

(2) Automotive Experts Dispatching Scheme for Indonesia (AEDSI)

This is a field guidance-based technical assistance project implemented under the assistance and cooperation of Japan Automobile Manufacturers' Association and Japan Auto Parts Industries Association and has been supported by JETRO/JODC through GAIKINDO/GIAMM since 2001. In 2004, it entered the second term, and the "production management system" was added as a major subject of technical guidance. Companies participating in the project are selected on the basis of their willingness to conduct "kaizen" activities and management's commitment

Objective: To improve international competitiveness of the country's supporting industries for automobile assemblers.

Activities: Japanese experts visit client companies and provide technical guidance and advice on the shop floor. Focused fields are in the following. For each company, a pilot product or process is selected and measurable goals are set, and guidance and advice is given to help the company to solve problems encountering in the course of achieving the goals.

- Kaizen in general
- Kaizen in quality
- Implementation of 5S practice
- Production management system

Target companies: Local (non-Japanese) parts suppliers

Areas of technological assistance: Production management and process technologies

5.2 General Outline and Major Issues of Supporting Industries in Local Areas

5.2.1 Current state of supporting industries in East Java

(1) Manufacturing industry in East Java

Table 5-1 shows the percentage contribution by key sectors to East Java's GRDP between 2003 and 2006. Note that the manufacturing sector is classified into nine subsectors, of which "food, beverage and tobacco" accounts for around 55% of the total every year.

According to the 2004 statistics, the manufacturing sector accounts for 28.3% of Indonesia's GDP, or 24.6% excluding the oil and gas sector. Note that the manufacturing sector's GRDP share in East Java remains at slightly below 30% in the past three years, even though the oil and gas sector makes no contribution. In East Java, therefore, the contribution by the manufacturing sector excluding the oil and gas sector exceeds the national average. In fact, Surabaya in East Java is the second largest industrial area next to JABODETABEK (in and around Jakarta).

Table 5-1 Percentage Contribution by Key Industry Sectors to GRDP in East Java

(Unit: %)

	2003	2004	2005	2006*
Agriculture, Livestock, Forestry & Fishing	18.24	17.58	17.24	17.16
Mining & Quarrying	2.00	1.93	2.01	2.06
Manufacturing Industries	29.50	29.61	29.99	29.26
Food, Beverage, Tobacco	16.38	16.06	16.69	16.28
Textile, Leather-goods, Shoemaking	1.25	1.23	1.18	1.13
Lumber, Forestry goods	1.21	1.15	1.13	1.09
Papermaking/Printing	3.27	3.69	3.57	3.43
Fertilizer/Chemical Products/ Rubber Products	2.25	2.29	2.27	2.23
Cement, Mining Products (excluding metal)	0.99	0.98	0.96	0.98
Basic Metal, Iron, Steel	2.25	2.38	2.27	2.23
Machine & Equipment, Transportation equipment	0.56	0.58	0.62	0.61
Other Manufacturing Industry	1.26	1.25	1.30	1.26
Electricity, Gas, Water Supply	1.94	2.22	2.06	1.86
Construction	3.74	3.68	3.60	3.46
Commerce	26.08	26.71	27.17	27.96
Transport & Communication	5.71	5.52	5.53	5.58
Finance & Business Service	4.41	4.43	4.36	4.53
Services	8.66	8.32	8.04	8.14
Total	100.00	100.00	100.00	100.00

Note: *) Data of 2006 includes the expected value partially

Source: East Java, "Industry/Trade Data" (2007)

Table 5-2 shows the growth rates of key industry sectors in East Java as well as of GRDP in the past four years. Note that while GRDP grew at an annual average of 5.82% between 2004 and 2006, the growth of the manufacturing sector was lower at 4.31%. Target growth rates of the manufacturing sector set by the provincial government were 3.90% in 2005 and 4.60% in 2006. In 2006, the province failed to fulfill the target rate with the actual growth rate at 3.05%, whereas the metal and machine parts subsector covered by the present study managed to achieve the target growth rate.

Table 5-2 Growth Rate by Industrial Sectors in East Java Province

(Unit: %)

	2003	2004	2005	2006*
Agriculture, Livestock, Forestry & Fishing	1.91	2.82	3.16	3.89
Mining & Quarrying	2.21	1.84	9.32	8.58
Manufacturing Industries	4.46	5.28	4.61	3.05
Food, Beverage, Tobacco	3.58	3.78	5.24	2.16
Textile, Leather-goods, Shoemaking	-1.02	1.20	2.51	2.26
Lumber, Forestry goods	4.16	-3.40	1.29	0.44
Papermaking/Printing	9.88	18.60	3.70	3.07
Fertilizer/Chemical Products/ Rubber Products	3.43	2.05	7.31	6.21
Cement, Mining Products (excluding metal)	5.31	6.22	3.48	6.31
Basic Metal, Iron, Steel	5.44	4.14	0.06	4.91
Machine & Equipment, Transportation equipment	4.30	2.96	12.77	4.88
Other Manufacturing Industry	5.75	4.15	5.20	4.26
Electricity, Gas, Water Supply	9.94	12.31	6.72	4.07
Construction	1.86	1.85	3.48	1.42
Commerce	7.92	9.25	9.15	9.65
Transport & Communication	5.78	6.77	5.00	6.77
Finance & Business Service		6.58	7.32	7.46
Services		3.44	4.23	5.27
Total		5.83	5.84	5.79

Note: *) Some 2006 Data are preliminary estimates

Source: East Java, "Industry/Trade Data" (2007)

Around the half of MEs in the manufacturing sector are reportedly not registered with the government. Table 5-3 shows the data on manufacturing companies in East Java (by size) published by the provincial government, which include the estimates of unregistered companies.

According to the 2006 data, there are approximately 680,000 enterprises in East Java, employing approximately 2.5 million people. Of total, SEs and MEs account for 98% in the number of enterprises and 61% in the number of employees. However, their share in the value of production is merely 16%.

Table 5-3 Data on Manufacturing Enterprises in East Java by Sizes

		2002	2003	2004	2005	2006*
Large/ Medium-sized Enterprises	Number of Enterprises	14,257	14,400	14,602	14,602	15,236
	Capital (1 billion Rp)	10,789	10,894	11,590	12,034	12,395
	Employees	924,250	938,552	962,250	987,269	1,014,913
	Value of production (1 billion Rp)	9,130	9,135	9,889	10,165	10,439
Small/ microenterprises and home manufacturers	Number of Enterprises	622,226	628,448	639,257	646,928	666,336
	Capital (1 billion Rp)	595	604	648	671	688
	Employees	1,382,264	1,402,560	1,442,672	1,477,296	1,521,615
	Value of production (1 billion Rp)	1,758	1,791	1,886	1,935	1,989
Total	Number of Enterprises	636,483	642,848	653,859	661,720	680,248
	Capital (1 billion Rp)	11,384	11,498	12,238	12,705	13,073
	Employees	2,306,514	2,341,112	2,404,922	2,464,565	2,513,856
	Value of production (1 billion Rp)	10,888	11,106	11,775	12,100	12,427

Note: *) Data of 2006 includes the expected value partially

Size distribution is based on the following classification according to the number of employees:

(1) large enterprises: 100 or more employees; (2) medium-sized enterprises: 20 – 99 employees;

(3) small enterprises: 5 – 19 employees; and (4) microenterprises and home manufacturers.

Source: East Java, “Industry/Trade Data” (2007)

(2) Supporting industries in East Java

In East Java, the transportation machinery and electrical/electronics equipment subsectors are designated as priority industries by the provincial government because of their significant spillover effects to the regional economy, technological advancement, and employment. Provincial government has made various efforts to attract assembly plants and foster supporting industries.

However, Surabaya accommodates a relatively small number of assembly plants in comparison to JABODETABEK where many Japanese and other multinational manufacturers run assembly factories. In order to attract foreign investment, the government established three bonded processing zones in and around Surabaya, two in Surabaya City and one in Pasuruan. However, only a small number of manufacturers in transportation machinery and electrical/electronics have come. For instance, while a

Japanese agricultural machinery factory and a domestic motorcycle assembly plant are in operation, no automaker has moved to the zones. In the electrical and electronics field, a few local manufacturers and Japanese manufacturers producing lighting fixtures and vending machines are there. Also, there are several auto parts suppliers (second-tier or third-tier) that serve assemblers in Jakarta.

Although there are no data available on how much assembly plants procure raw materials and parts from local industries, the surveys to some Japanese manufacturers indicate that they purchase most parts from outside the region. Purchased from local suppliers are limited to repair parts, expendable supplies for agricultural machines and a few other goods. The similar procurement pattern is seen among local state enterprises. Asked about the attraction of Surabaya, companies cite low prices and labor costs as well as good access to the port while none mentions local industries.

The provincial government promotes cluster development (SENTRA in Indonesian)⁸ as an industrial development strategy, and maintains statistical data on industrial clusters in the province (totaling around 3,000). Based on the data, Table 5-4 summarizes the numbers of enterprises and employees in the nine subsectors, together with their shares⁹. Note that they are significantly different from the corresponding data in Table 5-3, partially because the Table 5-4 does not include enterprises that do not form an industry cluster or unregistered MEs.

Highly ranked subsectors in the numbers of enterprises and employees are “food, beverage and tobacco,” “lumber and forestry products” and “textile, leather products, and shoes.” The average number of employees per company is 2.5, indicating that there are a large number of family manufacturers or MEs in the population. Similarly, the average number of employees for the “metal, machinery, machine parts” subsector is 4.3, suggesting that small enterprises dominate it.

8 Cluster is defined as “a group of ten or more companies that manufacture the same product in the same area.” East Java’s definition is “a group of five or more...”

9 General and transportation machinery (including parts) is included in basic metal, iron and steel.

Table 5-4 Numbers of Enterprises and Employees by Industrial Clusters

	Number of Enterprises		Number of Employees	
Food, Beverage, Tobacco	56,029	36.0%	124,759	31.9%
Textile, Leather-goods, Shoemaking	14,417	9.3%	48,276	12.4%
Lumber, Forestry goods	49,796	32.0%	101,117	25.9%
Papermaking, Printing	19	0.0%	130	0.0%
Fertilizer, Chemical products, Rubber Products	793	0.5%	1,414	0.4%
Cement, Mining Products (excluding metal)	4,640	3.0%	12,484	3.2%
Basic Metal, Iron, Steel	4,306	2.8%	18,709	4.8%
Machine & Equipment, Transportation equipment		0.0%		0.0%
Other Manufacturing Industry	25,661	16.5%	83,649	21.4%
Total	155,661	100.0%	390,538	100.0%

Source: Cluster Directory of SMEs Industry in East Java Province (2005)

In a narrow definition, supporting industries refer to suppliers for automobile and electrical/electronics equipment assembly manufacturers. In the definition by the provincial government of East Java, they include manufacturers selling parts at the aftermarket and small metalworking shops with a few employees which form an industry cluster. Sidoarjo (Waru district) and Pasuruan are examples of such clusters.

These industry clusters reflect the history of the metalworking industry that first rose as manufacturers of agricultural implements around the center of East Indonesia, Surabaya. They then evolved to bicycle producers and manufacturers of various machine parts. There is also a view that the rise of the clusters dates back to sugar plantation and shipyards in the colonial era and seemingly continues to the state-operated machine factory and shipyard. Note that many machining and metal press shops are in Waru, Sidoarjo, whereas a lot of foundries are traditionally in Pasuruan.

Based on the data and information obtained from the prefectural DINAS and companies in Sidoarjo, there are approximately 500 companies in the metal industry, of which 300 concentrate in Waru District. 70 to 80 of the companies in the district are members of the cooperative assisted by the Ministry of Cooperatives and SMEs, and the average number of employees is 30. The cooperative serves as an intermediary for bank loan applications and conducts various technical support activities through LPB

(discussed in 4.4.5). According to the cooperative, the district produces 80% of the agricultural implements made in the country.

In Waru District, there is an association of metal-related manufacturers, ASPLOW, which is organized by seven companies that are members of the cooperative. The largest among the ASPLOW member companies has 85 employees and manufactures OEM parts. ASPLOW is operating the die/mold center established according to the recommendation by a JICA's cluster study, but it has still to run it in full operation.

According to the results of the field survey conducted in Pasuruan, there are as many as 1,200 metal-related enterprises in the prefecture, including unregistered ones. 85 to 90% of them are family industries and around 800 companies are located in Pasuruan City. Around 120 out of the 800 companies are reportedly members of local cooperatives. Like ASPLOW, a metal industry association called KILOPAS is active in Pasuruan with the membership of around 50 companies. It was established two years ago to negotiate with the local government on behalf of its members. Most of the members are founders, and some are in the machining industry, both with 3 to 12 employees.

Based on the above estimates (500 companies in Sidoarjo and 1,200 in Pasuruan), the two prefectures accommodates approximately 40% of the metal-related companies located in the province.

5.2.2 Current state of supporting industries in West Java

(1) Manufacturing industry in West Java

Table 5-5 shows the percentage contribution by key sectors to West Java's GRDP between 2003 and 2005. Contribution by the manufacturing sector has reached over 42% for the years, far exceeding the sector's share in the country's GDP, 28.3% (in 2004). In Table 5-5, the manufacturing sector is classified into five subsectors, and "food, beverage, tobacco, textile and garment, lumber, chemical, rubber" and "machine and equipment" amount to around 20% each

While the contribution of the manufacturing sector is 28.3% of the Indonesian economy, its major portion (around 60%) is by the enterprises in West Java. Thus, the manufacturing industry in the province has significant impacts on the national economy.

**Table 5-5 Percentage Contribution by Industry Sectors to GDRP
in West Java Province**

(Unit: %)

		2003	2004	2005
1	Agriculture, Livestock, Forestry & Fishing	14.47	14.61	14.11
2	Mining & Quarrying	3.71	3.31	2.93
3	Manufacturing Industries	42.55	42.00	42.66
	3.1 Oil & Gas digging	1.27	1.19	1.21
	3.2 Non-oil manufacturing industries			
	3.2.1 Food, Beverage, Tobacco, Textile, Garment, Lumber, Chemical, Rubber	17.43	19.73	20.04
	3.2.2 Base metal industry	0.59	0.76	0.77
	3.2.3 Machine & Equipment	22.51	19.62	19.93
	3.2.4 Other Manufacturing Industry	0.75	0.70	0.71
4	Gas/Water Supply	2.22	2.29	2.30
5	Construction	2.70	2.83	3.17
6	Hotel/Restaurant	19.14	19.14	19.23
7	Transport & Communication	4.21	4.41	4.19
8	Finance, Real estate, Business Service	3.14	3.11	3.08
9	Service	7.86	8.30	8.33
	Total	100.00	100.00	100.00

Source: Badan Pusat Statistik (Central Statistic Bureau)

Manufacturing sector contributes the most to GRDP by 42.66% in 2005, followed by “hotels and restaurants” (19.93%) and “agriculture, livestock, forestry, and fishery” (14.11%). In terms of employment, the agricultural sector employs the largest workforce of approximately 4.4 million people. Manufacturing sector ranks third (2.3 million) next to agriculture and commerce (Table 5-6).

**Table 5-6 Numbers of Employees by Sizes of Enterprises
in West Java Province (2005)**

(Unit: person)

	Microenterprise/ Small enterprise ¹⁾	Medium-sized enterprise ²⁾	Large enterprise ³⁾	Total
Agriculture	4,353,604	82,980	14,401	4,450,985
Mining & Quarrying	46,387	7,812	805	55,004
Manufacturing	912,712	634,668	749,104	2,296,484
Electricity, Gas, Water Supply	1,733	1,963	4,300	7,996
Construction	57,748	19,774	422	77,944
Commerce	3,347,416	241,112	3,593	3,592,121
Transport & Communication	701,955	50,025	5,729	757,709
Finance, Business Service	468,224	15,013	21,916	505,153
Services	647,938	108,805	651,342	1,408,085
Total	10,537,717	1,162,152	1,451,612	13,151,481

Note: Enterprise or Individual 1) Under 1 billion Rp, 2) From 1 billion Rp to 50 billion Rp,

3) Over 50 billion Rp in sales amount.

Source: "KAJIAN PERANAN KUKM TERHADAP PEREKONOMIAN JAWA BARAT 2005"

In terms of the manufacturing sector's workforce by the size of enterprise, MEs and SMEs collectively account for nearly 70% (67.4%) of the employment, which shows that they provide the bulk of employment opportunities. Turning attention to the contribution to GDRP by the size of enterprises, that by MEs and SMEs is 20.07%, compared to 22.59% by large manufacturers (Table 5-7).

**Table 5-7 Breakdown of Percentage Contribution to GRDP in Manufacturing
Industry by Company Sizes (2005)**

(Unit: %)

	Microenterprise/ Small enterprise	Medium-sized enterprise	Large enterprise	Total
Manufacturer	11.51	8.56	22.59	42.66

Source: "KAJIAN PERANAN KUKM TERHADAP PEREKONOMIAN JAWA BARAT 2005"

Table 5-8 shows the sector-based growth rates in West Java between 2003 and 2005. While GRDP grew on average at 5.16% for the three years, the manufacturing sector did slightly higher at 5.56%.

Table 5-8 Growth Rate by Industries in West Java Province

(Unit: %)

	2003	2004	2005
Agriculture	2.46	6.11	1.92
Mining & Quarrying	2.91	6.4	6.63
Manufacturing Industries	5.72	3.85	7.13
Electricity, Gas, Water Supply	1.22	8.53	5.84
Construction	7.25	10.31	17.85
Commerce	1.39	5.15	5.95
Transport & Communication	9.97	10.20	0.2
Finance & Business Service	7.34	4.01	4.47
Services	11.27	11.01	5.81
Total	4.84	5.16	5.47

Source: "KAJIAN PERANAN KUKM TERHADAP PEREKONOMIAN JAWA BARAT 2005"

Table 5-9 shows the composition of each sector by company sizes, which is produced by a BDS.

Table 5-9 Distribution of Enterprises by Sizes in Each Industry (2005)

(Unit: %)

	Microenterprise/ Small enterprise	Medium-sized enterprise	Large enterprise	Total
Agriculture	85.80	10.11	4.10	100.00
Mining & Quarrying	67.79	15.23	16.98	100.00
Manufacturing	28.07	21.05	50.88	100.00
Electricity, Gas, Water Supply	0.27	3.98	95.76	100.00
Construction	24.01	31.26	44.72	100.00
Commerce	63.04	19.00	17.96	100.00
Transport & Communication	47.05	25.36	27.59	100.00
Finance, Business Service	49.04	28.51	22.45	100.00
Services	28.72	9.02	62.26	100.00
Total	85.80	10.11	4.10	100.00

Source: "KAJIAN PERANAN KUKM TERHADAP PEREKONOMIAN JAWA BARAT 2005"

In West Java which is close to JABODETABEK, there are a large number of industrial estates, and many assembly manufacturers including Japanese ones are in operation. As a result, large enterprises in the manufacturing sector amount to 50.88% in numbers, thus slightly exceeding a combined share of MEs and SMEs (Table 5-9). However, we need to bear in mind that most MEs and SMEs in the sector are not registered.

(2) Supporting industries in West Java

As discussed in 5.2.2 (1), the manufacturing sector in West Java contributes to GRDP highly (around 42%), and thus significantly influence the economy of the province. Also, it provides a lot of employment opportunities as the third largest employer next to agriculture and commerce. Provincial government designates in RENSTRA industrial areas where automotive and machine parts industries (i.e. supporting industries) concentrate as priority development zones, and attempts to foster them.

Also, thanks to the vicinity to JABODETABEK where assembly plants of multinationals including Japanese-affiliated ones concentrate, there are a large number of second- and third-tier suppliers in the province.

Figure 5-2 shows the geographical distribution of SMEs manufacturing automotive and machine parts in West Java. Clearly, supporting industries are largely located in the prefectures and municipalities close to JABODETABEK, namely Bandung, Bekasi, Bogor, and Sukabumi. While not all of them have supplied parts to multinational assembly manufacturers, there are a large number of potential companies that become second- and third-tier suppliers.

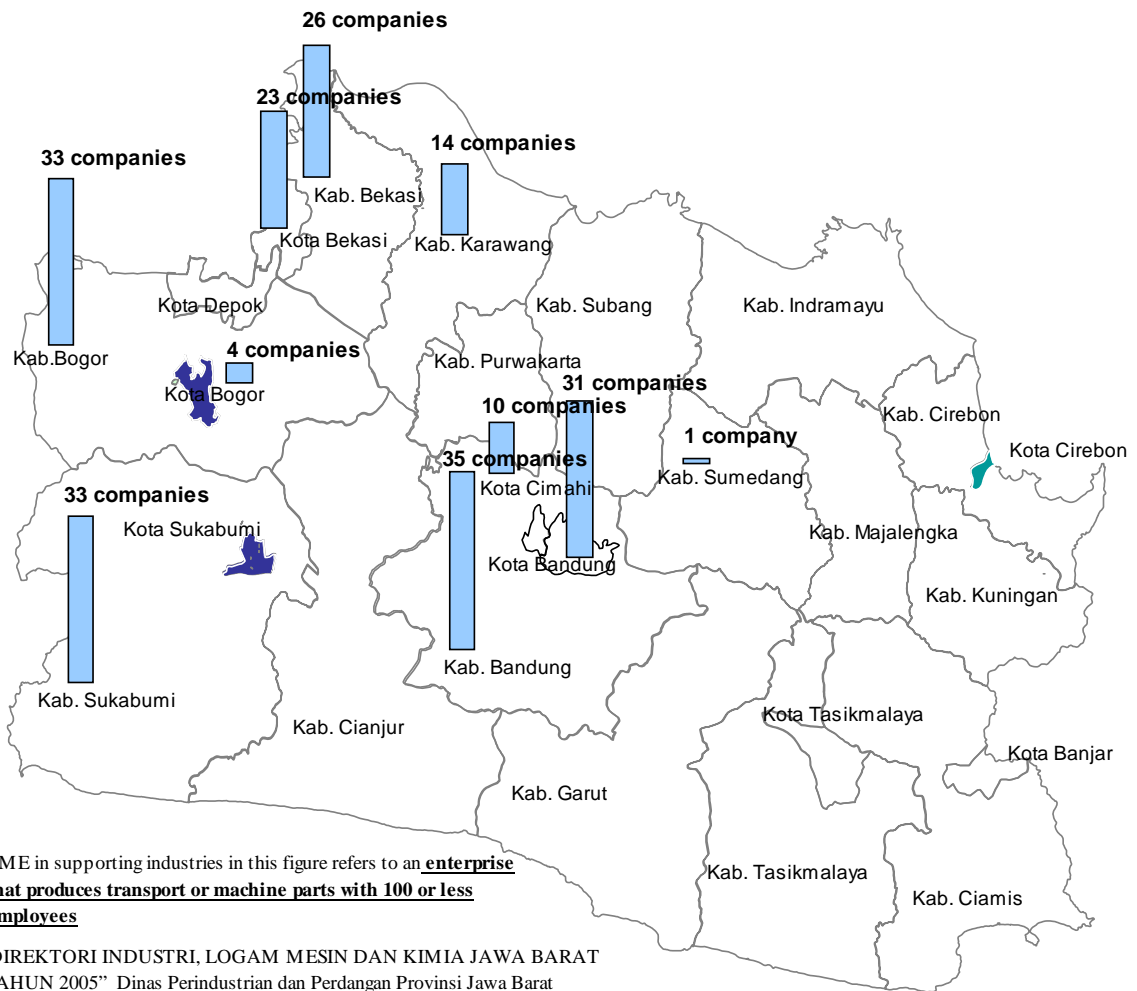


Figure 5-2 Distribution of SMEs in Supporting Industries, West Java Province

However, the interview surveys conducted by the study team experts suggest that supporting industries in West Java have not reached the levels high enough to become suppliers for major assembly manufacturers in terms of technology, facility and equipment, and human resources (discussed in detail in 5.2.3 (6)).

5.2.3 Visiting survey results of the current state of SMEs

The study team visited and surveyed the current state of SMEs in East and West Java.

(1) Objective

To study the current state of SMEs such as industrial characteristics of the regions, technology levels, problems, and the demand for technical support in order to reflect them in the model programs and recommendations.

(2) Methodology

Prior to the start of the survey, the study team asked the provincial DINASSs to prepare a list of SMEs in the machine parts sector, totaling around 40 each. The DINAS in East Java made one mainly from the enterprise databases held by the prefectural /municipal DINASSs, whereas the DINAS in West Java prepared it using the member lists of trade associations.

The study team experts visited the companies in the lists. At every enterprise to visit, they made an on-site inspection, followed by an interview to the owner(s) or managers with a questionnaire. After the interview, the study team experts commented their impressions on the factory and gave advice for improvement as much as possible.

The study team experts visited the companies with SME consultants of each province for the purpose of transferring the expertise of the experts and of getting the knowledge of the SME consultants on local industries in return.

(3) Questionnaire

The questionnaire used for the survey contains the questions on the following items.

- Company profiles
- Types of products made and technologies used
- Target Markets
- Urgent issues to tackle
- Requests relating to training and outside support organizations
- Intent to participate in the proposed model program which gives field guidance

(4) Survey Results

1) Number of enterprises visited and their sectors

The study team experts visited 43 companies in East Java and 40 in West Java.

Table 5-10 Numbers of Companies Visited by Sectors

Sector	East Java	West Java
Automobile parts/Motorcycle parts	20	23
Machine parts	18	4
Die/Jig	1	9
Process	1	2
Assemble	3	2
Total	43	40

Companies in East Java are mainly located in Sidoarjo and Pasuruan. Most of the enterprises in East Java are situated in and around Bandung while some are in Bekasi and Sukabumi. Around the half of them manufacture automotive parts or motorcycle parts. In West Java, nine companies specialize in the design and making of dies and molds. Note that although the study team experts also visited three large manufacturers in East Java which purchase parts from SMEs, they are not included in the table.

2) Number of employees

The number of employees in a company visited in East Java is between 5 and 400, and between 6 and 400 in West Java. The average number of employees in each sector is shown in Table 5-11.

Table 5-11 Average Numbers of Employees in Each Sector

Sector	East Java	West Java
Average of all sector	52.7	64.3
Automobile parts/Motorcycle parts	70.2	88.6
Machine parts	39.0	13.5
Die/Jig	14.0	37.9
Process	7.0	30.0
Assemble	46.3	40.0

In Indonesia, companies register their business with a different stratum of the governments according to their respective company sizes. While MEs and small enterprises register with a prefecture or municipality, medium-sized and large enterprises generally register with the central government. This seems to be a reason why the companies in East Java, which were selected from the provincial/municipal DINASs' databases, are smaller than those in West Java.

3) Sales per employee

Table 5-12 shows the weighted average of the sales per employee reported by the companies. Companies that did not report their sales (8 in East Java and 3 in West Java) are not included in the calculation.

Table 5-12 Sales per Employee

(Unit: Million Rp)

Sector	East Java	West Java
Average of all sector	161.6	81.6
Automobile parts/Motorcycle parts	216.1	82.8
Machine parts	56.7	56.9
Die/Jig	78.6	68.9
Process	25.7	81.7
Assemble	130.6	128.8

Contrary to the expectation of the study team, higher is the weighed average of East Java, where a company in the list is likely to be smaller and less likely to be an OEM vendor (discussed in detail later). Concerning the reliability of the calculation, we need to bear in mind three points at least. First, companies are often hesitant about reporting accurate figures. Second, some of them themselves do not know exact figures because they do not keep books. Third, the definition of employees is vague and some include part-time workers while others do not.

4) Technical specialty

Table 5-13 indicates the most frequently cited five major areas of technical specialty. Note that welding and machining occupy top two ranks in both provinces.

Table 5-13 Technical Specialities

Ranking	East Java	West Java
1	Welding	Machining
2	Machining	Welding
3	Machine assembling	Die design / manufacturing
4	Sheet metal / Metal press working	Sheet metal / Metal press working
5	Coating	Machine assembling

5) Markets

Companies were asked to indicate their sales composition by types of markets, namely: 1) OEM; 2) aftermarket; and 3) own products. Companies which specialize in the designing and making of dies and molds are classified as 3).

Table 5-14 shows the weighted average of OEM ratio to the sales. The population is the companies manufacturing automotive parts and motorcycle parts (20 in East Java and 23 in West Java).

Table 5-14 Ratio of OEM

	East Java	West Java
OEM ratio	28.7%	76.4%

One company in East Java engages exclusively in OEM production and nine in West Java. It is natural that a larger number of OEM-dedicated parts manufacturers are in West Java, given the proximity of the province to Jakarta where assemblers concentrate.

Six of the companies in East Java and five in West Java are not enthusiastic about increasing the ratio of OEM production. Major reasons include: 1) the levels of requirements in the OEM market is higher in terms of product quality and delivery schedule; and 2) OEM production is less profitable, although steady orders are guaranteed. This is consistent with the data on sales per employees at 3), i.e., lower OEM ratio and higher sales in East Java.

In the aftermarket, on the other hand, companies can sell products with higher profit margins without coping with strict quality standards. However, they cannot expect constant orders, and need a larger amount of operating funds.

6) Urgent problems

Table 5-15 and 5-16 shows the urgent problems cited by the companies (each cited two) and those identified by the study team experts.

Table 5-15 Urgent Issues Raised in East Java

Issues	Response from Enterprises	Viewpoint of specialist of Study Team
Financing	24	12
Expansion of product marketing	15	12
Development of own brand products	5	3
Cost reduction	5	4
Technological advancement	5	11
Upskilling of line worker	2	2
Introduction of Management/ Production management technology	14	34
Moral upgrading of employees	7	2
Others	4	2

Table 5-16 Urgent Issues Raised in West Java

Issues	Response from Enterprises	Viewpoint of specialist of Study Team
Financing	34	33
Expansion of product marketing	12	15
Development of own brand products	0	0
Cost reduction	0	0
Technological advancement	5	3
Upskilling of line worker	3	4
Introduction of Management/ Production management technology	12	15
Moral upgrading of employees	0	0
Others	12	10

The experts then asked the purpose of it if a company cited fund-raising as an urgent problem. In both provinces, the overwhelming majority of such companies mentioned the need for working capital. More companies cited the introduction of soft technology than those identifying engineering technology and improving of workers' skills.

Responses classified in “Others” include the following items.

Other problems responded by the companies

- Pollution control
- Establishment of corporate vision
- Acquisition and retention of workers
- Better communication among workers and/or between the owner and workers
- Education of new employees
- Unstable orders
- Unstable profits due to the fluctuations of materials prices
- Parts procurement system

Others problems identified by the study team experts

- Improvement of employees’ mindset
- Introduction of a modern accounting system
- Securing of orders
- Communication between different departments
- Training of die/mold designers

7) Desirable areas of employee education and training

Table 5-17 Desirable Areas of Employee Education and Training

Sector	East Java	West Java
Technology	20	24
Management/Production management	32	23
Skill	10	13

Table 5-17 shows the desirable areas of employee education and training which the companies mentioned. Prior to the survey, the study team expected that they were not aware of the importance of soft technology (business and production management) and were largely interested in engineering technology and production skills. However, the survey results indicate that there is also a substantial demand for education and training relating to soft technology. It should be noted, however, that some indicated it because they had just heard about it from the study team experts, i.e., they have a knowledge of it in word only, or they have never tried to put it into practice.

8) Field guidance by outside experts

Table 5-18 Answers to Whether to Wish to Receive Technical Guidance from Outside Experts, East Java

Desire	37	Technology	20
		Management/Production management	25
Not-desire	6		

Table 5-19 Answers to Whether to Wish to Receive Technical Guidance from Outside Experts, West Java

Desire	40	Technology	9
		Management/Production management	32
Not-desire	0		

Table 5-18 and 5-19 show how many companies showed an interest in receiving field guidance and what they wished to learn. Clearly, there is a strong demand for technical guidance by experts on the shop floor. Again, more companies have cited soft technology than expected. This indicates the presence of high potential demand for SME diagnosis consultants who disseminate soft technology as an extension officer.

9) Evaluation of technology levels by study team experts

Although each visit was short, the study team experts evaluated every company's levels of engineering and production management technologies after an interview survey. Table 5-20 shows the evaluation criteria in 5 grades, and Table 5-21 and 5-22 summarize the results.

Table 5-20 5-Grade Rating Criteria for Sub-Items

Score (Mark)	Rating Criteria for Sub-items	International Comparison
5	Equipment and technology: good/high enough to satisfy required product quality.	Average level of OEM parts industries in industrialized countries
4	Equipment& technology: mostly appropriate though needs some improvement.	Top level in ASEAN parts industries, but less good than foreign-affiliated companies.
3	Equipment& technology: lower than/inferior to required levels. Lacking some essential equipment/ technologies.	Average level in ASEAN parts industries except for companies with foreign capital
2	Equipment& technology: extremely old/low to cause poor product quality.	Lower level in ASEAN parts industries except for companies with foreign capital
1	Equipment& technology: obsolete and out-of-date. Cottage industry level.	The lowest level in ASEAN parts industries.

Table 5-21 Evaluation Results, East Java

Sector	Technology	Introduction and Implementation level of Production management
Average of all sector	2.3	2.3
Automobile parts / Motorcycle parts	2.4	2.5
Machine parts	2.2	2.1

Table 5-22 Evaluation Results, West Java

Sector	Technology	Introduction and Implementation level of Production management
Average of all sector	2.1	2.0
Automobile parts / Motorcycle parts	2.0	1.9
Machine parts	1.3	1.3
Die/Jig	2.7	2.4

In this survey, the average technology level of local SMEs (around 60 employees) is 2.2. Note that the sample size is small and each evaluation is based on an overall impression obtained during a brief on-site inspection.

The companies in West Java got lower scores than those in East Java, despite the fact that the former shows a higher average OEM ratio than the latter. This seems to reflect the differences in evaluation criteria applied by the three experts who visited different companies.

(5) Findings of experts from interview surveys in East Java

1) Current state of SMEs in East Java

The province accommodates a large number of metalworking shops. However, most of them make aftermarket parts for automobiles, motorcycles and farming equipment, repair parts for machinery, or metallic parts for furniture, because there are few major assembly manufacturers nearby. There is intensive competition among these metalworking shops, especially in terms of price. Major problems they face are summarized as follows.

- Because of capital shortage, they cannot afford to renew and upgrade deteriorated equipments.
- Shortage of working capital often prevents them from purchasing raw materials and thus accepting orders.
- Poor working environment; factory buildings are old, and the floor is dirt and uneven.
- Many companies do not keep books and some do not record even monthly sales. As a result, their operation and management relies on intuition and experience, rather than scientific planning.

2) Technical capability

As metalworking shops in the province are mainly producing parts for the aftermarket or repair purposes, quality requirements are relatively low. As a result, their technical capabilities remain low. In addition to the low technical skills, limited accuracy due to the use of old equipment and low-cost, poor quality materials seem to lead to poor product quality. Under the present circumstances, it is difficult for them to supply for OEM products.

As exceptional cases, there are a few companies with advanced technology levels, e.g., a company that performs a relatively high precision machining by using machine tools installed on the concrete floor, and another company that has introduced a cell production system.

3) Level of interest in production management and current level of implementation

Most companies have failed to apply basic production techniques to day-to-day operation. Also, owners of many MEs do not even understand what production management is. Few companies make or maintain drawings, production schedules, product inspection records, or accounts and books that form the basis of cost analysis. Thus, they are not simply ready to introduce modern production management.

4) Issues SMEs face

- They need to change traditional (intuitive) management to scientific (planned) management. Regardless of the size of their companies, they should introduce the modern accounting system, which enables them to make rational plans (for profit, sales, and operation) and to introduce cost and budget control into daily operation. Establishing a production plan allows SMEs to minimize the daily variation of production volume and thus equalize resource mobilization. Given the scale of production, most SMEs would be able to handle their accounts internally, rather than retaining an outside accountant. It is important to promote the modern management to them through advertising it.
- As a first step for visible improvement, they should introduce 5S activities. The first action is to separate necessary articles (products) from unneeded ones. It has been proved that 5S is effective in improving the working environment and integrating the planning and control of production into daily activities, with an ultimate goal to ensure the steady improvement of factory operation and management.
- Many owners cite the “improvement of employees’ morale” as an urgent issue. In fact, it has been often pointed out that the morale of Indonesian workers is low relative to those in other ASEAN countries. Clearly, it is a major issue to be addressed urgently if the Indonesian industry is to improve international competitiveness.

(6) Findings of experts from interview surveys in West Java

1) Current state of SMEs in West Java

- Machinery and equipment are generally old and deteriorated. Their capacities are fairly limited in product precision and productivity and thus they are not suited for OEM production.
- In many shops, workers take a strained position putting work pieces directly on the floor (bare ground). They need to adopt work methods based on the “motion economy” that allows workers to move and operate with ease for maximum work efficiency.
- In many shops, unused articles are scattered, and machinery is covered with dust. They put materials directly on the floor where workers walk around and even step over them. Most importantly, they often keep work-in-process and raw materials in the same place. A handful of companies carrying out OEM production satisfy most of 5S requirements, but they are exceptions.

- They carry out some operations under hazardous conditions, e.g., a lathe that has no cover on rotating parts, a welding gas cylinder that has no chain, and uneven floor surface that can cause an accident.
- There are many issues to be addressed to improve productivity, such as reduction of the time for setup change which should be considered as lost time, but most shops do not realize them.

2) Technical capability

Generally, there is an apparent lack of basic technical capability. On the other hand, a number of companies are engaged in OEM production and some of them have attained relatively high technology levels, as shown below.

Machining and skills

- A company makes full use of CNC machining centers, and another company makes jigs, fittings, and press molds for the automobile industry, which require relatively high levels of precision, though using conventional machine tools.
- A company has wheel lathes and produces rotors for turbines and pumps, and another company produces long articles by lathe. They seem to have skilled workers, in addition to the lathe. Their high level of technology is evident from the use of balancing detectors to maintain a balanced high speed rotation.

Die cast and castings

- An automotive parts manufacturer is capable of supplying castings to the automobile industry by using die casting machines with a urethane resin core.

Plastics molding and shaping

- A company produces small automotive parts by using small and medium-sized molding machines, in comparison to many other companies that use hand-clamping machines. Dies and molds seem to be kept separately, so that workers can tell easily whether one is currently under repair or has been already repaired. Some machines are completely automated.

Metal press technology

- A company has hydraulic and friction presses for stamping, bending, and drawing, making a sharp contrast to many other companies that use crank presses of more than 30 years old. Another company uses forward feed molds for small products.

Rubber molding technology

- A company tries to make small rubber products, in addition to rubber plates and pipes, indicating its efforts to supply higher value added products. Another company considers introducing molds that do not require subsequent steps such as debarring.

3) Level of interest in production management and current level of implementation

Quality control

- Most manufacturers of small automotive parts have an inspection laboratory (quality control room) within their factories to conduct 100% inspection. However, their idea of quality control is to do it in the inspection laboratory, and thus they do not think that it should be done by all employees. They collect data on defects but do not know how or for what to use them.

Quality standards, work procedures and instructions

- Some companies do not have any sign or marking on the shop. Some do not keep even documents or records.

5S

- Many companies do not recognize 5S or do not have interest in it. A few companies have implemented it.

4) Issues SMEs face

A problem is the difference between an ideal and the reality. At the same time, an owner, who does not know what is a good factory, cannot be motivated for improvement and cannot identify actual problems. SMEs should take every opportunity to look at an advanced factory in terms of technology and management, while their supporting organizations should provide such opportunities.

Chapter 6 Model Program

Chapter 6 Model Programs

Chapters 2 through 5 discuss the results of current state surveys conducted as the first stage of the present study. Based on the survey results, the study team planned and implemented model programs as the second stage.

6.1 Implementation Plan for the Model Programs

6.1.1 Objective of the Model Programs

The study team started the present study in consideration of the following factors: 1) the Indonesian government declared the development of the manufacturing industry as one of the national objectives. In the medium- and long-term national development plans, she placed priority on the development and technological upgrading of the manufacturing industry, in particular SMEs, 2) Based on the medium-term national development plan, MOI decided on RENSTRA which emphasizes the need for direct consulting to SMEs and the strengthening of consulting service system; and 3) Since 2001, decentralization has been rapidly progressing to the level in which local governments increasingly lead the fostering of industries both at their own initiatives and within their budgets. Set based on the context (especially 3) is the primary objective of the present study, namely to make proposals for “the SME support system implemented at local governments’ initiatives, in particular building of the human resource development support system.”

Defined as followed is the objective of the model programs, which were implemented jointly with the counterpart for the purpose of formulating recommendations to the local governments.

“To support the provincial governments implementing human resource development programs for local SMEs in the manufacturing sector under their leadership and in collaboration with the central government, to verify the programs’ appropriateness and feasibility, and then to reflect the results in the final recommendation.”

6.1.2 Relationship with the SME Consulting System

In 2006, MOI conducted the first “SME Diagnosis Consultant Training Course” for the period of six months. Participants were employees of provincial, prefectural and municipal Industry and Trade DINASs and of public organizations engaged in SME

support at national and provincial levels. Five of them came from East Java and fifteen from West Java. They learned, through lecture and practical training at factory, subjects relating to how to diagnosis companies, how to propose client companies, and how to provide consulting service. While the formal certification of SME consultant needs the agreement between BNSP and MOI, participants who completed the first training course received a provisional certificate of “Consultan Diagnosis IKM” that was issued by MOI. In 2007, it held the second “SME Diagnosis Consultant Training Course.”

A “SME diagnosis consultant” is supposed “to have broad and experience-based knowledge in all aspects of management, market and technology relating to SMEs in the manufacturing sector, to understand their problems from broad perspectives, and to propose means and methods to solve them.” Both public and private sectors have offered various loan schemes and technical support programs to SMEs. The “SME diagnosis consultant” is also expected “to be familiar with such schemes and to introduce them to SMEs as needed.” Moreover, the “SME diagnosis consultant” is in charge of advising on management and production in the following consulting service phase.

MOI realizes that, on-site consulting and advisory services are more effective than classroom training for human resource development of SMEs, and that they meet the demand of SMEs themselves. Therefore, MOI has also been working to establish a UPL-IKM, a direct consulting unit, in each local government to reinforce the existing consulting system. By founding a UPL-IKM in every stratum of local governments, MOI aims to establish a better support system which provides corporate diagnosis and consulting services by the team of local SME diagnosis consultants, extension officers, and outside experts.

From now on, local governments are to lead human resource development programs for local SMEs under the framework described above. Progress concerning the SME consulting system and UPL-IKMs being taken account, the study team designed these model programs.

6.2 Model Program Scheme

Based on the discussion between MOI and the provincial governments of East and West Java, the study team implemented two model programs; Model Program A for corporate diagnosis, kaizen proposal, and consulting activities, and Model Program B for developing a prototype database on specialty consultants in various fields, who are candidates of specialty consultants.

Figure 6-1 is a basic sketch of the two program. Note that “Shindan-shi” in the figure refers to those who completed the “SME Diagnosis Consultant Training Course” in 2006.

6.2.1 Model Program A

(1) Implementation scheme and areas

In each province (East and West Java), SME diagnosis consultants in provincial DINASSs, public technical support organizations and training institutes organize a team. With an assistance of the study team experts, groups of the team members provide integrated support services of corporate diagnosis, kaizen proposals, and consulting for model companies selected from the provinces. (Figure 6-2 shows the areas where they carried out the program in East Java, and Figure 6-3 those in West Java.)

If a team finds support of experts in specific fields necessary during the consulting process, it hires outside experts to be team members. For example, if a team considers a poor technological level in a specific engineering field to be a bottleneck for a client company, and upgrading it to be essential to the company’s growth and productivity improvement, advice of a qualified outside expert will be sought.

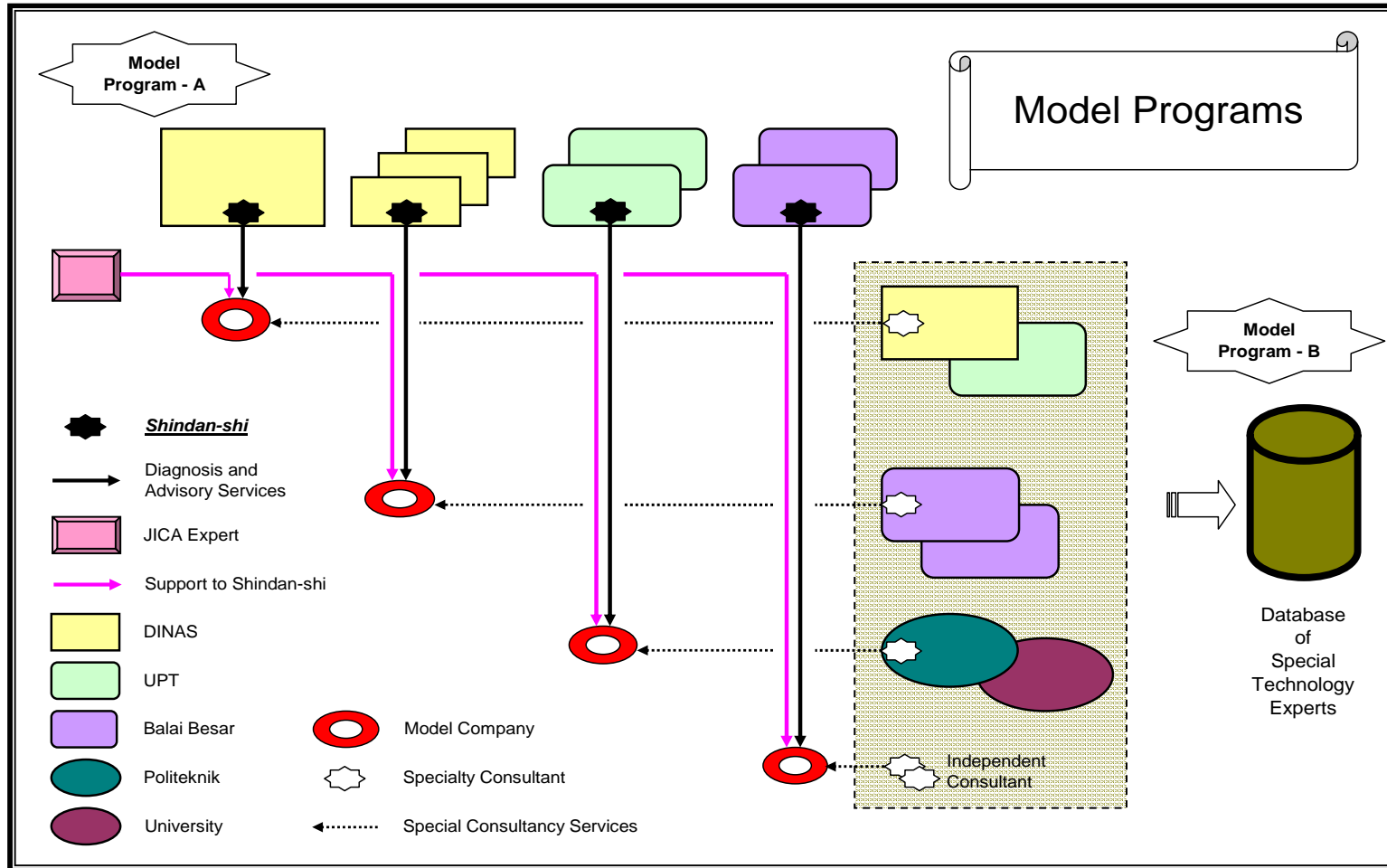


Figure 6-1 Model Program Scheme



Figure6-2 Implementation Areas of Model Program A in East Java

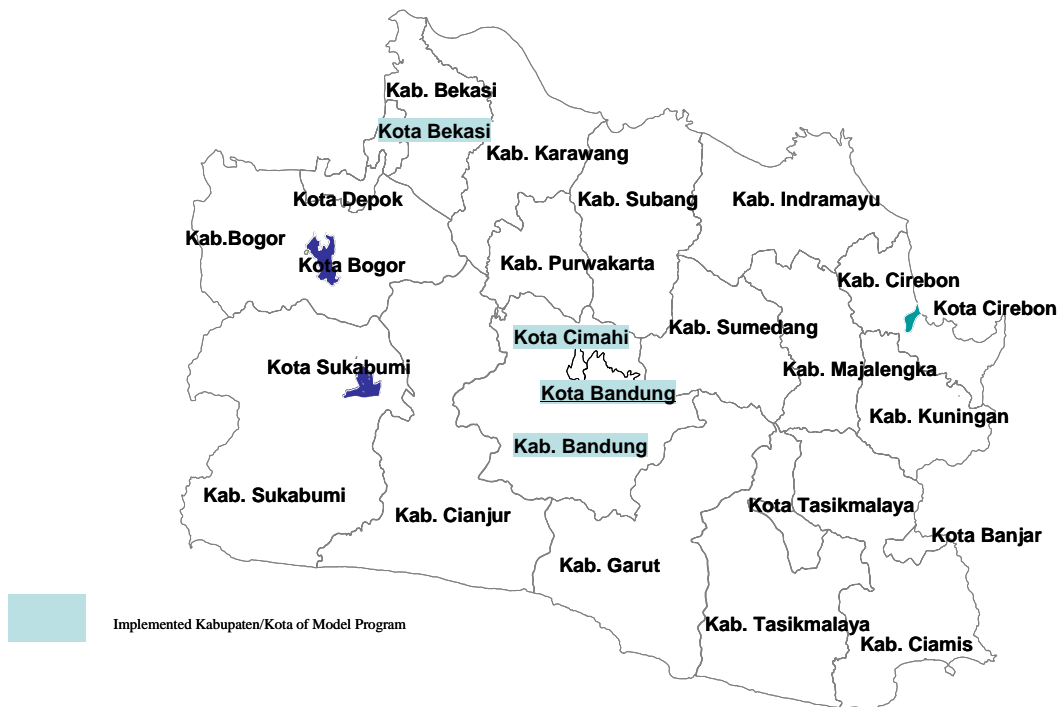


Figure 6-3 Implementation Areas of Model Program in West Java

(2) Rationale for program development and items to verify

Many local SMEs in Indonesia seriously recognize the need for human resource development to improve technical capability and productivity. To achieve the purpose, they want custom-made support that fits the need at their own factory, rather than classroom training to study a common theme. This is apparent in the results of the questionnaire survey in Phase I study and the fact-finding survey of the present study (see 5.2.3).

In this sense, the ongoing progresses – conducting the SME diagnosis consultant training courses, establishing UPL-IKMs in local governments, and offering the corporate diagnosis and consulting service by a combination of government employees and private consultants – are expected to meet the SMEs' demand. However, UPL-IKMs have just been launched and their activity program has still to be fixed.

Although they play an important part of this model program activities, the participants in the SME diagnosis consultant training course seem to lack field experience, especially that of advisory service, the most important part of consulting service.

To make UPL-IKMs functional as planned, it is important to take the following actions in parallel to securing the necessary budget: 1) experience acquisition and capacity building of SME diagnosis consultants; 2) PR activities to the private sector about directly consulting service and SME diagnosis consultants, including service menu; and 3) training of new SME diagnosis consultants.

This model program is designed to cover 1) and 2). It aims to have SME diagnosis consultants acquire experience with an assistance of the study team experts, hopefully successful experience which they can report in PR activities inside and outside the provinces.

Study team reflects the results to the final proposal to the local governments. In Model Program A, the team needs to verify the following items.

- a. Demand for direct consulting service and expectations of companies
- b. Potential and limitation of “Shindan-shi” who have completed the training course
- c. Appropriate consulting method, such as the selection of advisory themes and general rules
- d. Effective UPL-IKM operation system (structure) at the provincial level
- e. Collaboration with specialty experts whom MOI plans to utilize in direct consulting service system

6.2.2 Model Program B

(1) Implementation scheme and areas

In both East and West Java, a prototype database on specialty experts in production technology (hard technology), business administration, and production management (soft technology) will be developed. It will be designed in consultation with MOI as well as the provincial governments so that MOI and other local governments can divert it when MOI develops a nationwide database.

The study team collects data on experts in the fields above from government offices, public organizations, and private organizations. The data will be a part of the database to be developed by the Indonesian government in the future.

(2) Rationale for program development and items for verification

In the six-month training course, Shindan-shi learned corporate diagnosis techniques and specialty consulting skills in corporate management and production management. Some of them, such as those from Balai Besars, are experts with consulting experience in a specific field of production technology.

They are going to play a central role in UPL-IKM activities. However, Shindan-shi and SME diagnosis consultants in the future have to cover all the manufacturing industries. While a considerable portion of corporate management and production management are commonly applicable to all sectors, it is impossible for a single SME diagnosis consultant to handle matters in every industry and field. Therefore, it is an important part of their tasks for SME diagnosis consultants to introduce specialty consultants to their clients, and the database is meant to be a vital tool for such service.

In both provinces, there are many educational institutions and vocational training institutes. This is particularly true for Bandung, the capital of West Java which is the center of academics and industrial technology. Retaining experts with consulting experience, they hold technical support programs for the private sector though the contents and frequency differ. According to a trade association, there are also private consultants. However, neither of these organizations nor provincial DINASs have a comprehensive database on specialty experts which crosses institutional boundaries. This program is meant to solve (at least mitigate) the problem.

The study team needs to verify the following items in Model Program B.

- a. Demand for specialty experts and demanded areas of service
- b. Intent of outside support organizations, educational institutions, and private consultants whether to participate in UPL-ILMs' activities

6.3 Activities and Results of Model Program A

The model program started with corporate diagnosis of model companies, followed by SWOT analysis based on the results, problem identification, target setting of what issues to tackle, and planning of a kaizen activities. Teams provide advisory service during the kaizen activities, and assess the service results. Among them, they need to have the consent by the owner of the model company concerned when they decide targeted issues and activity planning. In particular, they carefully discuss with the owner regarding the inputs from the company necessary for the activities.

Study team experts and Shindan-shi respectively record activities from corporate diagnosis to advisory service in a uniform format in Japanese and Indonesia, and then compile the individual records into reports. The study team experts transfer their knowledge to Shindan-shi through the joint work at model companies, discussion at each step, and comparison and confirmation of one another's progress reports, which is also an objective of the model program.

Note that UPL-IKMs in Industry and Trade DINASs in East and West Java will continue to use the report format in the future corporate diagnosis and advisory services. During the program period, Shindan-shi in West Java explained how to utilize the format to fellow industrial advisors (PFPPs) not in the model program, and they have already started to use it.

Figure 6-4 shows the general work flow of Model Program A.

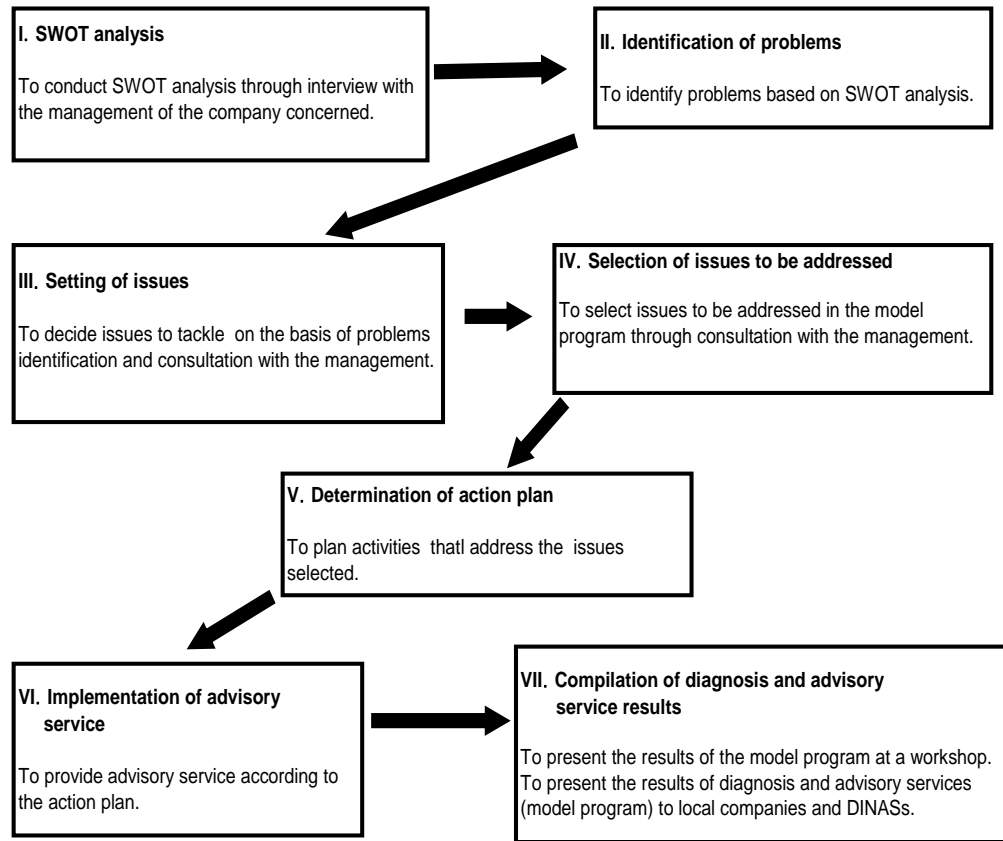


Figure 6-4 Work Flow of Model Program A

Appendix 1 reports the activities at three model companies. A separate volume covers all model companies.

During the model program, the study team held a progress report workshop and a final report workshop both in Surabaya, East Java and Bandung, West Java. In the final workshop, 8 model companies (4 per province) spoke the corporate diagnosis they had, activities that followed, and their achievement. In addition to the model companies and those concerned, the workshops attracted many attendees from local enterprises. Some are in the local industry. They were also meant to be the opportunities to publicize UPT-IKMs' activities by provincial DINASs.

6.3.1 East Java

(1) Activity outline

Two study team experts and four Shindan-shi formed two groups (each group consisting of one expert and two Shindan-shi). Using Industry and Trade DINAS in East Java as the activity base, they conducted corporate diagnosis and advisory services.

Seven model companies were selected from companies visited for the current state survey (conducted during the first field survey) and those recommended by DINAS. After the start of the program, several companies dropped out for various reasons (e.g, not committed to kaizen activity under the program, or production discontinued), and some were added. As a result, the final report was made for ten companies, including two companies for which advisory service is suspended.

Reasons for dropping out the program are as follows.

- A company has discontinued production activity due to the rise in materials cost
- A company, for which corporate diagnosis, SWOT analysis, and kaizen proposals were made, turned out to be reluctant to the implementation of kaizen proposals due to the low level of commitment by the management, which was content with the present technology level and company size and feared that kaizen activities could adversely affect production activities.

Table 6-1 lists issues that were selected for the ten model companies covered in the report and that were to be addressed in the model program.

Table 6-1 List of Key Kaizen Issues Selected for Model Companies in East Java

Model company			Kaizen issues
No.	No. of employees	Products	
E-13	100	Auto engine parts	<ol style="list-style-type: none"> 1. Preparation of a work instruction sheet that can indicate standard time and production record. 2. Problem solving by small group activity (QC circle) 3. Resumption of 5S activities 4. Implementation of cost analysis and development of cost reduction measures
E-34	30	Machine parts	<ol style="list-style-type: none"> 1. Implementation of 5S activities, focusing on warehouse 2. Productivity improvement through identification of causes for defectives and prevention of recurrence by using 7 QC tools 3. Preparation of SOP (standard operation procedures)
E-35	15	Furniture parts	<ol style="list-style-type: none"> 1. Implementation of 5S activities 2. Establishment of five-year visions and the development of strategies to achieve them 3. Establishment of work regulations and implementation of labor management 4. Cost analysis and promotion of cost reduction plan 5. Appointment of factory operation manager and definition of role 6. Preparation of production plans and implementation of progress control 7. Promotion of sales activity for production increase 8. Layout of a new factory
E-42	16	Machine parts	<ol style="list-style-type: none"> 1. Exclusion of unused articles and productivity improvement through implementation of 5S 2. Analysis of causes for defect and reduction of defectives by using 7 QC tools
E-59	40	Motorcycle parts	<ol style="list-style-type: none"> 1. Implementation of 5S activities 2. Establishment of product codes 3. Establishment of work regulations and implementation of labor management 4. Preparation of production plans and implementation of progress control 5. Cost analysis and promotion of cost reduction plan 6. Establishment of five-year visions and the development of strategies to achieve them
E-62	85	Auto parts Agro-machine parts	<ol style="list-style-type: none"> 1. Implementation of 5S activities 2. Upgrading of workers' skill level 3. Formulation of visions and strategies <ol style="list-style-type: none"> 3.1 Strategy for increasing sales and profit 3.2 Establishment of the production system (machinery and equipment, layout, work standardization, etc.) 3.3 Establishment of the management system (management plan, budget, organization, etc.)
E-152	30	Agro-machine parts	<ol style="list-style-type: none"> 1. Implementation of 5S activities 2. Formulation of a factory integration plan 3. Improvement of employees' morale 4. Work time management and the establishment of the payroll system according to working hours 5. Appointment of management assistant and factory manager, and definition of their roles 6. Creation and maintenance of cash-based books 7. Preparation of production plans and work instruction sheets, and implementation of progress control
E-203	22	Auto parts	<ol style="list-style-type: none"> 1. Implementation of 5S activities 2. Formulation of visions, strategies, management plan, and budget 3. Cost analysis and promotion of cost reduction plan 4. Establishment of product codes 5. Preparation of production plans and implementation of progress control 6. Appointment of factory operation manager and definition of role 7. Improvement of the method to store work-in-process on the floor
E-303	25	Furniture metal parts	<ol style="list-style-type: none"> 1. Implementation of 5S 2. Implementation of progress control based on SOP, such as production instructions and records
E-307	8	Motorcycle parts	<ol style="list-style-type: none"> 1. Optimal machinery layout 2. Safety measures

During the program period, a meeting of representatives of model companies was held to share experience, and a field tour to a Japanese agricultural machinery assembly plant was conducted.

The experience sharing meeting: it was conducted to create opportunity for model companies to share their experience in kaizen activity under the model program and to discuss problems facing them, thereby to raise motivation to promote kaizen activities. Representatives of eight model companies participated under attendance of DINAS staff. After the exchange of opinions, a lecture meeting was held by a local SME owner who established his own company by leaving a Japanese company where he worked and successfully operates the company by adopting management techniques he learned at the Japanese company.

Visit to the Japanese agricultural machinery assembly plant: Representatives of seven model companies visited a Japanese agricultural machinery assembly plant to learn from a model factory and its operation. They heard explanation of the Indonesian factory manager, followed by questions and answers.

The following are reports on activities of model companies and their results by two study team experts.

(2) Activities and results of model companies reported by study team expert A

1) E-35

For the company, the following eight issues were selected: a) implementation of 5S activities; b) establishment of five-year visions and the development of strategies to achieve them; c) establishment of work regulations and implementation of labor management; d) cost analysis and promotion of cost reduction plan; e) appointment of factory operation manager and definition of role; f) preparation of production plans and implementation of progress control; g) promotion of sales activity for production increase; and h) layout of a new factory.

In comparison to other model companies where wastes and work-in-process were left on the floor or machinery and little cleaning was carried out, the company maintained relatively good housekeeping. Nevertheless, dies, molds, jigs, tools and products were stacked rather disorderly at various locations of the factory. It was therefore decided to give priority to implementation of 5S activities. The company's operations other than field work, such as sales, procurement, and production

management, were handled by the owner, as seen in many small enterprises. 5S activities were introduced and conducted by workers under the owner's direction. As a result, the company has successfully reached at nearly the perfect level.

As for "layout of a new factory," the company planned to build a new factory in an adjacent vacant land and to complete relocation by the end of the year, and the consulting team provided support for factory layout planning and design. However, the owner was unable to spend time for the project because his family member was hospitalized, and factory construction was postponed. Also, introduction of the accounting system (including creation and maintenance of cashbooks), preparation of production plans, and the establishment of work regulations were also suspended for the same reason. The owner's inability to devote his efforts has eventually affected the company's operation. Orders decreased significantly and the factory was suspended. This unfortunate case suggests that the owner needs to appoint an assistant or manager in order to avert the risk of company failure due to a misfortune of the owner or his family by unloading responsibilities for sales, procurement, production management, and other day-to-day operations.

2) E-59

For the company, the following six issues were set: a) implementation of 5S activities; b) establishment of product codes; c) establishment of work regulations and implementation of labor management; d) preparation of production plans and implementation of progress control; e) cost analysis and promotion of cost reduction plan; and f) establishment of five-year visions and the development of strategies to achieve them.

It was decided to give the highest priority to "implementation of 5S activities". The implementation process was continuously monitored, at least once week, and the consulting team gave advice in consultation with the company. The initial observation indicated that the interior of the factory was kept disorderly, e.g., raw materials (waste pieces) purchased on the spot from the market were stacked in the center of the factory, without classification, and around them, product inventories (made in excessive quantities) were placed disorderly without any marking.

For other issues, the consulting team explained their importance and implementation steps to the owner at the start of the program. It was then decided to start consulting and advisory service gradually in consideration of the actual progress of 5S

implementation. The owner was responsible for day-to-day operations except for field production work, including sales, procurement, production planning and management. Because he intended to lead kaizen activities by himself, rather than leaving them to employees, the consulting team felt that it would be difficult to implement various themes concurrently. Other than “implementation of 5S activities,” guidance and advice was issued for the following areas, although it has still to be implemented.

- As the company mainly made automotive and motorcycle parts for aftermarkets, which included a large variety of similar products, but it managed them according to product name only to create a risk of confusion. It was therefore proposed to establish product codes by supplying documents showing the coding method.
- Many employees often came late for work and but the company did not maintain any attendance book and paid a full-day wage. It was then proposed to establish work regulations to allow the company to pay wage according to actual attendance by presenting draft regulations.
- The company did not know cost breakdowns and the company’s revenues and expenditures in detail. As the first step to create and maintain books required for the purpose, advice was given on the method to prepare and maintain a cash book and a bank book.

As agreed at the beginning, consulting and advisory activities were conducted by checking the implementation status, at least once per week, and problems were pointed out. However, the owner kept on saying that he was too busy to take action and wanted to start in the subsequent month. As his indecisive attitude continued, the consulting team concluded that no progress could be expected and suspended the visit. Then, in late August, the company was replaced with a new model company.

3) E-62

For the company, the following three items were selected for kaizen activities: a) implementation of 5S activities; b) upgrading of workers’ skill level; c) formulation of visions and strategies; c)-1 strategy for increasing sales and profit; c)-2 establishment of the production system (machinery and equipment, layout, work standardization, etc.); and c)-3 Establishment of the management system (management plan, budget,

organization, etc.).

The company manufactured assembly parts for Yanmar (40% of total sales) and automotive and motorcycle parts for aftermarkets (60%). A large number of dies and molds were piled up on the shop floor, because the company supplied all types of parts for aftermarkets including those before model change and had to preserve all dies and molds. Most of them were covered with rust and dirt, without classification or labeling. The consulting team decided that the implementation of 5S activities should start with the arrangement of these dies, and started to examine their conditions. However, the company was reluctant to the cleanup of die inventories. It was then proposed to classify dies into three types (frequently used, occasionally used, and rarely used) and keep them in designated stacks, while storing “rarely used dies” in a warehouse outside the factory. The proposal was rejected because the company had no money to buy stacks and the warehouse did not have any space to keep dies. As a result, the consulting team abandoned the idea of implementing 5S activities.

Instead, since mid-November, the consulting team has been engaged in “kaizen and standardization” of the production process for cage wheels (also called iron tires) that were incorporated into Yanmar’s cultivators. For the production process, there was no documentation on work conditions or method, which were left to individual workers. The consulting team studied working conditions, analyzed problems, and devised and proposed a possible method for kaizen and standardization. As the factory manager understood the possible effect of the proposed kaizen activities, significant progress was made. The results were then presented at the workshop held for the purpose. Due to time constraint, the consulting team was able to study and analyze part of the production process. It is hoped that the company will proceed with kaizen activities for the rest of the process.

4) E-152

This company was added as a new model company to replace E-59 in late August, for the reason mentioned earlier. The owner was enthusiastic about developing the company further. It has acquired factories in Pasuruan and is now operating four factories by hiring 30 employees in total. It is willing to make finished products and plans to make and sell farming tractors. The consulting team advised that, although business expansion to the downstream market was a valuable goal for parts suppliers, farming tractors would be highly risky for the first product and other products that would not require brand power or advanced technology should be selected.

For kaizen activities, the following seven themes were established: a) implementation of 5S activities; b) formulation of a factory integration plan; c) improvement of employees' morale; d) work time management and the establishment of the payroll system according to working hours; e) appointment of management assistant and factory manager, and definition of their roles; f) creation and maintenance of cash-based books; and g) preparation of production plans and work instruction sheets, and implementation of progress control.

a) As for "implementation of 5S activities," it was planned to implement at the four factories simultaneously, but the owner is very busy and it has not started yet. Like other small enterprises, the owner handles all day-to-day operations, including sales, procurement, and production management. For instance, he visits suppliers in Surabaya and purchase low-cost raw materials in cash.

b) As for "formulation of a factory integration plan," the company planned to integrate the four factories in August 2008, when the lease of the warehouse would terminate, and the consulting team offered support for relocation planning. However, a new factory site was far away from the existing factories and would produce a commuting problem for many employees, the plan was abandoned.

c) For "improvement of employees' morale," the following proposals were made: (1) to clearly define management visions and share them with employees to raise their morale and improve the stability of the work force; and (2) to establish an employee evaluation system and compensate them on the basis of performance and merit. Although the consulting team intended to provide advisory service, no activity has been carried out.

The company purchased personal computers in mid-November, and the owner (no experience in PC operation) and an employee (nephew with some PC knowledge) decided to introduce PC-based accounting and business administration. The consulting team provided board support, including format preparation, entry method, and operation and maintenance. Formats introduced include an attendance book, a cash book, a bank book, a work instruction sheet, a production plan, an incoming order ledger, and an inventory ledger, which are related to the issues in d), f), and g). The nephew is expected to make data entries to the PC formats (e.g., account book, incoming order ledger, and work instruction sheet) for the time being. As a result, he

will obtain knowledge and information on order, procurement, management, and production, and he will become the “management assistant” that addresses the issue in e). This was presented at the presentation workshop for the model program.

Although the above ledgers and books are essential tools for corporate management and production management, most small enterprises do not use them and rely on memory, experience, and intuition. Few small enterprises own or use PC, but they need to realize that effective use of PC allows efficient and accurate accounting and storage of massive data with instant access.

5) E-203

For the company, the following seven issues were selected for kaizen activities: a) implementation of 5S activities; b) formulation of visions, strategies, management plan, and budget; c) cost analysis and promotion of cost reduction plan; d) establishment of product codes; e) preparation of production plans and implementation of progress control; f) appointment of factory operation manager and definition of role; and g) improvement of the method to store work-in-process on the floor.

The owner was enthusiastic about participation in the model program, but he handled all day-to-day operations by himself (e.g., sales, procurement, and production planning and instruction) and did not have enough time to conduct kaizen activities. Consequently, unsatisfactory results were observed for most issues including implementation of 5S activities.

On the other hand, some results were obtained for creation and maintenance of a cash book and a bank book, which was carried out by the eldest daughter of the owner. Monthly revenues and expenses and cost tabulation by item were recorded, albeit handwriting. As the company recorded expenses relating to procurement as reference for purchase of raw materials, it formed the basis of the accounting system. The consulting team proposed further use of PC to improve efficiency and accuracy of accounting and tabulation, and the counterpart is expected to continue support to help achieve the goal.

(3) Activities and results of model companies reported by study team expert B

1) E-13

Company profile:

The company mainly manufactures cylinder liner castings including machining, which are supplied to Japanese automakers and agricultural machinery companies. It has obtained IOS certification and establishes itself firmly in the market. It has around 100 employees.

Results of corporate diagnosis:

As the company serves as the first-tier supplier for Japanese manufacturers, it pays great attention to product quality. It has obtained ISO certification (9001 Quality Management System).

Yet, there are many areas to be improved. First of all, the company does not practice job management. As standard work time is not specified in a work instruction sheet, there is no way to maintain or improve productivity. Also, a production record is kept only for shop and day, but not for an individual worker, so that work time spent by each worker is not known. A machine shop is fairly well cleaned, but it lacks discipline (“shitsuke” - one of 5S) because work-in-process is placed on a boundary market for safety passage. Work-in-process inventory is excessive (one month). This means it occupies space and holds up money. Quality policy remains in the 2001 version and quality targets in the 2003 version. Customer complaints and internally found defectives are not documented or analyzed. The company’s mission and goal are not clearly defined. Cost analysis is not carried out to prevent the company from devising the measures to improve price competitiveness.

Themes selected for kaizen activities:

- Creation of a work instruction sheet that can specify standard work time and can record production data
- Problem solving by small group activity (QC circle)
- Resumption of 5S activities
- Implementation of cost analysis and development of cost reduction measures

Kaizen activities:

The company has already implemented small group and 5S activities. During the program, the factory manager and the quality assurance manager showed enthusiasm and actively participated in small group activity. Although the consulting team

proposed the inclusion of standard work time and cost reduction measures in themes for small group activity, it was not realized because these subjects were not included in the themes for kaizen activities.

Kaizen results:

17 small groups were organized and worked with individual themes they chose. Their activities were culminated to the presentation meeting that was held on December 15. 11 groups presented their results over three hours, and the company awarded money prizes to groups with excellent results. According to the factory manager, the small group activities increased conversation among employees and created an atmosphere to encourage employees to solve a problem on their own.

2) E-34

Company profile:

The line of business consists of the manufacture of machine parts such as gears (70% of the total), plastics parts (10%), and printing (20%). It has 30 employees.

Results of corporate diagnosis:

The company makes parts for textile companies (60% of total sales) that order on a continuous basis. While it constitutes a firm base for the company's business, it depends much on the fixed customer base. It fails to define and control specifications for raw materials, resulting in material-based defectives that are discovered after production. Little effort to identify a cause for defect is made to result in recurrence of the same defect and thus adversely affect productivity. A warehouse storing raw materials is kept disorderly to require considerable time to find a required material and reduce actual production time, thereby deteriorating productivity. Unused articles are left intact in the shop.

The company boasts high levels of technology as it manufactures products that can substitute for imports. However, it does not have a hobbing machine to make gears that are displayed in the office. Seemingly, it makes maintenance parts (for textile machines).

Themes selected for kaizen activities:

- Implementation of 5S activities, especially in the warehouse
- Identification of a cause for defect by using 7 QC tools and prevention of recurrence for productivity improvement
- Development of SOP to ensure that any worker can do the same work

Kaizen activities:

Although the company showed willingness to improve factory operation, it lacked positive attitude and the consulting team did not have much opportunity to discuss with the owner. The person designated by the owner was not enthusiastic enough and was replaced upon our request. The successor was willing to do but was not given of much responsibility or authority, and kaizen activity did not make much progress even though the consulting team tried to bring it forward by requesting an action upon each visit. As part of kaizen activity, BPTI's expert was invited to conduct training for machine's accuracy test.

Kaizen results:

It was originally planned to implement the three themes in several phases. However, as it was difficult to see the owner and he left everything to the responsible person, it was decided to focus on 5S. The factory was divided into five sections, for each of which the responsible person was appointed. As for the warehouse, the responsible person made serious efforts and many unused articles were disposed. The cleanup of unused articles also progressed in the machine shop and the working environment improved significantly, such as safety passage, arrangement of cables, and installation of new racks.

3) E-42

Company profile:

The company mainly makes parts for building equipment (construction work). It also manufactures automotive parts for aftermarkets. It operates and maintains its factory well. It has 16 employees.

Results of corporate diagnosis:

The owner is enthusiastic about improvement of his company's management, but the company has no mission or policy because of the small company. A rejection rate of its products is high (20%), but a cause for defect is not identified to result in recurrence. There is no established production procedure and workmanship varies among workers, so that the company cannot assure stable quality.

A tool storeroom is not kept orderly and tools are lost or waste time occurs to find a necessary tool, thus adversely affecting productivity. The materials warehouse is partitioned by stacks but unused articles are also stored and take up space.

The company makes products upon order without detailed specifications, and a large number of rejected products occur. On the other hand, it also makes parts for aftermarkets (trucks) that require a relatively high level of precision. They seem to be accepted in the market.

Themes selected for kaizen activities:

- Exclusion of unused articles and productivity improvement through implementation of 5S
- Identification of a cause for defect and reduction of defectives by using 7 QC tools

Kaizen activities:

As the owner was enthusiastic about kaizen and the consulting team felt comfortable about promoting kaizen activities. The company has a better working environment as compared to other companies of the similar size. The cleanup of the warehouse and floor cleaning became daily practice. During the activity period, BPTI's maintenance expert was invited to conduct training for machine's accuracy test.

Kaizen results:

As the company made the afternoon of every Friday available to the program's activity, implementation of 5S progressed smoothly. In addition, cleaning prior to daily meetings took a firm hold.

As for the second theme on "use of 7 QC tools," the counterpart introduced small group activity during the period when the study team experts worked in Japan, and as a result, two groups (shop floor and administration) were organized and conducted intensive discussion on problem solving and cause and effect analysis. On the final day, the two groups presented the results.

4) E-303

Company profile:

The company makes electrical materials and metal parts for furniture. It has 15 employees. As commonly seen among small enterprises, the company mainly hires part-time workers, whose number varies with business status. Production equipment is generally very old.

Results of corporate diagnosis:

The company's products are generally accepted in the market because quality requirements are relatively low. It is characterized as home manufacturing. The factory shows no sign of regular cleaning and other housekeeping activities. Articles are piled up in a disorderly manner to result in downtime and lower productivity. The warehouse is not well partitioned and raw materials are scattered. The quality control manager is appointed but is not engaged in quality control activity all the time. While products are said to be delivered on time, progress control is not recorded and work instruction is given verbally, seemingly impeding productivity improvement. Many of employees are commission-based part-time workers and do not receive formal training. Generally, the company does not have high growth potential. Press work is carried out without basic safety protection measures.

Themes selected for kaizen activities:

- Implementation of 5S
- Implementation of progress control by using SOP such as work instruction and production record

Kaizen activities:

The contact person with the consulting team changed frequently among the owner's family members. As there was a sense of reluctant to preparation of production documents or work instructions in writing, it was proposed to start with 5S, followed by the next theme as progress was made. It turned out that 5S became the primary focus.

Kaizen results:

When the consulting team visited the factory for the first time, unused articles were scattered and the workshop was covered with dust. It was not a desirable working environment. On each visit, the consulting team emphasized the importance of cleanup and tidying up if productivity improvement is to be achieved. As a result, the company was actively engaged in 5S activities and substantial progress was made, e.g., unused dies were disposed, dust was removed, articles were classified and kept with clear marking, and tools were neatly arranged. These results facilitated layout change that was made during the program period.

5) E-307

Company profile:

The company makes dies and molds by means of electrical discharge machining. It was founded in May 2007 by the owner who retired from the public service. It has five employees, including two full-time ones (operator and administrative staff). The owner seems to be very busy and the consulting team could not meet him even if appointment was made.

Results of corporate diagnosis:

The owner requested advisory service at the interim presentation seminar for the model program. No diagnosis was made and advisory service on the following themes was requested.

Themes selected for kaizen activities:

- Optimum machine layout
- Safety measures

Kaizen activities:

Originally, the owner expressed enthusiasm about kaizen activity but seemed to lose interest as he was absent upon the consulting team's visit. Optimum machine layout required input of data on material flow and process steps from the company. Request was made several times but none was submitted. As a result, the theme was terminated. As for safety measures, it was decided to prepare a draft safety manual, based on which the owner would make the company's manual according to its peculiar conditions.

Kaizen results:

While optimization of equipment layout was not carried out for the above reason, the owner was pleased to have the safety manual as it was not widely available in Indonesia.

6.3.2 West Java

(1) Activity outline

Using Industry and Trade DINAS in West Java as the activity base, each of seven Shinda-shi and one PFPP formed a pair with one study team expert to conduct corporate diagnosis and advisory services.

Model companies were selected on the basis of the results of the current state survey (conducted during the first field survey) and in consultation with Industry and Trade DINAS in West Java. Upon agreement of each company, nine model companies were formally selected but one company dropped out before the start of corporate diagnosis. Then, two model companies completed kaizen activities and two companies were added to replace them. The final report covered ten companies including two companies that had completed kaizen activities in the course of the program.

Table 6-2 lists issues selected for kaizen activities for model companies. Many companies worked with “implementation of 5S,” “reduction of setup time” and “reduction of rejection rate.”

Table 6-2 List of Key Kaizen Issues Selected for Model Companies in West Java

Company No.	Kaizen issues								
	Implementation / enforcement of 5S	Reduction of setup time	Reduction of rejection rate	Reduction of erroneous work	Establishment of the cost accounting method	Work safety	Improvement of worker's skill level (implementation of practical training)	Bookkeeping	Monitoring and analysis of planned and actual production time
W-27	●	●	●						
W-34		●		●					●
W-52	●	●	●						
W-59					●				
W-60	●	●							
W-64	●	●	●						
W-74	●					●			
W-77	●						●		
W-94	●							●	
W-96	●							●	

During the program period, a three-day workshop on jig and fitting design was held at DINAS by a study team expert as instructor. It was initiated from the study team’s proposal and agreement with model companies, in order to address the situation that

problems relating to defective jig design and making were found at many model companies. It was designed to teach workable solutions for problems encountered in day-to-day operation by emphasizing on exercises simulating actual cases. 20 persons representing model companies attended.

(2) Activities and results of model companies reported by study team expert C

1) W-27

The company has 55 employees and reports annual sales of Rp 5 billion by supplying machined parts for automobiles. It is specialized in machining and welding. It has a variety of machine tools, including lathes, milling machines CNC lathes (made in Japan or Taiwan), cylindrical grinding machines, sawing machines, gear cutting machines, and hydraulic presses for press fitting.

Major issues for kaizen activities are the reduction of setup time, reduction of rejection rate, and implementation of 5S. As for reduction of setup time, the recording of the operating status was started by making a daily production report using Gantt charts, and setup time was estimated and recorded in a special sheet for analysis. As a result, it was discovered that time-consuming activities in the production process were the meeting, requisition of tools from the storage, and program input. In response, measures were devised and successfully executed to shorten the meeting time and the time to obtain tools. The long program input time was originated from old machines and it was concluded that the company should seek a solution by consulting with the manufacturer.

As for reduction of rejection rate, significant results were achieved by implementing three kaizen activities in the machining process, namely defect reduction measures relating to products that required boring by the CNC lathe, the machining of “hub” parts by the CNC lathe, and control of pipe cutting length.

As for implementation of 5S, the company responded to our advice by carrying out kaizen activities quickly, including the installation of a height restriction sign at the warehouse entrance, the repainting of boundary lines for service paths and passageways, the relocation or removal of articles placed on passageways, cleaning of upper part of machine tools, the removal of unused articles placed around machines, floor cleaning, cleaning of transportation vehicles, cleaning of liquid containers, and the arrangement of the pre-shipment product storage space. The president showed strong leadership and kept good relationship with employees.

The workshop on jig/fitting design was attended by three employees including the manager in charge of engineering. They expressed their impression that the workshop allowed participants to think and practice by using exercises.

2) W-34

The company has 24 employees and makes jigs, fixture, machined parts, dies and molds (for blow molding) with annual sales of Rp 1.8 billion. It is specialized in machining, machine assembly, and assembly of jigs and fixture. Its machine tools include simple milling machines, small lathes, drilling machines, and CNC milling machines that have been purchased recently (October) and are equipped with the function to exchange cutting tools automatically. They have still to be fully utilized, but they are used for finishing, following rough machining by simple milling machines.

The kaizen issue selected for the company was found in that actual machining time exceeded that estimated by the engineering division. To determine a cause, relevant operation data were plotted on the Gantt chart in a format provided by the consulting team and analysis was performed for the machining process including setup. The personnel who performed the analysis did not understand the preparation of the Gantt chart at first and came to DINA for advice. Analysis of operation of CNC milling machines revealed that setup time was unduly long due to improper preparation and wasteful movement of work pieces. The manager is expected to make continuous efforts to reduce setup time.

The operating rate of machine tools at the company is below 50%. Generally speaking, it should be maintained above 75% if profit is to be made. It is therefore strongly recommended to minimize downtime of CNC milling machines by ensuring elaborate preparation for machining operations, selecting suitable jigs and fixture, and performing efficient rough machining by simple milling machines.

3) W-52

The company has 140 employees. Its annual sales are around Rp 13 billion. It manufactures motorcycle and automotive parts (press, plastics molding, and machined parts). It is specialized in machining, press sheet metal working, welding, and die/mold making.

On the first visit, the consulting team learned that it took two hours to change setup in the injection molding process, and “reduction of setup time” was selected as the first kaizen issue. Then, short service life of dies and molds was raised. Because quick wear and tear of molds caused defectives, “reduction of rejection rate” was taken up as the second kaizen issue. Finally, 5S was picked up as the third theme, because it was relatively well practiced but did not reach at a satisfactory level, especially proper arrangement and storage of dies and molds.

For the first theme, setup time was estimated by using an analytical sheet provided by the consulting team and by collecting operational data. As a result, the setup change time for plastics molding was estimated at 65 minutes. Most time consuming steps were the accurate positioning and alignment of a mold in the machine by hoisting it by a chain block as well as the tightening of the mold in place. The consulting team made several proposals to reduce the time, which are implemented accordingly. The team also emphasized the importance of off-line setup and provided advice for reduction measures.

As for reduction of rejection rate, the consulting team pointed out the need for improvement of skills relating to mold design and making and provided advice on collection and compilation of quality data. In particular, the company was encouraged to record, for each product, the total quantity of production, the number of accepted products, the total number of rejected projects and their breakdown by cause, and the percentage of defectives. Then, it was also recommended to record defect data, including causes, corrective measures taken, and time when corrective measures were taken, while appointing a person who is responsible for implementation of corrective measures. Although the company conducted quality control activities, they did not address the problem properly, i.e., irrelevant data were collected to calculate process capacity indices and prepare histograms. It was emphasized that the company should give priority to implementation of proper measures to reduce defects, rather than data collection and analysis.

4) W-59

The company has 80 employees and its reported annual sales are Rp 5 billion. It is primarily engaged in the designing and manufacturing of jigs and fixture for automobile assembly by using machining, press sheet metal working, and welding technologies. It has large planer type milling machines that are capable of planar finishing large jig and fitting bases. It does not have CNC milling machines or lathes,

while it has lathes, milling machines, shaping machines, surface grinding machines, press brakes, and C-type presses, all of which are fairly old. It wants to purchase CNC milling machines but cannot afford to do it right now because of financial situation. There are three jig/fitting designers, who are responsible for designing and manufacturing according to the customer's request. Jigs and fixture so made are delivered to the customer (automobile manufacturer) for trial production, followed by correction and fine adjustment as required. The company enjoys a major advantage over competitors by offering a shorter lead-time of three months. It intends to explore new customers in the electrical/electronics industry, but it is difficult to achieve at present as the company's jigs and fixture are relatively large and meet relatively low precision requirements, while electrical/electronics manufactures demand higher accuracy standards that can only be met by more advanced machines and skills.

Price offering to customers is based on the market price, rather than accurate cost estimation. The company wished to establish the cost estimation method, in particular machine and man rates, which were generally determined according to a method unique to each company. The consulting team proposed a calculation method found in source materials provided by the counterpart. The company mastered the method quickly and decided to apply it to the future price setting. As a result, our advisory service was completed in July after three visits.

5) W-60

Advisory service for the company was started in August and ended after four visits. It had 108 employees and reported annual sales of Rp 4 billion. It manufactured press and machined parts for automobiles by using machining, press sheet metal working, welding, and mold assembling technologies. It had a large number of C-type frame presses and gate-type presses. Machines were generally old. As many molds were ready to use by aid of guide post, machine accuracy was sufficient to make products using thick materials.

The company was demanded by its customers to implement 5S. It made some progress as a result of our advice on the first visit, but still not at satisfactory levels. In particular, molds and machines were covered with dust and no cleaning was made. Also several advices were made in relation to work safety.

Setup change time was never measured. Using an analytical sheet provided by the consulting team, measurement was made. It was measured at 25 minutes or 40

minutes. There were two causes for long setup change time, the adjustment of die height and clamping. The adjustment of die height is inevitable as the company used different types of machines. Clamping time can be reduced by adjusting spacer height by screw. In addition, off-line setup time is an important factor for reduction of setup change time. Thus, kaizen activities in these two aspects will lead to considerable reduction of setup time, although they have still to be started.

As for quality control, the consulting team proposed several ways to prevent occurrence of defect, instead of relying on the worker's care and attention. In addition, advice was made to correct wrong use of the QC tools in several respects. It was emphasized that they should not waste time by collecting irrelevant data or construing unnecessary graphs.

6) W-64

Advisory service for this company was started in June and seven visits were made. It employed around 200 workers in January, which recently decreased to 130. With annual sales of Rp 7.8 billion, the company manufactured rubber products, gaskets, metal parts, press parts, and springs for automobiles. It was specialized in machining, metal press work, rubber molding, welding, and die/mold making. Its factory was equipped with rubber molding presses, metal sheet metal working presses, small lathes, and spring makers. The factory building was old and the interior was not well lit. It was not particularly well cleaned or tidied up, but at least not much dust was observed on the floor.

For the company, OEM production serves as a steady source of income with relatively small requirements for working capital, but profit is low. On the other hand, sales to aftermarkets show high profitability, while a large working capital is needed. The company intends to lay emphasis on the latter in the future.

The themes for kaizen activities were 5S, reduction of rejection rate, and reduction of setup change time. An ad-hoc committee was established for 5S. A proprietary check sheet was developed for evaluation, based on which, day-to-day kaizen activities are on the way.

As for reduction of rejection rate, the company conducted 100% inspection as well as sampling inspection before shipment for quality assurance. The consulting team pointed out that it was important to determine a cause for defect and carry out process

improvement if the rejection rate is to decline significantly. Major defects that occurred in the factory were “cracks caused by deep drawing” and “slanted flanges”. The former was closely associated with characteristics of raw materials, and for the company, it was difficult to obtain high quality materials that were mostly imports. The latter was reduced by controlling the slant of a mold used in the flange forming process. According to the factory manager’s report, the rejection rate fell dramatically from 12% to 1%. To maintain a low rejection rate, proper maintenance of dies and machines is essential.

As for press sheet metal working, the company made 11 types of products with different dimensions. This required setup change with product switching, which took a long period of time. The consulting team proposed to increase punch and die holders to two pairs (two pairs of punches and dies were provided for press tools used in six production steps), and as a result, setup change time was substantially reduced from 240 minutes at maximum to 45 minutes.

7) W-74

The company has 20 employees with annual sales of Rp 2 billion. It manufactures automotive parts (castings), water meters, and valves. Its flagship product is automotive parts that the company machines castings upon the customer’s request. Its technology base lies in foundry, machining, coating, and machine assembly. Sales to aftermarkets account for 95% of the total. In addition to automotive parts, valves are made by casting and machining. Water meters are assembled from key components and parts imported from Korea and housings made internally, and they are sold under the company’s own brand. It has no die casting machine. The company is characterized by production of a variety of products in small lot and stores a wide range of casting molds, jigs and tools for future orders.

Like many foundries, the company’s foundry floor and machines were covered with sand and dust. Sample products displayed in the office were also covered with dust, and packing paper was left beside them. The owner did not feel the need for cleaning, although it would not take much effort or time. On the other hand, the office floor was relatively well cleaned.

By concluding that the company’s 5S level was very low and safety management was poor, the consulting team proposed 5S and work safety as key issues for kaizen activities. The former was taken up first. A 5S implementation plan was made

according to our advice, but actual implementation was delayed and the results were limited to separation of used and unused articles and the disposal of some unused ones.

The owner's son attended at the workshop on jig/fitting design, which turned out to be useful for the company as it later received a customer's order for jig making.

8) W-77

The company has 50 employees and annual sales of Rp 2 billion. It makes jigs, fixture, and precision parts. It is specialized in heat treatment, electroplating, machining, coating, and press sheet metal working. The factory consists of three shops and a machining shop is selected as a model company. It has lathes, milling machines, surface grinding machines, cylindrical grinding machines, and sawing machines, but it does not have a CNC milling machine.

Upon the customer's order, the company received shop drawings. For any illegible or inaccurate drawing, engineering staff redrew it and also made a stereograph for a drawing that was misleading. After meetings with the customer's engineer, the company started production. As the consulting team tried to identify possible themes for kaizen activities, the owner complained about a delay in work as compared to estimation by engineering staff. Our analysis revealed that the company faced a shortage of skilled workers, while it had excellent leaders. It was thus proposed to provide skill training for all workers on an on-the-job training basis as well as off-the-job-training to teach them necessary knowledge. The on-the-job training program was designed to teach basic machining skills on lathe and milling machine, while the off-the-job-training program was conducted until the end of November. Eight sessions were held by using the time for shift change and the owner and factory leaders served as instructors. Main subjects covered measurement, reduction of operating time, 5S, and production planning. These programs will be carried out on a continuous basis. The consulting team furnished the company with training course materials for lathe and milling machine operations used at a Japanese university (which were downloaded via the Internet and were translated to Japanese), together with information on similar sites for which educational videos on various skills were made available for downloading.

The factory seemed to be well cleaned, but detailed observation revealed various shortcomings in terms of cleaning, storage and sign. Thus, 5S was selected as a kaizen issue. Originally, used articles were placed side by side with unused ones within the factory. Then, as a result of our advice, the latter was more and more

disposed. Also, signs and notices were installed, including height and width limitations at the entrance, the posting of production plans and the company's mottos.

9) W-94

The company has 6 employees and reports annual sales of Rp 840 million. Traditionally, it makes aftermarket parts (machined or stamped) for textile machinery and supplies them to textile companies through merchants. Recently, however, it has substantial unsold stocks. The owner is reluctant to direct sales and tends to rely on marketing channels (despite the consulting team's advice). It is specialized in machining, press sheet metal working, and calking techniques and owns lathes, milling machines, power presses, and drilling machines. It is capable of making machine parts other than textile machinery, but it needs to find customers through effective sales activities.

The factory is located on the first floor of a three-story house and its shop space is very small. The owner was not aware of 5S. Although the counterpart explained the concept to the owner and employees, neither of them showed an expected reaction.

The company did not maintain a cash book and only kept receipts. Upon the consulting team's advice, a cash book was created and maintained at the time of the final visit in August. As the company did not intend to implement 5S, advisory service was terminated.

10) W-96

This is only one model company in the textile industry. It has 140 employees with annual sales of Rp 4.2 billion. Note that it added one factory to operate three factories in November 2007 and hired additional 30 employees, but the increase is not reflected in sales. It makes textile products and operates spinning and weaving, calendaring, and yarn dyeing processes. It carried out production for other companies.

The company did not maintain books, which were created upon the counterpart's advice. Also, 5S was not implemented and was taken up as a kaizen theme. Although the company hired cleaning staff, little effect was observed. Yarn wastes or dust were deposited on machines as well as motors, without signs of cleaning. Yarns were kept in a disorderly manner. They were piled up without packaging and ones at the bottom were collapsed and seemed to be unusable. It was proposed to separate usable yarns from unusable ones and dispose the latter. Although separation work

was started, it has still to produce visible results. Clearly, further cleanup and assortment is required, together with inventory taking.

While the owner displayed an excellent marketing capability, he left factory operation to employees and showed no interest in its operating status. Clearly, it is not a desirable attitude or mindset for the owner of a manufacturing company.

6.4 Results of Model Program B

This program is designed to collect vital data on specialty experts in relevant fields, whom UPL-IKM under Industry and Trade DINAS relies on in relation to direct consulting service for SMEs to be conducted in the future.

The study team discussed with provincial DINASs of East Java and West Java the data items to be registered with the proposed database. It was agreed to classify special technology into 27 fields, as shown in Table 6-3, and to collect the following 17 items (started with “Field”), which were then compiled in Excel format. Then the study team visited relevant organizations and explained UPL-IKM’s plan and the intent of the database to ask for cooperation.

Field	Name	Sex
Date of birth	Organization the expert works for	Educational background
Major	Number of years in service	Qualification/certification
Training experience	Advisory service experience (years)	Address (province)
Address	Telephone	Facsimile
E-mail	Remarks	

Table 6-3 Fields Covered by Specialty Consultants

Field		Field	
T-1	Heat treatment	T-15	Beverage
T-2	Electroplating	T-16	Shoes
T-3	Machining	T-17	Textile and garment
T-4	Coating	T-18	Woodworking and furniture
T-5	Casting	T-19	Jewelry and accessories
T-6	Forging	T-20	Energy saving
T-7	Sheet metal working/ press work	T-21	Environment
T-8	Die casting	T-22	Other
T-9	Plastics molding		
T-10	Rubber molding	M-1	Production management
T-11	Welding	M-2	Corporate management
T-12	Machine assembly	M-3	Marketing
T-13	Printing	M-4	Bookkeeping and accounting
T-14	Food processing	M-5	Personnel management and human resource development

After the model program, provincial DINASs copied the database in their respective common computers. They need to keep collecting new data and updating the existing ones.

6.4.1 East Java

Data on 29 specialty consultants were collected from the following organizations and were entered into a file in Excel format.

- BDI
- BARISTAND
- ITS (Surabaya University)
- Industry and Trade DINAS
- BALAI PELAYANAN TEKNIS INDUSTRI LOGAM (BPTI Logam)

Table 6-4 shows the number of specialty consultants recorded in the format, by organization and field. Note that some of them are recorded in more than two fields.

**Table 6-4 Classification of Specialty Consultants in East Java,
by Organizations and Fields**

Organization	Field		Number
Central government organizations	T-1	Heat treatment	1
	T-2	Electroplating	1
	T-3	Machining	1
	T-5	Casting	1
	T-6	Forging	1
	T-7	Sheet metal working/press work	1
	T-8	Die casting	1
	T-12	Machine assembly	2
	T-14	Food processing	9
	T-15	Beverage	6
	T-16	Shoes	4
	T-17	Textile and garment	1
	T-21	Environment	1
	M-1	Production management	5
	M-2	Corporate management	7
	M-3	Marketing	1
	M-4	Bookkeeping and accounting	1
	M-5	Personnel management and human resource development	4
	University	T-3	Machining
Provincial Industry and Trade DINAS	T-1	Heat treatment	1
	T-3	Machining	3
	T-11	Welding	1
	M-1	Production management	1
	M-2	Corporate management	3
	M-3	Marketing	2
	M-5	Personnel management and human resource development	1

6.4.2 West Java

In West Java, many Balai Besar under BPPI are concentrated and there are two polytechnics. The following organizations are expected to have qualified specialty experts.

- POLMAN
- MIDC
- Textile Laboratory
- NVTC
- Metal Manufacturers Association
- POLBAN
- B4T
- State enterprises
- Bandung Institute of Technology
- Industry and Trade DINAS

Data submission was requested to the above organizations and data representing 181 persons were collected and recorded digitally.

Table 6-5 shows the number of specialty consultants recorded in the format, by organization and field. Note that some of them are recorded in more than two fields.

**Table 6-5 Classification of Specialty Consultants in West Java,
by Organizations and Fields**

Organization	Field		Number	
Central government organizations	T-1	Heat treatment	3	
	T-2	Electroplating	4	
	T-3	Machining	14	
	T-5	Casting	2	
	T-7	Sheet metal working/press work	3	
	T-8	Die casting	1	
	T-11	Welding	8	
	T-12	Machine assembly	24	
	T-13	Printing	1	
	T-17	Textile and garment	27	
	T-20	Energy saving	23	
	T-21	Environment	6	
	T-22	Other	15	
	M-1	Production management	6	
	M-2	Corporate management	7	
	M-3	Marketing	15	
	M-4	Bookkeeping and accounting	7	
	M-5	Personnel management and human resource development	13	
	Universities/ Polytechnics	T-3	Machining	15
		T-5	Casting	8
T-8		Die casting	2	
T-9		Plastics molding	2	
T-10		Rubber molding	2	
T-12		Machine assembly	3	
T-18		Woodworking and furniture	1	
M-2		Corporate management	2	
M-3		Marketing	4	
M-5		Personnel management and human resource development	2	

Chapter 7 Evaluation of Model Programs

Chapter 7 Evaluation of Model Programs

The schemes, activities and results of the two model programs implemented in East Java and West Java are discussed in Chapter 6. In this chapter, the program results are evaluated according to verification items established when the schemes were formulated, with a view to reflecting the results in our final recommendation. As for Model Program A, findings obtained from the analysis of results of questionnaire surveys of participating companies as well as program implementation by study team experts are presented prior to verification.

7.1 Model Program A

7.1.1 Questionnaire survey of model companies

(1) Objective of interview survey

The primary objectives of the interview survey are as follows.

- 1) To determine demand and expectation for SME diagnosis and advisory activities that will be implemented by UPL-IKM as a key element of the MOI's SME human resource development policy, by conducting interview surveys of companies in East and West Java, which have participated in Model Program A (corporate diagnosis and advisory service).
- 2) Under Model Program A, corporate diagnosis and advisory activities were conducted by the study team in East and West Java on an experimental basis and jointly with "Shindan-shi"¹ who has completed the 2006 SME diagnosis training course, by using the SME diagnosis and advisory methods adopted in Japan. To determine whether the diagnosis and advisory methods are suitable for local SMEs in Indonesia through interviewing of participating companies in the model program.
- 3) To understand expectations for SME diagnosis consultant to be formally certified in the future and the SME diagnosis and consulting system through evaluation of participating companies on Model Program A and Shindan-shi.

1 "Shindan-shi" refers to persons who have participated in and completed the 2006 "SME Diagnosis Consultant Training Course".

- 4) To determine expectations of local SMEs for provincial Industry and Trade DINAS and UPL-IKM in relation to the role of the coordinator for diagnosis and advisory activities.

(2) Methodology for interview survey

The interview survey was conducted of 9 companies in East Java and 8 companies in West Java, which had participated in Model Program A under the present study. Using a specially designed questionnaire (Appendix 2), it was conducted in early December when Model Program A nearly completed. It should be noted, however, that analytical results should be viewed with some caution that they are based on a relatively small number of samples (17 in total, consisting of 9 in East Java and 8 in West Java).

(3) Results and analysis of the interview survey

1) Demand and expectation for SME diagnosis and advisory services

The following questions were asked to assess demand and expectation for the scheme to provide diagnosis and advisory services for SMEs in the two provinces.

a) Reason for participation in Model Program A

(Unit: No. of companies)

Item	East Java	West Java	Total
a. Requested by DINAS (Shindan-shi)	2	0	2
b. We were interested in the diagnosis/advisory program	6	4	10
c. We had a problem and felt the need for improvement	9	7	16
d. Able to receive corporate diagnosis and advisory services with free of charge	3	1	4
e. Able to receive corporate diagnosis and advisory services by Japanese experts	3	1	4
f. Because it is JICA's program	1	1	2
g. Expected to establish relationship with Japanese companies	6	4	10
h. Other	1	3	4

Note: Multiple responses allowed

Other reasons cited are:

- We wish to obtain information on latest technology in Japan.
- We believe that continuous improvement is essential for today's companies.

The most frequently cited reason is “c. We had a problem and felt the need for improvement,” both in East and West Java. The second reasons were “b. We were interested in the diagnosis/advisory program” and “g. Expected to establish relationship with Japanese companies.” From these responses, it is estimated that most participating companies in both provinces receive invitation to the model program when it felt the need for improvement.

b) What did you expected from the diagnosis and advisory program?

(Unit: No. of companies)

Item	East Java	West Java	Total
a. Able to understand and improve our problem	6	4	10
b. Able to improve skills of our employees	9	4	13
c. Able to improve our production management capability	8	7	15
d. Able to improve our corporate management capability	7	3	10
e. Able to improve housekeeping practice	7	3	10
f. Able to establish business relationship with Japanese companies	6	1	7
g. Able to obtain a loan	5	1	6
h. No expectation	0	0	0
i. Other	1	3	4

Note: Multiple responses allowed

Other expectations are as follows.

- Able to increase production capacity and profits.
- Able to obtain information on JIS.
- Expected to receive a rubber molding machine from government.

Overall, “improvement of production management capability” is most frequently cited. In East Java, the highest response is “improvement of skills of employees,” followed by “improvement of production management capability.” In West Java, “improvement of production management capability” came first, followed by “improvement of skills of employees” and “to understand and solve a problem facing the company” (the same number of responses).

c) Did the diagnosis and advisory program meet your expectation?

(Unit: No. of companies)

Item	East Java	West Java	Total
a. As expected	4	3	7
b. Above expectation	0	0	0
c. Below expectation	5	5	10

d) Indicate a major reason(s) for the response “below expectation”.

(Unit: No. of companies)

Item	East Java	West Java	Total
a. Improvement results were below expectation	4	4	8
b. Expected advice was not obtained	2	5	7
c. Other	1	0	1

Note: Multiple responses allowed

“Below expectation” for Model program-A was most frequently cited in both provinces. Overall, “a. Improvement results were below expectation” was most cited as reason. In East Java, the response was twice as much as the second largest response “b. Expected advice was not obtained.” On the other hand, the largest response in West Java was “b. Expected advice was not obtained (5 companies)” followed by “a. Improvement results were below expectation (4 companies)”. Thus, in West Java, the same number of companies cited that improvement results and advice were below expectation.

2) Diagnosis and advisory method and period

The corporate diagnosis and advisory activities under the model program were conducted in the two provinces by using the SME diagnosis and advisory method adopted in Japan. The following questions were asked to determine whether the diagnosis and advisory method and period were adequate for local SMEs in the country.

a) Was the diagnosis and advisory method adequate?

(Unit: No. of companies)

Item	East Java	West Java	Total
a. The method was adequate	8	2	10
b. The method would require improvement	1	6	7

Major reasons for the response “the method would require refinement” are as follows.

- To increase corporate and advisory service on the shop floor.
- To provide continuous service up to implementation on the shop floor.
- To provide advice and guidance on 5S activities for field workers.
- To disseminate content of advisory service to all employees.
- To monitor the implementation status of advice and guidance for kaizen activities.
- To give advice and guidance to not only the management but workers as well.

As for participating companies in East Java, 8 out of 9 companies believe that the diagnosis and advisory service has been adequate. In contrast, 6 out of 8 companies in West Java think that the method would require improvement. From reasons cited by respondents who thought that improvement would be required, the majority of them wanted diagnosis and advisory service on the shop floor.

b) Was the diagnosis and advisory program period adequate?

(Unit: No. of companies)

Item	East Java	West Java	Total
a. The program period was adequate	3	4	7
b. It was too short	5	3	8
c. It was too long		1	1
d. Time spent for each advisory service was adequate	6	8	14
e. It was too short	1		1
f. It was too long		1	1

Note: Multiple responses allowed; including no response in East Java

Most respondents in both provinces believed that the time spent for each advisory service was adequate. As for the program period, more respondents in East Java stated that it was too short, than that it was adequate. On the other hand, the order reversed in West Java and slightly more respondents answered that it was adequate, than that it was too short.

3) Expectation for SME diagnosis consultant and the SME diagnosis and consulting system

Questions were asked to determine expectations for SME diagnosis consultant to be formally certified in the future and the SME diagnosis and consulting system.

a) Is the SME diagnosis and consulting system useful for SME promotion?

(Unit: No. of companies)

Item	East Java	West Java	Total
a. It is a very useful system	9	7	16
b. I do not think so			
c. It is not useful for SME promotion at all		1	1

A major reason for the response that the SME diagnosis and consulting system is “not useful for SME promotion” is as follows:

- It will not produce results unless Shindan-shi comes to us and provide advisory service every day.

A reason for the response stating that the consulting system is not useful is related to the diagnosis and consulting method, rather than the system itself. In fact, the SME diagnosis and consulting system itself is evaluated as good in both province.

b) Capability of Shindan-shi

(Unit: No. of companies)

Item	East Java	West Java	Total
a. Sufficient capability	5	2	7
b. Partially sufficient	3	6	9
c. No capability to serve as SME consultant	1		1

Major reasons for response “partially sufficient” or “no capability to serve as SME consultant” are as follows.

- Insufficient experience in advisory service
- Lack of technical skills (special technology)
- Lack of required skills
- Lack of experience in advisory service and factory work
- Lack of knowledge on production technology

- Lack of field experience and knowledge
- Inability to provide proper advice and guidance on the shop floor due to lack of experience

Overall, “partially sufficient” represents the largest number of responses (9). In East Java, the large number of responses chose “sufficient capacity.” On the other hand, 6 out of 8 respondents in West Java cited “partially sufficient.” Furthermore, responses “partially sufficient” and “no capability to serve as SME consultant” can be classified into three types, “production (engineering) technology,” “experience in diagnosis and advisory service,” and “experience on the shop floor.”

c) Are you willing to receive SME diagnosis consulting in the future?

(Unit: No. of companies)

Item	East Java	West Java	Total
a. I want to use the consulting system	8	3	11
b. I want to use it under conditions	1	5	6
c. I do not want to use it in future	0	0	0

Major reasons for the response stating that “I want to receive it under conditions” are as follows.

- If a SME diagnosis consultant provides advisory service directly and regularly.
- If advisory and guidance is provided on the shop floor.
- If an expert in the respective field gives advice.
- If government provides subsidy to partially cover the service fee.
- If it meets our demand and is provided with free of charge.
- If the diagnosis and advisory fee is relatively low.
- If the theme and cost agree with our requests.

Overall, no company responded that “it would not intend to use the SME diagnosis consulting system in the future, while six companies responded that “it would want to use the system under conditions.” The responses are roughly divided into those concerning the service fee and those dealing with content of diagnosis and consulting service. In East Java, 8 out of 9 companies want to use the system. In West Java, more than half (5 out of 8) want to use the system under conditions.

d) If SME diagnosis and consulting service is provided on a fee basis

This question was asked to companies that chose “a. Want to use the system” in c) above.

(Unit: No. of companies)

Item	East Java	West Java	Total
a. I want to use the system on a fee basis	1	2	3
b. I do not want to use the system if a fee is charged	3		3
c. It depends on how much is charged	2		2
d. It depends on service content	2	1	3

Overall, 8 companies chose responses “I want to use the system on a fee basis,” “It depends on how much is charged,” or “It depends on service content,” in comparison to 3 companies responded “I do not want to use the system if a fee is charged.” In West Java, 2 companies chose “I want to use the system on a fee basis,” one company “It depends on service content,” and no company wants to use the system if a fee is charged. In East Java, the largest number of companies, three, cited the response “I do not want to use the system if a fee is charged.”

e) Amount of the service fee the respondent is willing to pay

This question was asked to companies that responded “It depends on how much is charged.

(Unit: No. of companies)

Item	East Java	West Java	Total
a. I am willing to pay the transportation cost and lunch	2		
b. I am willing to pay the transportation cost, lunch, and Rp 10,000 per hour			
c. I am willing to pay the transportation cost, lunch, and Rp 50,000 per hour			
d. I am willing to pay the transportation cost, lunch, and Rp 100,000 per hour			

As it turned out, responses were obtained from companies in East Java. All of them are willing to pay the transportation cost and lunch only.

f) Major responses by companies that have responded “It depends on service content”

- Service content should be important for our company.
- Advisory service should be useful for continuous improvement of technology (up to 25% of the service cost)

4) Expectation for Industry and Trade DINAS and UPL-IKM

Responses to this question revealed that local SMEs expected Industry and Trade DINAS and UPL-IKM to play the role of coordinator for diagnosis and advisory service.

What do you expect from Industry and Trade DINAS and UPL-IKM?

(Unit: No. of companies)

Item	East Java	West Java	Total
a. Advisory service on special technology (welding, casting, etc.)	8	3	11
b. Advisory service on production management technology	4	4	8
c. Advisory service on accounting and financial management	4	2	6
d. Provision of information on seminars and workshops on SME management	2		2
e. Support for market exploration (the holding of exhibitions and support for participation in trade shows)	5	2	7
f. Support relating to SME loan (provision of information on public loan schemes and introduction of the private loan scheme, etc.)	2	5	7
g. Other	2	4	6

Note: Multiple responses allowed up to three

Other major responses:

- Support relating to equipment, tools, and measuring instruments
- Provision of information on machinery and equipment
- Product registration procedures
- Advisory service on quality control
- Support for technical assistance by large manufacturers
- Support and advice relating to hardware technology

Overall, the largest number of companies wants to have advisory service on key production technology, followed by advisory service on production management technology, and “provision of information on seminars and workshops on SME management” and “support relating to SME loan,” which had the same number of responses. In East Java, most (eight) companies expect Industry and Trade DINAS or UPL-IKM to provide advisory service on special technology. On the other hand, five

companies want support relating to SME loan, followed by four companies expecting advisory service on production management technology and three companies advisory service on special technology

(4) Results of analysis of interview survey and lessons learned

1) Demand and expectation for SME diagnosis and advisory service in local regions

As seen from the reason for participation in Model Program A (Question (3) 1) a)), local SMEs recognize problems facing them and the need for improvement. Also, many of them show interest in the corporate diagnosis and advisory scheme implemented under the program, suggesting high demand for diagnosis and advisory service in rural regions.

As for expectations for SME diagnosis and advisory service, responses to Question (3) 1) b) “What do you expect for the diagnosis and advisory program” indicate that the large number of companies cite “the improvement of their employees’ skills”. This can be interpreted that they expect something different from the main objective of the diagnosis and advisory program. At the same time, however, a total of 45 companies cite major issues that the diagnosis and advisory program tries to address, i.e., “improvement of production management capability,” “improvement of corporate management capability,” “identification and improvement of problems,” and “improvement of cleaning and other housekeeping operations (5S),” far exceeding the response “improvement of their employees’ skills (13)”. This suggests that local SMEs have great expectation for soft technology support in the diagnosis and advisory program.

Nevertheless, evaluation on Model Program A by participating companies shows mixed results. As seen from responses to Question (3) 1) c), 7 companies felt that the program met expectation, whereas 10 companies stated that it was below expectation. Thus, there is a significant gap between expectations and results. Reasons for this ((3) 1) d)), were divided into two elements, i.e., they were disappointed either by program results (eight companies) or by program content. Disappointment about program results largely reflects the fact that the program period was fairly limited and the interview survey was conducted before the results came out.

2) The diagnosis and advisory method for local SMEs

As seen from responses to Question (3) 2) a) (“Was the diagnosis and advisory method adequate?”), overall evaluation was considered to be adequate because most of participating companies in East Java (8 out of 9) responded affirmatively, which more than compensated for negative evaluation by most companies in West Java (6 out of 8). The unfavorable responses in West Java are also evidenced from responses to Question (3) 1) d), which indicate that many companies in the region felt that they could not receive advisory service as expected. Furthermore, dissatisfactions in West Java are expressed as expectation for advisory service targeting field workers in addition to managers, as seen from responses to Question (3) 2) a).

As for the time spent for each advisory service (Question (3) 2) b)), most companies responded that the time spent under Model Program A was adequate. On the other hand, the number of responses to the same question stating “the program period was too short” exceeded that representing “it was adequate.” Again, opposite results were observed in the two provinces. “Adequate” responses were more than “too short” responses in West Java, and the order was reversed in East Java. This can be partly explained by the fact that reasons for the “below expectation” responses to Question (3) 1) d) were dominated by “program results were below expectation” that was twice as much as “advisory service content was below expectation.” Thus, dissatisfactions about program results seem to have caused many companies to feel that the program period was too short.

3) Demand and expectation for SME diagnosis consultant and the consulting system

As seen from the responses to Questions (3) 3) a) (SME diagnosis consulting system) and (3) 3) b) (intent to use SME diagnosis consulting service), local SMEs generally feels that the SME consulting system is useful for development of local SMEs. Also, SMEs in both provinces want to use the SME diagnosis and consulting system in the future. However, as for capacity of Shindan-shi, who has completed the 2006 SME Diagnosis Consultant Training Course and has implemented Model Program A, overall evaluation is on the side of “partially sufficient.” In West Java, 6 companies have rated “partially sufficient” and 2 companies have rated “sufficient.” On the other hand, in East Java, “sufficient” responses outnumbered “partially sufficient” responses (5 versus 3). The results agree with responses to Question (3) 2) a). Note, however, that “partially sufficient” responses in West Java reflect, to some degree, the difference in employment size between companies participating from East and West Java; those from East Java were dominated by microenterprises, while

more companies in West Java have around 100 employees. This could result in higher level of expectation by participating companies in West Java than those in East Java.

Demand for diagnosis and consulting service by local SMEs seems to be fairly high as judged from responses to Question (3) 3 c), where no company responded that they did not want to use the consulting system in the future. However, there is a significant difference in level of demand between the two provinces. As seen in the responses to Question (3) 3 d), all companies in West Java that wanted to use the consulting system responded that they were willing to use it on a fee basis. In contrast, many companies in East Java responded that they would not want to use it if a fee is charged or they would use it if a fee is appropriate. The difference suggests that companies in West Java has feel the stronger needs for the consulting system, while the difference in company size between the two provinces should be taken into account to some degree. Analysis of the responses to Question (3) 3 d) and e) suggests that a service fee for the SME consulting system should be separately established for each province in consideration of local conditions, rather than a uniform fee for the entire country.

4) Roles of provincial Industry and Trade DINAS and UPL-IKM

Looking at each item in (3) 4) alone, local SMEs, especially those in East Java, expect Industry and Trade DINAS and UPL-IKM to provide advisory service on special technology. At the same time, however, 11 companies in total expect advice and guidance on special technology, whereas 14 companies want advisory service on production management technology or accounting/financial management. This means that more SMEs want to receive consulting service on “soft technology” (including production management and accounting/financial management) that is taught at the SME Diagnosis Consultant Training Course. In West Java, support relating to SME loan is strongly expected.

Needless to say, it is practically impossible for a single organization to provide advice and guidance on every special technology, and it is logical to expect Industry and Trade DINAS and UPL-IKM to serve as the coordinator to introduce experts on special technologies to local SMEs upon their request. For support in the fields of production management, accounting/financial management, and SME loan, the SME diagnosis consultant is expected to handle.

7.1.2 Findings of study team experts

(1) Expert A in charge of East Java

1) Common issues for model companies

Common issues for model companies are described from the following three perspectives, namely business environment, management attitude and system, and shop floor. Note that they are not necessarily applicable to all companies.

a. Business environment

a-1 Intensive competition and low profitability

Most of small metalworking shops that are concentrated in Waru and Pasuruan are making automotive and motorcycle parts for aftermarkets. They receive orders from resellers who do not specify quality standards nor demand strict quality requirements, but there is intensive price competition between metalworking shops. Also, genuine parts suppliers and Chinese companies expand sales to aftermarkets, so that local manufacturers face a significant decline in order and are required to cut down production capacity, including work force.

a-2 Decline in customer order from Jakarta

Some companies have been serving as second- or third-tier suppliers to ship automotive and motorcycle parts to assemblers operating in Jakarta, but they are losing sales as they face difficulty in meeting demand from their customers that are increasingly adopting the just-in-time system.

b. Management attitude and system

b-1 Owner in charge of everything other than daily production work

Many owners of companies with 30 or less employees handle day-to-day operation, including sales activity, procurement of raw materials, direction to the shop floor, and progress control, without appointing a manager or an assistant. If they are absent and unable to perform proper management, the company may stop functioning. Many owners are reluctant to employee education and training, while fearing that a manager or an assistant may leave or be hired away.

b-2 Lack of enthusiasm about business administration and management

Many owners do not pay much attention to business administration and management, while having enthusiasm about and confidence in production activities. They often deal with business administration and product management

on the basis of experience and intuition. They may want to develop their companies, but they do not have long-term plans or strategies for technological development, product development, and market exploration.

b-3 Lack of daily accounts

Small companies do not maintain a cash book and other income and expenditure record. As a result, they are unable to settle an account on a monthly or annual basis and do not have or use sales, profit or cost data. As a result, they do not have sales/profit goals or plans to support scientific management on the basis of accurate estimation or forecast.

b-4 Lack of documentation

Many owners issue a work instruction to the shop floor verbally, without any written record. They memorize the customer order as well as the purchase order.

b-5 Lack of PC use

Many companies do not use PC and use a cell phone to exchange e-mail with trade partners.

b-6 Low profitability and poor financial source

Many companies face difficulty in procurement of raw materials and modernization or addition of equipment due to financial constraint. They do not even purchase hand carts and stacks that are essential in promoting manpower saving and streamlining of work.

c. Shop floor

c-1 Poor housekeeping practice

Few companies conduct cleaning or other housekeeping activities on a periodical basis, resulting in a poor working environment. Many workers smoke during the work and discard cigarette stubs and wastes on the floor.

c-2 Excessive stock of dies and molds

Metalworking shops that make parts for aftermarkets keep excessive stock of dies and molds, which are piled up on the passageway or before stacks to adversely affect work efficiency. They are reluctant to disposal of old stocks because they sometimes receive orders for aftermarket parts before model change.

c-3 Machinery and equipment

Many companies use old, deteriorated machinery and equipment, which results in poor levels of productivity, precision, and durability.

c-4 Poor working environment

Many shop buildings are not well constructed to allow rain or wind or are not well lit. Light is often turned off for power saving, causing an adverse effect on safety or quality. The floor is uneven and create hazardous conditions for workers, including load shifting on the cart.

2) Issues relating to “kaizen activities” by model companies

a. Delay in implementation

Many companies tend to postpone kaizen activities proposed by the consultant because they are very busy and do not have time to spend. Owners of small companies are busy in handling everything and are reluctant to delegating their work to a manager or an assistant.

b. Difficulty in disposal of stocks to prevent smooth implementation of 5S activities

Many companies are unable to dispose large quantities of dies/molds, raw materials, and products that are not expected be used in the immediate future, thus preventing 5S activity to be implemented. For instance, a company that makes aftermarket parts insists on keeping old dies and molds in order to meet demand that might come from customers. A company that uses remainder materials purchases them whenever available on the market, resulting in unnecessary stocks without consideration to actual demand. A company makes products excessively due to the absence of scientific inventory control or production management or in anticipation of unwarranted orders, resulting in long-term inventory.

c. Lack of commitment to kaizen activities

Many companies originally agreed with and accepted the consultant’s explanation on implementation procedures for each kaizen theme and activity, its rationale, and expected results, but owners did not show, or seemed to lose commitment to or enthusiasm about actual implementation.

3) Overall comment on program results

Common kaizen themes were established for the model companies, namely “implementation of 5S activities,” “implementation of the accounting system,”

“development of a production plan,” and “formulation of long-term visions.” However, planned results were achieved by one out of five companies for 5S activities, two out of four companies for the accounting system, and one out of four companies for production plan. No activity was made for “formulation of long-term visions” because resources were devoted to other three themes. The consulting team repeatedly made advice to companies that failed to make progress by showing a workable implementation method, but many of them did not produce significant results due to the owner’s noncommittal attitude and reaction.

Then, the consulting team proposed additional two themes to two companies (“process improvement and standardization” and “computer-based production management”), which were carried out for one month before the end of the program and produced some results under the team’s intensive advice and guidance. For “computer-based production management,” the company purchased PC and started to develop formats for “accounting,” “work instruction sheet,” “production plan,” “order log,” “attendance record” and “inventory ledger,” followed by data input. These results were produced partly because the owner understood the kaizen activity’s importance and effectiveness and committed firmly to its implementation with enthusiasm and intensity. On the other hand, “process improvement and standardization” was carried out mostly by the consulting team, especially investigation, measurement and analysis of the production line, and kaizen proposals were reported to the company.

4) Opportunities and issues for Shindan-shi

Two Shindan-shi were engaged in the diagnosis and advisory activities up to the end of the model program. Both of them were accepted by owners because of gentle and sincere personality, which is an important qualification for management consultants. To become a consultant capable of helping development of SMEs, however, they need to make further efforts in the following respects and build up work experience.

a. Implementation of diagnosis and advisory service with enthusiasm and sincerity

To motivate the owner to become actively involved in kaizen activities – especially if he is reluctant and not firmly committed, the consultant who leads such activities needs to communicate and discuss with the owner enthusiastically and sincerely.

b. Positive efforts to make useful advices and proposals

During the program, the owners often made an excuse for not carrying out a kaizen

activity as planned, but the Shindan-shi only listened in many cases. The consultant should make a useful advice and proposal to the owner facing an obstacle to implementation of a kaizen activity.

c. Continuous effort to apply knowledge to field operation

Shindan-shi are eager to read books and participate in workshops, but they generally does not make serious efforts to apply knowledge obtained in the diagnosis and consulting activities to their day-to-day operation. It is important to grab opportunity for diagnosis and consulting service as far as possible, in order to develop the ability to deal with a variety of problems and situations.

(2) Expert B in charge of East Java

Model companies consist of one medium-sized company (100 employees) and four small companies (5 – 30 employees). Because of different characteristics and conditions between them, discussion is separately made for each.

1) Common issues facing model companies

a. Lack of basic documents

All the model companies are manufacturers, and they conduct production activities by using an instruction sheet that specifies dimensions, a production method, and required work time. Some companies use drawings for machining operation, but most instructions are given verbally. It seems to be difficult for field workers to understand product quality requirements accurately. Nevertheless, it is not problematic for small companies that make aftermarket parts that do not require very high quality. As a result, they do not have a strong desire to improve quality and their growth potential is limited.

On the other hand, the midsized company supplies OEM parts to Japanese companies. While it strives to meet quality requirements, it does not feel the need to issue an instruction sheet because it makes similar products in large quantities. Also, it does not maintain basic documents relating to manufacturing operation.

b. Poor work environment

While the midsized company conducts some organizational housekeeping activities, the small companies are indifferent and pay no attention to the work environment. Unused articles and wastes are scattered about in warehouses and on the shop floor. Even tools are left at some factories. This is not simply the work environment where

kaizen activities are undertaken. As a result, our advisory activities mostly focused on “5S” from the viewpoint of improving basic work conditions.

c. Lack of basic production technology and knowledge

Most companies do not understand the relationship between installation conditions for machines and the accuracy of machine tools. Some companies install machines on the poor foundation or continue operation without conducting a static precision test for machine tools. They do not have basic knowledge on product accuracy, and the current installation conditions do not meet requirements to maintain required accuracy levels. It is strongly recommended to acquire basic knowledge on production technology urgently by hiring an expert or sending employees to a training program.

2) Issues relating to “kaizen activities” by model companies

a. Management attitude

Kaizen activities, be it corporate management or factory operation, must be executed under the firm commitment of the management. They should not pursue an immediate effect, but rather, they should create a good cycle where a kaizen activity is conducted on a continuous basis to produce a result, based on which the next goal is set and the next activity is decided. Among the model companies, a company has produced expected results by allocating time to kaizen activities by workers. The owner was fully committed and directed workers to hear advice of the consulting team upon visit. The company presented impressive results at the final workshop. Photos 1 and 2 show a short training course for the company’s employees, which was held under the owner’s approval and during working hours. The course was taught by a Shindan-shi.



Photo-1



Photo-2

In selecting the model companies, consideration was given to the owner’s desire and enthusiasm about kaizen activity, in addition to company size and product line. Although the model companies so selected showed enthusiasm in the beginning, various problems arose to prevent smooth implementation or progress of actual kaizen activities, as summarized below.

- An owner believed that kaizen activities at his factory could progress smoothly by the consultant and a kaizen leader. The owner (or even the kaizen leader) was sometimes absent from the meeting with the consulting team. In fact, kaizen activities were given of lowest priority in the company's business and were considered as "the thing to do when there was extra time to spare." Naturally, no progress was made.
- A company only appointed a kaizen leader, who was not given of any responsibility or authority. The owner did not realize that kaizen activities at the factory must be driven by all workers under the owner's direction and leadership. He also failed to recognize that the owner should agree with the kaizen leader the details of kaizen activities and delegate power and authority to the leader to issue instructions to all employees. The kaizen leader appointed by the owner did not have no authority and was caught in conflict between the consultant and field workers without any progress.
- A company was family operated and a different family member met the consulting team at each visit. As a result, it was impossible to maintain integrity of advisory service and to make steady progress.
- An owner simply could not continue his commitment. He showed a strong desire when the company requested advisory service, but he seemed to lose interest after the formal service started, i.e., he was not available at an appointed time.

3) Overall comment on program results

While final results should wait for evaluation by the model companies, an overall comment by the consulting team is presented below, including comments from owners. Note that advisory service for one company was terminated in the middle of the program period because its owner was not available consecutively at an appointed time. On the other hand, companies that worked kaizen activities on a continuous basis – thanks to the owner's commitment - produced some results. Presumably, they were able to understand the method for promoting kaizen activities through continuous field advice and guidance (Some companies complained about previous advisory service, which was simply a lecture and did not teach a specific method).

In parallel to kaizen activities, BPTI Logam's maintenance engineer specialized in machine tools was invited to provide field advice and guidance for the testing of

machine precision, which was well received by client companies. As collaboration with a production technology specialist can produce synergetic effects, it is an important task for the diagnosis consultant to determine the need.

Some companies were not able to work with all kaizen items as planned, partly due to time constraint and the lack of understanding on the management side.

Comments made by owners of the model companies are summarized as follows.

- We realized that we were keeping many unused articles at the factory because of this advisory service. As a result of their disposal, we now have a substantial open space.
- As a result of cleanup and assortment of articles, the factory is tidied up and kept in an orderly condition.
- Previously, tools have disappeared often. After the cleanup and arrangement, a tool storage place is clearly designated with less disappearance of tools. (Photos 3 and 4)
- Cleaning of the factory at every weekend has become a regular practice. As a result of this advisory service, all employees are engaged in weekend cleaning for 30 – 60 minutes. (Photo 5)
- Advice by the consultant works better than the president's direction, and workers listen to it well and act accordingly.
- We have previously received a similar advisory service, which was piecemeal by nature and was difficult to understand. The continuous field advice given by the consulting team has helped us to understand the actual method for promoting kaizen activities.
- Through the small group activity, conversation between employees increased and “think” became a normal attitude.



Photo-3



Photo-4



Photo-5

- The testing of machine precision was never conducted. We intend to perform it continuously in the future.

On November 30, a maintenance engineer was invited to conduct the precision test at two model companies. It was well received by a company that never conducted the test, although the absence of source materials was complained (Photo 6). Poor precision of machine tools results in poor product precision.



Photo-6

4) Issues relating to Shindan-shi

a. Lack of consideration by government organizations where Shindan-shi work

The diagnosis consultant training course held in Puncak last year (for six months, starting in April 2006) was attended by employees of various government organizations. However, some organizations did not understand the importance of diagnosis, advisory and consulting activities and the need for continuous activities. As a result, activities of Shindan-shi in the model program were sometimes disturbed. To maximize benefits from the training course, a formal system to assure continued professional activities of Shindan-shi should be established as early as possible.

b. Lack of the ability to conduct financial analysis

Corporate diagnosis generally includes financial analysis. Some model companies submitted financial statements, but several Shindan-shi did not know how to perform financial analysis and turned down the request. They should learn about financial analysis for future service.

c. Lack of experience

For professional service like consulting, it is inevitable to start without work experience. A consultant, who has passed a difficult certification test, cannot give, in his first service, appropriate advice that would produce significant results. For Shindan-shi who have worked hard during the model program, development of practical skills is expected with addition of further work experience.

d. Sense of responsibility

A Shindan-shi has dropped out from the model program. This means the breaching of contractual obligation as consultant, which can never be tolerated. The consultant must assume responsibility for serving the best interest of his client up to the completion of his activities.

(3) Expert C in charge of Wast Java

1) Common issues facing model companies

a. Corporate culture

a-1 Lack of sense of responsibility

Many companies believe that they are not liable for a defect caused by a subcontractor (supplier). However, a manufacturer must assure its customer of product quality including parts and materials.

a-2 Reluctance to implementation of 5S

5S is the basis of improving productivity and other aspects of production activity. Any kaizen activity cannot be started in the shop where 5S has not become daily practice. In reality, however, there are many companies that are reluctant to implementation of 5S. They make a vain excuse while their factory floor, machines and stacks are covered with dust and yarn waste. At these companies, the management and employees have no intention to work for the common goal.

a-3 Machinery and skills

To improve workers' skills, it is important to conduct periodical in-house education and training and/or participation in outside training programs.

- While some companies have CNC milling machines and lathes, oil machine tools are widely used. Quality of products made by non-CNC machine tools depends on worker's skills. Thus, even new machines cannot make high quality products if they are operated by an unskilled worker. In particular, quality of jig parts and precision parts is governed by the worker's skill as they are custom made according to drawings.
- For CNC machines, a program optimized to the shape and material of a work piece must be developed. This skill should be learned and improved through repeated training.
- Shop drawings are usually furnished by customers. A company adds sketch drawings (perspective) to help the worker who cannot read drawings accurately.
- Skills relating to the finishing of dies and molds are low, resulting in quick wear and short service life.

a-4 Technical information

Most companies do have access to technical information such as the method for machining a new material. While the Internet is a useful information source, a government organization should play an active role in collecting and providing relevant information.

a-5 Quality control

Many companies are aware of the need for data collection as well as 7 QC tools, but they do not know how to do it or use them properly. As a result, they are engaged in wasteful activity. This is the area where outside advice is required and useful.

a-6 Setup change time

Reduction of setup change time in response to product change is an important issue for many companies. A model company specialized in plastics molding has achieved significant reduction by taking simple steps. In particular, it is important to learn the importance of off-line setup.

a-7 Planned and actual production time

Total planned production time and total actual production time can be recorded in a job sheet, but most companies do not keep job sheets. The job sheet can be used to calculate the operating rate, reduce setup time, and estimate downtime such as equipment failure. It can also be used as the basis of establishing kaizen goals. Some model companies have started to use the job sheet upon the consultant's recommendation.

a-8 Inventory control on raw materials and work-in-process

Many companies have problems relating to the inventory control method and the monitoring of inventory volume. They lack willingness to change their traditional methods.

2) Issues relating to "kaizen activities" by model companies

a. Shortage of fund

Most machines owned by the model companies are old. They have low level of precision and a high percentage defective, while they do not help reduce setup change time. The shortage of fund prevents the purchase of a new machine.

b. Low technology level

The level of technology of model companies is generally low. In particular, they lack a strong desire to conceive an idea for improvement. For instance, reduction of setup change time is often originated from innovative efforts in day-to-day production activity.

c. Lack of management leadership

An owner could not issue appropriate instructions to employees. Another owner made meaningless excuses about not implementing 5S, e.g., workers were not employed with obligation to do cleaning, or employees claimed that cleaning was not their job. Kaizen activities are supposed to be a companywide initiative and the mindset of the owner needs to be changed to assume leadership.

d. Incompetent factory manager

Many factory managers do not understand the product line in detail. The factory manager is responsible for production and other activities that take place within the factory. At a large factory consisting of several departments, managers are appointed to take care of respective departments, but the factory manager is still responsible for making production targets and issues for kaizen activities known to all workers and for directing them to make necessary operations and activities. For this reason, the factory manager must acquaint himself with every part of the production line and each worker and his skill/responsibility.

e. Lack of knowledge on production management technology

Some companies are not aware of various tools used for diagnosis and advisory service and are reluctant to use them. The situation has adversely affected the progress of kaizen activities.

3) Overall comment on program results

Program results varied with companies, depending upon the company's commitment as well as the selected theme.

a. Operating rate

Many companies realized the importance of improving productivity by raising the operating rate. While some companies recorded production data in a job sheet, they did not use Gantt charts and failed to grasp lost time. Plotting operating data on the

Gantt chart allows the operation manager to determine lost time easily, find a production step that serves as a bottleneck, and issues an adequate instruction for reduction of production time. This means, many companies were unable to estimate setup time and machine downtime accurately.

b. Quality improvement by skill improvement

The consulting team emphasized a widely accepted principle, i.e., quality assurance starts with improvement of skills. We believe that it was understood and accepted.

c. Quality data

It was emphasized that quality data forms were important. Unless data are collected and assorted in timely and proper manners, they lose a true value or even become meaningless. As a result of the model program, client companies gained understood the importance of determining data collection and assortment methods on the basis of their application.

d. 5S

Importance of 5S is now recognized by all the model companies. Although their actions are slow and vary greatly, steady progress seems to be made.

e. Production cost and sales price

A company determined product prices with reference to market price, without knowing production costs. The consulting team explained the cost calculation method and the company accepted it and started to introduce it.

4) Issues relating to Shindan-shi

a. Knowledge and experience

Shindan-shi understood what they learned in the diagnosis consultant training course. However, they did not have opportunity to apply the acquired knowledge to actual factory operation due to the lack of field experience. One way to gain experience is to send them to companies for an extensive period of time. It is important to realize that, however, consulting service requires immediate effect and measurable results, and techniques and skills learned from a company cannot be directly applied to another company.

b. Discipline

Companies, especially manufacturers, are required to keep discipline in terms of compliance with work rule, delivery schedule and accuracy. In contrast, government employees in any country are often criticized for lack of discipline. Shindan-shi should realize such difference as they interact with client companies. In fact, lack of discipline was observed in the course of the model program, e.g., failure to keep a promise, failure to notify a schedule change, and failure to send a response by fax, letter or e-mail.

c. Broad knowledge on production technology and skills

For Shindan-shi to provide corporate diagnosis and advisory services on a continuous basis, broad knowledge on production technology and skills is essential. When a consultant communicates with a client company, he is expected to have some knowledge on the company's proprietary technology if he is to win the client's confidence. While the consultant's knowledge may not match profound knowledge possessed by the company's engineer who has 10 – 20 years of experience, he can give advice from a fresh point of view, which is often appealing to client companies. Meanwhile, the consultant has to obtain knowledge on new technology.

7.1.3 Verification of program results

Chapter 6 establishes items to be verified in the model program. Each item was then evaluated on the basis of activity results of model companies (Chapter 6), results of questionnaire survey of model companies (7.1), and findings of experts on the model program (7.2).

(1) Demand and expectation for direct consulting service

Candidate model companies were selected by the study team and Industry and Trade DINAS in East and West Java, and formal invitation was made to them. None of them showed negative reaction or hesitation to participation in the model program. Generally, SMEs face various problems and recognize the need for overcoming them. In fact, all the model companies welcomed direct consulting service promoted by the MOI and responded that they would like to receive support service on a continuous basis, with some conditions on content or cost (according to the questionnaire survey conducted by the study team). In particular, they want outside advice and support for their factories.

As for fields that model companies want to have advisory service, strong interest is shown in implementation of basic production management technology, in addition to the improvement of skills. In fact, it is opposed to our expectation that SMEs would not be less interested in soft technology than skills, technology, market, and finance.

Generally, small companies covered by the study lack basic knowledge and even mid-sized companies incorrectly apply soft technology learned from books to the shop floor in many cases. It is reflected in the fact that most of model companies have accepted diagnosis results mostly in an original form, i.e., they vaguely realized presence of various problems but could not tell where they were and how they should deal with.

Proper implementation and application of soft technology allows SMEs to initiate efforts to improve productivity by using existing facilities and equipment – thus, with minimum investment - and to find issues in the next stage. This way, local SMEs will be able to establish the foundation of a modern manufacturing establishment, which will then help them to move to the next stage of growth.

At the end of the model program, a seminar to present program results was held by inviting local companies. Representatives of the model companies reported their activities and results. During the question and answer session held after presentation, many companies expressed expectations for diagnosis and advisory service. In East Java, 12 companies made inquiry on the day and the following day, indicating high expectation for direct consulting service.

(2) Opportunity for Shindan-shi

The majority of Shindan-shi did not have experience in providing diagnosis and advisory service for the same company, while some were engaged in corporate support activities. The model program, therefore, provided opportunity for them to gain experience and acquire practical knowledge.

At the same time, the questionnaire survey of the model companies indicates that the majority of them was not satisfied with capability of Shindan-shi. Responses cited the lack of experience in advisory service, the lack of experience in factory operation, and low levels of skills and hard technology knowledge.

Study team experts have pointed out that some Shindan-shi lack positive attitude or enthusiasm about their work. Some also lacked discipline, e.g., failure to keep a

promise, or failure to notify a schedule change. These problems were also observed on the model company side, but since the consultant is in a position to advise his client about behavior, he should avoid such misconduct by any means.

The lack of experience pointed out by the model companies can be resolved by making efforts to acquire broad knowledge including fields other than specialty. In consideration of high demand for advisory service by companies, a formal mechanism to support continuous activities and give incentive to Shindan-shi should be introduced.

(3) The adequate implementation method for consulting service including selection of kaizen themes and general rules for advisory service

Through the model program, the following lessons were learned with regard to the implementation of diagnosis and consulting service.

- Selection of a recipient company must be based on the agreement and leadership of the management
- Care should be taken to a small company where the owner handles all operations by himself or a company which owner is reluctant to delegate his responsibility to subordinates.
- A kaizen theme should be established through extensive discussion with the company and an elaborate agreement formation process. It is also a good practice to select a theme that is already taken up by the company.
- There are themes that require considerable time to produce results, such as the establishment of long visions and the improvement of morale.
- It is assumed that it takes time to persuade the company to start activity, and advisory service may be terminated if the company's reaction or attitude justifies it (while keeping in mind that continuation of service is very important).
- It is difficult to product results for a company that leaves everything to the consultant.

- A kaizen leader with proper authority should be appointed, while securing the assurance from the owner that the leader will not be replaced during the service period.
- Once advisory service is started, it is important to involve the owner, the kaizen leader and all employees in the process. Small group activities and companywide discussions are proven to be effective in raising interest and enthusiasm.
- Producing visible results, however small, give impetus to advisory service and kaizen activities.
- For a small company, it is important for the consultant to set an example in a visible way, such as the proposal of a specific action, data collection, and demonstration.
- When a theme is completed, advisory service may be suspended to check that the kaizen activity is continued.
- Advice based on feedback from a product buyer, including his needs and requirements, is proven to be effective.
- The consultant should sometimes act as a spokesperson for the president to send a message to employees.
- While the shortage of fund almost always constitutes a bottleneck, the consultant should no allow the company to use it as an excuse for lack of or delay in action.
- It is a good practice to raise motivation for kaizen activities by holding a meeting for client companies to share experience or a field tour to companies with advanced technology.
- It is effective to combine the dissemination of soft technology from the viewpoint of improving skills for the manufacturing industry.
- It is difficult to establish an appropriate period for advisory service, which depends on how long it takes to produce results.

(4) Provincial UPL-IKM's program implementation system

UPL-IKM has just been established and is still viewed by IKM as a project financed by the central government budget. Partly because of the transition period, it faced various problems during the model program, such as the restraint on the activity budget. Possibly, there are the following three obstacles to continuation of its activities in the future.

- There are many Shindan-shi who serve as managerial or general staff and do not have time to perform corporate diagnosis and advisory activities in addition to their ordinary work.
- While Shindan-shi come from a variety of government organizations, including central and provincial, there is no organization responsible for coordination of different organizations to ensure integrated activities.
- Although companies are highly expecting support in the fields of technology and skill improvement and the provision of loan and other information, in addition to soft technology, UPL-IKM has still to form networks with vocational training institutes and private organizations.

(5) Collaboration with special consultants planned by the MOI in relation to direct consulting service

During the model program in East Java, a machine maintenance engineer of BPTI Logam under local government was invited to provide practical training for the machine precision test at two model companies. BPTI Logam is an organization under Industry and Trade DINAS and is easy to collaborate.

At present, the linkage between DINAS, organizations under the central government, universities, and the private sector is fairly weak and there have been a few joint projects.

7.2 Model Program B

Under Model Program B, data on special consultants in a variety of fields, including soft technology, were collected on an experimental basis in East and West Java.

7.2.1 Demand for special consultants and specialty fields

Interview with model companies indicates that they are dissatisfied with the lack of knowledge of Shindan-shi on specialty fields. This includes soft technology that was taught in the diagnosis consultant training course, in particular financial management about which study team experts pointed out an apparent lack of knowledge. While Shindan-shi are required to provide both diagnosis and advisory services, there is strong demand for skill improvement on the company side. It is impossible for one consultant, including a Shindan-shi, to provide advisory service in diverse technical fields, so that collaboration of a special consultant in a respective field is inevitable and is highly demanded.

Technical fields served by special consultants were established on the basis of the study team's proposal and in consultation with provincial DINASs in East and West Java. In the course of data collection, however, various requests were made by other organizations. The consulting team pointed out that detailed classification of specialty fields would only make the database unduly complex.

As for data collection, those having high demand - such as technology relating to priority industries - should be given of priority.

7.2.2 Intent of participation in UPL-IKM's activities by outside support organizations, educational institutions, and private consultants

Under the model program, data on special consultants were obtained from organizations to which cooperation was requested, and their intent of participation in UPL-IKM's activities was confirmed. Partly due to time constraint, data were mainly collected from central and local government organizations, and some came from polytechnics and universities.

Companies seek knowledge and technology that can be applied to shop floor activities. The next step is to incorporate data on experts in the private sector, including those who retired from companies, into the database. At LPT-INDAK that provides corporate finance service in East Java, corporate engineers and managers work as consultants for other companies. They use human networking as an advantage to their own companies and businesses. This can serve as a reference to the future development of a special consultant database.

Chapter 8 Questionnaire Survey of Shindan-shi of
the SME Diagnosis Consultant
Training Course in 2006

Chapter 8 Questionnaire Survey of Shindan-shi of the SME Diagnosis Consultant Training Course in 2006

8.1 Objective of the Questionnaire Survey

The objective of the questionnaire survey is summarized as follows

(1) UPL-IKM

To ask questions about UPL-IKM, which is expected to become a principal place of activity for participants who have completed the SME diagnosis consultant training course in 2006, thereby to understand the status of the establishment of UPL-IKM at the national level, problems relating to management of UPL-IKM, and issues to be addressed for UPL-IKM to continue its activities.

(2) SME diagnosis consultant

To ask questions about current activities of the course participants and future plans, in order to understand the difference between the sectors that were intended to be served by SME diagnosis consultants, including company size, and those actually served, while identifying issues relating to their activities by taking into account such recognition as well as issues for SME diagnosis consultants to continue their activities.

(3) SME diagnosis consultant training course

To ask questions about problems facing the course participants as they conduct activities as SME diagnosis consultant, in order to identify issues relating to the present SME diagnosis consultant training course for the purpose of developing and proposing a new training course that fits the country's real conditions and needs.

8.2 Survey Method and Responses

This questionnaire survey was conducted by sending a questionnaire in the form shown in Appendix 3 to 100 persons who have participated and completed the 2006 SME diagnosis consultant training course. Response was received from 63 persons (Table 8-1). Thus, the level of confidence of the questionnaire survey is 93%.

8.3 Results of the Questionnaire Survey

8.3.1 Key attributes of respondents

(1) Place of residence (province)

Provinces represented by participants of the 2006 SME diagnosis consultant training course accounted for 85% of all provinces in Indonesia, while provinces represented by respondents to the questionnaire survey 67% (Table 8-2).


Table 8-1 Key Attributes of Questionnaire Survey Respondents

No	Organization which the respondent works for	Province of residence
SMEC-1	Central Government Organization	West Java
SMEC-2	Municipal industry/Trade investment DINAS	North Sumatera
SMEC-3	Provincial industry/trade DINAS	Aceh
SMEC-4	Provincial industry/trade DINAS	West Nusa Tenggara
SMEC-5	Prefectural industry/trade cooperative DINAS	West Sumatera
SMEC-6	Central Government Organization	West Kalimantan
SMEC-7	Central Government Organization	West Sumatera
SMEC-8	Provincial industry/trade DINAS	Jambi
SMEC-9	Provincial industry/trade DINAS	Gorontalo
SMEC-10	Municipal industry/Trade cooperative DINAS	West Sumatera
SMEC-11	Prefectural industry/trade cooperative DINAS	West Sumatera
SMEC-12	Prefectural industry/trade DINAS	Riau
SMEC-13	Central Government Organization	Central Java
SMEC-14	Provincial Economy/Industry DINAS	South Sulawesi
SMEC-15	Municipal industry/Trade DINAS	West Sumatera
SMEC-16	Provincial industry/trade DINAS	Central Kalimantan
SMEC-17	Central Government Organization	East Java
SMEC-18	Provincial industry/trade DINAS	South Sulawesi
SMEC-19	Municipal industry/Trade cooperative DINAS	South Sumatera
SMEC-20	Provincial industry/trade DINAS	West Nusa Tenggara
SMEC-21	Prefectural industry/trade SME DINAS	North Sumatera
SMEC-22	Prefecture industry/Trade investment DINAS	West Sumatera
SMEC-23	Prefecture industry/Trade DINAS	South Sulawesi
SMEC-24	Prefecture industry/Trade DINAS	West Java
SMEC-25	Provincial industry/trade DINAS	D.I. Yogyakarta
SMEC-26	Provincial industry/trade DINAS	North Maluku

SMEC-27	Municipal industry/Trade DINAS	Bangka Belitung
SMEC-28	Prefecture industry/Trade DINAS	South east Sulawesi
SMEC-29	Prefecture industry/Trade DINAS	North Sumatera
SMEC-30	Prefecture industry/Trade DINAS	Bali
SMEC-31	Municipal industry/Trade DINAS	West Sumatera
SMEC-32	Central Government Organization	South Sumatera
SMEC-33	Prefecture industry/Trade DINAS	West Sumatera
SMEC-34	Provincial industry/trade DINAS	East Nusa Tenggara
SMEC-35	Municipal industry/Trade DINAS	West Sumatera
SMEC-36	Provincial industry/trade DINAS	South Kalimantan
SMEC-37	Prefecture industry/Trade DINAS	Bali
SMEC-38	Municipal industry/Trade DINAS	South Sulawesi
SMEC-39	Municipal industry/Trade DINAS	South Sulawesi
SMEC-40	Prefecture industry/Trade investment DINAS	South Sulawesi
SMEC-41	Municipal industry/Trade DINAS	East Java
SMEC-42	Prefecture industry/Trade DINAS	South Sulawesi
SMEC-43	Prefecture industry/Trade DINAS	South east Sulawesi
SMEC-44	Prefecture industry/Trade DINAS	Jambi
SMEC-45	Provincial industry/trade DINAS	West Sumatera
SMEC-46	Provincial industry/trade investment cooperative DINAS	South kalimantan
SMEC-47	Provincial industry/trade DINAS	Central Java
SMEC-48	Provincial industry/trade DINAS	South east Sulawesi
SMEC-49	Prefecture industry/Trade DINAS	South Sulawesi
SMEC-50	Central Government Organization	West Java
SMEC-51	Provincial industry/trade DINAS	West Java
SMEC-52	Central Government Organization	West Java
SMEC-53	Central Government Organization	West Java
SMEC-54	Central Government Organization	West Java
SMEC-55	Central Government Organization	West Java
SMEC-56	Central Government Organization	East Java
SMEC-57	Municipal industry/Trade DINAS	West Java
SMEC-58	Prefecture industry/Trade DINAS	South Sulawesi
SMEC-59	Provincial industry/trade DINAS	North Sumatera
SMEC-60	Provincial industry/trade DINAS	West Sumatera
SMEC-61	Provincial industry/trade DINAS	North Sulawesi
SMEC-62	Provincial industry/trade DINAS	East Java
SMEC-63	Prefecture industry/Trade DINAS	East Java

Table 8-2 Place of Residence of Respondents (Province)

	Province	Province where the training course participant resides (✓)	Province for which response was made (✓)
1	Ache	✓	✓
2	North Sumatera	✓	✓
3	West Sumatera	✓	✓
4	Riau	✓	✓
5	Jambi	✓	✓
6	South Sumatera	✓	✓
7	Bengkulu	✓	
8	Lampung		
9	Bangka Belitung	✓	✓
10	DKI Jakarta	✓	
11	West Java	✓	✓
12	Central Java	✓	✓
13	D.I Yogyakarta	✓	✓
14	East Java	✓	✓
15	Banten	✓	
16	Bali	✓	✓
17	West Nusa Tenggara	✓	✓
18	East Nusa Tenggara	✓	✓
19	West Kalimantan	✓	✓
20	Central kalimantan	✓	✓
21	South Kalimantan	✓	✓
22	East Kalimantan	✓	
23	North Sulawesi	✓	✓
24	Central Sulawesi		
25	South Sulawesi	✓	✓
26	South east Sulawesi	✓	✓
27	Gorontalo	✓	✓
28	West Sulawesi		
29	Maluku		
30	North Maluku	✓	✓
31	Papua	✓	
32	Riau islands	✓	
33	South Irian Jaya		

Note:  is a provincial represented by no participant

 is a province from which no response was made

(2) Job classification of respondents

Managerial (Struktural) and general staff accounted for 69.84% of respondents, and professional staff the remaining 28.57% (63 valid responses).

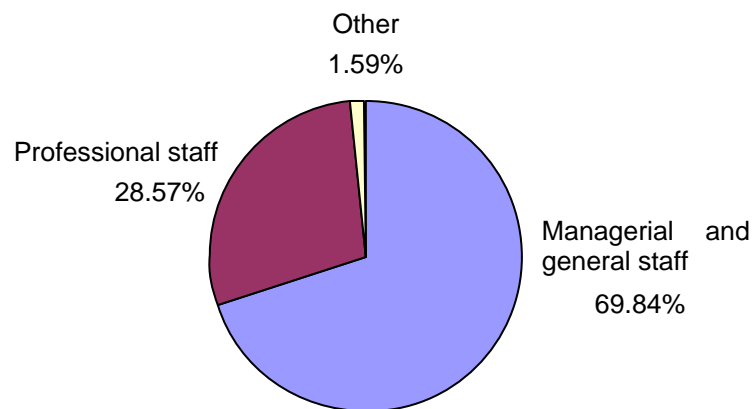


Figure 8-1 Job Classifications of Respondents

Classification of respondents by province and job type is shown in Table 8-3.

Table 8-3 Distribution of Respondents by Provinces and Job Types

(Unit: Person)

Province	Managerial / General Staff	%	Professional Staff	%
Aceh	1	100	0	0
North Sumatera	3	75	1	25
West Sumatera	9	82	2	18
Riau	1	100	0	0
Jambi	1	50	1	50
South Sumatera	1	50	1	50
Bangka Belitung	1	100	0	0
West Java	5	56	4	44
Central Java	0	0	2	100
D.I. Yogyakarta	1	100	0	0
East Java	4	80	1	20
Bali	2	100	0	0
West Nusa Tenggara	2	100	0	0
East Nusa Tenggara	1	100	0	0
West Kalimantan	0	0	1	100
Central Kalimantan	1	100	0	0
South Kalimantan	2	100	0	0
North Sulawesi	1	100	0	0
South Sulawesi	6	67	3	33
Southeast Sulawesi	3	100	0	0
Gorontalo	1	100	0	0
North Maluku	0	0	1	100

Provinces represented by only managerial/general staff total 12 (55% of total), those represented by only professional staff 3 (14%), and those presented by both managerial/general staff and professional staff 7 (31%). Thus, the majority of provinces send managerial/general staff only.

Classification of respondents by their organization and job type indicates that managerial/general staff accounts for 62% and professional staff 38% for Industry and Trade DINAS under provincial government.

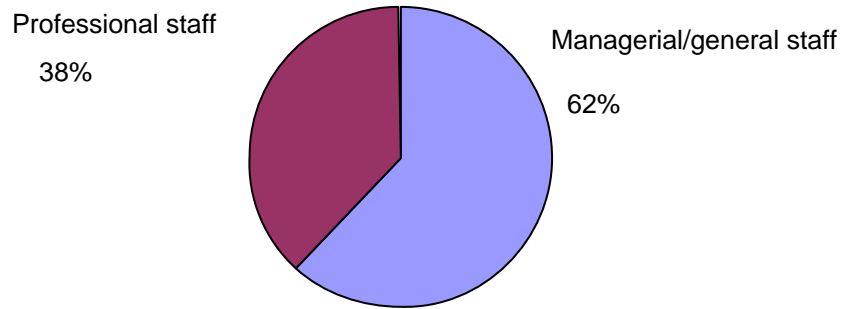


Figure 8-2 Distribution of Respondents' Job Types (Provincial Industry and Trade DINASs)

For Industry and Trade DINAS of prefectural and municipal governments, managerial/general staff accounts for 90% and professional staff 10%.

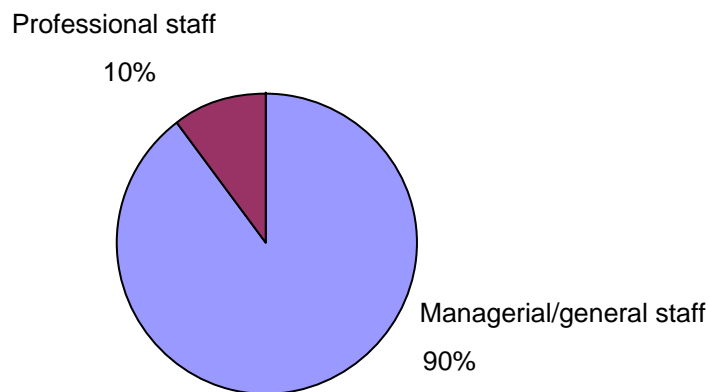


Figure 8-3 Distribution of Respondents' Job Types (Prefectural / Municipal Industry and Trade DINASs)

For the central government, managerial/general staff represents 42% and professional staff 58%.

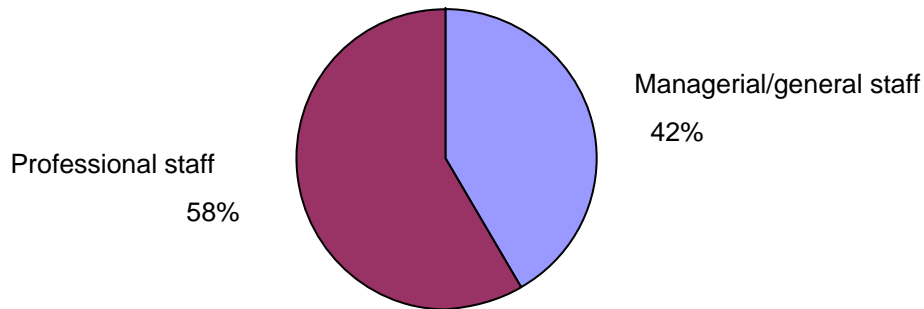


Figure 8-4 Distribution of Respondents' Job Types (the Central Government)

(3) Classification of respondents by organization

When respondents were classified according to organizations which they belong to, respondents representing Industry and Trade DINAS of provisional governments accounted for 37% of the total, those representing Industry and Trade DINAS of prefectural and municipal governments 44%, and those representing central government organizations 19%.

Respondents were also classified according to their organization and province, as shown in Table 8-4. In West Java, respondents representing the central government are much large in number than other provinces, totaling 6, to reflect the fact that they mainly come from Balai Besar¹, which are concentrated in the province.

¹ Research Institute

Table 8-4 Distribution of Respondents by Provinces, Organizations and Job Types

(Unit: Person)

Province	Central Government	%	Prefectural / Municipal DINAS	%	Provincial DINAS	%
Aceh					1	100
North Sumatera			3	75	1	25
West Sumatera	1	9	8	73	2	18
Riau			1	100		
Jambi			1	50	1	50
South Sumatera	1	100				
Bangka Belitung			1	100		
West Java	6	67	2	22	1	11
Central Java	1	50			1	50
D.I Yogyakarta					1	100
East Java	2	40	2	40	1	20
Bali			2	100		
West Nusa Tenggara					2	100
East Nusa Tenggara					1	100
West Kalimantan	1	100				
Central Kalimantan					1	100
South Kalimantan					2	100
North Sulawesi					1	100
South Sulawesi			6	60	4	40
Southeast Sulawesi			2	67	1	33
Gorontalo					1	100
North Maluku					1	100
	12		28		23	

8.3.2 Status of establishment of UPL-IKM

UPL-IKM has been established in all provinces where respondents are located (see Table 8-5 for detail). At prefectural and municipal levels, 98% of prefectures and municipalities which respondents come from have their own UPL-IKM. According to the UPL-IKM Team at IKM, UPL-IKM exists in all provinces and all prefectures and municipalities represented by participants as of the end of November 2007.

Table 8-5 Operating Status of UPL-IKM at the Provincial Level

	Province	Province where the training course participant resides (✓)	Province for which response was made (✓)	Province where UPL was established (✓)
1	Aceh	✓	✓	✓
2	North Sumatera	✓	✓	✓
3	West Sumatera	✓	✓	✓
4	Riau	✓	✓	✓
5	Jambi	✓	✓	✓
6	South Sumatera	✓	✓	✓
7	Bengkulu	✓		?
8	Lampung			?
9	Bangka Belitung	✓	✓	✓
10	DKI Jakarta	✓		?
11	West Java	✓	✓	✓
12	Central Java	✓	✓	✓
13	D.I. Yogyakarta	✓	✓	✓
14	East Java	✓	✓	✓
15	Banten	✓		?
16	Bali	✓	✓	✓
17	West Nusa Tenggara	✓	✓	✓
18	East Nusa Tenggara	✓	✓	✓
19	West Kalimantan	✓	✓	✓
20	Central Kalimantan	✓	✓	✓
21	South Kalimantan	✓	✓	✓
22	East Kalimantan	✓		?
23	North Sulawesi	✓	✓	✓
24	Central Sulawesi			?
25	South Sulawesi	✓	✓	✓
26	Southeast Sulawesi	✓	✓	✓
27	Gorontalo	✓	✓	✓
28	West Sulawesi			?
29	Maluku			?
30	North Maluku	✓	✓	✓
31	Papua	✓		?
32	Riau Islands	✓		?
33	West Irian Jaya			?

Note:////// is a province represented by no Shindan-shi

■ is a province from which no response was made

8.3.3 Activity status of Shindan-shi of the 2006 SME Diagnosis Consultant Training Course

The questionnaire survey results reveal activities of Shindan-shi who have completed the SME diagnosis consultant training course in 2006.

(1) Sectors covered by service activities of Shindan-shi (62 valid responses)

Nationwide:

Shindan-shi, who had completed the 2006 SME diagnosis consultant training course, provided diagnosis service for 422 companies, of which 166 companies received consulting service, or 39.43% of the total.

This means, on average, each consultant performed diagnosis service for 6.8 companies and consulting service for 2.7 companies. In terms of employment, the average number of employees was 23 for companies that received diagnosis service and 29 for those that received consulting service. Breakdown of companies that have received diagnosis/consulting service by sector and employment size is shown in Table 8-6.

Table 8-6 Breakdown of Companies that Have Received Diagnosis / Consulting Service by Sectors and Respective Average Numbers of Employees

Sector	Number of companies that have received diagnosis service	Average number of employees	Number of companies that have received consulting services	Average number of employees
Food and Beverage	141	11	54	5
Textile and garment	41	17	31	65
Leather and shoes	45	34	8	17
Woodworking and furniture	24	13	14	13
Machinery assembly	4	19	1	20
Metal Parts	100	42	26	61
Plastic Parts	4	25	4	25
Other	63	17	28	19
Total	422	23	166	29
Average per Shindan-shi	6.8		2.7	

Among companies that have received diagnosis service, the largest number of companies are found in the food and beverage sector, followed by the metal parts sector. As for companies that have received consulting service, the food and beverage sector represents the large number, followed by the textile and garment sector, whereas the metal parts sector ranked fourth. All the companies that have received diagnosis service had 50 or less employees and are thus classified into SMEs under BPS's company classification. Among companies that have received consulting service, the largest number of employees is found in the textile and garment sector, totaling 65. All of them are classified into medium-sized or smaller enterprises.

By Provinces:

The current state of activities by Shindan-shi who have completed the training course in 2006, on a provincial basis, is described in Appendix-4.

The numbers of companies that have received diagnosis and consulting services, in the top three provinces, are summarized as follows.

Table 8-7 Number of Companies that Have Received Diagnosis and Consulting Services in Top Three Provinces

Number of Companies that have received Diagnosis and Consulting Services	1. East Java	72
	2. South Sulawesi	63
	3. West Sumatera	51
Number of Companies that have received consulting service	1. South Sulawesi	34
	2. West Java	26
	3. North Maluku	20

In East Java, 72 companies have received diagnosis service, but less than 20 companies have received consulting service. In contrast, a fairly large number of companies (26) in West Java have received consulting service, whereas less than 50 companies have received diagnosis service.

Table 8-8 Average Numbers of Companies per Consultant that Received Diagnosis and Consulting Services in Top Three Provinces

Average number of companies that have received diagnosis service per Shindan-shi	1. East Java	14
	2. Central Java	10
	3. West Kalimantan, North Maluku	9
Average number of companies that have received consulting service per Shindan-shi	1. North Maluku	20
	2. Bali	5
	3. East Nusa Tenggara	5

East Java has the largest number of companies that have received diagnosis service – 14 - as measured by the average per consultant, followed by 10 in Central Java. On the other hand, North Maluku dominates other provinces in the average number of companies that have received consulting service, totaling 20, although only one respondent represents the province and more companies have received consulting service than diagnosis service.

Sector-wise, companies in the food and beverage sector have received diagnosis service in all provinces but Jogjakarta, Central Kalimantan, and Gorontalo. On the other hand, three provinces - East Nusa Tenggara, North Sulawesi, and Gorontalo – have only one sector representing companies that have received diagnosis or consulting service, while West Java covers all the sectors for diagnosis and consulting services.

In terms of employment size, companies that have received diagnosis service in Jogjakarta show the largest number of employees on average, 60, followed by West Java (39). On the other hand, Central Java outnumbers other provinces significantly with 410 employees for companies that have received consulting service, because they include a large enterprise employing around 800 persons. West Java is the second largest with 37 employees.

By job types:

Classifications of companies that have received diagnosis or consulting service by job type and sector are shown in Tables 8-9 and 8-10.

Table 8-9 Numbers of Companies that Have Received Diagnosis / Consulting Service by Sectors and Respective Average Numbers of Employees: Managerial / General Staff

Sector	Number of companies that have received diagnosis service	Average number of employees	Number of companies that have received consulting services	Average number of employees
Food and Beverage	90	9	31	8
Textile and garment	28	14	17	13
Leather and shoes	29	33	5	21
Woodworking and furniture	20	14	10	14
Machinery assembly	2	30		
Metal Parts	36	27	17	43
Plastic Parts	3	20	3	20
Other	39	25	21	32
Total	247	21	104	21
Average per Shindan-shi	5.7		2.4	

Table 8-10 Numbers of Companies that Have Received Diagnosis / Consulting Service by Sectors and Respective Average Numbers of Employees: Professional Staff

Sector	Number of companies that have received diagnosis service	Average number of employees	Number of companies that have received consulting services	Average number of employees
Food and Beverage	50	22	23	10
Textile and garment	13	17	14	72
Leather and shoes	16	53	3	12
Woodworking and furniture	4	11	4	10
Machinery assembly			1	20
Metal Parts	24	32	9	27
Plastic Parts	1	30	1	30
Other	24	11	7	16
Total	132	25	62	28
Average per Shindan-shi	7.3		3.4	

By job type, the number of companies that have received diagnosis service by managerial/general staff is much larger than those that have received consulting service by professional staff, i.e., 247 vs. 132. This is because respondents who are managerial/general staff are much more than those who are professional staff. In fact, the number of companies per consultant is 5.7 for managerial/general staff and 7.3 for professional staff. Similarly, the average number of companies that have received consulting service is 2.4 for managerial/general staff and 3.4 for professional staff. Meanwhile, there is not much difference in employment size between the two job types, around 20 persons. Also there is no significant difference in terms of sector between the two job types.

Organization that Shindan-shi come from:

Classifications of companies that have received diagnosis or consulting service by affiliated organization (provincial Industry and Trade DINAS, prefectural/municipal Industry and Trade DINAS, and central government organizations) and sector are shown in Tables 8-11, 8-12 and 8-13.

Table 8-11 Numbers of Companies that Have Received Diagnosis / Consulting Service by Sectors and Respective Average Numbers of Employees: Provincial Industry and Trade DINASs

Sector	Number of companies that have received diagnosis service	Average number of employees	Number of companies that have received consulting services	Average number of employees
Food and Beverage	44	27	20	11
Textile and garment	15	8	17	58
Leather and shoes				
Woodworking and furniture	6	20	3	21
Machinery assembly				
Metal Parts	22	15	5	20
Plastic Parts	1	30	1	30
Other	27	13	11	12
Total	115	19	57	27
Average per Shindan-shi	5.5		2.7	

Table 8-12 Numbers of Companies that Have Received Diagnosis / Consulting Service by Sectors and Respective Average Number of Employees: Prefectural / Municipal Industry and Trade DINASS

Sector	Number of companies that have received diagnosis service	Average number of employees	Number of companies that have received consulting services	Average number of employees
Food and Beverage	68	9	31	9
Textile and garment	17	20	13	20
Leather and shoes	8	81	4	18
Woodworking and furniture	18	10	11	11
Machinery assembly	2	8	1	20
Metal Parts	2	36	1	42
Plastic Parts	3	20	3	20
Other	25	29	16	40
Total	143	19	80	19
Average per Shindan-shi	4.9		2.8	

Table 8-13 Numbers of Companies that Have Received Diagnosis/Consulting Service by Sectors and Respective Average Numbers of Employees: Central Government Organization

Sector	Number of companies that have received diagnosis service	Average number of employees	Number of companies that have received consulting services	Average number of employees
Food and Beverage	27	8	3	8
Textile and garment	9	18	1	30
Leather and shoes	29	21	4	17
Woodworking and furniture				
Machinery assembly	2	30		
Metal Parts	31	38	15	42
Plastic Parts				
Other	11	14	1	6
Total	109	22	24	32
Average per Shindan-shi	9.1		2.0	

As measured by the average number of companies that have received diagnosis service, participants from the central government represent the largest number of 9.1 companies, nearly doubling that served by other two organizations. On the other hand, participants from the central government handle the smallest number of companies for consulting service.

Note that participants from the central government include those who have participated in the model training program conducted by the study team, accounting for 67% of the total. The breakdown of participants from the central government, not including those who have participated in the model program, is shown below.

Table 8-14 Numbers of Companies that Have Received Diagnosis / Consulting Service by Sectors and Respective Average Numbers of Employees: Central Government Organization (Excluding Shindan-shi in Model Program A)

Sector	Number of companies that have received diagnosis service	Average number of employees	Number of companies that have received consulting services	Average number of employees
Food and Beverage	27	8	3	8
Textile and garment	2	10		
Leather and shoes	1	14	1	14
Woodworking and furniture				
Machinery assembly				
Metal Parts	8	3		
Plastic Parts				
Other	1	6	1	6
Total	39	7.2	5	8.8
Average per Shindan-shi	9.8		1.3	

Excluding Shindan-shi in the model program, the average number of companies that have received diagnosis service increases slightly from 9.1 to 9.8. In contrast, the average number of companies that have received consulting service decreases from 2.0 to 1.3. As for employment size, significant declines are observed for both categories, from 22 to 7.2 employees for diagnosis service and from 32 to 8.8 for consulting service.

(2) Major themes for improvement proposed by consulting service and reaction by client companies (52 valid responses)

Top five themes for improvement proposed in consulting service by participants are summarized in Figure 8-5.

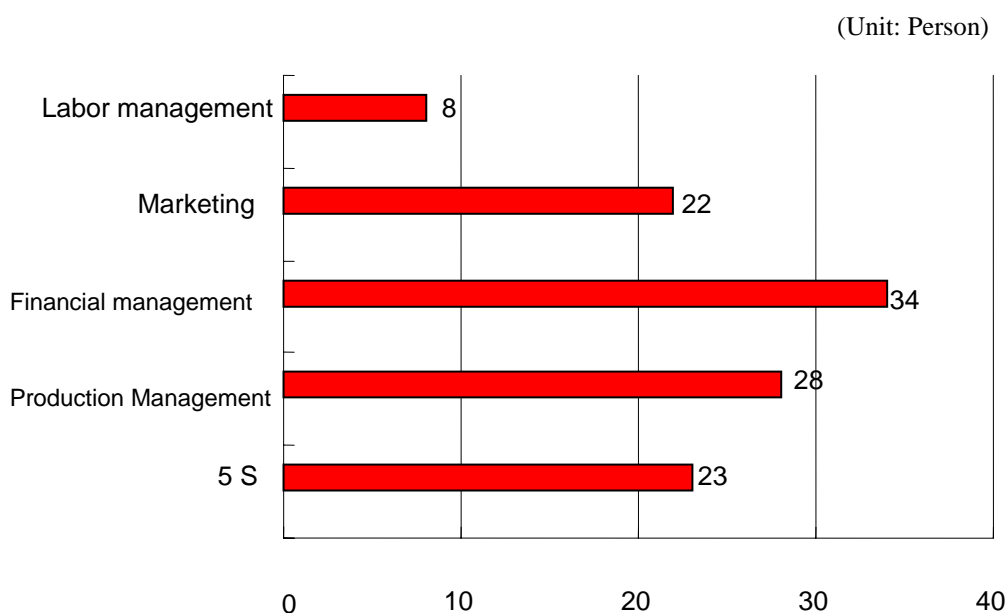


Figure 8-5 Top Five Themes for Improvement Covered by Consulting Service

As seen in the Figure, 34 Shindan-shi - approximately 65% of the total – have provided or are providing consulting service by focusing on financial management as the main theme for improvement. Levels of commitment of client companies to these themes for improvement are summarized in Table 8-15.

Table 8-15 Levels of Commitment by Client Companies by Themes for Improvement

(Unit: No. of companies)

Theme for improvement proposed by Shindan-shi	The client was firmly committed and produced results		The client understood the proposal for improvement but was slow in implementation		The client did not understand the proposal for improvement	
	No.	%	No.	%	No.	%
5 S	14	61	9	39		
Production Management	14	50	13	46	1	4
Financial Management	10	29	24	71		
Marketing	9	41	13	59		
Labor Management	2	25	6	75		

As for 5S, 61% of respondents felt that their client companies were firmly committed to improvement initiatives according to the consultant's proposal and produced some results. In contrast, financial management was mostly taken up as the theme for improvement but 71% of respondents considered that their clients accepted the proposal but were slow in implementation.

(3) Financial needs of SMEs

The questionnaire survey asked questions whether respondents received the request for advice on loan from client companies through the SME diagnosis/consulting service, in an attempt to gain insight on financial needs of SMEs and assess opportunity for SME diagnosis consultants to provide support for loan application procedures.

Nationwide:

Responses

A: I have received the request for advice on loan or have provided support for loan-related procedures.

B: I have received the request for advice or have not provided any support.

C: None.

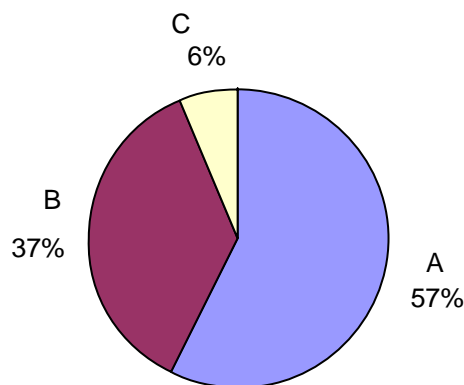


Figure 8-6 Financial Needs of SMEs (Nationwide)

Nearly all of respondents (94%) have received the request for advice (i.e., they choose responses A or B), indicating high financial needs of SMEs. Furthermore, the majority of them (57%) have actually provided support for loan application procedures.

Province:

Table 8-16 shows the breakdown of the above responses by province.

Table 8-16 Financial Needs of SMEs by Provinces (Number of responses)

(Unit: Person)

Province	Have received the request for advice and have provided actual support	%	Have received the request for advice but not provided actual support	%	Never received the request for advice	%
Aceh			1	100		
North Sumatera	4	100				
West Sumatera	4	44	3	33	2	23
Riau			1	100		
Jambi	1	50	1	50		
South Sumatera	1	100				
Bangka Belitung	1	100				
West Java	3	33	4	44	2	23
Central Java	1	50	1	50		
D.I. Yogyakarta	1	100				
East Java	1	20	4	80		
Bali	2	100				
West Nusa Tenggara	2	100				
East Nusa Tenggara	1	100				
West Kalimantan	1	100				
Central Kalimantan			1	100		
South Kalimantan	1	50	1	50		
North Sulawesi	1	100				
South Sulawesi	6	75	2	25		
Southeast Sulawesi	1	33	2	67		
Gorontalo	1	100				
North Maluku	1	100				

Respondents in only two states, West Sumatra and West Java, have responded that they never received the request for advice, and thus respondents in most states have received such request. In addition, respondents in all but three provinces (Atje, Riau, and Central Kalimantan) have provided actual support for SMEs in relation to loan procedures.

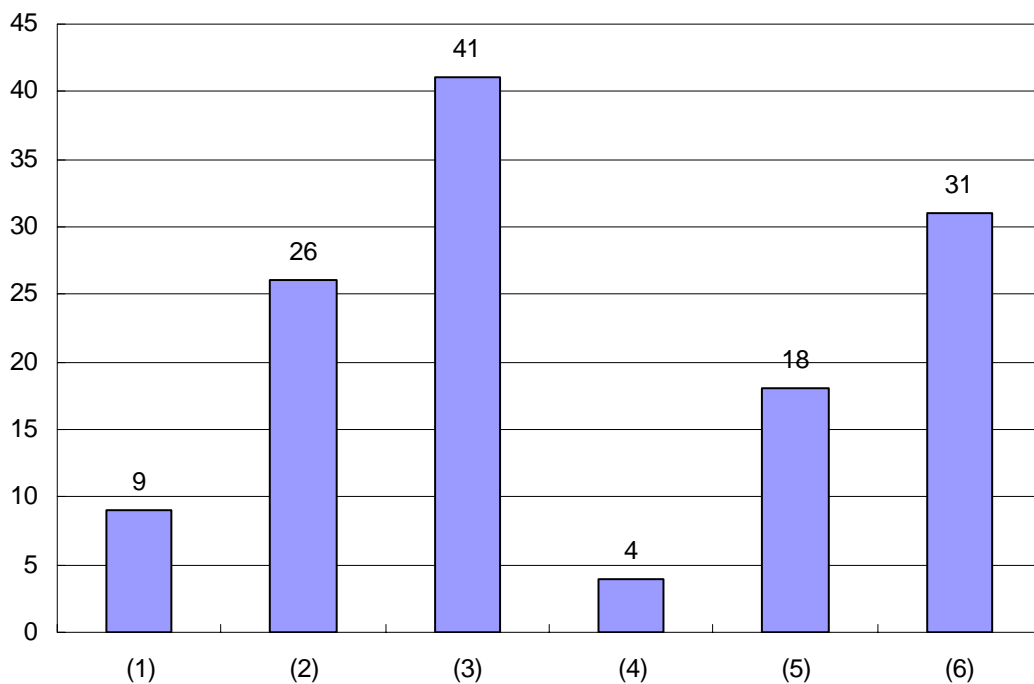
(4) Impeding factors for SME diagnosis/consulting activities

1) Self-assessment of professional capability by Shindan-shi who have completed the 2006 SME diagnosis consultant training course

The questionnaire survey asked the Shindan-shi as to what skill, knowledge or other capability they feel they lacked to conduct proper diagnosis and consulting activities. Their responses are summarized in Figure 8-7.

Nationwide:

(Unit: Person)



- (1) Knowledge on business administration and production management
- (2) Experience in corporate diagnosis and consulting
- (3) Knowledge on production (engineering) technology
- (4) Presentation skills
- (5) Negotiation and persuasion skills
- (6) Actual experience in factory operation

Figure 8-7 Shindan-shi's Self-assessment of Professional Capability (Nationwide)

The responses indicate that the largest number of respondents cited the lack of knowledge on production (engineering) technology, followed by experience in factory operation. Two categories - experience in corporate diagnosis and consulting, and experience in factory operation – agree with desirable themes as analyzed in 8.3.5 (2).

By Provinces:

The self-assessment results are reclassified according to province, as shown in Table 8-17.

**Table 8-17 Shindan-shi's Self-assessment of Professional Capability by Provinces
(Number of responses)**

(Unit: Person)

Province	Skill / knowledge the Shindan-shi feels he lacks to conduct corporate diagnosis / consulting activities					
	Knowledge on business administration and production management	Experience in corporate diagnosis and consulting	Knowledge on production technology	Presentation skills	Negotiation and persuasion skills	Actual experience in factory operation
Aceh			1		1	
North Sumatera		3	1		1	2
West Sumatera	2	7	8	1	4	5
Riau		1	1		1	3
Jambi		1	1		1	2
South Sumatera	1		1			
Bangka Belitung	1		1			
West Java		4	3		3	3
Central Java		1	1		1	3
D.I. Yogyakarta			1			1
East Java	1	2	4		2	2
Bali			1	1	1	1
West Nusa Tenggara			2			1
East Nusa Tenggara			1			1
West Kalimantan	1		1			
Central Kalimantan		1	1		1	1
South Kalimantan	1	1	2			1
North Sulawesi	No response					
South Sulawesi	1	4	5	2	2	3
Southeast Sulawesi	1	1	3			1
Gorontalo			1			1
North Maluku			1			

Clearly, respondents representing all the provinces think that they lack “knowledge on production (engineering) technology.

Job type:

The self-assessment results are reclassified according to job type.

**Table 8-18 Shindan-Shs's Self-assessment of Professional Capability by Job Types
(Number of responses)**

(Unit: Person)

Province	Skill / knowledge the Shindan-shi feels he lacks to conduct corporate diagnosis / consulting activities					
	Knowledge on business administration and production management	Experience in corporate diagnosis and consulting	Knowledge on production technology	Presentation skills	Negotiation and persuasion skills	Actual experience in factory operation
Professional staff	3	8	11	1	4	13
Managerial / General staff	6	18	30	3	14	18

Respondents of professional staff cite “experience in factory operation” most frequently as knowledge they lack. For managerial/general staff, “experience in production (engineering) technology seems to be given of highest priority.

Organization that Shindan-shi come from:

Self-assessment results are reclassified according to organization they belong to.

**Table 8-19 Shindan-Shi's Self-assessment of Professional Capability by Organizations
(Number of response)**

(Unit: Person)

Province	Skill / knowledge the Shindan-shi feels he lacks to conduct corporate diagnosis / consulting activities					
	Knowledge on business administration and production management	Experience in corporate diagnosis and consulting	Knowledge on production technology	Presentation skills	Negotiation and persuasion skills	Actual experience in factory operation
Provincial Industry and Trade DINAS	3	5	14		4	12
Prefectural / municipal Industry and Trade DINAS	2	15	20	3	9	12
Central government organization	4	6	7	1	5	7

Response patterns among Shindan-shi who represent provincial and prefectural/municipal Industry and Trade DINASs agree with the overall pattern. On the other hand, among Shindan-shi representing the central government, the largest number of responses is seen in two categories, “knowledge on production (engineering) technology” and “experience in factory operation,” because the majority of Shindan-shi representing the central government are professional staff (Table 8-13). In particular, “experience in factory operation” is cited by many participants. Also, many Shindan-shi feel that they lack “experience in corporate diagnosis and consulting”.

2) PR activity about UPL-IKM and SME diagnosis consulting service

Nationwide:

Approximately 70% of respondents conduct some sort of PR activities.

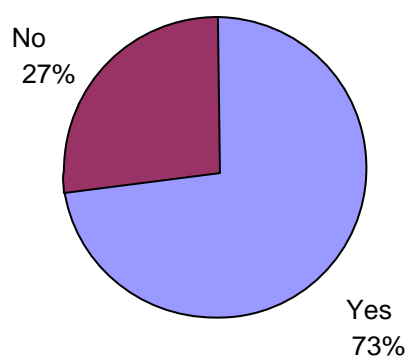


Figure 8-8 PR Activities about UPL-IKM and SME Diagnosis Consulting Service

Generally, PR activities are conducted in the following manners.

- Presentation at trade association’s seminar and similar occasions
- Magazine published by the province
- Educational and promotional activities upon visit to SMEs

In practice, more than 90% of respondents who have said “yes” seem to conduct educational and promotional activities on UPL-IKM and SME diagnosis consultant when they visit SMEs.

Province:

The status of PR activity on UPL-IKM and SME diagnosis consulting, by province, is summarized in Table 8-20, which shows the breakdown in each province by percentage of participants who conducted or not conducted PR activity.

**Table 8-20 Status of PR Activities on UPL-IKM and SME Diagnosis Consultant
by Provinces**

(Unit: %)

Province	Conducted PR activity	Not conducted
Aceh	100.0	
North Sumatera	25.0	75.0
West Sumatera	81.8	18.2
Riau	100.0	
Jambi	50.0	50.0
South Sumatera		100.0
Bangka Belitung	100.0	
West Java	55.6	44.4
Central Java	100.0	
D.I. Yogyakarta	100.0	
East Java	100.0	
Bali	50.0	50.0
West Nusa Tenggara	100.0	
East Nusa Tenggara	100.0	
West Kalimantan	100.0	
Central Kalimantan	100.0	
South Kalimantan	100.0	
North Sulawesi		100.0
South Sulawesi	88.9	11.1
Southeast Sulawesi	66.7	33.3
Gorontalo		100.0
North Maluku	100.0	

Among provinces, no PR activity is carried out in three provinces, South Sumatra, North Sulawesi, and Gorontalo. However, as UPL-IKM has been established in these provinces and diagnosis and consulting services are conducted, PR activity seems to be conducted for client companies receiving these services.

3) Proposals for supporting continuation of corporate diagnosis and guidance activities

The Shindan-shi were asked to describe impeding factors for continuation of corporate diagnosis and guidance activities. While many responses gave no answer or make no sense, some Shindan-shi gave answers that are summarized as follows.

a) Impeding factors relating to UPL-IKM's organization and proposals for improvement

- As UPL-IKM is a local government organization, central government staffs who have completed the SME consultant training course cannot virtually participate in UPL-IKM's activities because various arrangements and coordination activities are required between the central and local governments or between respective organizations.
- UPL-IKM has not retained specialty consultants for post-diagnosis consulting service and its service is limited to diagnosis service in many cases.
- UPL-IKM is not widely recognized within DINAS.
- UPL-IKM does not have a sufficient number of staff members.
- UPL-IKM needs to make known to SMEs and related organizations that it will provide consulting service for SMEs in the future.
- The scope of services and authorities of SME diagnosis and specialty consultants is not clearly defined.
- While UPL-IKM is organized, its membership is limited to some of consultants who have completed the SME consultant training course. Membership should extend to all persons who have participated in the training course, regardless of organization they come from.
- UPL-IKM's detailed organization, scope of responsibility, positioning of SME diagnosis consultant, and their detailed duties and authorities have still to be defined.
- To make SME consulting service functional, UPL-IKM should have broader power and authority.
- As UPL-IKM consists of members representing various organizations (both central and local government), it cannot be managed in an integrated and coordinated manner.

- b) Impeding factors relating to budget and proposals for improvement
- The operating budget is not sufficient to ensure proper activities.
 - At present, UPL-IKM does not have budget control ownership and is thus incapable of making appropriate budget allocation.
 - As UPL-IKM's budget is managed by the provincial government, UPL-IKM's members representing prefectural and municipal governments cannot use the budget freely.
- c) Impeding factors relating to the scheme and proposals for improvement
- The SME diagnosis consultant and PFPP are not clearly distinguished.
 - The method to use consultants who have completed the training course and do not belong to UPL-IKM is not determined.
- d) Impeding factors relating to other matters and proposals for improvement
- SMEs do not trust Industry and Trade DINAS or UPL-IKM.
 - A network of SME diagnosis consultants and consultants in each province to allow joint efforts should be established.
 - Linkage with related organizations should be reinforced to facilitate activities of SME diagnosis consultants.

8.3.4 Future activities of Shindan-shi

(1) SME diagnosis and consulting activities

Shindan-shi were asked to indicate whether they would intend to continue SME diagnosis and consulting activities in the future (63 valid responses).

Nationwide:

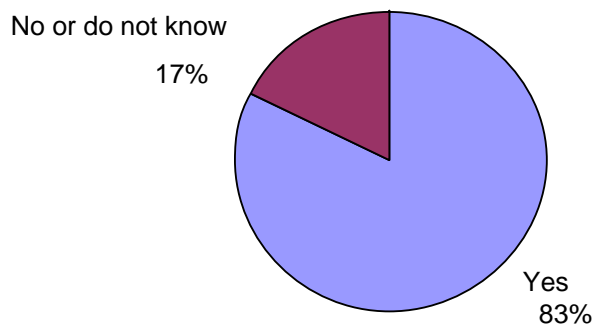


Figure 8-9 Intention of whether to Continue Corporate Diagnosis/Consulting Activities

Overall, 83% of respondents showed intention to continue corporate diagnosis and consulting activities in the future. Those who responded “No” or “Do not know” accounted for the remaining 17%. Reasons for these responses are summarized as follows.

Busy with other activities	18%
Other reasons	83%

Among “other reasons,” the largest number of respondents cited that they did not receive any instruction or direction from their supervisors at UPL-IKM or other organization they worked for, followed by the lack of access to client companies (means of transportation or the budget to cover the transportation cost).

Province:

Responses on the intent to continue future activities by province are analyzed as follows (Table 8-21).

Table 8-21 Intention of whether to Continue Corporate Diagnosis/Consulting Activities by States (Number of respondents)

(Unit: Person)

Province	Intend to continue	%	Do not have intention to continue or do not know	%
Aceh	1	100		
North Sumatera	2	50	2	50
West Sumatera	11	100		
Riau	1	100		
Jambi	2	100		
South Sumatera			1	100
Bangka Belitung	1	100		
West Java	6	67	3	33
Central Java	1	50	1	50
D.I. Yogyakarta	1	100		
East Java	3	60	2	40
Bali	2	100		
West Nusa Tenggara	2	100		
East Nusa Tenggara	1	100		
West Kalimantan	1	100		
Central Kalimantan	1	100		
South Kalimantan	2	100		
North Sulawesi			1	100
South Sulawesi	8	89	1	11
Southeast Sulawesi	3	100		
Gorontalo	1	100		
North Maluku	1	100		

All respondents representing South Sumatra and North Sulawesi stated “No” or “Do not know,” although each province has only one person. In addition, high percentages of the negative response were seen in North Sumatera (50%), West Java (33%), Central Java (50%), and East Java (40%).

Job type: (62 valid responses)

The above responses were classified and analyzed according to job type, as shown in Table 8-22.

Table 8-22 Intention of whether to Continue Corporate Diagnosis/Consulting Activities by Job Types (Number of respondents)

(Unit: Person)

Job type	Yes	%	No/do not know	%
Professional staff	15	83	3	17
Managerial / general staff	36	82	8	18

Response patterns are more or less the same between professional staff and managerial/general staff, i.e., approximately 80% responded “Yes” and 20% “No/do not know”.

Organization that participants come from:

The above responses were classified according to the organization represented by each participant, as shown in Table 8-23.

Table 8-23 Intention of whether to Continue Corporate Diagnosis/Consulting Activities by Organizations Shindan-shi Belong to (Number of respondents)

(Unit: Person)

Organization	Yes	%	No/do not know	%
Provincial Industry and Trade DINAS	19	90	2	10
Prefectural/municipal Industry and Trade DINAS	26	90	3	10
Central government organization	6	50	6	50

Notably, 90% of Shindan-shi representing provincial and prefectural/municipal Industry and Trade DINASs responded that they would continue corporate diagnosis and consulting activities in the future, whereas the percentage was limited to 50% among Shindan-shi representing the central government. Major reasons for the negative response by Shindan-shi from the central government are as follows.

- I am waiting for instruction from provincial Industry and Trade DINAS.
- I am not assigned as SME diagnosis consultant.
- I belong to a research institute under the central government and I do not know about SME diagnosis and consulting activities that are managed by UPL under jurisdiction of provincial Industry and Trade DINAS.

- I belong to a research institute under the central government and I have not received any instruction from my supervisor as to whether I will be assigned to SME-related work.

Clearly, these reasons are all related to organization (relationship between the central and local governments).

(2) Sectors intended for future activities

Shindan-shi were asked to select three sectors for which they intended to provide corporate diagnosis service, as shown below.

Table 8-24 Sectors and Employment Sizes Intended for Future Diagnosis Activities

(Unit: %)

Sector	Percentage of respondents	Employment size	
Food and beverage	69.8%	Under 10	40.9
		10-49	59.1
Textile and garment	52.4%	Under 10	32.3
		10-49	64.5
		50-99	3.2
Leather and shoes	12.7%	Under 10	25.0
		10-49	75.0
Woodworking and furniture	49.2%	Under 10	31.1
		10-49	65.5
		50-99	3.4
Machinery assembly	11.1%	10-49	57.1
		50-99	42.9
Metal parts	27.0%	Under 10	13.3
		10-49	53.3
		50-99	13.3
		Over 100	20.0
Plastics parts	3.2%	10-49	50.0
		50-99	50.0
Other	33.3%	Under 10	40.0
		10-49	60.0

Nearly 70% of respondents cited the “food and beverage” sector as their principal sector for future activity, followed by “textile and garment” (52%). Compared to sectors covered by current activities (Table 8-6), where the most frequently cited sector is also “food and beverage,” followed by “metal parts” that ranked fifth for future activities (27%). On the other hand, the “textile and garment” sector ranked fifth for present activities and second for future activities.

Province:

Sectors cited by respondents for future diagnosis activities are classified according to province they represent, as shown in Appendix-4. Respondents representing all provinces but Jogjakarta and Bali cited the “food and beverage” sector for future activities. On the other hand, the “metal parts” and “machinery assembly” sectors were cited in only 9 out of 22 provinces. In terms of employment size, all Shindan-shi intend to serve companies of 100 or less employees, except for metal parts sectors in West Java and Bali.

8.3.5 SME Diagnosis Consultant Training Course

(1) Major areas of improvement desired by Shindan-shi

Major areas of improvement desired by Shindan-shi are classified into the following five categories.

- Improvement relating to instructors
- Improvement relating to training materials
- Improvement relating to content of training
- Improvement relating to training method and period
- Improvement relating to recruitment of course Shindan-shi

1) Improvement relating to instructors

Major areas of improvement cited by respondents are as follows.

- The number of Indonesian instructors should be increased to facilitate communication.
- Teaching staff at an Indonesian university seem to have the same level of capability as JICA experts and should be hired for cost and other purposes.
- Quality of teaching by instructors should be improved.
- Instructors should be persons who have sufficient capability and qualification.

- 2) Improvement relating to training materials
 - Training materials in Indonesian should be improved in terms of wording and expression.

- 3) Improvement relating to content of training
 - Time spent for field training/OJT should be increased.
 - Content of field training should be modified to reflect the current status of local SMEs.
 - Field training should cover SMEs, rather than modernized companies.
 - Training should cover not only modern industries but traditional ones (SMEs) as well.
 - Content should be applicable to local industries.
 - Case study should be increased.
 - Practical training for diagnosis activity should be enhanced.
 - Financial management should cover more details.
 - It is desirable to receive shop floor training.
 - Course content should reflect the current state of SMEs in Indonesia.

- 4) Improvement relating to training method and period
 - The four-month training period is sufficient.
 - There are too many Shindan-shi in one training course.
 - The number of Shindan-shi should be cut by half.

- 5) Improvement relating to recruitment of participants
 - Government employees, who want to become SME diagnosis consultants, should be required to have at least five year of experience and to be younger than 50.
 - Shindan-shi should be recruited in consideration of their educational background.
 - Shindan-shi in each course should represent the same organization.

Among these areas, item 3) is cited by the largest number of Shindan-shi, which outnumbered other items. In particular, many Shindan-shi want course content to reflect the current state of SMEs in Indonesia.

(2) Theme for retraining

Shindan-shi were asked to cite a main area they would wish to study for retraining of corporate diagnosis and consulting techniques. Their responses are summarized as follows.

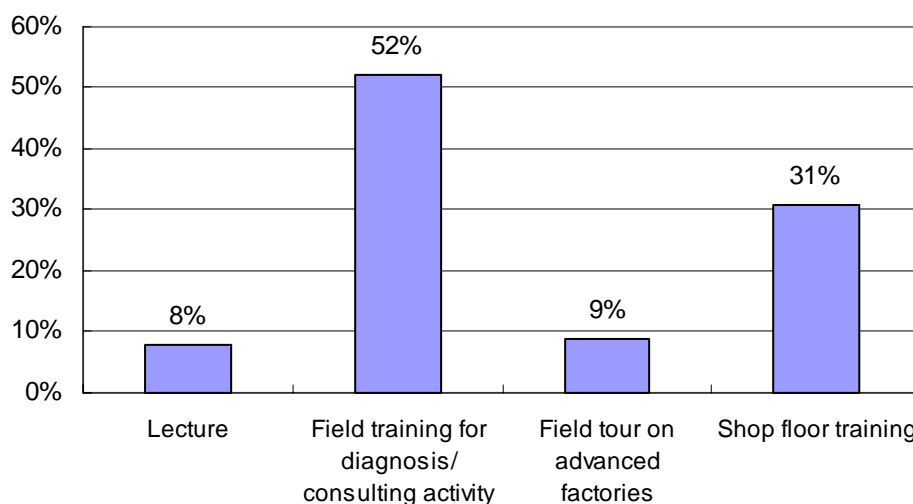


Figure 8-10 Desirable Themes for Retraining Relating to Corporate Diagnosis and Consulting Techniques

The majority of respondents wanted field training for diagnosis/consulting activity, while second largest percentage (31%) wanted shop floor training.

These responses agree with the fact that, in (1), many Shindan-shi cited field training and shop floor training as area of improvement for the training course.

8.4 Analysis of Questionnaire Survey Results

8.4.1 UPL-IKM

(1) Issues relating to UPL-IKM

1) Status of establishment of UPL-IKM

As pointed out in 8.3.2, UPL has been established in all provinces that are represented by Shindan-shi who have completed the 2006 SME diagnosis consultant training course (totaling 22, except for provinces where participants did not respond to the questionnaire survey). Also, at the prefectural and municipal levels, UPL-IKM has been established in prefectures and municipalities to which all participants belong, except for those that are represented by only one participant. This indicates that UPL-IKM is maintained evenly throughout the country. If UPL-IKM is to be established in new prefectures and municipalities in the future, however, efficient budget allocation

should be ensured by taking policy for differentiating areas where manufacturing activities are prospering from those not.

2) UPL-IKM organization and Shindan-shi of the 2006 SME diagnosis consultant training course

UPL-IKM should serve as the place for participants of the SME diagnosis consultant training course to apply knowledge and experience that they have learned after completion of the training course. In reality, however, as UPL-IKM is established within local governments (provincial, prefectural or municipal), Shindan-shi representing the central government face various problems relating to their treatment after training, as pointed out in 8.3.3 (4) 3) and 8.3.4 (1) of the questionnaire survey. More specifically, Shindan-shi representing the central government are required to give priority to their work at the organization to which they belong and do not have time to provide SME diagnosis or consulting service. Even if they have time to do so, they are also prevented from providing service smoothly due to an organizational barrier between the central and local governments. This is reflected in the fact that the average number of companies that have received diagnosis and consulting service from Shindan-shi who represent the central government and have completed the training courses (except for the model program under the present study) is 1.3, much smaller than 2.7 for participants representing provincial DINAS and 2.8 for prefectural/municipal DINAS. In the future, a new scheme should be devised to allow Shindan-shi representing the central government to participate in SME diagnosis and consulting activities freely, from the viewpoint of promoting effective use of human resources who have completed the SME diagnosis consultant training course. At the same time, conditions to recruit Shindan-shi in the SME diagnosis consultant training course should be revised to take into account the effective use of participants after completion. Finally, coordination between UPL-IKM and the central government is called for in relation to the effective use of qualified SME consultants.

3) UPL-IKM budget

At present, UPL-IKM's activities are funded by the central government (MOI) budget, under management of provincial Industry and Trade DINAS. As pointed out in 8.3.3 (4) 3), as UPL-IKM under the prefectural/municipal government is not authorized to control its budget, many prefectural and municipal UPL-IKMs cannot make appropriate budget allocation and thus face difficulty in executing the budget effectively. It is understandable, however, that budget control by provincial DINAS is a temporary measure in light of the fact that the UPL-IKM is a relatively young

organization and many prefectural and municipal governments cannot allocate a new budget to UPL-IKM's activities. Coupled with the fact that the number of SME diagnosis consultants is relatively small and the SME diagnosis and consulting system has just begun, leaving control of UPL-IKM's operating budget to provincial DINAS seems to be justifiable for the time being (up to 2011). After 2011, however, it is recommended to transfer budget authority to each local government (provincial, prefectural or municipal) in phases to ensure efficient budget management by taking into account the number of SME diagnosis consultants and SME special consultants in each area.

8.4.2 Shindan-shi of the 2006 SME Diagnosis Consultant Training Course

(1) Issues relating to SME diagnosis and consulting activities

1) Activity status

As discussed in 8.3.3 (1), Shindan-shi who have completed the 2006 SME diagnosis consultant training course have provided diagnosis service for 422 companies and consulting service for 166 companies. Thus, the percentage of companies that have received consulting service is slightly below 40% (39.43%) of those that have received diagnosis service. Looking at individual provinces, no consulting service is provided in one province (Bangka, Belitung) and only one company has received consulting service in six provinces, accounting for 27% of the total. Reasons for the low rate of consulting service in comparison to diagnosis service are partially substantiated by data shown in 8.3.3 (4) "Impeding factors for activity of Shindan-shi" and 8.3.5 (2) "Theme for retraining."

As shown in 8.3.3 (4) and Figure 8-7, 65% of Shindan-shi felt that they lacked knowledge on production (engineering) technology, 50% work experience on the shop floor, and 42% experience in corporate diagnosis and consulting activities. Thus, the lack of knowledge and experience in these areas seems to be one factor for the significant reduction of companies that have received consulting service, equivalent to 40% of those that have received diagnosis service. Another factor is reflected in the fact that 52% of Shindan-shi wanted field training for diagnosis and consulting as the main theme for retraining, and 31% shop floor training, as pointed out in 8.3.5 (2). It should be noted, however, that the original scope of service of "SME diagnosis consultant" is diagnosis and consulting service based on soft technology (business administration and production management techniques), whereas production

(engineering) technology is covered by “SME specialty consultant.” Although the true value of SME diagnosis and consulting service lies in the improvement of conditions identified by corporate diagnosis (through guidance and advice), the current situation prevents diagnosis service from being advanced to consulting service if the main theme for improvement is relating to production (engineering) technology, because the method to ensure an effective linkage with the “SME specialty consultant” has not been established. Also, even if the theme for improvement belongs to soft technology (production management), the lack of experience in diagnosis and consulting activities as well as the lack of shop floor experience are reflected in the small number of companies that have actually received consulting service.

2) Sectors for present activities and company size

In 8.3.3, sectors currently served by Shindan-shi and distribution of company size are tabulated and analyzed by country, province, job type, and organization that Shindan-shi come from. The food and beverage sector accounts for the highest percentage (33%) of companies that have received diagnosis service, 141 out of 422, followed by the metal parts sector (100 companies, 24%). Similarly, the food and beverage sector accounts for 33%, or 54 out of 166 companies that have received consulting service, followed by the textile and garment sector 19% (31 companies). As for 100 companies in the metal parts sector, the fact that the present study selects the sector for the model program should be taken into account. By province, the food and beverage sector is the subject of diagnosis activity in all provinces but three provinces (Jogjakarta, Central Kalimantan, and Gorontalo). On the other hand, the metal parts sector receives diagnosis service in only 9 out of 22 provinces (44%), indicating geographical concentration. Note that sectors receiving diagnosis and consulting activities are selected according to the policy of provincial Renstra (See sections in Chapter 3 discussing Renstra in East Java and West Java).

As for company size, the average number of employees was 23 for companies that have received diagnosis service and 29 for those that have received consulting service. Furthermore, the average number of employees in the food and beverage sector was 11 in the case of diagnosis service (33% of participants have provided), and 5 in the case of consulting service. Thus, around 30% of Shindan-shi were engaged in corporate diagnosis and consulting service for companies with around 10 employees in the food and beverage sector. As for supporting industries, i.e., machinery assembly, metal parts, and plastics parts, the average number of employees of companies that have received diagnosis service is relatively small, 19, 42, and 25, respectively.

3) Relationship between sectors selected for diagnosis/consulting activities, company size, and SME diagnosis consultant training course

As discussed earlier, sectors currently selected for diagnosis/consulting activities as well as company size were determined in consideration of Renstra policy and local conditions.

Nevertheless, Shindan-shi of the 2006 SME diagnosis consultant training course have pointed out a large gap between what they have learned and what they have actually handled in terms of sector and company size. Furthermore, as pointed out in 8.3.5 (1) (the main theme for improvement in 3)), many Shindan-shi have wanted to correct the difference between sectors covered in the training course and those actually served by Shindan-shi. As shown in Tables 8-6 and 8-23, in light of the fact that most Shindan-shi actually deal with local microenterprises, the SME diagnosis consultant training course should address the needs of local industries by increasing the number of local companies as the place for shop floor training and by emphasizing the needs for practical skills and techniques. Such course design is very important to maximize the effect of the “SME diagnosis consultant training course” and to ensure effective implementation of SME diagnosis and consulting services.

(2) Issues relating to continuation of SME diagnosis and consulting activities that are planned for the future

1) Continuation of SME diagnosis and consulting activities by participants of the training course

In 8.3.4, data on future activities of participants are presented. 83% of Shindan-shi who have responded to the questionnaire survey are expected to continue SME diagnosis and consulting activities, while the remaining 17% responded “No” or “Do not know.” There is a clear difference between organizations that participants come from. 90% of Shindan-shi representing provincial and prefectural/municipal DINASs responded that they would continue diagnosis and consulting activities, whereas the percentage was limited to 50% of Shindan-shi representing the central government. As seen here, problems described in 8.4.1 (1) 2) constitute an obstacle to continuation of diagnosis and consulting activities.

2) Sectors selected for future activities

At present, 33% of Shindan-shi conduct diagnosis activities for companies in the food and beverage sector. For sectors selected for future activities (Table 8-23),

nearly two thirds (69.8%) of Shindan-shi have selected the food and beverage sector. The same trend applies to the company size, which is more or less the same between present practice and future choice. As discussed in 8.4.2 (1) 3), these responses suggest the need for development of “SME diagnosis consultant training course” that reflects the current state of qualified consultants who have completed the training course. In the process, it is important to clarify human resource development policy in the context of SME diagnosis consultant training.

8.4.3 SME Diagnosis Consultant Training Course and retraining

(1) Issues relating to the SME diagnosis consultant training course

As discussed in 8.3.5, Shindan-shi have indicated a variety of requests for improvement. In particular, many respondents express the need for correcting the substantial gap between what they have learned in the training course and what they actually deal with, in terms of industry sector and employment size. It is therefore important to develop the training course that reflects actual conditions in the country. Based on the current state of activity by Shindan-shi (Table 8-6) and the future activity outlook (Table 8-23), the present training course needs to be reviewed to maximize its effectiveness.

(2) Need for retraining

The fact that only 40% of companies that have received diagnosis service are covered by consulting service seems to come from the lack of experience in corporate diagnosis and consulting as well as the lack of work experience in factory operation, which is substantiated by the results of self-assessment made by Shindan-shi in the questionnaire survey. Furthermore, many Shindan-shi cited field training for diagnosis and consulting service (52%) and shop floor training (31%) as main themes for retraining. To increase the number of companies that receives consulting service after diagnosis and to stimulate demand for SME diagnosis and consulting service for the purpose of ensuring sustainable SME diagnosis and consulting activities, therefore, it is imperative to provide opportunities for field training relating to diagnosis and consulting service and factory operation.

Chapter 9 Current Status of Human Resource
Development for Local SMEs of
the Manufacturing Sector

Chapter 9 Current Status of Human Resource Development for Local SMEs of the Manufacturing Sector

This chapter reviews government involvement in human resource development for SMEs, and based on the results of the field surveys presented in Chapter 2 through 8, the current state of human resource development for local SMEs of the manufacturing sector is examined in detail.

9.1 Human Resource Development for Local SMEs of the Manufacturing Sector

9.1.1 Manufacturing SMEs

Growth of the manufacturing industry has ripple effects on its upstream (raw materials) and downstream (packaging, transportation, and distribution) sectors, which lead to the vitalization and growth of national economy. Especially, development of the manufacturing industry in the globalizing market environment works as impetus for expansion and diversification of both domestic and export markets, while stimulating growth of service industries such as physical distribution. Finally, in terms of job creation, income growth, and foreign currency earning, the manufacturing industry is major driver for national economy.

At present, the IT industry is hailed as the next-generation leader of economic growth. However, we should not forget the fact that the IT industry is founded upon production technology that manufactures information and communication equipment as well as management techniques that support corporate activities including production. It is not information technology that creates employment opportunities, earns foreign currency, and stimulates income growth, but the broad industrial base led by manufacturing and related industries, which is linked to innovation of information technology. As economic development is the most important issue for any country, industrialization is a realistic and effective option and should be driven by the manufacturing sector.

Meanwhile, SMEs hold a critical position in national economy as evidenced from their share in the number of companies (generally 98 - 99%) and employment. In Indonesia, development of SMEs is increasingly receiving a renewed attention as a key policy agenda by positioning them as a principal player in the recovery process after the economic crisis

in 1997. Also, decentralization that initiated by a presidential decree in 1991 has created opportunity to shed spotlight on SMEs as a core element of local industry development. These recognitions are based on the premise that brisk activities of SMEs that hold a predominant share of the market can invigorate national economy.

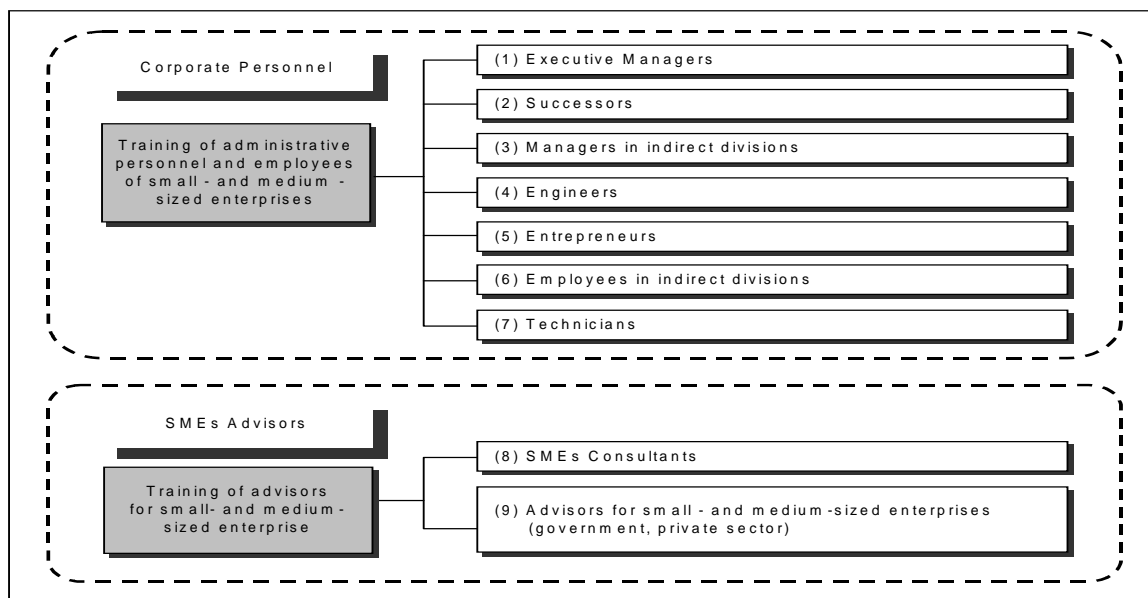
The expected role of SMEs of the manufacturing industry and their positioning are summarized as follows.

- 1) SMEs inherently take root in a local area and constitute a core element of local economy and industrial concentration. Invigoration of their activities creates a driving force for local economy and contributes to local community. In the great wave of globalization, importance of local economy is increasingly rediscovered and the role of SMEs in there should be weighed heavily.
- 2) SMEs are often viewed as a weak player in comparison to large enterprises because of a substantial difference in size. However, they play an active role in national economy, which cannot be expected from large enterprises. In addition to a supplement role in providing niche service that cannot be covered by large companies, SMEs or their loosely organized network can show a clear advantage over large companies. Furthermore, SMEs have strong potential to create a new market by developing a new product that incorporates their proprietary technology and responds flexibly to the niche market needs.
- 3) SMEs play a vital role in job creation. Many jobs are created with the birth and growth of SMEs. It is conducive to social stability and poverty reduction.
- 4) In comparison to large enterprises, SMEs are quick in decision making and have agility to meet market trends in a flexible manner. In particular, SMEs in supporting industries are adaptive to flexible production (small lot and large variety) that is becoming norm in the manufacturing sector.

9.1.2 Human resource development for SMEs of the manufacturing industry

Human resource development in the manufacturing industry means the training of workers having techniques and skills that meet the industrial needs. This involves dissemination and transfer of technology. From the viewpoint of the MOI that is the counterpart of the present study, target groups for human resource development for

manufacturing SMEs are primarily composed of corporate personnel and SME advisors, as shown in Figure 9-1.



Source: JICA StudyTeam

Figure 9-1 Target Groups for Human Resource Development for Manufacturing SMEs

Technologies required by the manufacturing industry and covered by human resource development for SMEs are roughly classified into production technology (hard technology), corporate management/production management technology (soft technology), and vocational skills.

Table 9-1 Subject Areas of Human Resource Development for Manufacturing SMEs

Theme	Target	Subjects (examples)
Management technology	1) Corporate managers 2) Administrative staff 3) Entrepreneurs	1) Management 2) Production control 3) Marketing/Sales 4) Human resources development 5) Finance
Production technology	1) R/D staff 2) Engineers	1) R/D 2) Die/Molds, Jig/Tools 3) Material processing 4) Finishing/Final treatment 5) Assembly
Vocational skills	1) Technicians	Skills for administrative and production technologies

Source: JICA Study Team

Production technology covers production of raw materials, their processing and shaping, and jigs, dies and molds, as well as assembly in supporting industries. Among them, technology relating to the processing and shaping of materials forms the foundation of the manufacturing industry. It is generally referred to as “key technology,” which is further divided into casting, forging, press, machining, and plastics molding in the case of machine parts. Production technology also includes design and research and development (R&D) technologies, which are also called product technology.

Management technology represents knowledge and technology required for corporate management, including marketing, personnel management, and accounting, which compose key items for entrepreneur training. Production management technology is used to improve competitiveness of a product in terms of quality, cost, and delivery schedule by applying limited resources. It covers broad aspects of production activity, including process control, quality control, inventory control, cost management, equipment maintenance, and physical distribution, for which new methods and techniques are being developed. Corporate management and production management technologies are also called soft technology to distinguish them from production technology.

Finally, vocational skills are related to equipment operation and the primary processing of materials. Basic knowledge required for application of production management technology may be included in this category.

For the manufacturing sector, each of the three technologies is indispensable in supplying a competitive product to the market. It is often the case that production technology and skills receive much attention and the importance of corporate management and production management technologies is overseen, but the latter is a vital tool – especially for SMEs – to achieve productivity improvement as discussed below.

For SMEs with limited resources to improve productivity and competitiveness, they have to work together to combine their resources for synergetic effects. To ensure use of resources in maximum efficiency for the purpose of promoting growth of SMEs of the manufacturing sector, corporate management and production management technologies are equally important or even more important than production technology and skills. In particular, the machine parts sector faces demand from buyers to establish a flexible production system that can address the product development needs in the market. Again, it can only be accomplished without production management technology that can be fine tuned to support small lot production in large varieties.

9.1.3 Role of government in industrial human resource development

There are lively discussions about the desirable role of government's industrial policy in the industrialization process, including industrial human resource development. It is a long-held notation that, since industry is an engine for economic development and drives the country's development, government must take a lead in industrial development by means of effective policy making and implementation. In reality, however, many countries faced the situation that their industries could not grow out of the infancy stage. As a new industrial policy based on economic liberalism was increasingly adopted as a limited option to deal with economic turmoil in the 1980s, the previous views to advocate government leadership and intervention faded away in the 1990s. Today, the majority of opinions share the notion that government intervention can lead to the decline in economic efficiency. Nevertheless, it cannot be universally supported in light of the fact that various countries in Northeast Asia, typically Japan and South Korea, have achieved dramatic economic growth under government intervention. At the same time, the success stories indicate that government's aggressive industrial policy is justified only when government has the ability to formulate and implement policy properly and government intervention is supported by the public in the form of social consensus. In fact, government involvement that fails to satisfy such requirements has turned into excessive intervention and failure.

Industrial policies formulated in the industrialization process are generally classified into the following two categories.

a) Selective policy

This type of policy focuses on protection and fostering of infant industries and subsidy on R&D activities in specific technology. As it is difficult to assess true potential of a target company industry accurately, i.e., its international competitiveness in the future, the policy creates a risk of perpetuating protection policy while the target industry fails to improve competitiveness to the international level.

b) Inter-industrial (neutral) policy

This type of policy targets a certain aspect of industrial development, rather than a specific sector, such as SME promotion policy, export promotion policy, science and technology development policy. Compared to the selective policy, the inter-industrial policy has a much wider coverage and its probability of failure is lower. It is designed to build up a favorable environment for local industries to enter an international market with sufficient competitiveness.

Given a number of unsuccessful cases of government intervention and problems caused by excessive intervention, and with the ongoing economic trends characterized by market opening and globalization, many countries are increasingly cautious about the selective policy, while opting for the inter-industrial policy.

Government intervention in SME promotion as part of inter-industrial (neutral) policy can be justified by the argument that it serves the public purpose “to provide a level playing field for SMEs by means of support programs that help SMEs to overcome some of disadvantages against large enterprises, which cannot be mitigated or eliminated by the working of a market mechanism.” As SMEs are invariably exposed to competition with foreign products, their potential impacts on national economy – provided that they are properly invigorated – constitute the good grounds for government support, for they cannot otherwise have international competitiveness in terms of information, fund, and human resources.

SME promotion programs under this category are expected to address the following goals.

- Improvement of society’s ability to adopt technology
- Reduction of service link cost
- Development of the environment to support the buildup of inter-company relationship
- Formation of industrial clustering
- Promotion of trade between local companies

Technology forms the foundation of every manufacturing sector and should be effectively used by newly industrializing countries to their advantage, as previously done by Japan. They are in a position to use technology and knowledge that is already developed and applied in industrialized countries. Government is expected to play a critical part in building the environment to introduce, adopt and modify existing technology. In the case of assembly-intensive industries, government policy should focus on support for local SMEs, which are exposed to competition with imported products in the wave of globalization, by ensuring that a cumulative effect of technology transfer to small parts suppliers from assembly manufacturers or other buyers is linked to long-term formation of the technology base and then to the country’s economic development. In particular, attention should be paid to promotion of technology transfer when there is a large technological gap between assembly manufacturers and local suppliers, which would hinder smooth transfer.

In the general machinery and parts sector, manufacturers are expected to develop and make products that can compete with imports by applying technology that enables them to meet demand for performance improvement and diversification. Again, the reliable and proven technology base is essential in improvement of productivity and competitiveness.

For growth of local SMEs in the manufacturing sector, they must have: 1) capability to adopt and develop technology transferred from outside; and 2) capability to develop proprietary technology. These capabilities are energized by country's average technology level, the degree of technology dissemination, and the ability to adopt technology support.

Industrial human resource development that should be undertaken by government serves the purpose of "improving society's ability to adopt technology" that is identified as one of the key goals for SME promotion policy (positioned as inter-industrial (neutral) policy). In particular, industrial human resource development targeting SMEs including supporting industries is expected to upgrade the country's technology base from bottom-up. Because of its importance to serve public interest, it should be left to government's undertaking like school education.

9.1.4 Roles of central and local governments in industrial human resource development

The central government is responsible for establishing an overall framework of inter-industrial policy without targeting a specific industry and for formulating a nationwide support scheme. Among the five goals for inter-industrial SME promotion policy discussed in 9.1.3, "the improvement of society's ability to adopt technology" – which aims to upgrade basic technology that is underpinning the manufacturing industry – should be undertaken by the central government in relation to the formulation of a nationwide support scheme. Same is true for "reduction of service link cost" that covers simplification of procedures, deregulation, and the securing of opportunity for fair competition. To achieve these goals, the central government's sustainable policy and institutional buildup is indispensable because they cannot be left to a market mechanism.

For the remaining goals – “development of the environment to support the buildup of inter-company relationship,” “formation of industrial clustering,” and “promotion of trade between local companies,” government support is highly demanded by SMEs that are based and closely associated with local communities. For this reason, local government’s initiative in cooperation of the private sector constitutes a core element of policy implementation. In other words, this type of support should be undertaken by local government as part of its local SME support scheme, rather than the central government. It should be fine tuned to meet the local needs by using an integrated support mechanism participated by local support organizations (both public and private sectors) and educational institutions. A scheme to upgrade technical capability required by an individual sector can be operated efficiently by implementing it in an area where a target industry cluster exists, while allowing implementation results to be reflected in the scheme. Table 9-2 shows a general framework of roles to be assumed by the central and local governments.

Table 9-2 Roles of Central and Local Governments

	Central government	Local government
1) Improvement of society’s ability to adopt technology	○	△
2) Reduction of service link cost	○	
3) Development of the environment to support the buildup of inter-company relationship		○
4) Formation of industrial clustering		○
5) Promotion of trade between local companies		○

As the central government formulates national policy for industrial human resource development as well as a general support scheme, local government implements the support scheme in a manner to meet local demand.

SMEs in the country’s manufacturing industry are divided into supporting industries, consumer product manufacturers, and local industries including food processing, textile, leather and shoes, wood materials, furniture, and craft products. SMEs in supporting industries are further divided into the following four stages according to the level of involvement in the OEM market.

Stage 1: Companies that are satisfied with the supplying of materials and products (parts and components) to aftermarkets

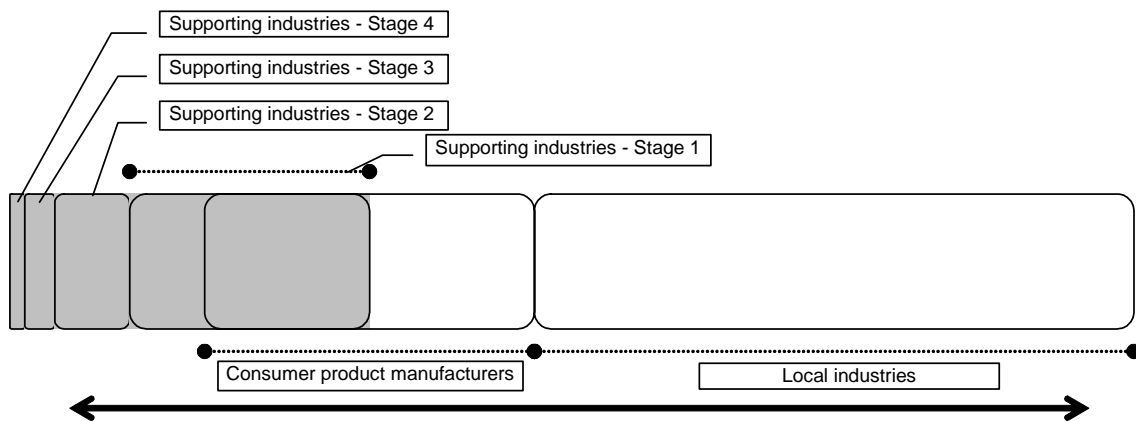
Stage 2: Companies that desire to enter the OEM market but cannot do so because they are not capable of meeting requirements (quality, cost, and delivery schedule) of OEM customers

Stage 3: Companies that supply products to OEM customers but cannot secure a long-term contract due to failure to reach advanced level of technical requirements

Stage 4: Companies that supply products to OEM customers by receiving their periodical audit and support including technical information

SMEs in supporting industries can also be classified according to the status of suppliers in the production chain, i.e., first-tier and second-tier suppliers, but this classification is often based on product type, rather than technical capability. On the other hand, the steady supplier status in the OEM supply chain is governed by the company's overall technical capability, rather than product type. The rise in the levels of production and management technologies leads to higher productivity and better competitiveness, which enables the supplier to establish its firm position in supporting industries.

Figure 9-2 shows a conceptual image of SMEs in the Indonesian manufacturing industry in terms of the above classifications. In terms of the numbers of establishments and employees, SMEs in local industries and the consumer product sector hold dominant share (in the case of East Java, slightly below 80% in the number of establishments and 70% in the number of employees; see Table 5-3). As shown in this figure, consumer product sector is partially overlapped with Stage 1 companies in supporting industries.



Source: JICA Study Team

Figure 9-2 Conceptual Image of SMEs of the Manufacturing Industry

Based on the above classifications, the division of roles of the central and local governments in industrial human resource development policy implementation can be explained as follows.

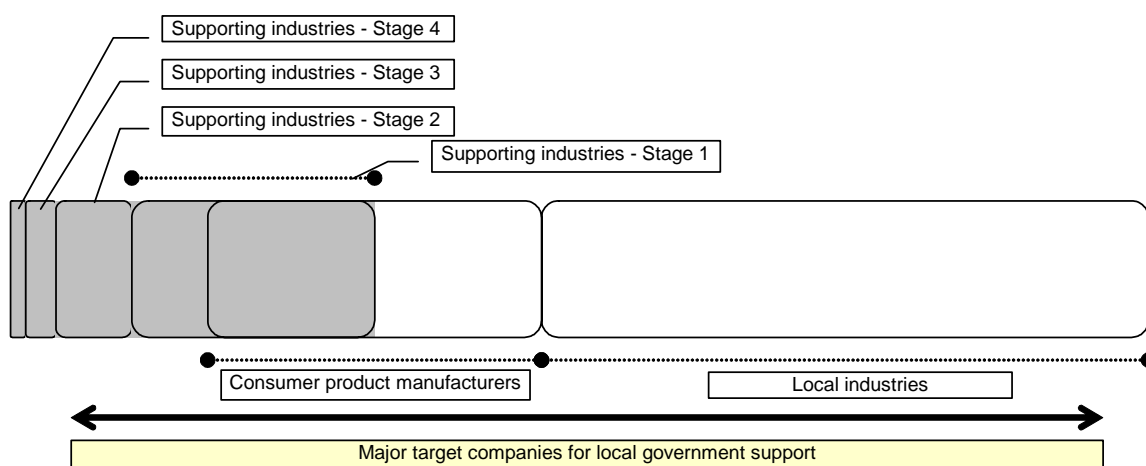
Companies in Stages 3 and 4 constitute supporting industries that belong to the pyramid structure led by large assembly manufacturers in automotive and electrical and electronics industries and are part of the production chain that is founded on contractual relationship, rather than geographical concentration. In the area of industrial human resource development, the central government needs to devise and implement support programs that take into account procurement strategies and trend of assembly manufacturers.

On the other hand, parts suppliers in Stages 1 and 2, consumer product manufacturers, and local industries, which dominate the Indonesian manufacturing industry, are closely associated with local areas and thus geographical concentration. They do not have regular customers and require public support to meet demand that reflects local characteristics and conditions in each area, such as the development and promotion of the environment to encourage human resource development and inter-company trade, support for industrial clustering, and provision of market information. These support activities should preferably be led by local government, rather than the central government.

In fact, various support programs implemented by local government primarily target parts suppliers in Stages 1 and 2, consumer product manufacturers, and local industries, as seen from activities of Shindan-shi. (See Chapter 8.) Also, in the current state survey of

SMEs conducted under the present study and in the selection of participating companies for the model program, local governments wanted Stages 1 and 2, consumer product manufacturers, and local industries. This means local SMEs that continue to operate without having opportunity for the learning and improvement of production technology and corporate management/production management technologies.

Figure 9-3 shows a conceptual image of major target industries and companies in the manufacturing industry for local government support, on the basis of the above defined roles of central and local governments.



Source: JICA Study Team

Figure 9-3 Conceptual Image of Target Manufacturers for Local Government Support

9.1.5 Survey of human resource development demand in the manufacturing industry (Phase I Study)

During Phase I Study on human resource development for SMEs, which was conducted prior to the present study, field survey was conducted to estimate demand for human resource development by SMEs in supporting industries that serve the electrical/electronics, transportation equipment, and general machinery sectors.

As part of the study, interview surveys of 80 companies and questionnaire surveys of 263 companies in and around Jakarta (JABODETABEK) were conducted. In estimating nationwide demand on the basis of survey results covering a limited number of companies, the stage classification of supporting industries discussed in 9.1.4 was used.

From responses to the interview and questionnaire surveys, demand for human resource development of SMEs in supporting industries was estimated for each stage. At the same time, the number of companies in each stage was estimated on a national level by using interview surveys of trade associations and procurement managers of assembly manufacturers as well as statistical data. Table 9-3 summarizes the estimates¹.

Table 9-3 Estimation of Supporting Industries by Stage

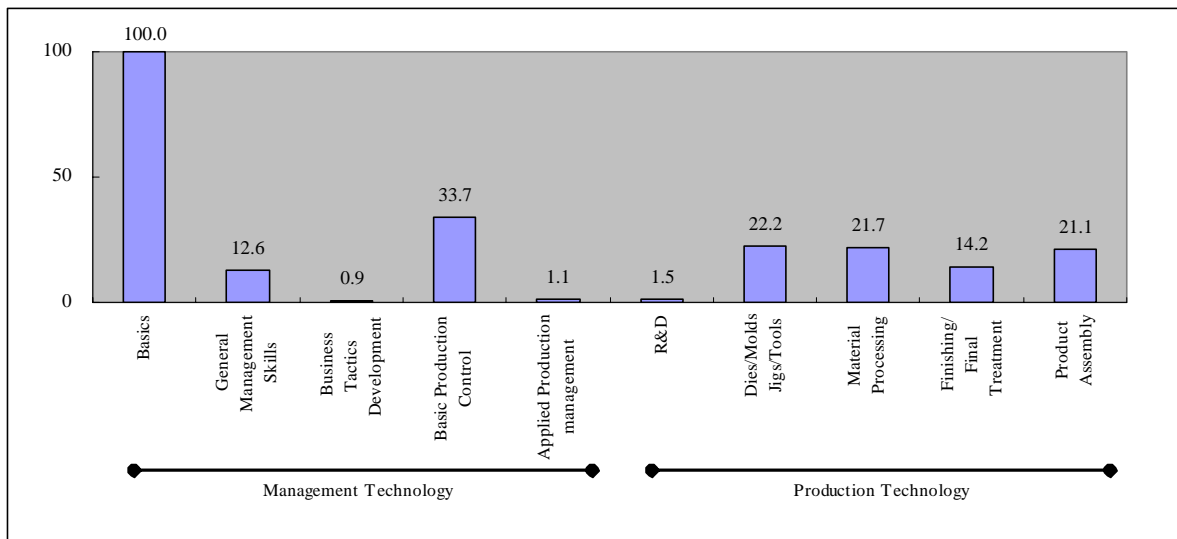
Stage	Number of Companies
Stage 1	99,000
Stage 2	11,600
Stage 3	2,200
Stage 4	1,050

Source: JICA Phase I Study

Assembly manufacturers in Japan and other industrialized countries operate plants in Indonesia to supply products to the domestic market. They mainly import parts and components because local companies cannot serve as supporting industry because of insufficient technical capability. If local companies become supporting industries for multinational manufacturing companies, it will not only create opportunity for them to gain access to latest technical information and obtain advanced technology, but it will also prompt improvement of technical capability and productivity the entire manufacturing industry. As far as many local suppliers cannot become supporting industries for assembly plants due to insufficient technical capability, while being content with production of aftermarket parts, they create opportunity loss for the entire country.

Nationwide demand for human resource development by SMEs in supporting industries was estimated for each field by extrapolating demand estimated from the results of the interview and questionnaire surveys on the basis of the estimated number of companies shown in Table 9-3. Note that, as for soft technology, corporate management technology (e.g., business administration, sales, personnel management, and finance) was classified into three levels, and production management technology was classified into two levels. Figure 9-4 shows field-based demand indices by denoting national demand for human resource developing in basic management technology (i.e., technical training) as 100.

¹ The basis of estimation is discussed in detail in 3.2.2 of Final Report on Phase I Study



Source: JICA Phase I Study

**Figure 9-4 Nationwide Training Demand by Field
(Indexed with demand for basic management technology = 100)**

The survey results indicate that SMEs well recognize human resource development training for basic management and production management technologies, accompanied by high demand. In particular, questionnaire survey results suggest that companies wanting to receive support in the production management field have a strong desire to receive advice and guidance on the shop floor, which can lead to measurable results.

Meanwhile, the study team conducted current state surveys of the supplier side, both public and private organizations conducting human resource development and training services. The results revealed that there are few programs that directly deal with corporate management and production management technologies in Indonesia, although training programs covering production technology and skills are not sufficient, such as press work and plastics molding technologies that are required for supporting industries. There are only limited opportunities for manufacturing SMEs to learn soft technology, such as non-serial training programs held by trade associations or support organizations, and advisory service provided by a limited number of private consultants specialized in the field.

Based on the survey results of human resource development demand and supply, and under the recognition that development of systems and institutions for activities to promote technology to local SMEs, dissemination activities of basic knowledge, and initial advisory service is one of the key roles for government to play – as important as school education,

the study team recommended in its final proposal that dissemination and promotion of corporate management and production management technologies be carried out under the MOI's initiative. As many SMEs seem to be unaware of importance of soft technology as a vehicle to improve productivity and competitiveness, it should be promoted to stimulate training demand in the field and it is imperative to start the development of a formal system to meet demand. A new initiative by IKM discussed in 9.2 agrees with this direction.

9.2 Current State of Human Resource Development for Local SMEs of the Manufacturing industry

9.2.1 Human resource development programs for manufacturing SMEs by ministries

Within the Indonesian government, the following ministries are responsible for policy making and implementation in the area of human resource development for SMEs. According to a presidential decree in 2001, formulation and coordination of SME promotion policy is under the jurisdiction of the MOCSME, which worked together with other ministries to develop and announce the Medium Term Action Plan (MTAP) in 2002.

- Ministry of Cooperatives and SMEs (MOCSME)
- Ministry of Industry (MOI)
- Ministry of Trade (MOT)
- Ministry of Manpower and Transmigration (MOMT)
- Ministry of National Education (MONE)

The MOI and the MOT aim for SME development from the standpoint of industrial development. Human resource development for the manufacturing industry means dissemination and transfer of technology. The MOI has the mission to promote production technology (hard technology) and corporate management and production management technologies (soft technology) essential for the manufacturing industry. The MOI's SME policy is discussed in Chapter 4. With the progress of the decentralization process, the SME promotion budget is transferred to Industry and Trade DINAS at local government, and each DINAS plan and implement its own local industry development programs. However, decentralization is still in the transition period and responsibilities of central and local governments are not clearly defined.

Another approach to SME promotion is based on the concept of social development to address poverty reduction and job creation. Primary examples are skill training programs for jobless persons by the MOMT and policies to promote the MOCSME.

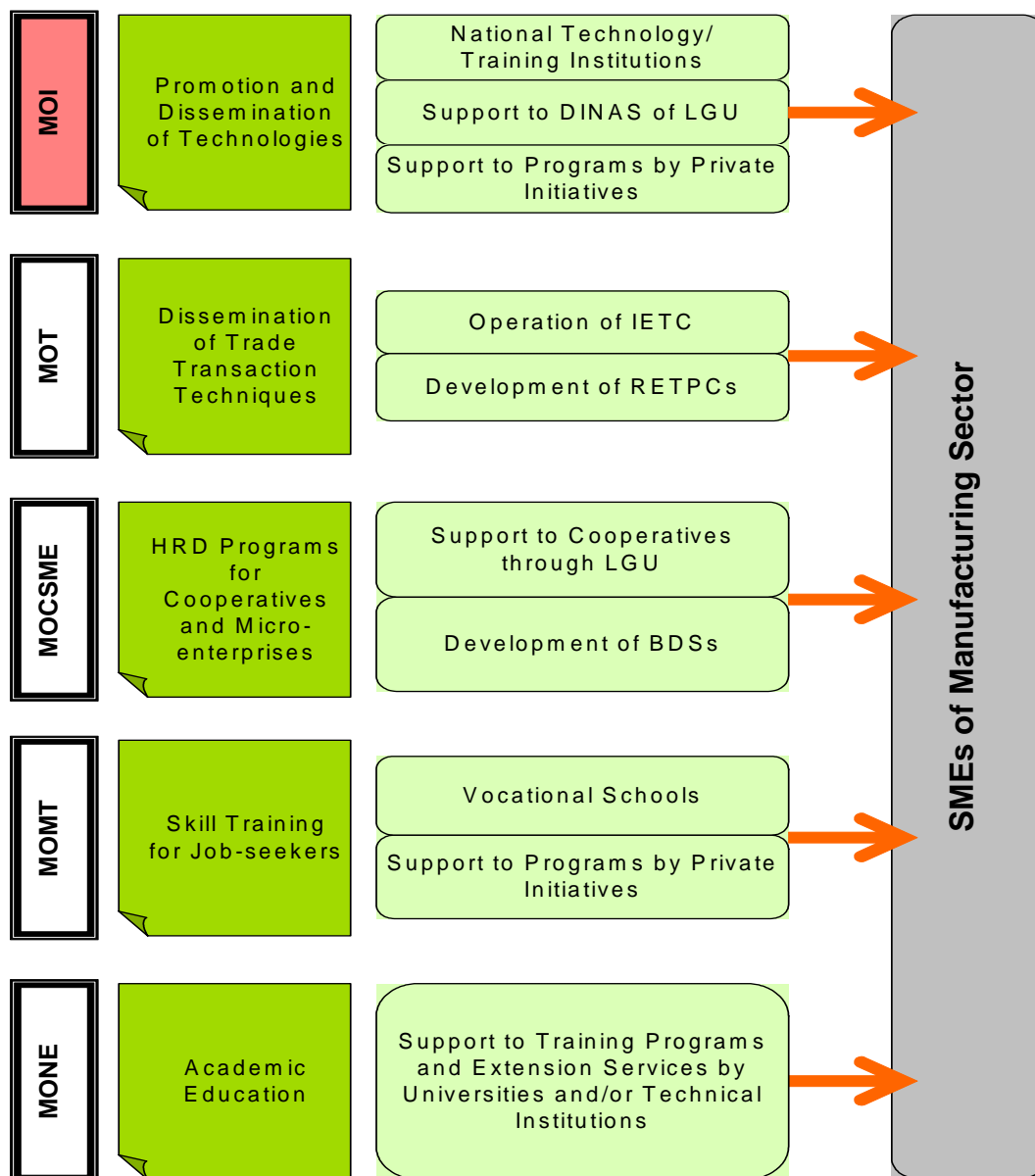
The MOCSME, after becoming a state ministry in 1999, continued implement training programs at SMECDA that is an implementation organization for human resource development. In 2002, SMECDA was dismantled and its training program was terminated. At present, various training programs by Cooperative and SME DINAS at local government and indirect SME consulting service through private BDS providers are carried out.

BDS offers a variety of support services for SMEs in the business startup stage. NGOs, universities, trade associations, and financial institutions act as facilitators and the MOCSME provides financial and technical support. Each BDS retains consultants (varying between 2 and 10) specialized in finance and management technology. Qualification for these consultants is not defined. In 2002, Indonesian BDS Association was established. At present, there are around 800 BDSs throughout the country. It should be noted, however, that the manufacturing industry accounts for small share among target sectors, while microenterprises and cooperatives in the agricultural sector hold the majority. Also, the main target in the manufacturing sector is local industries and few BDSs target supporting industries.

The MOMT's mission is to provide skill training for job seekers, such as new graduates and unemployed. On the other hand, skill training conducted by technical support organizations under the MOI is designed to provide retraining for skilled workers of SMEs and is distinguished from the MOI's skill training.

Needless to say, the MONE is responsible for academic education. Also, extracurricular courses on skills and production technology conducted by polytechnics accept participants from SMEs of the manufacturing industry. Many universities and higher educational institutions offer special courses (mainly management technology) for corporate employees, in addition to formal courses on production technology.

Figure 9-5 shows the relationship between missions of the MOI and other ministries and human resource development for SMEs of the manufacturing industry.



Source: JICA Study Team

Figure 9-5 Roles and Activities of Ministries in Human Resource Development for SMEs of the Manufacturing Industry

9.2.2 New approach by IKM of MOI

IKM is responsible for formulation of promotion policy for SMEs of the manufacturing industry and consists of sector-specific divisions, including food, apparel, metal, electronics, and handicraft (Figure 4-1). Before decentralization, the MOI has a local office in each region, which was directly engaged in development of local SMEs, together with local government. As a result of decentralization, however, the MOI's local offices have been reorganized to Industry and Trade DINAS under local government.

In addition to policy formulation, IKM holds training programs for the private sector and provides direct support. Training is mainly taught by instructors, but it is not fully conducted according to annual plans.

Support service for the private sector is performed by PFPP personnel (extension officers). As discussed in Chapter 3, Indonesian government employees classified into managerial staff (structural), general staff, and professional staff (PFPP or fungsional and extension officer). General staff may be promoted to managerial staff or may become professional staff. While there is no significant difference in work conditions between managerial and professional staff, compensation for professional staff is largely determined on the basis of performance.

The MOI's professional staff is required to have sufficient knowledge and experience in a specific field, which is suitable for serving as extension officer. Originally, PFPP was started as SME advisor to assist the fostering of SMEs and was hired from outside through the review of professional quality. Later, however, many extension officers have not been hired through the strict selection process because they were transferred from other ministries or divisions as a result of organizational reforms including the merger of ministries or agencies. As defined in the minister's order, professional staff's responsibility covers a wide range of services, including program development, development of methodology, planning, and implementation of advisory service and training programs relating to human resource development and its evaluation. These responsibilities are difficult to fulfill with the current professional staff, most of who is not qualified for SME support activities and is relatively old because new employment has not been made for a fairly long period of time due to the "zero growth" policy.

In fact, the MOT has not made much efforts to improve professional staff's knowledge and skills or raise their motivation by conducting systematic training, except for ad-hoc ones. Under these circumstances, SME support activities by extension officers have not produced results as expected and are even stagnated.

In recognition of the situation, IKM decided to establish a SME consultant certification system and a SME consulting system (service provided by certified consultants) in the MOI ministerial order issued in June 2006. These systems were designed on the basis of the proposal by the Japanese government, which has long been using the SME consultant (Shinda-shi) certification system as a vehicle for promotion of SME growth. The

decision represents the government's firm commitment to support for the manufacturing industry in the form of direct consulting service at factory, particularly technology transfer and human resource development. The ministerial order clearly states that consulting service is critical for the fostering and development of SMEs by identifying problems and supporting solution and that such service must be provided by professional consultants who have received formal training. The ministerial order classifies SME consultants into two types, diagnosis consultants and special consultants.

Under the professional skill certification system in Indonesia, BNSP – under direct supervision of President – establishes professional skill standards and LSP – testing organization accredited by BNSP – conducts a certification test. As for SME consultant, IKM held the first SME diagnosis consultant training course in 2006 and two courses have been held so far. The course is considered to be a precursor of the SME consultant certification system to be established in the future.

As a LSP that requires accreditation of BNSP is under preparation, final tests for participants of the training courses were administered by BNSP's provisional committee. Test results will remain effective after the establishment of the LSP. BNSP will also accredit a LDP. At present, PUSDIKLAT-IND, which conducts training for the MOI's staff, took over the SME diagnosis consultant training course from the second half of 2007 and started preparation for implementation in 2008. PUSDIKLAT-IND has been sporadically conducting training programs for the private sector and has a division in charge of such training (see Figure 4-2). It is expected to be accredited as LDP that is authorized to provide training for SME diagnosis consultants.

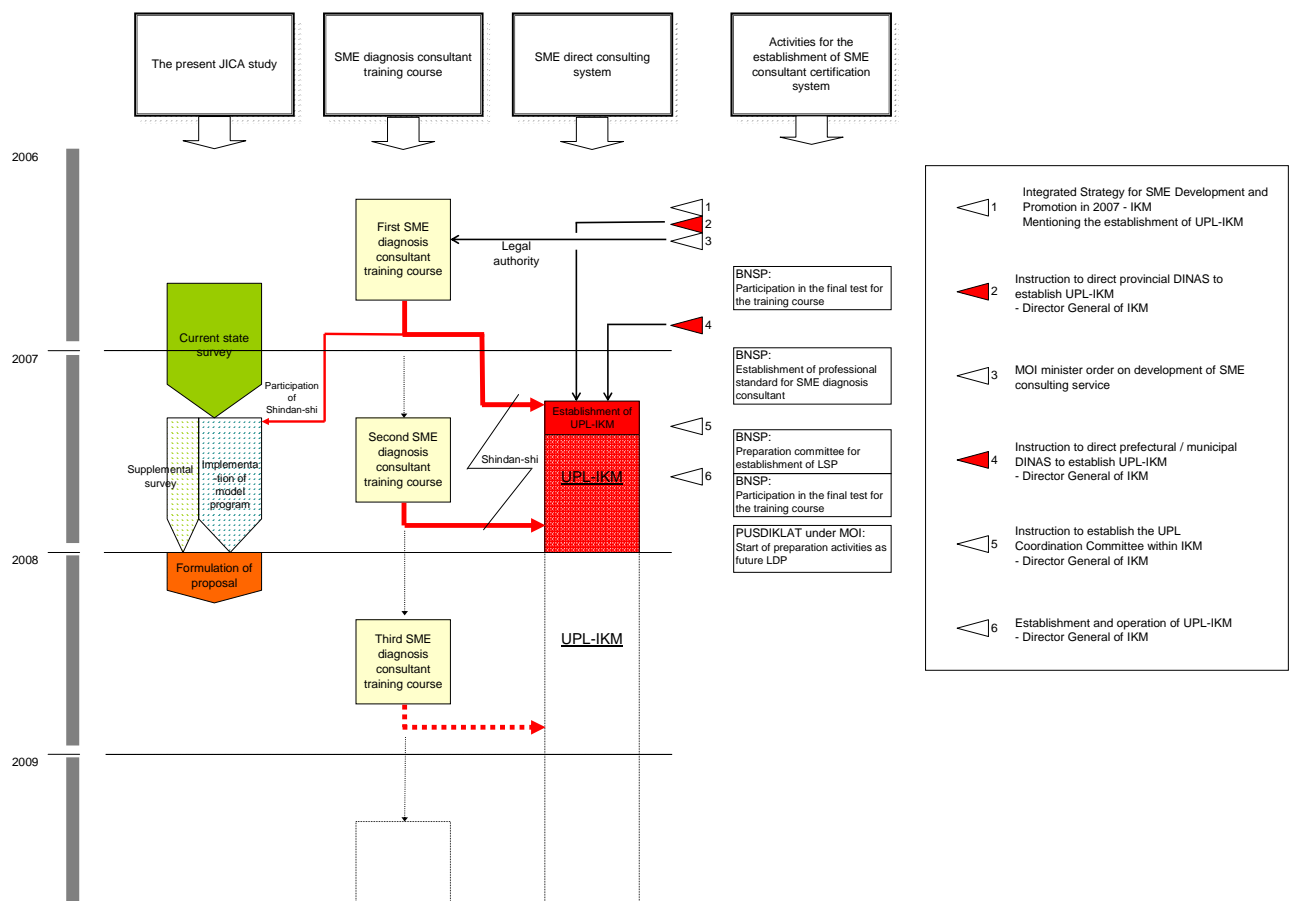
In parallel to the start of the SME diagnosis consultant training course, IKM issued an instruction to establish a new unit in charge of direct consulting service, to each provincial government in May 2006 and to each prefectural and municipal government in November. This is direct consulting unit (UPL-IKM) discussed in Chapter 4. While many local governments take a SME cluster development (Sentra) approach, the objective of UPL-IKM is to provide consulting service for individual companies and support service for Sentra. In May 2007, a PUL-IKM team was organized within IKM to supervise and coordinate activities of local UPL-IKMs.

According to the UPL-IKM team's report, as of the end of November 2007, UPL-IKM was established at every provincial government and at prefectural and municipal governments that had Shindan-shi who completed the 2006 diagnosis consultant training

course. UPL-IKM's activity budget in 2007 was entirely funded by the MOI, totaling Rp 20 billion, 88% of which were allocated to provincial UPL-IKMs and 12% to prefectural and municipal UPL-IKMs. The allocation to the latter will be increased after 2008.

In August 2007, a service guideline (PEDOMAN) for staff members of IKM and local DINASs, PFPP personnel, and UPL-IKM administrators was issued in the form of regulation issued by Director General of IKM. The guideline covers the establishment and operation of UPL-IKM.

Figure 9-6 shows a structural image of IKM's new approach to industrial human resource development after 2006, together with activities under the present study and in the process of establishing the SME consultant certification system.



Source: JICA Study Team

Figure 9-6 IKM's New Approach to Industrial Human Resource Development

By the aid of support programs by the Japanese government that was started in 2003, IKM has been taking various initiatives for industrial human resource development and technology dissemination through consulting, including the administration of the consulting training courses, discussion in preparation for the establishment of the national certification system, and the establishment of a division in charge of consulting within local government.

At present, participants in the SME diagnosis consulting training course are limited to central and local government employees. They include all types of staff members (professional, managerial, and general). This course is considered to serve as a training program for professional staff, which has not been carried out in a systematic and continuous manner.

9.2.3 Current state of human resource development initiatives for SMEs of the manufacturing industry by Provincial Industry and Trade DINAS

Decentralization is the global trend, although its degree of progress varies between countries. It has started with the recognition that, as lessons learned from the failure of the big government, encouraging people's participation in the policy making process is critical for sustainable development and economic growth. Local communities serve as an appropriate place for expanding public participation because they are closely associated with people's daily life. Generally, decentralization involves the shift of power and functions of the central government to local government. It is also justified from the economic point of view that public service can be provided by local government more efficiently and effectively than the central government, when it is designed according to local conditions.

As discussed in Chapter 3, decentralization progresses rapidly after the enactment of the Local Autonomy Act in 2001, partially driven by negative reaction to the centralized system that prevailed in the past. The actual rate of progress varies with ministries and local autonomy systems established as a result of decentralization are not uniform and vary one government to another. The present study takes East and West Java as examples (where the model program was conducted) to review the current state of industrial human resource development initiatives undertaken by Industry and Trade DINAS.

As for the current state of funding of the SME promotion (industrial sector) budget at DINAS, the percentage originated in the MOI budget varies between provinces. In 2007, 46.1% of the SME promotion budget of East Java DINAS was funded by the MOI and 52.7% West Java DINAS. At present, IKM's policies still form the core of local DINAS's policies, but the earmark from the MOI is on the steady decline, whereas the central government allocates more money directly to prefectural and municipal governments. For instance, in the SME promotion budget of East Java DINAS in 2008, the share of the MOI allocation will decline to around 20%. As a result, provincial, prefectural and municipal governments formulate and implement different industrial development policies.

Basically, extensive officers of local governments (professional staff) are responsible for support service directly for individual companies, although some governments assign the task to managerial or general staff in the decentralization process. They conduct advisory service for the purpose of promoting dissemination of basic knowledge, together with related advisory service. In East Java, both general and professional staffs are engaged in support service. They form groups specialized in various fields, such as standardization, productivity improvement, energy saving, and design, by focusing on dissemination of basic knowledge and field advice and guidance.

The highest portion of DINAS's SME promotion budget goes to training for individual companies. Companies or Sentra decide on a technical training them and make a formal request to DINAS, which then entrusts program implementation to universities and other organizations. Courses are mainly related to production technology, while a few of them cover soft technology. Extensive officers do not have much knowledge or experience and rarely serve as instructor. For skill training, UPT staff act as training instructor for companies.

Under the direction of IKM, UPL-IKM was established within local Industry and Trade DINASs in 2007. Under UPL-IKM, it is planned to enhance advisory service for SMEs, which was previously provided by professional staff, by mobilizing additional resources, such as extension officers who have received the diagnosis consultant training course and similar courses as well as private SME consultants and consulting firms, although full-fledged activities have still to be started.

Chapter 10 Recommendation of Action Plans for Human
Resource Development for SMEs of
the Manufacturing Industry by
Provincial Industry and Trade DINAS

Chapter 10 Recommendation of Action Plans for Human Resource Development for SMEs of the Manufacturing Industry by Provincial Industry and Trade DINAS

This chapter first reviews the problems discussed in Chapter 9. It then presents a future vision of human resource development promotion for SMEs in the manufacturing industry, which the central and local governments should strive to make it a reality. Then, it proposes action plans to address issues to be dealt with so that they can narrow the gap between the current state and the vision.

10.1 Issues Relating to Human Resource Development for SMEs of the Manufacturing Industry Identified in the Present Study

10.1.1 Issues relating to SMEs in the Indonesian manufacturing industry

Present study covers East and West Java. In the first half of the study, the study team researched on actual conditions of companies in both provinces. Then, we conducted model programs consisting of the on-site diagnosis and advisory service and the construction of databases on specialty consultants. Subjects of this survey were parts manufacturers in supporting industries.

We originally planned to target SMEs at Stage 3 (see 9.1.4. for the stage classification) in the fact-finding surveys and model programs. However, most companies the provincial governments selected were those at Stages 1 or 2. (Note that some in West Java, which is close to large assemblers in Jakarta, were at Stage 3)

Regardless of the differences in products and processes, it turns out that companies at Stages 1 and 2 have common problems. The following summarizes their current situations. In order to proceed to the next stage, they need to learn and apply basic management techniques, correctly understand and introduce production management technology, and improve their skills. While it is natural for them to demand support for loan access to upgrade equipment and expand the market, the first to do is to improve their operations.

- The owner is often responsible for most of management activities, except for machine operation, including business administration, sales, procurement, accounting, personnel management, and instruction for production activities. For some companies, the situation is caused by the shortage of human resource. Many companies, however, are reluctant to delegate power or foster their successor, partly because they fear that trained employees may be hired away. As a result, they run a great risk of depending on a single person.
- For SMEs, whether they can make any improvement depends on the owner's policy and attitude. In reality, few owners bravely take a new challenge.
- As they do not have regular customers, they are exposed to intensive competition that leads to low profitability and always suffer the shortage of fund. They have to purchase poor quality materials and process them by using old machines, making it difficult to improve product quality.
- Few small- and medium-sized companies have a clear goal or vision. This affects their willingness to improve.
- Many companies vaguely recognize problems facing them and feel the need for outside advice and guidance, but they do not understand them accurately. As a result, they tend to leave everything to the consultant, including the establishment of goals for improvement.
- For companies which owner does not understand discipline and customer satisfaction as business basics, it is difficult to explore a new market.
- While many owners show interest in implementation of corporate management and production management technologies during the questionnaire or interview survey, few of them are committed to continuous improvement.
- Some companies have knowledge on quality control and collect quality data, but they do not understand proper use of them. They do not believe the notion that quality control is everyone's work and quality must be incorporated into a product in the production process. They think that quality control is the inspector's job. They often apply superficial knowledge to field operation, resulting in futile work.

- Many companies do not have proper understanding of 5S activities that form the basis of factory improvement, including productivity and quality. 5S is not only important as the first step of visible improvement but effective as well.
- Regardless of size, many companies fail to maintain a standard set of books and records and thus cannot perform analysis and goal setting based on analysis. Many factories do not have any posting and do not use work procedures or instruction sheets. All instructions are given verbally.
- In comparison to OEM production, many companies are content with serving aftermarkets that do not demand strict requirements and have no intention to enter the OEM market. As a result, their technology level remains low and they do not make any effort to make higher value added products.
- Some companies have relatively high levels of technology, but they simply lack basic knowledge on production technology and skills. In particular, skills govern quality when old machines are used. Skill improvement should be given of highest priority.
- Most companies have excessive inventories as a result of nonscheduled purchase of materials or make-to-stock production. They should understand waste created from uncontrolled inventory buildup.
- Lost time in setup work is seen in all companies. However, there is little interest in reduction of setup time, including the owner.
- Many factories are operated in the poor working environment, which adversely affects work efficiency as well as work safety including improper storage of dangerous articles.
- Many companies do not have access to outside information on skills and technology, while obtain market information with ease. This is the area where external support is required and effective.

10.1.2 Issues relating to the MOI's implementation system for industrial human resource development support

The MOI's mission is to promote human resource development through dissemination of production technology (so-called hard technology) and techniques in corporate management and production management (soft technology). It has to comprehensively cover the manufacturing industry, which consists of supporting industries (further divided into four stages), consumer product manufacturers, and local industries.

(1) Technology transfer to supporting industries using private sector initiatives

Today, the private sector owns advanced technologies, and multinational assemblers want supporting industries to own some of them too. These technologies disseminate and transfer to supporting industries through transactions between them. The role of the government is to create and maintain the environment encouraging such technology transfers. In fact, MOI has been supporting technical assistance programs conducted by foreign assemblers and technology transfer projects by donor organizations. MOI needs to take advantage of the initiatives by assemblers who want to get hold of good local parts suppliers so that it can enable local industries with sufficient technology and strong commitment to enter the OEM market.

(2) Dissemination of basic technology

On the other hand, a different approach is necessary for local supporting industries, i.e. those at Stages 1 or 2, consumer product manufacturers, and local industries, as their technological needs are quite different from those at Stages 3 and 4. Focusing the discussion on the enterprises at Stage 1 and 2 in supporting industries, both fact-finding surveys and experience in Model Program A reveal that they use old equipment of widely adopted technology and limited manpower. Their challenge is how to build a solid operation system and improve productivity under such constraints. To promote dissemination of basic technology, the government has not only to build a system to promote smooth technology transfer but also continuously to utilizing it. Establishment of SME consultant certification system and UPLs' direct consulting to SMEs are considered to be MOI's new initiatives in the direction .

Chapter 4 outlines MOI's industrial human resource development programs. In particular, 9.2.2 discusses their new approach. SME consultant certification system and the SME consulting system serve the purpose of disseminating soft and hard technologies to local companies. Also, they are ambitious in that they aim to utilize the existing pool of extension officers (professional staff) who already have relevant experience.

MOI has to develop the SME consultant certification system and the SME consulting system so that they can be the foundation for SME's human resource development.

(3) Establishment of the SME consultant certification system

Concerning a national qualification in Indonesia, BNSP under the President institutionalizes it, and accredited LSP (testing organization) and LDP (training institute) administer the certification system. Discussion on the establishment of a LSP has begun. While the SME consultant is a national certification, a committee consisting of stakeholders determines its requirements and other detailed conditions. Being a major user of the SME consulting system, MOI plays a central part in the committee. INKINDO, an association of private consultants are also invited in the discussion. MOI has issued a ministerial order to classify the certification into two classes, i.e., diagnosis and specialty consultants, and BNSP has established the professional skill standard for SME diagnosis consultant. Once a LSP is formally accredited, any person who has passed the certification test administered by the LSP will become a nationally certified SME consultant, regardless of his affiliation, i.e., public or private sector. BNSP has yet to establish the certification system for SME specialty consultant.

For the formal establishment of the SME diagnosis consultant system, the following steps have to be taken.

- Detailed specification of SME diagnosis consultant certification
The BNSP's professional skill standard consists of seven categories. At present, two proposals are under consideration. One is to give a certification for each category, and another is to establish a classification by grades (e.g., junior, senior, and advance, or first class, second class, and third class) while every grade covers all the seven categories.
- Establishment of a LSP (testing organization) agreed by both the public and private sectors, and BNSP's accreditation to it
- Conferment of the formal certification to Shindan-shi, who have completed a SME diagnosis consultant training course
MOI had held the training courses before BNSP established the professional skill standard. While BNSP was involved in the final test administration, what type of certification to be granted to the participants is still under discussion.

- Establishment of a LDP (training institute) and accreditation by BNSP
Implementation body for the training course has been shifted from MOI's Human Resource Development Clinic to PUSDIKLAT-INDs.

(4) Anchoring and development of the SME consulting system

According to the MOI's announcement, under the new SME consulting system, the following three consulting services will be added to the existing services (consulting service by extension officers and SME consulting service on specialty products by sector-based departments).

- Analysis and recommendations by SME diagnosis consultants
- Consulting service in specific fields by SME special consultants
- Consulting service for SME cluster areas (Sentra) by consulting firms

At present, providing consulting service are not only Shindan-shi but also extension officers, those who have completed other consultant training courses and private consulting firms. This is a provisional measure, and only certified SME consultants can be engaged in SME consulting in the future. In this connection, it is planned that all extension officers take a SME consultant training course for capacity building and certification.

MOI ordered local governments to establish UPL-IKMs, who provide direct consulting service and lead the new SME consulting system. All of the local governments which sent their staff to the SME consultant training courses have already established a UPL-IKM. MOI intends to establish a UPL-IKM in every other prefectures and municipalities, too. MOI has funded the UPL-IKMs' operating costs while less and less proportion of the local budgets for SME promotion is the transfer from the central government. Finally, the UPL-IKM Team in IKM plans to develop local UPL-IKMs to one-stop service centers to deal with all problems relating to SMEs.

Decentralization is still in process, and the relationship between a province and the prefectures or the municipalities in it is still fluid. However, the number of staff at each UPL-IKM is limited, and it is difficult for a single UPL-IKM in a prefecture or municipality to achieve its goal by conducting its activities independently. Therefore, how to integrate the limited resources in local UPL-IKMs to meet the local needs is a major issue for the UPL-IKM Team as well as local governments.

10.1.3 Issues relating to the provincial government's implementation system for human resource development programs for the manufacturing sector

SMEs in every region want the public sector to provide the services which meet the specific needs to the region, and this is one of the reasons for promoting decentralization. In Japan, major players in SME human resource development are local governments and nine SME technical colleges. Each local government in Japan has built a network of certified management consultants and engineers, and they send them upon request to local SMEs as technical advisors.

The study team implemented Model Program A in East and West Java together with Shindan-shi who are to provide diagnosis and advisory services for local companies. Shindan-shi are staff in local Industry and Trade DINASs and those in technical support organizations under the central government. To support their activities, every local government which have Shindan-shi established a UPL-IKM according to the direction of IKM, but it is still an unit under the central government's budget. To ensure full-fledged activities of the UPL-IKMs, the following issues are to be addressed and dealt with.

(1) Organization and membership of UPL-IKM

At present a UPL-IKM is a temporary unit like a "Project Team". IKM directed that the chiefs and staff of UPL-IKMs should be professional or general staff, and not managerial (Struktural) staff. As a result, a UPL-IKM is not a division of the Industry and Trade DINAS concerned and does not appear in its organizational chart. Accordingly, provincial governments do not allocate funds to its UPL-IKM's activities.

The study team conducted a questionnaire survey and received responses from 63 Shindan-shi. Of total, professional staff account for 29% (see Figure 8-1). Shindan-shi who were managerial staff could not spend much time for SME diagnosis and advisory services, which often disturbed the activities in Model Program A. Note that professional staff account for as low as less than 20% in the second SME consultant training course of 2007, too.

(2) Public organizations in provinces

Some Shindan-shi who have completed the training course in 2006 came from support organizations which are located in the provinces but are under the jurisdiction of the central government. Again, prevented smooth implementation of Model Program A was

the lack of good coordination concerning their participation to it between a provincial DINAS and these organizations.

Shindan-shi indicate in their responses to the questionnaire survey that cooperative attitudes by outside organizations and good coordination between provincial DINASs and them would be essential to ensuring sustainable activities of UPL-IKMs. Some of them suggest that all Shindan-shi should be assigned to UPL-IKMs.

The supporting organizations under the central government are Balai Besars and BARISTAND-INDs under BPPI, and BDIs under PUSDIKLAT-IND as described in Chapter 4. Balai Besars and BARISTAND-INDs are organizations specialized in hard technology. BDIs are training organizations for local government employees while they also hold training courses for private companies. Each of the three organizations conducts support and training activities separately.

(3) Specialty consultants

Direct consulting activities by UPL-IKMs start with corporate diagnosis, followed by consulting service by a specialty consultant who gives advice and guidance in a specific field on the basis of diagnosis results. Specialty areas include both soft and hard technologies. UPL-IKMs have to provide the effective combination of consulting services in these technologies for every case. However, the provinces do not have a database covering experts in other organizations.

(4) Incentive for individual companies to receive diagnosis and advisory service

Many SME owners recognize their problems and wish to receive diagnosis and advisory service. However, our experience in Model Program A suggests that many of them cannot keep interest in and enthusiasm about kaizen activities, because they usually do not have an immediate effect. By nature, it takes considerable time for these activities to lead to visible effects such as rise in profitability. While provincial governments subsidize a large portion of the diagnosis and advisory service costs, the current scheme by UPL-IKMs does not motivate SME owners to continue kaizen activities.

10.1.4 Issues relating to Shindan-shi

This section describes major issues relating to Shindan-shi as surmised from the verification of the model program in Chapter 7, and the results of the questionnaire survey to Shindan-shi who completed the 2006 training course.

(1) Job classification and activity record

Table 10-1 summarizes the activity records of respondents shown in Tables 8-6, 8-9, and 8-10.

Table 10-1 Activity Record of Shindan-shi by Job Class

	Average number of companies that received diagnosis service	Average number of companies that received advisory service
Total	6.8	2.7
Managerial/ general staff	5.7	2.4
Professional staff	7.3	3.4

The table indicates that professional staff is more active in both categories, reflecting the fact that it is difficult for managerial and general staff to perform consulting activities because they have other tasks to do. Same is true for staff of central government organizations (such as Balai Besars) which are responsible for activities other than consulting service. While 90% of Shindan-shi who belong to a provincial, prefectural or municipal DINAS indicates that they want to continue consulting services in the future, only 50% of Shindan-shi who are in central government organizations express such intent.

(2) Capability

The results of the questionnaire survey to companies that participated in the model program show that the majority of respondents are not satisfied with professional capability of Shindan-shi and that they point out their lack of experience in advisory service, that of on-site work experience, and insufficient knowledge on hard technology.

These responses are consistent with the self-evaluation by Shindan-shi. Many of them cite the lack of experience in advisory service, lack of on-site work experience, and insufficient knowledge on hard technology. Thus, retraining fields wanted most by them are practical training in diagnosis and advisory services and field training on the shop floor.

(3) Other impediments for diagnosis and consulting activities

In addition to professional capability, it has become apparent during the model program that the lack of enthusiasm or commitment of Shindan-shi themselves are another impediment to their activities. It might be because there is no formal system other than compensation to motivate them to perform their service enthusiastically.

(4) Loan-related consultation

94% of Shindan-shi answers that they received a request for advice from client companies and 57% actually gave assistance to them (Figure 8-6), suggesting that many companies wish they had more funds. They need to have a good knowledge of the existing financial support schemes for SMEs so that they can introduce them as needed. However, some UPL-IKM staff do not seem to consider such assistance to be a part of their support activities.

(5) Scope of service by SME diagnosis consultants and specialty consultants

After discussing on the scope of service by SME diagnosis consultants, the Director General of IKM has set a regulation covering a service guideline (PEDOMAN), which prescribes that “if he can, a diagnosis consultant may provide advisory service after making a diagnosis. Otherwise, he hands it over to a specialty consultant.”

A SME diagnosis consultant is supposed to make a diagnosis assuming that advisory service follows. However, Shindan-shi actually provided advisory service to less than 40% of the clients they had diagnosed (Table 8-6). The rest of companies did not receive advisory service, partly because they could not introduce an appropriate specialty consultant due to the lack of linkages with specialty consultants. And yet, it would be also because they had insufficient capability or experience, as seen in the responses by Shindan-shi to the questionnaire survey. Although Shindan-shi respond that they produced good results at 42.6% of the client companies (Table 8-15), they need to keep improving the consulting skills in their respective fields of specialization, in addition to diagnosis skills.

10.2 Future Vision of Human Resource Development Promotion for the Manufacturing Industry through Collaborative Efforts of the Central Government (MOI) and Provincial Governments

Based on the MOI's mission to "develop and disseminate production technology (hard technology) and corporate management/production management technologies (soft technology) required by the manufacturing industry," the study team presents in Figure 10-1 the "Future Vision of Human Resource Development Promotion for the Manufacturing Industry through Collaborative Efforts of the Central and Provincial Governments." It is based on the actual programs and initiatives currently undertaken by MOI.

Below is the future vision for each of the three key components, namely production technology (hard technology), corporate management/production management technologies (soft technology), and UPL-IKMs in local governments.

Image of what SME Human Resource Development to be like in the future

Production technology (hard technology)

- Balai Besars under BPPI and its local office, BARISTAND-INDs, are core organizations in charge of the SME support in terms of hard technology. Balai Besars are technical support organizations widely recognized in the private sector, although they locate unevenly in the country (five in Bandung). They conduct R&D and training courses for private companies in respective specific fields, and owns necessary equipment. On the other hand, BARISTAND-INDs focus on providing technical support to foster specialty products in each location.
- UPTs¹ belonging to the Industry and Trade DINASs of provincial governments are also technical support organizations targeting local industries, though their equipment is old.
- Supporting industries at Stages 3 and 4 concentrate in Jabodetabek and West Java. MOI promotes training activities by assemblers in Jakarta as well as donor organizations' various technology transfer programs involving assemblers. It also promotes trade fairs (including held by suppliers) cosponsored with KADIN and other organizations.

1 BPTIs in East Java .

Corporate management/production management technologies (soft technology)

- BNSP has established the SME diagnosis consultant certification system, and there are accredited LSP and LDP. LSP is an independent organization founded by stakeholders in the public and private sectors, including MOI. PUSDIKLAT-INDs are an accredited LDP. They hold annual training courses taught by Indonesian instructors, while conducting TOT programs for themselves. Participants in the training courses are staff in local governments and technical support organizations under MOI.
- The private sector increasingly recognizes the SME diagnosis consultant certification system. Management consultants in the private sector can receive a certification by participating a LDP's training course or passing a certification test administered by LSP. SME diagnosis consultants are responsible for corporate diagnosis service. They continue to provide advisory service in the management field.

UPL-IKMs as divisions as local-based integrated consulting service providers in soft and hard technologies

- At the local level, UPL-IKMs in provincial Industry and Trade DINASs are divisions providing integrated consulting service for local companies. UPL-IKMs' activities start with corporate diagnosis by their staff or SME diagnosis consultants of BDIs, Balai Besars or BARISTAND-INDs. Advisory service by the diagnosis consultants or specialty consultants follows, depending upon the diagnosis results. To find qualified specialty consultants, every UPL-IKM maintains a comprehensive database on specialty consultants, which includes the data of those who work for public organizations, universities, and trade associations as well as private consultants.
- UPL-IKM staff including SME diagnosis consultants are basically composed of full-time professional staff capable of providing information on loans, market, and other issues in addition to making a corporate diagnosis and giving advisory service.
- At the local level, in addition to the activities by UPL-IKMs, public technical support organizations, private support organizations, universities, and private consultants operate their own schemes to provide training and consulting services on a continuous basis.

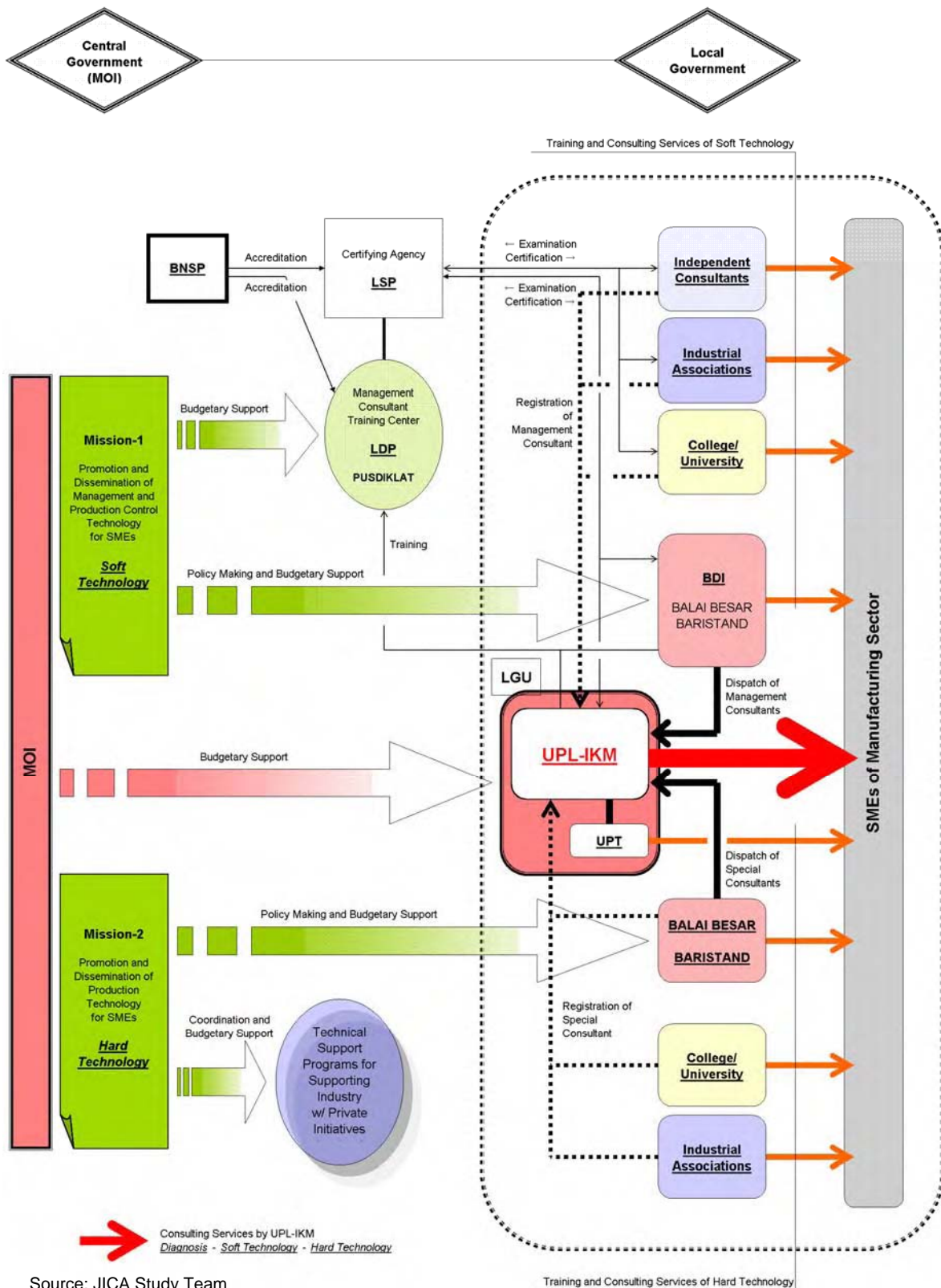


Figure 10-1 Future Vision of Human Resource Development Promotion for the Manufacturing Industry by MOI and Provincial Industry and Trade DINASS

10.3 Proposal for Human Resource Development Support for the Manufacturing Industry by Provincial Industry and Trade DINAS

Based on 9.2 “Current State of Human Resource Development for Local SMEs of the Manufacturing industry,” major issues were identified in Chapter 10.1. In this section, the following action plans are proposed for the purpose of realizing in “Future Vision of Human Resource Development Support for the Manufacturing Industry in 10.2.

- Action Plan 1: Organization and membership of UPL-IKM
- Action Plan 2: Establishment of provincial UPL-IKM committee
- Action Plan 3: Development of a database on SME special consultants
- Action Plan 4: Linking UPL-IKM’s diagnosis and advisory service with loan schemes
- Action Plan 5: Retraining program for Shindan-shi
- Action Plan 6: Organization of periodical workshops and events for companies

These action plans are designed to promote wide acceptance and further development of the SME consulting system that is started up by local UPL-IKM.

Note that the action plans correspond to the following issues discussed in 10.1, as follows.

Action Plan 1	10.1.3 (1) 10.1.4 (1)
Action Plan 2	10.1.3 (2)
Action Plan 3	10.1.3 (3)
Action Plan 4	10.1.3 (4) 10.1.4(4)
Action Plan 5	10.1.4 (2) (3) (5)
Action Plan 6	—————

10.3.1 Action Plan 1: Organization and membership of UPL-IKM

(1) Current state

IKM Director General Regulation No.55/IKM/PER/8/2007 sets forth a guideline for the establishment and operation of UPL-IKM and serves as a service guideline (PEDOMAN) for staff members of IKM, local DINASs, PFPP, and UPL-IKM administrators. The regulation consists of three volumes. Book 1 contains a guideline for the establishment of UPL-IKM, which states that the chief of local Industry and Trade

DINAS serves as superintendent of provincial, prefectural or municipal UPL-IKM, while the chief and members of UPL-IKM are professional or general staff, not managerial (Struktural) staff.

At present, UPL-IKM is not positioned as a formal division of Industry and Trade DINAS and thus does not appear in DINAS's organizational chart. Rather, it is treated as a project implemented under the central government's budget. UPL-IKM that is not led by managerial (Struktural) staff is not entitled to receive provincial budget allocation.

Finally, 70% - 80% of participants in the SME diagnosis consultant training courses in 2006 and 2008 were managerial staff or general staff, who was too busy with other work to spend much time to consulting service activities. This issue was identified and pointed out during the model programs.

(2) Action

To make UPL-IKM a formal division of DINAS to allow allocation of the provincial budget.

As a result, the chief of UPL-IKM will be managerial staff. This reorganization will require the approval of the provincial assembly, as well as the revision of PEDOMAN.

Professional staff will be appointed as UPL-IKM staff members to allow them to be dedicated to corporate diagnosis and advisory activities. Note that UPT, which is a division of DINAS, is operated under the provincial budget and is led by managerial staff. Its staff members are mostly professional staff and are engaged in advisory service for companies.

Shindan-shi who have completed the SME diagnosis consultant training course will become key members of UPL-IKM. In selecting participants in the future training course, therefore, professional staff who can be fully engaged in corporate diagnosis and advisory activities should be given of priority.

(3) Implementation organizations

- 1) Provincial Industry and Trade DINAS
- 2) Prefectural/municipal Industry and Trade DINAS
- 3) IKM under the MOI

(4) Related organizations

- 1) Technical support and training organizations under the central government (MOI) operated in each province

(5) Expected results

- 1) A formal system to deliver future consulting service activities will be established.
- 2) Shindan-shi will become key members of UPL-IKM and will be able to be fully engaged in corporate diagnosis and advisory services.
- 3) UPL-IKM becomes a division of DINAS and can receive the provincial budget to fund its activities. As a result, it will be able to conduct support activities that are finely tuned to local conditions through arrangement of necessary equipment, etc. P.C. Camera, Projector, for SME consultant activities.

10.3.2 Action Plan 2: Establishment of provincial UPL-IKM committee

(1) Current state

Activities of Model Program A were sometimes disturbed due to the lack of coordination or agreement on program participation between provincial Industry and Trade DINAS (counterpart) and prefectural DINASs or central government organizations to which Shindan-shi belonged. In fact, this was verified by the questionnaire surveys of Shindan-shi that those who came from organizations other than provincial DINAS pointed out that they had hard time to conduct diagnosis and consulting activities due to the lack of understanding of their organizations.

UPL-IKM has already been established in all provinces and some prefectures and municipalities that have Shindan-shi. The MOI intends to establish UPL-IKM in the rest of prefectures and municipalities. Also, staff members of support organizations under the central government will be sent to the future SME diagnosis consultant training course on a continuous basis, in addition to those of local DINASs.

With the progress of the decentralization process, the relationship between the province and the prefecture or the municipality is still uncertain in some aspects. As the number of staff members at each UPL-IKM is limited, it is very difficult for a single UPL-IKM in a prefecture or municipality to conduct its activity separately in order to achieve its goal. Also, the number of Shindan-shi who belong to the central government organization is relatively limited, and it is not realistic for each organization to make activity plants for their consulting staff. As a result, while resources having diagnosis

and consulting capabilities are dispersed, there is no organization that performs the coordinating function to promote their effective use.

(2) Action

To establish the UPL-IKM committee within each provincial Industry and Trade DINAS, which is responsible for coordination of UPL-IKM activities in each province.

It is designed to meet diverse needs of local companies by integrating limited UPL-IKM resources.

While the UPL-IKM Team will be responsible for the fostering, guidance, supervision, and evaluation of provincial, prefectural, and municipal UPL-IKMs, the provincial UPL-IKM committee is expected to perform the following functions.

- Coordination of UPL-IKM activities in each province
- Promotion of collaborative activities of UPL-IKM staff members and information sharing
Cooperation as well as the sharing of experience and information will allow UPL-IKM staff to make up for the lack of experience of each staff, helping them to increase knowledge and improve professional skills.
- Selection of participants in the SME diagnosis consultant training course
- Evaluation of activities of UPL-IKM staff members and selection of participants in the retraining program (Action Plan 5)

The provincial UPL-IKM committee will be comprised of representatives of provincial, prefectural, and municipal UPL-IKMs, and central government organizations operating in each province, which have Shindan-shi. In addition, representatives of the following organizations will join on an observer status.

- Trade associations in each province representing the interest of users of corporate diagnosis and advisory service (such as ASPILOW and KILOPAS in East Java, and ASPEP in West Java)
- Universities and polytechnics providing consulting service for companies
- Technical support organizations under the central government, which operate in each province and employ special consultants

SMEs eagerly want to improve operator skills, in addition to corporate and advisory services. Information sharing and collaboration of organizations responsible for vocational training (such as Labor DINAS) with other DINASs within local government is the issue to be addressed in the next stage.

(3) Implementation organizations

- 1) Provincial Industry and Trade DINAS
- 2) Provincial, prefectural, and municipal UPL-IKMs
- 3) Technical support and training organizations under the central government (MOI) and operated in each province

(4) Related organizations

- 1) Trade associations
- 2) Universities and polytechnics

(5) Expected results

- 1) Human resources engaged in corporate diagnosis and advisory service in each province can be assigned efficiently.
- 2) The development of long-term activity plans is facilitated.
- 3) Capacity development of UPL-IKM staff members through the sharing of experience and information is expected.
- 4) The feedback of demand information in the private sector and the results of consulting activities can be made with ease.
- 5) Selection of participants in the SME diagnosis consultant training courses and the retraining program can be made from the viewpoint of program efficiency in the entire area.
- 6) The retaining of special consultants is facilitated.

10.3.3 Action Plan 3: Development of a database on SME special consultants

(1) Current state

According to the service guideline for UPL-IKM (IKM Director General Regulation), advisory service is provided by a Shindan-shi or an extensive officer/PFPP who has performed corporate diagnosis or by a special consultant in a specific field, who takes over from the diagnosis consultant. UPL-IKM covers all manufacturing sectors. While major portions of soft technology are commonly applicable to the manufacturing industry, hard technology consists of diverse elements that cannot be covered by a single consultant. Thus, the list of special consultants is an important tool to ensure the smooth transition from diagnosis to advisory service.

UPL-IKM's activities include advice and guidance relating to both soft and hard technologies. At present, there is no list of special consultants covering soft and hard technologies at the provincial level, regardless of organizations which they belong to.

During the present study, a prototype database on special consultants for East and West Java was developed under Model Program B. 27 fields were identified, i.e., 22 for hard technology and 5 for soft technology, and 17 data items were collected for each special consultant (See 6.4 for detail).

The number of special consultants for whom data were collected by province is shown in Table 10-2. Most of them are staff members of local governments or organizations under the central government.

Table 10-2 Special Consultant Data Collected under Model Program B

Data collected	East Java	West Java
Total number of special consultants	29	181
Aggregate number by field	61	220

(2) Action

The UPL-IKM committee proposed under Action Plan 2 will, as part of its responsibility, develop a database on consultants specialized in SME consulting in each province, including the private and public sectors. It can be accomplished by developing the prototype made under Model Program B.

Data collection will be started with provincial, prefectural and municipal Industry and Trade DINASs and support organizations under the central government, with an ultimate goal to construct a comprehensive database covering universities, trade associations, and private consultants. In East and West Java, the intent to cooperate in database development from related organizations was confirmed during Model Program B. As for actual data collection, priority may have to be set for technological fields that are highly demanded by selected local industries. Finally, as companies want knowledge and technology directly relating to shop floor operation, the database needs to incorporate data on experts and experienced engineers in the private sector, including retired persons.

In fact, At LPT-INDAK that provides corporate finance service in East Java, corporate engineers and managers are working as consultants for other companies. This serves as a good model for the development of the special consultant database.

In the future, the UPL-IKM Team is expected to integrate provincial databases and develop a nationwide database. For this purpose, standard data items and database formats, including classification of technological fields, should be established to be used by all provinces. This action should preferably be taken under the UPL-IKM Team's initiative.

(3) Implementation organizations

- 1) UPL-IKM Team, MOI
- 2) Provincial UPL-IKM committee

(4) Related organizations

- 1) Trade associations
- 2) Universities and polytechnics

(5) Expected results

- 1) The retaining of special consultants is facilitated.
- 2) A nationwide database on special consultants is developed.
- 3) Basic data for the establishment of the special consultant certification system are obtained.

10.3.4 Action Plan 4: Linking UPL-IKM's diagnosis and advisory service with loan schemes

(1) Current state

It was confirmed from the current state surveys of companies and the implementation process of Model Program A that many local SMEs continued operation without upgrading oil machines due to the shortage of fund, creating a major obstacle to quality improvement. The questionnaire survey of Shindan-shi consultants indicates that 94% of Shindan-shi received request for loan-related advice from client companies, suggesting that many SMEs face a financial access problem.

Many SME owners recognize their problems and wish to receive diagnosis and advisory service. However, our experience in Model Program A suggests that many of them cannot keep interest in and enthusiasm about kaizen activities that take considerable time to produce visible effects such as improvement of profitability. UPL-IKM's current scheme does not provide significant incentive for SME owners to continue kaizen activities, except for the government's subsidy to cover diagnosis and advisory service costs partially.

(2) Action

To relate the provincial government's loan schemes with UPL-IKM's diagnosis and advisory services. By requiring a company that applies for a provincial loan scheme to receive UPL-IKM's diagnosis and produce results on the basis of advisory service as loan conditions, the action is designed to provide incentive for local SMEs to conduct kaizen activities on a continuous basis.

The study team examined loan schemes of East and West Java, where the model program was carried out. In East Java, two loan schemes - KIK (Kredit Industri Kecil) and UKM (Usaha Kecil Menengah) – are operated. KIK sets line of credit at Rp 50 million and targets microenterprises and small enterprises in the manufacturing sector. UTK loans Rp 200 million at maximum to SMEs in the manufacturing and commerce sectors. According to KIK's loan record, it finances 70% of companies applying for loans each year. While actual loans are made by the provincial bank, application is accepted by provincial Industry and Trade DINAS, which joins the examination process. In provinces other than East Java, there is a SME loan scheme called Dana Bergulir, which serves microenterprises and small enterprises in the manufacturing and commerce sectors by setting line of credit at Rp 50 million. In West Java, a SME loan scheme

(DAKA PIN) is operated by using the provincial government's funds to serve the manufacturing sector only (See 3.2.3 and 3.3.3 in detail).

These small loans provided by local governments serve as an important financial source for SMEs. Under the action plan, the obligation to receive UPL-IKM's diagnosis service will be added to loan conditions. Then, based on the result of corporate diagnosis; 1) the loan is provided; 2) the loan is accepted under the condition that the company receives advisory service; or 3) the loan is accepted under the condition that the company produces specified results on the basis of advisory service.

In East Java, LPT-INDAK (attached to the MOI) operates a loan scheme that integrates loan and consulting services (See 3.2.3 (3) in detail). It provides a good example for the action plan.

UPL-IKM's consulting activity has started only recently. For promotion of local SMEs, it is imperative to continue and develop this activity. By providing proper incentive for companies to receive corporate and advisory service and continue kaizen activities, UPL-IKM's staff members can gain experience and improve skills, while promoting UPL-IKM's activities effectively. As an increasing number of companies receive UPL-IKM's support, the range of its activities expand to create opportunity for the MOI's future vision to develop UPL-IKM to a one-stop service center.

(3) Implementation organizations

- 1) Provincial Industry and Trade DINAS
- 2) Provincial, prefectural and municipal UPL-IKM

(4) Related organizations

- 1) Banks executing loans for UPL-IKM

(5) Expected results

- 1) Diagnosis and advisory service motivates companies to work with kaizen activities.
- 2) Loan borrowers increase in number.
- 3) Diagnosis and advisory service drives kaizen results.
- 4) Loan provides a tangible activity goal for UPL-IKM's staff members.
- 5) UPL-IKM's activities continue and its staff members gain experience and improve skills.
- 6) The action helps UPL-IKM's PR activities.

10.3.5 Action Plan 5: Retraining program for Shindan-shi

(1) Current state

The results of the questionnaire survey of companies that participated in the model program (see 7.1.1) show that the majority of respondents were not satisfied with professional capability of Shindan-shi and that they pointed out the lack of experience in advisory service, the lack of work experience on the shop floor, and insufficient knowledge on skills and hard technology.

These responses agree with self-evaluation results by Shindan-shi, i.e., frequently cited were the lack of experience in advisory service, the lack of work experience on the shop floor, and insufficient knowledge on hard technology. Shindan-shi actually provided advisory service for slightly less than 40% of companies that they had provided diagnosis service, partly because some consultants were not capable of providing advisory service due to insufficient capability or experience. This is reflected in the fact that Shindan-shi want to have practical training in diagnosis and advisory services and retraining for factory operation.

(2) Action

To conduct a retraining program aiming to make up for the lack of experience of Shindan-shi in diagnosis and advisory service and help them to improve skills.

It is expected to create incentive for Shindan-shi to continue professional activities.

Possible program methods include: 1) additional participation in corporate diagnosis exercise of the SME diagnosis consultant training course; and 2) special participation in a corporate diagnosis and advisory service training program or a factory tour program provided by donor organizations (including Japan). As for the donor organization's program, the UPL-IKM Team will make a formal request through the MOI.

As the retraining program is wanted by many Shindan-shi, participants will be selected by the provincial UPL-IKM committee that evaluates activity record of each Shindan-shi. Evaluation items include the following:

- The number of companies for which the Shindan-shi has provided diagnosis service
- The number of companies for which the Shindan-shi has provided advisory service

- Evaluation by client companies of advisory results and Shindan-shi by using a format prepared by the committee

As for the lack of knowledge on hard technology, which was pointed out by model companies and self-evaluation by Shindan-shi, most participants in the SME diagnosis consultant training courses do not have background in this field, except for technical experts of Balai Besar and BARISTAND, and so that it is not likely that they will be able to improve skills in the training course to the level where they can provide advisory service on their own. Essentially, the SME diagnosis consultant is expected to have broad knowledge (not necessarily in-depth) and the ability to select and retain an expert who is suitable for a client's needs. He simply leaves advisory service to a special consultant so selected. Thus, Shindan-shi need to improve these capabilities by continuing service and self-development efforts. In this connection, there are some concerns about the lack of experience in shop floor operation among Shindan-shi who are mostly central and local government employees, and few of them have experience in factory work. However, field experience is not necessarily a critical condition for a good SME consultant, who can be trained through experience in helping companies to solve problems and self-conscious efforts to hone their consulting skills.

(3) Implementation organizations

- 1) IKM, MOI
- 2) Provincial UPL-IKM committee

(4) Related organizations

- 1) PUSDIKLAT-IND

(5) Expected results:

- 1) UPL-IKM's staff members improve their professional knowledge and skills.
- 2) Evaluation by client companies of kaizen activity results, which is treated as requirement for program participation, provides incentive for UPL-IKM staff to improve quality of diagnosis and advisory service.

10.3.6 Action Plan 6: Organization of periodical workshops and events for companies

(1) Current state

While Industry and Trade DINAS has been conducting field consulting service by using extension officers, their service is not highly accepted by client companies partly because few efforts have been made to improve professional capabilities of extension officers. UPL-IKM's activity led by Shindan-shi has started only recently and it may not be widely known in the private sector.

The study team has identified the need for promotion of the SME consulting system as a key issue to be dealt with by the MOI. Likewise, promotion of UPL-IKM by local government is considered to be critical for its successful activities.

During the implementation of Model Program A in East and West Java, two workshops were held to make interim reports on the program's progress and present program outcome. Invitation for participation in these workshops by companies was widely advertised by using the company list held by Industry and Trade DINAS. The workshops were primarily designed to publicize the present study and the model program, while it was intended to promote UPL-IKM and its activities. At the workshop presenting program results, model companies reported the progress and outcome of diagnosis and advisory services, together with problems they faced, which impressed many participants strongly. And after the end of the workshop, DINAS received many requests for diagnosis and corporate service.

In addition to the workshops, meetings for model companies to share experience and field tours on advanced factories were held.

(2) Action

To hold workshops on a periodical basis to promote UPL-IKM's consulting service.

The plan assumes that the workshops will be hold at a hotel. Alternatively, they may be held at a meeting room of Industry and Trade DINAS in the form of small workshop or meeting to share experience.

Place	Hotel
Frequency	Twice per year
Participants	Owners and factory managers of SMEs in the province's manufacturing industry
Theme	Results of UPL-IKM's diagnosis and advisory service
Presenters	Representatives of companies that have received diagnosis and advisory service and UPL-IKM's staff members in charge
Estimated cost (in the case of 100 participants)	Approx. Rp10 million per workshop

(3) Implementation organizations

- 1) Provincial UPL-IKM committee

(4) Related organizations

- 1) Provincial, prefectural and municipal UPL-IKM

(5) Expected results:

- 1) UPL-IKM and its activities are promoted and made known widely.
- 2) Recipient companies are encouraged to continue their kaizen activities by learning results made by other companies.

10.3.7 Implementation Schedule for the Action Plans

Table 10-3 presents implementation organizations of the proposed action plans, related organizations, and their implementation schedule. In the first stage, UPL-IKM's organization and support system will be established, followed by the establishment of the provincial UPL-IKM committee. Then, the committee will start its activities.

		Implementation organizations											Implementation schedule					
		Central government			Local government								First half of 2008	Second half of 2008	First half of 2009	Second half of 2009		
		MOI IKM	MOI IKM UPL-IKM Team	PUSDIKLAT-IND	Provincial Industry and Trade DINAS	Provincial UPL-IKM committee	Prefectural/ municipal Industry and Trade DINAS	Provincial/ prefectural/ municipal UPL-IKM	Province-based technical support/ training organizations under MOI	Trade associations	Universities/ polytechnics	Banks extending loans						
Action Plan 1	Organization and membership of UPL-IKM	●			●		●		▲									
Action Plan 2	Establishment of provincial UPL-IKM committee				●			●	○	▲	▲							
Action Plan 3	Development of a database on SME special consultants		○		▲	●	▲	▲	▲	▲	▲							
Action Plan 4	Linking UPL-IKM's diagnosis and advisory service with loan schemes				●		●	●				▲						
Action Plan 5	Retraining program for Shindan-shi	○		○		●												
Action Plan 6	Organization of periodical workshops and events for companies					●		▲										

● Major implementation organization ○ Implementation organization ▲ Related organization

Table 10-3 Implementation Organizations of the Proposed Action Plans, Related Organizations, and Implementation Schedule

10.4 Proposals Relating to the SME Diagnosis Consultant Training Course

For the SME diagnosis consultant training course, which is expected to serve as the foundation for the SME consulting system operated by UPL-IKM, the following three proposals are made.

10.4.1 Sectors covered by diagnosis and advisory service

Case studies and field training for corporate diagnosis in the SME diagnosis consultant training course mainly take up parts suppliers that serve as supporting industry for assembly manufacturers. This reflects the fact that production management tools have been developed from kaizen activities undertaken by factories of certain size in supporting industries.

On the other hand, the questionnaire survey of Shindan-shi who have completed the 2006 training course (Chapter 8) indicates that companies belonging to local industry sectors account for 74.4% of companies for which Shindan-shi conducted diagnosis service for one year after the end of the course by and 81.3% of those that have received advisory service (Table 8-6; including “others”), with the average number of employees being 23 and 29, respectively. The food and beverage sector accounted for the largest share. In fact, the sector was most frequently cited by Shindan-shi as the sector they are expected to provide diagnosis and advisory service in the future, followed by the woodworking sector. As companies covered by the diagnosis/advisory service were selected from priority sectors in each province, companies to be covered by UPL-IKM will mainly be MEs and SMEs in local industry sectors.

The results of the questionnaire survey indicate that many Shindan-shi felt somewhat uncomfortable about a gap between sectors taken up in the training course and those that were dealt with in actual service.

Thus, consideration should be given in the future course that examples of local industries are taken up as much as possible, especially small enterprises and microenterprises in local industries for case study and field training for corporate diagnosis.

10.4.2 Selection criteria for course participants

The SME diagnosis consultant training course teaching various tools for productivity improvement of the manufacturing industry and corporate diagnosis and consulting techniques is highly useful for any person engaged in SME support activity. At the same time, participation in the long-term course requires a high level of commitment as it becomes significant investment for both participants and organizations that send them. In selecting participants representing government organizations, therefore, priority should be given to those who can make effect use of what they learn in the course, especially taking into account the following two factors.

- Professional staff, rather than managerial and general staff, can be fully engaged in corporate diagnosis and consulting activities.
- The manufacturing industry's importance for local economy varies between provinces, and there is high demand for technical service learned by Shindan-shi in an area where the manufacturing industry is brisk and strong.

10.4.3 Implementation of TOT

In the training courses in 2006 and 2007, most subjects (other than accounting, etc.) were taught by Japanese instructors. In the 2008 course, however, Indonesian instructors are expected to teach the majority of classes. And in 2009 and afterwards, Indonesian instructors will be responsible for all lectures and practical training.

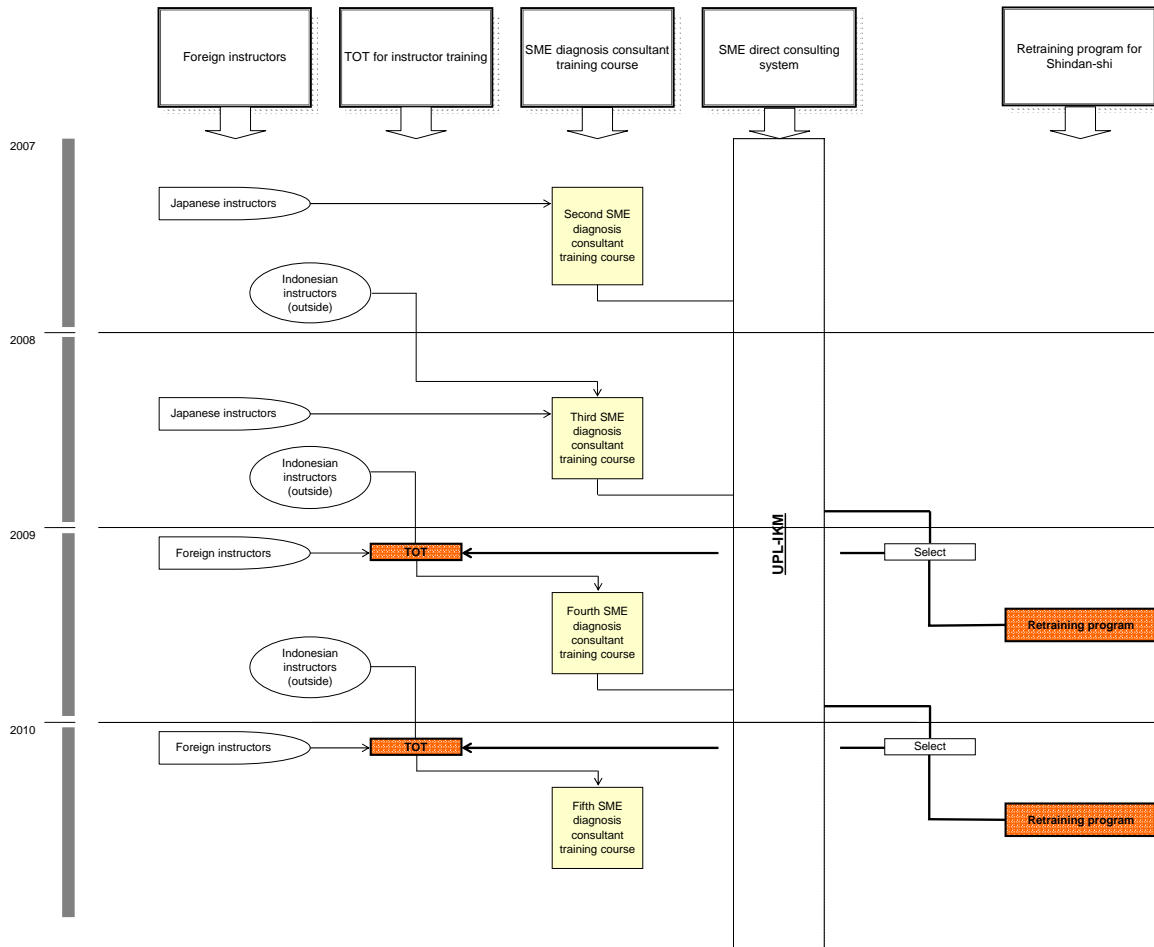
Furthermore, PUSDIKLAT-IND will take charge of the training course under cooperation of JICA. However, it is a training organization for government employees and has no experience in training courses that focus on shop floor operation and production management, except some experience in training for private companies.

Continuation of the SME diagnosis consultant training course is a very important policy agenda for the MOI and the retaining or training of Indonesian instructors is considered to be an urgent matter. PUSDIKLAT-IND's instructors have already started preparation and outside instructors are being recruited.

Under this action plan, it is proposed to select and retain Shindan-shi, who show an excellent record in terms of scores at the final test of the training course and professional activities after the course, as course instructors, and to implement the TOT (Training of Trainers) program. Note that TOT can be positioned as one type of retraining program for Shindan-shi, which is proposed in Action Plan 5.

The training course emphasizes practical knowledge and experience on the shop floor, making a sharp contrast to university lecture. TOT instructors should preferably be selected from instructors of company training courses or retired persons, rather than universities and other outside organizations. Also, it should be considered to request donor organizations for sending foreign instructors via the MOI.

Figure 10-2 presents a TOT scheme proposed under this action plan.



Source: JICA Study Team

Figure 10-2 SME Diagnosis Consultant Training Course/TOT Program

Appendix

- Appendix -1 Report on Corporate Diagnosis and Advisory Activities under Model Program
- Appendix -2 Interview Survey Questionnaire Companies Participating in the Model Program
- Appendix -3 Questionnaire Graduates of the First SME Consultant Training Course
- Appendix -4 Number of Companies that have received diagnosis / consulting service by sector and employment size (each province)
- Appendix -5 Sectors intended for future diagnosis activities by employment size (each province)

Appendix -1 Report on Corporate Diagnosis and Advisory Activities
under Model Program

Company code : E-152

**THE STUDY
ON
HUMAN RESOURCE DEVELOPMENT FOR SMALL-and
MEDIUM-sized ENTERPRISES (SMEs) FOCUSED ON
MANUFACTURING INDUSTRIES
IN
REPUBLIC OF INDONESIA (PHASE2)**

**Report on Corporate Diagnosis and Advisory Activities under Model
Program**

Company code: E-152

Indonesian Shindan-shi: Ali Muzakki, SE

Indonesian Shindan-shi: Ir. Chusaeri

Indonesian Shindan-shi:

JICA study team expert: Yasuhiro Izuho

Contents

- 1. Visit Record Sheet(Company Profile)**
- 2. SWOT Analysis**
- 3. Problem Identified**
- 4. Identification of Issues for the Model Program**
- 5. Kaizen Activity Record and Result**
- 6. Findings by Study Team Experts**

Company code : E-152

1. Visit Record Sheet (Company Profile)

Visit Record Sheet on Company in East/West Java	Ver.04
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Company No.: E-152

Accompanied by DINAS personnel: Tony Sunggarai, SH, MM

Date of visit	2.8, 8.23	Study team members who visited:	Izuho and Agung (as interpreter)
Company name		Tel	
		Fax	
		E-Mail	
Address			
Personnel interviewed			
No. of employees	29	Annual sales(2005)	Rp2 billion

A. Questions

A-1 Products:	<ul style="list-style-type: none"> - Parts for fishing boats (40%) 20% of total orders come from shipbuilders and 80% represent spare parts. - Parts for farming equipment (45%) ... 50% for Yanmar and 50% for Arido - Parts for machinery used by tin mines (15%)
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A-2 Engineering technology (multiple response allowed) (indicate your choice by)

1. Heat treatment 2. Electroplating 3. Machining 4. Coating
 5. Casting 6. Forging 7. Sheet metal working/press work 8. Die casting
 9. Plastics processing 10. Rubber molding 11. Welding 12. Machine assembly
 13. Printing 14. Other (specify)

The company outsources sheet metal working and casting operations that account for approximately 30% of sales, because they do not have machinery. It also contracts out the manufacture of simple parts such as small screws to a technical college (private).

A-3 Product composition by destination (value basis)

1. OEM production	20	%	(Parts to be incorporated into final products made by assemblers)
2. Aftermarket	80	%	(Parts destined to markets for repair/spare parts)
3. Own brand product	0	%	

A-4 Do you plan (expect) to increase OEM production in future? (indicate your choice by)

1. Yes
 2. No

If no, specify the reason:

OEM production is not desirable due to unfavorable terms, e.g., a long payment period, low price, and strict specifications.

Company code : E-152

A-5 Indicate the two most urgent problems facing your company (indicate your choice by).

- | | | | | | |
|----|--|---------------------------|---|---|-----------------|
| 1. | <input checked="" type="checkbox"/> Financing | Purpose? | a | <input type="checkbox"/> Equipment renewal | Working capital |
| | | | b | <input type="checkbox"/> Factory expansion | |
| | | | c | <input checked="" type="checkbox"/> Other (specify) | |
| 2. | <input type="checkbox"/> Market expansion for own products | | | | |
| 3. | <input type="checkbox"/> Development of own brand products | | | | |
| 4. | <input type="checkbox"/> Cost reduction | | | | |
| 5. | <input type="checkbox"/> Improvement of engineering technology | Specify a major challenge | | | |
| 6. | <input type="checkbox"/> Improvement of workers' skills | Specify a major challenge | | | |
| 7. | <input checked="" type="checkbox"/> Introduction of corporate management/production management | Specify a major challenge | | Quality control | |
| 8. | <input type="checkbox"/> Improvement of employee morale | | | | |
| 9. | <input type="checkbox"/> Other (specify) | | | | |

A-6 Indicate two training subjects that your company wants to send your employees for human resource development (indicate your choice by .

- | | | | |
|----|--|-----------------------------|------------|
| 1. | <input checked="" type="checkbox"/> Engineering technology | Indicate a training subject | Casting |
| 2. | <input checked="" type="checkbox"/> Corporate management/production management | Indicate a training subject | Accounting |
| 3. | <input type="checkbox"/> Skill training | Indicate a training subject | |

A-7 Do you wish to receive corporate diagnosis and advisory service by an outside expert? (indicate your choice by)

- | | | | |
|----|---|--|---|
| 1. | <input checked="" type="checkbox"/> Yes | Indicate an area for which you wish to have professional guidance. | a. <input checked="" type="checkbox"/> Engineering technology |
| | | | b. <input checked="" type="checkbox"/> Corporate management/production management |
| 2. | <input type="checkbox"/> No | If no, specify the reason: | |

A-8 We plan to conduct a six-month model program covering corporate diagnosis and field guidance on production management by local government staff and Japanese experts, starting in this May. The program will be offered with free of charge. Do you wish to participate in the program?

- | | | |
|----|---|--|
| 1. | <input checked="" type="checkbox"/> Yes | |
| 2. | <input type="checkbox"/> No | If no, specify the reason: |

Company code : E-152

B. Expert's findings

B-1	Evaluation of engineering technology (five grades) * They are satisfied with the present quality level as customers' requirements are relatively low.	3	[Evaluation criteria for B-1 and B-2] 5. Equipment and technology fully meets requirements for production of parts. 4. Equipment and technology mostly satisfies required levels, except for partial improvement.
B-2	Evaluation of implementation level for production management (five grades)	3	3. Equipment and technology falls below required levels, with some even missing or in shortage. 2. Equipment and technology remains at low levels, resulting in poor product quality. 1. Equipment and technology is old and obsolete, considered to be at microenterprise level.
B-3	Groups 1 – 4	3	[B-3 levels] 1: Products (parts and components) are supplied for aftermarkets. 2: QCD has still to reach at levels required by OEM buyers. 3: Products are supplied to OEM buyers under a short-term contract. 4: Products are supplied to OEM buyers under a long-term contract.

B-4 The two most urgent problems (indicate your choice by **■**).

1. Financing
2. Market expansion for own products
3. Development of own brand products
4. Cost reduction
5. Improvement of engineering technology Specify

Production management in general

6. Improvement of workers' skills Specify
7. Introduction of corporate management/production management Specify

8. Improvement of employee morale

9. Other (specify)

B-5 In what subjects do you intend to provide advisory service for this company in the area of production management if it is selected as a model company?

1	Cost control
2	Quality control

B-6 Special remarks

1. Since the establishment of a main factory with the company's incorporation in 1993, the company has been small factories in Pasuruan and now owns four factories.

Factory/operation/No. of workers/machine tools

(1) Cutting (13, including the owner) ... Lathes

(2) Cutting (2) ... Lathes

(3) Cutting and welding (7) Lathes, boring machines, and milling machines

(4) Aluminum casting (8) Sand casting

In August 2008 when a lease for its warehouse facility (floor area of 1,325m²) expires, the company plans to integrate the four factories into one, provided that it can secure the fund to cover the relation cost.

2. The company has strong interest in production and sales of finished products. Current candidate products are farm tractors and water pumps (propeller). The owner was engaged in brokerage for parts production before the establishment of the company, and he maintains contact with metalworking shops. And he intends to use the network for the manufacture of finished products.

3. The owner is responsible for all factory-related operations, including sales, order fulfillment, production planning, materials procurement, and outsourcing. In fact, he appointed five assistants so far, but all of them left after having acquired knowledge and skills and he has appointed or hired none since then. Outsourcing accounts for approximately 30% of total sales. Profit margin is 30% for own production and 20% for outside processing.

4. Outsourcing accounts for approximately 30% of total sales. Profit margin is 30% for own production and 20% for outside processing.

2. SWOT Analysis

<p>Strength:</p> <p>(1) Since its foundation, the company has been steadily growing by making aggressive investment, including the acquisition of factories and warehouses.</p> <p>(2) The company boasts customer confidence as evidenced from a steady stream of orders from as many as 30 companies.</p> <p>(3) It has a sufficient fund to accept later payment (usually one month, with current accounts receivable totaling Rp 140 million).</p> <p>(4) It wins orders with relatively high profitability by using the owner's experience as broker for parts business.</p> <p>(5) It maintains a network of local metalworking shops by acting as coordinator.</p> <p>(6) It successfully secures orders at relatively high prices on the basis of customer confidence gained from long-term contract, quality and compliance with delivery schedule.</p> <p>(7) It has a large number of skilled workers.</p>	<p>Weakness:</p> <p>(1) It carries out production at relatively four small factories that are scattered in the city.</p> <p>(2) It does not keep account books.</p> <p>(3) The owner is solely responsible for many operations such as sales and business administration, and there is no assistant.</p> <p>(4) Many employees are frequently late for work and daily operation starts late.</p> <p>(5) Workers' morale is generally low.</p> <p>(6) Cleaning and arrangement in the factory is not satisfactory.</p> <p>(7) A motor vehicle cannot be used for direct transportation of raw materials and products from and to the main factory.</p> <p>(8) No production plans or instruction sheets are made.</p>
<p>Opportunity:</p> <p>(1) By purchasing presses, the company is expected to expand a market further.</p> <p>(2) By entering the business of making and selling finished products (farming equipment and fishing boat) where the company has strength, it can expand and grow further.</p> <p>(3) By integrating the four factories in August 2008 when a lease for its warehouse facility expires, the company can streamline operation and expand business through the enhancement of the production system.</p>	<p>Threaten:</p> <p>(1) Price competition is anticipated due to new entries.</p> <p>(2) There is a risk of losing skilled workers.</p> <p>(3) As the owner takes care of all key operations, including sales, production planning, and procurement, his absence may cause disturbance with order fulfillment and production activities.</p> <p>(4) Prices of raw materials are on the rise.</p>

3. Problems Identified

Problems Identified :

- (1) The company conducts production activities at relatively small four factories that are scattered in the city, making production management difficult and consuming time and labor wastefully due to the need for transportation of intermediate products between factories.
- (2) A motor vehicle cannot be used for direct transportation of raw materials and products from and to the main factory, which have to be carried to and from a parking area by a cart, causing additional labor.
- (3) Workers' morale is relatively low.
 - When the owner is absent, workers often engage in small talk to result in lower work efficiency.
 - Many workers fail to come to work at 7:00 a.m., and work often starts at around 7:30 a.m.
- (4) The owner is solely responsible for all factory-related operations, including sales, order fulfillment, production planning, materials procurement, and outsourcing. As he is overloaded, work tends to be incomplete or unsatisfactory. He appointed five assistants in the past, but all of them left after having acquired knowledge and skills. As a result, he has appointed or hired none since then. (This is also pointed out by other owners for not appointing an assistant.)
- (5) The company does not maintain any account books or monthly and annual sales, cost, and profit data. As a result, it does not have data required for management planning, including cost reduction and investment.
- (6) Materials, work-in-piece and unused articles are placed disorderly in work areas and service paths within the factory, adversely affecting safety and efficiency.
- (7) As no production plan or instruction sheet is prepared for a received order, workers may not understand production specifications or delivery schedule accurately.

4. Identification of Issues for the Model Program

Recommendations:

(1) Implementation of 5S

Judging from the present conditions of the factories, implementation of 5S activities including cleaning and arrangement can lead to the improvement of work efficiency, quality, and safety. Also, the betterment of the working environment will help raise workers' morale. Furthermore, a factory where 5S is effectively enforced makes customers have better confidence in the manufacturer in terms of production management and QCD.

(2) Establishment of relocation plans for integration of the four factories

To achieve efficient factory management and production, it is desirable to relocate and integrate the four factories into one in August 2008 when a lease for its warehouse facility expires. It is therefore recommended to establish a work schedule for preparation up to relocation, develop equipment investment (capacity expansion) and factory layout plans, and estimate relocation costs.

(3) Improvement of workers' morale

The following measures should be taken to improve productivity and increase the retaining rate of workers (including management assistants).

- a. Define a clear management vision and share it with employees to create a sense of unity and belonging.
- b. Establish an employee performance evaluation system and reward employees according to evaluation results.

(4) Recording of employees' reporting and leaving time and establishment of a payroll system according to actual working hours

(5) Appointment of management assistants and factory managers and clear definition of their roles

To delegate the owner's power and authority in various fields to management assistants (procurement of materials, development of production plans, and outsourcing management) and factory managers (work instruction, field guidance, evaluation, and progress control)

(6) Creation of cash-based account books

(7) Development of a production plan statement and an instruction sheet, and implementation of progress control

Develop a production plan statement that contains work description, schedules for procurement, production, and delivery, which is made upon receiving a customer order, and produce and distribute an instruction sheet recording necessary items to the shop floor. Also check actual progress according to the plan statement and the instruction sheet.

Issues to be addressed and tackled in the model program :

After discussion with the owner with regard to the above recommendations, it was agreed to take up all of them as kaizen theme.

Recommendations (1) through (8) correspond to the actions as follows.

- (1)→ **A1** (Seiri (arrangement)), **A2** (Seiton (tidying up)), **A3** (Seiso (cleaning)), **A4** (Seiketsu (hygiene)), and **A5** (Shitsuke (discipline)) (Implementation of 5S)
- (2)→ **A6** (Establishment of relocation plans for integration of the four factories)
- (3)→ **A7** (Improvement of workers' morale)
- (4)→ **A8** (Recording of employees' reporting and leaving time and establishment of a payroll system according to actual working hours)
- (5)→ **A9** (Appointment of management assistants and factory managers and clear definition of their roles)
- (6)→ **A10** (Creation of cash-based account books)
- (7)→ **A11** (Development of a production plan statement and an instruction sheet, and implementation of progress control)

Action plan to address the above issues :

1. Objective

To take the following actions: "implementation of 5S" to improve the working environment and improve production efficiency and quality; "establishment of relocation plans for integration of the four factories" to start relocation in August 2008; "improvement of workers' morale" and "recording of employees' reporting and leaving time and establishment of a payroll system according to actual working hours" to raise productivity; "appointment of management assistants and factory managers and clear definition of their roles" to delegate the owner's responsibilities and streamline work, while improving quality of work; "creation of cash-based account books" to serve as the first step to obtain sales, cost, and profit data and use them for management planning, including cost reduction and capital investment; and "development of a production plan statement and an instruction sheet, and implementation of progress control" to reinforce production management, to inform workers of work description accurately, and to ensure compliance with delivery schedule.

2. Action List

A1 Seiri (arrangement) ... To bring unused articles out of the factory for disposal.

A2 Seiton (tidying up) ... To determine storing locations/positions of remaining articles within the factory.

A3 Seiso (cleaning) ... To clean up the factory according to formal standards.

A4 Seiketsu (hygiene) ... To create and maintain the good work environment through good housekeeping activities.

A5 Shitsuke (discipline) To make 5S activities and compliance with work rules an integral part of worker's everyday practice.

A6 Establishment of relocation plans for integration of the four factories To establish a work schedule for preparation up to relocation, develop equipment investment (capacity expansion) and factory layout plans, and estimate relocation costs.

A7 Improvement of workers' morale To define a clear management vision and share it with employees, and to establish an employee performance evaluation system.

A8 Recording of employees' reporting and leaving time and establishment of a payroll system according to actual working hours To make employees' reporting and leaving time record and to adjust a payroll system accordingly.

A9 Appointment of management assistants and factory managers and clear definition of their roles

A10 Creation of cash-based account books

A11 Development of a production plan statement and an instruction sheet, and implementation of progress control

3. Evaluation method (metrics to verify if a problem has been solved)

A1 Seiri (arrangement)

- To check to see if remaining articles in the factory after the completion of "Seiri" activity are needed for production activity within a standard period.

A2 Seiton (tidying up)

- To check if storage areas for dies/molds, raw materials, work-in-process, finished products, and jigs and tools have been selected properly, and if work areas, service paths, and storage areas are clearly established and marked on the floor.

A3 Seiso (cleaning)

- To check to see if the floor, walls, ceilings, together with machinery and equipment, are cleaned properly as a result of "Seiton" and "Seiri" activities, free from any foreign matter and waste.

A4 Seiketsu (hygiene)

- To check if the factory is kept in clean and hygienic condition as a result of "Seiton," "Seiri" and "Seisou" activities.

A5 Shitsuke (discipline)

- To check if 5S activities and work regulations and rules are complied with by workers and are adopted as an integral part of everyday practice.

A6 Establishment of relocation plans for integration of the four factories

- To check if the preparation works for relocation in August 2008 has been completed according to the schedule.

A7 Improvement of workers' morale

- To check if the sharing of the management vision with employees and the operation of the employee performance evaluation system have contributed to the improvement of workers' morale.

A8 Recording of employees' reporting and leaving time and establishment of a payroll system according to actual working hours

- To check if the establishment of the time record and the payroll system to reflect it has resulted in reporting and leaving according to work rules.

A9 Appointment of management assistants and factory managers and clear definition of their roles

- To check if the owner's responsibilities have been delegated to improve work efficiency and quality.

A10 Creation of cash-based account books

- To check if the cash basis accounting system has been implemented to allow the company to obtain sales, cost, and profit data on a periodical basis.

A11 Development of a production plan statement and an instruction sheet, and implementation of progress control

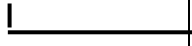





- To check if a production plan statement and an instruction sheet have been made and used for production activity.

4. Input required from the client company for problem solving

(1) The nephew of the owner assumes responsibility for development of computer-based account books, confirmation and promotion of companywide progress of action plans, and delegation of the owner's responsibilities.

(2) Factory managers take a lead in deploying action plans within each factory.

5. Kaizen Schedule

Action		September	October	November	December
A1 : 5S - Seiri (arrangement)	Plan				
	Actual	5	5		
A2 : 5S - Seiton (tidying up)	Plan				
	Actual	Not implemented (explanation only)			
A3 : 5S - Seiso (cleaning)	Plan				
	Actual	Not implemented (explanation only)			
A4 : 5S - Seiketsu (hygiene)	Plan				
	Actual	Not implemented (explanation only)			
A5: 5S - Shitsuke (discipline)	Plan				
	Actual	Not implemented (explanation only)			
A6 :Establishment of relocation plans for integration of the four factories	Plan				
	Actual	Relocation plan suspended		25	

A7: Improvement of workers' morale	Plan	┌..... 10			
	Actual	Explanation only			
A8 :Recording of employees' reporting and leaving time and establishment of a payroll system according to actual working hours	Plan	┌..... 15			
	Actual			—————	
A9: Appointment of management assistants and factory managers and clear definition of their roles	Plan	┌..... 5			
	Actual			—————	
A10: Creation of cash-based account books	Plan	┌..... 5			
	Actual			—————	
A11: Development of a production plan statement and an instruction sheet, and implementation of progress control	Plan	┌..... 10			
	Actual			—————	

<Legends>



Implementation of the plan



Guidance on the implementation method



Operation/management according to the guidance

5. Kaizen Activity Record and Results

Issue 4	Theme	Recording of employees' reporting and leaving time and establishment of a payroll system according to actual working hours
	Situation before the start of the program	(1) Many workers failed to come to work at 7:00 a.m., and work often started at around 7:30 a.m. (2) Although managers of two factories record workers' attendance and absence, a full day wage was paid to all employees regardless of their actual working hours because there was no work rule.
	Kaizen activity record	(1) A hand-written attendance record was made for each factory to record reporting and leaving time for all workers. (2) An attendance record format for computer processing was developed. (3) Weekly data for each factory were entered to the PC-based attendance record and a format for automatic payroll calculation using a PC function was developed.
	Result	(1) Attendance record at the main factory will be entered to the PC-based format, followed by enactment at other factories. Data stored in the PC-based attendance record will be used as the basis of payroll calculation.
Issue 5	Theme	Appointment of management assistants and factory managers and clear definition of their roles
	Situation before the start of the program	(1) The owner was solely responsible for all operations other than factory work, including sales, procurement, production planning, job instruction, and receipt and payment process. (2) As he was overloaded, work was often incomplete or unsatisfactory.
	Kaizen activity record	(1) The method for entering data in various PC-based formats and the method for using them were taught to the nephew of the owner, who then made entries and produced documents. (2) The need for use of various formats (e.g., accounting, order fulfillment, production plan, and job instruction) provided by the consulting team was explained to the nephew as well as the president until they gained a certain level of understanding. (3) The need for appointment of management assistants and factory managers was explained to the president until a

		certain level of understanding was gained.
	Result	(1) As the nephew has taken responsibility for PC input, works monopolized by the owner can be also handled by the nephew. (2) The nephew has gained work knowledge and information and is capable of assisting the owner in various works.
Issue 6	Theme	Creation of cash-based account books
	Situation before the start of the program	(1) As there was no accounting record, daily revenue and expenditure data were not recorded. As a result, the company did not know monthly and annual sales, cost, and profit data accurately. (2) The company did not have data used for the basis of management planning, including cost reduction and investment.
	Kaizen activity record	(1) The company purchased a PC and the owner and his nephew (employee) started to learn PC use and make PC-based account books. (2) Formats for cash book, bank account management, monthly settlement, monthly cost tabulation was prepared, and the methods for data input and use were taught. (3) The method for using sales and profit data for development of management planning and strategy was introduced and taught. (4) The method for using item-based cost tabulation results for cost analysis and cost reduction was introduced and taught. (5) It was advised to consider an advantage of filing an income tax return by using accounting data, in comparison to declaration without financial statements that currently results in tax payment based on the tax office's assessment.
	Result	(1) Based on slips kept by the company, monthly financial statements were made for three months (September – November). However, due to the lack of data (some slips and bank records were missing), the results could not be used for financial analysis. It was advised to collect and keep slips, receipts and other documents to record revenues and expenditures accurately. (2) The company gained proper understanding of the importance of the accounting system and the method for

		making accounting books and is expected to execute them on a continuous basis.
Issue 7	Theme	Development of a production plan statement and an instruction sheet, and implementation of progress control
	Situation before the start of the program	<p>(1) Production plans and job instructions made by the owner for a specific order were not documented and were notified to field workers verbally, thus depending upon each worker's memory.</p> <p>(2) Because of no documentation or record, there was a great risk of miscommunication, misunderstanding or mistake.</p> <p>(3) As no progress control was carried out, production was made according to empirical and intuitive judgment. (The owner believed that production could be made according to schedule by using production capacity and equipment properly, so he did not notify workers of an actual delivery schedule.</p> <p>(4) Details of customer orders or procurement of materials were not recorded in a written form, depending on the owner's memory, and an error often occurred and employees were unable to check them.</p>
	Kaizen activity record	<p>(1) The methods for entering and using data in various PC-based formats for production planning and work slip (job instruction) provided by the consulting team were taught.</p> <p>(2) The methods for entering and using data on customer orders and procurement of materials in a PC-based format for order fulfillment were taught.</p>
	Result	<p>(1) A work slip (job instruction sheet) is posted on the shop floor to allow workers to understand their tasks in detail and make confirmation as required.</p> <p>(2) Workers can confirm present and past customer order data on the basis of the order record.</p> <p>(3) Once a production plan format is completed, a production schedule for a product currently in process can be confirmed quickly.</p>

6. Findings by Study Team Experts

Findings:

Among small enterprises with 30 or less employees, the following problems are commonly observed.

- Even a simple accounting system (recording and tabulating daily receipt and payment) is not implemented.
- Job instruction is verbally communicated to the worker.
- An inventory record or an employee attendance record is not kept.
- Customer order and procurement data are not documented, depending on the owner's memory.

Also, most companies do not have a PC to store and tabulate operational data.

Thus, they do not conduct production management that is essential for high quality product making and do not own tools to promote work efficiency and provide the means of communication on international standards.

The owner of UD. Tenaga Muda has understood these problems pointed out by the consulting team. He purchased a PC and he and his nephew learned its operation (they had no or little experience). It was then decided to implement a PC-based accounting system and a business and production management system by using the PC, and they have implemented it as planned.

At the same time, the company acquired the ability to collect, tabulate and use various data, which addresses another problem commonly seen in small companies, i.e., the owner is solely responsible for non-production operations (sales, procurement, production planning, and work instruction) without appointing an assistant or a responsible person, so that the company faces a risk relating to the owner's misjudgment or absence. Such data collection, tabulation, and use, as led by the nephew, allow companywide sharing of knowledge and information.

In the future, it is hoped that owners of small companies in East Java will follow the example of UD. Tenaga Muda to understand the need for dealing with the above problems and implement appropriate measures.

Company code : E-34

**THE STUDY
ON
HUMAN RESOURCE DEVELOPMENT FOR SMALL-and
MEDIUM-sized ENTERPRISES (SMEs) FOCUSED ON
MANUFACTURING INDUSTRIES
IN
REPUBLIC OF INDONESIA (PHASE2)**

**Report on Corporate Diagnosis and Advisory Activities under Model
Program**

Company code: E-34

Indonesian Shindan-shi: Ir. Susilowati

Indonesian Shindan-shi:

Indonesian Shindan-shi:

JICA study team expert: Ryuji Seki

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- 1. Visit Record Sheet(Company Profile)**
- 2. SWOT Analysis**
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- 4. Identification of Issues for the Model Program**
- 5. Kaizen Activity Record and Result**
- 6. Findings by Study Team Experts**

Company code : E-34

1. Visit Record Sheet (Company Profile)

Visit Record Sheet on Company in East/West Java	Ver.04
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Company No.: E-34

Accompanied by DINAS personnel: Ir. Susilowati

Date of visit	2007.1.29	Study team members who visited:	Imaizumi, Izuhō and Seki
Company name	Tel		
	Fax		
	E-Mail		
Address			
Personnel interviewed	Director		
No. of employees	30	Annual sales (2005)	Rp2.4 billion

A. Questions

A-1	Gears and machine parts (70%) and plastics parts (30%) (January 29)
Products	Gears and machine parts (80%), plastics parts (0%), and printing (20%) (June 4)

A-2 Engineering technology (multiple response allowed) (indicate your choice by ■)

1. Heat treatment 2. Electroplating 3. Machining 4. Coating 5. Casting
 6. Forging 7. Sheet metal working/press work 8. Die casting 9. Plastics processing
 10. Rubber molding 11. Welding 12. Machine assembly 13. Printing
 14. Other (specify)

A-3 Product composition by destination (value basis)

1. OEM production	100	%	(Parts to be incorporated into final products made by assemblers)
2. Aftermarket		%	(Parts destined to markets for repair/spare parts)
3. Own brand product		%	

A-4 Do you plan (expect) to increase OEM production in future? (indicate your choice by ■)

1. Yes

2. No

If no, specify the reason:

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A-5 Indicate the two most urgent problems facing your company (indicate your choice by ■)

1. Financing Purpose? a Equipment renewal
b Factory expansion
c Other(specify)
2. Market expansion for own products
3. Development of own brand products
4. Cost reduction
5. Improvement of engineering technology Specify a major challenge
6. Improvement of workers' skills Specify a major challenge
7. Introduction of corporate management/production management Specify a major challenge
8. Improvement of employee morale
9. Other (specify)

A-6 Indicate two training subjects that your company wants to send your employees for human resource development (indicate your choice by ■)

1. Engineering technology Indicate a training subject
2. Corporate management/production management Indicate a training subject
3. Skill training Indicate a training subject

A-7 Do you wish to receive corporate diagnosis and advisory service by an outside expert? (indicate your choice by ■)

1. Yes Indicate an area for which you wish to have professional guidance. ? a. Engineering technology
b. Corporate management/production management
2. No If no, specify the reason:

A-8 We plan to conduct a six-month model program covering corporate diagnosis and field guidance on production management by local government staff and Japanese experts, starting in this May. The program will be offered with free of charge. Do you wish to participate in the program?

1. Yes
2. No If no, specify the reason:

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B. Expert's findings

B-1	Evaluation of engineering technology (five grades) * They are satisfied with the present quality level as customers' requirements are relatively low.	2	[Evaluation criteria for B-1 and B-2] 5. Equipment and technology fully meets requirements for production of parts. 4. Equipment and technology mostly satisfies required levels, except for partial improvement. 3. Equipment and technology falls below required levels, with some even missing or in shortage. 2. Equipment and technology remains at low levels, resulting in poor product quality.
B-2	Evaluation of implementation level for production management (five grades)	2	1. Equipment and technology is old and obsolete, considered to be at microenterprise level.
B-3	Groups 1 – 4	3	[B-3 levels] 1: Products (parts and components) are supplied for aftermarkets. 2: QCD has still to reach at levels required by OEM buyers. 3: Products are supplied to OEM buyers under a short-term contract. 4: Products are supplied to OEM buyers under a long-term contract.

B-4 The two most urgent problems (indicate your choice by ■)

- 1. Financing
- 2. Market expansion for own products
- 3. Development of own brand products
- 4. Cost reduction

5. Improvement of engineering technology

Specify ?

MC/CNC technology

6. Improvement of workers' skills Specify ?

7. Introduction of corporate management/production

management Specify ?

Quality control techniques

8. Improvement of employee morale

9. Other (specify)

B-5 In what subjects do you intend to provide advisory service for this company in the area of production management if it is selected as a model company?

- 1. Quality control
- 2. Improvement of processing accuracy

B-6 Special remarks

- 1. The company shows strong interest in receiving technical guidance.
- 2. It also wishes to make job improvement on the shop floor.
- 3. It is interested in improving quality of products (plastics) for textile companies.

2. SWOT Analysis

<p>Strength:</p> <ol style="list-style-type: none"> 1. The company documents and defines its philosophy and policy clearly. 2. It complies with delivery schedule and wins confidence of customers 3. It tries to establish credibility by giving priority to quality and providing a warranty period for its products. 4. It is capable of fulfilling short-term orders. 5. It strives to improve production techniques by developing the capability to manufacture parts equivalent to imports. 6. It supplies products to a Japanese textile company on a continuous basis and with a certain level of confidence. 7. It manages its organization with clearly functional division. 8. It intends to start a new business (such as plastics). 	<p>Weakness:</p> <ol style="list-style-type: none"> 1. The production method is not standardized to cause quality variation. 2. Specifications for raw materials are not very clear, with an apparent lack of knowledge. 3. Low morale (according to the president) 4. The high percentage defective for plastics products lowers productivity. 5. The workhouse is in a disorderly condition, presumably producing waste and deteriorating productivity. In the factory, there is an unused space (inside of the tool room), which should be used to improve work efficiency. 6. When a defect is found, no investigation is made to determine a cause and as a result it is often repeated. Usually, quality of a raw material or worker's skill is blamed. 7. The company is often in an unfavorable position about low value added products because of price competition. 8. The turnover of skilled workers is high and the company feels difficulty in retaining them. 9. The company relies heavily on a single customer (which accounts for 60% of sales).
<p>Opportunity:</p> <ol style="list-style-type: none"> 1. The company maintains a stable source of income as it is in a long-term contract with a large textile company. The country's textile industry is expected to grow steadily, thanks to healthy growth of exports. 2. The company is located in an industrial area and has easy access to related industries as well as infrastructure (electricity, communication, and transportation). 3. Unskilled workers can be easily recruited. 	<p>Threaten:</p> <ol style="list-style-type: none"> 1. It is difficult to recruit and retain skilled workers. 2. The company is in competition with companies that produce similar products in a nearby area.

3. Problems Identified

Problems:

1. Product quality depends on each worker's skill and varies greatly. Grinding operation (Photo 1) is carried out by the same worker to ensure uniform quality of work.



2. As raw materials are not checked according to standard specifications, poor quality of materials often causes product defect, which is discovered after production.

3. For any defect (including a customer's complaint), no investigation is made to find a cause. As a result, the defect is repeated to prevent improvement of productivity. Photo 2 shows the reuse of defectives.



4. The warehouse storing raw materials is in a disorderly condition. It takes time to find an adequate material and take up production time, lowering productivity. Photo 3 shows the inside of the warehouse. Also, a room at the depth of the tool room is used to pile up wastes.



5. While the company has generally improved production technology and now makes products that can replace imports (Photo 4 shows bevel gears made by the company), it is in an unfavorable position regarding low value added products due to price competition.



6. Skilled workers often leave the company due to a trouble relating to human relationship with their supervisor or subordinate. Workers' morale is generally low (according to the president).

7. A single customer represents 60% of the company's product sales, presenting a risk.

4. Identification of Issues for the Model Program

Recommendations:

1. Develop standard operation procedures (SOPs) to enable different workers to make a product of uniform quality (Problem 1).
2. Select raw materials suitable for a specific product by understanding specifications, and prepare an instruction sheet to specify production details (Problem 2).
3. Analyze and determine a cause for a defect subject to the customer complaint by using the seven QC tools (in particular, factorial analysis) and take corrective action to prevent recurrence, thereby to reduce customer complaints and improve productivity.
4. Implement 5S activities, especially for the warehouse, in order to allow necessary articles to be found quickly, thereby to eliminate wasteful time and improve productivity (Problem 4).
5. Promote cost reduction through productivity improvement that can be achieved in above 3 and 4, so as to improve price competitiveness for low value added products.
6. Diversify the customer base by increasing sales from the second and third largest customers.
7. Identify a cause(s) for low workers' morale by conducting a survey and devise appropriate improvement measures such as small group activity, management by objective, and bonus/penalty system.

Issues to be addressed and tackled in the model program:

1. Implementation of 5S activities, especially for the warehouse
2. Defect cause analysis using the seven QC tools, and implementation of measures to prevent recurrence and improve productivity.
3. Development of standard operation procedures (SOPs) to enable uniform work and product quality.

Action plan to address the above issues:

1. Objective 1

The shop floor is maintained in clean and orderly conditions to allow quick access to tools and materials.

2) Action list 1

- 2.1 Explanation on 5S activities
- 2.2 Group formation
- 2.3 Delineation of responsible sections
- 2.4 Provision and attachment of red tags
- 2.5 Floor cleaning and disposal of visible wastes
- 2.6 Provision of a tools storage space

- 2.7 Reclassification of stack codes in the warehouse
- 2.8 Selection and designing of storage spaces (for raw materials and products) in the warehouse
- 2.9 Selection and designing of a storage space for work-in-process
- 2.10 Rearrangement of stocks in the warehouse

1. Objective 2

Techniques and tools to prevent recurrence of defective are acquired and defects are reduced.

2) Action list 2

- 2.1 Presentation on QC circle
- 2.2 Formation of QC circles
- 2.3 Tabulation of defect data and preparation of Pareto diagrams
- 2.4 Determination of a cause(s) for defect by using a factorial analysis chart
- 2.5 Development of measures to eliminate a cause(s) for defect and preparation of an implementation plan
- 2.6 Tabulation of defect data after implementation of the elimination measures and confirmation of results

3. Evaluation method (metrics to verify if a problem has been solved)

- 3.1 5S activities: To compare photos before and after each activity.
- 3.2 Reduction of defectives

4. Input required from the client company for problem solving

- (1) Input of manpower relating to the present project
- (2) Allocation of time to allow every employee to participate in the proposed measures, once per week before the start of daily operation

5. Kaizen Schedule

5.1 5S

Action		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
2.1	Plan		→						
	Actual		●						
2.2	Plan		→						
	Actual		→●						
2.3	Plan		→						
	Actual		→●						
2.4	Plan			→					
	Actual			→					
2.5	Plan			→					
	Actual			→	→	→●			
2.6	Plan				→				
	Actual				→	→	→	→●	
2.7	Plan				→	→			
	Actual				→	→	→	→	continue
2.8	Plan					→	→		
	Actual					→	→	→	continue
2.9	Plan						→	→	
	Actual						→	→	continue
2.10	Plan							→	→
	Actual							→	→

5.2 QC Circle

To be planned after the full-fledged launching of 5S activities under Objective 1.

5. Kaizen Activity Record and Result

5.1 Situation prior to the start of the program

(1) Reporting of survey results (June 12)

The report was made to the president on June 12. Two kaizen goals to address problems identified by the diagnosis were presented and understood by the president. The consulting team requested him to arrange a meeting to explain about 5S activities.



5.2 Kaizen activity record

(1) Presentation meeting on 5S activities (June 16)

The meeting was held in the Saturday afternoon to explain about 5S activities to employees. 26 employees participated.

(2) Group formation and monitoring of progress (after June 22)

The consulting team explained to Mr. Pamudji (HR manager, who participated in the June 16 meeting) about the appointment of responsible persons for common areas and the implementation policy. The team then inspected the storage areas and confirmed that they were tidied up much better than before.



In August, however, no meeting was held with Mr. Pamudji because he was busy. The consulting team requested the president to appoint a new person.

(3) Progress of 5S activities

See the following photos.

Raw material warehouse



Cleaning and arrangement underway in the warehouse



Around the tool box – before



Around the tool storage space



Company code : E-34

Room inside of the instrument room – before arrangement



After arrangement



Plastics molding shop



After cleaning of wastes



(4) Designation and marking of storage spaces

A tool storage space and safety paths within the factory are clearly designated and marked. Stacks are numbered and marked. A good example of “visible management” is set.

Numbering and marking of stacks



Designation and marking of the tool storage space



Indication of articles kept in each stack



Designation and marking of a safety path



Arrangement of cables



Installation of a new cable rack



(5) Static precision test for machine tools

This was not included in the original objective. Machine tools play a critical role in making various products and are thus referred to as “mother machine.” However, the company did not realize that the product’s workmanship (dimensional accuracy, etc.) was governed by precision of a machine tool that was used to make it. In particular, it had no idea about what precision level would be required for machine tools to make a product that meets specific precision requirements.

The consulting team requested BPI Logan to send a technical expert (maintenance of machine tools), and Mr. Samsuri visited the company with the consulting team and taught the method for conducting a precision test for lathes. As a result, the company’s workers seem to have had a understanding of machine’s precision as an essential factor for maintaining workmanship at a required level, and the method for measuring machine’s precision and adjusting it as required.



Measurement of a lathe’s precision on the shop floor

Finally, it is desirable to perform periodical calibration of instruments used for measuring machine’s precision, such as dial gauges, and it is recommended to have discussion with a maintenance expert.

Company code : E-34

5.3 Results

As shown in the previous section, the factory was cleaned up and rearranged. As a result, many unused articles were disposed and parts and materials were kept in an orderly condition to improve the visible impression significantly. Also, tools were placed in a designated area with clear marking, and it can be expected to ensure ease of access and use as well as to prevent loss.

A cable rack was installed in a space below the ceiling to accommodate power supply cables for machine tools that had been laid near the wall. It is expected to help clear the floor and improve safety. Note that the work was only carried out on every other Sunday when the factory was not operated, and the consulting team did not confirm its completion. Upon our final check, the rack was almost completed, leaving only cabling work. Thus, it was expected that the work would be completed as planned.

As for Objective 2 “Reduction of defects by means of QC circle,” no activity was implemented partially due to the intermission of activities for Objective 1. More importantly, the responsible person (Mr. Pamudji) was often not available for the meeting with the consulting team, despite an appointment being made, because he was also engaged in sales activity. The consulting team wanted the president to improve the situation but was not able to meet him for a while. It was eventually decided on September 3 to appoint a new person (Mr. Agus), causing a substantial delay in the plan. Then, Mr. Agus was not available at the second meeting on September 14 (confirmed in advance), and the consulting team only inspected the factory. While progress of 5S practice was confirmed, the consulting team was unable to check if 5S activities have reached at the final (Shitsuke – discipline) stage. As a result, Objective 2 was not accomplished.

Finally, the questionnaire survey of the company owner indicated that he felt that consulting results were less than expected because “5S and quality were taken up as kaizen themes, whereas production technology and maintenance was not included (due to a short activity period).” This suggests that a new theme should be taken up after 5S activities have reached at a satisfactory level. Although the kaizen themes were agreed with the owner after corporate diagnosis, sufficient time was not allocated due to the lack of availability of the responsible person and the president did not appoint replacement despite the fact that the consulting team pointed out the problem in August.

6. Findings by Study Team Experts

In implementing any new activity - including 5S - to a company, it is imperative that its owner first gains understanding of employees by telling them an intended objective accurately. Once implementation starts, progress should be monitored to check if the activity and its result meet the objective and to make correction as required, until the original objective is accomplished.

However, the owner of the model company (Mr. Imam) was very busy and rarely available for meetings with the consulting team. Furthermore, the person in charge of kaizen activities was not very cooperative probably because he did not receive an appropriate instruction from the owner. Eventually, the company managed to achieve only one objective by appointing a new responsible

person, e.g., the company can now use a warehouse space effectively, which was littered with wastes, because they have been cleared as a result of 5S activities. Overall, however, a lesson learned from the process is that it is important to gain the owner's understanding and commitment to kaizen activities.

Meanwhile, the Shinda-shi consultant?? showed a high level of commitment to the consulting activity, e.g., he visited the model company and continued to provide advice while the study team was in Japan. In fact, his efforts have encouraged the company to continue kaizen activities and achieve one objective (implementation of 5S). As pointed out in 5, the company was able to improve its working environment substantially and the owner appreciated it during the interview conducted in the final stage of the program.

Clearly, continuation of such kaizen activities contributes greatly to the company's future development. We hope that the owner will make a firm commitment and start the next kaizen activity with a clear objective to create a new value by using the Shindan-shi consultant's service effectively.

Company code : W-27

**THE STUDY
ON
HUMAN RESOURCE DEVELOPMENT FOR SMALL-and
MEDIUM-sized ENTERPRISES(SMEs)FOCUSED ON
MANUFACTURING INDUSTRIES
IN
REPUBLIC OF INDONESIA (PHASE2)**

**Report on Corporate Diagnosis and Advisory Activities under Model
Program**

Company code: W-27

Indonesian Shindan-shi: George

Indonesian Shindan-shi:

Indonesian Shindan-shi:

JICA study team expert: Osamu Fukaya

Company code : W-27

Company code: W-27

Date of visit: May 28, 2007

Company name: -

Visited by: George, Fukaya, Insan

TEL: -

FAX: -

E-mail: -

Address : -

Personnel interviewed : -

Number of employees: 55

Sales: Rp 5,000 million

SWOT Analysis

1. Company code/name: W-27

2. Date of visit/number of visits: June 19, 2007/second time

3. SWOT analysis made by: George

4. Study team expert: Osamu Fukaya

<p>Strengths:</p> <ol style="list-style-type: none"> 1. The owner is strongly committed to the company's development and growth. 2. The company makes and supplies high quality OEM parts directly or through suppliers and receives good reputation from customers in terms of quality and delivery schedule. 3. The company is basically managed according to the policy set by its OEM customer and participates in Astra Green Company's program. 4. The company has an excellent accounting system and makes a financial report. 5. The company retains a group of excellent engineers and skilled workers. 6. The turnover rate of employees is relatively low. 	<p>Weakness:</p> <ol style="list-style-type: none"> 1. 5S activities are not fully implemented. 2. The company has not obtained ISO 9000 certification. 3. There is the shortage of human resource and equipment. 4. The company accepts materials in terms of chemical composition and mechanical property by relying on supplier's data. 5. The internal rejection rate is relatively high at 6%. 6. The rejection rate of parts shipped by the company is also high at 3%. 7. The company maintains relatively large inventories, i.e., one year for SCM steel materials for washers and three months for other materials according to the customer's forecast, taking up the operating cost.
<p>Opportunity:</p> <ol style="list-style-type: none"> 1. Demand for automotive parts from domestic aftermarkets and OEM companies is expected to increase. 2. The country offers a favorable investment climate for foreign investors. 	<p>Threaten:</p> <ol style="list-style-type: none"> 1. Prices of low-cost Chinese products may become global standard. 2. Companies having large capital and high performance equipment may become competitors. 3. Materials suppliers are not always cooperative.

Problems identified:

1. The in-process rejection rate is high (6%).
2. The customer's rejection rate is 3%.
3. Insufficient implementation of 5S, especially machine cleaning and the method for storing jigs and fittings need to be improved.
4. Excessive inventories of materials (one year for SCM steel materials for washers and three months for other materials are too long)
5. Accurate estimation of machine operating time

Issues identified:

1. Reduction of setup time (accurate estimation of machine operating time)
2. Reduction of the in-process rejection rate
3. Strict enforcement of 5S, especially proper cleaning of machines and the improvement of the storage method for jigs and fittings
4. Reduction of inventories of materials

Issues selected for the model program:

1. Reduction of setup time (accurate estimation of machine operating time)
2. Reduction of the in-process rejection rate
3. Strict enforcement of 5S, especially proper cleaning of machines and the improvement of the storage method for jigs and fittings

Action plan to address the selected issues:

1. Objective: Internal goals
 - Reduction of setup time: 30% reduction of the present setup time
 - Reduction of the in-process rejection rate: Reduction from the present 6% to 4%
 - Strict enforcement of 5S: Implementation by setting the number of items

2. Method for solving the issues (action)
 - Setup time: At first, setup time and work description relating to a frequently operated machine (CNC lathe) is analyzed and the results are recorded in a setup time analysis sheet and a daily work report. Then, for items that take significant time, a method for reduction is selected and executed. Then, the same cycle is implemented for other process stages.
 - In-process defect: The number of in-process defects is measured and recorded in a countermeasure sheet. Record items include the total quantity of production, the total number of defects, the number of defects by item, and the rejection rate. Then, a person responsible for implementation of corrective measures is appointed for each defect item. Possible corrective measures are identified to make a correction plan. A corrective measure is implemented under the leadership of the responsible person.
 - 5S: The factory is inspected and evaluated on the basis of the check sheet to select items and places for corrective measures to be implemented.

3. Evaluation method (metrics to verify if a problem has been solved)
 - Setup time: To check the setup time to see if it is shortened by 30%.
 - Rejection rate: To calculate the rejection time to see if it has decreased from 6% to 4%.
 - 5S: To check if identified items have been implemented.

4. Input required from the client company for problem solving
 - Setup time: Analysis of setup time, preparation of work reports, and planning and implementation of reduction measures
 - Rejection rate: To record the rejection rate for each lot in the countermeasure sheet and select a corrective measure.
 - 5S: Floor cleaning, floor repair, redrawing of floor lines, removal of unused articles, and machine cleaning

General Flow of Kaizen Activity

Action		May	June	July	August	September	October	November	December
A1:Reduction of setup time	Plan				—————				
	Actual					—————		
A2:Reduction of the in-process rejection rate	Plan				—————				
	Actual					—————		
A3:5S	Plan				—————				
	Actual					—————		

Company code : W-27

Advisory Service Record and Results

Company visited	Company code: W-27	Company name :
Number of visits	9	
Shindan-shi	Osamu Fukaya	Study team member : Hiroshi Imaizumi
Principal contact of the client company	president	
Process from diagnosis to determination of issues	The results of the SWOT analysis and the subsequent diagnosis suggest that setup time is fairly long, although accurate data are not collected. The rejection rate is relatively high, 6% in process and 3% after shipment. 5S seems to be at a relatively high level but is by no means satisfactory. The president's first request was reduction of setup time. In consideration of these circumstances, reduction of setup time was selected as the first issue, followed by reduction of the rejection rate and 5S.	
Issue 1	Theme	Reduction of setup time
	Before situation of advice/ guidance	Setup time is not to be understood as the daily record of work
	Guidance record	The consulting team furnished a daily work report sheet, based on which daily work record was taken for the most frequently used machine (CNC lathe) and the current state of setup work was studied to estimate setup time. As a result, process steps that required improvement were identified, and corrective measures were developed and undertaken under the plan. However, some goals were not achieved.
	Result and evaluation	The setup time was reduced from original 74 minutes to 56 minutes, resulting in 18-minute reduction. Further efforts are expected to reduce it further.

Issue 2	Theme	Reduction of the rejection rate
	Situation prior to the start of guidance	(1)A defect in workmanship occurred due to wear of a cutting tool; (2) a dimensional defect occurred due to barring produced in the course of work piece machining; and (3)a defect occurred when a semi-finished product supplied by the customer was machined by a CNC lathe, regardless of difference in material between pipe and round bar.
	Guidance record	It was advised: (1) to replace a worn-out tool quickly or to take corrective measures such as regrinding or re-machining of the tool; (2) to perform deburring after machining or use the part not affected by burr; and (3) to pay attention to the difference in supplied material.
	Result and evaluation	Defects identified for specific products have been eliminated, although the corrective measures did not cover every item because the company makes a variety of products.
Issue 3	Theme	5 S
	Situation prior to the start of guidance	There were many problems observed in the factory, such as cardboard boxes left on the floor, fading of floor lines, articles left on the path, dust deposited on a machine, and a PET bottle or bag found around or below a machine.
	Guidance record	The company entered the 5S check sheet under our advice and realized its importance. Also, photos were taken for places to be improved and were shown to the company.
	Result and evaluation	The conditions were improved at the time of the subsequent visit.

Company code : W-27

Issue1 Setup Change

1-1 Time for short meeting

Before improvement:

The short meeting prior to setup work was long, 10 – 20 minutes in the following cases.

After improvement:

Time spent for the short meeting was reduced by half from 20 to 10 minutes.

1-2 Tools

Before improvement

Tools were kept in drawers and the user requisitioned a tool from the caretaker by filling out a card with his name.

After improvement

A tool box is provided to keep tools for CNC lathes and is accessible by the worker.

1-3 Need for searching a container box for parts

Before improvement

It was often required to search a container box for parts.

After improvement

The container box is placed in a designated area to eliminate the need for searching.

Reduction of setup change time

Machine: CNC lathe (Takizawa)

Process: To reduce setup time by 30% (from 75 minutes to 52 minutes).

Product type change: From color (92143-1291) to KMI holder (13280-0229A)

No	Step	Current time	After improvement		Action plan
			Planned	Actual	
1	Short meeting	20	10	10	Reduced
2	Preparation of a tool	8	4	6	Providing a special container for CNC group
3	Setting	12	10	10	Skill improvement
4	Program input from book to machine	5	←	←	
5	Zero setting	5	←	←	
6	Trial operation	4	←	←	
7	Confirmation of goal guide	2	1	2	Skill improvement
8	Try 1	4	←	←	
9	Improvement of program X, try 2	4	←	←	
10	Need for searching a container box	5	1	1	Designation of a space designated for empty boxes
11	Try 3	2	←	←	
12	Try 4, improvement of program Z	2	1	2	Skill improvement
13	Entry to the check sheet	1	←	←	
14	Start of production	2	←	←	
TOTAL		74	52	56	

Activities :

I.

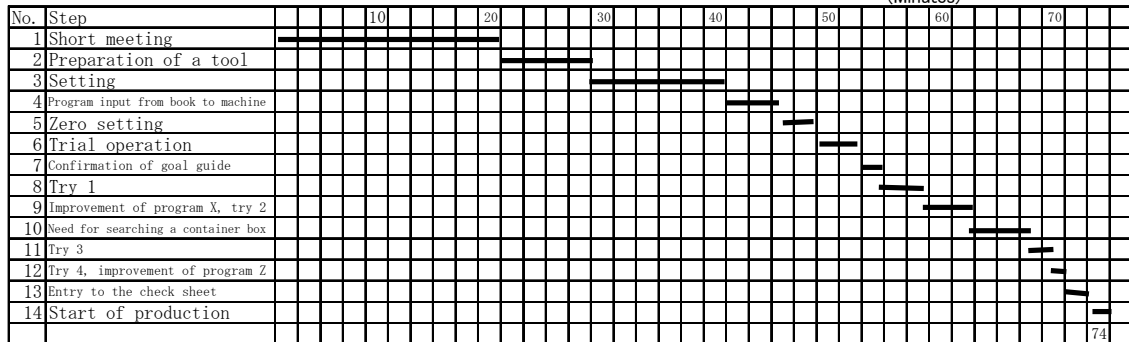
1. Designation of a storage area for empty boxes
2. Training of CNC operators
3. Designation of stacks for CNC tools

II. Reduction of setup time by 23.4%, in comparison to the planned target of 30%

Company code : W-27

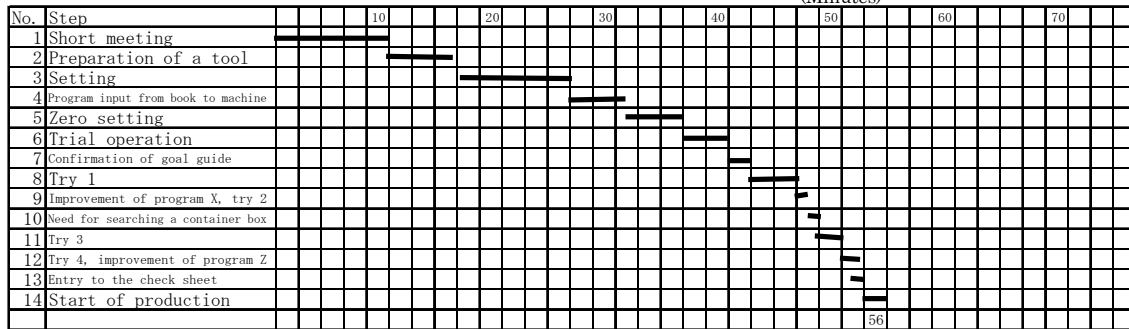
Before improvement

(Minutes)



After improvement

(Minutes)



Issue 2 Reduction of the Rejection Rate

2-1 Reduction of Holder Defects

Before improvement

For the machining of holders (13280-0225A), the company performed only boring operation by using the CNC lathe. The rejection rate was as much as 1.83%, or 4 pieces (defect in rough surface) versus 212 pieces machined.

After improvement

It was found that the defect came from the difference in material between the pipe and the round bar, and corrective action was taken to change the setting of the CNC program for round bars and for pipes.



Total number of pieces machined		212
Number accepted		208
Number rejected	Rough surface	4
	Total	4
Rejection rate		1.83%

Defect item	Person in charge	Planned and actual corrective actions				
		Month/year	July	August	September	October
Roughsurface after boring	KUNCORO(QA) MASHUDIN (PROD)	Plan	—————→			
		Actual	- - - - -→			

Company code : W-27

2-2 Reduction of defects in hub cutting

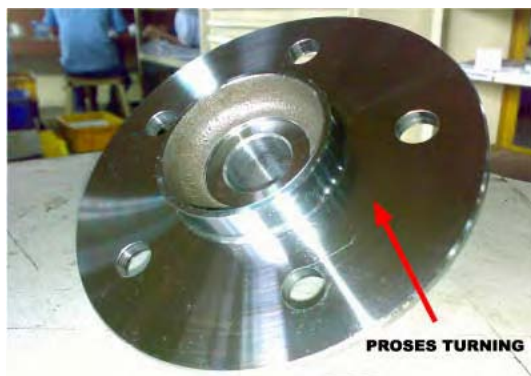
Before improvement :

Rough surface finish occurred in hub cutting operation using a CNC lathe (Victor). The rejection rate was 1 versus 291 pieces machined.

After improvement :

As a result of study and analysis, it was found that the defect was caused by vibration of the tip of the cutting tool. Corrective action was taken to rework the cutting tool so that the tip was securely fixed to the tool body.

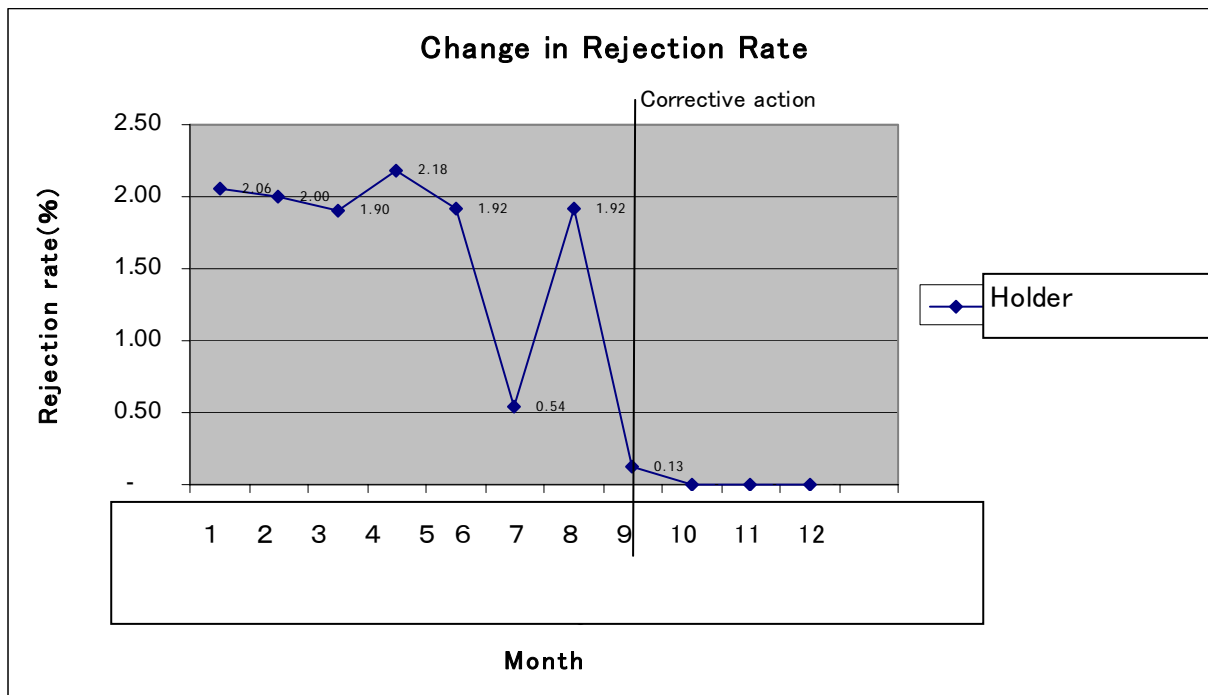
Countermeasure sheet	Machining operation
July 2007 Shift 1	
Worker:	Mashudin
Product name and number:	HUB, FRONT AXLE (43511-X62000-A)
Machine name and number:	CNC lathe VICTOR
Process number	No.3 (TURNING)
Material name	SVd 48 SI



Total number of pieces machined		291
Number accepted		290
Number rejected	Rough surface	1
	Total	1
Rejection rate		0.34%

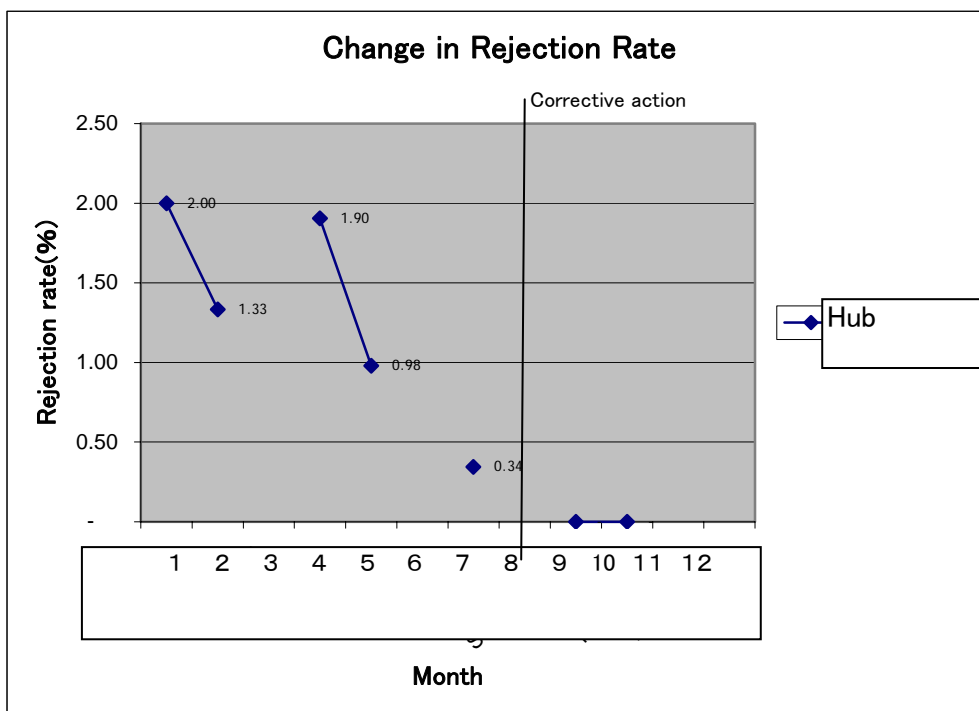
Defect item	Person in charge	Planned and actual corrective actions				
		Month/year	July	August	September	October
Rough surface	MASHUDIN	Plan	—————→			
		Actual	- - - - -→			

Company code : W-27



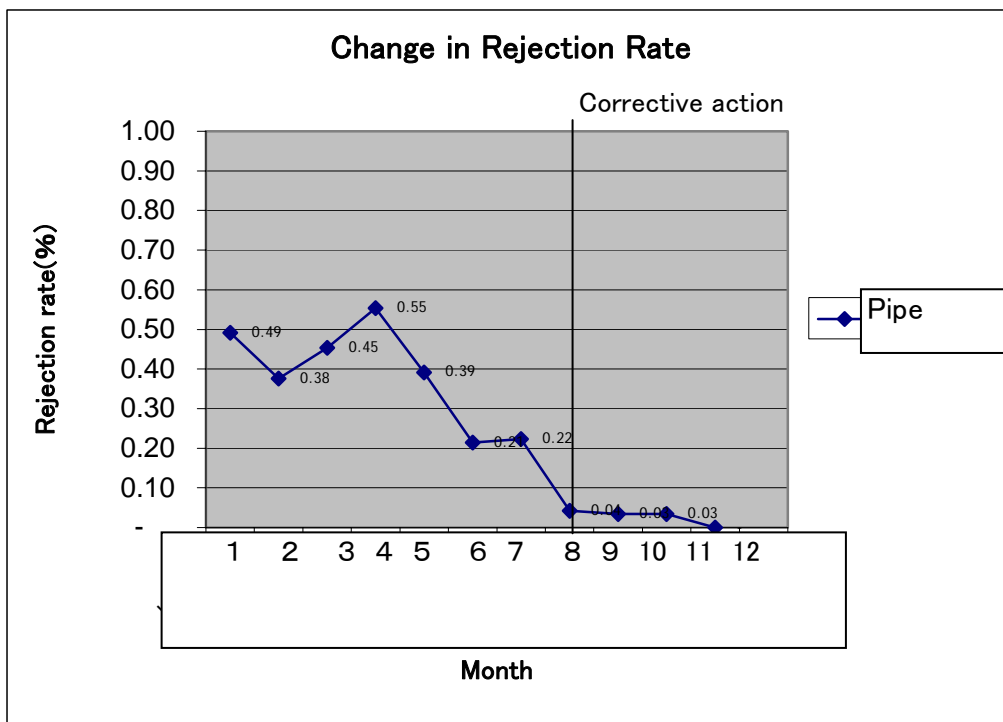
M0nth	1	2	3	4	5	6	7	8	9	10	11	12
OK	340	250	315	275	208	558	208	765	842	448	987	-
NG	7	5	6	6	4	3	4	1	-	-	-	-

Company code : W-27



Month	1	2	3	4	5	6	7	8	9	10	11	12
OK	100.00	150.00	-	105.00	102.00	-	290.00	-	234.00	150.00	-	-
NG	2	2	-	2	1	-	1	-	-	-	-	-

Company code : W-27



Month	1	2	2	4	5	6	7	8	9	10	11	12
OK	8,135	7,987	8,153	8,127	7,670	8,881	45,189	9,443	8,796	8,780	8,650	-
NG	40	30	37	45	30	19	101	4	3	3	-	-

Issue 3 5S

3-1 Redrawing of floor lines

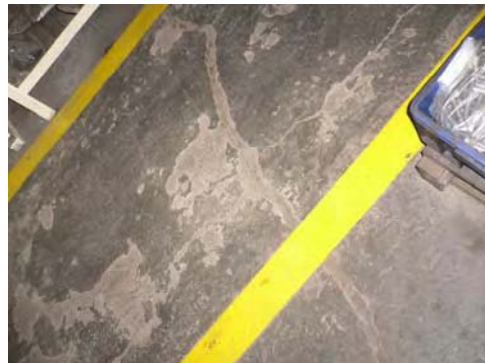
Before improvement

1. Yellow lines on the floor faded and disappeared partially.



After improvement

1. Yellow lines were redrawn.



3-2 Wastes left around the machine

Before improvement

Wastes and scraps were found near a machine.



After improvement

They were cleared and disposed.

3-3 Cardboard boxes left around the machine

Before improvement

Cardboard boxes were left on the floor near a machine.



After improvement

They were cleared and disposed.

3-4 Container left on the service path

Before improvement

A container was found on a service path.



After improvement

It was removed from the service path.

3-5 Unclean forklifts and carts

Before improvement

Hand-powered forklifts and carts were not cleaned.



After improvement

Cleaning was carried out to remove dust and stain.

3-6 Stained liquid storage place

Before improvement

A liquid storage place was not cleaned.



After improvement

The floor and the wall of the storage place were cleaned, together with liquid containers.

3-7 Dust on the machine

Before improvement

The upper part of a machine was covered with dust.



After improvement

Cleaning was carried out by wiping dust from the machine.

Company code : W-27

3-8 Dust particles on the container

Before improvement

Dust particles were found on the edge of a container.

After improvement

Cleaning was carried out to remove dust.

3-9 Unclean rack and pinion pressure press

Before improvement

Dust was found around a rack and pinion pressure press.



After improvement

The area around the press was cleaned.

Company code : W-27

3-10 Unclean CNC lathe

Before improvement

The CNC lathe (Takizawa) was covered with dust.



After improvement

The cover of the CNC lathe and auxiliary equipment around it were cleaned.

3-11 Program note

Before improvement

A notebook recording CNC programs was old and its content was hard to read.



After improvement

The old notebook was replaced with the new one.

Company code : W-27

3-12 Unclean material storage area

Before improvement

A material storage area was not cleaned



After improvement

Cleaning was carried out.

Company code : W-27

3-13 Lack of height restriction sign

Before improvement

Height restriction was not indicated at the entrance of the building where a track entered.

After improvement

A sign was installed to indicate height restriction for an entering track.



Maximum
2.9m

Appendix -2 Interview Survey Questionnaire Companies
Participating in the Model Program

December 1st 2007

Interview Survey Questionnaire Companies Participating in the Model Program

JICA Study Team of Indonesia Human Resource Development (Phase II) Study

Thank you for your participation in the model program, which has been implemented as a part of JICA Development Study since May 2007. Based on the results and experiences obtained from the model program, we, the JICA study team, will develop specific proposals and recommendations with regard to SME promotion in the country's rural regions and will submit them to the Indonesian government. Now we would like to ask you the following questions on the model program to collect candid opinions of the participants. Thank you for your cooperation.

We assure you that information revealed in your response will not be disclosed to any third party other than JICA.

1. Company name:
2. Address:
3. Name of SME consultant:

1. Indicate a reason(s) for your participation in the diagnosis and consultation program from below.

- a. I was asked by DINAS (SME consultant) to participate in the program.
- b. I was interested in the diagnosis and consultation program.
- c. I felt the need for addressing and overcoming a major issue facing my company.
- d. The program allowed us to receive diagnosis and consultation service with free of charge.
- e. The program allowed us to receive diagnosis and consultation service from Japanese experts.
- f. The program was offered by JICA
- g. I hoped to establish business relationship with Japanese companies
- h. Other

Specify:

2. What did you expect from the program? (Multiple answers allowed)

- a. To identify a major issue facing our company and find a solution for it.
- b. To help my employees to improve their skills.
- c. To improve our production management capabilities.
- d. To improve our business management capabilities (cost management, accounting, and finance).
- e. To promote good housekeeping practice in the form of 5S activities.
- f. To cultivate business relationship with Japanese companies.
- g. To have access to commercial loan.
- h. I did not expect anything in particular.
- i. Other

Specify:

3. Did the program meet your expectation?

- a. As expected.
- b. More than expected.
- c. Less than expected.

3-1 If you have checked “a” or “b” in the above, in what aspects did the program meet your expectation? (Multiple answers allowed)

- a. Actual results of the kaizen activity
- b. The method for diagnosis and consultation applied by the SME consultant

Specify:

- c. Other

Specify:

3-2 If you have checked “c” in the above, in what aspects did the program fail to meet your expectation?

- a. Actual results of the kaizen activity.

Specify:

- b. Guidance and advice given by the SME consultant was below my expectation.

Specify:

- c. Other

Specify:

3-3 If you have checked “b” in 3.2, in what aspects did the program fail to meet your expectation?

- a. Specific content of guidance and consultation service

Specify:

- b. The method for diagnosis and consultation applied by the SME consultant

Specify:

- c. Time span and period allocated to diagnosis and consultation

Specify:

- d. Other

Specify:

4. In this section, we would like to ask questions concerning the method and period for the diagnosis and consultation program

4-1 Was the method adopted for the program adequate?

- a. The method was adequate.
- b. The method should be refined.

4-2 If you have checked "b" in 4-1, indicate a specific aspect or part of the diagnosis and consulting method, which requires any modification, refinement or improvement.

Specify:

4-3 As for time elements of the diagnosis and consultation program (duration of the program period or session, frequency, etc.), indicate your opinion by checking an appropriate box(es) below. (Multiple answers allowed)

- a. The program period was adequate in terms of duration.
- b. The program period was too short. (I prefer it should be _____) Specify, for example, more than 1 year.
- c. The program period was too long. (I prefer it should be _____)
- d. The program duration per session was adequate.
- e. The program duration per session was too short. (I prefer it should be _____)
- f. The program duration per session was too long. (I prefer it should be _____)

5. In this section, we would like to ask questions concerning the Indonesian SME consultants who have conducted diagnosis and consulting service this time, and the SME consultant training/certification system

5-1 Is the newly introduced SME consultant system useful for SME promotion?

- a. It is a very good system.
- b. It is not a good system.
- c. It does not appear to be useful for SME promotion.

5-2 If you have checked “b” or “c” in 5-1, indicate a specific reason.

Specify:

5-3 Are Indonesian SME consultants generally capable of meeting the your needs?

- a. They are fully capable of meeting the our needs.
- b. They are partially capable.
- c. They are not capable at all.

5-4 If you have checked “b” or “c” in 5-3, indicate in what aspect (skills and capacities) the Indonesian SME consultants are not as competent as you expected.

Specify:

6. Indicate what kind of support you would like to obtain from DINAS or UPL. (Three items at maximum)

- a. Guidance and advice on engineering technology (welding, casting, etc.)
- b. Guidance and advice on production management technology
- c. Guidance and advice on accounting and financial management (cost management, etc.)
- d. Provision of information on seminars and like in relation to SME management
- e. Support for market development (holding of exhibitions and support for participation in trade shows)
- f. Loan-related support (information service on the public loan and credit system as well as the commercial loan system)
- g. Other

Specify:

7. Do you want to have diagnosis and consultation service by an Indonesian SME consultant in the future, as provided under the model program?

- a. Yes, we want.
- b. Yes, but under certain conditions.
- c. No, we do not want to.

7-1 If you have checked "b" in 7, under what conditions you would like to have the service again?

Specify:

8. If you have checked “a” in 7, would you like to have the service by an Indonesian SME consultant when a service fee is charged?

- a. Yes, we want to have the same service on a fee basis.
- b. No, we do not when a service fee is charged.
- c. It depends on how much we should pay.
- d. It depends on service content.

8-1 If you have checked “c” in 8, indicate how much are you willing to pay?

- a. Actual expenses (transportation and lunch)
- b. Actual expenses plus the hourly fee of Rp. 10,000
- c. Actual expenses plus the hourly fee of Rp. 50,000
- d. Actual expenses plus the hourly fee of Rp. 100,000

8-2 If you have checked “d” in 8, what content (type) of service is acceptable for you to pay a fee, and how much are you willing to pay? (For instance, ___% of the total cost)

Specify:

Appendix -3 Questionnaire Graduates of the First SME Consultant
Training Course

Questionnaire
Graduates of the First SME Consultant Training Course

JICA Study Team of Indonesia Human Resource Development (Phase II) Study

On the occasion of the model program conducted in East and West Java between May through December 2007, wherein SME consultants (the first SME consultant training course) and a team of Japanese experts gave corporate diagnosis and consulting service, we would like to ask you questions on activities that you have conducted since the completion of the training course last year.

We assure you that information revealed in your response will not be disclosed to any third party other than the study team members.

1. **Name**

2. **Telephone/Facsimile No.**

3. **e-mail address**

4. **Company**

4.1 Do you work at what position, structural or fungsional?

a. Structural

b. Fungsional

4.2 If you work for state, prefectural or municipal DINAS, your DINAS has UPL (Unit Pendampingan Langsung)?

a. Yes

b. No

5. **After completion of the SME consultant training course in October 2006, for how many companies have you conducted corporate diagnosis? Please indicate the number of companies for which you have performed corporate diagnosis by sector and the average number of employees. Also indicate the number of companies for which you have rendered or you are currently rendering consulting service after corporate diagnosis, together with the average number of employees**

Sector	No. of companies diagnosed	Average number of employees	No. of companies consulted	Average number of employees
a. Food and beverage				
b. Textile and garment				
c. Leather and shoes				
d. Woodworking and furniture				
e. Machine assembly				
f. Metallic parts				
g. Plastics parts				
h. Other				

6. If you rendered and/or are currently providing consulting service, indicate the main theme (kaizen) for such service. Also indicate the client's reaction to your service for each theme by selecting an appropriate statement from below.

- (1) The client has aggressively conducted kaizen activities and has produced results.
- (2) The client has understood your service but has not made progress in actual kaizen activity.
- (3) The client fails to understand your service and is reluctant to take any action.

Main theme for consulting service	Client's reaction
a.	
b.	
c.	
d.	
e.	

7. In the course of your corporate diagnosis service, have you received a request for consultation concerning loan application?

- a. Yes, and I have supported the client in actual loan application.
- b. Yes, but I have not provided any support.
- c. No.

11. Do you intend to continue corporate diagnosis activity?

a. Yes.

b. No or I do not know.

If you have checked "No" in Question 11, move to Question 12. If you have checked "Yes," move to Question 13.

12. Indicate a reason(s) for your answer "No or I do not know." (Multiple answers allowed)

- a. I am too busy with other work to continue corporate diagnosis service.
- b. I have no confidence in myself due to the lack of knowledge or experience.
- c. I do not believe that corporate diagnosis is useful.
- d. Other

Specify:

13. Select three sectors for which you intend to conduct corporate diagnosis service and check appropriate columns below. Also indicate a preferable company size you would like to serve by selecting an appropriate number from below.

Sector	To be diagnosed	Preferable company size
Example	√	3
a. Food and beverage		
b. Textile and garment		
c. Leather and shoes		
d. Woodworking and furniture		
e. Machine assembly		
f. Metallic parts		
g. Plastics parts		
h. Other		

Company size:

- 1 Less than 10 employees
- 2 10 – 49 employees
- 3 50 – 99 employees
- 4 100 or more

14. Suggest any improvement that should be made about the last year's SME consulting training course.

15. If you receive retraining for corporate diagnosis techniques and skills, what type of training do you prefer? Select two from below.

- a. Lecture
- b. Field training in corporate diagnosis
- c. Field tour on advanced factories
- d. Factory training

Thank you for your cooperation.

In December, we will hold seminars to present model program results in Bandung and Surabaya. We are looking forward to seeing you there.

Appendix -4 Number of Companies that have received diagnosis / consulting service by sector and employment size (each province)

Appendix-4 Number of Companies that have received diagnosis/consulting service by sector and employment size: (each province)

Province	Sector	No. of companies that have received diagnosis service	Average number of employees	No. of companies that have received consulting services	Average number of employees	
Aceh	Food and Beverage	1	2			
	Textile and Garment	1	11	1	11	
	Leather and Shoes					
	Woodworking and furniture	1	5			
	Machinery assembly					
	Metal parts					
	Plastic parts					
	Other	1	4			
	Total	4	6	1	11	
	Average per Shindan-shi	4		1		
North Sumatera	Food and Beverage	9	18	5	25	
	Textile and Garment					
	Leather and Shoes					
	Woodworking and furniture	2	7			
	Machinery assembly					
	Metal parts	1	30			
	Plastic parts					
	Other	5	5			
		Total	17	13	5	25
	Average per Shindan-shi	4		1		
West Sumatera	Food and Beverage	29	8	5	13	
	Textile and Garment	5	30	3	53	
	Leather and Shoes	5	14	3	18	
	Woodworking and furniture					
	Machinery assembly	2	8	1	20	
	Metal parts	10	4			
	Plastic parts					
	Other			3	20	
		Total	51	10	15	24
		Average per Shindan-shi	5		1	
Riau	Food and Beverage	3	5			
	Textile and Garment					
	Leather and Shoes					
	Woodworking and furniture					
	Machinery assembly					
	Metal parts					
	Plastic parts					
	Other	3	20	1	35	
		Total	6	13	1	35
	Average per Shindan-shi	6		1		

Province	Sector	No. of companies that have received diagnosis service	Average number of employees	No. of companies that have received consulting services	Average number of employees
Jambi	Food and Beverage	13	30	3	7
	Textile and Garment	2	6	1	4
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other				
	Total	15	26	4	6
Average per Shindan-shi	8		2		
South Sumatera	Food and Beverage	1	15	1	15
	Textile and Garment				
	Leather and Shoes	1	14	1	14
	Woodworking and furniture				
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other				
	Total	2	15	2	15
Average per Shindan-shi	2		2		
Bangka Belitung	Food and Beverage	2	10		
	Textile and Garment	1	40		
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other				
	Total	3	20		
Average per Shindan-shi	3				
West Jawa	Food and Beverage	3	12	5	10
	Textile and Garment	9	21	3	25
	Leather and Shoes	11	36	3	18
	Woodworking and furniture	2	10	3	8
	Machinery assembly	2	30		
	Metal parts	16	65	10	73
	Plastic parts	1	30	1	30
	Other	1	10	1	10
	Total	45	39	26	37
Average per Shindan-shi	5		3		
Central Jawa	Food and Beverage	8	15		
	Textile and Garment	1	5	1	800
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts	8	3		
	Plastic parts				
	Other	3	5	1	20
	Total	20	8	2	410
Average per Shindan-shi	10		1		

Province	Sector	No. of companies that have received diagnosis service	Average number of employees	No. of companies that have received consulting services	Average number of employees
D.I. Yogyakarta	Food and Beverage				
	Textile and Garment				
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts	2	70		
	Plastic parts				
	Other	2	50	2	10
	Total	4	60	2	10
Average per Shindan-shi	4		2		
East Jawa	Food and Beverage	11	18		
	Textile and Garment	1	20		
	Leather and Shoes	27	55		
	Woodworking and furniture	3	25		
	Machinery assembly				
	Metal parts	20	19	15	20
	Plastic parts				
	Other	10	15		
	Total	72	32	15	20
Average per Shindan-shi	14		3		
Bali	Food and Beverage	2	10	1	10
	Textile and Garment	2	33	2	33
	Leather and Shoes	1	15	1	15
	Woodworking and furniture	2	20	2	20
	Machinery assembly				
	Metal parts	1	150	1	150
	Plastic parts	3	20	3	20
	Other	1	20		
	Total	12	31	10	36
Average per Shindan-shi	6		5		
West Nusa Tenggara	Food and Beverage	2	9		
	Textile and Garment				
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other	6	18	1	25
	Total	8	15	1	25
Average per Shindan-shi	4		1		
East Nusa Tenggara	Food and Beverage	6	5	5	5
	Textile and Garment				
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other				
	Total	6	5	5	5
Average per Shindan-shi	6		5		

Province	Sector	No. of companies that have received diagnosis service	Average number of employees	No. of companies that have received consulting services	Average number of employees
West kalimantan	Food and Beverage	6	7	1	7
	Textile and Garment	2	10		
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other	1	6	1	6
	Total	9	8	2	7
Average per Shindan-shi	9		2		
Central kalimantan	Food and Beverage				
	Textile and Garment				
	Leather and Shoes				
	Woodworking and furniture	2	20	1	40
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other	2	10	1	20
	Total	4	15	2	30
Average per Shindan-shi	4		2		
South kalimantan	Food and Beverage	2	27	1	15
	Textile and Garment	1	4		
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts	1	7		
	Plastic parts				
	Other	1	5		
	Total	5	14	1	15
Average per Shindan-shi	3		1		
North Sulawesi	Food and Beverage	2	10	1	15
	Textile and Garment				
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other				
	Total	2	10	1	15
Average per Shindan-shi	2		1		
South Sulawesi	Food and Beverage	26	9	13	7
	Textile and Garment	6	6	5	6
	Leather and Shoes				
	Woodworking and furniture	10	11	5	10
	Machinery assembly				
	Metal parts	1	5		
	Plastic parts				
	Other	20	22	11	23
	Total	63	13	34	12
Average per Shindan-shi	7		4		

Province	Sector	No. of companies that have received diagnosis service	Average number of employees	No. of companies that have received consulting services	Average number of employees
South east Sulawesi	Food and Beverage	8	9	3	8
	Textile and Garment	3	12	3	12
	Leather and Shoes				
	Woodworking and furniture	1	2	1	2
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other	1	15		
	Total	13	10	7	9
Average per Shindan-shi	4		2		
Gorontalo	Food and Beverage				
	Textile and Garment				
	Leather and Shoes				
	Woodworking and furniture				
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other	6	8	6	8
	Total	6	8	6	8
Average per Shindan-shi	6		6		
North Maluku	Food and Beverage	7	10	10	7
	Textile and Garment	1	12	8	7
	Leather and Shoes				
	Woodworking and furniture	1	13	2	11
	Machinery assembly				
	Metal parts				
	Plastic parts				
	Other				
	Total	9	11	20	7
Average per Shindan-shi	9		20		

Appendix -5 Sectors intended for future diagnosis activities by
employment size (each province)

**Appendix-5 Sectors intended for future diagnosis activities by employment size
(each province)**

Province	Sector	Number of Shindan-shi of respondents	Employment size
Aceh	Food and Beverage	1	Under 10 persons
	Textile and Garment		
	Leather and shoes		
	Woodworking and furniture		
	Machinery assembly		
	Metal parts		
	Plastic parts		
	Other	1	Under 10 persons
North Sumatera	Food and Beverage	3	10-49 persons
	Textile and Garment		
	Leather and shoes		
	Woodworking and furniture	1	10-49 persons
	Machinery assembly	1	50-99 persons
	Metal parts	1	50-99 persons
	Plastic parts		
	Other		
West Sumatera	Food and Beverage	4	Under 10 persons
		5	10-49 persons
	Textile and Garment	4	Under 10 persons
		4	10-49 persons
	Leather and shoes		
	Woodworking and furniture	6	10-49 persons
	Machinery assembly	3	10-49 persons
	Metal parts	1	Under 10 persons
Plastic parts	1	10-49 persons	
Other	1	Under 10 persons	
Riau	Food and Beverage	1	10-49 persons
	Textile and Garment	1	10-49 persons
	Leather and shoes		
	Woodworking and furniture	1	10-49 persons
	Machinery assembly		
	Metal parts	1	10-49 persons
	Plastic parts		
	Other	1	10-49 persons
Jambi	Food and Beverage	1	Under 10 persons
		1	10-49 persons
	Textile and Garment	1	Under 10 persons
	Leather and shoes		
	Woodworking and furniture	2	Under 10 persons
	Machinery assembly		
	Metal parts		
	Plastic parts		
Other			
South Sumatera	Food and Beverage	1	10-49 persons
	Textile and Garment		
	Leather and shoes	1	10-49 persons
	Woodworking and furniture	1	10-49 persons
	Machinery assembly		

Privunce	Sector	Number of Shindan-shi of respondents	Employment size
	Metal parts		
	Plastic parts		
	Other		
Bangka Belitung	Food and Beverage	1	10-49 persons
	Textile and Garment		
	Leather and shoes		
	Woodworking and furniture		
	Machinery assembly		
	Metal parts		
	Plastic parts		
	Other		
West Jawa	Food and Beverage	2	Under 10 persons
	Textile and Garment	2	Over 100 persons
		3	10-49 persons
	Leather and shoes	3	10-49 persons
	Woodworking and furniture	1	Under 10 persons
		1	10-49 persons
	Machinery assembly	2	50-99 persons
		1	10-49 persons
	Metal parts	1	10-49 persons
		1	50-99 persons
	Plastic parts	2	Over 100 persons
1		50-99 persons	
Other			
Central Jawa	Food and Beverage	1	Under 10 persons
	Textile and Garment	1	10-49 persons
	Leather and shoes	1	Under 10 persons
	Woodworking and furniture		
	Machinery assembly		
	Metal parts		
	Plastic parts		
	Other	1	Under 10 persons
D.I. Yogyakarta	Food and Beverage		
	Textile and Garment		
	Leather and shoes		
	Woodworking and furniture		
	Machinery assembly		
	Metal parts		
	Plastic parts		
	Other	1	10-49 persons
East Jawa	Food and Beverage	4	10-49 persons
	Textile and Garment	1	10-49 persons
	Leather and shoes	2	10-49 persons
	Woodworking and furniture	1	10-49 persons
	Machinery assembly		
	Metal parts	3	10-49 persons
	Plastic parts		
	Other	2	10-49 persons
Bali	Food and Beverage		
	Textile and Garment	2	10-49 persons
	Leather and shoes		

Privunce	Sector	Number of Shindan-shi of respondents	Employment size
	Woodworking and furniture	1	10-49 persons
	Machinery assembly		
	Metal parts	1	10-49 persons
		1	Over 100 persons
	Plastic parts		
West nusa Tenggara	Other	2	10-49 persons
	Food and Beverage	2	Under 10 persons
	Textile and Garment		
	Leather and shoes		
	Woodworking and furniture	1	Under 10 persons
	Machinery assembly		
	Metal parts	1	Under 10 persons
	Plastic parts		
East Nusa Tenggara	Other	2	10-49 persons
	Food and Beverage		
	Textile and Garment	1	10-49 persons
	Leather and shoes		
	Woodworking and furniture		
	Machinery assembly		
	Metal parts		
	Plastic parts		
West kalimantan	Other		
	Food and Beverage	1	Under 10 persons
	Textile and Garment	1	Under 10 persons
	Leather and shoes		
	Woodworking and furniture		
	Machinery assembly		
	Metal parts		
	Plastic parts		
Central Kalimantan	Other		
	Food and Beverage	1	10-49 persons
	Textile and Garment		
	Leather and shoes		
	Woodworking and furniture	1	10-49 persons
	Machinery assembly		
	Metal parts		
	Plastic parts		
South Kalimantan	Other	1	10-49 persons
	Food and Beverage	1	Under 10 persons
	Textile and Garment	1	10-49 persons
	Leather and shoes		
	Woodworking and furniture	1	10-49 persons
	Machinery assembly		
	Metal parts		
	Plastic parts		
North Sulawesi	Other	1	10-49 persons
	Food and Beverage	1	10-49 persons
	Textile and Garment		
	Leather and shoes		
	Woodworking and furniture		
	Machinery assembly		

Province	Sector	Number of Shindan-shi of respondents	Employment size
	Metal parts		
	Plastic parts		
	Other		
South Sulawesi	Food and Beverage	4	Under 10 persons
		3	10-49 persons
	Textile and Garment	4	Under 10 persons
		3	10-49 persons
	Leather and shoes		
	Woodworking and furniture	5	Under 10 persons
		3	10-49 persons
	Machinery assembly		
	Metal parts	1	Under 10 persons
		1	10-49 persons
South east Sulawesi	Food and Beverage	1	Under 10 persons
		2	10-49 persons
	Textile and Garment	1	Under 10 persons
		1	10-49 persons
	Leather and shoes		
	Woodworking and furniture	2	10-49 persons
		1	50-99 persons
	Machinery assembly		
Gorontalo	Food and Beverage	1	10-49 persons
	Textile and Garment		
	Leather and shoes		
	Woodworking and furniture	1	10-49 persons
	Machinery assembly		
	Metal parts		
	Plastic parts		
	Other		
North Maluku	Food and Beverage	1	10-49 persons
	Textile and Garment	1	Under 10 persons
	Leather and shoes		
	Woodworking and furniture	1	10-49 persons
	Machinery assembly		
	Metal parts		
	Plastic parts		
	Other		