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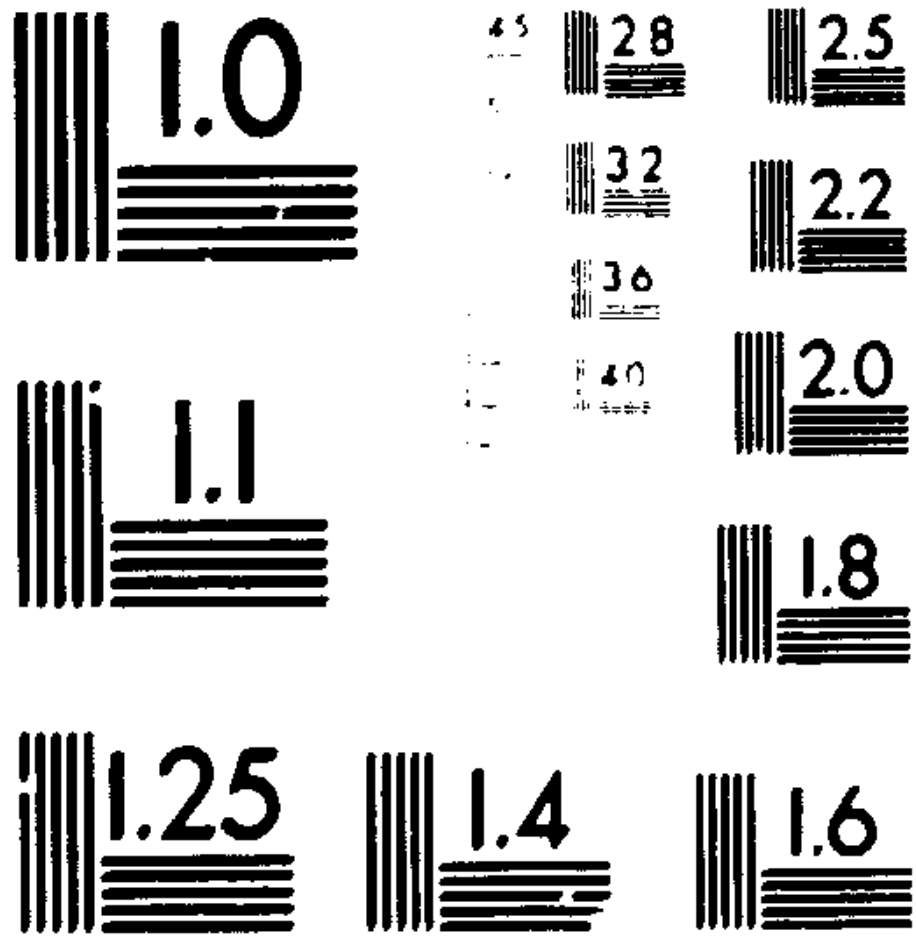

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ASSISTANCE TO THE DEVELOPMENT OF SMALL INDUSTRY.

DP/INS/78/078

THE REPUBLIC OF INDONESIA

Report of the Evaluation Mission*

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Prepared for the Government of the Republic of Indonesia
by the United Nations Development Programme and
the United Nations Industrial Development Organization

United Nations Industrial Development Organization

Vienna

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Summary

The project, both its central staff and the field teams, worked with Indonesian staff recruited for the project, not with permanent Government staff. This has seriously reduced the transfer of know-how and methodologies to the Government organizations. No permanent capabilities were created in the Ministry. The central experts produced a large number of policy papers that do not seem to have been extensively used by the Indonesian administration. The only exception was the training expert, who did co-operate closely with DJIK staff. A training capability now exists, including trainers and manualized programmes. The information expert succeeded to some extent. An information service was established at the Jakarta Pula Gadung estate, which is operational but not very active.

The direct support to the small-scale industry (mainly consisting of advice and training) by the field teams, but also by some Jakarta-based experts, has been useful at the level of individual enterprises, but the cost-effectiveness and the lasting effect on the sector of this type of activity is doubtful. There was no geographical or sector concentration within the activities of the experts, nor was specific systematic attention paid to the existing Government programmes such as the Foster Father system. Co-operation with the National Research and Development Institutions and other organizations such as banks and industry associations has been limited to a handful of ad hoc contacts. The experts worked largely as individual consultants to the SSI.

The exception here has been the activities in the SSI in the Bandung area, focussing on the electrical/electronic sector. The expert concerned succeeded, using the local R+D institutions and working together closely with the provincial authorities, in improving the operations of a group of similar enterprises that now are producing new and better products and selling these. Additional employment was created. The model developed in Bandung is considered by the evaluation mission to be a good basis for future industry-level assistance.

The evaluation mission did ascertain that at least a large proportion of the SSI are open for technical support, and that, at the same time, markets seem to exist for the small-scale industry. Certainly, if a good quality product can be made in the electrical and metal products sectors, large subcontracting opportunities exist in principle. Further, for viable projects, financing seems to be available, although the channels and procedures should be and could be improved.

In Indonesia, technical assistance should not ignore the extensive national infrastructure and development programmes, and should not attempt to work directly with industry alone. Based on our experience, a very important technical assistance task is to develop ways to implement national programmes at the SSI level, using the infrastructure and working with groups of enterprises. For future assistance, the evaluation team proposes to apply the above-described Bandung model to begin with in another two location/sector combinations, selected on the basis of product groups identified in a systematic way in the Ministry of Industry. After a careful evaluation of the effectiveness of the approach, and possibly further external assistance in later wider application in other products, sectors and regions, eventually the national structure should be able to implement this focussed approach without such assistance.

The project should also, at the same time, strengthen the central functions of the Ministry in its training, product design and information services, as well as in establishing a data bank on SSI.

List of Abbreviations Used

REPELITA - Five-Year Plan

SSI - Small-Scale Industry

DJIK - Directorate General for Small Industry

BIPIK - Small Industry Development Programme

PPIK - Small Industry Extension Centre

LIK-MIE - Mini Industrial Estate

TPL - Extension Officer

KANWIL - Provincial Office of the Ministry of Industry

KANDEP - District Office

CSF - Common Service Facility

UPT - Technical Service Centre

TPR - Tripartite Review

Sentra - Informal group of small-scale manufacturers usually located near to each other and producing similar products (e.g., all metal-working shops).

PSPPIK - Abbreviation for the project established in the Ministry to deal with international cecnnical assistance.

CTA - Chief Technical Adviser

SIDFA - Senior Industrial Development Field Adviser

AIRD - Agency for Industrial Research and Development

Table of Contents

INTRODUCTION

UNIDO's assistance to the Government of Indonesia in the field of Small-Scale Industry (SSI) began in 1973 with an adviser on light industry. A year later (1974), a UNDP/UNIDO/ILO mission recommended a large-scale project which was, however, not developed. The involvement of ILO indicated the importance of the very large handicraft sector in Indonesia.

The third Five Year Development Plan, REPELITA III (1979-1984), emphasized special attention to the Small-Scale Industry sector. This labour-intensive sector spread throughout the country was expected to generate over 400,000 new jobs over the Plan period.

To support this small-scale industry development, the Government of Indonesia established a programme for the establishment of Small Industry Development Centres and Mini Industrial Estates through which the Government and other assistance could be channelled. The Government requested UNDP/UNIDO assistance for the implementation of this programme in 1977. In February 1978, project DP/INS/77/004 - Assistance to the Development of Small-Scale Industry started operation to assist in the establishment and operation of two pilot Small Industry Development Centres in Surabaya and Yogyakarta. This project was succeeded by the present large-scale UNDP/UNIDO project for Small Industry (DP/INS/78/078), which was approved in December 1980. It had a planned duration of three years and one month, with a UNDP contribution of US$ 2,400,000. Implementation began in August 1981. The project is now terminating.

It has been agreed by all parties concerned to undertake an in-depth evaluation in an effort to assess the overall achievements of the project and to identify needs for future assistance. The Terms of Reference of the evaluation mission are given in Annex 1.

The evaluation mission consisted of:

- Mr. H. Fahlstrom, Team Leader, representing UNDP, New York;
- Mr. F. Sartono, representing the Government of Indonesia, Jakarta;
- Mr. A. de Groot, representing UNIDO, Vienna.

Over a period of 19 working days (27 November-15 December 1984), the mission held meetings with a large number of Government officials, staff from research and training institutions, and bank officials. The mission also visited several industrial estates, sentra and individual companies where discussions were held with entrepreneurs. A considerable part of the visits and discussions took place outside Jakarta in Ujung Pandang (Sulawesi), Denpasar (Bali), in and around Surabaya (East Java), Yogyakarta (Central Java) and Bandung (West Java). Six UNIDO experts involved in the SSI project, who had not yet left Indonesia, were interviewed, as well as the local consultants working with them. Altogether, some 30 industrial extension officers (TPLs) working at various places were contacted and interviewed. Several meetings were held with the UNDP Resident Representative and the UNIDO SIDFA in Jakarta. For a detailed list of persons met, see Annex 2.

CHAPTER I. Formulation of the Project

I.A. Objectives and Function

The "development objective" of the project can be summarized from the text of the project document: To expand the small-scale industry Sector in Indonesia. Specific quantified targets on the national level were taken from the Third Five-Year Development Plan - REPELITA III: Creation of some 434,000 new jobs, Rp. 90,000 million of new investment and Rp. 60,000 million added value (1973 constant prices). Specific advantages of small-scale industry development were seen to be in the fact that small-scale industries are widespread and that they are, in general, labour intensive.

To contribute to the achievement of these national objectives and targets, the following objectives were set for the UNDP/UNIDO project:

1. Establishment of an operational Central Project Unit/Team at the Directorate General of Small Industry dealing especially with the planning and implementation of various Government programmes for the development of Small Industry, particularly the establishment of Mini Industrial Estates (MIEs), Small Industry Development Centres (PPIKs), Product Reservation Programmes, and formulation of policies and incentives for the promotion of small-scale industries.

2. Establishment and operation of model Small Industry Development Centres (PPIKs) and their constituent Extension Services Centres in five regions.

3. Establishment and operation of model Mini Industrial Estates (MIEs), Common Service Facilities (CSFs) in the five regions and the training of their staff.

4. Identification and implementation of opportunities for linkages with national technological institutes with a view to mobilizing and stimulating national technical expertise to develop joint programmes aiming at the diversification and improvement of the quality of products manufactured by the small industries.

5. Identification of business opportunities like production and marketing sub-contracts with large industries in the spirit of Bapak Angkat (Foster Father system) programme where feasible, and assistance in their implementation.

6. Upgrading of the planning, implementation and monitoring of the in-service training programmes for the extension officers, trainers and entrepreneurs.

7. Mobilization and co-ordination of technical and financial assistance from other multilateral and bilateral sources for PPIKs, MIEs and CSFs as requested by the Government.

Unfortunately, the above objectives are somewhat confused. The first objective: "Establishment of an Operational Central Project Unit/Team at the Directorate General..." can obviously not be an objective in itself.

Objectives 2 and 3, Establishmen and Operation of PPIKs, extension service centres, MIEs and CSFs, are Government (Ministry) activities to which the project could contribute. Certainly the project was never intended to operate all these.

Objectives 4 and 5 can be seen as valid objectives, provided they are interpreted as "establishing permanent national linkages", and not just temporary co-operation between the project team and the institution.

Objective 6 is also a valid objective to the extent that it is meant to involve a strengthening of a national training system.

Objective 7 is rather out of place. Mobilization and co-ordination of multi- and bi-lateral assistance should not be an objective of a temporary project (at most, it could have been mentioned as a minor activity).

The main problem of the set of objectives, however, with the exception of objective 6, is that it does not differentiate between the (temporary) project and the Directorate General of the Ministry and other Government organizations.

Another problem is that the function of the project was not clear. Was it "Institution-Building" as in objective 6, or was it "Direct Support", whereby the experts work directly with the industry? The designated function states "Direct Support" as primary and "Institution-Building" as secondary. The project document as a whole has not sufficiently worked out these two concepts, leading to confusion and misconception both on the side of the experts, as well as on the side of national staff.

I.B. Socio-economic Perspective

When REPELITA III started in 1979, Indonesia had a population of some 148 million. The population pyramid showed that some 40 per cent of the population, or 59 million, was below 14 years of age. From 1979 to 1984 some 8 million males above 14 years were supposed to enter the labour market. Since in 1979 only 12 per cent of the economically active population was employed in industry, there was large potential for growth in this sector and within it, particularly in small-scale industry.

A 1974/1975 census estimated about 1.3 million industrial establishments of all sizes in operation in the country (now estimated to be 2.5-3 million). Most of these are in the "informal" or "cottage" sector. Rough estimates for the number of organized small-scale industries vary from 60,000-100,000 (about 50,000 in 1974). These statistics make it clear that small-scale industries are very important in Indonesia.

Many sets of figures are given in an indirect form also because the definitions used are mixed. The project document mentions cottage and small-scale industries, economically weak and disadvantaged groups, family units, unorganized, organized, informal, small, very small units. For the reader and for the UNIDO experts, it would have been more useful to know approximately how many workers were employed in the small industry as separate from the informal sector. This number cannot be found immediately in the text. The Central Bureau of Statistics, however, gave the figure of 837,000 workers in 113,000 enterprises for the small-scale industry for 1979, defining a small industry as a factory unit employing 5-20 workers.

It is in the SSI sector where the Government in REPELITA III (1979-1984) planned a considerable contribution to the overall target for additional employment of 434,000. This must be considered a high target for such a short period of time. In order to stimulate the development of small-scale industries, the Government established a special "project" organization within the Ministry of Industry to deal with SSI development (BIPIK) that was made responsible for a variety of activities and tools to assist in SSIs. Examples are mini industrial estates, common service facilities, technical service centres; Extension officers were recruited all over the country to advise the entrepreneurs.

For Indonesia, with its large population spread over 13,000 islands, the development of small-scale industry is considered to be very important. The main advantage of small-scale industry, being able to work for and adapt itself to a local market, with a high labour intensity, and a relatively low investment required, with only a limited infrastructure needed, is that it matches very well with the needs of Indonesia. Basically, this situation, which existed in the late 1970s when the project was designed, has not changed.

In addition to the above-mentioned advantages of SSI over larger units, the Government of Indonesia sees an important role for the entrepreneurs in this sector as subcontractors for the large-scale industries, mainly but not only in the metalworking and electronics sectors. The SSI sector is expected to make a major contribution to the "common theme" of REPELITA IV: "Consolidation of the Foundation for the Industrial Development". Again, the SSI will be important for REPELITA V (1989-1994): "Strengthening of the Foundation", when the industrial structure will further be deepened and interlinked. The Government of Indonesia hopes to see the "take-off" happen during REPELITA VI (1994-1999). This systematic long-term plan is being considered in the design of the follow-up project, as proposed in this report (Chapter VI).

I.C. Project Design

A typical feature of the project has been to establish teams involving the international expert and the national staff, both in Jakarta and at the field stations, consisting of staff recruited for the project duration. These groups, however, did not include (with the exception of national staff members seconded for short periods) regular Government staff. It is not clear what the "Central Project Unit" would be expected to do, nor how it would be composed. At any rate, it was never established. The project teams were from the beginning planned to work in parallel with the existing and changing Government structures. It is obvious that institution or rather capacity-building in such a set-up can only be very limited. The evaluation team considers that this parallel approach has seriously hampered both the efforts of the experts and the development of strengthened permanent structures in the DJIK. In countries like Indonesia with an extensive and capable administration, technical assistance should work through and within these national structures; strengthening these ought to be a major priority for the Ministry in its efforts to stimulate industrial development. We will come back to this problem later.

At the same time, the outputs and activities as presented in the project document are a mix of direct support and institution-building. Several of the activities and outputs mentioned can only refer to continuous DJIK and BIPIK efforts to which the project can only temporarily assist. For instance,

"successful planning, implementation and operation of the five model Small Industry Development Centres" must be a Government (BIPIK) task to which the project team can only temporarily contribute. What was the role of the project compared with the roles of the much bigger, permanent BIPIK and DJIK organizations has not been specified.

The project document as a whole does give some interesting targets such as specific numbers of PPIKs, MIEs, etc. to be established during the project. Other quantitative targets were added at the first Tripartite Review in 1982. Also a relatively good indication is given in the later sections of the document as to the modalities of co-operation of the project experts with the DJIK, although in the project document there seems to be confusion between the Director General, the Directorate General and the Head of BIPIK functions. As will be reported later, these elements in the project design were not adapted when the organization in the DJIK and BIPIK subsequently changed. It may be that this confusion caused the CTA to distance the project from the DJIK.

Summing up, the document gives a number of important elements for a good project design and treats these in more detail than many other projects. It is, however, unfortunate that the key parameters of the project such as objective, outputs and activities were rather unspecific and also mixed with other elements. This seriously reduced the value of the document for a common and adequate understanding by all parties involved during the implementation of their respective roles. In the efforts to monitor and measure the achievements, as well as for a clear specific description of the tasks of the international experts, the design was inadequate. The job descriptions did not improve the situation. During several of the interviews with Government staff, it became clear that the concept of the present Technical Assistance project was not well understood. Experts were thought to handle tasks of permanent Government staff, rather than to transfer knowledge resulting in the build-up of the Government's own implementation system.

I.D. Means-end Analysis

The comments under A) and C) make it clear that a means-end analysis is not possible. It seems obvious, however, that by trying to provide assistance in several ways to a large variety of parties in the national system, the project lost a clear sense of direction. The attention of the experts, certainly of those in the field, was spread too widely. The relation between the inputs available and the expected outputs were rather stretched.

CHAPTER II. Implementation of the Project

II.A. UNDP/UNIDO Inputs

1. The inputs provided by UNDP/UNIDO can best be displayed by presenting the planned budget and the use of this.

	Planned Inputs (Project Document)				Latest Status			
	Budget Revision "A"				Budget Revision "0"			
Experts	01 Team Leader	37	226,200		41.4	330,252		
	02 Industrial Engineer	30	183,000		25.2	180,779		
	03 Industrial Marketing	30	186,000		11.6	78,671		
	04 Industrial Training	24	148,200		32.4	225,709		
	05 Industrial documentation	18	110,400		23.8	165,870		
	06 Industrial Engineer (W. and C. Java)	30	186,000		28.2	175,377		
	07 Eng. Design (W. and C. Java)	18	113,400	Ind. Eng. (Yogyakarta)	16.8	116,865		
	08 Industrial Engineer (E. Java, Bali)	30	186,000		26.9	166,670		
	09 Eng. Design (E. Java, Bali)	18	113,400	Ind. Eng. (Bandung)	11.8	86,500		
	10 Industrial Engineer (N. Sumatra)	30	186,000		26.7	176,902		
	11 Eng. Design (N. Sumatra)	18	113,400	Ind. Eng. (Ujung Pandang)	13.3	101,482		
	50 Short-term Consultants	15	92,000		12.7	82,909		
Administrative Support			11,000			7,677		
. UN volunteers			120,000			--		
. Travel			81,000			35,515		
. National consultants			45,000			40,897		
Totai Personnel			2,101,000			1,988,078		
. Subcontracts			200,000			24,000		
. Fellowships				42,000				58,669
. Study Tours				--				37,517
. Group Training				30,000				--
			72,000			96,186		
Equipment			7,000			82,659		
Miscellaneous			43,330			20,000		
TOTAL			2,400,000			2,234,253		

The short-term expert assignments covered, by approximately three months each, the areas of standardization, credits, data display and packaging. Three man-months are still unused.

On the occasion of the first Tripartite Review Meeting on 9 November 1982, changes were made to the list of inputs and their utilization, as follows:

1. The three industrial design experts of the three regional teams were exchanged for industrial engineers at three additional locations;

2. United Nations volunteers were replaced by local consultants, to be assigned to the international experts;

3. Shifts were made within the training component;

4. The equipment component was increased.

Although concerns were expressed at the delays in the delivery of expert inputs, it must be said that the initial plan, that most experts should arrive at almost the same time, was unrealistic. This would also have put a heavy strain on the "absortive capacity" of the counterpart organizations.

As can be seen in the input chart, the budgetary profile of the project did not change in any important way. Almost 90 per cent of the total inputs has been spent on the personnel component. In view of the objectives of the project, this seems appropriate. It is, however, interesting to note that the provision for local subcontracting of specific studies was hardly taken up.

Under the training component, ten individual fellowships were awarded. Some 7 of these had a very direct relation with small-scale industry development. Two other fellowships on "export promotion" and one on "production management" (all not yet implemented) seem to have been more general industrial in nature.

II.B. Government Inputs

The Government inputs foreseen in the project document, 5 senior and 5 junior experts, research officers and secretarial assistance, were all made available. Although there was some delay in recruitment initially, there also was a delay on the side of the UN inputs. These delays on both sides have not necessarily seriously hampered the project implementation. The Government, however, used specially recruited consultants - who were not permanent staff members of the Ministry - for the project to work with the experts. This concept of specially recruited staff to work with experts should have been handled with more care. To the extent these local consultants play the same role as international ones, the use of these can be very fruitful in complementing international expertise with local contacts and experience. The local temporary consultants can, however, never play the role of a permanent administration staff member, such as a DJIK counterpart. Possibly another reason for the "distance" between the project and the central organization of the Ministry might have been caused by these national consultants, who partly took over the role of DJIK counterparts so to say, standing between the experts and the DJIK. This definitely seems to have hampered the transfer of know-how and experience to the Ministry itself.

The staff officers expected to be seconded to the project from the Agency for Industrial Research and Development, the Bank of Indonesia and the Department of Trade/Nafed for short periods "as required" have not really been used. This is probably due to the fact that the Central Project Unit that should have been responsible for this was never established.

After some problems at the start of the project in Jakarta and in the field, good quality office accommodation was provided. The physical location of the expert in Jakarta, however, separate from the Ministry in another building, might also have added to the previously mentioned "distance" between the project staff and the DJIK staff.

In summary, the provision of Government counterpart inputs as foreseen in the project document for Jakarta has been satisfactory. This is also valid for the field activities, although no clear plan was made in the project document. Here the required structure was expected to be "formed when needed". One should bear in mind, however, that, as discussed above, the counterparts were hired for the duration of the project and will not stay on after the project ends. The evaluation team did not endeavour to estimate the rupiah value of the actual contribution in comparison with the originally planned Rp. 1.570.000.000.

II.C. Implementation of Activities

Both the planning and subsequent reporting of activities was done mainly in categorical terms; no extensive detailed activity plans were made, neither for the central experts nor for the field experts. Of course, for the field experts, due to the fact that no clear strategy or focus for their work was established, and the ad hoc direct support nature of their tasks that consequently developed, detailed work planning became impossible.

Co-ordination of the project activities and between the project and other parts of the administration, as well as with external organizations, was expected to be realized by the "Central Project Unit" for internal co-ordination and by the Supervisory Committee for the external co-ordination. How these were to be composed or exactly how they were to function was not described. This has lead to confusion in the project document and for the implementation of the project. Neither of these bodies was ever established.

The experts in Jakarta, each going about his work separately, developed their own "way of working" rather than a detailed work plan. The CTA, who saw his task as a "general advisor", concentrated on the writing of policy papers, proposals for new activities for the DJIK (such as a study on the Product Reservation Scheme and a proposal for a subcontracting exchange), as well as general studies. He also, in a number of cases, requested specific jobs from the other experts, such as studies of MIEs and CSFs, etc.

The Industrial Engineer concentrated his attention on the SUIK Estate near Jakarta, where he made several studies and proposals, as well as provided advice to individual factories. This type of trouble-shooting assistance was also provided to a number of units outside the estate.

The expert in industrial information and documentation concentrated his activities on the establishment of an information centre at the Pula Gadung

Estate, as well as in two other places. Attempts to train a larger number of staff in this specialty, as well as to develop a series of hand-outs on different subjects were either not taken up by the Ministry, or actually discouraged. For the other two documentation centres, planned in Surabaya and Medan, there was locally no interest at all. The information expert, in his final report, very clearly complained about the lack of direct daily co-operation in Jakarta between the international experts and the DJIK regular staff. He also warned that operating like this would make transfer of know-how to the DJIK very difficult. He also criticized the role of the specially-hired consultant counterpart staff instead of direct co-operation with the DJIK staff. Inspite of these clear warnings, none of the parties involved, UNIDO, UNDP Jakarta or the SIDFA, reacted to this.

The only Jakarta expert who worked within a wider overall planned framework was the training expert, who was also the one expert who managed to operate largely within the DJIK structure rather than separately, directly on a day-to-day level with regular Ministry staff.

The individual experts in the field operated in a scattered, unfocussed fashion, although some of them sooner or later partly began to concentrate their efforts in some sectors and on a limited number of factories, apparently mainly related to their own previous experience.

For instance, the expert in Yogyakarta concentrated most of his efforts on four companies chosen for their openness for change. Here he identified new products and improved existing ones. The expert in Surabaya spent considerable efforts, together with some sentra, to develop and build a model hardening kiln and mini furnaces for foundry operations. The expert in Medan concentrated his advisory efforts partly on improving the products of some enterprises involved in building industry hardware.

A different approach was followed in Bandung, where the expert was the only one of the six field experts who had a Job Description that specified the subsector in which he was to concentrate his work: electrical/electronics. This seems up to now to have been successful. The approach should be used as a model for the Government (and UNDP/UNIDO) assistance to the small-scale industry in the future.

The main implementation problem in Jakarta was the (previously noted) "distance" between the central project staff and the DJIK. Direct interaction was almost non-existent. Both groups undertook their own, almost completely separate, activities. The main contact and exchange of information was in the papers and reports that the project experts produced. (See Chapter III on the utilization of these.) The mission was told that it was necessary for DJIK officers who wanted to use an expert for a specific task to submit a formal request to the Chief Technical Advisor.

It is interesting to note that the different parties responsible for monitoring the project (the UNIDO backstopping office, the UNDP Resident Representative and the SIDFA) repeatedly expressed unease with the way the project was performing. Inspite of this, none of these parties was able to pinpoint the difficulties and initiate remedial action. For instance, a request from UNIDO headquarters for a reformulation of the project, which could have led to a better focus of the activities, was not taken up, partly for fear that this would seriously disrupt project implementation. It is the view of the mission, however, that such a step would instead have been advantageous.

The mid-term evaluation, foreseen in the project document, which might have identified the problems and have lead to improvements in the project design and implementation, was never held. It appears that the two Tripartite Reviews that took place, with the adequate participation from all parties, unfortunately did not really identify the problems.

Another problem identified by many experts in the project, as well as by the SIDFA and the backstopping officer in UNIDO, Vienna, was the lack of systematic co-operation and exchange of information and of experience between the international experts themselves. Definitely the field experts complained about this. However, this issue was partly resolved in the latter part of the project when several meetings of all experts were held to exchange views and experiences.

II.D. The Organization of the National Implementing Agency

Part of the implementation problems may have been due to the complexity of the organization of the Ministry of Industry and its evolution. In this part a brief description of the organization and the changes in the structure of the DJIK and BIPIK will be given.

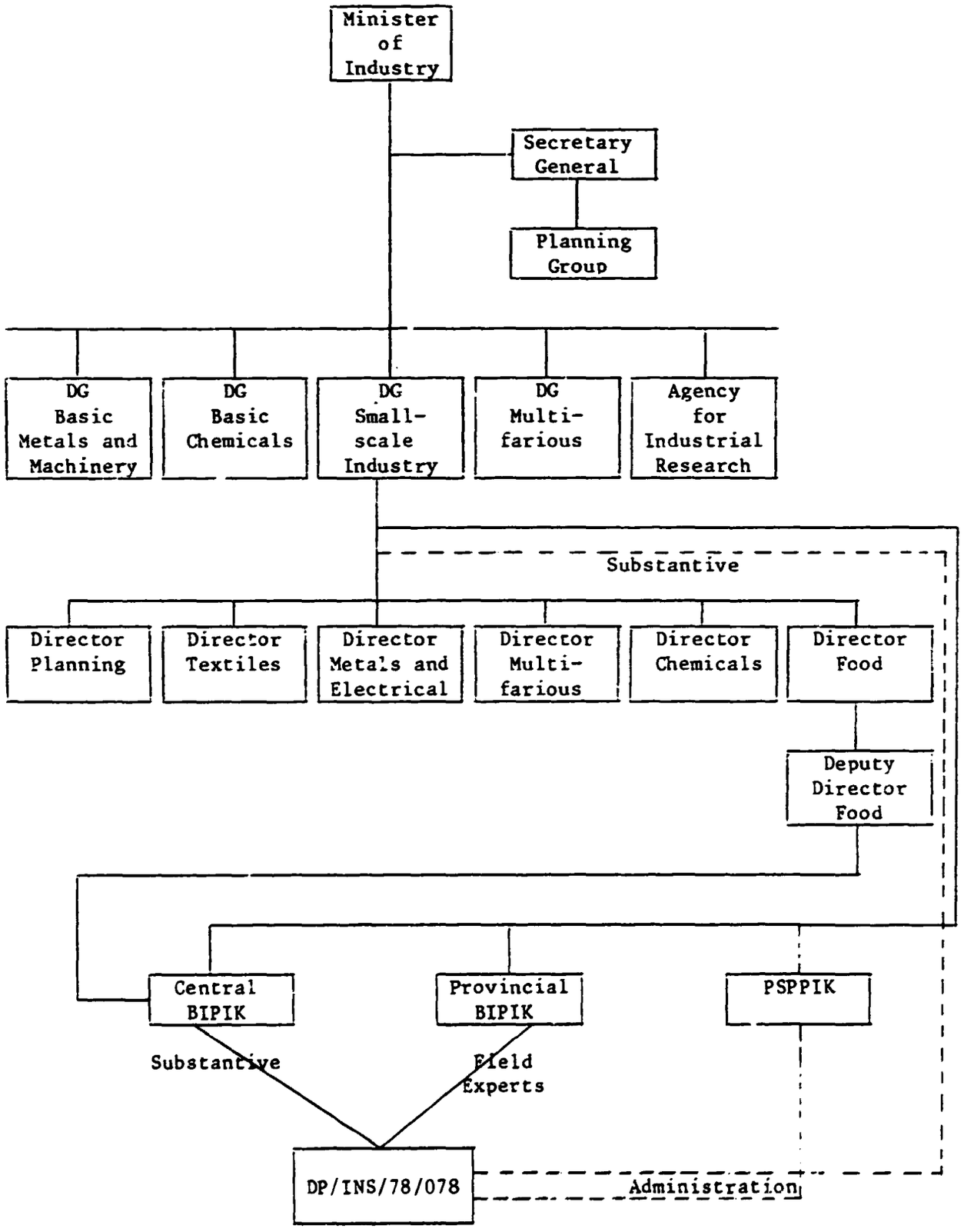
Until the start of REPELITA III (mid-1979), there was no Directorate General dealing specifically with small-scale industry. There was, however, a special "project" organization called Small Industry Development Programme (BIPIK). Its staff was then and still is drawn from the regular staff of the Ministry (who have double functions). A special budget was allocated to BIPIK. The Head of BIPIK reported to the Secretary General of the Ministry of Industry.

When in 1979 a new Directorate General for Small-Scale Industry (DJIK) was established, the Director General in addition also became Head of the BIPIK. From that moment, two parallel structures existed the (Directorate General and BIPIK), both dealing with small-scale industry. The two were partly staffed by the same personnel but with parallel lines of authority coming together in the then Director General. This was the situation when the project was designed and approved. In two subsequent changes, the Head of BIPIK position was filled, first by a Director, later (now) by a Deputy Director of the DJIK. (For the present structure, see Chart 1.) It seems that there is a possibility that in the future the two parallel structures (organizations) may be merged into one. Such a step would seem to be an advantage for the development of the small-scale industry. At the moment (December 1984), the two still exist and the BIPIK organization controls most of the budgets available for small-scale industry support. The DJIK budget is limited to the salaries of its own staff and expenses.

At the provincial level, the DJIK is represented in the KANWIL offices, while BIPIK has its own provincial organizations, which partly uses regular staff of the KANWIL office. These BIPIK organizations are headed by a Chief, who is normally housed in the KANWIL office.

Finally, at the district level, the DJIK is represented through the 286 KANDEP industrial offices, which undertake general industrial promotion, training and information activities. The heads of these offices serve as the local BIPIK co-ordinators for the BIPIK extension officers (TPLs), who,

CHART 1



Organizational Chart of the Ministry of Industry
and the Relations of the Project with the Ministry

however, formally report to the provincial BIPIK organizations. These TPLs, who work in direct contact with the small-scale industries at the level of "sentras" or clusters, number about 1800. They are on short-term contracts (normally 2 years) as consultants paid by BIPIK. Most of them have come straight from schools, not necessarily technical, and have very limited practical experience. At the local level, there are a number of mini industrial estates (MIEs or LIKs), common service facilities (CSFs) and technical service centres (UPTs) co-ordinated by the local BIPIK official.

In parallel with the BIPIK "project" organization described above, another project organization called PSPP-IK was established to deal with all international co-operation activities of the Ministry. From the administrative point of view, this was the direct counterpart organization to the project DP/INS/78/078. The national project staff was recruited and paid, including travel cost, by this organization.

CHAPTER III. Project Results

III.A. Direct Support Results

The Central Expert Group

The CTA prepared a large number (approximately 50) of general studies, reports, notes and proposals on policy issues such as the Foster Father system, subcontracting exchanges, the product reservation scheme and the PPIKs. These were submitted for consideration by the Government officials of the DJIK. It could not be clearly established which of the reports were prepared at request of the DJIK and which on the initiative of the CTA himself. Several of the papers produced may still be used in the future.

The industrial engineer prepared studies and papers on specific estates and companies, plus a number of feasibility studies. The industrial information expert prepared proposals for two information centres, one of which is now working , and a detailed proposal for the establishment of a Small-Scale Industry Data Bank in the DJIK. This proposal could be used in the future. The short-term consultants in packaging, credit, standardization and data display prepared general reports, including several interesting proposals in their respective areas that certainly may be useful for future activities. For a complete list of papers and reports prepared by the project, please refer to the Project Terminal Report (pages 109-117).

The evaluation team questions if the submission of a large number of papers on general and policy-related issues as the CTA produced was useful. This because the main policy lines for SSI development were already well established in REPELITA III, and the programmes were well defined also in the project document. On the other hand, some more specific reports like the ones on information centres, on the reorganization of and purchase of equipment for MIEs and CSFs may have been useful.

The Jakarta-based industrial engineer also provided direct advice to a number of establishments in and around Jakarta, much in the same way as the field experts. We will discuss this later.

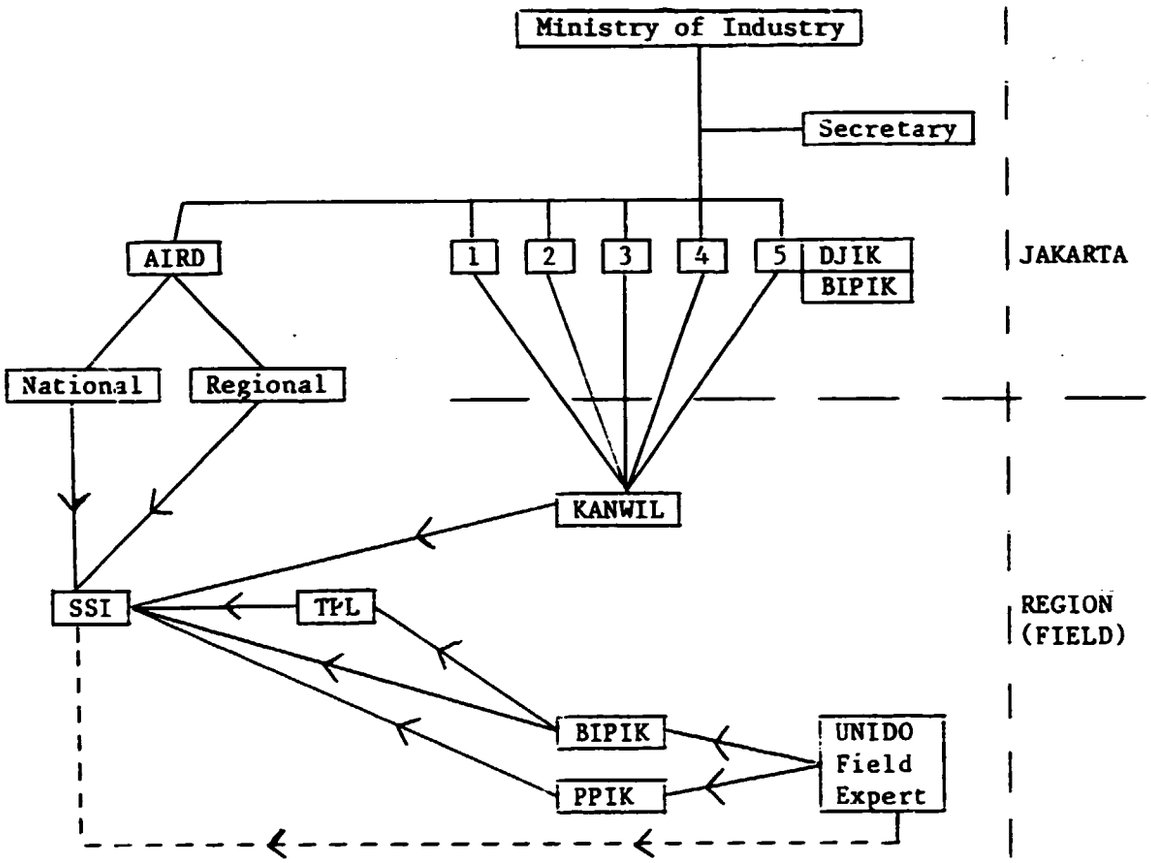
He showed initiative by preparing a practical training programme on project identification and formulation. The first part dealt with the principles of feasibility studies, and the second consisted of real feasibility studies of a number of projects. Groups of entrepreneurs in Jakarta and Surabaya actually participated. The planned third phase of the programme, i.e., the actual implementation, was not done due to a lack of time.

The Field Experts

The main activities of the field experts consisted of direct support to the SSI. This was almost the only activity as the planned advisory and training activity with BIPIK and PPIK did not take place (see Chart 2).

In most cases, typical advisory activities were performed instead, providing advice on improved lay-out, better management, machinery selection, product improvement, and including limited training on the use of new equipment. In some cases, new products were developed, such as educational equipment and toys, parts for boat building and building hardware.

CHART 2



This chart reflects the project design in practice. Please note that the UNIDO field expert used most of his time for direct advice to the SSI (the dotted line) and not for BIPIK and PPIK.

A second major activity, depending on interest and experience of the expert, has been the identification of opportunities and the preparation of feasibility studies for new products (for instance, wheelbarrows, accessories for fishery development, voltage regulators, heavy-duty ropes and electrical insulators).

A third activity has been the introduction of improved technology, including the construction of prototypes and demonstration equipment, such as a brass-casting furnace and a metal-hardening kiln.

Several field experts designed and implemented training courses which, in some cases, are manualized (industrial safety and maintenance, gas-welding, wood-working and metal-working operations, design of transformers, non-ferrous casting, etc.). The field staff and the Jakarta-based industrial engineer developed in total eight programmes and trained about 100 persons, mainly entrepreneurs and their factory staff.

The field experts also contributed to the CSFs and UPTs (Technical Service Centres) in the process of selection of equipment, the improvement of lay-out and staff training.

The above description makes it clear that the experts paid attention to a wide variety of activities and industrial sectors, and did not concentrate their efforts. The Foster Father programme, as well as other national programmes, and aspects like financing and marketing, were unfortunately not systematically considered.

In total, referring to the above, a large number of individual small units were assisted in one way or another, and in many cases the assistance has certainly improved the situation of these enterprises and their products. The cost effectiveness of this direct support by international experts is, however, rather doubtful.

III.B. Institution-Building Results

In a country of the size of Indonesia, with some 113,000 (1979) small-scale industries and millions of even smaller units in the informal sector, a limited international co-operation project like the UNDP/UNIDO one cannot even hope to have a significant effect on the SSI sector by directly working with individual companies. As stated above under III.A., the cost effectiveness of international experts working directly with the small-scale units is doubtful. Unfortunately, the field experts to a great extent did exactly this. Only if the international involvement at the same time produces or assists in establishing national capabilities (in the counterpart organizations) to provide the required assistance and/or develops ways of using existing national resources (R+D institutions) for assistance to the SSI sector can a reasonable impact be made. The "institution-building" results of the project are, therefore, of paramount importance.

The Central Experts

Most of the central group of experts have either defined their tasks as direct support, or did not have the opportunity to work with permanent national staff (for instance, from the DJIK) able to take over. As should be

recalled here, the consultants working with the experts were specially hired for the project and will, therefore, leave when the project ends. Although these nationals may have acquired important new skills and experience, this is likely to be lost for the DJIK and, in general, for the small-scale industry sector. To some extent, regular DJIK staff may have been influenced by the international staff, but this (apart from the training expert) probably is limited.

The "Institution-Building" results of the central team activities exist in particular in two areas:

1. Training

Based on three training needs surveys (officials, extension services and entrepreneurs) specific training programmes were designed and implemented, so far mainly for the first group. This included

identification of training needs;
curriculum design and preparation;
evaluation of training.

These programmes, meant for DJIK staff, were supplemented by "on-the-job" training activities where the expert went through the exercises with the DJIK staff.

A number of other programmes for extension officers and entrepreneurs have been prepared and have started to be given by the new trainers. All these programmes have been or are being manualized. Staff of the DJIK and/or the Ministry's Training Centre have been involved in the preparation. In other words, a number of trainers were trained and are now ready (about 20).

The Training Centre is said to be well-equipped with training facilities and visual and other aids. A definite but limited training capability has been established at the DJIK Jakarta. It is likely that several training activities now can be undertaken by the centre's own staff.

2. Industrial Information

One of the planned centres, at Pula Gadung, which was recently relocated to the Jakarta Fair area, seems to be well staffed in number and well equipped. Special leaflets and brochures have been prepared. The main problem here is that the general attitude of the staff is very passive so that not much activity is undertaken. It seems to the evaluation team that with a change in the attitude and methods (see Chapters V and VI), a meaningful active role can be established. A much more outgoing approach and activity at the factory level should be developed.

A second information centre was established on the initiative of the Yogyakarta LIK. This is not operational as there is no trained staff available.

The Field Teams

The institution-building results of the field experts must be considered very limited, partly because they worked with specially hired national staff, and secondly because the interaction with Ministry staff was limited. Also, the involvement of the experts in improving the operations of the CSFs, UPTs and LIKs was normally limited to advice on management procedures, lay-out, choice of equipment and training of operators. In several cases, this has led to (temporarily) improved operations, but the lasting influence is likely to be limited. The planned strengthening of the BIPIK and PPIK staff and its assistance to SSI did not take place, partly due to the lack of counterparts and the weaknesses of the PPIKs. This caused five of the six experts to involve themselves directly and only with the industry (Chart 2). Obviously no aggregate result can be calculated for this direct support work.

The only field effort which may have led to a considerable strengthening of local factories and organizations in terms of experience and methods of co-operating with the national institutions co-ordinated by the KANWIL office took place in Bandung where the sixth field expert concentrated fully on one subsector within a limited geographic area (City of Bandung), on the improvement and manufacturing of electrical and electronic products and parts. The project has certainly made progress, also in terms of increased confidence between some SSI and buyers of their products. The model of operations developed here could possibly be tried out and duplicated in other sectors (see Chapters V and VI).

III.C. Actual Results Compared With Plans

Comparing the above-mentioned results with the outputs planned in the project document and the additional targets set in the tripartite review of September 1982, we can see that a number of activities were not or only partly undertaken or completed (paraphrased from the project document).

Phase I - i) A comprehensive evaluation study of the existing planning and implementation organizations dealing with SSI development and;

ii) the design of a network system for effective execution of Government policies, which was to become a functional planning, programming and implementation system involving the DJIK, the national technological and financial institutions to co-ordinate efforts directed to the development of mini estates, CSFs, UPTs, extension services, and the effective implementation of support measures, including sub-contracting, product reservation programme and the deletion programme, as well as any other national programmes.

Why this was not done is not clear. The CTA started visiting the field and institutions, but the study and proposals for the planned central project unit and the planning and implementation system never materialized. These, however, could have been extremely valuable for the development of an operational level support programme defining the role of the international experts, and be different from the independent activities that unfortunately actually took place instead.

Phase II- Successful planning, implementation and operation of five model Small Industry Development Centres (PPIKs) and extension services, and strengthening those already established; successful planning and implementation of 14 mini industrial estates.

When the project started, the above PPIKs and MIEs were already established. The project did, however, provide these with training and other advice. Several elements of the given outputs could not be produced by the project (see Chapter I), as these were in fact tasks of the DJIK/BIPIK itself.

- Establishment of functional collaboration programmes between the national technological institutions and the MIEs involving introduction of improved quality and diversified products, accompanied by training of extension officers (2 per institute per PPIK).

Although individual ad hoc contacts between some experts and some institutions were established, no systematic programmes between the institutions and the MIEs, as specified in the project document, were established. The only place where fruitful co-operation involving institutions, the SSI and the expert took place was in Bandung at the end of DP/INS/78/078. This approach seems to have become a potential success. It must be considered a definite shortcoming of the project and the experts that not more co-operation with other institutions was pursued.

- Identification, promotion and implementation of a number of small business opportunities like production and marketing subcontracts with large industries, preferably under a Foster Father system (5 per PPIK).

- To formulate a model subcontracting agreement and promote about 25 such arrangements (added in the Tripartite Review meeting).

- Help establish 2 subcontract exchanges (added by the TPR).

Proposals were made but only one information centre was est[illegible]hed (in Jakarta). The subcontracting exchanges were not established. Th[illegible]es not seem due to the project but to a perception from the Indonesian si[illegible] that such exchanges would not show the way and solve the problem. The mission found that the problems for the development of subcontracting are related to production difficulties in the SSI and the lack of confidence between the large industries and the SSI. This will not necessarily be solved by a subcontract exchange. More complete efforts will be needed (see proposal in Chapters V and VI).

A model subcontracting agreement was prepared but only few subcontract arrangements actually materialized. As a system, the Foster Father structure has been used in only some cases. With more specific attention by the project and by the Government, more could have been achieved.

- Training of 300-500 extension service officers and entrepreneurs.

- Design 15 new model training programmes (added in the TPR).

- To identify 100 new industrial opportunities (added in the TPR).

These targets were fully achieved; 380 staff participated in the training exercises and 20 programmes were/are manualized and available. Several hundreds of opportunities were identified; a list of 280 was prepared by one expert alone. So far, only few of these have been implemented.

- Several (5-10) agreements for financial grants or loans for the establishment of PPIKs, MIEs and CSFs.

This is not a project output. Although the experts could contribute to reaching such agreements, it should not have been specified as an output.

- Help establish 3 pilot Information and Documentation Centres (added in the TPR);

III.D. Achievement of the Objectives

In view of the inadequate definition of the immediate objective and of the function of the project (see Chapter I), only general comments can be made here. Probably the operation of a number of SSIs was (temporarily) improved, but no hard cost benefit analysis can be made. With regards to the objectives to establish or strengthen a national capability to support the development of the SSI sector, only some rather insignificant results (20 trainers, training programmes, the information centre in Jakarta, the "Bandung experience") have been achieved.

For the DP/INS/78/078 project as a whole, with a budget of US$ 2.4 million, the results reported above must be considered insufficient. A benefit may be the Bandung experience, which can be used for the future.

CHAPTER IV. Conclusions

IV.A. The Project

While the project certainly addressed major Government objectives (more employment) and an important sector in the Indonesian economy, the Small-Scale Industry Sector, the UNDP/UNIDO project did not manage to identify and apply an effective way to support the development of the sector. Instead, the experts did concentrate on direct assistance to the small enterprises. As mentioned before, a small technical assistance project should not attempt to rely exclusively on this direct support, as this is not likely to produce results that are meaningful to the sector as a whole (with 113,000 enterprises). At the same time, the project should not have worked alone since a large number of local resources and a large national administration existed that were defined in the project design to provide assistance to the sector (see IV.B.). The central problem of the project (design and implementation) was that it could not identify effective methods to strengthen these national structures and to use them in an effective way at the operational level.

The project produced a number of scattered individual results, both in SSI units and in the Ministry, but it is obvious that in this way an impact at the national level could not be made. On the other hand, it is clear to the evaluation team that most or probably all of the experts have worked hard but had no guidance as to the areas of priority.

The project have given valuable experience of the Indonesian situation concerning technical assistance to the UNDP and to UNIDO. As a result, the situation seems now to be ripe to test a different approach to assist the small-scale industry.

The experience of the electrical/electronic sector activities in the Bandung region indicates that there is a large potential for development of SSI provided the national resources are brought in. The technical assistance expert should play a catalytic role, and bring in external technical know-how. The national institutes will also be available to assist with technical know-how. The whole effort and all elements should be coordinated by the KANWIL provincial staff.

IV.B. The Government Policies

In REPELITA IV (started and on-going since May 1984) the Government has focussed on six areas for the development of the industrial sector:

1. Deepening and strengthening the national industrial structure and linkages to other sectors of the economy;

2. Development of machinery, electronics and electrical industries;

3. Development of small industry;

4. Increase export of industrial product (included saving of foreign exchange;

5. Increase in the capability and know-how in design and production engineering, as well as research and development;

6. Upgrading of professional industrial manpower (management and labour skill).

Four types of industries have specifically been given priority within this framework:

1. Labour intensive industry;

2. Industry producing goods that meet the needs of the people;

3. Industry that has maximum linkages with other sectors of the economy, particularly agriculture, construction and machinery;

4. Industry producing export goods.

The Government plans the creation of 815,000 jobs in the small-scale industries. For the five-year period of REPELITA IV, this is an ambitious figure.

The Government plans to assist the SSI in general by training in management, business and technical skills, technical information services, by improved raw materials, supporting materials and machine design. The institutional infrastructure is, in particular, expected to be strengthened in the areas of information services, design services specially for SSI, and a promotion and technology adaptation service

A major role is seen for the SSI in the regions to deepen the industrial structure. Links with medium and large industry (subcontracting) is seen as an important priority. A policy tool in this area is the Foster Father System, whereby a large industry assists a number of small companies in improving their products (components and parts) so that they can be used as subcontractor to the large industry. The Government is actually applying pressure on large companies to use this approach, but to date only a limited number of such arrangements have been established.

An important role is foreseen for the SSI sector in the import substitution drive of the Government, which has become very relevant in view of the falling oil income. The deletion programme, under which gradually equipment and parts are no longer granted input licenses when local production is satisfactory, is one tool used to achieve this. At the same time, increased value added to local raw materials such as rubber, wood and other agricultural and mining products is a related objective.

An important task for the development programme during REPELITA IV is the introduction and application of standardization/quality control in the small-scale sector. Certainly a lot of attention will have to be paid to this. Also in relation with the Foster Father/subcontracting drive, quality control systems are vital in the efforts to establish the necessary confidence between large and small-scale industry.

The Government has started the systematic identification of products (including semi-processed and components) that could be manufactured in Indonesia. Starting from a raw material available, they go step by step through various stages of production to final products, or starting from a

final product, step by step backward through the stages of production, identifying semi-processed products, components, etc., of which a number could be produced by small industry. (The evaluation team named this the "tree method", and the related expert the "tree man".)

IV.C. The National Infrastructure

The National infrastructure consists of many organizations that are either actually involved in assisting the development of small-scale industry or that could in the future provide such assistance.

First, there is the Ministry of Industry itself, specially the Directorate General for Small Industry, and well as the Agency for Industrial Research and Development, the Training Centre of the Ministry and, to some extent, the other Directorates General.

The Directorate General for Small Industry (DJIK), consisting of the Directorates of Chemicals, Textiles, Food, Basic Metals and Handicrafts, is represented at the provincial level in the 27 KANWIL offices and at the district (Kabupaten) level in the 283 KANDEP offices. Each of these has information, training and promotion activities. This structure is fully part of the Ministry of Industry.

In parallel with this Ministry hierarchy, there is the BIPIK project organization, much older than the DJIK, consisting of the Central BIPIK in Jakarta, 26 provincial BIPIKs and BIPIK activity co-ordinators at the district level.

The BIPIK project organization draws most or all of its people from the regular Ministry staff, both at headquarters and at provincial and district levels. For instance, normally the head of the KANDEP office is also the BIPIK co-ordinator. At the moment, the head of the Central BIPIK is the Deputy Director for Food of the DJIK. As can be easily understood, the two parallel organizations cause of lot of confused working and reporting relations. There is a trend, as well as an expressed desire, to gradually fully merge the two structures.

On the level of SSI itself, or rather the informal groupings (sentra) or clusters, the extension officers (TPLs) are active. They are hired on a two-year contract basis by the provincial BIPIKs but "co-ordinated" by the district (KANDEP) office. The approximately 1800 TPLs are mainly new graduates from secondary schools or technical schools; only very few a university degree or any technical or business experience.

Also at this "sentra" level the BIPIK project uses a number of different "tools" to assist SSI:

1. The Mini Industrial Estates or LIK, of which there are now 13 in operation. Here the enterprises are provided with land and buildings on a managed estate. Different standards have been used for buildings in the different estates. The estates also vary in numbers of units. At the moment, the programme of establishing LIKs has been frozen, and a review of their use and effectiveness is taking place.

2. CSFs or Common Service Facilities, located on the LIKs, providing equipment on a shared basis, staffed with technical staff under supervision of the LIK director. This programme should undergo the same critical review as the LIKs themselves. Examples of the wrong type of equipment (sector) or the wrong LIK have been observed. The equipment of the CSFs was not used.

3. Technical Service Centres located in or close to specific sentra, also providing equipment and staff to the SSI. Also here a critical review seems to be in order, although no seriously wrong examples have been observed by the team. About 80 are now in operation.

Like the TPLs, all these facilities are co-ordinated in the local Kabupaten industry office but belong to the provincial BIPIK.

In addition to these two parallel structures, in 9 of the provinces that are industrially most important, there are PPIKs which offer extension services to the SSI.

Industry-wide, for both large and medium as well as small-scale industry, there are nine National Research and Development Organizations and approximately 9 provincial Laboratory and Testing Institutes that, in principle, offer research and extension services to SSI. The Ujung Pandang based South Sulawesi Research Organization, for instance, has 137 staff, of which about 20 are extension officers specialized in building materials, rattan, food and wood. None is specialized in metal. The mission has the strong impression that the regional institutes, at present, are not fully suitable to provide direct assistance to the factories. This situation should be improved. A more positive active attitude should be developed so that a better service can be given during REPELITA V.

The main part of the R+D infrastructure consists of the 9 national institutes, all located in Java (see Annex 3). The level of capabilities, manpower and equipment enables the institutions, for instance, MIDC, to meaningfully assist large-scale modern industry. Certainly most technical problems of industry can be dealt with by these institutes. The contacts with small-scale industry are not yet so well developed, although in some sectors services are being made available to SSI (notably the leather sector). These national institutions, however, cannot offer services country-wide directly to the SSI. Methods and channels will have to be developed for meaningful interaction, possibly using the extension officers. Funds will have to be established to finance staff of these national institutions to come and work as advisors at the sentra level; the SSI cannot pay for such services.

CHAPTER V. Recommendations

Introduction

As seen in the previous chapter, the Government system and the national infrastructure, in terms of support institutions are by and large in place, certainly as far as the hardware (equipment, financing) is concerned. As to the software, in some of the elements, the quality of manpower in terms of capabilities, skills and experience should be improved. A main problem, however, is the fact that the operation of the structure as a whole in providing assistance to the small-scale entrepreneur, and in implementing the different policies and programmes of the Government is deficient. Another problem is the mainly passive approach to the entrepreneur. The direct "interface" between the infrastructure and the industries, the extension officers, are not able to function effectively, neither as a provider of support to the industry nor as a liaison officer with the other elements of the support infrastructure.

On the other hand, the mission observed that the Small-Scale Industry entrepreneurs are very interested in, and willing to accept technical support and advice. They face a number of problems that are not effectively dealt with. Inspite of the interest but in view of the numbers of small-scale units involved and the wide dispersion, UNDP/UNIDO external technical assistance cannot effectively deal with all the entrepreneurs directly; instead, it will have to be done through working with the informal groups of factories, together with the organizations of the national structure and to jointly develop methods for the provision of the assistance. At the same time, it will work by strengthening the national infrastructure.

Based on our experience with the project in the past, as described in Chapters 2 and 3, and our analysis of Government policies and targets concerning small-scale industries, the evaluation team would like to make the recommendations that, broadly speaking, the future assistance will concentrate on two parallel activities:

- Developing effective ways of applying Government policies and programmes at the operational level working directly with small-scale entrepreneurs (Direct Support);

- Strengthening the Ministry (DJIK) organization (Institution-building).

V.A. Recommendations Concerning Future UNDP/UNIDO Assistance

To implement its policies, the Government of Indonesia will also have to develop more focussed ways of actively promoting development of certain types of industry. It is in this development of methodology that UNDP/UNIDO technical assistance can be very useful. The evaluation team has developed the following general methodology based on numerous discussions with Government officials and entrepreneurs:

1. Within Government priorities and starting from the product families selected by the Ministry (see above), specific groups of products will be selected that are at present not manufactured in Indonesia but that are suitable for small-scale industries.

2. In one or two geographical locations, two to three sentra are selected that offer the best starting point for the manufacture of these products.

3. In each sentra the informal leaders ("change agents") will be approached and directly assisted to upgrade the quality of their production, introduce new products and increase the productivity. Often this will involve searching for better raw materials, introducing new tools, as well as basic quality control. In addition, markets will be approached and developed, contacts with large buyers established (be it traders or larger industries). Also, assistance will be provided in negotiating with financing sources.

The objective of the programme will be to have the selected products produced commercially in the sentra and marketed successfully. For the concentrated programme, a concerted effort involving:

- Technical/production engineering and commercial/marketing expertise.

- Approximately 15 TPLs selected on skills and motivation (10 technical, 5 commercial). These TPLs should be offered (or promised) a position in the Civil Service appropriate to their skills to ensure they will stay with BIPIK after being trained. Before the programme starts, these TPLs will take part in "tailor-made" intensive practical training.

- National R+D institutions (such as MIDC) and provincial industrial development organizations.

- The Ministry of Industry-DJIK (for instance, Directorate for Metals) with at least two staff to be stationed in the region.

- The KANWIL office as co-ordinator.

An important effect of such concentrated efforts will be that all the above-mentioned organizations will have co-operated, and it will have been demonstrated that clear results can be obtained. At the same time, a small but very clear contribution will have been made to the deepening of the industrial structure.

Initially, external technical assistance may be required. If the approach proves to be successful after several rounds of concentrated exercises, the national structures should be sufficiently developed to carry on introducing new products in other regions.

In addition to this field methodology, external assistance should be aimed at strengthening the central service functions of the Ministry of Industry, such as the training centre, the information system, the product identification activities ("tree" method) and the establishment of an SSI data bank and of product design services.

The evaluation team considers that the adequate provision of suitable information and documentation to the SSI is very important. The approach of such a service should, however, be very active and outgoing, as is outlined here below.

A practical methodology to do this should be developed and tested initially in the Jakarta area, using the existing information centre. After at least 6 months, the effectiveness of this approach will be studied, adapted and applied in another location on Java. In a third step, the methodology will be tested outside Java. This information package could be oriented towards products/product groups identified in the DJIK (tree method) and selected for the field activities.

The initial methodology will consist of the following steps:

a) Selection of 3-5 subsectors, relevant for the area chosen;

b) Identification of related (about 20) sentra in the Jakarta area with a large proportion of enterprises in above subsectors;

c) Staff involved and selected TPLs visit 3-5 sentra to identify main problems of the SSI;

d) TPLs and the information department of the Ministry develop "packages" of information material, including video/film demonstrations of improved production methods, etc., simple hand-outs repeating this information, etc.

e) Trainers from the Ministry and selected TPLs organize and implement half to one-day presentation and information meetings in or close to the sentra, inviting all units to attend. After a number of these meetings, the TPLs should be able to do this alone.

For the preparation of the materials, the Jakarta Information Centre of the Ministry will be able to call on the national R+D institutions for assistance. Apparently all hardware required is available.

V.B. Recommendations to the Government

There are a number of recommendations that, although not directly related to the technical assistance joint effort, are considered by the team of utmost value for the development of small-scale industries.

1. Establishment of risk-taking "venture capital" type of banking services. At present, it is very difficult for a small entrepreneur to obtain sufficient credit, both for investment as well as for working capital. While many would-be entrepreneurs do not have any collateral, others have some, but the banks are said to request 150-300 per cent coverage of their loans by collateral. The Government should investigate ways of making available risk capital, either directly or through the existing banking system. Initially, this could be tried out in relation to the proposed concentrated development efforts. The Bank of Indonesia has extensive funds earmarked for the SSI. The problem seems to be in the way in which the funds are made available, apparently not the availability as such. The Bank of Indonesia could also study and improve the procedures for making available credit. The present ones are seen to be very slow and difficult by the SSI.

2. Up-grading of the quality of extension officers. In view of the fact that the extension officers are the actual interface with the small-scale industries, their quality is very important to enable adequate assistance to be delivered. Probably the most important for improving the average quality of the officers and retaining the best ones is making the posts civil servant posts (they are now virtually on two-year contracts) at an adequate level, something like junior consultants. Insofar as possible, recruitment should be oriented towards a technical

background (technical high school) with at least some years of industrial experience. A more extensive and practical sector specific training (see Chapter VI) should complement this. In the team's opinion, 900 well-trained, motivated civil servant-extension officers will be more effective than the present 1800 TPLs.

3. Streamlining and further integrating the governmental structures dealing with SSI, from the DJIK level down to the district level. Ideally, the BIPIK project should be completely integrated into the Ministry organization, eliminating parallel hierarchies that may now cause misunderstandings and conflicts.

4. Continue to strengthen the PPIKs as well as the provincial Laboratory and Testing Centres. Insofar as PPIK staff is on a short-term contract basis, this should be improved. Both organizations should play a far more active role in the future, supporting the TPLs in their work on factory level using their own extension officers.

5. Increase pressure on the research and development institutions to allocate at least a certain percentage of manpower and other resources to assist SSI and to develop specific SSI-oriented activities (including the development of technologies suited for small-scale labour-intensive production).

6. Allocate a minimum percentage of the budget of all Government buying organizations to purchases from domestic small-scale industries.

CHAPTER VI. A Proposal for the Continuation of Assistance - Phase II

VI.A. New Conceptual Approaches

Introduction

1. The direct assistance

Assistance to small industry should begin at the micro level, with several factories brought together as a group located in a selected region. One industry sector will be represented, and only a few kinds of similar products manufactured. Since the demand for these will have been ascertained in advance, it will become easier for the entrepreneurs to obtain loans from banks. Suitable products and components might have been selected by use of the product tree method.

As experiences are gained, this model will be expanded gradually to include several groups, with other kinds of products, in several industry sectors, and located in many provinces. A multiplying effect will be achieved.

2. The institution-building

A detailed plan ought to be developed, as a result of which the DJIK, in turn, should become able to manage the assistance itself in the future to an expanding small industry sector. Ad hoc activities can no longer be used. A systematic approach will be required. Institution-building - a properly functioning system - is needed.

Such a plan and the details of its implementation should, to begin with, be concentrated and limited to the field projects of Phase II. For instance, the suggested intensive 4.5 month training seminars for a selected number of TPLs are only one activity amongst several for their upgrading. Other staff to be included in the plan includes the regular counterparts to the UNIDO experts and the PPIK officers.

The number of persons to be included in the plan will increase as Phase II continues. It is, therefore, important that the establishment of a special DJIK training officer (STO) post is suggested (see Chart 4). He will co-ordinate and concentrate on Phase II, while other DJIK training staff will be free to assist other parts of the small industry sector.

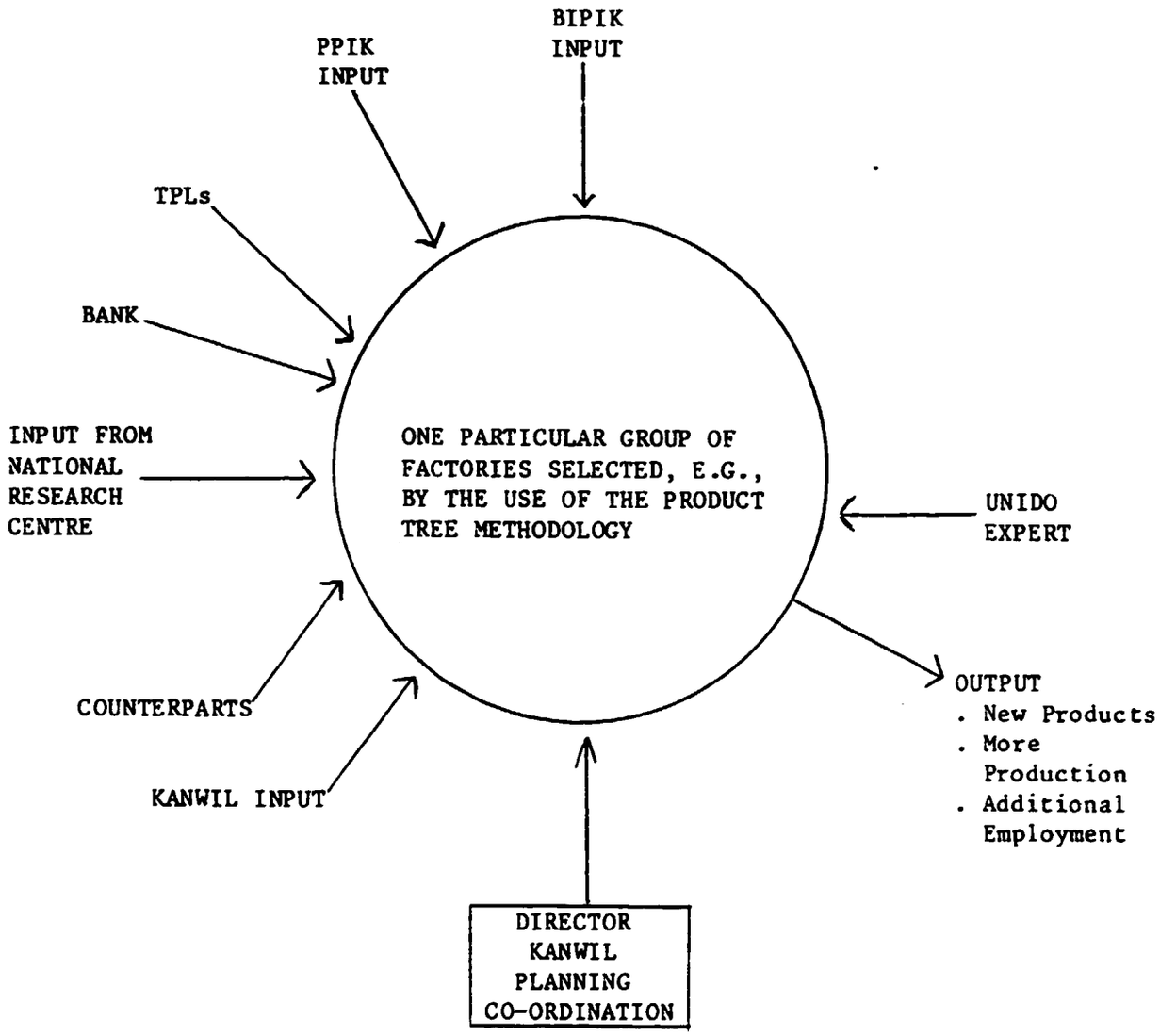
The UNIDO expert on training (Post J2 in Chart 4) will deal with the development of new kinds of courses, and introduce workshops using practical case studies for the entrepreneurs.

VI.B. The Group. Principle of Co-ordination of the Inputs

The Group

1. The mission has ascertained the interest and ingenuity amongst the entrepreneurs, and their willingness to accept technical assistance. The workers are industrious. Note has also been taken of the hitherto encouraging results of the single sector assistance approach used in Bandung. These facts together suggest the inclusion of a number of factories as a group to receive advise and assistance. This approach seems realistic as the basis for a UNDP/UNIDO trial during the next phase of assistance.

CHART 3


BIPIK INPUT
PPIK INPUT
TPLs
BANK
INPUT FROM NATIONAL RESEARCH CENTRE
ONE PARTICULAR GROUP OF FACTORIES SELECTED, E.G., BY THE USE OF THE PRODUCT TREE METHODOLOGY
UNIDO EXPERT
OUTPUT
. New Products
. More Production
. Additional Employment
COUNTERPARTS
KANWIL INPUT
DIRECTOR KANWIL PLANNING CO-ORDINATION

A group consists of several small individual factories, e.g., in already existing sentras, in LIKs, or to be formed within a limited geographical area. The individual factory units might all be manufacturing identical products or alternative different components selected on the basis of the product tree approach.

Principle of Co-ordination of the Inputs

2. The model of a group consisting of several small factory units is shown in Chart 3. Various inputs are indicated. The central issue is that the KANWIl office in a region will act as the planning and co-ordinating agent, bringing these inputs together. The amount of services per period required from a national research centre, e.g., the MIDC, must be estimated in advance, the financial terms for obtaining these determined and funds secured.

The counterparts to the foreign experts, the LIKs, the PPIK staff will put in their knowledge, but, at the same time, also become practically trained.

VI.C. Principal Outline of the Suggested Phase II

1. Valuable time was lost during project DP/INS/78/078. So it is understandable if the Government of Indonesia now might wish to compensate for it with the largest possible Phase II project. However, great caution is suggested in the efforts to avoid possible pitfalls. Some suggestions to that extent are given in Section D.

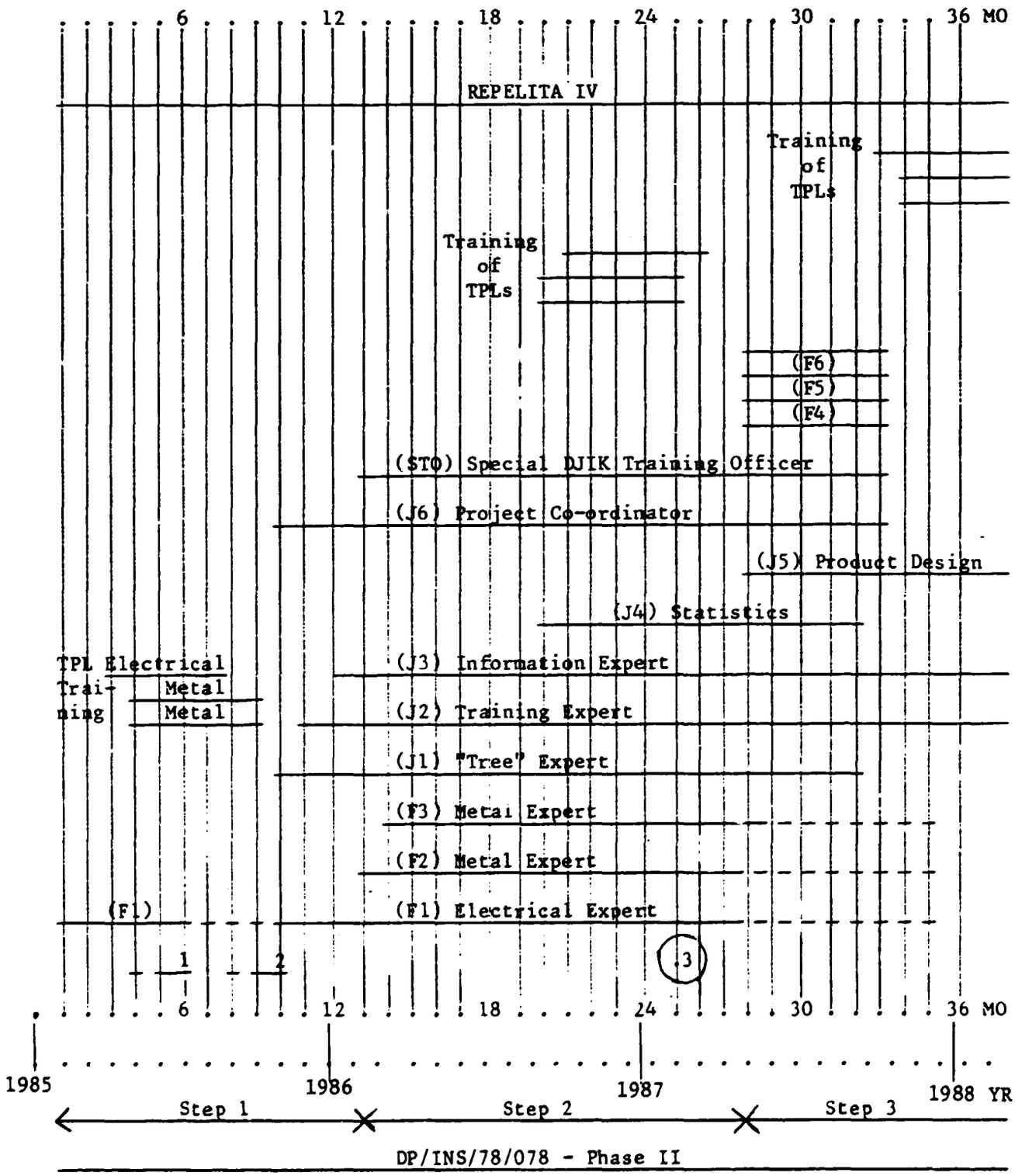
2. Phase II is suggested to be divided into three consecutive steps. See Chart 4. In fact, step 1 is on-going insofar that the electronics expert (F-1) is still on-board at the project in Bandung. Step 2 includes assistance to 3 industry groups. Only in case the results in these three tests become satisfactory, such step 3 should be started, which will apply the model to a number of other products. In turn, this will open new possibilities for expansion.

3. Step 1 began on 1 January 1985 and is suggested to last approximately 13 months, until the end of January 1986. During this period, the project design mission will take place, as indicated by the bar numbered 1 (see Chart 4). The project document should be approved during month 8 or 9, as shown by line 2.

4. The earliest possible approval is needed in order to have the UNIDO project co-ordinator (J-6), who also will be responsible for the marketing/commercial aspects of the field trials, and the "product tree expert" (J-1) arrive before the end of 1985. Both experts will have no difficulties to begin their assignments at once.

5. The same goes for the training expert (J-2), with new tasks to develop and to introduce workshops using practical case studies for the entrepreneurs. Also, the information expert (J-3) is expected as soon as possible, and will have counterparts at once to begin to build up a visual aids and a video cassette library to be used later in a mobile manner at the industry groups and/or other small industry units. Less urgent is the recruitment of the expert on computerized statistics (J-4), and the expert on product design (J-5).

CHART 4



DP/INS/78/078 - Phase II

6. Step 1 finally includes the training of 3 different groups of fifteen industrial extension officers. This activity is part of the preparation needed in the efforts to assist the three groups during step 2.

7. Step 2 is suggested to begin in February 1986 and last for 15 months, until April 1987. The electrical expert (F-1) for the group in Bandung is already on-board. Two additional field experts (metal F-2 and metal F-5) will work with two different groups of factories in the metals sector. Where these will be located is not yet known. Some 3-4 months are available for their recruitment.

The post indicated as JT is the new national special training officer, who will be fully responsible for all training related to the technical assistance project. He might continue with this activity during REPELITA V as well.

During step 2 again, a package of three training courses for TPLs will take place. This is a preparatory activity, step 3.

Approximately at month 25 (a point marked "3"), an in-depth evaluation of the progress made and of the methodology used in the electrical, as well as in the two metal, pilot project groups should take place. If the results are not satisfactory, Phase II ought to be definitely stopped.

8. Step 3. In case the outcome is positive, it will be possible to go ahead with a continuation of the project up until the end of REPELITA IV, April 1989. It will be possible to extend the on-going group projects, or alternatively to start working with new small industry groups in additional industry sectors in other regions of Indonesia.

The additional (new) experts required are indicated as (F-4), (F-5), (F-6) and so on.

Again this continuation assumes a package of intensive training courses for 3 X 15 industrial extension officers. In what fields has to be determined at a later date. Of course, the training of extension officers outside the project could be done in the same more thorough way.

From the experience gained in international technical assistance work over the years, there seems to be a optimum number of experts who should be assigned to a programme at one and the same time. This optimum should not be exceeded. Consequently, it is important that well-trained national counterparts are ready to take over as the small industry development efforts increase in magnitude.

9. The details of the new project, including its steps 1, 2 and 3, will ultimately have to be formulated by the preparatory project design mission (bar-line 1).

VI.D. Some Suggested Pre-requisites for Step 2

1. The "Consolidation of the Foundation" period - REPELITA IV, has begun. During this, the three steps of the new project are suggested. Errors and delays should be eliminated in order to guarantee the highest possible degree of success. This calls for several actions by the Ministry of Industry and the DJIK during the period April 1985-October 1985.

a) Studies should have been made and an agreement reached on how to organize a top DJIK committee in Jakarta to co-ordinate the future project and liaise with UNIDO.

b) Some additional KANWIL offices should have been approached and the group methodology explained. The directors' interest and support should be guaranteed.

c) Preparations should have been completed to select the special training officer (STO) and a deputy. Sufficient funds for their travel inside Indonesia during 1986 ought to be guaranteed.

d) Negotiations ought to have been completed with MIDC, LEN and LIN to obtain their participation with local consultancy to small industry groups. During 1986, there will be two such groups for MIDC and one group for LEN/LIN to service. Tentatively, it is assumed in each case a consultancy input of 8-10 weeks as a minimum. The costs have to be estimated and the necessary funds guaranteed.

e) The selection of 45 TPLs (30 for the two metal groups and 15 for the electric group) for intensive training in Bandung, in accordance with the plan in App. 5 should have been completed. Agreements should have been reached with MIDC, LEN, LIN and the Management School of the Pajajaran University. The necessary budgets should have been secured. All three training courses should have begun.

ANNEX 1

Joint UNDP/UNIDO Evaluation of

DP/INS/78/078

Assistance to the Development of Small Industries

Terms of Reference

I. Background

The third Five Year Development Plan, REPELITA III (1979-1984) emphasized special attention to the Small Scale Industry Sector. This labour intensive sector spread throughout the country was expected to generate over 400,000 new jobs over the plan period.

To support this small scale industry development the Government of Indonesia established a programme for the establishment of Small Industry Development Centres, Mini Industrial Estates through which government and other assistance could be channelled. The Government requested UNDP/UNIDO assistance for the implementatior of this programme in 1977. In February 1978 project DP/INS/77/004 Assistance to the Development of Small Scale Industry started operation to assist in the establishment and operation of two pilot Small Industry Development Centres in Surabaya and Yogyakarta. This project was succeeded by DP/INS/78/078 Assistance to the Development of Small Industries which was approved in december 1980s. The objectives of this project were given as:

a. Establishment of an operational Central Project Unit/Team at the Directorate General of Small Industry dealing especially with the planning and implementation of various Government programmes for the development of Small Industry, particularly the establishment of Mini Industrial Estates (MIEs), Small Industry Development Centres (PPIKs), Product Reservation Programmes, and, formulation of policies and incentives for the promotion of small scale industries.

b. Establishment and operation of model Small Industry Development Centres (PPIKs) and their constituent Extension Services Centres in five regions.

c. Establishment and operation of model Mini Industrial Estates (MIEs), Common Service Facilities (CSFs) in the five regions and train their staff.

d. Identification and implementation of opportunities for linkages with national technological institutes with a view to mobilize and stimulate national technical expertise to develop joint programmes aiming at the diversification and improvement of the quality of products manufactured by the small industries.

e. Identification of business opportunities like production and marketing sub-contracts with large industries in the spirit of Bapak Angkat (Foster Father system) programme where feasible, and assistance in their implementation.

f. Upgrading of the planning, implementation and monitoring of the in-service training programmes for the extension officers, trainers and entrepreneurs.

g. Mobilization and co-ordination of technical and financial assistance from other multilateral and bilateral sources for PPIKs, MIEs and CSFs as requested by the Government.

In order to assess the overall achievements of the project and to identify the needs for further assistance, (in accordance with UNDP/PROG/FIELD/150) it has been agreed by all parties concerned to undertake an in-depth evaluation.

II. Scope and Purpose of the Evaluation

In accordance with provisions contained in Chapter 3470 of the Policies Procedures Manual (PPM) and the relevant guidelines described in UNDP/PROG/FIELD/150 of 30 September 1982, the primary purpose of the evaluation mission is:

a) Assess the achievements of the project against the set objectives, targets and expected outputs, this will include a re-examination of the project design:

b) Examine the extent to which the results/outputs produced by the project have contributed towards the strengthening of Government capability to support small scale industries and of developing a programme of support and subsequently to what extent this has contributed to the development of the Small Industries Sector.

c) Identify and assess the factors which facilitated the achievement of the project's objectives as well as those factors that impeded the fulfillment of those objectives.

As part of above tasks the mission will specifically review if the approach utilised in the project has led to optimum results or if another approach could have improved the results. This will include a review of:

- Functions of the Headquarter team versus the field teams,
- balance between technical/commercial/management expertise of the project team and demand for services
- effectiveness of having individual experts at the field station in view of assistance required
- industry branch orientation

The mission should also review to what extent the planned relations with and involvement of national institutions in the small industry development programme have been realised and how this could be improved.

While a thorough review of the past in itself is very important the evaluation is expected to also lead to detailed suggestions for further assistance to the Small Scale Industry Sector.

III Composition of the Mission

The mission will be composed of the following:

One representative of the UNDP
One representative of the Government of Indonesia
One representative of UNIDO

These representatives should not have been directly involved in design, appraisal or implementation of the project.

IV. Consultations in the Field

The mission will maintain close liaison with the UNDP Resident Representative in Indonesia, the concerned Government Organizations and the projects national and international staff.

The mission is also expected to visit at least two - three of the field stations, make intensive contact with existing and/or potential small scale entrepreneurs as well as with some of the existing institutions that were planned to be involved in the projects efforts.

Although the mission should feel free to discuss with the authorities concerned all matters relevant to its assignment, it is not authorized to make any commitments on behalf of UNDP or UNIDO.

V. Time table and Report of the Mission

Insofar required the UNDP and UNIDO representatives will receive briefings at their respective headquarters. Upon arrival in Jakarta the mission will be briefed by the UNDP Resident Representative who will also provide the necessary substantive and administrative support. The mission will attempt to complete its work within 2 1/2 weeks, starting in Jakarta on 15 October. Upon completion of its work it will be debriefed by the UNDP Resident Rerpresentative. At the end of the mission the UNDP Resident Representative will organize a meeting involving senior Government officials where the mission will present its initial findings, conclusions and recommendations and be ready to discuss these.

The mission will complete its report in Indonesia and will leave behind a copy of the draft with the Resident Representative.

The final version of the report will be submitted simultaneously to UNDP and UNIDO Headquarters, which in agreement, will transmit the report to the Government of Indonesia through the Resident Representative.

ANNEX 2

List of Persons and Institutions Contacted

Government

Ministry of Industry, Jakarta

H.E. Hartarto, Minister of Industry
Mr. Gitosewoyo, Director-General, Small Industry
Mr. Eman Yogasara, Director-General, Machinery and Metal Industries
Mr. Sotion Ardjanggi, Director-General, Miscellaneous Industries
Mr. Bintaldjemur, Secretary-General, Small Industry
Mr. Sudirjo, Secretary, Agency for Industrial Research and Development, Ministry of Industry (AIRD)
Mr. Toebin, Director, Food Industries, DJIK
Mr. Trisura, Director, Metal Industries, DJIK
Mr. Tata Syarief, Director of Programming, Directorate-General for Machinery and Metal Industries

BAPPENAS, Jakarta

Mr. Katjep K. Abdoelkadir

Ministry for Promotion of Domestic Products, Jakarta

Mr. Sanyoto, Secretary-General

UNDP/UNIDO

Mr. G. Hamdy, Resident Representative
Mr. A. Patten, Deputy Resident Representative
Mr. G.L. Narasimhan, UNIDO SIDFA
Mr. Ram T. Batra, Assistant Resident Representative
Mr. Ram K. Vepa, UNIDO Chief Technical Advisor, DP/INS/78/078, Jakarta
Ms. H. Fajardo, UNIDO Training Expert, Jakarta
Mr. Bjorn Eidsvig, UNIDO Industrial Engineer, Jakarta
Mr. Sven Ursberg, UNIDO Industrial Engineer, Surabaya
Mr. Michael Humphreys, UNIDO Industrial Engineer, Yogyakarta
Mr. Prabir K. Sandell, UNIDO Industrial Engineer, Bandung
Mr. Hoesodo, National Expert, Surabaya
Mr. Dibyo, National Expert, Semarang
Mr. Sjardis Iljas, National Expert, Ujung Pandang

PSP-2 IK Staff (Counterparts)

Mr. Muljadi, National Project Co-ordinator
Mr. Sjorfai, Chief National Staff, Jakarta
Mr. Soendoro, Tjokrokusumo, Industrial Engineer, Jakarta
Mr. Djamhari, Junior Training Officer, Jakarta
Mr. Suroyo, Consultant, Yogyakarta
Mr. Hanafi Wirabrata, Consultant, Bandung
Mr. Eddy Asmanto, Consultant, Bandung
Mr. Soedharmo Partoatmodjo, Counterpart to Mr. Marklund, Semarang

KANWILs/BIPIKs

Jakarta

Mr. Zulkoflie Abbas, Director BIPIK, Deputy Director for Food, DJIK
Ms. Lucky Hartini, Sub-Director, BIPIK

Sulawesi
(Ujung Pandang)

Mr. Lukman Syah, Director, KANWIL
Mr. Baharuddin Kalo, Chief, BIPIK Office

E. Java
(Surabaya)

Mr. Rachman Karim, Director, KANWIL
Mr. Soedarijo, Deputy Director, KANWIL
Mr. Soeroso, Chief, BIPIK Office
Mr. Alimuddin, Deputy Chief, BIPIK Office

Bali
(Denpasar)

Mr. Moeljono, Director, KANWIL
Mr. Made Regig, Chief, BIPIK Office
Mr. Nyoman Dibia, BIPIK Office

Special Region
(Yogyakarta)

Mr. Winarto, Director KANWIL
Mr. Suhartono, Chief, BIPIK Office

Central Java
(Semarang)

Mr. Suwarsono, Director, KANWIL
Mr. Soeparno, Chief, BIPIK Office

W. Java
(Bandung)

Mr. Kusnadi, Director, KANWIL

Industrial Estates/LIKs

Mr. M. Surihandono
Head, Pulogadung Industrial Estate, Jakarta
garment manufacturers
oil stoves manufacturing

LIK Sidoarjo, Surabaya
Common Service Facilities
shoe manufacturer
garment manufacturer
motorcycle upholstery

LIK Klaten-Ceper
Central Java
ferrous foundries
Technical Service Centre

LIK Bandung - Mr. Bambang (transformers, voltage stabilizers)
Mr. Kesit (stainless steel grinders)
Common Service Facilities (shoe-making)

Industry Clusters (SENTRAS), including individual units within the clusters

Sentra NGINGAS WARU, Surabaya (machine components, metal products, bicycle factory)

Sentra YOGYAKARTA (ferrous and aluminium foundry)

Sentra UMBUL JAYA, Yogyakarta (aluminium products)
Mr. Endro Suharto, Mr. Andi Hasibuan

Sentra WEDI, Central Java (textiles)

Sentra KLATEN/CEPER, Central Java (foundry)

Information Extension Service Centres

Industrial Information Centre in Jakarta, Mr. Harahap, Director
Information Unit at LIK, Yogyakarta

Bank of Indonesia, Jakarta

Mr. Farouq Latjuba, Co-operative and Small Credit Department
Mr. Bistok Hutasoit, Co-operative and Small Credit Department

National Research Institutes

Mr. Kuntoro, Director, Leather Research Institute, Bandung
Mr. Dodi Supardi, Director, MIDC, Bandung
Mr. Djanum, Head, Technology Division, MIDC, Bandung
Mr. Djoewito, Director, Metallurgical Institute, Bandung
Mr. Wahyudin, Metallurgical Institute, Bandung

Regional Laboratory and Testing Institutes for Industrial Products

Building Materials Institute, Jakarta Area
Mr. Irsan Suriaatmadja, Director

Surabaya Laboratory and Testing Institute
Mr. Paribowo Soetigno, Director

Ujung Pandang Laboratory and Testing Institute

Universities

Dr. Sri Hardjoko Wirjomartono, Professor, Mechanical Engineering, Institute of Technology, Bandung
Professor TS. MHD. Soelaiman, Head, Electrical Energy Conversion Laboratory, Institute of Technology, Bandung
Dr. Yuyun Wirasasmeta, Rector, Management School, Pajajaran University, Bandung
Dr. Eddy Endro, Co-ordinator of Training, Management School, Pajajaran University, Bandung

Chamber of Commerce and Industry, Jakarta

Mr. Sunarto Prawirosujanto, Chairman, Compartment of Multifarious, Small-Scale and Pharmaceutical Industries
Mr. Sani, Chairman, Department of Small-Scale Industry
Mr. Bugi Iskandar, Vice Chairman, Department of Small-Scale Industry

NAFED (National Agency for Export Development)

Mr. Arifi, Secretary

Other Persons Contacted

Mr. Dietrich Lerche, Economist, German Bilateral Consultant to Directorate General for Machinery and Metal Industry
Mr. Klaus Maibach, Economist, German Bilateral Consultant to Directorate General for Machinery and Metal Industry
Mr. Soebianto, Secretary General, Gaakindo (Association of Motor Vehicle Assemblers)
Mr. Safiun, Vice Chairman, Association of the Automobile and Components Industry
Mr. Gunawan, Chairman, Association of Motorcycle Industries, Director of ASTRA Prasetya Foundations
Mr. Sutrisno, Chairman, Association of Motorcycle Industries, Director, Harapan Group
Mr. Tanamas, Vice Chairman, Association of Motorcycle Industries, Engineering Director, Manager, Federal Motor

Individual Factories/Entrepreneurs

Sulawesi
(Ujung Pandang)

Sutera Alam, Silk Weaving, Garments (Ms. Pertenunan)
Factory Gaya, Tiles, Concrete (Mr. Noch Umar)
Foundry, Agricultural Machinery (Mr. Surjo Jutama)

Bali
(Denpasar)

Ms. Nyoman Kotawati, Garment Manufacturer
Mr. Togog, Woodcarving
Mr. Ida Bagus Marka, Woodcarving
Mr. Nyoman Djabud, Gold/Silversmith

Yogyakarta

Ms. Agus Suwito, Rarad Jonggara Batik Company

ANNEX 3

List of National and Regional Research and Testing Institutions

that are part of the

Agency for Industrial Research and Development
Badan Penelitian dan Pengembangan Industri - BPPI

Balai Besar Penelitian dan Pengembangan Industri		Institute for Research and Development	
1. Kimia, Jakarta	BBIK	1. Chemical Industries	IRDCHI
2. Hasil Pertanian, Bogor	BBIHP	2. Agro-Based Industries	IRDABI
3. Tekstil, Bandung	BBT	3. Textile Industries	IRDTI
4. Selulosa, Bandung	BBS	4. Cellulose Industries	IRDCLI
5. Keramik, Bandung	BBK	5. Ceramic Industries	IRDCRI
6. Bahan dan Barang Tehnik, Bandung	BBBBT	6. Materials and Technical Product Industries	IRDMTPI
7. Kerajinan dan Batik, Yogyakarta	BBKB	7. Handicraft and Batik Industries	IRDHBI
8. Kulit, Karet dan Plastik, Yogyakarta	BBKKP	8. Leather and Allied Industries	IRDLAI
9. Balai Besar Pengembangan Industri Logam dan Mesin, Bandung	BBLM	9. Institute for Development of Metal and Machinery Industries	IDMMI
Balai Penelitian dan Pengembangan Industri		Laboratory and Testing Institute for Industrial Products	
1. Banda Aceh	BIBA	1. Banda Aceh	LTIBA
2. Medan	BIMD	2. Medan	LTIMD
3. Palembang	BIPA	3. Palembang	LTIPA
4. Semarang	BISM	4. Semarang	LTISM
5. Surabaya	BISB	5. Surabaya	LTISB
6. Banjarbaru	BIBB	6. Banjarbaru	LTIBB
7. Ujung Pandang	BIUP	7. Ujung Pandang	LTIUP
8. Manada	BIMN	8. Manada	LTIMN
9. Ambon	BIAM	9. Ambon	LTIAM

Source: Agency for Industrial Research and Development

ANNEX 4

List of New Products/Markets

	Source	Products/Markets
1.	German export group D-G METAL	400 products identified. Summary list exists.
2.	Bank of Indonesia	Continuously studies new products, identifying where, by whom and in what regions.
3.	Ministry for Internal Purchasing	Up-to-date list (November 1984). Hundreds of products. Suitable manufacturers.
4.	Research Centres in Bandung	Have developed simple prototype machines - waiting for manufacturers to come?
5.	Within DJIK	List exists, hundreds of products by name, when to manufacture, by whom. Waiting for entrepreneurs to come.
6.	UNDP Office - SIDFA	UNIDO field teams have developed and tested many new simple machines and tools. Photos and drawings exist.
7.	National Agency for Export (NAFED)	Regularly arranges two-day export seminars in all 27 provinces.
8.	International Trade Centre (NY)	Indonesian representatives continuously looking for Indonesian exporters.
9.	UNDP Office - SIDFA	Study made by UNIDO teams. 18 product groups/ 690 manufacturers.
10.	UNDP Office - SIDFA	UNIDO study. 280 industrial opportunities.
11.	Directorate-General Misc. Industries	Use of product tree. Many examples of products and product components.
12.	Directorate-General Metals	Use of product tree. Many examples of products and product components.
13.	UNDP Office - SIDFA	Expert study. List of machine manufacturers. Foster Father system.
14.	UNDP Office - SIDFA	Expert study. List of possible agricultural tools.
15.	UNDP Office - SIDFA	Mr. R.K. Vepa's final report, pps. 53-55. 63 different products.
16.	UNDP Office - SIDFA	Mr. R.K. Vepa's final report, p. 73. 10 different products.

17.	UNDP Office - SIDFA	Mr. R.K. Vepa's final report, pps. 58-59. Feasibility studies for 45 products to be manufactured in nine towns and by DJIK.
18.	KANWIL Office, Bandung	Lists of possible electro-electronic products.
19.	Market Promotion Centres (PPIKs)	Studies of products and local markets.
20.	Project DP/INS/77/004 Project DP/INS/78/078 UNDP Office - SIDFA	A study of the field experts' reports reveals many possible new products.
21.	Association of Automobile and Components Industry	Has list of hundreds of spare parts suitable for local manufacture (import substitution).
22.	Association of Motorcycle Industries	Has list of hundreds of spare parts suitable for local manufacture (import substitution).

ANNEX 5

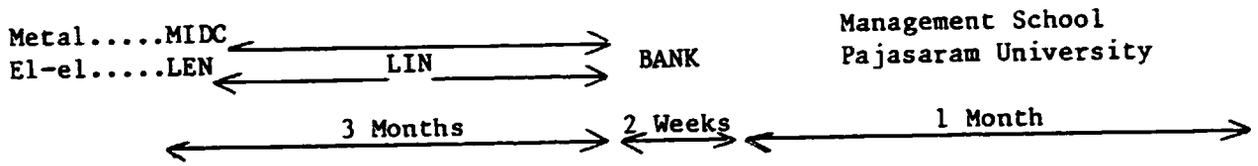
Outline of Principle of an Accelerated Course for TPLs in Two Industry Sectors (1985)

Sectors: 1) Metal and 2) Electro-electronic

Participants: Metal 2 X 15 (two consecutive groups)
Electro-electronic 1 X 15 (one group)

Duration: For each of the three groups: 3 months + 2 weeks + 1 month equals approximately 17 weeks

Duration/Content:



- TPLs receive their regular salary during training in Bandung.
- BIPIK pays fees MIDC, LEN, LIN.
- Assumed that training in Bank (2 weeks) will be free of charge.