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DP/ID/SER.C/6
28 May 1986
ENGLISH

ASSISTANCE TO THE INDUSTRIAL PROJECTS SERVICE (IPS)

DP/ETH/83/001

Report of the Evaluation Mission*

United Nations Development Programme
New York

United Nations Industrial Development Organization
Vienna

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SUMMARY OF CONCLUSIONS AND RECOMMENDATONS

The purpose of the tripartite in-depth evaluation mission was to assess the achievements of the project and to recommend possible improvements, if any, for the remainder of the project and for a subsequent phase foreseen in the Fourth UNDP Country Programme Cycle.

Conclusions

The evaluation mission considers that the outputs planned in the Project Document have been or will be produced (by the end of 1986) at least as planned. The immediate (project) objective of developing the capability of Industrial Projects Service (IPS) in the areas of pre-investment studies, sectoral and sub-sectoral surveys and consultancy services during investment project implementation is being attained, in qualitative as well as quantitative terms implied in the Project Document. It is safe to state that, by the end of 1986, the project will fully achieve its immediate objective.

The strength of a consultancy organization can essentially be measured by the strength of its staff. Due to various positive factors, IPS has an ideal blend of very experienced senior staff and younger, well-educated economists and engineers. With a total of 30 professionals, the current capacity of IPS can be estimated at 7 -10 various pre-investment (mostly feasibility) studies, 2 sectoral or sub-sectoral surveys and 2 consulting services during project implementation (for the time being relatively simple services) per year. This matches the capacity which can be inferred from the Project Document. In most cases, studies done by IPS are of a solid international-level quality.

The very strong and favorable position of IPS in its environment is illustrated by the fact that it is operating on a commercial basis by charging clients for services and does not need to subsidized by the Government. The relevance of the work performed by IPS is illustrated by a high percentage of investments projects studied which are now being implemented or are under serious consideration for financing. The demand for IPS services is very high, at the moment significantly higher than its capacity. The share of IPS in industrial project preparation in Ethiopia is a convenient measure of the project's success. The organization currently handles about 30% of the projects (number-wise), while the investment value of projects elaborated by IPS corresponds to somewhat less than 30% of the annual investment in industry. Most of the pre-investment studies prior to 1983 were done by foreign consultancy firms.

The recognition by the Government of the development objective of the project has not changed since the creation of IPS and the inception of DP/ETH/83/001. The need for improvement in industrial project preparation, decision-making and implementation management, through increased reliance on domestic capabilities in this domain -- all with the purpose of better allocating scarce resources in industry -- is now recognized more than ever before.

The establishment of a strong consultancy house is a long-term and delicate task which requires continued UNDP/UNIDO assistance. The current capacity of IPS is still strongly dependent on the project DP/ETH/83/001 because of the very specific nature of this technical assistance project. The next phase of the project is therefore very significant and relevant, particularly considering the tasks and heavy load that lie ahead of IPS in the medium-term. With investment plans in the industrial sector being very ambitious, IPS will be in a position to make a very essential contribution to industrial development in Ethiopia -- if its institutional capabilities are further strengthened.

Recommendations

Recommendations related to the remainder of project DP/ETH/83/001 are divided into recommendations addressed to IPS and UNIDO separately, as well as recommendations given to IPS and UNDP/UNIDO together. IPS should elaborate a detailed Three-year Development Plan, introduce new operational planning and control methods, use long-term experts with more emphasis on medium-term needs of IPS (training, methodology development), prepare more specific terms-of-reference and job descriptions for consultants and sub-contracts, and critically analyze some of the weaker points in a number of previous studies (such as market research and economic analysis). UNIDO is asked to improve the recruitment of long-term experts and short-term consultants, ensure better communication with them in the field, improve and speed up the mechanism of making their reports available to IPS, and provide more methodological support by appraising in-depth some of the completed studies. A detailed plan of inputs and activities for the next 12 months is elaborated.

The evaluation mission strongly recommends the continuation of UNDP/UNIDO technical assistance to IPS in the Fourth UNDP Country Programme Cycle, 1987 - 1991, as it is fully justified by the tasks awaiting IPS, very relevant to the plans and needs of the industrial development process in Ethiopia, and indeed deserved by the results of Phase I.

IPS is not the same organization now as it was at the start of Phase I. It encompasses a wider domain than the UNDP/UNIDO project, which can now address only certain portions of IPS's activities/capacities. The project design for the new phase should clearly respond to the strategic development goals of IPS and to its short-term operational needs. On the basis of an IPS development plan (to be drafted by IPS within two months) and the estimated budget for Phase II, priority areas which the future technical assistance will address should be identified. A number of specific recommendatons is given with respect to possible areas of focus and modalities of implementation which could come into consideration (the latter on the basis of lessons learned in Phase I).

LIST OF ABBREVIATIONS USED

AID-Bank	-	Agricultural and Industrial Development Bank, Addis Ababa
Atkins	-	W.S. Atkins Group of Consultants, U.K.
Birr	-	Ehiopian currency (1 US$ = 2.07 Birr)
COMFAR	-	Computerized Feasilibity Analysis and Reporting (a computer software developed by UNIDO)
CPSC	-	Central Planning Supreme Council
DPSA	-	Development Projects Study Agency
GDP	-	Gross Domestic Product
IPS	-	Industrial Projects Service
m/m	-	man-month
NPC	-	National Project Co-ordinator
NRDC	-	National Revolutionary Development Campaign
SIDFA	-	Senior Industrial Development Field Adviser
U.K.	-	United Kingdom
UNDP	-	United Nations Development Programme
UNIDO	-	United Nations Industrial Development Organization
UNILES	-	Consultancy firm from Yugoslavia, specializing in the furniture industry

INTRODUCTION

In 1982 the Ten Year Prospective Plan of Ethiopia was in the process of formulation. A very extensive investment programme for the industrial sector was being considered. Up to that year, the pressure on the industrial sector to either expand existing units or create new ones had led the Ministry of Industry to assign the corporations under it the responsibility of preparing expansion/rehabilitation as well as new investment projects. In the process of preparing these projects it became apparent that there were weaknesses in the system. In general, the standard of preparation left much to be desired, the major drawbacks being too great a dependence on foreign consultants and the consequent failure of nationals to gain adequate knowledge and experience. These drawbacks, combined with the increasing number and size of industrial projects to be prepared, was a major factor leading to a re-examination of the manner in which new projects should be identified, prepared and implemented. The Government decided to establish a specialized project agency under the Ministry of Industry to deal with investment project preparation work, relieve the industrial corporations of such obligations and reduce the dependence on foreign consultants. The agency, under the name of Industrial Projects Service (IPS), was established by Legal Notice No. 76 of 15 October 1982.

The Government of Socialist Ethiopia then sought assistance from UNDP/UNIDO to build up the capacity of IPS. In the Third UNDP Country Programme Cycle, US$ 1.6 million were allocated to project DP/ETH/83/001 - "Assistance to the Industrial Projects Service (IPS)", the immediate objective of which was "the development and strengthening of IPS's capability to identify and prepare industrial investment projects". Although the Project Document was officially signed only in October 1983, eight months later than originally planned, project activities actually started in February 1983 under preparatory assistance which consisted of a study tour of four core IPS staff members to several consultancy houses in Europe and Africa, as well as UNIDO. The project duration was to be four years.

The Project Document had foreseen a tripartite in-depth evaluation according to the policies and procedures established for this purpose by UNDP (the project budget being over US$ 1 million). Originally the in-depth evaluation was to be held in 1985, but the three parties agreed that the first half of 1986 was more appropriate. The primary purpose of the evaluation mission was to assess the achievements of the project with respect to the set objectives and expected outputs. With the project expected to end within the next 12 months, the evaluation was to give suggestions for the remainder of the project DP/ETH/83/001 and recommend possible improvements, if any, taking into account a subsequent phase foreseen in the Fourth UNDP Country Programme Cycle, 1987-1991. The terms-of-reference for the evaluation mission are attached as Annex I.

The members of the evaluation team, as designated by their respective organizations, were:

Dr. Janos Fath	-	Consultant Representative of UNDP (Team Leader)
Dr. Nikola Čatipović	-	Industrial Development Officer Evaluation Unit, UNIDO
Dr. Gebremeskel Mebrahtu	-	Senior Expert Department of Industry, Office of the National Committee for Central Planning, Government of Ethiopia.

The mission took place from 14 to 25 April 1986. Team members held meetings with UNDP/UNIDO representatives, contacted a number of Government and other organizations of relevance to the project and had extensive discussions with national and international project staff as well as with several important clients of IPS. The schedule of meetings held and visits made is given in Annex II. The list of persons met is attached as Annex III. The reports and documents examined by the mission are listed in Annex IV.

Preliminary findings and recommendations of the evaluation mission were presented to and discussed with the Government and UNDP/UNIDO on 25 April 1986. At the same time the draft version of the mission's report was made available.

The mission wishes to thank Ato Tadewos Haregework, Vice-Minister of Industry, and Ato Bacry Yusuf, Head of the Industry Department in the Office of the National Committee for Central Planning, for their interest in the project and the extensive discussions held with the evaluation team. The team members are grateful to Mr. K. Vencatachellum, UNIDO Senior Industrial Development Field Adviser, for the co-operation and assistance provided in carrying out its assignment. Particular thanks go to Ato Bruck Kebede, General Manager, and the staff of IPS for their excellent professional and administrative support given to the mission throughout its stay in Addis Ababa.

CHAPTER I. PROJECT FORMULATION

I.A. Objectives of the Project

According to the Project Document, the development objective of the project is to contribute to the industrial development efforts of the country.The Project Document correctly identifies the industry sector as the main target, but it fails to focus on the issues to be addressed specifically by the project, such as the weakness of project preparation, decision-making and implementation management in industrial investments, in order to achieve -- in the long run -- a better allocation of resources in the industry.

The Project Document is more appropriate in identifying the immediate objective, which is stated as follows:

> "The immediate objective of the project will be the development and strenthening of IPS's capability to identify and prepare industrial investment projects and carry out sectoral surveys in line with accepted methodologies, e.g., UNIDO's "Manual for the Preparation of Industrial Feasibility Studies" (ID/206). In particular, the project will assist the IPS:
>
> 1) To identify potential investment projects and to carry out, as appropriate, opportunity studies, pre-feasibility studies or full-scale feasibility studies on new projects as well as on proposals for the rehabilitation and/or expansion of existing industrial plants.
>
> 2) To support public enterprises in the implementation of approved investment projects by offering advice on planning and management methods, machinery and equipment specifications, operational problems of a mechanical or technical nature, etc.
>
> 3) To undertake detailed surveys of selected industrial sectors.
>
> 4) To train its staff in a variety of skills that are directly relevant for the establishment and efficient management of a consultancy house, capable of identifying, appraising and implementing industrial investment projects and of conducting sectoral surveys.
>
> 5) To acquire adequate office equipment, reference literature, and transportation facilities so that the agency will be able to cope effectively with the tasks entrusted to it."

It seems that the Project Document is more meticulous about IPS functions to be assisted than about specifics of capacity building. Such a project design can easily lead to tensions between long-term objectives of capacity building and the short-term pressures deriving from day-to-day operations.

In order to clarify the statements given above, it seems more accurate to state that the immediate objective of the project is the creation and development of the project preparation and implementation capacity of the newly established IPS.

I.B. Socio-economic and Institutional Setting of the Project

The contribution of the gross fixed investment in the GDP fell from about 10 per cent in 1973/74 to 7.5 per cent in 1977/78. In the last six years, the trend was reversed and the investment/GDP ratio steadily rose to reach about 12 per cent by 1983/84, the time of the creation of IPS.

The low level of investment is strongly felt in industry. Manufacturing currently accounts for about 11 per cent of the GDP. The scope of increasing industrial production without capacity creation is limited because much of the excess capacity in industry has already been utilized. The problem of the development of the industry sector is further aggravated by the obsolescence of the machinery and equipment. As indicated in the Ten Year Perspective Plan 1984/85 - 1993/94 it is imperative that much greater investments be made in this sector. Priority-wise, industry is second only to agriculture. The Plan foresees the industry contribution to GDP to increase to over 20 per cent by 1994. Industrial investments of approximately 300 million Birr per year will have to be made in the medium term.

Rigorous project preparation and evaluation should be instrumental in channeling scarce resources to the most appropriate new and rehabilitated investments in industry. The Government's awareness of the importance of using adequate economic criteria in investment choice was indicated by the creation of the Development Projects Study Agency (DPSA) within the Central Planning Supreme Council (CPSC) in 1979. The DPSA is charged with reviewing public sector investment projects before submission for decision-making, as well as prescribing the methodology and standards required for pre-investment work.

The establishment of the Industrial Projects Service (IPS) in 1983 as an autonomous body under the Ministry of Industry to cover a sizeable portion of pre-investment work for the industry sector was another important step taken by the Government to improve the investment decision-making process.

The public enterprises in industry are controlled by the Ministry of Industry. They are organized according to the "Corporation Model". The corporations are sub-sectoral holding companies that have responsibilities of co-ordinating and controlling the operations of public enterprises (mills, factories and plants) under their jurisdiction, directing and guiding them, and doing research and development work in their respective fields. These corporations are the promoters of investment projects in industry within the context of the Development Plan. They involve, after the approval by the Ministry of Industry, IPS in their project idenfication, preparation and implementation activities. They enter into contract with IPS for conducting studies and implementating investment projects. While they use IPS as a consultant, they continue acting as the only promoter of the project, inter alia, by submitting it to the planning authorities or negotiating its financing with the Agricultural and Industrial Development Bank (AID-Bank). The contract between IPS and the Corporation contains stipulations for the fee to be paid by the Corporation to IPS for its services. The 10 corporations under the Ministry of Industry are the following (brackets show the number of plants under each corporation):

1. Ethiopian Food Corporation (32)
2. Ethiopian Sugar Corporation (5)
3. Ethiopian Beverages Corporation (19)
4. National Tobacco and Matches Corporation (3)
5. National Textile Corporation (19)
6. National Leather and Shoe Corporation (15)
7. Ethiopian Cement Corporation (4)
8. Ethiopian Printing Corporation (9)
9. National Chemical Corporation (15)
10. National Metal Works Corporation (21)

In addition, the Ministry of Industry is responsible for 6 share companies. Share companies are medium- and large-scale industrial concerns which continue to operate as joint ventures between the Government and minority foreign interests (such as Addis Tyre S.C., Ethiopian Crown Cork and others). While the corporations and share companies are IPS's most 'natural' clients, the Ministry of Industry, the AID-Bank, or the various multi- and bilateral organizations can also make use of the services of IPS.

It seems that IPS is well established within its institutional environment. Since the design and approval of the project, no major changes have taken place in this field. If its autonomy is kept, any possible institutional change at the national planning and project appraisal level should not necessarily modify its proper functioning within the framework laid down by Legal Notice No. 76 of October 1982 which established IPS.

The application of new institutional schemes, such as joint ventures (Government/foreigners), may increase and diversify the tasks of IPS as the technical and financial capability of the country to invest in industry could possibly grow at a faster rate.

I.C. Project Design

The immediate objective and the outputs foreseen by the Project Document conform in the sense that some outputs partly complement the objective in terms of the indicators of future performance of IPS, such as the number of projects and the minimum number of sectoral surveys to be conducted. Other planned outputs like guidelines prepared, career development plans and training of IPS staff, as well as the creation of information and other services, are more in line with direct capacity building. The structure of the activities planned corresponds to the above findings.

The direct participation of UNIDO experts in providing services to clients of IPS certainly facilitates the fulfillment of contractual commitments by IPS. However, IPS's own capacity develops in this process only to the extent to which its own personnel is organized to profit from the presence of the highly specialized short-term experts. A more detailed analysis of outputs in relation to the immediate objective is given in Chapter III. Activities are discussed in Section II.B.

The input structure in terms of long-term and short-term experts, training facilities and equipment seems to be appropriate. Within the 48 m/m foreseen for long-term experts, provision was made for a project analyst. As regards the two long-term technical experts, the Project Document failed to underline the need for multi-sectoral experience in their respective fields in view of the variety and uncertainty of the projects to be handled.

The Project Document describes fairly well the general economic and institutional setting in which the project was expected to function. In the Section "Institutional Framework" explicit reference is made to the need for co-operation between IPS and the Development Projects Study Agency (DPSA). DPSA is responsible for final appraisal of investment projects from all sectors of the economy. The need to synchronize and share, whenever possible, the inputs provided by UNDP and UNIDO to both institutions, is also emphasized. The relationship between the two projects in actual practice is analyzed in Section II.B.5.

CHAPTER II. PROJECT IMPLEMENTATION

II.A. Delivery of Inputs

II.A.1. UNDP/UNIDO Inputs

In the original Project Document the UNDP contribution was planned at US$1,600,000. The total budget remains the same in the latest budget revision "G". Table II.A.1 shows the comparison between the original and latest budgets. There are significant differences in the components. The total long-term expert component remains in the original framework but there were certain changes in the type and length of experts desired. The short-term expert component was significantly reduced with respect to the original budget but emphasis was shifted to sub-contracts which were not originally planned. The training component remained practically the same in the revised budget but in the course of the project more emphasis was placed on fellowships than originally foreseen. The equipment component was increased by a factor of two. All of the above changes, particularly the shift to sub-contracting, were introduced in the course of implementation with the purpose of making the project more effective.

Table II.A.1 also shows the uncommitted funds for 1986 which amount to US$602,360. Some of them are being or are about to be used while a significant portion remains to be used this year. Related activities are likely to be carried over into 1987 which was to be expected because the project was planned for four years and it started with several months delay.

Because of the significant influence of experts and sub-contracts, as well as national staff training, on the performance of the project and the capacity being developed at IPS, details on the assignments of experts and the topics of training and study tours of IPS staff are given in Annex V. Reference will be made to this detailed elaboration of inputs in the analysis of project results in Chapter III. The adequacy of various inputs is examined in Section II.B.

II.A.2. Government Inputs

In the original Project Document, it was foreseen that the Government would provide adequate accommodation and facilities and would assign a minimum of 15 national professional staff to the project. A Government capital contribution of one million Birr to the establishment of IPS certainly contributed significantly to the smooth take-off of the project as these inputs were provided as planned.

Table II.A.1

Comparison between original and latest UNDP/UNIDO budget and indication of funds remaining for 1986

Budget line	Original budget m/m	Original budget US$	Latest budget (Rev.G.) m/m	Latest budget (Rev.G.) US$	Uncommitted in 1986 m/m	Uncommitted in 1986 US$
10. Project Personnel						
11. Experts						
11.01 Project Analyst	16	127,800	18	126,768	-	-
11.03 Chemical Engineer	16	113,600	12	76,667	-	-
11.04 Market Analyst	-	-	9.5	70,300	9.5	70,300
11.05 Electro-Mechanical Eng.	16	113,600	7.8	57,720	7.8	57,720
11.50 Short-term Consultants	61	523,600	24.5	212,322	12	102,000
11.99 Sub-total	109	873,900	71.8	543,777	29.3	230,020
15. Experts travel		10,000		4,933		1,000
16. Mission costs		20,000		25,272		22,000
19. Total Personnel Component		903,900		571,669		253,020
20. Sub-contracts	-	-		228,192		85,000
30. Training						
31. Fellowships	78	171,600		299,584		77,350
32. Study tours	70	350,000		251,333		92,000
34. Workshops/seminars	-	30,000	-	-		
39. Total Training Component	148	551,600		536,122		169,350
40. Equipment						
41. Expendable				75,066		30,000
42. Non-expendable				177,083		60,000
49. Total Equipment Component		135,000		250,471		90,000
50. Miscellaneous		9,500		13,546		5,000
99. Total UNDP Contribution		1,600,000		1,600,000		602,360

Table II.A.2 shows the comparison between the originally planned Government contribution to project personnel and the actual situation as of 31 March 1986. (The way in which IPS obtains a major portion of its required financing -- by charging for its services -- is described in Section III.B.)

Table II.A.2

Comparison between originally planned Government contribution and current situation (March 1986)

Personnel	Original budget (for 4 yrs)		Current situation (after less than 3.5 yrs)	
	m/m	Birr	m/m	Birr
Professional	1472	1,770,000	822	1,151,960
Administrative	372	113,323	675	282,036
TOTAL	1844	1,883,323	1497	1,433,996

The Project Document stated that the number of national staff would gradually rise during the project period. A target of 52 professionals by the end of the project was indicated. IPS currently numbers 30 professionals. However, much more important seem to be the quality, composition and capability of the national staff which exist. It will be seen in Chapter III that most of the planned ouputs and, more importantly, the project's immediate objective are well on its way of being attained with the present staff. (A target of 52 professionals might be more appropriate for the next phase of the project.) This indicates that the Government inputs, in general, can be considered as adequate.

II.B. Implementation of project activities

The project activities actually started with a study tour of four core staff members in February 1983. On the basis of knowledge and experience gained during the tour, the organizational structure of IPS was defined. For practical purposes the project and IPS had their start at the same time.

One of the important characteristics of project implementation is that the capacity of IPS had to be gradually built up under the strain of pre-investment work for clients under contract. The institutional set-up of IPS as an autonomous state consultancy house under the Ministry of Industry serving the industrial Corporations meant that there was a rather heavy load of pre-investment work from the early stages of the project. IPS started financing itself by charging clients for its services practically from the onset of its activities. In addition to the heavy load of pre-investment studies, performed on a commercial basis, an intensive training programme was taking place with a substantial number of national staff being away on training. This manner of project implementation, rather unusual for a technical co-operation project in its early stages, strongly influenced the way in which international expertise and other inputs were used.

II.B.1. Long-term Experts

The two long-term experts thus far used in the project were given roles quite different from those usually expected from resident experts in UNDP/UNIDO projects. They were assigned certain duties as team members for specific project studies, and reported to national team leaders. The functions usually expected of resident experts -- on-the-job-training of counterparts, advice on organization and development of pre-investment or other studies, evaluation of studies completed, development of methodologies, etc., could not effectively be performed under such circumstances. There seemed to be different expectations of long-term expert contributions from IPS management on the one side, and long-term experts and possibly UNIDO headquarters on the other. It seems that IPS management expected rather universal experts who could contribute to numerous aspects of preparing feasibility studies for a wide range of subjects.

All of the above factors led to a less than expected contribution from the resident experts, as well as to an under-utilization of their capabilities or possible scope of functions. While the industrial economist could be used relatively flexibly for a number of projects, it was unreasonable to expect that a fertilizer engineer could be a technological expert for a wide range of chemical industry projects. Their contribution to the project is mostly reflected in their work on portions of specific studies and, to some extent in the case of the project analyst, in certain methodological developments that could be used by IPS in the future (criteria for selection of location, guidelines for economic and financial analysis of alternative capacities and locations).

II.B.2. Short-term Consultants (individual and under sub-contract)

Considering the manner in which short-term consultants are used, their role is very crucial for project implementation as well as for IPS performance vis-à-vis their clients. Their expertise is usually required for technology and engineering portions of feasibility studies and, to a certain extent, for related market considerations. In spite of some problems encountered in their recruitment and performance, their contribution has to be assessed as significant because they often dealt with a bottleneck in getting the study done. In the process of their engagement, depending on the type of consultant and the subject matter, a certain amount of know-how was transferred contributing to a build-up of IPS capacity. The number of consultants used thus far (23) also indicates their importance for the project.

The problems experienced with short-term consultants may be summarized as follows:

- difficulties in recruitment resulting in delays;
- often inappropriate job descriptions -- vague or extremely demanding (resulting in the expert not knowing what is specifically required and frequently performing below what the national staff expects; this problem can also lead to a less-than-optimal choice of experts);

- preparatory work by national staff not fully completed before the arrival of consultants, thereby putting bigger load and additional strain on consultants during their short stay; and

- with the technical part of pre-investment study often being a bottleneck, too much pressure on the consultant to cover a wide range of open questions, thereby not allowing sufficient time for on-the-job interaction or involvement with national staff.

The experience indicates that sub-contracts (a total of 5, involving 12 consultants) have been used more effectively than individual consultants for the following reasons:

- possibility of better selection of consultants for the specific subject involved;

- interaction of consultants with their consultancy firm headquarters (possibility of headquarters backstopping);

- more experience of consultants in team work, which is a very important feature of this project; and

- contacts established with known consulting firms can be of use in the future.

It also appears that the use of consulting firms on the project can contribute more effectively to the transfer of know-how (methodological) and on-the-job training. Studies on furniture and joinery industry rehabilitation/expansion and electronics industry development are cases in point.

II.B.3. Training

There seems to be a unanimous opinion among all parties concerned that training -- both in the form of fellowships and study tours -- has contributed significantly to the capability built up at IPS. Twenty fellowships have dealt with a variety of topics (see Annex V). The national staff appreciated general courses in project planning and appraisal, particularly in cases where they were previously involved in only narrow portions of study work. Post graduate courses of one year duration are considered very useful and should be continued to the extent possible.

Study tours -- a total of 21 thus far (to consulting houses, equipment manufacturers and industrial plants) -- are a special chapter in project implementation. In many cases they enabled solutions to be found for major bottlenecks in the preparation of feasibility and other studies.

II.B.4. Equipment

The equipment already obtained, as well as that being obtained in 1986 -- in the domains of information and documentation (including computer usage), reproduction and presentation and transportion -- can be considered as fully adequate and has contributed to the functioning of IPS as an efficient consultancy house.

II.B.5. Project Management and Backstopping

In the first one-and-a-half years of project implementation there were delays in the fielding of experts, selection of consultancy firms and organization of training courses and tours abroad, which affected the timely completion of work undertaken by IPS on behalf of its clients. Realizing that the backstopping of this type of project is complicated and that the development of consultancy capability is more delicate than the case of more standard-type institution-building projects, UNIDO agreed to IPS requests and introduced in 1985 new administrative procedures which enable IPS itself to make preliminary arrangements with foreign experts, consultancy firms and training institutions. These innovative procedures have contributed to improved project implementation.

Contacts between the UNIDO backstopping section and IPS management have been frequent (minimum 3 per year, both in Vienna and Addis Ababa) and have contributed to satisfactory backstopping, monitoring and fire-fighting (in some delicate or problematic cases). The backstopping officer has attempted to involve the UNIDO technical sections/branches in as much project work as possible, although with varying degree of success.

A problem that the evaluation mission noticed with regard to project management and backstopping is the lack of at least a tentative yearly workplan for the project (and the IPS). There is not much forward planning and many actions are ad-hoc (although the nature of project activities contributes to this). As a result there is a backlog of studies. Complaints from clients with regard to delays could become stronger in the future.

UNIDO should attempt to speed up the process of sending to IPS reports or portions of studies done by short-term experts or consulting firms under sub-contract, which are first submitted to UNIDO. The excessive delay experienced in the case of furniture/joinery study should not be repeated. UNIDO headquarters should also attempt to get more involved in reviewing and commenting on the methodological aspects of studies done under the project.

Three other on-going UNIDO-executed projects in Ethiopia are of relevance to IPS -- DP/ETH/83/013 - "Industrial Project Development", DP/ETH/84/005 - "Development Projects Study Agency (DPSA), Phase II" and DP/ETH/85/004 - "Development of a portfolio of industrial opportunity studies" (DPSA). While there is no essential overlap between them and project DP/ETH/83/001 as they deal -- respectively -- with improvement in operation of existing enterprises, project appraisal and development of standards for project preparation, and identification of opportunities or possible new projects to be studied, the mission is of the opinion that there should have been more interaction or co-operation between DP/ETH/83/001 (IPS) and DP/ETH/84/005 (DPSA) considering the complementarity of the two projects and the strong institution-building aspect of both. The Project Document for DP/ETH/83/001 did suggest such a co-operation with the purpose of ensuring that inputs provided to both projects be synchronized and shared whenever possible. Since the two projects are backstopped by the same Section of UNIDO, some synchronization had necessarily taken place at the level of the Executing Agency. The co-operation at the project level is less clear. IPS is supposed to follow DPSA guidelines in its work. However, IPS is currently not aware of the details of appraisals of its feasibility studies carried out by the DPSA staff (in co-operation with UNIDO experts). The appraisals contain important methodological observations of interest for IPS in its work. The appraisals made by DPSA are now submitted only to the planning authorities and to the promoter of the project.

CHAPTER III. PROJECT RESULTS AND ACHIEVEMENT OF OBJECTIVES

III.A. Outputs

From the original Project Document it is clear that the project DP/ETH/83/001 has institution-building as its primary function. The immediate objective is to develop the capability of IPS in three major functions:

- preparation of pre-investment studies (opportunity, pre-feasibility and feasibility) on new as well as rehabilitation/expansion projects;
- undertaking of surveys of selected industrial sectors or sub-sectors; and
- consultancy services during investment project implementation.

Ordinarily, the outputs in such a project should be detailed descriptions of the capacities existing at the end of the project in each of the three areas of activity, in terms of functions to be performed (quantity and quality), staff skills acquired, methodologies and guidelines developed and used, equipment and premises required and market/marketing of services. The outputs listed in the Project Document go only half way in this respect as they represent a mixture of institution-building and direct support outputs. However, there is no need of re-interpreting or reformulating them. Instead, the presentation of results achieved will consist of a comparison between those planned in the Project Document vs. those actually produced, as well as of a detailed analysis of capabilities developed at IPS through the project.

III.A.1. Outputs Foreseen in the Project Document

The outputs foreseen in the original Project Document are as follows:

1.1 A systematic guideline for the identification, preparation and appraisal of industrial projects to be followed by the Ministry of Indistry, the IPS, and the industrial corporations.

1.2 A minimum of 20 identified projects submitted to relevant corporations and the Ministry of Industry for consideration, and opportunity or pre-feasibility studies completed on all approved project ideas.

1.3 Completion by about mid-1985 of a least (a) 8 feasibility studies, including (but not limited to) the following: pencil, leather board, medium density board, cement-bonded particle board, blankets; (b) 1 expansion study; and (c) four rehabilitation studies.

2.1 A set of guidelines outlining (a) the form of assistance provided by the IPS to public enterprises involved in the implementation of investment projects, and (b) the terms on which such assistance is given.

2.2 Expertise developed within the IPS staff in (a) planning and management of industrial projects; (b) preparing and reviewing machinery and equipment specifications; (c) identifying practical solutions to operational problems of a mechanical or technological nature; and (d) preparing and evaluating bid documents and contract proposals.

3.1 A minimum of two sectoral surveys completed.

3.2 A minimum of two new sub-sectors identified and approved for sectoral study.

4.1 An overall career development and training plan for IPS personnel.

4.2 IPS staff members trained overseas in relevant disciplines for a total of 78 man-months.

4.3 IPS staff members exposed overseas to specific investment projects and industrial enterprises through 70 man-months of study tours.

4.4 All IPS professional staff familiarized with selected professional topics through two training seminars in Addis Ababa.

5.1 A library and an information and documentation centre complete with a micro-computer.

5.2 A small printing unit furnished with a composer, a camera, a small-sized off-set machine and binding equipment.

5.3 A transport service unit consisting of a fleet of two four-wheel drives and six sedans.

The planned outputs are grouped into five categories:

- pre-investment studies;
- consultancy services during investment project implementation;
- sectoral and sub-sectoral surveys;
- staff skills development; and
- facilities.

The analysis of results achieved will be made according to these categories.

III.A.1.1. Pre-investment studies

With respect to output 1.1, guidelines for the identification, preparation and appraisal of industrial projects are well established and followed by the Ministry of Industry, the industrial corporations, IPS and DPSA. The basis for activities in pre-investment studies are "Guidelines to Project Planning in Ethiopia" and "Guidelines for the Preparation of Terms-of-Reference for Feasibility Studies of Development Projects" both issued by DPSA and based on UNIDO publications "Manual for the Preparation of Industrial Feasibility Studies" (UNIDO/ID/206) and "Guidelines for the Preparation of Industrial Feasibility Studies for Consulting Firms" (UNIDO/ID/401). The IPS staff uses the above manual and guidelines in all opportunity, pre-feasibility and

feasibility studies that are undertaken. In addition, the COMFAR computerized financial analysis is now used in all feasibility studies. This capacity is fully established at IPS a: five staff members are capable of conducting computerized sensitivity analysis. In this manner, the project preparation methodology used by IPS is fully in line with project appraisal performed by DPSA. As a matter of fact, it can be stated that strict project preparation and appraisal procedures are followed and enforced in the industrial sector in Ethiopia.

Table III.A.1 summarizes the status of work on various studies in the course of the project with respect to planned outputs 1.2 and 1.3. Distinction is made between feasibility and other studies (survey, opportunity, pre-feasibility) as well as new vs. rehabilitation/expansion projects. Table III.A.2 gives additional details on projects studied and services rendered by IPS. It indicates the investment value of projects studied, duration of study or service and direct inputs by UNDP/UNIDO (strictly speaking, a number of studies were made with inputs outside the UNDP/UNIDO project and these are identified). For completed studies, the current status of the investment project is described (under consideration by banks, already under implementation, etc.).

Considering that the start of the project activities in the area of pre-investment studies was delayed by about eight months, the target date originally indicated as mid-1985 actually becomes March 1986, for which Tables III.A.1 and III.A.2 were compiled. It can safely be stated that targets planned in the Project Document in the domain of pre-investment studies have been reached as 8 feasibility, 3 rehabilitation, 1 expansion and 3 partial (market, distribution, location) studies have been completed and submitted to clients. Since all these studies have been undertaken in the past 18 - 24 months, the capacity of IPS in preparation of various studies (mostly feasibility) can be estimated at 7 - 10 per year, a number that also can be inferred from the Project Document.

Certain problems which IPS is facing with its workload and delays (which are becoming more burdensome as IPS activities expand) are described in Section III.A.2. All studies are conducted according to the manual and guidelines discussed under output 1.1. The mission examined several of them (see Annex IV) and is convinced that in most cases they are of a solid international-level quality. Some weaknesses as noted in a number of studies by IPS are also discussed in Section III.A.2.

The workload facing IPS in pre-investment studies in the next 12 - 18 months, which can be seen from Tables III.A.1 and III.A.2, appears to be at least of the same magnitude as in the past year (10 studies per year).

Table III.A.1

Output as of March 31, 1986

1. Project Studies Completed

(a) Final Stage

- Tractor Marketing and Distribution Study
- Pencil Manufacturing Plant Feasibility Study
- Awassa Flour Mill Feasibility Study
- Bahr Dar Oil Mill Feasibility Study
- Addis Ababa Plywood Factory Rehabilitation Study
- Leather Fibre Board Plant Feasibility Study
- Addis Ababa Asbestos Factory Rehabilitation Study
- Cement-Bonded Particleboard Plant Feasibility Study
- Ceramics Complex Feasibility Study
- Electronics Industry Development Study
- Ethiopian Crown Cork Plant Rehabilitation Study
- Industrial Potential Survey of Ethiopia
- Sewing Thread Market Study
- Seventh Textile Project (Location Study)

(b) Draft Final Stage

- Furniture and Joinery Industry Rationalization/Expansion Study
- Electric Machinery Assembly Plant Feasibility Study
- Blanket Factories Feasibility Study (3 for rehabilitation, 1 new)
- Exercise Book Plant Feasibility Study

(c) Advisory Services Rendered

- Evaluation of Consultancy Offers for Bagasse Pulp Mill Feasibility Study
- Fourth Cement Project Commisioning (design and documentation review)
- Wonji/Shoa Sugar Factory Preliminary Financial Cost Analysis of Extension Project
- Review of Project Document of Fifth Cement Project

2. Project Studies Nearing Completion

- Mineral Water Plant Feasibility Study
- Plastics Industry Sector Study
- Hides Tannery Feasibility Study
- Tender Document Preparation on:
  . Electric Machinery Complex
  . Ceramic Complex
  . Matches Manufacturing Plant

Table III.A.1 cont'd

3. Project Under Study

- Fertilizer Plant Pre-feasibility Study
- Pipe Fittings Plant Feasibility Study
- Industrial Estate Feasibility Study
- Household Appliances Manufacturing Complex Pre-feasibility Study
- Alkyd Resins Processing Plant Feasibility Study
- Spare Parts Manufacturing Complex (erection supervision)
- Mugher Cement Factory Expansion (project concept, negotiation, contract and erection supervision)
- Low Cost Vehicles Assembly Feasibility Study
- Kaliti Steel Industry Rehabilitation/Expansion (new study)
- Window Glass Sheet Plant Feasibility Study
- Leaf Tobacco Production Feasibility Study
- Rehabilitation/Expansion of 11 Flour Mills

4. Project Studies Under Consideration

- Household Utensil Manufacturing Plants Rehabilitation/Expansion (IPS has won international bid for the study of the project; only World Bank/AID Bank approval awaited)
- Dire Dawa Cement Factory Rehabilitation/Expansion
- Akaki Textile Mills Rehabilitation/Expansion

Table III.A.2. Details on projects studied and services rendered by IPS

PROJECT	STUDY STARTED	STUDY COMPLETED	STUDY DIRECTLY SUPPORTED BY UNIDO				INVESTMENT MAGNITUDE (in Birr)	IMPLEMENTATION STATUS
			STUDY TOUR	LONG-TERM EXPERT	SHORT-TERM EXPERT	SUB CONTRACT		
(a) Completed to Final Stage								
Tractor Marketing	Sept|83	March|84	-	-	-	-	24.0 million	Marketing being done
Pencil Plant	July|83	Sept|84	-		-	-	5.2 "	Implementation about to start
Awassa Flour Mill	Oct|83	July|84	-	-	-	-	15.2 "	Start-up expected by end 1986
Plywood (Rehabilitation)	Aug|83	March|85	-	-	-	-	15.7 "	Under appraisal by DPSA
Bahr Dar Oil Mill	Oct|83	Aug|84	-	-	-	-	23.8 "	Plant commissioned
- Leather Fibre Board	Feb|84	July|85	X	X	X	-	6.2 "	Under appraisal by DPSA
- Cemboard	Feb|84	Nov|85	-	-	-	-	29.2 "	Under appraisal by DPSA
- Electronics Complex	June|84	Aug|85	X	-		X	15.8 "	Under appraisal by PDSA
- Crown Cork (Rehabilitation)	June|84	Dec|85	X	-	-	X	4.2 "	Positively appraised by DPSA. Financing to be approved.
- Seventh Textile (Location)	Jan|85	June|85	-	X	-	-	156.9 "	Under tendering
- Sewing Thread (Market)	Aug|85	Dec|85	-	X	-	-	-	Under tendering
- Asbestos (Rehabilitation)	June|84	Nov|85	X	-	-	-	8.2 "	Under apprraisal by DPSA
- Industrial Potential Survey	May|85	Sept|85	-	-	-	-	-	-
- Ceramics Complex	-	March|85	X	-	X	-	32.7 "	Under tendering
(b) Completed to Draft Stage								
- Furniture + Joinery	-	March|86	X	X	-	X	8.91 "	Under appraisal by DPSA
- Electric Machinery	June|84	March|86	X	-	-	-	6.4 "	Under tendering
- Blanket Factories	-	March|86	-	-	-	X	46.2 "	Under appraisal by AID Bank
- Exercise Book	-	March|86	-	-	-	X	9.9 "	Under appraisal by AID Bank
(c) Nearing Completion								
- Mineral Water	Feb|85	April|86	-	-	X	-	29.0 "	-
- Plastics Sector	June|85	May|86	X	X	X	-	-	-
- Hides Tannery	May|85	April|86	X	-	X	-	19.0 "	-

Table III.A.2. cont'd

PROJECT	STUDY STARTED	STUDY COMPLETED	STUDY DIRECTLY SUPPORTED BY UNIDO				INVESTMENT MAGNITUDE (In Birr)	IMPLEMENTATION STATUS
			STUDY TOUR	LONG-TERM EXPERT	SHORT-TERM EXPERT	SUB-CONTRACT		
(b) Under Study								
- Fertilizer	April|85	Planned June|86	X	X	-	X	-	-
- Pipe Fitting	May|85	" June|86	Planned	-	X	X	-	-
- Industrial Estate	Oct|85	" Aug|86	HASIDA Fund	X	-	HASIDA Fund	-	-
- Electric Appliances	June|85	" July|86	X	-	-	-	-	-
- Low Cost Vehicles	Sept|85	" June|86	X	-	-	X	-	-
- Kaliti Steel	April|86	" 87	Planned	-	-	Planned	-	-
- Window Glass Sheet	April|86	" 87	-	-	-	Planned	-	-
- Leaf Tobacco Production	April|86	" 87	Planned	-	-	Planned	-	-
- 11 Flour Mills (Rehabilitation)	April|86	" 87		-	-	Planned	-	
(c) Tender Document Preparation								
- Electric Machinery	Feb|86	April|86	-	-	-	-	6.4 million	
- Ceramics Complex	Feb|86	April|86	-	-	-	-	32.7 "	-
- Matches	March|86	Planned June|86	-	-	-	-	- -	-
(d) Advisory Services Rendered								
- Bagasse Pulp	March|84	May|84	-	-	-	-	39.8 "	Under appraisal
- Fourth Cement	April|84	Oct|84	-	-	-	-	225.0 "	Implemented
- Wonji|Shoa Sugar Expansion	-	March|84	-	-	-	-	277.8 "	Under appraisal
- Fifth Cement	June|84	Jan|85	-	-	-	-	375(approx.)	Under appraisal
- Spare Parts	Aug|85	36 months	-	-	-	-	175.7 million	Under implementation
- Mugher Cement Expansion	Aug|85	36 months	-	-	-	X	120.0 million	Under contracting

III.A.1.2. Consultancy services during investment project implementation

With respect to outputs 2.1 and 2.2, it must be stated that the project's or IPS's involvement in the implementation of investment projects was not foreseen as significant until the latter stages of project DP/ETH/83/001, when some of the studies previously prepared start leading to implementation. Table III.A.1 also shows some of the consultancy services which are now being offered. These services represent the simpler ones among the possible spectrum of consultancy services described under activity 2.1.1 in the Project Document (planning and programming of project management, tender preparation, evaluation of offers, contract negotiation, checking of designs, equipment and machinery inspection, erection supervision, etc.), but IPS will gradually develop its capabilities in this field. More assistance to this function of IPS should be focussed in the remainder of this phase of the project and especially in phase II foreseen to start in 1987. IPS has serious ambitions in this domain as is illustrated by the contract for the Mugher Cement Factory Expansion, which the evaluation mission examined.

As far as guidelines for assistance by IPS in implementation of investment projects, they are contained in model contracts (like the Mugher Cement Factory one), which go into the details of methodology that can be modified from case to case. The project has thus far contributed only in a very limited amount to the development of expertise within IPS in this area (two fellowships); however, several activities are foreseen in 1986.

III.A.1.3. Sectoral and sub-sectoral surveys

Although the Project Document did not give the exact definition of a sectoral or sub-sectoral survey (i.e., is it a survey leading to the identification of new investment opportunities or maybe to rehabilitation/ expansion plans), the electronics industry development study (completed) and plastics industry sector study (nearing completion) certainly fall in this category. Furniture and joinery industry rationalization/expansion study (practically completed) and flour mills rehabilitation/expansion may also be classified under the same heading. Methodological know-how for these studies (for example, diagnosis of existing facilities vs. analysis of new opportunities) can be developed through work with sub-contractors (Atkins - electronic industry development study and UNILES - furniture industry study seem to be good examples). The results with respect to planned outputs 3.1 and 3.2 can be considered satisfactory.

The tripartite review held 18 April 1985 expressed concern about the lack of financing for these surveys. Developments since then have shown that there is no need for concern. These surveys are a form of pre-investment work with broad coverage (although not necessarily into great detail) and the commercial need for them will arise just like for other pre-investment studies. If, for long-term planning purposes, the Government need for such broad studies arises, the capacity at IPS is there.

III.A.1.4. Staff skills development

Annex V gives a good overview of achievements with respect to outputs 4.1, 4.2, 4.3 and 4.4. As mentioned in Section II.A.1, the main emphasis -- budget-wise -- was on fellowships. By the end of 1985, 48 of the 70 m/m of fellowships had already taken place. With four IPS staff currently on post-graduate studies in the U.K., the total is about to reach 72 m/m. Additional 58 m/m are planned (see Section IV.B.1.3). Study tours have been numerous but have not exceeded 15 m/m in duration. More important than the number of man-months is the broad coverage of fellowships and study tours in terms of subjects, as well as the quality of training appreciated by practically all involved. There is hardly an IPS staff member who has not been involved in some type of training which has included 20 fellowships and 21 study tours. The training programme will be fully accomplished as planned (or better than planned) in revision "G" considering the training foreseen until the end of 1986 (see Section IV.B.1.3).

III.A.1.5. Facilities

Without going into details (which are elaborated in the three project progress reports submitted thus far -- see Annex IV), suffice it state that IPS facilities (library, computer centre, reproduction and document preparation, transport service) are being developed at least as planned in the Project Document. The achievements of the Business Development and Information Service of IPS, especially if augmented as planned until the end of 1986 (data bank, information storage and retrieval system), are commendable. The library should be strengthened with more periodicals dealing with techno-economics, as well as with technical books and documentation.

III.A.1.6. Summary

Taking into account the material presented in Sections III.A.1.1 to III.A.1.5, as well as some achievements not directly foreseen in the Project Document (for example: (a) the computerized management information system which is under installation and should facilitate work planning and monitoring under increasing obligations for IPS; (b) several initial very good working contacts established between IPS and renown international consultancy firms; and (c) a number of methodological contribution by the industrial economics expert -- see Section II.B.1), the evaluation mission considers that the outputs planned in the Project Document have been or will be produced (by the end of 1986) at least as planned.

III.A.2. Capabilities/Capacities Developed at IPS and the Position of IPS in the Industrial Environment

The above somewhat formalistic output-by-output listing does not necessarily give a complete picture of what the project has contributed to. An assessment of IPS's capabilities and its position in the industrial environment in Ethiopia is therefore presented below.

The organizational chart of IPS is given in Table III.A.3. IPS currently has 30 professionals and 23 administrative staff. The distribution of professionals in the various groups is also indicated in the table, to the extent possible (Engineering Consultancy Service currently operates as one group while the structure indicated in the table is designed for the future when IPS gets more involved in implementation activities). The General Manager of IPS reports directly to the Vice-Minister for Development in the Ministry of Industry. The organization has the status of an autonomous consultancy house under the Ministry, operating on a commercial basis by charging for its services.

The strength of a consultancy house can essentially be measured by the strength of its staff. In this category IPS fares extremely well. The type of work to be performed, its relevance to the development of industry in Ethiopia, the strength of the Ministry of Industry's intention to create and develop a competent consulting organization, the autonomous status of the organization and possibility of satisfactory remuneration, the co-operation with international organizations (UNDP and UNIDO) and the attractiveness of training opportunities abroad, as well as joint work and contacts with international experts and consultancy firms -- all these factors contributed to the assembly of an excellent consultancy group at IPS. Annex VI contains a short profile of IPS with qualifications and experience of its staff. The organization has an ideal blend of very experienced senior staff -- many coming from high management positions in the industrial corporations (9 professionals have very relevant experience of 15 years or more) and younger economists and engineers, well-educated (many abroad) with only several years of experience. Currently, of the 30 professionals, four are on longer-term training abroad and plans are to maintain this ratio in the medium-term.

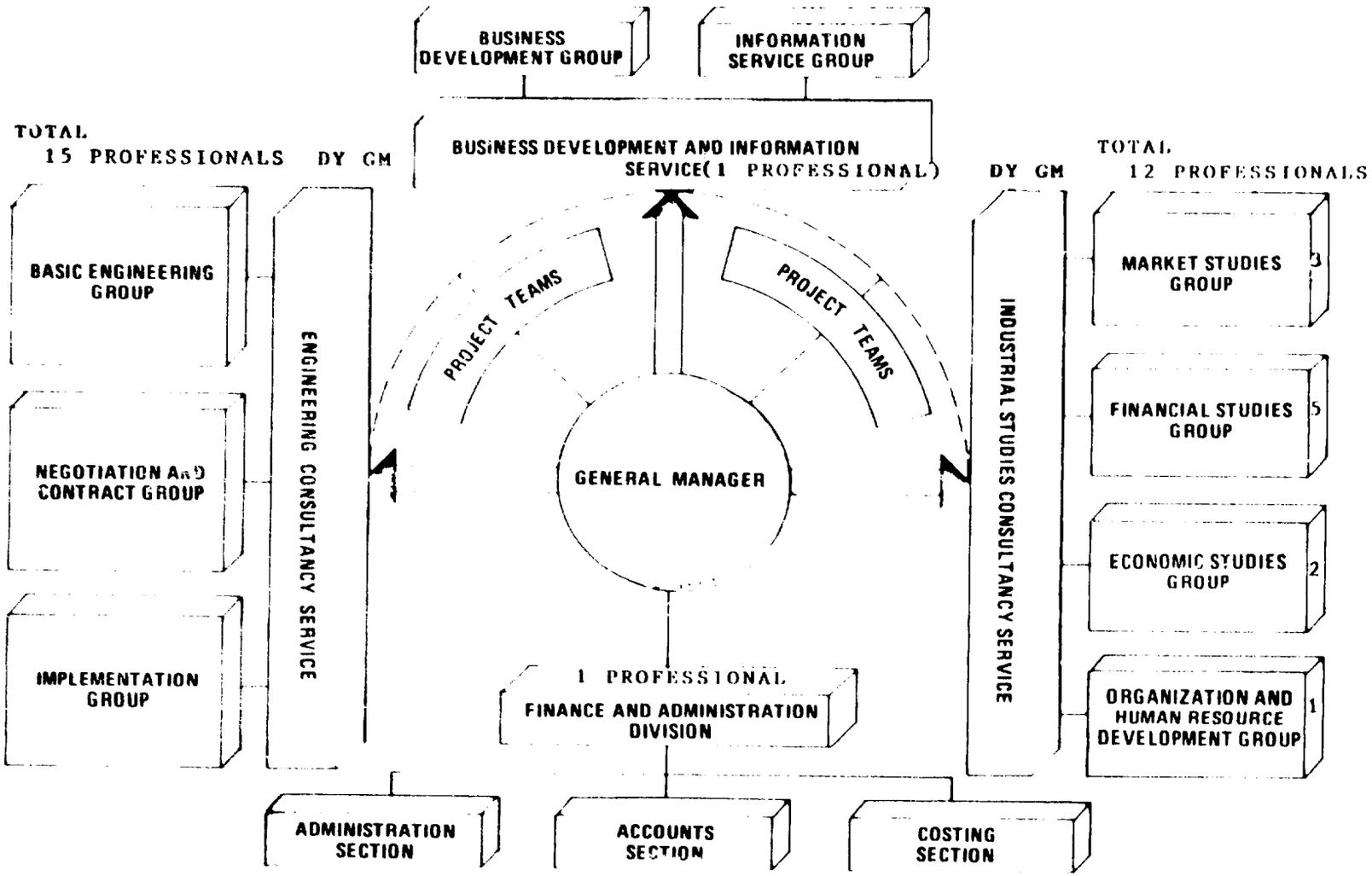
A very important characteristic of IPS's operation is the formation of teams (numbering 3 - 4 or more, if needed) for work on specific projects. Because of this, IPS capability/capacity is to be measured not by the capacity of organizational/functional units but by the capacity of project teams, created as matrix structures (see Table III.A.3). On the basis of Section III.A.1, the current capacity by types of studies or services could be estimated as follows:

- pre-investment (pre-feasibility and feasibility) studies -- 7 - 10 per year;
- sectoral or sub-sectoral surveys/studies -- 2 per year; and
- consulting services during project implementation -- 2 per year (for the time being these include relatively simple services).

These are essentially capacities which are implied in the Project Document DP/ETH/83/001. The contribution of the project to the development of this capacity is crucial; as a matter of fact, for the first two-and-a-half years of the project it is difficult to distinguish between the project and IPS (although IPS is now partly capable of and is beginning to conduct certain activities with inputs coming from outside the project).

Table III.A.3

ORGANIZATION CHART : INDUSTRIAL PROJECTS SERVICE



IPS is in the position to fill a big gap which existed in the domain of industrial investment project planning and preparation in Ethiopia. Most of the pre-investment studies prior to 1983 were performed by foreign consulting firms, for which a large amount of foreign currency was used. IPS is the only domestic consulting organization catering the industrial sector, its clients being the ten industrial corporations. With investment plans in the industrial sector being very ambitious, IPS is in a position to make a very relevant and essential contribution to the industrial development of the country.

Because of its institutional location and mandate, with easy access to its clients, the demand for IPS services is very high, at the moment certainly significantly higher than its capacity. With the capacity as indicated above, IPS is currently carrying out around 1.5 million Birr worth of services per fiscal year. This represents full capacity operation and full commitment of the staff. With 7 - 10 studies per year involving projects of an average investment value between 10 and 15 million Birr, IPS is involved in preparing an investment portfolio that can be estimated at around 100 million Birr per year. This represents somewhere around 30 per cent in terms of the investments planned in industry yearly in the medium-term (and approx. the same percentage or maybe slightly higher in terms of the number of industrial projects per year). The remainder of project preparation work goes to foreign consulting firms. Considering that IPS is still only in its three-year "take-off" phase, this is a very significant accomplishment.

The very strong and favourable position of IPS is illustrated by the fact that it is operating on a commercial basis by charging clients for its services and does not need to be subsidized by the Ministry. According to the Ministry of Industry sources, it was planned to subsidize IPS up to 50 per cent in its first years, with this figure gradually decreasing. For the current fiscal year IPS is approximately 15 per cent away from breaking even or fully covering its operation. The initial Government capital contribution and relatively high advance payments by clients (agreed to in contracts) maintain IPS liquidity.

The relevance of the work which IPS is performing is illustrated by the number of projects studied which are now either being implemented or are under consideration for financing. These are indicated in Table III.A.2. Recognition of IPS by international organizations outside the project DP/ETH/83/001 is a significant indicator of progress: the Asbestos Factory Rehabilitation Study was financed by the World Bank through AID Bank, the industrial potential survey by Centre for Industrial Development (Brussels); World Bank financing will also be involved in the rehabilitation/expansion study of 11 flour mills and possibly for the household utensil study.

IPS clients - the industrial corporations - appreciate the work done thus far and consider IPS a competent consultancy house. Considering the ambitious plans in the industrial sector in the next several years and Ethiopia's improving economic situation which could significantly contribute to the realization of these plans, client needs for IPS services in the future will be even stronger than today. The corporations will need IPS services in a larger number of pre-investment studies than today and in more and more consultancy assignments during implementation (ranging from preparing tender documentation to commissioning), particularly for projects studied by IPS in

the pre-investment phase. The corporations also see a significant role for IPS in the area of investment promotion and financial resource mobilization -- as a natural extension to extensive work done and information collected in the pre-investment study phase.

In its plans for future activities, IPS is facing a number of problems of growth. Table III.A.4 shows the time needed for the preparation of studies for clients. It is clear that significant delays occur, some of them closely connected to the nature of project DP/ETH/83/001 and a number of implementation problems discussed in Section II.B. IPS is currently under considerable strain to maintain the capacity of 7 - 10 studies per year. Its forward planning of work to be done is somewhat ad-hoc. IPS needs to grow in staff but growth has to be a function of income earned from services provided. The availability of people for consultancy work is limited. A careful organizational plan taking into account the demand for services, the time needed to perform them and the possibility of organizational growth has to be made. For a summary of the strengths and weaknesses of IPS, with special regard to the conditions of its further growth, see Section III.B.

III.B. Achievement of the Immediate Objective

From Sections III.A.1 and III.A.2, it is clear that the immediate (project) objective of creating and developing the capabilities of IPS in the areas of pre-investment studies, sectoral and sub-sectoral studies and consultancy services during investment project implementation is being attained in qualitative as well as quantitative terms implied in the Project Document. It is safe to state that, by the end of 1986 when all of the planned outputs are produced, the project will fully achieve its immediate objective. The project has contributed significantly toward building-up the considerable capacity at IPS in a relatively short time. The evaluation mission is of the opinion that, in comparison with similar UNDP/UNIDO institution-building technical assistance projects in the area of investment project preparation evaluated in Africa and Asia in the past two years, the achievements of DP/ETH/83/001 are very impressive.

The project has successfully contributed to the 'take-off' of IPS. On a yearly basis, IPS is currently able to prepare up to 10 major project studies (pre-feasibility and feasibility), and 2 sector studies and accept partial assignments in implementation management of 2 investment projects. IPS is able to carry out market studies and a significant part of technical studies (depending on the sector concerned), as well as financial and economic analysis. IPS would certainly need foreign inputs regarding project technology and engineering, especially in industrial branches non-existent in Ethiopia.

The industrial corporations and DPSA appreciate the services furnished by IPS. The studies are carefully prepared and presented. During the short period of its existence IPS has managed to create its own identity, its own ways of doing things and to train a group of professionals -- economists, accountants and engineers -- who work with devotion and competence and who proudly claim to serve an important institution.

Table III.A.4.

INDUSTRIAL PROJECTS SERVICE

PROJECT COMPLETION SCHEDULING - PLAN AND ACTUAL

NO.	PROJECT	AGREEMENT DATE	PLAN			ACTUAL		
			DRAFT	CLIENT	FINAL	DRAFT	CLIENT	FINAL
1.	Tractor Marketing & Distribution	6/9/83	6/12/83	21/12/83	11/1/84	6/12/83	6/2/84	20/3/84
2.	Pencil Manufacturing Plant	1/7/83	21/10/83	7/11/83	30/11/83	22/02/84	6/6/84	8/9/84
3.	Awassa Flour Mill Feas. Study	11/10/83	11/01/84	26/01/84	26/02/84	25/02/84	15/05/84	14/07/84
4.	Plywood Factory	26/08/83	26/02/84	10/03/84	10/04/84	18/09/84	18/01/85	05/03/85
5.	Bahr Dar Oil Mill Feas. Study	11/10/83	11/02/84	26/02/84	26/03/84	20/08/84	------	------
6.	Leather Fibre Board Feas. Study	20/02/84	20/06/84	04/07/84	05/08/84	26/09/84	15/12/84	27/07/85
7.	Cement Bonded Particle Board	29/02/84	14/09/84	29/09/84	29/10/84	28/05/85	28/06/85	19/11/85
8.	Electronics Industry Dev't Opp. St.	07/06/84	07/03/85	07/04/85	07/01/86	09/05/85	30/05/85	06/08/85
9.	Ethiopian Crown-cork Plant Reh. St.	29/06/84	29/12/84	-------	29/01/85	04/04/85	16/07/85	09/12/85
10.	7th Textile Project (Location St.)	22/01/85	22/04/85	06/05/85	21/05/85	26/03/85	10/05/85	27/06/85
11.	Bagasse Pulp Mill - Tender Eval.	28/03/84	-	-	-	-	-	18/05/84
12.	Sewing Thread (Market Study).	29/08/85	13/11/85	28/11/85	11/01/86	07/10/85	15/11/85	5/12/85
13.	A.A. Asbestos Factory Reh. St.	30/06/84	30/01/85	30/02/85	30/03/85	02/01/85	15/01/85	5/11/85
14.	Industrial Potential Survey of Eth.	21/05/85	05/06/85	20/06/85	20/07/85	12/07/85	23/08/85	26/09/85
15.	Fourth Cement Project Comsg.	04/04/84	-	-	10/10/84	-	-	10/10/84
16.	Wonji/Shoa Factory - Fin. Anals.	-	-	-	-	01/01/84	02/02/84	03/03/84
17.	Review of Project Dct. 5th Cement	30/06/84	-	-	05/01/85	-	-	05/01/85

While acknowledging this, some problems and difficulties need to be mentioned. Their solution is a necessary condition for maintaining IPS's good quality standards and securing its further growth:

a) it seems that in the market research some of the forecasting models are questionable, including over-optimistic market estimates and the lack of detailed comparison of prevailing domestic and international prices;

b) technology is normally the strong point of IPS's studies, but in some of them the array of products and technologies assessed seems to be limited;

c) the collection and evaluation of technical information very often lead to major delays in the delivery of the study; more efficiency is required in this respect, with due regard to the growing workload;

d) some weaknesses have been found in the economic analysis of investment projects. Inter alia, inappropriate currency conversion factors used in the analyses may favour capital-intensive investment in industry;

e) the delays in delivery, the long duration of the studies and the pressures of the growing workload may lead to more difficulties in the future;

f) investment promotion and the mobilization of financial resources for industrial projects seem to be a justified addition to the mandate of IPS;

g) the strengthening of activities in project implementation is another justified programme, both regarding projects studied by IPS and projects prepared by others and entrusted to IPS by the promoter. Both extensions require careful planning and strengthening of the number and skills of personnel, as well as co-ordination.

III.C. Contribution to the Achievement of the Development Objective

The project has successfully contributed to the creation and development of investment preparation and implementation capabilities in the industry sector. The recognition by the Government of the importance of improving project preparation, decision-making and implementation management in industrial investment in order to achieve in the long run a better allocation of resources in industry -- i.e., the recognition of the development objective -- has not changed since the creation of IPS and the inception of the project. The need for a strong national capability in this domain is even better recognized now than ever before.

The existing capacity of IPS is not the result of the project alone, but it could not have been achieved within such a short period of time without it. The share of IPS in industrial project preparation and implementation is a convenient measure of the project's success. IPS currently handles about 30 per cent of the projects (number-wise), while the investment value of the projects eleborated by IPS corresponds to somewhat less than 30 per cent of the annual investments in industry. IPS share in implementation management is still quite low.

III.D. Need for Further International Assistance

The Project Document correctly stated that the establishment of a strong industrial consultancy house is a long-term objective and a delicate task which might require continued UNDP/UNIDO assistance. It has to be mentioned that the current capacity of IPS is still significantly dependent on the project DP/ETH/83/001 because of the very specific nature of this technical assistance project. Solutions to technical-technological and other bottlenecks in pre-investment work are found through short-term international expertise or national staff study tours. If the UNDP/UNIDO assistance were to terminate, the capacity of IPS to perform its functions would be reduced.

The next phase of the project, foreseen in the Fourth UNDP Country Programme Cycle (with a budget of US$1,000,000), is therefore very significant and relevant, particularly considering the tasks and heavy load that lie ahead of IPS in the next few years. The general direction of the next phase should be toward the consolidation of achievements of Phase I and reduction of dependence on international inputs in pre-investment work, as well as toward the build-up of capacity in consultancy services during investment project implementation.

CHAPTER IV. CONCLUSIONS AND RECOMMENDATIONS

IV.A. Conclusions

IV.A.1. Project Formulation

The formulation of the project is grosso modo satisfactory. As regards the development objective, the lack of focus on project preparation, decision-making and implementation in industrial investment, related to improved allocation of resources in industry, needs mentioning. While the definition of the immediate objective is more accurate, the project design is not fully balanced with respect to institution-building and direct-support results and inputs. Such a project design necessarily leads to tensions and disproportions between long-term objectives of capacity building and the short-term pressure deriving from contractual commitments of the organization being assisted.

IV.A.2. Project Implementation

The establishment of IPS in 1983 as an autonomous consultancy house under the Ministry of Industry was an important step taken by the Government to improve project preparation, decision-making and implementation in industry. IPS is well established in its institutional environment. The institutional status is most convenient for IPS as well as for its main clients, the industrial corporations. IPS itself offers a very good environment for the technical co-operation project.

The delivery of UNDP/UNIDO inputs followed the Project Document. With the purpose of making the project more effective, some changes were introduced flexibly (type and length of service provided by resident experts, reduction of individual short-term expertise, use of sub-contracts). The Government's inputs have been adequate. It needs to be signalled, however, that the number of professional project personnel is below the level planned while the administrative personnel is almost doubled, with respect to the Project Document.

For all practical purposes, the project and IPS had their start at the same time. The capacity of IPS had to be gradually built up under the strain of pre-investment work for clients under contract. This manner of project implementation strongly influenced the way in which international expertise and other inputs were used.

So far, long-term experts have contributed to the success of the project less than expected. This may be a result of the inadequate definition of their function, the differing expectations between IPS management and UNIDO and, finally, the less than optimal selection of experts.

Short term experts (23 thus far) have played a major role in the performance of the project. They often worked under pressure in dealing with a bottleneck to get a study done. Delays in recruitment, often unrealistically demanding job decriptions and not enough preparatory work by IPS before their arrival are some of the negative features of their use. The IPS experience shows that the use of consulting firms under sub-contract in technical assistance projects can very effectively contribute to the solution of problems, transfer of know-how and on-the-job training.

Training programmes consisting of 21 study tours and 20 fellowships, among them post graduate courses of one year duration, as well as courses in project planning and appraisal, have contributed very significantly to the capability built up at IPS. The equipment already obtained, as well as that being obtained in 1986, is fully adequate.

Contacts between the UNIDO backstopping section and IPS management have been frequent and have contributed to satisfactory backstopping and monitoring. The delays which occured in UNIDO inputs in the first one-and-a-half years have led to the adoption of new, more flexible procedures on both sides related to the fielding of experts, selection of consultancy firms and organization of study tours and fellowships. It seems that a more efficient co-operation between the backstopping section and the technical sections/branches in UNIDO could have prevented some of the difficulties encountered in the delivery of inputs. Such co-operation could lead to a better appraisal and definition of the technical expertise required and a more timely evaluation of the reports submitted directly to UNIDO by experts and consulting firms. In addition, the lack of a yearly work plan for the project and enough forward planning at IPS also contributed to some of the delays experienced.

As regards the other UNIDO executed projects in Ethiopia, there should have been more interaction and co-operation between DP/ETH/83/001 (IPS) and DP/ETH/84/005 (DPSA) considering their complementarity and the strong institution building aspect of both.

IV.A.3. Project Results and Achievement of Objectives

The targets planned in the Project Document in the domain of pre-investment studies have been achieved as 8 feasibility, 3 rehabilitation, 1 expansion and 3 partial (market, distribution, location) studies have been completed and submitted to clients.

The project's or IPS's involvement in the implementation of investment projects was not foreseen as significant until the latter stage of the project, when some of the studies previously prepared start leading to implementation. More attention should be focussed on this function of IPS in the remainder of this phase of the project.

The results with respect to sectoral and sub-sectoral surveys can be considered satisfactory. If the Government's need for such broad studies arises, the capacity at IPS is there.

As regards staff skills development, there is hardly an IPS staff member who has not been involved in some type of training. Training activities represent one of the strongest aspects of the project as far as the development of national consultancy capability is concerned.

Overall, the evaluation mission considers that the outputs planned in the Project Document have been or will be produced (by the end of 1986) at least as planned.

The strength of a consultancy organization can essentially be measured by the strength of its staff. Due to various positive factors, IPS has an ideal blend of very experienced senior staff (9 professionals have very relevant experience of 15 years or more) and younger economists and engineers, well educated (many of them abroad) with several years of experience.

The current capacity of IPS can be estimated as follows: 7 - 10 pre-investment (mostly feasibility) studies, 2 sectoral or sub-sectoral surveys and 2 consulting services during project implementation (for the time being relatively simple services) per year. This matches the capacity which can be inferred from the Project Document.

The very strong and favourable position of IPS in its environment is illustrated by the fact that it is operating on a commercial basis by charging clients for services and does not need to be subsidized by the Government. The demand for IPS services is very high, at the moment certainly significantly higher than its capacity. The relevance of the work which IPS is performing is illustrated by a high percentage of projects studied which are now being implemented or are under serious consideration for financing.

The immediate (project) objective of developing the capabilities of IPS in the areas of pre-investment studies, sectoral and sub-sectoral surveys and consultancy services during investment project implementation is being attained, in qualitative as well as quantitative terms implied in the Project Document. It is safe to state that, by the end of 1986 when all of the planned outputs are produced, the project will fully achieve its immediate objective.

In most cases, the studies done by IPS are of a solid international-level quality. However, some weaknesses have been noticed in the appreciation of the market and occasionally in the scope of products and technologies assessed. There are indications that the limited use of shadow-pricing in economic analyses may encourage capital-intensive investments. The delays in the delivery of studies to clients may be explained by a heavy workload; they also indicate the need for adjustments in managerial planning and control.

The recognition by the Government of the development objective of the project has not changed since the creation of IPS and the inception of the project. There are signs that the need for project preparation and implementation management capability, as related to a better allocation of resources to industry, is more recognized now than ever before.

IPS is currently carrying out around 1.5 million Birr worth of services per fiscal year. It is involved in preparing an investment portfolio of 7 - 10 projects per year, which can be estimated at around 100 million Birr. This represents somewhere around 30 per cent in terms of investment planned in industry yearly in the medium-term and approximately the same percentage in terms of the number of investment projects.

The establishment of a strong consultancy house is a long-term and delicate task which requires continued UNDP/UNIDO assistance. The current capacity of IPS is still strongly dependent on the project DP/ETH/83/001 because of the very specific nature of this technical assistance project. The next phase, foreseen in the Fourth UNDP Country Programme Cycle, is therefore very significant and relevant, particularly considering the tasks and heavy load that lie ahead of IPS in the medium-term. With investment plans in the industrial sector being very ambitious, IPS will be in a position to make a very essential contribution to industrial development in Ethiopia -- if its institutional capabilities are further strengthened.

IV.B. Recommendations

As suggested in the terms-of-reference for the evaluation mission, detailed suggestions are given for the remaining part of the project (in particular with respect to improvements that could be introduced), while for the future technical assistance major considerations are outlined.

IV.B.1. Recommendations Related to the Remainder of Project DP/ETH/83/001

The recommendations addressed separately to IPS (Section IV.B.1.1) and to UNIDO (Section IV.B.1.2) are intended to improve project implementation and can be considered applicable to both the remainder of this project as well as to Phase II. Recommendations addressed to IPS and UNDP/UNIDO together (Section IV.B.1.3) deal with specific project inputs/activities for the remainder of this project.

IV.B.1.1. Addressed to IPS

1. Elaborate a Three-year Development Plan for IPS in order to:

   (i) Consolidate the actual level of performance;
   (ii) Assess the foreseeable tasks both quantitatively and qualitatively (industry branches, new projects and rehabilitations, sectoral studies, project implementation and promotion, mobilization of financial resources); and
   (iii) Strengthen the existing structures, personnel and technical facilities accordingly by scheduling the necessary measures to be taken each year.

   This is necessary because of the current heavy load on IPS and an even heavier load expected in the near future; the imperative of careful financial planning (as growth can only be a function of income); delays in completion of studies which could cause problems with clients and with scheduling of work; the need to recruit new staff (the selection currently being rather limited) and train them, as well as further train some of the present professionals; and the likelihood of having to specialize groups in certain areas/topics which will be more demanded by clients.

2. Formulate and apply new operational planning and control methods at all levels (general management, management of services and project management).

3. Use long-term experts in the months ahead with more emphasis on the medium-term needs of IPS (training, methodologies) rather than on operational work.

4. Pay more attention to the preparation of job descriptions and terms-of-reference for experts, consultants and sub-contracts, particularly by better defining the nature of services required; if appropriate, a two-step approach can be applied: a preliminary description to start the recruitment process followed by a well focussed description of the needs and tasks as they become available in the course of a study.

5. Make efforts for better integration of both long-term experts and short-term consultants into the work of IPS and make full use of their industrial experience. In some cases, extend short-term assignments (especially if the terms-of-reference are of a broader nature) to get more benefit in the transfer of know-how and experience.

6 Pay more attention to the accurate description of the required technical information as well as to the identification of the ways and channels of obtaining it.

7. Critically analyze previous market research carried out by IPS, assess ways and means of strengthening this activity, both by long-term and short-term experts.

8. Hold consultations at the national level regarding the further development of economic analysis in project studies, with special regard to national criteria to be applied in the allocation of investment funds.

9. Consolidate the on-going thinking regarding the improvement of engineering services in project studies through:

(i) better use of consultants;
(ii) strengthening own data base;
(iii) direct contacts with specialized consultancy houses, enterprises and technical information services, as well as better use of UNIDO information services; and
(iv) better techniques in technical information collection and processing.

10. Assess and plan the strengthening of IPS's capabilities in project implementation management, specifically in:

(i) preparation of implementation programmes (programming);
(ii) preparation of general layout and design;
(iii) cost estimation;
(iv) preliminary engineering of the project, including preparation of design, specifications and contract documents;
(v) tendering for equipment, machinery and construction work;
(vi) evaluation of offers and assistance in preparation and negotiation of contracts with suppliers and contractors;
(vii) supervision of investment project execution (with respect to progress, quantity, quality, cost and scheduling of work agreed upon in the contracts); and
(viii) reception and commissioning of the plant and its operation for an initial period.

Specify in which fields IPS needs co-operation with other (national or foreign) institutions; programme the "skills development".

11. Specify the need for promotional activities, including mobilization of project financing, at the level of IPS and analyze the necessary capabilities. Identify possible initial measures in this direction.

IV.B.1.2. Addressed to UNIDO

1. More attention needs to be paid to the recruitment of long-term experts, in order to recruit them in accordance with well defined technical and human requirements and to ensure their balanced use both for long-term and operational needs of the institution assisted.

2. Ensure better communication with experts and consultants regarding their use and their satisfaction on the job. Use terminal reports of experts as an important information source regarding their own work and environment and as a basis for introducing improvements in project implementation.

3. Before starting recruitment of short-term consultants, better scrutinize the terms-of-reference submitted with regard to their clarity and correspondence between the available expertise and the volume of work required, in close co-operation with the technical sections/branches of UNIDO. See recommendation No. 4 addressed to IPS.

4. Improve the mechanism of sending reports by consultants to the field in order to avoid some of the delays experienced earlier. Individual consultants or consulting firms under sub-contract should send a working copy to IPS simultaneously with submitting the report to UNIDO. Official clearance or any reservations by UNIDO can come subsequently.

5. Provide methodological support to the institution assisted by appraising in-depth some of the studies completed and exchanging information on findings with the national staff.

6. Ensure more assistance by the information services of UNIDO in solving problems of technical information gathering, processing and dissemination.

7. Ensure more synchronization and synergy among the complementary projects in Ethiopia (particularly those with DPSA as the national agency).

IV.B.1.3. Addressed to IPS and UNDP/UNIDO with respect to specific inputs/activities in 1986/87

The unused portion of the project budget is to be committed in 1986. However, it is reasonable to expect that a number of project activities will carry over well into 1987. The mission recommends that the implementation plan for 1986 submitted to it by IPS be followed as this plan represents the optimal use of the remaining funds and will ensure the full achievement of the immediate objective of project DP/ETH/83/001. The major features of the implementation plan are as follows:

1. Long-term experts

- Expert in Market Research and Demand Analysis - 9.5 m/m; and
- Expert in Electro-Mechanical Engineering - 7 m/m (primarily for engineering aspects of pre-investment studies).

In both cases, and particularly the first, the job descriptions now focus more on methodological, advisory and training (workshops, seminars and on-the-job) aspects needed for better utilization of long-term expertise toward capacity-building.

2. Short-term consultants (individual and consulting firms)

- Project Data Bank and Information Storage and Retrieval System - 2.5 m/m (the mission's earlier observations on excessively demanding terms-of-reference and job descriptions still apply in this case);
- Mineral Water Plant Feasibility Study (already engaged);
- Alkyd Resins Plant Feasibility Study (already engaged);
- Window Glass Sheet Plant Feasibility Study;
- Leaf Tobacco Production Feasibility Study;
- Kaliti Steel Industry Rehabilitation/Expansion;
- Rehabilitation/Expansion of 11 Fluor Mills ;
- Dire Dawa Cement Factory Rehabilitation/Expansion;
- Short-term expertise for workshop on evaluation of offers and contract negotiation (terms-of-reference to be prepared); and
- (Possibly short-term expertise for UNIDO seminar on investment project implementation management, although this could be planned for 1987).

3. Training

- Fellowships:

. Management	- 5	m/m
. Business development and information service	- 3	m/m
. Industrial studies (operations research and market analysis, of which 1 post-graduate study of 12 m/m in U.K.)	- 21	m/m
. Engineering studies (post-graduate in design engineering)	- 24	m/m
. Administration and finance	- 5	m/m
Total	58	m/m

(It is anticipated that in order to cover the costs of these planned fellowships, partial transfer of budget, most likely from the allocation for short-term consultants or sub-contracts will have to be made during the next mandatory revision.)

4. Equipment

- Expendable (books and reference material, stationary, consumables, etc.) - US$30,000 (the mission recommends a much stronger emphasis on techno-economic periodicals in the future); and
- Non-expendable (IBM PC, survey equipment, 2 word processors, 1 four-wheel drive, TV camera, 3 motorcycles, calculators, duplicator, automatic combi-binder and other items) - US$60,000.

IV.B.2. Recommendations Related to Future UNDP/UNIDO Technical Assistance

1. The evaluation mission strongly recommends the continuation of UNDP/UNIDO technical assistance to IPS as it is fully justified by the tasks that are ahead of IPS, very relevant to the plans and needs of the industrial development process in Ethiopia, and indeed deserved by the results of Phase I.

2. The development objective for Phase II could be the improvement of the project preparation, decision-making and implementation management in industry, as well as increased reliance on domestic capabilities in this domain, with the purpose of better allocating scarce resources, particuarly in view of the increasing volume of investment in the sector in the forthcoming years.

3. As regards the immediate objective -- which will undoubtedly be directed at further strengthening the capability of IPS -- and the outputs, the expected performance of IPS (e.g., in terms of the number of pre-investment studies, sectoral surveys, implementation management consultancy services and other possible activities) and that of the future project need to be more precisely separated than in the Project Document of Phase I. While the almost simultaneous start of IPS and project DP/ETH/83/001 gave justification to such a procedure, its repetition should be avoided. IPS is not the same organization now as it was three years ago; it now encompasses a wider domain than any possible technical assistance project directed toward it. The UNDP/UNIDO project can now address only certain portions of IPS activities/capacities. The preliminary draft Project Document for Phase II presented to the mission by the UNDP Office in Addis Ababa fails to take into account the above and cannot be considered adequate. The draft is essentially a repetition, combined with a multiplication, of elements from the original document.

4. The mission recommends that the next Phase have as its primary function institution building, with direct support as the secondary function. Phase II of the project should be directed toward a consolidation of achievements of Phase I and reduction of dependence on international inputs in pre-investment work, as well as toward a significant build-up of capacity in consultancy services during investment project implementation and management.

5. Since the project will deal with an already functioning and established organization, a clear programme of the development of IPS, its structure, functions, personnel and technical facilities for the forthcoming 3 - 4 years is required. The foreseen organizational development needs to be based on the actual mission of IPS, its possible diversification (e.g., promotion, more emphasis on implementation management) and specialization (according to industry sectors, size structure of investments or certain types of investments, such as new investments, rehabilitation, modernization, etc.). Since IPS cannot meet all the pre-investment and implementation management needs of the country, its expected growth in relation to the total investment needs in industry should be defined.

6. The project design for the new phase should clearly respond to the strategic development goals of IPS and to its short-term operational needs. The planned inputs-activities-outputs structure needs to be defined accordingly. It is therefore clear that a detailed IPS development plan as outlined in Section IV.B.1.1 (Recommendation No. 1), as well as above (Recommendation No. 5), represents a pre-condition for the logical and constructive design and subsequent effective start-up of Phase II.

7. On the basis of the IPS development plan and the UNDP/UNIDO budget for the Fourth UNDP Country Programme Cycle (currently estimated at US$1,000,000 for Phase II), priority areas which the future technical assistance will focus on should be identified. Recommendations a) to g) are related to the identification of possible areas of focus and modalities of implementation which could come into consideration for Phase II.

a) Pre-investment and sectoral studies

- The need and demand for IPS services in this area will require that its capacity be raised to at least 15 studies in the next three years. The good results of Phase I will enable IPS to conduct about 50 per cent of the studies without any direct project inputs; however, the modality of operational assistance of the project to IPS in the form of short-term consultants/sub-contracts and study tours related to specific investment projects will have to be continued (and funds allocated to this) for a number of sub-sectors and studies which could, at least indicatively, be identified from the three-year IPS development plan (related to investment plans in different industrial sectors). The dependence of IPS on this type of assistance will be decreasing steadily but cannot be fully eliminated because of the nature of its consultancy work.

- A strong focus in this area should be on the development of long-term co-operation with several international consultancy houses (see recommendation d).

- Further strengthening in market research and forecasting, particularly in specific sectors and sub-sectors, as well as economic analysis, might be necessary in the form of medium-term expertise (not exceeding 6 m/m) or seminars/workshops.

- Activities in information data bank development related to consulting firms, engineering organizations, equipment suppliers, sources and conditions of financing have to be strengthened, possibly in co-operation with project DP/ETH/85/004 (DPSA) which includes a similar effort.

- Long-term expertise in chemical engineering, electro-mechanical engineering or similar is not recommended in this phase, at least not in the form used in Phase I. Mid-term expertise in specified engineering services would be sufficient, if needed.

- Training of less experienced and new staff will have to be continued as it will contribute to an increased IPS capacity. (This capacity will be a strong function of the number of new staff who are necessary. Therefore a three-year IPS growth and training plan is essential.)

b) Consultancy services during investment project implementation

- Capacity needs to be systematically developed at IPS in this area in the next three years as the demand will be rising. Corporations plan to engage IPS particularly in projects for which pre-investment work was performed by IPS.

- The project contribution to the capacity building will be strongly dependent on the IPS plan indicating which activities of implementation management are to be covered. (See Section IV.B.1.1, recommendation No.10.) This capacity has to be developed gradually as the transformation from a consultancy organization doing mostly pre-investment studies to one doing both pre-investment and implementation work is a sensitive one. As far as design activity is concerned, IPS should not get involved further than preliminary/conceptual design in project implementation. Its development in this activity should be co-ordinated with project DP/ETH/83/024 - "Engineering and Design Centre", executed by UNIDO. IPS already has 15 engineers, which is a strong potential for implementation work. A rapid expansion here is not recommended; rather, more experience/expertise and specialization are required.

- Project inputs in this area will have to include:

  . Seminars/workshops;

  . Medium-term expertise in various aspects of implementation services; and

  . Specialized engineering and design training abroad related to priority sectors like textiles, chemical industry, food processing and metal processing (according to investment plans).

c) Project promotion, mobilization of financial resources

- Project promotion activities and the investigation of possible financing sources represent an area of possible significant impact of IPS. The organization which does pre-investment studies has at its disposal a wealth of relevant information and could rightfully be continuously involved in promotion activities. IPS could therefore contribute considerably, in co-operation with other relevant organizations, to industrial project promotion in Ethiopia.

- The possible project contributions could be as follows:

  . Information data bank development (engineering companies, equipment manufacturers, sources of financing, etc.);

  . Specialized training (short-term consultants, seminars, posting at UNIDO Investment Promotion Service Offices); and

  . Participation/integration in UNIDO investment promotion activities (Investment Promotion Service activities, regional investment fora).

d) Long-term co-operation with international consultancy houses

Establishment of long-term channels of exchange of technological and engineering information is an important goal which IPS is aware of. Collaborative or twinning arrangements with established consultancy organizations in Europe or Asia (or elsewhere) can gradually reduce IPS dependence on short-term international expertise. These arrangements could involve provision of technical and other information, secondment and exchange of staff for specific projects, practical training of IPS staff in these consultancy houses, etc. Contact has already been made with several consulting firms and the possibilities for formalizing the collaboration should be explored. Particular attention has to be given to the financial implications of this important aspect on Phase II. A significant budgetary provision will have to be made since possible agreements might involve lump sum payments for fixed services as well as special payments for a number of projects. The active role of UNIDO should be significant in this area (establishment of contact, advice and participation in negotiating and contracting).

e) Use of international experts and consultants

Recommendations in Sections IV.B.1.1 and IV.B.1.2 on this subject should be fully applicable to Phase II. Long-term expertise is not recommended, at least not in the form used in Phase I. If found necessary, then it should involve the expert in an advisory role to the General Manager on subjects of management, growth and organization of a consultancy house, quality control of work done and organization of internal training. (This could be a split mission.)

f) Training

This strong point of Phase I should also be emphasized in Phase II in the form of post graduate studies, shorter specialized training and training in consultancy firms. The rate of 3 - 4 staff on longer training per year could be maintained for the next three-year period.

g) Facilities

With the expected growth of IPS, an expansion of premises is essential. Gradual growth in the capability of computerized data gathering, storage and processing, as well as computerized project management can be foreseen. The libary will have to grow much faster (in terms of technical literature, specialized books and documentation and especially periodical literature) than in Phase I.

8. The suggested time-table related to the above recommendations is as follows:

- Submission of final report of the evaluation mission -- May - June 1986;
- Elaboration of the three-year IPS development plan -- June - July 1986;
- Clarification of project design elements and preparation of draft Project Document -- July - September 1986; and
- Start of procedure necessary for project approval -- September 1986.

9. All of the above considerations and recommendations are made under the assumption that IPS will functionally and organizationally remain in the form in which it currently exists, i.e., an autonomous entity.

Annexes

I. Terms-of-reference for the evaluation mission

II. Schedule of meetings held and visits made

III. List of persons met

IV. Reports and documents examined

V. Details on experts, consultants, sub-contracts, fellowships and study tours used by 31 December 1985

VI. IPS - a short profile

Annex I

TRIPARTITE IN-DEPTH EVALUATION OF DP/ETH/83/001

INDUSTRIAL PROJECTS SERVICE

Terms of Reference

I. BACKGROUND

Since the 1974 Revolution, a number of major steps have been undetaken by the Government aimed at ushering in important changes in economic policies and in the structure of Ethiopia's economy and institutions. With the establishment of the National Revolutionary Development Campaign and Central Planning Supreme Council (NRDC and CPSC) in 1978, four annual Development Campaign Programmes have been launched, establishing production targets for the main sectors of the economy. A Ten Year Perspective Plan involving massive investment is in the process of being formulated.

The present contribution of the industrial sector of the economy is however still very low. Thus, cognizant of the significant role the sector has to play in ensuring a sustained and self-reliant economy, the current and anticipated development efforts are aimed at reorienting and correcting the role played by industry in the past through, inter alia, establishing and improving linkages with other sectors (especially agriculture) of the economy.

These efforts involve emphasis, to start with, on the expansion of handicrafts as well as medium and small-sclae industries, and subsequently on the establishment of a basis for the creation and expansion of heavy industry which is essential for the transformation of the structure of the economy.

Accordingly, the Ministry of Industry, which at the moment directs and supervises more than 170 industrial establishment organized under 13 corporations, has been given responsibility for the planned development of the industrial sector.

The first pre-occupation of the Government after the nationalization of the major industrial enterprises in 1974 was the development of expertise to run

these industries. It reorganized the Government machinery and trained and up-graded the available manpower. Indeed, the Ministry of Industry and its thirteen corporations were an outgrowth of these efforts.

The rehabilitation of the existing nationalized plants, which in most cases had been established more than 15 years before, and in many instances had been second-hand when purchased, became the next priority. At the same time, because of the improvement in the income of the agricultural sector as a result of the land reform measures, there was an increased demand for manufactured goods. This increased the pressure on the industrial sector either to expand existing units or to create new ones. To meet this challenge, the Ministry of Industry has the thirteen corporations under it the responsibility to prepare new projects and to expand some. As a result, many projects were prepared, some of which have now reached the implementation stage.

In preparing these projects it became apparent that there were weaknesses in the system. In general, the standard of preparation left much to be desired, the major drawbacks being too great a dependence on foreign consultants and the consequent failure of nationals to gain adequate knowledge and experience. This drawback, combined with the increasing size and number of industrial projects to be prepared, was a major factor that led to a reexamination of the manner in which new projects should be identified, prepared and implemented, and as a result it was decided to establish a specialized project agency within the Ministry of Industry for these purposes. The main objectives of the agency, established by Legal Notice No. 76 of 15 October 1982 under the name of the Industrial Projects Service (IPS):

1) to create a team of highly specialized and experienced project officers and engineers so as to reduce the dependence of foreign consultants; and

2) to relieve the thirteen industrial corporations from project preparation work so that they may be in a position to concentrate more on operational matters.

The major outputs foreseen for the project were:

1.1 A systematic guideline for the identification, preparation and appraisal of industrial projects to be followed by the Ministry of Industry, the IPS, and the industrial corporations.

1.2 A minimum of 20 identified projects submitted to relevant corporations and the Ministry of Industry for consideration, and opportunity or pre-feasibility studies completed on all approved project ideas.

1.3 Completion by about mid-1985 of at least (a) 8 feasibility studies, including (but not limited to) the following: pencil, leather board, (medium density board), cement-bonded particle board, blankets, (b) 1 expansion study, and (c) four rehabilitation studies.

2.1 A set of guidelines outlining (a) the form of assistance provided by the IPS to public enterprises involved in the implementation of investment projects, and (b) the terms on which such assistance is given.

3.1 Expertise developed within the IPS staff in (a) planning and management of industrial projects, (b) preparing and reviewing machinery and equipment specifications, (c) identifying practical solutions to operational problems of a mechanical or technological nature, and (d) preparing and evaluating bid documents and contract proposals

3.1 A minimum of two sectoral surveys completed.

3.2 A minimum of two new sub-sectors identified and approved for sectoral study.

4.1 An overall career development and training plan for IPS personnel.

4.2 IPS staff members trained overseas in relevant disciplines for a total of 76 man-months.

4.3 IPS staff members exposed overseas to specific investment projects and industrial enterprises through 7½ man-months of study tours.

4.4 All IPS professional staff familiarized with selected professional topics through two training seminars in Addis Ababa.

5.1 A library and an information and documentation centre complete with a micro-computer.

5.2 A small printing unit furnished with a composer, a camera, a small-sized off-set machine and binding equipment.

5.3 A transport service unit consisting of a fleet of two four-wheel drives and six sedans.

In order to accomplish the objectives and produce the outputs of the project, the following activities were foreseen:

1.1.1 Collect sample guidelines from other countries on matters related to 1.1 above;

1.1.2 assemble all possible relevant guidelines that have been issued in the country to date;

1.1.3 draft the proposed systematic guideline and circulate it for comments;

1.1.4 finalize the proposed guideline and submit it to the Ministry of Industry for approval;

1.2.1 collect data necessary for the identification of viable projects from such sources as the Ten-Year Perspective Plan, existing and future sectoral surveys etc.;

1.2.2 identify viable projects and submit them to corporations and the Ministry of Industry for decision;

1.2.3 prepare opportunity studies and pre-feasibility studies on approved project ideas;

1.2.4 carry out feasibility studies on approved project ideas (new, expansion as well as rehabilitation projects);

2.1.1 participate, whenever necessary, in the implementation of approved investment projects by:

- assisting public enterprises in the planning, programming and co-ordination of project management;
- checking and recommending technological, mechanical and other designs;
- carrying out inspections of machinery and equipment;
- supervising the erection and installation of machinery and equipment;
- supervising trial runs and commissioning of projects;
- preparing technical specifications for goods and services;
- preparing bid documents and evaluating bids submitted by suppliers;
- assisting in the preparation and negotiation of contracts with suppliers and contractors;

3.1.1 assess the current status of the sectors identified;

3.1.2 conduct detailed studies of future prospects in the chosen sectors and identify promising investment possibilities;

3.1.3 formulate the planned development of each sector;

4.1.1 collect career development and training plans from as many consulting houses as possible;

4.1.2 draft a training and career development plan and circulate it for comments;

4.1.3 finalize and approve the proposed plan;

4.2.1 select the persons to be trained and determine their specific fields and places of training, the itinerary of study tours, their respective durations, and select courses and training institutions;

4.3.1 determine curricula, place, duration and participants of training seminars;

4.4.1 identify and arrange for national and expatriate staff to lead the proposed seminars;

5.1 itemize, specify and require the equipment, documents, books and vehicles necessary for the establishment of the information, printing, library and transport units respectively; and

5.2 provide on the job training for IPS personnel assigned to handle micro-computer, composer etc.

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 is:

a) assess the achievements of the project against the set objectives 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 building up of Government capability to create a team of highly specialized and experienced project officers and engineers to increase the standard of preparation of industrial projects;

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

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

a) The degree of utilization of the major assistance components, namely

   1) the experts and the provision of qualified local staff to co-operate with them;
   2) the local and international sub-contractors;
   3) the equipment in the office and elsewhere.

b) Status of standardization of project preparation methodologies in in Ethiopia vis-a-vis project appraisal done by DPSA.

c) Capability of IPS in terms of skilled manpower, methodogies and techniques, facilities etc. to provide services which are appropriate to present and future needs of Ethiopian industry in pre-investment studies, management consulting during implementation and sectroal studies.

While a thorough review of the past in itself is very important, the evaluation is expected to also lead to detailed suggestions for the remaining part of the project, in particular with respect to improvement that should, if any be introduced, taking into consideration also the foreseen activities for Phase II.

III. Consultations in the Field

The mission will maintain close liaison with the UNDP Resident Representative in Ethiopia, the UNIDO staff, the concerned government organizations, and the project's national and international staff.

The mission is also expected to make intensive contact with the IPS's clients, as well as any other organizations that may be relevant to the evaluation.

Although the mission could 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.

IV. Composition of the Mission

The mission will be composed of the following:

One representative of UNIDO

One representative of UNDP

The Ethiopian Government is invited to associate itself with the mission's work and to nominate an official to be associated as fully as it wishes with the mission.

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

V. Time-table and Report of the Mission

In so far as required, the UNIDO and UNDP representatives will receive briefings at their respective headquarters. Upon arrival in Addis Ababa, 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 two and a half weeks, starting in Addis Ababa on 7 April 1986. Upon completion of its work, it will be debriefed by the UNDP Resident Representative. 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 them.

The mission will complete its report in draft in Addis Ababa and will leave behind a copy of the draft with the Resident Representative. The final version of the report will be submitted simultaneously to UNIDO and UNDP Headquarters, which, in agreement, will transmit the report to the Government of Ethiopia through the Resident Representative.

Annex II

SCHEDULE OF MEETINGS HELD AND VISITS MADE

14 April	-	Briefing at UNDP
	-	Preliminary discussions at IPS
15 April	-	Meeting at the Office of the the National Committee for Central Planning
	-	Meeting at the Ministry of Industry
16 April	-	Detailed discussions at IPS, meetings with national staff
17 April	-	Visits to IPS clients: National Metal Works Corporation, Ethiopian Food Corporation and National Chemical Corporation
	-	Meeting with international project staff
18 April	-	Meeting at World Bank
	-	Visit to Development Projects Study Agency
	-	Tour of IPS premises
21 April	-	Meeting with Agricultural and Industrial Development Bank
	-	Preparation of draft report
22-24 April	-	Preparation of draft report, discussions on preliminary findings and recommendations with IPS, UNDP/UNIDO and Ministry of Industry
25 April	-	Presentation of findings and recommendations to Government and UNDP/UNIDO

Annex III

LIST OF PERSONS MET

UNDP/UNIDO

Mr. P. Venkatachellum - Senior Industrial Development Field Adviser
Ms. Daphne Casey - Assistant Resident Representative
Mr. F. Meyer - Junior Professional Officer

Office of the National Committee for Central Planning

Ato Bacry Yusuf - Head, Industry Department

Ministry of Industry

Ato Tadewos Haregework - Vice Minister, Industrial Development
Ato Daniel Gebreweld - Foreign Relations Department

National Metal Works Corporation

Colonel Alula Birhane - General Manager
Ato Yeheyes Aseffa - Deputy General Manager, Development
Ato Getachew Degefu - Head, Planning and Project Department

National Chemical Corporation

Ato Worku Wondimu - General Manager

Ethiopian Food Corporation

Ato Gebrehiwet Gebregziabher - Deputy General Manager

World Bank

Mr. M. Payson - Resident Representative

Development Projects Study Agency

Mr. D. R. Garga	-	Industrial Economist, UNIDO Expert
Mr. C. Pearce	-	Project Analyst, UNIDO Expert

Industrial and Agricultural Development Bank

Ato Ahmed Sayed Ali	-	Manager Industry Department
Ato Girma Seyoum	-	Head, Medium and Large Projects Division
Ato Tadelle Teferra	-	Head, Small Scale Projects Division

Industrial Projects Service - Project DP/ETH/83/001

National Staff:

Ato Bruck Kebede	-	General Manager and National Project Co-ordinator
Ato Kiflemariam Zerom	-	Deputy General Manager, in charge of Industrial Studies Consultancy Service
Ato Kifle Gebre	-	Deputy General Manager, in charge of Engineering Consultancy Service
Ato Abebe Andualem	-	Manager, Business Development and Information Service
Ato Negash Tekeste	-	Leading Engineer
Ato Ephraim Zaude	-	Leading Project Analyst
Ms. Mulumebet Jembere	-	Project Analyst
Ato Fekade Lakew	-	Engineer
Ato Yonnas Chebude	-	Junior Engineer

International Staff

Dr. P. C. Sah	-	Industrial Economist, UNIDO Expert
Dr. R. C. Maudgal	-	Chemical Engineer, UNIDO Expert
Mr. A. Heinemann	-	UNIDO Associate Expert

Annex IV

REPORTS AND DOCUMENTS EXAMINED

Project Background and History

1. Project Document DP/ETH/83/001 - Industrial Projects Service, 14 October 1983.
2. Project Progress Report for July 1983 - June 1984, NPC, 30 August 1984.
3. Project Progress Report for July - December 1984, NPC, 25 February 1985.
4. Report of the Tripartite Review Meeting, 18 April 1985.
5. UNIDO Internal Evaluation System - Project Evaluation Report, 9 December 1985.
6. Project Progress Report for January - December 1985, NPC, 14 April 1986.
7. SIDFA briefing note for the tripatite in-depth evaluation mission, 14 April 1986.
8. Final report of Dr. P.C. Sah, UNIDO Project August, 23 April 1986.

Internal Project Documentation

1. Proposed administrative procedures for the project implementation of ETH/83/001 and ETH/83/030, 11 June 1984.
2. Proposed procedures for the selection and recruitment of consulting firms, for DP/ETH/83/001, 84/005, 85/004 and 84/001.
3. Guidelines for the Preparation of Terms of Reference for Feasibility Studies of Development Projects, DPSA, September 1982.

4. Agreement made by Ethiopian Wood Works Corporation and IPS on a feasibility study of a cement bonded particleboard plant, February 1984.

5. Agreement between the Buildings Material Corporation and IPS on a study on the rehabilitation and expansion of the Addis Ababa Asbestos Factory.

6. Proposal to Ethiopian Cement Corporation on consultancy service for Mugher Cement Plant expansion, IPS, July 1985.

7. Agreement by and between Ethiopian Cement Corporation and IPS in respect of a consultancy service concerning the expansion of Mugher Cement Plant.

Studies Produced by the Project

1. Awassa Flour Mill Feasibility Study, IPS (for Ethiopian Food Corporation), July 1984.

2. Ethio-Pottery Plant Rehabilitation/Expansion and Ceramics Manufacturing Complex Feasibility Study, IPS (for Ethiopian Ceramics Corporation), January 1985.

3. Electronics Development in Ethiopia, Final Report, IPS (for National Metal Works Corporation), August 1985.

4. Electrical Machinery Manufacturing Complex Feasibility Study, Draft Report, IPS (for National Metal Works Corporation), February 1986.

5. Rehabilitation/Expansion Feasibility Study of Furniture and Joinery Plants, Draft Report, IPS (for National Metal Works Corp.), March 1986.

Appraisal Reports Produced by DPSA

1. Appraisal Report on the Forestry Development Project (feasibility study done by FAO), May 1985.

2. Appraisal Report on the Rehabilitation/Expansion Study of the Ethiopian Crown Cork and Can Manufacturing Industries (study done by IPS), February 1986.

3. Appraisal Report on the Feasibility Study of the Cement-Bonded Particleboard Plant (study done by IPS), March 1986.

Ethiopia - General, Industry, UNDP/UNIDO Projects

1. Ten Year Perspective Plan 1984/85 - 1983/84, Office of the National Committee for Central Planning, August 1984.

2. Industrial Projects and Programmes of the Ten-Year Plan, ONCCP, October 1984.

3. Ethiopia - Staff Appraisal Report of Proposed Credit to the Agricultural and Industrial Development Bank, World Bank Report No. 2610 a-ET, 3 May 1982.

4. Ethiopia Country Report, ABECOR (Association of European Banks), October 1985.

5. Ethiopia - Industrial Sector Review, World Bank Report No. 5301 -ET, 16 December 1985.

6. 1985 Yearly Country Brief on Ethiopia by the SIDFA, UNIDO, 27 January 1986.

7. Guidelines for Investment in Joint Ventures in Ethiopia, DPSA - ONCCP, April 1985 (still undistributed).

8. Project Document DP/ETH/83/013 - Industrial Project Development (Phase III), 30 August 1984.

9. Project Document DP/ETH/84/005 - Development Projects Study Agency (Phase II), 3 December 1984.

10. Project Document DP/ETH/85/004 - Development of a Portfolio of Industrial Opportunity Studies (DPSA), 7 August 1985.

11. Project Document DP/ETH/83/024 - Engineering and Design Centre (in the process of approval).

Annex V

DETAILS ON EXPERTS, CONSULTANTS, SUBCONTRACTS, FELLOWSHIPS AND STUDY TOURS USED BY 31 DECEMBER 1985

Long-term Experts

1. Dr. P. C. Sah, Project Analyst, 18 months starting 19 September 1985

2. Dr. R. C. Maudgal, Chemical Engineer, 12 Months starting 13 May 1985

Short-term Consultants and Subcontracts

1. Dr. Ivan Lorant (Hungary), Chemical Engineer, was assigned to IPS from March 29 to May 18, 1984 or 1 and 2/3 m/m in connection with the Leather Board Manufacturing Plant Feasibility Study

2.3. Dr. Ewald Brunner (Austria) March 9 - 21, 1984 to train IPS Staff in the operation of Apple III micro-computer using the COMFAR System; and Mr. Christian Novak (Austria). March 9 - 13, 1984, for the installation of Micro-computer; for a total of ½ m/m

4.5. Dr. Janusz Lukasik K.(Poland) from July 20 - 31, 1984 and Dr. Jyotirany Majumdar(India) from July 29 - Aug. 8, 1984 for Workshop training

6-9. Mr. Satej Stojan from Sept. 22 to Nov. 4, 1984

Mr. Cerar Janez from Sept. 22 to Oct. 21, 1984

Mr. Markic Bozidar from Sept. 29 to Nov. 4, 1984

Mr. Ferlat Bojan from Sept. 29 to Oct. 21, 1984

(All from UNILES Yugoslavia were assigned to IPS for a total of 4.6 m/m for the Furniture Industry Rationalization/Expansion Study - Subcontract)

10.11 Mr. C. D. Humphrey and Mr. J. Higham (U.K.) from Oct. 17 - 30, 1984 for a total of one m/m for the Electronics Industry Development Opportunity Study - Subcontract

12. Mr. Tawfik El-Tawdy (Egypt) from December 20, 1984 - Feburary 14, 1985 for Ceramics Complex Manufacturing Industry Feasibility Study or 0.3 m/m

13. Satej Stojan (Yugoslavia) Feb. 26 - March 4, 1985, 0.2 m/m Furniture and Joinery Industry Rationalization/Expansion - Subcontract

14-16. P. Soundararajan, Dr. Narayan Aswamy and Shri N.V. Kannan (India), April 23 - May 31, 1985, 4 m/m, Industrial Estate Feasibility Study - Subcontract

17. Ernest Chard (U.K) August 2 - Oct. 12, 1985, 2.4 m/m, Plastics Sector Study

18. A. William Vos (Netherlands), Sept. 8 - Nov. 1, 1985, 1.8 m/m, Hides Tannery Feasibility Study.

19. Elling Olsen (Norway). Oct. 8 - Oct. 15, 1985 0.2 m/m, Management Information System - Subcontract

20. Bogdan Syzdlow (Poland) Nov. 21 - Dec. 22, 1985, 1 m/m. Pipe Fittings Plant Feasibility Study.

21. Dr. Henry Warson (Britain) Dec. 3 - Jan. 26, 1985, 1.8 m/m, Alkyd Resins Plant Feasibility Study

22-23 Murrey Park and Arthur Northholt (Britain) Aug. 12 - 18, 1985, 1.1 m/m, Fertilizer Complex Pre-feasibility Study - Sub-contract

Workshop/Seminar

1. Workshop on Market Analysis and Selection of Technology, 23 July - 8 August 1984

Fellowships

1. Seifu Awash, Senior Project Analyst, attended the Bradford University Planning and Appraisal of Industial Projects Course from January - March, 1984, or for 3 m/m

2. Ayele Abebe, Project Analyst, attended the University of Sussex

Development Statistics Course from April - June, 1984, i.e. 3 m/m

3. Abebaw Alemayehu, Project Analyst, attended Project Preparation, Evaluation and Financing Course at the Central School of Planning and Statistics, Warsaw, from June 7 - July 21, 1984, i.e. 1½ m/m

4. Gebre Meskel Gebre Egziabher, Senior Engineer, Project Management, College, Dublin, June 29 - August 25, 1984

5. Getinet W/Giorgis·General Manager, Procurement and Negotiation Seminar, International Law Institute, Washington D.C., August 23 - Sept. 26, 1984

6. Taye Hailu, Leading Project Analyst, Advanced Institutional Management Consultancy, Research Institute for Management Sciences (RVB) Delft, Netherlands, Sept. 18 - Dec. 19, 1984

7 - 8 Ephraim Zaude, Senior Project Analyst and
Telahun Jabessa, Junior Engineer, Planning and Appraisal of Agro-Industrial Projects, Project Planning Centre, University of Bradford, U.K. Sept. 20 - Dec. 15, 1984

9. Kifle Mariam Zerom, Manager, Industrial Studies Consultancy Service, Technology and Development, University of Strathclyde, Glasgow, U.K., Sept. 20 - Dec. 15, 1984

10. Girma Wolde Mariam, Senior Lawyer, Procurement and Negotiation Seminar, International Law Institute, Washington D.C., Nov. 18 - Dec. 19, 1984

11. Abebe Andualem, Manager, Business Development and Information Service, Technical Writing and Project Study Management, Production Engineering Research Association (PERA), WS Atkins Group of Consultants, U.K., and UNIDO - Vienna Nov. 23 - Dec. 19, 1984

12 - 14 Negash Tekeste, Fekade Lakew, Solomon Zewde, Project Planning and Appraisal Course, Bradford University, U.K., Jan. 9 - April 4, 1985, 9 m/m

15 Atnafu Mebrate, Fertilizer Course, International Fertilizer Development Centre, Far East, Feb. 18 - March 5, 1985, 0.5 m/m

16 Zerabruck Aberra, Development Lawyers Course, International Development Law Institute, Italy, March 4 - May 23, 1985, 2 m/m

17 - 20 Seifu Awash, Ayele Abebe, Girma Milky and Assefa Kebede, Post Graduate Studies in Marketing, Economic Planning, Technology and Finance, Sept. 30, 1985 for one year, a total of 12 m/m in 1985

Study Tours

Under preparatory assistance, 4 core staff members for one m/m each to study various consultancy houses in Europe and Africa, February - April 1983:

1. Gebre-Kiros Habtu, Part-time Consultant, with IPS, visited some European Countries from May 21 - June 12, 1984 in connection with the Leather Board Manufacturing Plant Feasibility Study
2. Getinet Wolde-Giorgis, General Manager and Taye Hailu, Head Project Analyst visited the Norconsult Head Office in Oslo and UNIDO from June 18 - 23, 1984
3. Tadeos Haregework, Head, Planning, Projects and Policy Department, Ministry of Industry, Dec. 2 - 17, 1984, Japan and Ireland
4. Kifle [illegible], Manager, Engineering Consultancy Service, Dec. 2 - 28, 1984 Japan, Ireland, UNIDO - Vienna and Egypt
5. Sirak Belayneh, Engineer, Abandoned tour after visiting Japan
6. Kifle-Mariam Zerom, Manager, Industrial Studies Consultancy Service, Dec. 16 - 24, 1984, Yugoslavia

   3 - 5 made the study tour in connection with the Electronics Industry Development opportunities survey and 6 on Furniture and Joinery Industry

Study Tours

7 - 8 - Getinet W/Giorgis, Gebre Meskel G/Egziabher, Industrial Estate Feasibility Study, Kenya, Tanzania and India, Feb. 23 - March 21, 1985 17, 1985, 2.7 m/m

9 - Getinet W/Giorgis, Asbestos Factory, Zimbabwe and Italy, March 21 - 28, 1985, 0.2 m/m

10-11 - Atnafu Mebrate and Girma Milky, Ceramics Complex, West Germany, Bulgaria, Italy and Egypt, July 7 - 30, 1985, 1.6 m/m

12-13 - Gebre Meskel G/Egziabher and Kassahun Ayele, Crown Cork and Can, U.K., Italy, Zambia, and Kenya, July 20 - Aug. 14, 1985, 1.7 m/m

14 - Yonnas Chebude, Plastics Sector, U.K., Aug. 16 - 20, 1985, 0.3 m/m

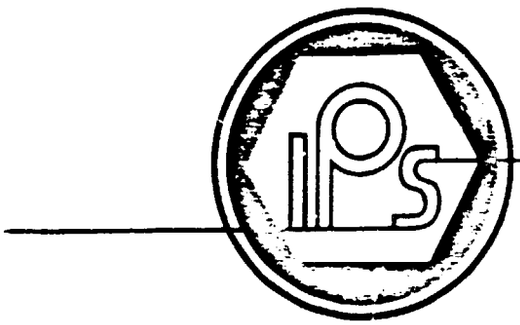
15-16 - Gebre Kiros Habtu and Tilahun Jabessa, Low Cost Vehicles Assembly. India, China and Philippines, Nov. 4 - Nov. 28, 1985, 1.7 m/m

17-18 - Ephraim Zawde and Belay Ashagre, Fertilizer Complex, U.K., Nov. 4 - Nov. 19, 1985, 0.5 m/m

19-20 - Atnafu Mebrate and Yonnas Chebude, Hides Tannery, West Germany and Italy, Nov. 24 - Dec. 10, 1985, 0.6 m/m

21 -- Bruck Kebede, Special Mission, U.K., Belgium, Luxumbourg, West Germany, Austria, Italy, Dec. 1 - Dec. 30, 1985, 1 m/m

Annex VI



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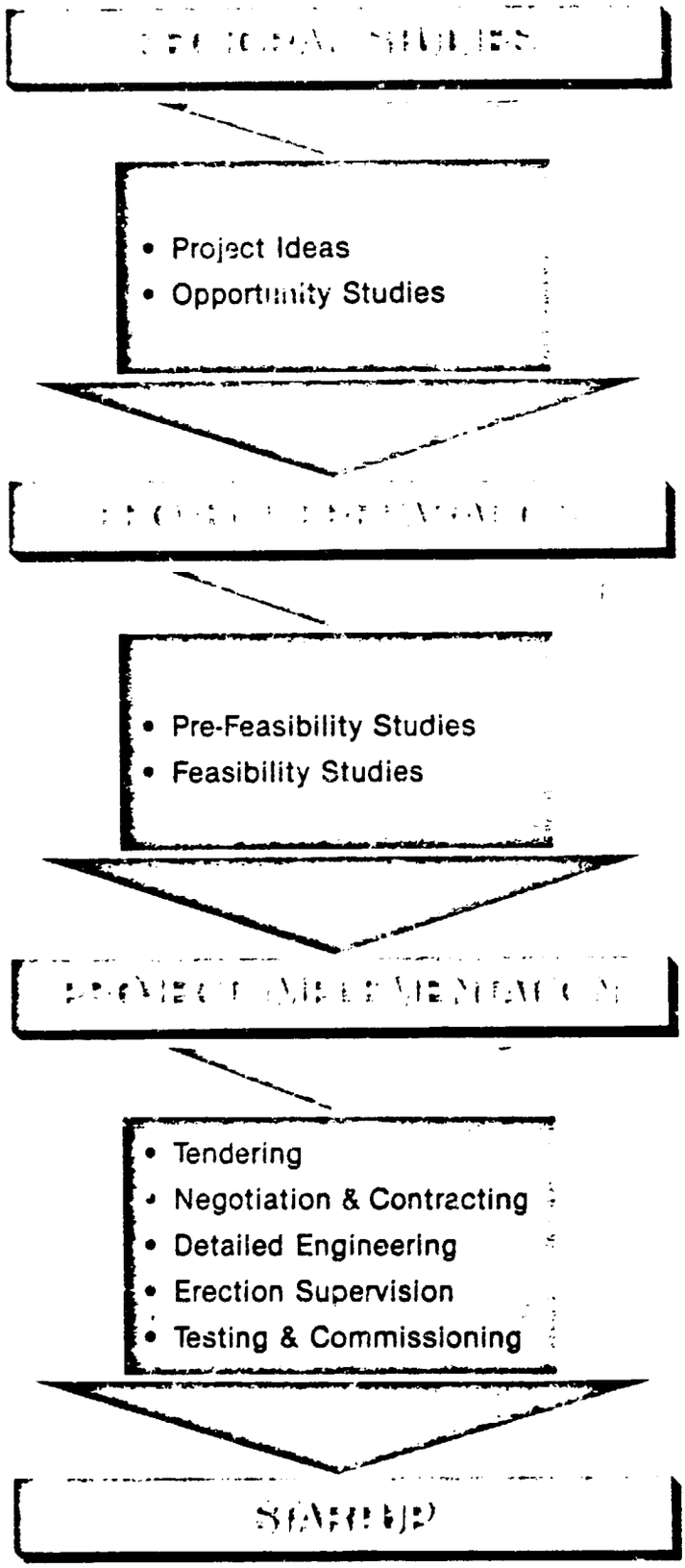
INDUSTRIAL PROJECTS SERVICE

A SHORT PROFILE:

Scope • Methods • Activities

An Autonomous Consultancy House
Under the Ministry of Industry


• Project Ideas
• Opportunity Studies
• Pre-Feasibility Studies
• Feasibility Studies
• Tendering
• Negotiation & Contracting
• Detailed Engineering
• Erection Supervision
• Testing & Commissioning

The Industrial Projects Service

The Industrial Projects Service (IPS) under the Ministry of Industry of the Government of Socialist Ethiopia is a young but continuously expanding institution whose consultancy service has assumed prominence in the industrialization process launched within the context of the overall socio-economic development goals of Ethiopia.

Operating as a self-supporting and autonomous consultancy house, IPS plays a pivotal role in the provision of services vital for the preparation and successful implementation of a variety of industrial projects. The role of IPS in the efforts of the nation's industrialization process may further be gauged from the fact that its consultancy services reach, in one way or another, most of the 150 industrial establishments currently directed and supervised by the Ministry of Industry.

The establishment of IPS was inspired, first and foremost, by the realization that the formulation and execution of viable industrial projects is a *sine qua non* for the successful and rapid realization of the development goals of the nation.

From project identification to project preparation and implementation, IPS marshalls its consultancy services to ensure a judicious and efficient utilization of the country's material and human resources. Its autonomous status within the Ministry of Industry allows IPS to provide a multi-disciplinary service to the industrial sector with a high standard of professionalism. Its operational mechanism has been accordingly tailored to provide a comprehensive consultancy service.

Comprehensive Consultancy

Scope of Services

The sound planning, formulation and successful implementation of industrial projects as well as the efficient operation of industrial establishments require a multi-disciplinary service. The rational utilization of available resources, the ever increasing size and number of projects and the number of parties involved in their implementation as well as the complex issues and the attached series of conditions often place a heavy burden on project promoters. It was precisely an awareness of such heavy burdens which has led to the creation of IPS.

IPS now offers a comprehensive multi-disciplinary consultancy service to the industrial sector. Its services are not limited to planning, engineering and project implementation of new industrial ventures but also include evaluation and rehabilitation studies of existing industrial establishments with emphasis on cost reduction, production increase, stream-lined organizational set-up and improved work efficiency.

IPS activities generally focus on the following four areas of specialized service:

- *Sectoral Studies*
- *Pre-Feasibility Studies*
- *Feasibility Studies*
- *Implementation*

Sectoral Studies

The identification of industrial opportunities is often a difficult task in many developing countries. However, in countries which have development plans with sectoral priorities based on defined criteria, this task can be relatively easy. Once a priority sector is identified, a sectoral study is carried out to identify the potential for, and the constraints on, the development of a sector and to formulate strategies and policies for the realization of its development. Specifically, a sectoral study involves:

— Assessment and evaluation of the existing production facilities, such as the type of technologies, machinery and equipment employed in a specific sector;

— Formulation of recommendations on the required changes and improvements in the present systems of operation and organizational framework to increase productivity and total output in the short-run and to ensure an effective, sustained and co-ordinated development of the sector in the long-run;

— Identification of viable investment projects based on domestic and foreign market potentials, resources availability, including human and material as well as other relevant factors;

— Determination of priorities in the implementation of the identified viable projects;

— Preparation of project profiles; and

— Assessment and evaluation of the linkages and interactions of the sector with other sectors and its impact on the country's economy in general.

Pre-Feasibility Studies

Pre-Feasibility Studies

In contrast to a general opportunity study relating to areas, sectors or resources, a specific project opportunity study aims at the transformation of a project idea into a broad investment proposition. Such a study normally includes basic information which can lead to a decision on whether it is worthwhile considering an in-depth techno-economic feasibility study of the project idea under consideration.

However, before a time-consuming and costly techno-economic feasibility study is carried out to enable a definite investment decision on a particular project, a preliminary assessment of the project idea is often conducted in the form of a pre-feasibility study. A pre-feasibility study generally includes:

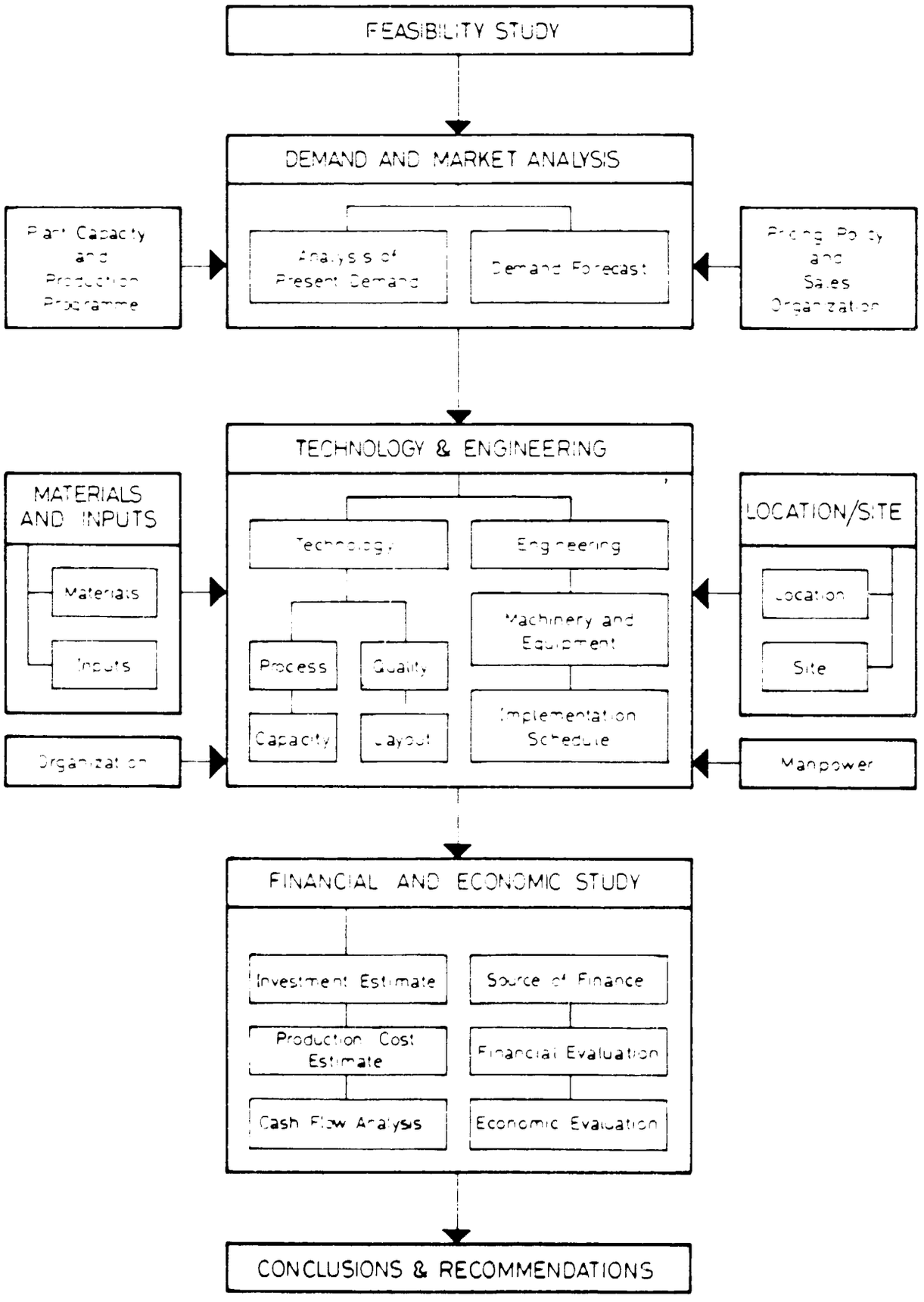
- Survey of the domestic and export market potential;
- Determination of plant capacity and production programme;
- Assessment of raw material and input requirements;
- Assessment of possible alternative locations/sites;
- Assessment of alternative technologies, machinery and equipment, and civil engineering works and infrastructure requirements;
- Assessment of organizational structure and manpower requirements;
- Scheduling of implementation programme; and
- Assessment of financial and economic viability.

Feasibility Studies

Feasibility Studies

A feasibility study should provide detailed techno-economic data to facilitate an investment decision on a particular industrial project. Such a detailed study should define and evaluate the critical aspects of demand and market, technology and engineering, finance and economics which affect the production of a particular product. In particular a feasibility study involves:

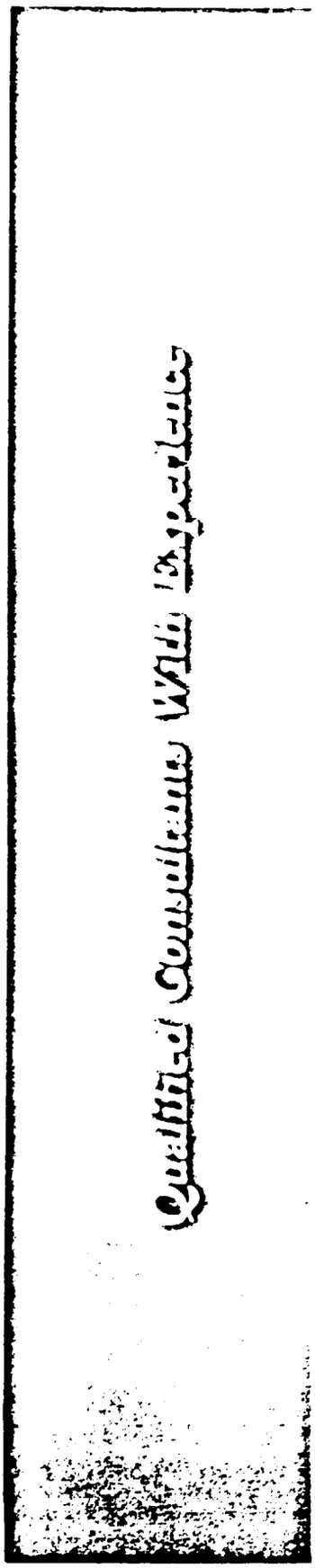
- Detailed analysis and determination of the domestic market, export market potential, sales and distribution system;
- Determination of plant capacity and production programme;
- Detailed analysis of materials, inputs and utility requirement, source, cost and supply programmes;
- Assessment of possible alternative locations/sites; selection of optimum location/site;
- Evaluation of available alternative technologies and selection of the most appropriate; determination of process formulation and product quality;
- Selection of machinery and equipment; determination of plant lay-out, civil works and infrastructure requirements;
- Recommendation of an appropriate organizational structure, and determination of manpower and training requirements;
- Scheduling of implementation programme;
- Financial analysis and evaluation, including detailed estimates of cost and revenues, cash flow and sensitivity analyses; and
- Economic or cost-benefit analysis of the project from the national point of view, including the impact of the project on foreign exchange saving/earning, employment, linkages with other economic activities, regional development etc.


FEASIBILITY STUDY
DEMAND AND MARKET ANALYSIS
Plant Capacity and Production Programme
Analysis of Present Demand
Demand Forecast
Pricing Policy and Sales Organization
TECHNOLOGY & ENGINEERING
MATERIALS AND INPUTS
Materials
Inputs
Organization
Technology
Engineering
Process
Quality
Capacity
Layout
Machinery and Equipment
Implementation Schedule
LOCATION/SITE
Location
Site
Manpower
FINANCIAL AND ECONOMIC STUDY
Investment Estimate
Source of Finance
Production Cost Estimate
Financial Evaluation
Cash Flow Analysis
Economic Evaluation
CONCLUSIONS & RECOMMENDATIONS

Implementation

The final phase of a project cycle consists of procurement and installation of plant machinery, equipment and other facilities as well as trial runs, testing and commissioning. But the implementation of this final phase would require preparation of tender documents incorporating details on contractual terms and conditions, identification of and invitation to equipment and machinery suppliers, meticulous negotiation with bid winner(s) to obtain the best terms and conditions before signing firm and binding agreements. It would also require a detailed engineering design of the plant and a realistic implementation programme. Generally, the implementation phase of a project cycle includes:

- Preparation of tender documents including specifications of plant machinery, equipment, other facilities and services;
- Identification of potential suppliers of machinery, equipment, other facilities and services;
- Preparation of pre-qualifying bids depending on the size and complexity of a project, short-listing of suppliers;
- Invitation to selected suppliers to submit bids on plant machinery, equipment, other facilities and services specified in tender documents;
- Negotiating with bid winner(s) to obtain the best terms and conditions and to conclude firm and binding agreements;
- Preparation of a detailed engineering design of the plant and drawing up an implementation programme;
- Inspection of plant machinery, equipment and other facilities during manufacturing to ensure strict conformity with specifications and standards;
- Supervision of each stage of installation of plant machinery, equipment and other facilities; and
- Supervision of trial runs, testing and commissioning.



Multi-Disciplinary Specialization

IPS has now a professional staff composed of both nationals and expatriates with a multi-disciplinary specialization in economics, financial analysis, marketing, organization and human resources, and law as well as in mechanical, electrical, chemical, civil and industrial engineering.

The consultancy staff, selected from existing industries, has a membership with a broad and relevant experience in the public and private sectors of industry.

To complement the professional staff, IPS has established a close working relationship with the Addis Ababa University, with highly qualified individual specialists and with a number of national consultancy firms. It has also made arrangements for back-stop services with recognized foreign consultancy houses.

Although IPS is a young organization, its staff members are not new to project preparation and implementation. IPS project analysts have been involved in a number of industrial feasibility studies such as textile, wood, leather and shoe, building materials and sugar projects. They also have extensive experience in plant management. IPS engineers have been involved in the preparation and implementation of several projects such as sugar, cement, oil mills and leather goods factories.

Since joining IPS, these project analysts and engineers have undertaken a number of project studies ranging from sectoral surveys to detailed techno-economic studies; they have also been providing advisory services on trial runs and commissioning of different projects, further enriching their experience in the field.

BRUCK KEBEDE, GENERAL MANAGER

EDUCATION:

BBA, Major in Management, Minor in Accounting, Addis Ababa University, 1968.
M.Sc. in Economics (Development Planning and Finance), Central School of Planning and Statistics Warsaw, Poland, 1971.

TRAINING:

Industrial Projects Course, Economic Development Institute, IBRD, Washington D.C., 1972.
Small Industry Financing Course, Small Industry Extension Training Institute, Hyderabad, India, 1974.
Investment Planning and Appraisal Course for Development Banks and Financial Institutions, Project Planning Centre, University of Bradford, U.K. 1983.

EXPERIENCE.

1985 -	General Manager, Industrial Projects Service.
1982 - 85	Manager, Industrial Department, Agricultural and Industrial Development Bank (AIDB)
1978 - 82	General Manager, Ethiopian Shipping Corporation.
1977 - 78	General Manager, National Soap Corporation.
1976 - 77	Deputy General Manager, Ethiopian Food Corporation.
1975 - 76	Manager, Awassa Food Processing Enterprise.
1971 - 75	Senior Industrial Loan Officer, Industrial Department, Agricultural and Industrial Development Bank (AIDB).
1968 - 69	Research Economist, National Bank of Ethiopia.

KIFLE MARIAM ZEROM, DEPUTY GENERAL MANAGER

EDUCATION:

B.A. Major in Economics, Major in Accounting, University College of Addis Ababa, 1960.
Post-Graduate Diploma in Economics, International Graduate School, Stockholm University, Stockholm, 1965.
M.S.Sc. in Economics, Stockholm University, Stockholm, 1965.

TRAINING:

Certificate of Achievement, Export Trade Development, World Trade Institute, World Trade Centre, New York, US, 1971.

Technology and Development Course, David Livingstone Institute of Overseas Development Studies, University of Strathclyde, Glassgow, 1984.

EXPERIENCE:

1985 -	Deputy General Manager, Industrial Projects Service.
1983 - 85	Manager, Industrial Studies Consultancy Service, Industrial Projects Service.
1981 - 83	Planning Department Head, Ethiopian Wood Works Corporation.
1979 - 81	Manager, Warka Furniture Plant.
1978 - 79	Head, Sales and Market Research Dept., National Fibreworks Corporation.
1975 - 78	Manager, SAPE-Soap Alikes Plant-Electro-Chemical, Asmara Soap Factory, Asmara Sack Factory, National Salt Works Corp., Asmara Sweater Factory, Melotti Brewery, SAVA.

	Glass Works.
1969 - 75	Assistant and later Executive Secretary, Chamber of Commerce, Industry, Agriculture and Handicraft of Eritrea.
1965 - 69	Senior Economist/ Acting Chief of Research, Technical Agency, Ministry of Planning and Development.
1960 - 61	Senior Auditor, Auditor General Office.

KIFLE GEBRE, DEPUTY GENERAL MANAGER

EDUCATION:

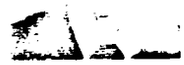
B.Sc. in Mechanical Engineering, College of Engineering, Addis Ababa, 1960.

TRAINING:

Planning and Appraisal of Industrial Projects Course, Project Planning Centre, University of Bradford, U.K. 1984.

EXPERIENCE:

1985 -	Deputy General Manager, Industrial Projects Service.
1983 - 85	Manager, Engineering Consultancy Service, Industrial Projects Service.
1979 - 83	Project Manager, Metahara Sugar Factory.
1977 - 79	Technical Advisor, Ethiopian Sugar Corporation
1976 - 77	Estate Manager, Wonji & Shoa Sugar Estate.
1975 - 76	Chief Engineer, Metahara Sugar Factory
1972 - 75	Chief Engineer, Wonji & Shoa Sugar Factories.
1968 - 72	Senior Engineer, Shoa Sugar Factory.
1960 - 68	Factory Engineer, Wonji & Shoa Sugar Factory.



ABEBE ANDUALEM, MANAGER, BUSINESS DEVELOPMENT & INFORMATION [illegible]

EDUCATION:

B.A. in Journalism, University of Missouri, U.S. 1964
Post-Graduate Studies in International Communications, University of Missouri, U.S. 1964.
Dip. in Meteorology, Penn. State University, U.S. 1955.

TRAINING:

Technical Writing and Presentation, Project Study Management and Quality Control Course at Production Engineering Research Association (PERA) and W.S. Atkins International, U.K. 1984.

EXPERIENCE:

1984 -	Manager, Business Development and Information Service, Industrial Projects Service.
1976 - 84	Head, Political Department and Information Service, Office of the Chairman of the Council of Ministers.
1957 - 76	Ministry of Information and National Guidance Permanent Secretary (1975 - 76) General Manager Ethiopian Press Service (1974 - 75) Deputy General Manager Ethiopian News Agency (1964 - 74) Editor, Voice of Ethiopia Daily Newspaper (1957 - 60)

1955 - 57 **Senior Meteorologist and Liaison Officer with the World Meteorological Organization (WMO) and the International Civil Aviation Organization (ICAO)**

NEGASH TEKESTE, LEADING ENGINEER

EDUCATION:

B.Sc. in Mechanical Engineering, Addis Ababa University, 1964.

TRAINING:

Course in Technology Transfer and Contracting of Projects, Helsinki School of Economics, Finland, 1983.
Planning and Appraisal of Industrial Projects Course, Project Planning Centre, University of Bradford, U.K., 1985.

EXPERIENCE:

1983 -	Leading Engineer Industrial Projects Service.
1979 - 83	Head, Engineering Department, Ethiopian Building Materials Corporation
1975 - 79	National Metal Works Corporation:
	Plant Manager, Kawa Steel Industry, Technical Adviser, Akaki Steel Foundry (1976 - 79)
	Head, Engineering Department of the Corporation (1975 - 76).
1964 - 75	Addis Ababa Cement Factory:
	Plant Manager (1973 - 75)
	Assistant Plant Manager and Head of Plant Mechanical Engineering (1966 - 73)
	Plant Engineer (1964 - 66).

TAYE HAILU, LEADING PROJECT ANALYST

EDUCATION:

BBA, Addis Ababa University, 1970
MBA, Bowling Green State University, Bowling Green, Ohio, U.S.A., 1974.

TRAINING:

Advanced Institutional Management Consultancy Course, Research Institute for Management Sciences (RVB), Delft, The Netherlands, 1984
Course on Computer Programme Languages, COBOL and Fortran IV, Addis Ababa, 1983.

EXPERIENCE:

1983 -	Leading Project Analyst Industrial Projects Service
1976 - 83	Agricultural and Industrial Development Bank Manager, Finance and Banking Department (1980 - 83) Deputy Controller (1976 - 80)
1970 - 71	Junior Bank Officer, Commercial Bank of Ethiopia.

EPHRAIM ZAUDE, LEADING PROJECT ANALYST

EDUCATION:

B.Sc. in Agriculture (Agronomy) Addis Ababa University, 1963.
Dip. in Sugar Technology, The Netherlands, 1965

TRAINING:

African Advanced Management Programme in General Management, Marketing, Finance and Behavioural Sciences by International Management Development Institute of Wisconsin, USA, held in Ethiopia, 1971.
Planning and Appraisal of Agro-Industrial Projects Course, Project Planning Centre, University of Badford U.K., 1984.

EXPERIENCE:

1984 -	Leading Project Analyst Industrial Projects Service
1983 - 84	Agricultural Expert Finchaa Sugar Project
1963 - 84	Ethiopian Sugar Corporation Factory Manager, Wonji Sugar Estate (1980 - 84) Chief of Training (1979 - 80) Agricultural Manager, Metahara Sugar Estate (1976 - 79) Division Manager, Metahara Sugar Estate (1973 - 76) Chief Chemist, Wonji Sugar Estate (1969 - 73) Shift Chemist, Wonji Sugar Estate (1963 - 69)

GEBRE KIROS HABTU, LEADING ENGINEER

EDUCATION:

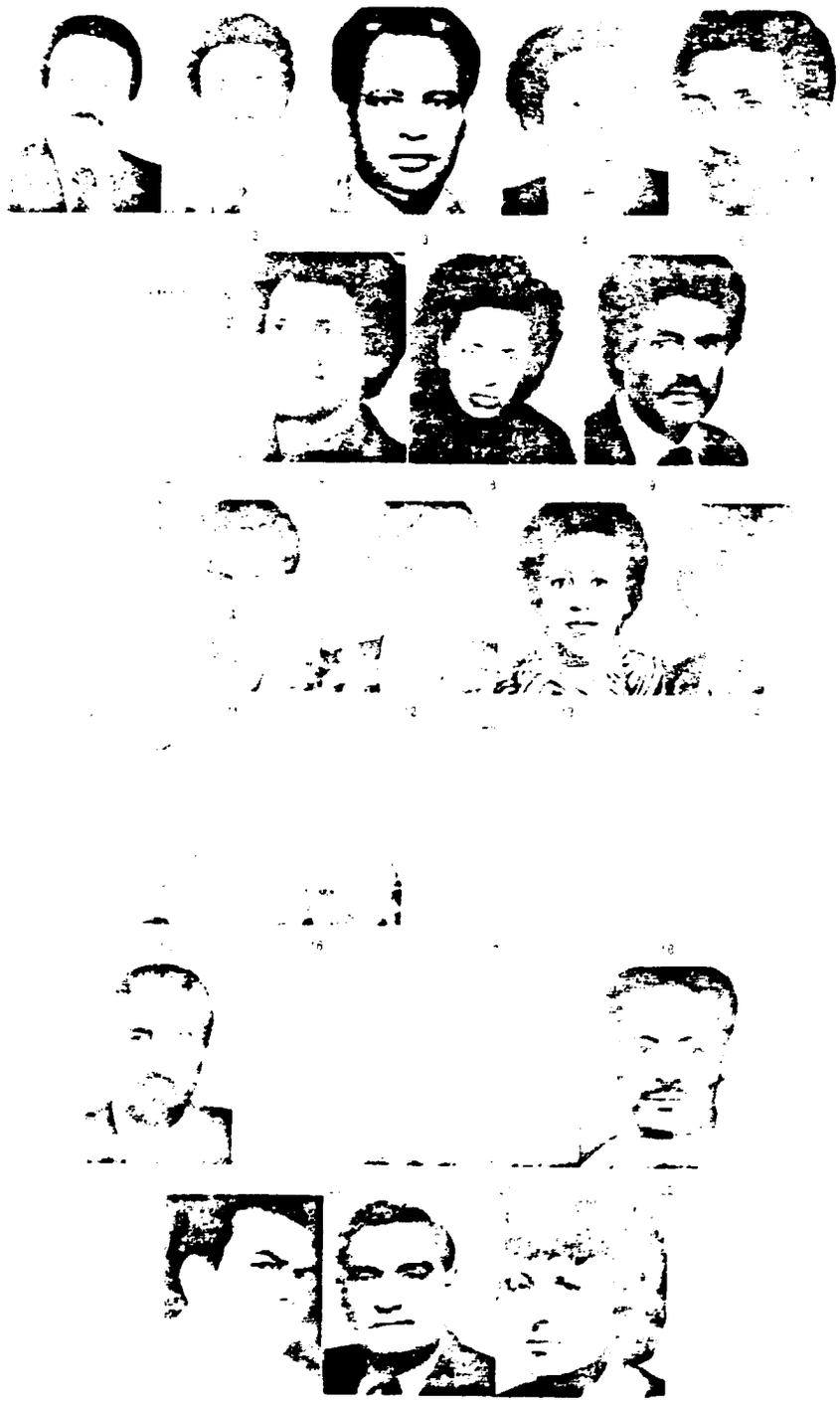
B.Sc. in Mechanical Engineering, Addis Ababa University, 1964

TRAINING:

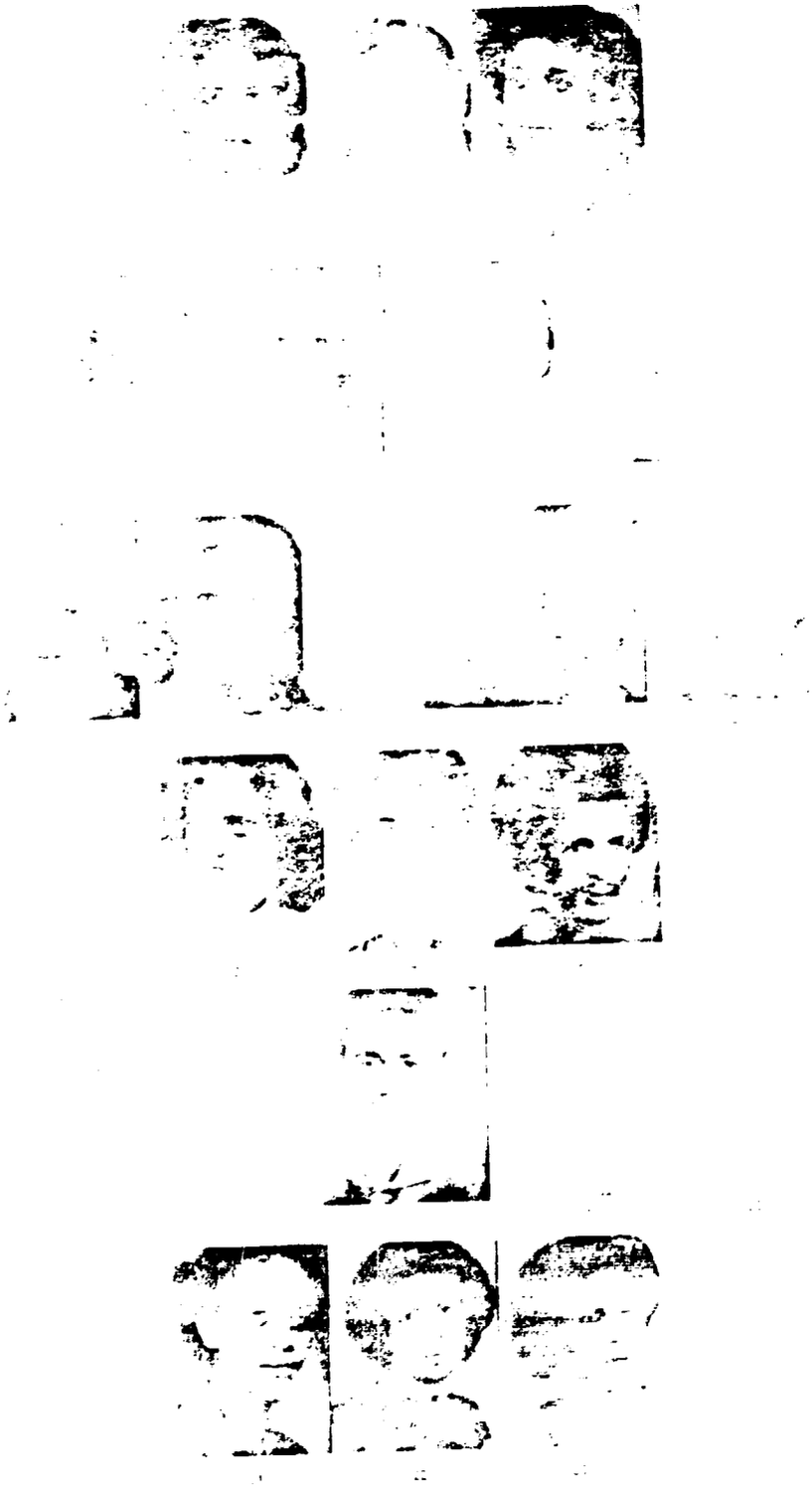
Certificate in Industrial Maintenance Management, Stockholm, Sweden, 1971.
In-Plant Training in Pulp and Paper Technology, ENSO GUTZEIT Pulp and Paper Mills, Finland, 1974-75

EXPERIENCE:

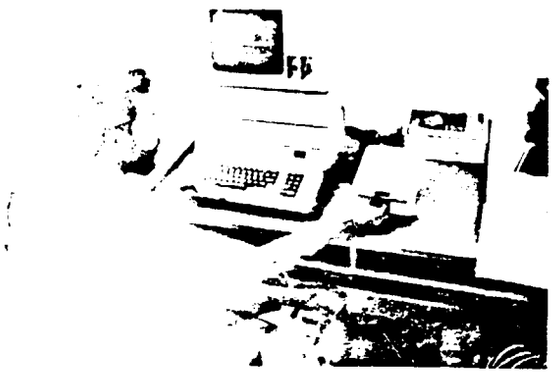
1985 -	Leading Engineer Industrial Projects Service
1969 - 85	Ethiopian Pulp and Paper S.C. General Manager (1975 - 85) Estate Manager (1975 - 76) Plant Engineer (1972 - 75) Maintenance Engineer (1969 - 72)
1969 -	Standards Engineer Ministry of Commerce and Tourism
1967 - 69	Maintenance Supervisor Mobil Oil East Africa Ltd
1965 - 67	Maintenance Engineer CITRA (Compagnie Industrielle De Travaux)
1964 - 65	Service Engineer, Ethiopian Cement Corporation



1. Girma Wolde-Mariam (LL.B. 1973) Senior Lawyer. 2. Seifu Awash (BBA 1973) Senior Proj. Analyst. 3. Atnafu Mebrate (B.Sc. 1971) Senior Engineer. 4. Kassahun Avele (B.Sc. 1973) Senior Engineer. 5. Elias Tesheberu (BA, 1971, MA 1982) Senior Proj. Analyst. 6. Gebre-Meskel Gebre-Egziabher (B.Sc. 1977) Senior Engineer. 7. Menbere Taye (BBA 1976, M.Sc. 1984) Senior Proj. Analyst. 8. Yeshoa-Abeba Gedamu (BBA, 1978) Senior Proj. Analyst. 9. Samuel Fevissa (B.Sc. 1976) Senior Proj. Analyst. 10. Girma Milky (B.Sc. 1975) Eng. 11. Ayele Abebe (B.Sc., 1974) Proj. Analyst. 12. Abebaw Alemayehou (BA, 1980) Proj. Analyst. 13. Mulumebet Jembere (BBA, 1979) Proj. Analyst. 14. Assefa Kebede (BA 1980) Proj. Analyst. 15. Fekade Lakew (M.Sc., 1983) Eng. 16. Tilahun Jabessa (M.Sc., 1983) Eng. 17. Dr. Frai Eman (PH.D. 1983) Eng. 18. Kassa Wolde-Senbet (M.Sc., 1981) Eng., 19. Essayas Abene (M.Sc. 1982, M.Sc., 1984) Eng. 20. Belay Asnagre (M.Sc., 1984) Junior Eng., 21. Yonnas Chebude (M.Sc. 1984) Junior Eng. 22. Bekele Gorba, Draftsman. 23. Pramod Chandra Shah (MA, 1954, MA, 1956, Ph.D. 1968) UNIDO Expert. 24. Ramesh Chandra Maudgal (B.CH.E, 1956, D.Sc., 1963) UNIDO Expert. 25. Arne M. Heineman (BA, 1980, MBA 1983) UNIDO Associate Expert.

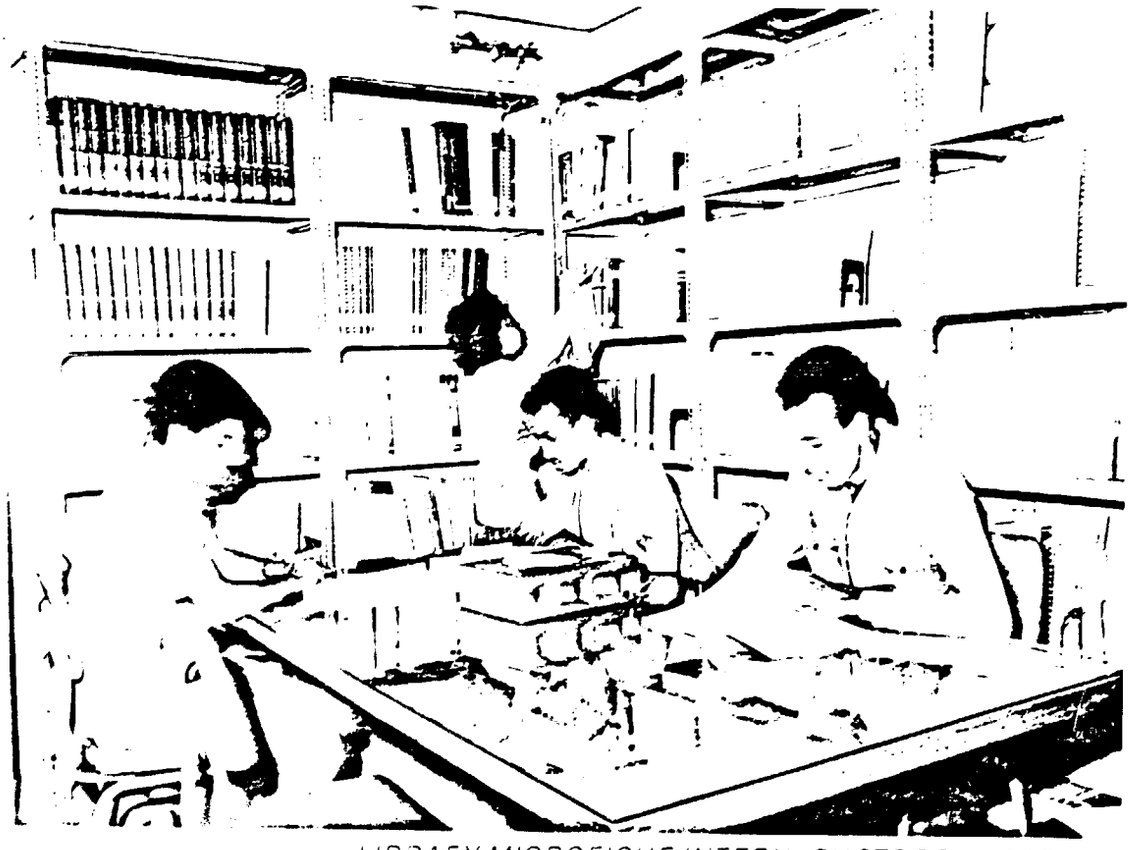


1. Aster Tessema, Head, Administration Section. 2. Zeleka Kifle, Head, Accounts Section. 3. Yemisratch Teferra, (BA 1984) Admin. Assist., 4. Yeshiareg Desta, Senior Secretary. 5. Sara W-Giorgis, Senior Secretary. 6. Misrak Zewde, Senior Secretary. 7. Debritu Akalu, Librarian. 8. Marta Girma, Secretary. 9. Alice Rafat, Secretary, 10. Adanetch Sebsibe, Secretary. 11. Zewdnesh Alemayehu, Secretary. 12. Altaye Yeshitila, Secretary. 13. Yenenesh Demisse, Typist, Receptionist, 14. Getachew Getanen, Junior Accountant. 15. Admassu Ademe, Assist., General Service, 16. Tesfaye Desalegne, Senior Office Machines Operator, 17. Daba Abebe, Store Keeper. 18. Negussie Diresse, Driver, 19. Adugna Haile Mariam, Driver, 20. Alemayehu Zeleke, Messenger, 21. Woin-Hareg Wolde, Cleaner, 23. Tejitu W-Tsadik, Cleaner, 23. Tsige Tadesse, Cleaner.



COMPUTERS/WORD PROCESSORS/
ON-LINE SERVICE

SURVEYING AND DESIGN EQUIPMENT



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Organizational Structure

IPS is now organized around three areas of specialization, supported by an Administration and Finance Division. The three areas of specialization are:

Industrial Studies Consultancy Service:

- Market
- Finance
- Organization and human resources development
- Economics

Engineering Consultancy Service:

- Basic engineering
- Negotiation and contracting
- Implementation

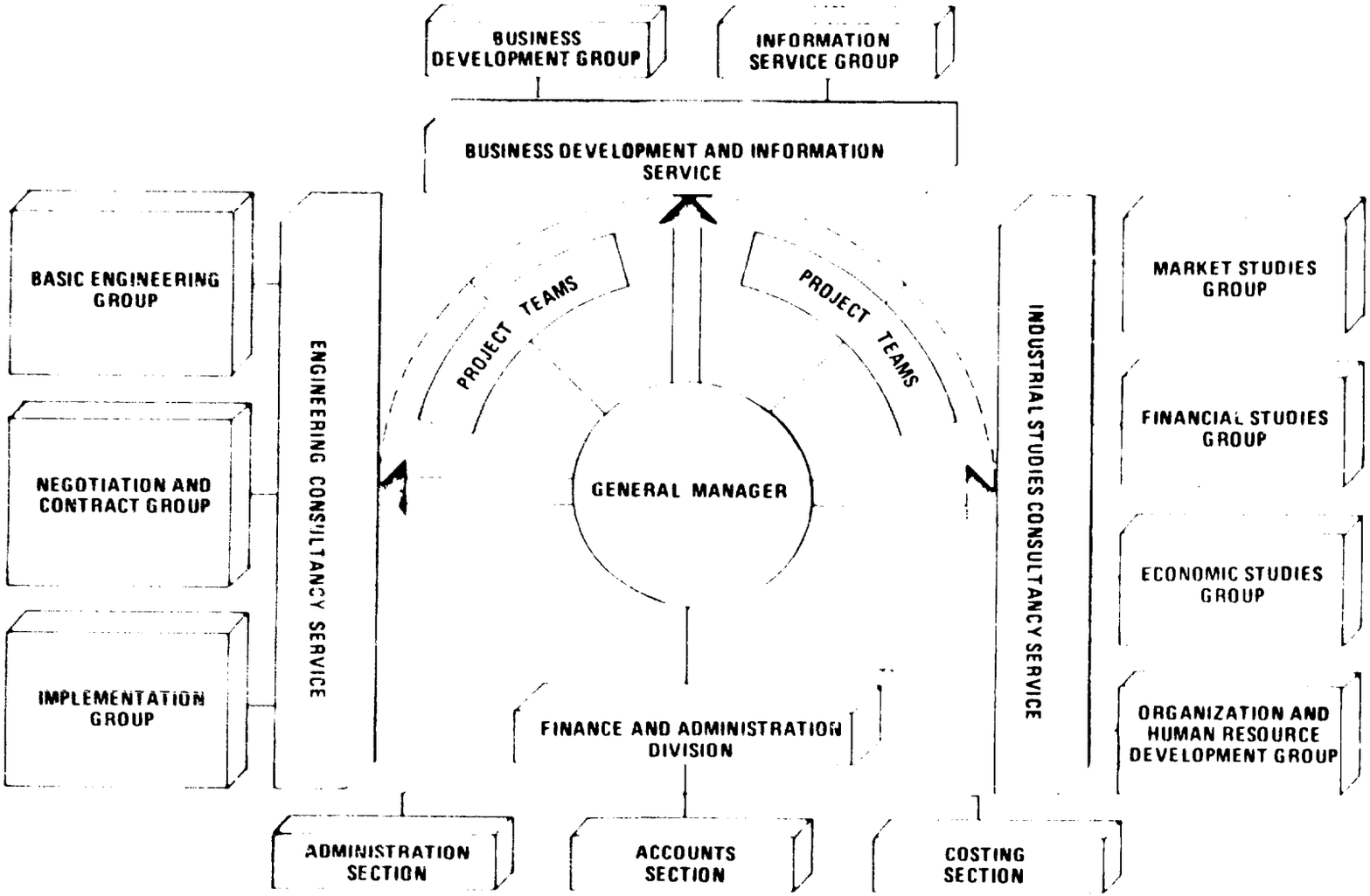
Business Development and Information Service:

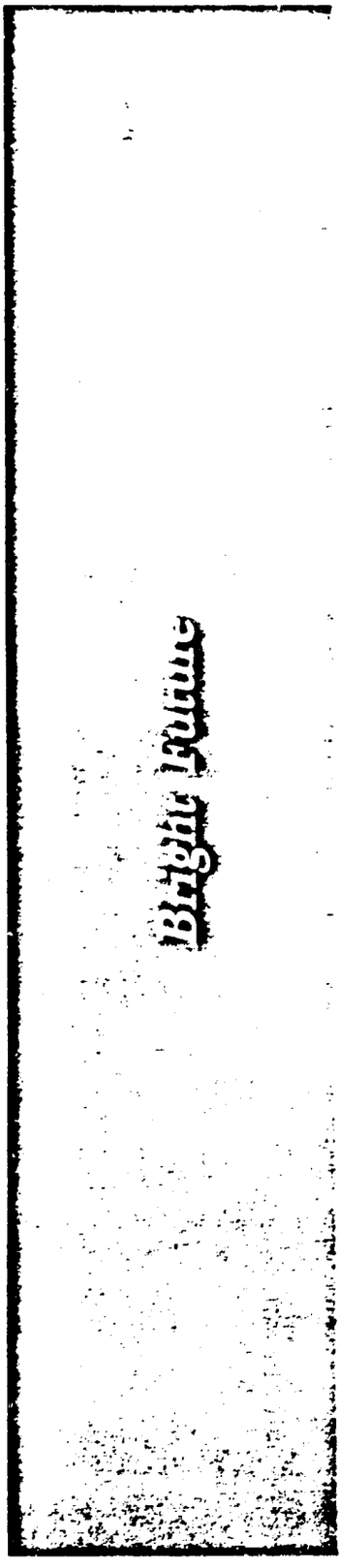
- Business development
- Information

Since IPS activities require an integrated expertise approach, a multi-disciplinary team is constituted under the leadership of a project team leader to co-ordinate the exacting task of project studies and implementation.

Such a set-up and team organization enable IPS to render a specialized range of services for projects of any magnitude and complexity.

ORGANIZATION CHART : INDUSTRIAL PROJECTS SERVICE





Broadened Horizon

A national consultancy house such as IPS means more than mere independence from foreign consultants; it means that project preparation and execution at all levels are carried out by specialists who have an intimate knowledge of local conditions and of the specific requirements and milieu under which industrial establishments operate. It also means foreign exchange savings which had to be disbursed to foreign consultants for project studies and implementation.

An increasing and sustained national involvement in the planning and management of industrial ventures inevitably generates valuable and specialized experience in a national consultancy capability which in turn would have considerable cumulative impact on the national economy, particularly in view of the significant role the sector can play in ensuring a sustained and self-reliant economy. Such an involvement in the future will not be limited to pre-investment and some aspects of project implementation but will also extend to design and engineering work of plant and machinery. The strengthening of this capability in design and engineering is of crucial importance to the creation of a domestic technological capability and for the growth of a capital goods industry which is now at a low level of development.

IPS is fully conscious of its tasks and responsibilities in light of the challenges lying ahead and is just as fully committed to live up to its expanding role. IPS will, therefore, exert every effort to make its proper contribution by providing its specialized services for the successful pursuit of this exciting new venture.

There is indeed a bright future, and IPS will play an active role in Ethiopia's industrialization programme by assisting to translate and articulate project ideas into concrete proposals

Some of the Project Studies Undertaken by IPS