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UNITED NATIONS INDUSTRIAL
DEVELOPMENT ORGANIZATION

Distr.
LIMITED
UNIDO/IOD.195
5 July 1978
ENGLISH

ASSISTANCE TO THE ASSOCIATION OF AFRICAN INDUSTRIAL TECHNOLOGY
ORGANIZATIONS (AAITO) IN THE ELABORATION OF
PROJECT PROPOSALS

REPORT */

by

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id.78-4322

C O N T E N T S

	<u>Page</u>
I. INTRODUCTION	1
II. IMPLEMENTATION OF THE ASSIGNMENT	3
III. RECOMMENDATIONS	15

ANNEXES

ANNEX I	-	Outline of Consultants Assignment
ANNEX II	-	Programme of visits
ANNEX III	-	Inventory of African Industrial Technology Organizations, Experts and Research and Development Programmes
ANNEX IV	-	AAITO Information Unit
ANNEX V	-	Development of Industrial and Technological Manpower in Africa
ANNEX VI	-	Short-term Training Workshops
ANNEX VII	-	In-Plant Group Training Programmes for Technicians
ANNEX VIII	-	Preparation and Production of the First Issue of the "African Journal of Industrial Technology"
ANNEX IX	-	Cooperation between the OAU and CID
ANNEX X	-	African Regional Centre for Technology Draft work programme for 1978 and 1979

I. INTRODUCTION

At the 29th Ordinary Session of the Organization of African Unity (OAU) Council of Ministers in Libreville, Gabon from 23 June to 3 July 1977, resolution CM/Res.569 (XXIX), on Industrial and Technological Research in Africa, was adopted endorsing the establishment of the Association of African Technology Organizations (AAITO) and calling for the assistance of UNIDO and other relevant international agencies to this effect. The Association was inaugurated in December 1977 under the aegis of the OAU to act as the technical arm of OAU's Scientific Council of Africa (SCA) and the Scientific, Technical Research Commission (STRC), liaise with other relevant international organizations, and express Africa's view point on all matters related to industrial and technological research and development in Africa.

In order to ensure an effective implementation of AAITO's aims and objectives, it was agreed by UNIDO, the OAU/STRC and AAITO to set up an OAU/AAITO/UNIDO Joint Panel of Experts on Industrial and Technological Research and Development in Africa. The first meeting of the Joint Panel of Experts held in Nairobi, Kenya from 20-23 March 1978 to draw up a plan for the development and implementation of a Programme of Action on Industrial and Technological Research and Development in Africa, and to identify a number of projects to enable the implementation of AAITO's work programme.

As the time was too short at the Nairobi meeting to elaborate the projects, the Joint Panel requested the assistance of UNIDO in financing the services of consultants to elaborate specific project proposals based on the guidelines and projects defined at the Nairobi meeting. The Joint Panel also recommended that the President of AAITO and the UNIDO recruited consultants should hold consultations with various international agencies on the possibility of their financing one or more of the projects elaborated.

Consequently, UNIDO recruited two consultants to elaborate and formulate the AAITO projects into specific requests and to consult international agencies in Europe and Africa for financial and technical support in the implementation of the projects elaborated. An outline detailing the assignment of the consultants is attached as Annex 1 to this report.

Dr. O.A. Koleoso, President of AAITO and Acting Director of Research at the Federal Institute of Industrial Research, Lagos, Nigeria and Dr. Enil J.B. Tutuwan, Professor of Chemistry, University of Yaoundé, Cameroon, were recruited as the consultants by UNIDO.

After the elaboration of the Project Proposals, UNIDO sent out copies of the Project Proposals to the International Agencies to be visited, and fixed appointments with each Agency on behalf of the OAU and the AAITO. Drs. Koleoso and Tutuwan held consultations with UNIDO, the ACP-EEC Convention of Lomé in Brussels, UNESCO Headquarters in Paris, ILO and UNCTAD in Geneva, FAO in Rome, ECA in Addis Ababa, and finally with the Regional Office of UNESCO in Nairobi. The schedule of appointments is attached as Annex II.

Besides seeking specific commitments to ensure the financial means needed to permit the execution of the projects, the purpose of the consultations was also to seek the reactions of the various organizations visited on the projects, to provide additional background information on AAITO and its objectives, and to establish collaboration between AAITO and the International Agencies in the field of Industrial and Technological Research and Development in Africa.

UNIDO kindly financed the recruitment of the consultants as well as their per diems and travel costs. Secretarial services for preparing the project proposals as well as logistic support and guidance were also provided by UNIDO. UNIDO also made contacts with all the international agencies to be visited and fixed appointments for the consultations.

II. IMPLEMENTATION OF THE ASSIGNMENT

A. Elaboration of Project Proposals

Dr. Enil J.B. Tutuwan arrived in Vienna on 10 May 1978 and immediately started on his work programme (Annex I) under the guidance of Mr. S.N. Ndam, Industrial Development Officer in the Industrial Operations Division of UNIDO, who as a representative of UNIDO has guided AAITO through many stages of its formation. After studying the relevant background documents and the report and project proposals of the Nairobi meeting, the project proposals were re-organized and formulated into six concrete projects (Annexes III-VIII) in the three general areas initially suggested, i.e., information, training, and technical co-operation.

Each project was then carefully elaborated in conformity with the Statutes of AAITO, the aim being to enable the Association to achieve its immediate and long-term objectives. The point was born in mind that the six projects identified for elaboration were not exhaustive of the Association's activities or the only ones in the Work Plan, but rather the execution of preliminary seed ideas designed to establish a working base and a firm foundation for future projects. As such modesty in the project proposals reflects the determination to find technical support and financing for their execution rather than limitations in AAITO's perspectives or expectations. In other words, although AAITO is quite ambitious and determined to achieve its objectives, it prefers to be realistic and practical in its projects, rather than grandiose and impressive in its plans.

Dr. O.A. Koleoso arrived in Vienna on 29 May 1978 and, after a carefully review, endorsed the six project proposals. The team then proceeded with consultations starting with the UN Agencies.

B. Consultations with Divisions of International Organizations

1. Consultations with UNIDO

Consultations by Drs. Koleoso and Tutuwan on behalf of AAITO with international organizations for technical assistance for the project proposals started on 29 May 1978 with Divisions of UNIDO dealing with the various aspects of the Project Proposals. The schedule of appointments is reflected in Annex II.

a) Consultations with Mr. A. Sissingh, Acting Head, IOD/TRNG

Discussions with Mr. Sissingh centred on projects 3,4 and 5 dealing with training. It was remarked that the schedule of implementation was generally a bit too tight and could be spread out a bit more, perhaps into 1980. In reference to Project 3, it was mentioned that the ECA has projects in Manpower training similar to this AAITO project, but without overlapping since the AAITO project would help to clarify and better define the ECA proposal which has just been submitted to the UNDP for consideration. He promised to submit it for further consideration by UNIDO.

Mr. Sissingh saw project 4 on short-term training workshops as the most clear UNIDO project in AAITO's work programme, and promised to process it for further action by UNIDO. He suggested that it might be better to execute Project 5 in an established training centre with facilities and expertise such as the Turin Centre in Italy. He promised to process this proposal also for further action.

b) Consultations with Mr. H. Fahlstrom, Head, IOD/INFR

Projects 1 and 2 on Information were the subjects of discussions with Mr. Fahlstrom and his collaborators. The group raised a number of questions such as how to organize information in the Inventory so as to reflect Africa's

industrial development priorities, what type of information to store in the Information Unit and what coding system to adopt. He suggested that information could be obtained from satellites in orbit over the continent, which seemed to infer that AAITO should perhaps be more ambitious. Mr. Fahlstrom informed that the division is also working on information system on a country to country basis and will collaborate with other interested divisions of UNIDO in helping AAITO.

c) Consultations with Mr. G. Dobos, Deputy Director, IOD

Dr. Koleoso expressed AAITO's appreciation for UNIDO's assistance in its establishment and was relying further on UNIDO's help. Mr. Dobos expressed the belief that facilities exist in the African countries for the In-group training programmes (Project 5) and he saw no need to undertake this training abroad. Facilities abroad, e.g., at the Turin Centre in Italy, he said, are more suitable for research and the training of specialists or teachers who could return to Africa and carry out the training of technicians in their local institutions, and the Turin Centre can help in the establishment of regional centres in Africa.

Turning to Project 3, he said AAITO is highly privileged to prepare the study on Manpower and should obtain a copy of "Africa - 2% in Year 2000" which may give AAITO a wider perspective on the project and suggest avenues of assistance.

d) Consultations with Mr. Manning, Officer-in-charge, IOD/AGRO

Mr. Manning and the group of experts under him raised a number of questions concerning the training programmes, such as the basis for selection of sponsoring institution, the number and divergent backgrounds and interests of participants, and the structure of the training programmes. They felt that the projects did not give sufficient information. However, they expressed their willingness to provide documents for training programmes and assist in the formulation of outlines.

e) Consultations with Mr. Cyranski, Acting Head, IOD/ENG

Mr. Cyranski and his collaborators had reservations on the In-group training programmes in repair and maintenance on a continental level. They suggested that another approach would be to organize such training programmes at the national level. In this case, he said, training is provided at advance training centres such as the Turin Centre for 1-2 years as basis for the establishment of national programmes after which training could be provided locally in Africa as envisaged in Project 5. He emphasized that participants should be both qualified and highly motivated, and concluded that his group is ready to assist AAITO in any way seen fit.

f) Consultations with Mr. Okumu, Acting Chief, EX/PC/ECD/C

Mr. Okumu and his collaborators expressed interest in all the Project Proposals and more particularly in Project 3 for which they agreed to allocate funds in their 1978 and 1979 budget for its implementation.

g) Consultations with Mr. Hable-Selassie, Head, IOD/FEAS

Mr. Hable-Selassie offered general suggestions for AAITO to obtain financing for its projects from the African Development Bank or from the World Bank, to design its training programmes to permit maximum interaction between the various disciplines involved in industrial technology, and to decide on follow-up action after training. Mr. Hable-Selassie promised his division will collaborate with other divisions of UNIDO in assisting AAITO, particularly in the implementation of the portion of Project 4, dealing with Project Preparation and Evaluation.

h) Consultations with Mr. G.S.Gouri, Deputy Director, IOD
Mr. Tanaka, Acting Head, ICIS/TEC; and Mr. R.T.de Mautort,
Chief, Industrial Information Section

Dr. Koleoso expressed AAITO's appreciation for UNIDO's valuable assistance in its establishment and hoped that this assistance would continue. Discussions with this group delved into practical aspects of virtually all the projects, with a little more emphasis on Information. Several useful

suggestions were made and it was clear that this group has a deep and sustaining interest in AAITO. Possibilities of Swedish as well as Japanese technical assistance for training programmes were discussed. It was suggested that the Information Unit should operate as part of a larger and wider information system, and tie in with UNIDO services until it would be able to work alone. To ensure the Inventory (Project 1) contains useable information, it was suggested that AAITO should collaborate closely with UNIDO in formulating the questionnaire and produce the Inventory as a joint project.

i) Consultations with Mr. Jowhari, ICIS/REG

Mr. Jowhari took note of the importance AAITO places on Project 3 and the Cairo Conference and promised to communicate this to Mr. Nanjundan and to keep AAITO informed of other possible areas of assistance.

j) Consultations with Ms. Salburg, ICIS/SEC

Ms. Salburg reconfirmed her interest in AAITO projects and promised to collaborate through documents and identification of areas of activities of common interest with AAITO.

k) Consultations with Mr. Hamdy, Chief, EX/PX/NGO

Mr. Hamdy introduced the possibility of bilateral technical assistance for AAITO from non-governmental organizations and promised to act as contact on specific types of requests from AAITO.

l) Consultations with Messrs. Tandon and Mathews, EX/FC/DEV

Dr. Koleoso requested Messrs. Tandon and Mathews to convey to the Executive Director and other appropriate authorities in UNIDO, the appreciation of the AAITO for UNIDO's valuable assistance to the African Governments and the OAU for the establishment of the AAITO which is now a reality. He hoped that UNIDO would not desert AAITO but would continue and even expand its assistance to it. Messrs. Tandon and Mathews expressed concern about the possibility of AAITO duplicating the activities of ECA.

They assured the AAITO of UNIDO's support and would sympathetically review the Project Proposal, relying on the substantive contribution of the relevant units of UNIDO. They promised to convey the appreciations expressed by Dr. Koleoso to the Executive Director and their supervisor.

2. Consultations at the ACP-EEC Centre for Industrial Development, Brussels

We (Koleoso and Tutuwan) arrived in Brussels on 31 May 1978 from UNIDO, Vienna and were warmly received. From the airport we were taken to the ACP-EEC Centre for Industrial Development where we were received by the Director of the Centre, Dr. Thiesen and a number of his officers including Dr. Livi, the Executive Secretary of the EEC, Dr. Akinrele, Deputy Director of the Centre, and Mr. O'Hagan of the Information Section at the Centre.

As Dr. Thiesen and Dr. Akinrele were to travel out of Brussels later that afternoon on mission, little time could be lost before starting discussions. We went straight into general discussions on the purpose of our visit during lunch, and filled in background information on the Project Proposals and on the status and mandate of AAITO as a professional autonomous Association under the aegis of the OAU/STRC.

We were informed that the project proposals which appeared well formulated had been received only the day before our arrival and as such they had not had sufficient time to study them in detail. However, specific interest was expressed in some of the projects for which the Centre hopes to provide assistance in the form of "soft ware". A communiqué outlining these areas of technical assistance was prepared and signed at the end of the discussions (Annex IX). The Centre plans to establish contact with AAITO in working out the details with regards to the assistance for parts of Projects 2 and 4.

It was pointed out that the Centre has rather limited resources for the type of assistance needed to execute some of the projects. As such it was recommended that AAITO should address requests for technical assistance for the other projects to the EEC through the Regional Office in Lagos.

The reception which we were accorded, much as the time spared for our discussions demonstrated a frank and genuine interest and seriousness in AAITO on the part of the Centre. It can only be hoped that collaboration between the two, particularly in the areas mentioned above will only further strengthen these ties between and permit the Centre to render invaluable service to Africa in the field of industrial research and technology.

3. Consultations with UNESCO, Paris

We (Koleoso and Tutuwan) arrived in Paris from Brussels on 1 June 1978 and the following morning went to the UNESCO Headquarters where we were received by Mr. Sapé of the Science and Technology Policy Section who was expecting us. Mr. Hemptinne whom we were scheduled to see was away. Mr. Sapé was joined in the discussions by Mr. Goodyear of the Engineering Education Section who is mainly interested in training programmes.

Mr. Sapé informed us that he had received the Project Proposals only the day before, and as such had not had sufficient time to study them through. A number of general background questions arose concerning AAITO's "professional and non-governmental" status as well as its possible duplication of the functions of the African Regional Centre for Technology (ARCT) which he claimed has strong backing (probably financial backing from UNDP). This concern was clarified.

Turning to the project proposals, Mr. Goodyear briefed us of the work UNESCO is doing with UNDP in Africa South of the Sahara in the area of training. He indicated that collaborating the training programmes of engineering schools with the problems of local industries in the area has proved successful and a network is envisaged to expand the scale of this project in the area. It was pointed out that UNESCO is not a funding agency, thus although the projects of AAITO are identical to those of UNESCO in a number of areas, they could not be funded directly. Therefore, UNESCO will study the AAITO Project Proposals more closely to identify those that could be incorporated in its regular programmes, many possibilities being in the area of training.

UNESCO is interested in a global information network and finds AAITO's Project 1 complementary to its efforts in this area. The regional office in Nairobi will provide more information on what progress has been made with respect to the African region. UNESCO is planning a conference in Abidjan in December 1978 on Manpower and might be able to assist AAITO in Project 3.

In conclusion it was advised that AAITO should study the work programmes and budgets of international organizations to identify areas of complementary section, so as to avoid duplication.

4. Consultations with the ILO, Geneva

We (Koleoso and Tutuwan) travelled from Paris to Geneva on 4 June 1978 and were received in separate discussions at the International Labour Organization the next day by Mr. Baron of the Technology Section and Mr. Wallace, Chief of the Training Section, in lieu of Mr. Bhalla who was out on mission as originally scheduled.

Following a brief introduction of the purpose of our visit by Dr. Koleoso, Mr. Baron expressed thanks for the Project Proposals and was surprised that the ILO was not invited to the inaugural meeting of AAITO. Nonetheless, he reassured us that he had studied the Project Proposals with interest and the ILO was interested in being of assistance to AAITO. He cautioned that his branch deals only with information on appropriate technology, small scale rural industries, employment generation, and economic considerations and furthermore that the section has no funds for direct bilateral assistance to AAITO, but can solicit funds from national agencies such as the Swedish International Development Agency (SIDA).

He expressed specific interest in Project 2, on the Information Unit as pertains to small scale industries and suggested that if AAITO is willing to pay about 20% of the travelling costs as a sign of its seriousness, the ILO can send somebody to Lagos to work out with AAITO details concerning this particular project for submission to an international agency for funding. He said the ILO is interested in collaborating

with UNIDO in assisting AAITO. His division plans to produce small booklets on Small Scale Technologies for wide distribution and will like AAITO to be involved. He suggested that AAITO should allow more time in the work plan.

Discussions with Mr. Wallace keyed in on the training projects. He informed us that the division deals with Management Training for Appropriate Technology Selection. Specific attention was directed to part 3 of Project 4 (Selection of participants, p.16). On account of the fact that he had had very little time to study the Project Proposals, he assured us that he would study them more closely and talk to his colleagues and contact AAITO on the assistance his division could provide in this area. He expressed the willingness to participate with a paper at the Cairo Conference.

5. Visit to UNCTAD

During our meeting with Mr. Baron in the morning a phone call was made to Mr. Andreasson of UNCTAD (Mr. Patel was out of Geneva) to find out if it would be suitable to see him later in the afternoon instead of the previous day as scheduled. He agreed and fixed a meeting with us at 3:00 pm, June 6. Dr. Koleoso went as scheduled and met Mr. Andreasson and two other colleagues. The discussion started as usual with Dr. Koleoso explaining the purpose of our visit and providing additional information already on the formation of AAITO, its objectives and functions and on the six Project Proposals submitted. Mr. Andreasson welcomed our visit and explained that the Technology Transfer Division of UNCTAD was relatively young, financially weak and has a rather small staff. He explained that his Division depends mostly on external consultants for execution of their projects. He however pointed out that our Project Proposals Nos. 1 and 4 were quite similar to the projects currently being executed by UNCTAD, but wider in scope and coverage - these being carried out on a global scale. Mr. Andreasson informed the meeting that UNCTAD is

at present carrying out an inventory on technological capabilities and related policies in developing countries. He however did not think it possible for UNCTAD to collaborate with AAITO on proposed one for slight differences in their objectives and for financial reasons. Similar reasons were advanced for item 2 of Proposal 4. UNCTAD has been involved in isolated training programmes for officers in Senior Management level in Sri Lanka last year and presently planning one for Latin America this year, and another, hopefully, for French Speaking African countries in the future. A similar workshop was held in 1975 for the English Speaking African countries. In concluding he mentioned that two of his officers who are quite familiar with the projects were not around and that the proposals would be further studied in detail and their final reaction would be communicated to the AAITO Secretariat.

Finally Mr. Andreasson expressed UNCTAD's interest in the Cairo Conference included in Proposal 3 and that UNCTAD would be willing to participate if invited but not to co-sponsor it for financial reasons.

6. Visit to FAO (Rome)

The visit to Mr. Friedrich was short but beneficial. Mr. Friedrich was met in the main FAO building on his way to a meeting that would last till late afternoon, we decided to use the brief moment he had to spare to discuss on our mission. He informed us that he had not been able to take any action on AAITO's Project Proposals as his Division was presently moving their seat to New York, U.S.A. However, he intended to table the Proposals at the UNDP Council meeting which has been scheduled for this month in Geneva. In addition, he also hoped to discuss them in New York and would communicate the various reactions to the AAITO Secretariat.

7. Consultations with ECA

Consultations with ECA took place on Saturday, June 10, instead of Thursday June 8, as scheduled. We were informed by Dr. E. Lartey that the scheduled date was not suitable and that he had sent a cablegram to Mr. Gouri of UNIDO to that effect and suggested Saturday June 10 instead.

The consultations took place in Dr. Lartey's room with Dr. Lartey presiding. Also present at the meeting were Mr. I.M. Nur (Chief, Natural Resources Division of the OAU in Addis Ababa) and Mr. Karumuna (Economics Affairs Officer, Science and Technology Division of the ECA). The Chairman opened the meeting by welcoming us to ECA and explaining the reason for the change in schedule which was due to the fact that most of the people he would have liked to invite for the consultations, including his immediate superior officer, would be out of Addis Ababa. This situation however had not changed when the consultations started.

The chairman's main focus of attention seemed to be directed at the covering letter written by Mr. Gouri. He focused his remarks on the use of some words and their implications. Concerning the Proposals themselves some of which he said were identical with those his Centre (African Regional Centre for Transfer of Technology) had in mind to execute even though Project Proposals, like those submitted by AAITO, had not been prepared. He however mentioned that their work plan (which included their proposed projects) has been approved by his Executive Council and had been sent to UNDP for financing.

Explanations were offered both by the consultants and the OAU representative on the administrative questions raised by the chairman. The OAU representative was to have more consultations with the STRC in Lagos at some later date. On the Project Proposals the consultants noted with pleasure that three of the Proposals submitted by AAITO were similar to those being contemplated by ECA. The meeting agreed that AAITO and ECA should collaborate on the implementation of the projects and requested UNIDO to assist in the choice of the consultants. Finally it was agreed to keep the channels of communications between AAITO, ECA and OAU (in Addis) open. A copy of the work programme prepared by ECA was later sent to our hotel.

3. Consultations with the UNESCO Regional Office, Nairobi

We arrived in Nairobi from Addis Ababa on 11/6/78 and held discussions with the Director, Chief Ibukun and his colleagues the following morning. Discussions were held at two levels. First we had a general meeting during which the Director welcomed us and explained some general working details of his regional office with regards to the AAITO Project Proposals. After that we held further discussions with his colleagues, Drs. V.P. Kahr and R.H. Maybury who had been charged to study the Project Proposals.

Chief Ibukun asked if AAITO had been fully recognized by the OAU. He remarked that the UNESCO is ready to assist concrete projects rather than meetings and talk from which nothing concrete is never done. He said his office is ready to go through their draft programme in Training and Research with a representative of AAITO to identify areas of common interest and in AAITO work programme so that they can consider joint execution. AAITO should integrate itself into regional structures so as to enhance the activities of these regional organizations in its line of interest and formulate projects for joint funding with limited partnership rather than drag everybody into every project.

Chief Ibukun informed us that regional associations like AAITO can make direct official requests for assistance to his regional office and collaborate with it on a regional basis in regional activities.

During discussions with Dr. Kahr and Dr. Maybury we looked at the Project Proposals. Projects 1, 2, and 6, and parts of Project 3, were seen to fall within UNESCO's regional activities. UNESCO can assist AAITO in these projects by presenting them to funding agencies like UNDP and international development aid programmes. It was suggested that UNESCO and UNIDO should meet to work out details on how to assist AAITO carry out the above projects.

III. RECOMMENDATIONS

In view of comments and reactions, as well as suggestions made during the consultations, we wish to recommend that:

1. AAITO should immediately take action to obtain full legal documented recognition by the OAU. Guidelines for this process have been submitted to the AAITO President during consultations in Addis Ababa by the OAU representative who was present at our discussions.
2. AAITO must strengthen its staff and services in order to follow up contacts created during the consultations with appropriate action.
3. AAITO should normalize and move towards increasing its membership, and inform them of its work programme and projects.
4. AAITO should immediately request through the help of UNIDO, if possible, copies of the long and short-term objectives and work programmes of all international organizations and agencies in the African region in the fields of science, technology and research.
5. AAITO should allow more time for planning and obtaining promised assistance before embarking on execution of most projects (especially training).

OUTLINE OF CONSULTANTS ASSIGNMENT

1. Review the UNIDO reports on the establishment of the African Association of Industrial Technology (AAITO) particularly its Statutes, Rules of Procedure and Work Programme.
2. Review UNIDO and other documents related to industrial research and development, appropriate technology, and transfer of technology relevant to the African context especially on the preparations for the next UN Conference on Science and Technology and the UNIDO Forum on Appropriate Technology,
3. Review the 1978/79 Work Programme of UNIDO, the draft Medium Term Plan as well as the Work Programme of other UN Agencies, if available in UNIDO, to identify elements common with AAITO's Work Programme.
4. On the basis of 1, 2, and 3 above, elaborate the project outlines adopted by the OAU/AAITO/UNIDO Joint Panel of Experts on Industrial and Technological Research and Development in Africa at its meeting held in Nairobi, Kenya from 20 to 23 March 1978.
5. Undertake, together with the second consultant and a representative of the OAU, visits to selected UN Agencies in Europe and Africa to solicit their financial and technical support for the projects elaborated.
6. Prepare a report on the work done, the results of the consultations with the funding agencies and recommend follow-up action for the implementation of the projects.

PROGRAMME OF VISITS

A. MONDAY 29 - TUESDAY 30 May 1978 - UNIDO Headquarters, Vienna

S.N. Ndam, Industrial Development Officer, IOD/OD
Room No. A-122, Ext. 787

Mr. G. S. Gouri, Deputy Director, IOD
Room No. B-111, Ext. 307

Mr. R. de Mautort, Chief, Industrial Information Section
Room No. C-116, Ext. 899

Ms. I. Lorenzo, Chief, EX/CPT/REL
Room No. H-513, Ext. 725

Mr. M. Handy, Chief, EX/PC/TCO, Room No. H-307, Ext. 326

Mr. A. Sissingh, Acting Head, IOD/WRMG
Room No. B-225, Ext. 443

Mr. H. Fahlstrom, Head, IOD/INFR
Room No. B-209, Ext. 703

Mr. G. Dobos, Deputy Director, IOD
Room No. B-121, Ext. 317

Mr. Okumu, Acting Chief, EX/PC/ECDC
Room No. H-102, Ext. 631

Mr. M. Aref, Head, IOD/AGRO
Room No. A-212, Ext. 352

Mr. Cyranski, Acting Head, IOD/ENG,
Room No. A-222, Ext. 419

Mr. M. Verghese, Head, IOD/CIEM
Room No. A-28, Ext. 368

Mr. Hable-Selassi, Head, IOD/FEAS
Room No. A-2, Ext. 919

Mr. S. Nanjundan, Head, ICIS/RTG
Room No. C-329, Ext. 421

Mr. Succar, Head ICIS/SEC
Room No. C-207, Ext. 935

Mr. M. Siddiqui, Deputy Director, EX/PC/REV
Room No. H-338, Ext. 790

2. WEDNESDAY 31 May and THURSDAY 1 June 1978 -
EEC-ACP, Centre for Industrial Development (CID)
Dr. Thiesen, Director, EEC-ACP/CID
Dr. Livi, Executive Secretary
Dr. I.D. Akinrele, Deputy Director
Mr. O'Hagen, Information Section
3. FRIDAY 2 June 1978 - UNESCO Headquarters, Paris
Mr. K.M. Sapé, Science and Technology Policy Section
Mr. Goodyear, Engineering Education Section
4. MONDAY 4 June 1978 - ILO, Headquarters, Geneva
Mr. Baron, Technology Section
Mr. Wallace, Chief of Training Section
5. MONDAY 4 June 1978 - UNCTAD, Headquarters, Geneva
Mr. Andreasson
6. THURSDAY 8 June 1978 - FAO Headquarters, Rome
Mr. A.C. Friedrich, Executive Secretary
7. SATURDAY 10 June 1978 - ECA, Addis Ababa
Mr. E. Lartey, Chief, Science and Technology Section
Mr. I. M. Nur, Chief, Natural Resource Division
Mr. Karumuna, Economic Affairs Officer, Science and Technology Div.
8. MONDAY 12 June 1978 - UNESCO, Regional Office for Africa, Nairobi
Chief Ibukun, Director
Dr. V.P. Kahr
Dr. R.H. Maybury

PROJECT PROPOSAL NO. 1

REQUEST OF THE AFRICAN GOVERNMENTS
through the
SCIENTIFIC, TECHNICAL, RESEARCH COMMISSION (STRC)
of the
ORGANIZATION OF AFRICAN UNITY (OAU)
and the
ASSOCIATION OF AFRICAN INDUSTRIAL TECHNOLOGY
ORGANIZATIONS (AAITO)
for technical assistance in the
Preparation of an
INVENTORY OF AFRICAN INDUSTRIAL TECHNOLOGY
ORGANIZATIONS, EXPERTS AND RESEARCH AND
DEVELOPMENT PROGRAMMES

Lagos, Nigeria
29 May 1978

CONTENTS

<u>CHAPTER</u>		<u>Page</u>
I.	BACKGROUND INFORMATION AND JUSTIFICATION	3
	A. General Background Information	3
	B. Specific Background Information	5
II.	OBJECTIVES OF THE PROJECT	6
	A. Development Objectives	6
	B. Immediate Objectives	6
III.	DESCRIPTION OF THE PROJECT	7
IV.	WORK PLAN	8
V.	PROJECT BUDGET	9
	A. External Assistance Inputs	9
	B. AAITO Inputs	10
<u>ANNEX</u>	REGISTRATION FORM	11

I. BACKGROUND INFORMATION AND JUSTIFICATION

A. General Background Information

Most developing countries place high priority on industrial development to facilitate the achievement of their social and economic goals. There is general recognition that the rate of economic growth in general and of industrial development in particular is greatly enhanced by the level of technology in the country and the rate at which technological research results and "know-how" are applied. Accordingly, there has been an increasing movement within the developing countries towards the development of their technological capacities through, inter alia, the establishment of national technological institutions as a means of aiding industrial development.

The Lima Declaration and Plan of Action on Industrial Development and Co-operation stressed, among other things, the stimulation of the development of technological activities and the elaboration of technological policies and programmes adapted to the individual requirements of developing countries, the establishment and strengthening of industrial and technological machinery and institutions and the strengthening of regional activities and institutions for the promotion of economic co-operation between developing countries.

While industrial and technological activities have developed significantly in most Asian and Latin American countries, they are still very much at the conceptual stage in most African countries. The importance of developing industrial and technological activities in Africa has been stressed at various meetings of the OAU and at the Conferences of African Ministers of Industry. The meetings and conferences have stressed the need to create national, regional and sub-regional technological policies, programmes and institutions. The Africa aspirations for technological development are reflected in several documents, the most important ones of which include the "Addis Ababa Declaration of Industrial Development in Africa in the 1970's"; the Cairo Declaration on "Industrialization in Africa - Principles and Guidelines for Co-operation and Development"; and the OAU Resolution CM/Res.569 (XXIX) on industrial and technological activities in Africa adopted by the OAU Council of Ministers at its 29th Regular Session held in Libreville, Gabon, from 23 June to 3 July 1977. The recommendations included in these declarations and resolution are essentially the same as those highlighted in the resolutions adopted at the Conference of Ministers

of African Member States Responsible for the Application of Science and Technology to Development organized by UNESCO with the co-operation of the United Nations Economic Commission for Africa and the Organization of African Unity, which was held in Dakar, Senegal, from 21 to 30 January 1974.

In the light of the above and in accordance with a recommendation adopted at a regional Joint Consultation on the Promotion of Industrial Research and Services in Africa held in Lagos, Nigeria, in September 1975 and sponsored by UNIDO, the Nigerian Government and the World Association of Industrial and Technological Research Organizations (WAITRO), the African Governments, with the assistance of UNIDO and the Nigeria Government undertook a number of preparatory activities leading towards the establishment, in December 1977, of the Association of African Industrial Technology Organizations, AAITO.

The main objectives of AAITO include:

- To promote co-operation among the African countries in Industrial and Technological Research and Development through, inter alia, the establishment of links between African institutions concerned with industrial and technological research and development for the exchange of information, experience capabilities and facilities, as appropriate;
- To promote co-operation between African industrial and technological research institutes, relevant departments and units of Universities and the organized industrial sectors;
- To contribute towards the identification and periodic review of the needs and requirements of Africa, on a regional or sub-regional level, in industrial and technological research and development;
- To promote and assist in defining joint industrial and technological research development projects and help, as need be, in locating finance for such projects;
- To contribute towards the co-ordination and planning of industrial and technological research and development in Africa;
- To contribute towards upgrading the level of skills of personnel and the development of manpower requirements for industrial and technological research and development in Africa;

- To collaborate with the OAU/STRC in expressing Africa's viewpoint on industrial and technological research and development matters;
- To promote the effective transfer of industrial technology, particularly the commercialization of research and development results.

The establishment of the Association has been welcomed by the OAU which has accorded the Association with the responsibility of advising the OAU on all matters related to industrial and technological research and development activities in Africa.

In order to translate the Association's objectives into concrete operations, a Joint UNIDO/OAU/AAITO Panel of Experts, consisting essentially of the Executive Committee members of the Association met in Nairobi from 22 to 24 March 1978 to define projects for the implementation of the Association's work programme adopted at its inaugural meeting in Lagos in December 1977. The projects defined in Nairobi cover such activities as training, information and co-operation on industrial and technological activities in Africa.

B. Specific Background Information

Concerning this particular project proposal, it is worth mentioning, in addition to the above, that the AAITO Inventory, containing correct and up-to-date information on industrial technology organizations, experts, specialists and facilities in Africa, will help to provide reliable information on Africa's capacity and expertise in industrial technology development. This information would be extremely useful to national, regional and international industrial development organizations in the implementation of their various programmes especially related to Africa. The information will also contribute towards the establishment of trends for planning and co-ordinating programmes and manpower development for industrial technology activities in Africa.

II. OBJECTIVES OF THE PROJECT

A. Development Objectives

The development objectives of the proposed project is to assist the African countries both at the national and at the regional levels, to raise their industrial and technological capacities and capabilities in order to enhance their ability in the acquisition and adaptation of appropriate foreign industrial technologies and in the development and commercialization of local ones.

It is expected that this will contribute towards: increasing the production and the improvement of the quality of locally manufactured goods and services; the development of local industrial manpower resources; and the development and more effective utilization of local raw materials, thereby increasing the share of Africa in the world industrial production.

It is also expected that the results of the project will have several multiplying effects on the economic development of the African countries by, for example, helping to reduce their dependence on foreign industrial technologies; optimizing the utilization of investments in the acquisition and adaptation of technologies and the development and commercialization of local ones. This would help to reduce the enormous amount of foreign exchange currently involved in technology transfer and to enhance the development of rural areas.

B. Immediate Objectives

The immediate objectives of the project are to:

- a) initiate the publication of an AAITO Inventory of African Industrial Technology Organizations including experts and specialists in various technological fields; and
- b) promote co-operation among technological institutions in Africa on industrial and technological research and development programmes and projects relevant to Africa.

III. DESCRIPTION OF THE PROJECT

It is planned to collect information on the various organizations, experts and specialists engaged in industrial technology in Africa. The questionnaire (Annex I) which was adopted by the Joint OAU/UNIDO/AAITO Panel of Experts Meeting in Nairobi in March 1978 would be reviewed and improved with the assistance of a consultant, as need be. A list of research institutions, relevant departments of the university, government institutions, public and private industries, development banks and other institutions actively engaged in industrial technology activities in Africa will be prepared and the questionnaire sent to them. A number of African experts will be selected to visit a number of countries to ensure that the questionnaire is properly filled out.

Upon receipt of the questionnaire the consultant who had assisted in its design would be requested to analyse the information received. He will also be required to assist the AAITO Secretariat in designing an appropriate format for the presentation of the information of the inventory as well as suitable indices for easy reference and use. It is planned to prepare the inventory in two parts, the first part dealing with institutions, and the second part with experts and specialists. The information in both parts will be classified: in alphabetical order; according to countries; in areas of activities, such as testing and analysis, techno-economic evaluation, engineering design, repair and maintenance and standardization and quality control; and in industrial sectors such as food processing, textiles and building materials.

The information will accordingly be compiled, reproduced or printed, as appropriate and circulated to organizations on a list to be established by AAITO. It is also intended that the inventory will, if not initially but ultimately, be sold, at least to non-members of AAITO.

The questionnaire mentioned above will also be designed in such a format as to enable the collection of information on industrial and technical research and development programmes and projects which are relevant to Africa, being carried out both within and outside Africa. This information will also be analysed and reproduced, in an appropriate format, in a separate document, according to institutions and industrial sectors. This document will be circulated among interested organizations as a means of promoting co-operation in industrial and technological research and development in Africa.

In order to accomplish the activities described above, the AAITO Secretariat would require the assistance of a high level expert for the design of the questionnaire, the analysis and presentation of the information, as well as the organization of the entire work involved. As indicated earlier, the services of short-term consultants will also be required to assist institutions in selected countries in the proper completion of the questionnaire. Since the AAITO has only recently been established, it would also require financial assistance in the reproduction or printing, as appropriate, of the inventory and its circulation. A modest provision will also be required for the services of a consultant to assist AAITO in carrying out the first exercise for updating the inventory.

IV. WORK PLAN

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
1. Securement of external funds for the production of the Inventory	AAITO Secret.	June 1978 - 2 months
2. Recruitment of consultant to assist in the organization and implementation of the activities for the production of the first issue of the Inventory	" "	July 1978 - 1 month
3. Establishment of list of organizations to be contacted	" "	Aug. 1978 - 1 month
4. Finalization and distribution of questionnaire to organizations included in the list established in 3 above.	" "	Sep. 1978 - 1 month
5. Selection and fielding of consultants to assist institutions in various countries in properly completing the questionnaires	" "	Sep. 1978 - 2 months
6. Collection, analysis and editing of information from questionnaire	" "	Nov. 1978 - 1 month
7. Design of format and lay-out of Inventory in programme	" "	Nov. 1978 - 1 week
8. Reproduction and circulation of Inventory	" "	Dec. 1978 - 2 months

V. PROJECT BUDGET

A. External Assistance Inputs

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. <u>Experts</u>						
a) Consultant in the organization of work for the production of the first issue of the Inventory	6	30	6	30	-	-
b) Consultants to assist institutions in the proper completion of the questionnaire	15	60	15	60		
Sub-total	21	90	21	90	-	-
2. <u>Administrative and Technical Support Staff</u>						
a) English/French bilingual Secretary	6	6	6	6	-	-
b) English/French typists	2	3	2	3	-	-
Sub-total	8	9	8	9	-	-
3. <u>Miscellaneous</u>						
a) Circulation of questionnaire, production and distribution of the first issue of the Inventory		10		10		-
b) Sundry and contingencies		1		1		-
Sub-total		11		11		-
GRAND TOTAL	29	110	29	110	-	-

B. AAITO Inputs (in-kind)

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. Personnel						
a) 1 Technical Information Officer	12	20	-	-	12	20
b) 1 English/French Translator	12	18	-	-	12	18
c) 1 Documents reproduction equipment technician	12	13	-	-	12	13
d) 1 Research Assistant	12	13	-	-	12	13
e) 1 English/French Bilingual Secretary	12	11	-	-	12	11
f) 2 Shorthand/Typists (one English, one French)	24	18	-	-	24	18
g) 1 Messenger	12	7	-	-	12	7
Sub-total	96	100	-	-	96	100
2. Training						
3. Land and Equipment						
a) Premises (including rental, insurance and utilities)	:	15		4		11
b) Office equipment	:	25		5		20
Sub-total		40		9		31
4. Miscellaneous						
a) Reproduction of AAITO Documents and Newsletter		2		-		2
b) Operation and Maintenance of equipment		2		0.5		1.5
c) Communications (e.g. mail, cables, telephone, etc.)		5		0.5		4.5
d) Sundry and contingencies		1				1
Sub-total		10		1.0		9.0
GRAND TOTAL		150		10		140

ANNEX I

ASSOCIATION OF AFRICAN INDUSTRIAL TECHNOLOGY ORGANIZATIONS

(AAITO)

REGISTRATION FORM

MEMBER

ASSOCIATED MEMBER

1. Name of the organization _____

Abbreviation _____

2. Mailing Address _____

3. Telephone No. _____ Cable _____ Telex _____

4. Date of creation _____

5. <u>Status</u>	<u>YES</u>	<u>NO</u>
Governmental	<input type="checkbox"/>	<input type="checkbox"/>
Public Organization	<input type="checkbox"/>	<input type="checkbox"/>
Private Organization	<input type="checkbox"/>	<input type="checkbox"/>
University Department/Division	<input type="checkbox"/>	<input type="checkbox"/>
Section/Department of an Enterprise	<input type="checkbox"/>	<input type="checkbox"/>
Section/Department of a Financial Institution	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>

6. Responsible to _____

7. Name and Title of Head of the Organization _____

8. Organizational Structure _____

PROJECT PROPOSAL NO.2

REQUEST OF THE AFRICAN GOVERNMENTS
through the
SCIENTIFIC, TECHNICAL, RESEARCH COMMISSION (STRC)
of the
ORGANIZATION OF AFRICAN UNITY (OAU)
and the
ASSOCIATION OF AFRICAN INDUSTRIAL TECHNOLOGY
ORGANIZATIONS (AAITO)
for Technical Assistance in the
Establishment of an
AAITO INFORMATION UNIT

Lagos, Nigeria
29 May 1978

CONTENTS

<u>CHAPTER</u>		<u>Page</u>
I.	BACKGROUND INFORMATION AND JUSTIFICATION	3
	A. General Background Information	3
	B. Specific Background Information	5
II.	OBJECTIVES OF THE PROJECT	6
	A. Development Objectives	6
	B. Immediate Objectives	7
III.	DESCRIPTION OF THE PROJECT	7
IV.	WORK PLAN	8
V.	PROJECT BUDGET	10
	A. External Assistance Inputs	10
	B. AAITO Inputs	11

I. BACKGROUND INFORMATION AND JUSTIFICATION

A. General Background Information

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The Lima Declaration and Plan of Action on Industrial Development and Co-operation stressed, among other things, the stimulation of the development of technological activities and the elaboration of technological policies and programmes adapted to the individual requirements of developing countries, the establishment and strengthening of industrial and technological machinery and institutions and the strengthening of regional activities and institutions for the promotion of economic co-operation between developing countries.

While industrial and technological activities have developed significantly in most Asian and Latin American countries, they are still very much at the conceptual stage in most African countries. The importance of developing industrial and technological activities in Africa has been stressed at various meetings of the OAU and at the Conferences of African Ministers of Industry. The meetings and conferences have stressed the need to create national, regional and sub-regional technological policies, programmes and institutions. The Africa aspirations for technological development are reflected in several documents, the most important ones of which include the "Addis Ababa Declaration of Industrial Development in Africa in the 1970's"; the Cairo Declaration on "Industrialization in Africa - Principles and Guidelines for Co-operation and Development"; and the OAU Resolution CM/Res.569 (XXIX) on industrial and technological activities in Africa adopted by the OAU Council of Ministers at its 29th Regular Session held in Libreville, Gabon, from 23 June to 3 July 1977. The recommendations included in these declarations and resolution are essentially the same as those highlighted in the resolutions adopted at the Conference of Ministers

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The main objectives of AAITO include:

- To promote co-operation among the African countries in Industrial and Technological Research and Development through, inter alia, the establishment of links between African institutions concerned with industrial and technological research and development for the exchange of information, experience capabilities and facilities, as appropriate;
- To promote co-operation between African industrial and technological research institutes, relevant departments and units of Universities and the organized industrial sectors;
- To contribute towards the identification and periodic review of the needs and requirements of Africa, on a regional or sub-regional level, in industrial and technological research and development;
- To promote and assist in defining joint industrial and technological research development projects and help, as need be, in locating finance for such projects;
- To contribute towards the co-ordination and planning of industrial and technological research and development in Africa;
- To contribute towards upgrading the level of skills of personnel and the development of manpower requirements for industrial and technological research and development in Africa;

- To collaborate with the OAU/STRC in expressing Africa's viewpoint on industrial and technological research and development matters;
- To promote the effective transfer of industrial technology, particularly the commercialization of research and development results.

The establishment of the Association has been welcomed by the OAU which has accorded the Association with the responsibility of advising the OAU on all matters related to industrial and technological research and development activities in Africa.

In order to translate the Association's objectives into concrete operations, a Joint UNIDO/OAU/AAITO Panel of Experts, consisting essentially of the Executive Committee members of the Association met in Nairobi from 22 to 24 March 1978 to define projects for the implementation of the Association's work programme adopted at its inaugural meeting in Lagos in December 1977. The projects defined in Nairobi cover such activities as training, information and co-operation on industrial and technological activities in Africa.

B. Specific Background Information

Concerning this project proposal in particular, it is worth mentioning, in addition to the information already presented above, that there is a general lack of knowledge and information on alternative sources of technology and the existence of alternative technologies in various fields in African countries. There is also often a lack of knowledge as well as information on alternative modes of transfer, terms and conditions associated with various alternatives, and the consequences of importing technology. At the domestic level, there is little information as to the existing technological capability of the country, in terms of both, manpower and institutions. At the sub-regional and regional levels, there is a lack of information channels for dissemination of the achievements of various technological activities; although there are some attempts to communicate with similar regional institutions at the sectoral research and development level. It is perhaps this lack of information on the programmes and results of various African Centres which explains the phenomenon of duplication in technological development. This deficiency of information systems to find, acquire, process and rapidly deliver information on various aspects of technology is further compounded by the structural defects of the information system for transfer of technology in Africa.

The Information Unit is therefore envisaged to act as the nervous centre of AAITO's activities. Besides collecting and organizing information on sources of technological information both within and outside Africa, as well as other information of interest to AAITO, the Information Unit will serve, through the Newsletter and Journal as a catalyst and purveyor of dynamic co-operation and contact between members of the Association and between the AAITO and the outside world. The Newsletter to be published by the Information Unit will serve as a medium for announcing AAITO's activities; reports and meetings of interest to its members; and important scientific and technological break-throughs of interest to Africa. As such, the Information Unit will become the repertoire of industrial and technological accomplishments in Africa, a feed-line and an antenna of the AAITO, thereby helping the Association to achieve its aims and objectives.

II. OBJECTIVES OF THE PROJECT

A. Development Objectives

The development objectives of the proposed project is to assist the African countries both at the national and at the regional levels, to raise their industrial and technological capacities and capabilities in order to enhance their ability in the acquisition and adaptation of appropriate foreign industrial technologies and in the development and commercialization of local ones.

It is expected that this will contribute towards: increasing the production and the improvement of the quality of locally manufactured goods and services; the development of local industrial manpower resources; and the development and more effective utilization of local raw materials, thereby increasing the share of Africa in the world industrial production.

It is also expected that the results of the project will have several multiplying effects on the economic development of the African countries by, for example, helping to reduce their dependence on foreign industrial technologies; optimizing the utilization of investments in the acquisition and adaptation of technologies and the development and commercialization of local ones. This would help to reduce the enormous amount of foreign exchange currently involved in technology transfer and to enhance the development of rural areas.

B. Immediate Objectives

The immediate objective of the project is to establish an AAITO Information whose main functions will be to:

1. collect, organize, store and retrieve relevant information on sources of industrial and technological information and services and to furnish AAITO members and other interested organizations with such information, as requested;
2. reproduce AAITO documents;
3. publish the AAITO Newsletter; and
4. assist in the preparation and production of the AAITO African Journal of Industrial Technology.

III. DESCRIPTION OF THE PROJECT

The establishment of an AAITO Information Unit is considered a very crucial element in the fulfillment of AAITO's objectives. This would involve a clear definition of the work to be undertaken by the Unit and the elaboration of a short and long-term programmes of its activities. A number of activities will then need to be carried out to ensure the effective implementation, initially, of the short-term programme and, ultimately, of the entire work programme. It is envisaged that these activities would include the establishment of operational procedures and working methods. A system for the collection, analyses, storage and easy retrieval of information on sources of technological information will need to be set up. Since a number of documents coming and leaving AAITO Secretariat will need to be translated into English or French, a small translation service will also need to be established.

An important element of AAITO's functions as prescribed in its statutes involves the organization of meetings, both general and technical; the reproduction and circulation of the reports of such meetings; as well as the publication of an AAITO Newsletter and the "African Journal of Industrial Technology". These activities make it necessary for the AAITO's Secretariat to establish modest but efficient document reproduction facilities. An essential activity in the establishment of the AAITO Information Unit will

therefore involve the selection, procurement, installation and initial operation of a suitable reproduction and, possibly, printing equipment and facilities. In order to ensure the smooth operation of such equipment, it will also be necessary for the skills of a local staff to be augmented to ensure their proper operation and maintenance.

Although the activities described above appear straight forward, it is considered necessary for the AAITO Secretariat to be assisted with the services of experts in the organization of the Unit, as well as in the selection, installation and initial operation of the document reproduction equipment. An important assistance required by AAITO would be financial contribution for the purchase of not only the document reproduction equipment but also such office equipment and facilities as typewriters, filing cabinets, information storage facilities (e.g. microfiche and audio-visual equipment).

IV. WORK PLAN

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
1. Securement of external funding for the establishment of the Unit	AAITO Secr.	June 1978 - Three months
2. Recruitment of consultants	" "	Oct. 1978 - 1 mo.
3. Recruitment of special staff for the Unit including English/French translators and bilingual secretaries	" "	December 1978 3 months
4. Setting-up of procedures and working instructions	" "	December 1978 3 months
5. Selection and procurement of office equipment	" "	December 1978 3 months
6. Setting up of information collection, analysis, storage and retrieval system	" "	January 1979 2 months
7. Establishment of work programme of the Unit	" "	Jan. 1979 - 3 mo.
8. Extraction from the AAITO Inventory of African Industrial Technology Organizations and reproduction of information on AAITO members	" "	February 1979 1 month
9. Collection, analysis, storage and retrieval of information on sources of technological information	" "	March 1979 Continuing

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
10. Request of information for inclusion in the AAITO Newsletter	AAITO Secr.	December 1978 2 months
11. Collection, analysis and editing of information for inclusion in the AAITO Newsletter	" "	February 1979 2 months
12. Setting up of operational procedure for the publication of the AAITO Newsletter	" "	March 1979 1 week
13. Collection and editing of information for inclusion in the AAITO Newsletter	" "	February 1979 2 months
14. Production and circulation of first issue of the AAITO Newsletter	" "	April 1979 1 month
15. Selection of document reproduction and audio visual equipment	" "	December 1978 1 month
16. Procurement of documents reproduction and audio visual and information storage equipment	Locally or abroad	January 1978 3 months
17. Installation and initial operation of documents reproduction and information storage equipment	AAITO Secr.	April 1978 1 month
18. Training of AAITO staff in operation and maintenance of document reproduction, audio-visual and information storage equipment	AAITO Secr. or abroad if need be	April 1979 2 months
19. Assistance in the production and distribution of first issue of the 'African Journal of Industrial Technology'	AAITO Secr.	June 1979 2 months

V. PROJECT BUDGETA. External Assistance Inputs

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. <u>Experts</u>						
a) Consultant on the organization of technical information	5	25	1	5	4	20
b) Consultant on the selection, installation and operation of document reproduction equipment	4	20	1	5	3	15
Sub-total	9	45	2	10	7	35
2. <u>Training</u>						
Training of two AAITO staff, one in the organization of technical information, including the operation and maintenance of audio-visual and information storage equipment and the second in the operation and maintenance of documents reproduction equipment	4	6	-	-	4	6
Sub-total	4	6	-	-	4	6
3. <u>Equipment</u>						
a) Document reproduction equipment (e.g. photocopying, off-setting, duplicating, printing and binding equipment)		50		30		20
b) Information storage equipment (e.g. microfiche, storage and filing cabinets, tapes.		15		15		-
c) Audio-visual equipment (e.g. movie, slides and overhead projectors, tape and cassette recorders and photographic equipment).		10		8		2
d) Special office equipment (e.g. calculating machines, typewriters and drafting equipment).		10		10		-
Sub-total		85		63		22
4. <u>Miscellaneous</u>						
Contingencies, sundry and reporting costs		4		2		2
Sub-total		4		2		2
GRAND TOTAL	13	140	2	75	11	65

B. AAITO Inputs (in-kind)

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. Personnel						
a) 1 Technical Information Officer	12	20	-	-	12	20
b) 1 English/French Translator	12	18	-	-	12	18
c) 1 Documents reproduction equipment technician	12	13	-	-	12	13
d) 1 Research Assistant	12	13	-	-	12	13
e) 1 English/French Bilingual Secretary	12	11	-	-	12	11
f) 2 Shorthand/Typists (one English, one French)	24	18	-	-	24	18
g) 1 Messenger	12	7	-	-	12	7
Sub-total	96	100	-	-	96	100
2. Training						
3. Land and Equipment						
a) Premises (including rental, insurance and utilities)	:	15		4		11
b) Office equipment	:	25		5		20
Sub-total		40		9		31
4. Miscellaneous						
a) Reproduction of AAITO Documents and Newsletter		2		-		2
b) Operation and Maintenance of equipment		2		0.5		1.5
c) Communications (e.g. mail, cables, telephone, etc.)		5		0.5		4.5
d) Sundry and contingencies		1				1
Sub-total		10		1.0		9.0
GRAND TOTAL		150		10		140

PROJECT PROPOSAL NO.3

REQUEST OF THE AFRICAN GOVERNMENTS
through the
SCIENTIFIC, TECHNICAL, RESEARCH COMMISSION (STRC)
of the
ORGANIZATION OF AFRICAN UNITY (OAU)
and the
ASSOCIATION OF AFRICAN INDUSTRIAL TECHNOLOGY
ORGANIZATIONS (AAITO)
for Technical Assistance in the
Preparation of a Study
and the Organization of a Conference
on the
DEVELOPMENT OF INDUSTRIAL AND TECHNOLOGICAL
MANPOWER IN AFRICA

Lagos, Nigeria
29 May 1978

CONTENTS

<u>CHAPTER</u>		<u>Page</u>
I.	BACKGROUND INFORMATION AND JUSTIFICATION	3
	A. General Background Information	3
	B. Specific Background Information	5
II.	OBJECTIVES OF THE PROJECT	6
	A. Development Objectives	6
	B. Immediate Objectives	7
III.	DESCRIPTION OF THE PROJECT	7
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A. General Background Information

Most developing countries place high priority on industrial development to facilitate the achievement of their social and economic goals. There is general recognition that the rate of economic growth in general and of industrial development in particular is greatly enhanced by the level of technology in the country and the rate at which technological research results and "know-how" are applied. Accordingly, there has been an increasing movement within the developing countries towards the development of their technological capacities through, inter alia, the establishment of national technological institutions as a means of aiding industrial development.

The Lima Declaration and Plan of Action on Industrial Development and Co-operation stressed, among other things, the stimulation of the development of technological activities and the elaboration of technological policies and programmes adapted to the individual requirements of developing countries, the establishment and strengthening of industrial and technological machinery and institutions and the strengthening of regional activities and institutions for the promotion of economic co-operation between developing countries.

While industrial and technological activities have developed significantly in most Asian and Latin American countries, they are still very much at the conceptual stage in most African countries. The importance of developing industrial and technological activities in Africa has been stressed at various meetings of the OAU and at the Conferences of African Ministers of Industry. The meetings and conferences have stressed the need to create national, regional and sub-regional technological policies, programmes and institutions. The Africa aspirations for technological development are reflected in several documents, the most important ones of which include the "Addis Ababa Declaration of Industrial Development in Africa in the 1970's"; the Cairo Declaration on "Industrialization in Africa - Principles and Guidelines for Co-operation and Development"; and the OAU Resolution CM/Res.569 (XXIX) on industrial and technological activities in Africa adopted by the OAU Council of Ministers at its 29th Regular Session held in Libreville, Gabon, from 23 June to 3 July 1977. The recommendations included in these declarations and resolution are essentially the same as those highlighted in the resolutions adopted at the Conference of Ministers

of African Member States Responsible for the Application of Science and Technology to Development organized by UNESCO with the co-operation of the United Nations Economic Commission for Africa and the Organization of African Unity, which was held in Dakar, Senegal, from 21 to 30 January 1974.

In the light of the above and in accordance with a recommendation adopted at a regional Joint Consultation on the Promotion of Industrial Research and Services in Africa held in Lagos, Nigeria, in September 1975 and sponsored by UNIDO, the Nigerian Government and the World Association of Industrial and Technological Research Organizations (WAITRO), the African Governments, with the assistance of UNIDO and the Nigeria Government undertook a number of preparatory activities leading towards the establishment, in December 1977, of the Association of African Industrial Technology Organizations, AAITO. The main objectives of AAITO include:

- To promote co-operation among the African countries in Industrial and Technological Research and Development through, inter alia, the establishment of links between African institutions concerned with industrial and technological research and development for the exchange of information, experience capabilities and facilities, as appropriate;
- To promote co-operation between African industrial and technological research institutes, relevant departments and units of Universities and the organized industrial sectors;
- To contribute towards the identification and periodic review of the needs and requirements of Africa, on a regional or sub-regional level, in industrial and technological research and development;
- To promote and assist in defining joint industrial and technological research development projects and help, as need be, in locating finance for such projects;
- To contribute towards the co-ordination and planning of industrial and technological research and development in Africa;
- To contribute towards upgrading the level of skills of personnel and the development of manpower requirements for industrial and technological research and development in Africa;

- To collaborate with the OAU/STRC in expressing Africa's viewpoint on industrial and technological research and development matters;
- To promote the effective transfer of industrial technology, particularly the commercialization of research and development results.

The establishment of the Association has been welcomed by the OAU which has accorded the Association with the responsibility of advising the OAU on all matters related to industrial and technological research and development activities in Africa.

In order to translate the Association's objectives into concrete operations, a Joint UNIDO/OAU/AAITO Panel of Experts, consisting essentially of the Executive Committee members of the Association met in Nairobi from 22 to 24 March 1978 to define projects for the implementation of the Association's work programme adopted at its inaugural meeting in Lagos in December 1977. The projects defined in Nairobi cover such activities as training, information and co-operation on industrial and technological activities in Africa.

B. Specific Background Information

In addition to the above and more particularly, it is to be noted that manpower constitutes a very important element of industrial and technological development. In virtually all African countries shortages of skilled manpower place serious constraints on development. There are shortages of persons who combine engineering and agricultural expertise with managerial skills, industrial designers, production and process engineers, engineering draughtsmen, food technologists, quality control personnel, management accountants - to name only a few cadres. Among the skilled manpower now available such imbalances exist as an unfavourable ration of middle-level technicians to professionals, and a general lack of correlation between skill requirements and the training provided. These shortages and imbalances have been perceived to a degree in a number of countries, but these countries have not been able to initiate adequate measures both in policy and in practical terms towards a meaningful solution.

With regard to the training of technicians, various countries appear not to have adequate training facilities. This has resulted in shortages of technical personnel, who are therefore in great demand in most African countries.

In view of the present situation, in which governments are already allocating large proportions of their budgets to education and training, it is necessary to explore better ways of utilizing these resources in order to produce the right types of skilled personnel needed for the African economies. In order to achieve this, governments have to take measures to involve industry actively in all forms of training and resolve the problems of shortages and imbalances in manpower. In addition, the process of imparting technical skills should be viewed in a much larger perspective than at present. In order to do this, there must be a serious re-examination of what the countries are training for, in order for the manpower planning machinery to arrive at realistic estimates of the skill mix and numbers of trained manpower required to support the current and projected development activities.

II. OBJECTIVES OF THE PROJECT

A. Development Objective

The development objective of the proposed project is to assist the African countries both at the national and at the regional levels, to raise their industrial and technological capacities and capabilities in order to enhance their ability in the acquisition and adaptation of appropriate foreign industrial technologies and in the development and commercialization of local ones.

It is expected that this will contribute towards: increasing the production and the improvement of the quality of locally manufactured goods and services; the development of local industrial manpower resources; and the development and more effective utilization of local raw materials, thereby increasing the share of Africa in the world industrial production.

It is also expected that the results of the project will have several multiplying effects on the economic development of the African countries by, for example, helping to reduce their dependence on foreign industrial technologies; optimizing the utilization of investments in the acquisition and adaptation of technologies and the development and commercialization of local ones. This would help to reduce the enormous amount of foreign exchange currently involved in technology transfer and to enhance the development of rural areas.

B. Immediate Objectives

The immediate objective of the project is to carry out a study on the existing technological manpower situation in Africa with a view to establishing a programme of action to assist the African countries, individually and/or collectively, in improving or developing, where they do not exist:

1. industrial technology manpower development policies, strategies, plans and programmes;
2. industrial and technological training institutions;
3. adequate compensation schemes for personnel engaged in industrial and technological activities;
4. financial allocations for industrial and technological training.

It is expected that the study and its proposals and recommendations will be submitted by the AAITO to the OAU and other interested international organizations for consideration, approval and execution for the development of industrial and technological manpower in Africa, at the national and regional levels.

III. DESCRIPTION OF THE PROJECT

It is planned to solicit, through the OAU/STRC national correspondents, the preparation of national papers. An outline of the papers will be elaborated to include such items as national industrial technology, manpower development policy strategies, plans and programmes; national industrial technology training institutions, facilities and programmes; status of an compensation scheme for personnel engaged in industrial

technology development activities; and allocation of financial sources for the training of industrial technology personnel.

On the basis of the country papers and other available relevant documents, a consultant will assist the AAITO Secretariat in identifying common elements and to prepare a general background issue paper on the subject and a proposed plan of action. The latter documents will be discussed at the Second African Conference on Industrial and Technological Research and Development, scheduled to take place in Cairo in April 1979. The theme chosen for the conference is "Development of Industrial and Technological Manpower in Africa". The Conference, to be attended by national representatives and selected experts will, from their discussions, modify the background paper and the proposed plan of action, as appropriate, and adopt them for submission to the OAU and other relevant international organizations for consideration, approval and execution.

As can be envisaged from the above, the AAITO Secretariat will require the assistance of an expert to co-ordinate the whole study, prepare the background issue paper and the proposed plan of action, and in the finalization of these reports after discussion in the Cairo meeting. AAITO will also require financial assistance for the travel and per diem of the national representatives and experts to attend the Cairo meeting, as well as the cost of translation of the necessary documentation and interpretation in the course of the meeting.

IV. WORK PLAN

<u>Activity</u>	<u>Location</u>	<u>Estimated Starting date and duration</u>
1. Securement of funds for the project	AAITO Secret.	June 1978 - 1 month
2. Recruitment of consultant to organize the collection and review of national papers, the preparation of a background issue paper and a proposed plan of action	" "	July 1978 - 1 month
3. Preparation of directives and establishment of an outline for the preparation of nat'l. papers	" "	Aug. 1978 - 2 weeks

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
4. Request for national papers from the OAU/STRC national correspondents or AAITO member organizations	AAITO Secret.	Aug. 1978 - 3 months
5. Collection and review of national papers	" "	Nov. 1978 - 2 weeks
6. Preparation of background issue paper and proposed plan of action for consideration at the Second African Conference on Industrial and Technological Research and Development in Africa (ACITRDA) to be held in Cairo in April 1979	" "	Nov. 1978 - 1 month
7. Selection of participants to the Cairo Conf.	" "	Dec. 1978
8. Translation, reproduction and circulation of Background Issue Paper and Proposed Plan of Action and invitation to participants to the Cairo Conference	" "	Dec. 1978 - 2 months
9. Finalization of local arrangements and recruitment of simultaneous interpreters for Cairo Conference	Cairo	Feb. 1979 - 1 month
10. Holding of Cairo Conference	"	Apr. 1979 - 10 days
11. Finalization and circulation of report and recommendations of Cairo Conference to the OAU and relevant international organizations	AAITO Secret.	May 1979 - 1 month
12. Submission of Report of Cairo Conference to the OAU and relevant international organizations	" "	June 1979 - 1 week
13. Follow up on the implementation of the recommendations of the Cairo Conference	" "	July 1979 - Continuing

V. PROJECT BUDGET

A. External Assistance Inputs

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. <u>Experts</u>						
a) Consultant to organize the collection and review of national papers and the preparation of a background issue paper and proposed plan of action	3	15	2	10	1	5
b) Experts to help countries requiring assistance for the preparation of national papers	20	20	20	20	-	-
Sub-total	23	35	22	30	1	5
2. <u>Administrative and Technical Support Staff</u>						
Bilingual English/French Secretary/Typist	3	4.5	2	3	1	1.5
3. <u>Cairo Conference on Manpower Development in Africa</u>						
a) Travel and per diem for about 50 participants		60		-		60
b) Simultaneous interpretation, translation and bilingual secretarial services		20		-		20
c) Travel and per diem and honorarium for 2 internationally recruited consultants on manpower development	1	7		-	1	7
d) Miscellaneous		1.5		-		1.5
Sub-total	1	88.5		-	1	88.5
4. <u>Miscellaneous</u>						
a) Reproduction and circulation of Background Issue Paper and Proposed Plan of Action		5		-		5
b) Sundry and contingencies		2		1		1
Sub-total		7		1		6
GRAND TOTAL	27	135	24	34	3	101.0

B. AAITO Inputs (in-kind)*

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. Personnel						
a) 1 Technical Information Officer	12	20	-	-	12	20
b) 1 English/French Translator	12	18	-	-	12	18
c) 1 Documents reproduction equipment technician	12	13	-	-	12	13
d) 1 Research Assistant	12	13	-	-	12	13
e) 1 English/French Bilingual Secretary	12	11	-	-	12	11
f) 2 Shorthand/Typists (one English, one French)	24	18	-	-	24	18
g) 1 Messenger	12	7	-	-	12	7
Sub-total	96	100	-	-	96	100
2. Training						
3. Land and Equipment						
a) Premises (including rental, insurance and utilities)	:	15		4		11
b) Office equipment		25		5		20
Sub-total		40		9		31
4. Miscellaneous						
a) Reproduction of AAITO Documents and Newsletter		2		-		2
b) Operation and Maintenance of equipment		2		0.5		1.5
c) Communications (e.g. mail, cables, telephone, etc.)		5		0.5		4.5
d) Sundry and contingencies		1				1
Sub-total		10		1.0		9.0
GRAND TOTAL		150		10		140

* With regard to the Cairo Conference, the AAITO will, in addition to these inputs, provide, through the host Government/institution, the local meeting services and facilities including, in particular, secretarial services, local transportation, hotel reservation, conference room with simultaneous interpretation equipment, meeting rooms, offices and office material and stationary.

PROJECT PROPOSAL NO.4

REQUEST OF THE AFRICAN GOVERNMENTS

through the

SCIENTIFIC, TECHNICAL, RESEARCH COMMISSION (STRC)

of the

ORGANIZATION OF AFRICAN UNITY (OAU)

and the

ASSOCIATION OF AFRICAN INDUSTRIAL TECHNOLOGY
ORGANIZATIONS (AAITO)

for technical assistance in the
Organization and Implementation of

SHORT-TERM TRAINING WORKSHOPS

in

1. Project Identification, Preparation and
Evaluation
2. The Selection, Appraisal, Acquisition and
Transfer of Technology
3. The Management of Technological
Institutions

Lagos, Nigeria

29 May 1978

CONTENTS

<u>CHAPTER</u>	<u>Page</u>
I. BACKGROUND INFORMATION AND JUSTIFICATION	3
A. General Background Information	3
B. Specific Background Information	5
1. Project Identification, Preparation and Evaluation	5
2. Selection, Evaluation, Acquisition and Transfer of Industrial Technology	7
3. Management of Technological Institutions	8
II. OBJECTIVES OF THE PROJECT	9
A. Development Objectives	9
B. Immediate Objectives	9
III. DESCRIPTION OF THE PROJECT	10
A. Industrial Project Identification, Preparation and Evaluation	10
B. Selection, Appraisal, Acquisition and Transfer of Industrial Technology	11
C. Management of Technological Institutions	12
IV. WORK PLAN	13
Training Workshops in	
A. The Selection, Appraisal, Acquisition and Transfer of Industrial Technology - in English	13
B. The Selection, Appraisal, Acquisition and Transfer of Industrial Technology - in French	14
C. Project Identification, Preparation and Evaluation - in English	14
D. Project Identification, Preparation and Evaluation - in French	15
E. Management of Technological Institutions - in English	15
F. Management of Technological Institutions - in French	16
V. PROJECT BUDGET	17
A. External Assistance Inputs	17
B. AAITO Inputs	18

ANNEX

SUMMARY OF INFORMATION ON SHORT TERM TRAINING WORKSHOPS

I. BACKGROUND INFORMATION AND JUSTIFICATION

A. General Background Information

Most developing countries place high priority on industrial development to facilitate the achievement of their social and economic goals. There is general recognition that the rate of economic growth in general and of industrial development in particular is greatly enhanced by the level of technology in the country and the rate at which technological research results and "know-how" are applied. Accordingly, there has been an increasing movement within the developing countries towards the development of their technological capacities through, inter alia, the establishment of national technological institutions as a means of aiding industrial development.

The Lima Declaration and Plan of Action on Industrial Development and Co-operation stressed, among other things, the stimulation of the development of technological activities and the elaboration of technological policies and programmes adapted to the individual requirements of developing countries, the establishment and strengthening of industrial and technological machinery and institutions and the strengthening of regional activities and institutions for the promotion of economic co-operation between developing countries.

While industrial and technological activities have developed significantly in most Asian and Latin American countries, they are still very much at the conceptual stage in most African countries. The importance of developing industrial and technological activities in Africa has been stressed at various meetings of the OAU and at the Conferences of African Ministers of Industry. The meetings and conferences have stressed the need to create national, regional and sub-regional technological policies, programmes and institutions. The Africa aspirations for technological development are reflected in several documents, the most important ones of which include the "Addis Ababa Declaration of Industrial Development in Africa in the 1970's"; the Cairo Declaration on "Industrialization in Africa - Principles and Guidelines for Co-operation and Development"; and the OAU Resolution CM/Res.569 (XXIX) on industrial and technological activities in Africa adopted by the OAU Council of Ministers at its 29th Regular Session held in Libreville, Gabon, from 23 June to 3 July 1977. The recommendations included in these declarations and resolution are essentially the same as those highlighted in the resolutions adopted at the Conference of Ministers

of African Member States Responsible for the Application of Science and Technology to Development organized by UNESCO with the co-operation of the United Nations Economic Commission for Africa and the Organization of African Unity, which was held in Dakar, Senegal, from 21 to 30 January 1974.

In the light of the above and in accordance with a recommendation adopted at a regional Joint Consultation on the Promotion of Industrial Research and Services in Africa held in Lagos, Nigeria, in September 1975 and sponsored by UNIDO, the Nigerian Government and the World Association of Industrial and Technological Research Organizations (WAITRO), the African Governments, with the assistance of UNIDO and the Nigeria Government undertook a number of preparatory activities leading towards the establishment, in December 1977, of the Association of African Industrial Technology Organizations, AAITO.

The main objectives of AAITO include:

- To promote co-operation among the African countries in Industrial and Technological Research and Development through, inter alia, the establishment of links between African institutions concerned with industrial and technological research and development for the exchange of information, experience capabilities and facilities, as appropriate;
- To promote co-operation between African industrial and technological research institutes, relevant departments and units of Universities and the organized industrial sectors;
- To contribute towards the identification and periodic review of the needs and requirements of Africa, on a regional or sub-regional level, in industrial and technological research and development;
- To promote and assist in defining joint industrial and technological research development projects and help, as need be, in locating finance for such projects;
- To contribute towards the co-ordination and planning of industrial and technological research and development in Africa;
- To contribute towards upgrading the level of skills of personnel and the development of manpower requirements for industrial and technological research and development in Africa;

- To collaborate with the OAU/STRC in expressing Africa's viewpoint on industrial and technological research and development matters;
- To promote the effective transfer of industrial technology, particularly the commercialization of research and development results.

The establishment of the Association has been welcomed by the OAU which has accorded the Association with the responsibility of advising the OAU on all matters related to industrial and technological research and development activities in Africa.

In order to translate the Association's objectives into concrete operations, a Joint UNIDO/OAU/AAITO Panel of Experts, consisting essentially of the Executive Committee members of the Association met in Nairobi from 22 to 24 March 1978 to define projects for the implementation of the Association's work programme adopted at its inaugural meeting in Lagos in December 1977. The projects defined in Nairobi cover such activities as training, information and co-operation on industrial and technological activities in Africa.

B. Specific Background Information

1. Project Identification, Preparation and Evaluation

Concerning this project proposal in particular, it is worth mentioning that industrialization, particularly in the developing countries, is an extremely complex process involving managerial, technological, economic, social and political considerations and parameters, dynamically composed, orchestrated and performed by a changing cast of players, participants and decision-makers. It involves the building and management of enterprises that harmonize and integrate resources, technology and human effort for productive purposes. As such, it must be handled as a system, consisting of an organized combination of subsystems and elements linked together to form a whole. The most desirable way for the Government of a developing country to achieve its industrial development aspirations is to develop its own technological capability to plan, initiate, implement and evaluate projects and to act as a "watch dog" to see that national objectives are achieved.

Although the detailed methodology varies from country to country, the broad planning is usually co-ordinated by indigenous economists and planners within the country. The technical inputs to planning, however, are largely provided from external sources. In most developing countries, local technological institutions, where they exist, are generally not called upon, nor do they actively seek to play an important role in national planning. The level of achievement of national industrial goals would generally be enhanced if national indigenous technical capabilities, especially technological institutions, were intimately involved at all points of the industrialization process especially at the planning stage.

The implementation of industrial projects by African countries is extremely difficult due to the lack of competent local technological institutions and experts. Such technological institutions and experts are required for initiating industrial projects and programmes by identifying, collecting, and preparing sectoral industrial surveys and technology plans. To do this effectively, special staff need to be trained and a national network or system established to ensure a smooth and constant flow of information to the planners. Even when the project has been implemented and its products have entered the market, there is a continuing need for evaluation, monitoring and technical support. Further, there is a need for feedback to the policy makers for possible modification of national and sectoral plans, based upon the performance and the potential for growth of the plant. It may also be determined that the operation, or a phase of it, needs to be modified or improved.

Of major importance during this phase is the evaluation of on-going production; a continuing analysis of market and technological trends; identification of new opportunities arising from market changes and new technology; identification of changes arising for revised national and sectoral plans; provision of technical information and data required for assessing the short- and long-range industrial and economic trends of the country and the changing needs of industry.

An important task which is often overlooked in many African countries is the need to see that industrial projects meet national goals. There is a general lack of evaluation systems in African countries that would enable them to learn from past successes and failures. In many cases there are detailed contracts between enterprises in developing countries and foreign companies, but no one seems to be charged with the responsibility for seeing that agreed upon specifications are being maintained. Technological institutions could assume this responsibility.

2. Selection, Evaluation, Acquisition and Transfer of Industrial Technology

Trading of technology has become a steadily increasing item in international trade, particularly with the developing countries. It was estimated that in 1976 the total payments for transfer of technology of developing countries (direct payments for transfer of technology, patents, licenses, know-how, trade marks and other technical services), would amount to about \$ 1,500 million. It has also been estimated that direct costs for transfer of technology may grow at about 20 per cent per annum. The value of industry based upon foreign technology in the developing countries is at least five times the above mentioned figure.

The African countries are, in general, in a weak negotiation position due mainly to their lack of sufficient and precise information on various aspects of technological transfer such as: sources of available and alternative technologies; available indigenous technologies; research and development activities in developing countries; comparable information on financial, legal and technical conditions of transfer of technology agreements; information on foreign companies, donors of the technologies, particularly the multi-nationals; and information on recent developments in international licensing, patents and trade-mark laws, compulsory licensing, etc. This has, in most instances, resulted in excessive payments, restrictive and tie-in clauses, and grant back provisions, just to mention a few of the unfavourable terms.

The selection and proper use of technology from the existing "technology shelf" is therefore an act which requires technological capacity of the same general order as the act of creating new technology. To negotiate with machinery salesmen and select the most economical and advantageous equipment, to purchase process technology on equitable terms and conditions, to examine tenders for development projects, to enter into various licensing arrangements, to evaluate project proposals associated with a given technology, to negotiate effectively with foreign investors, or to be familiar with the various aspects of industrial property - these are but some of the complex acts involved in selecting from existing processes requiring a high degree of national technological capacity usually not sufficiently available in developing countries.

3. Management of Technological Institutions

Technological institutions in developing countries have emerged, with some exceptions, only within the last two decades. These institutions cover a wide variety of areas such as multipurpose and specialized technological research, standardization and quality control, industrial information, engineering design, patents, regulation of imported technology, industrial management; and consultancy and training. They all aim at supplying the technological inputs in some form or other towards the design, development, acquisition, absorption and improvement of technologies suitable for local conditions; the adaptation of processes to meet local needs; and the supply of technological and related information, data and services to government agencies and to public and private industries of the countries. While in some countries some of these institutions fulfil important functions, in most developing countries their role is still limited, especially in such areas as technological planning and forecasting, project identification and evaluation, and project design and implementation. It is in these stages that the basic decisions concerning design, development or selection of appropriate technologies are made.

The establishment of technological institutions in developing countries was not always planned to respond to national needs identified within the context of national policies and plans. In some countries they were established initially as subsidiaries or departments of larger institutions to respond to specific needs of foreign countries and their organizations. In this connexion, it may be noted that some of these organizations were established prior to the independence of their countries for carrying out scientific research along the lines of traditional practices in the developed countries. With the advent of independence and with the reorientation of scientific and industrial activities towards reaching national goals on utilization of local natural resources, decentralization of industry and rural development, etc., it has been found difficult to put some of these institutions into meaningful use. The problems technological institutions of this kind are currently experiencing relate mainly to the lack of a well-developed industrial base, an appropriate policy and legislative framework, national technology plans and programmes, national machinery for research and development and technology transfer, finance, organizational patterns, marketing of research and development services; and adequate technical staff and technological information.

II. OBJECTIVES OF THE PROJECT

A. Development Objective

The development objective of the proposed project is to assist the African countries both at the national and at the regional levels, to raise their industrial and technological capacities and capabilities in order to enhance their ability in the acquisition and adaptation of appropriate foreign industrial technologies and in the development and commercialization of local ones.

It is expected that this will contribute towards: increasing the production and the improvement of the quality of locally manufactured goods and services; the development of local industrial manpower resources; and the development and more effective utilization of local raw materials, thereby increasing the share of Africa in the world industrial production.

It is also expected that the results of the project will have several multiplying effects on the economic development of the African countries by, for example, helping to reduce their dependence on foreign industrial technologies; optimizing the utilization of investments in the acquisition and adaptation of technologies and the development and commercialization of local ones. This would help to reduce the enormous amount of foreign exchange currently involved in technology transfer and to enhance the development of rural areas.

B. Immediate Objectives

The immediate objectives of the project is to provide

1. high-level management personnel of technological institutions an opportunity to meet and exchange views and experiences and to update their knowledge with new developments in the management of technological institutions;
2. a forum for senior personnel involved in the acquisition of industrial technologies to exchange experiences and acquire new approaches in the selection, appraisal and transfer of industrial technology;

3. an opportunity for senior personnel engaged in the planning of industrial investment projects to exchange experiences and acquire new techniques in project identification, preparation, evaluation and implementation.

III. DESCRIPTION OF THE PROJECT

It is planned to organize and conduct, in collaboration with selected African countries, through AAITO member institutions, training workshops in: industrial project identification, preparation and evaluation; selection, appraisal, acquisition and transfer of industrial technology; management of technological institutions. Two training workshops, one in English and one in French, will be organized for each area of activity. Each workshop will last for two weeks and will be attended by 15 participants. The AAITO would require assistance in the implementation of the workshops. This assistance essentially entails the financing, for each of the six workshops, of two short-term internationally recruited experts to assist in designing, elaborating and conducting the workshops; two short-term experts from the host country to prepare and present case studies; the travel and per diem of the 15 participants; as well as miscellaneous expenses for such items as preparation and reproduction of course material.

A. Industrial Project Identification, Preparation and Evaluation

The 15 participants, to be selected for the training workshop, would mainly be senior officials with experience in project identification, preparation and evaluation from the relevant departments of national financial, technological and development institutions. The workshop will mainly deal with project identification, preparation and evaluation; technology and market selection; choice of plant location; calculation of production and investment costs; and economic, financial and sensitivity analyses. In addition to discussions on the general principles and approaches based on the recently published UNIDO Manual or other documents on the preparation of industrial feasibility studies, case studies on operational and/or planned investment projects, to be prepared by the host country, will also be discussed. Participants will also visit the operational investment project discussed. Towards the end of the workshop, participants will be

expected to apply the knowledge acquired from the workshop in evaluating, under the guidance of the internationally recruited experts, existing or planned investment projects in their countries. It is expected that the workshop will help the participants to improve their knowledge of the identification, planning, preparation and appraisal of industrial investment projects.

B. Selection, appraisal, acquisition and transfer of industrial technology

The training workshop on the selection, appraisal, acquisition and transfer of industrial technology will cover such aspects as:

General considerations and definitions, including definition, origin, necessity, world situation, channels and economy of technology transfer; the relationship between technology transfer and industrial property, patents, trade marks, utility models and know-how; modes of technology transfer including agreements for licenses, know-how, franchising, technological information supply, consulting and engineering, marketing and administrative and turn-key and equipment delivery agreements; and, types of joint venture agreements, their operations and place in the technology transfer process.

Selection and adoption of industrial technology, including appropriateness of technology and its basic criteria; product and process evaluation; use of national technology institutions in the selection, appraisal and adoption of technology; and absorption and diffusion of technology at the national and enterprise level.

Technology transfer arrangements, including know-how on packaging of technology; technical, financial, legal and technological considerations in technology transfer agreements; training, information and market selection, provisions of technology agreements.

National machinery for technology transfer, including national legislative framework for the promotion, acquisition and regulation of industrial technology; technology inflow and existing administrative systems; indirect control of technology, such as fiscal policies, taxation, granting of import licenses, etc.; and the role of the governments, as well as associated technological financial and other institutions in the regulation of technology transfer.

In addition to discussions on the above issues, based on a background paper to be prepared by a competent international organization, participants will also discuss case studies to be prepared and presented by the host country, as well as by any of the participants. Towards the end of the workshop, participants will be expected to apply the knowledge acquired during the workshop, in evaluating, under the guidance of the international recruited experts, existing or planned investment projects in their countries. It is expected that the workshop will help the participants to improve their knowledge in the process of selecting, appraising, acquiring and transferring industrial technology.

Participants to the workshop will consist of senior officials of national organizations engaged with the selection, appraisal and acquisition of industrial technology, such as national offices of technology transfer, relevant departments of technological, financial and development institutions; and public and private enterprises.

C. Management of Technological Institutions

It is planned to organize and conduct the two-week workshop for managers, directors and senior executives of technological institutions. The programme of the workshop will include various aspects on the management of technological institutions with particular emphasis on: the

Structure of technological institutions concerning such items as government support; institutions autonomy; board of management; evaluation; linkage with other national development and technological institutions; internal structure; programming and budgeting; and buildings and facilities.

Technical services including industrial, technological and commercial information and documentation; testing and analysis; standardization, quality control and metrology; instrumentation; instrument analysis; and engineering design and services.

Commercial services such as industrial liaison and security; economic and market assessments; contract work, patenting and technological selection and appraisal for licensing agreements.

Applied research work covering organization; programme selection; pilot plant operations; and commercialization of research results.

General institution management with specific reference to financial control; staff consideration; project supervision; reporting methods; general services; and public relations.

In addition to the above, it is planned to organize a study tour to selected technological institutions and industrial enterprises in the host country where participants could observe the development and implementation of technological research results on the spot. Towards the end of the workshop, participants will be expected to perform specific assignments, under the supervision of the internationally recruited experts, aimed at assisting them to assimilate the new experiences acquired during the workshop.

IV. WORK PLAN

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
1. Securement of funds for the 6 programmes	AAITO Secret.	June 1978 - 2 months
2. Selection of short-term consultants to assist in the preparation of outlines for each of the three areas of training - selection, appraisal, acquisition and transfer of technology; industrial project identification, preparation and evaluation; and management of industrial technology organizations	" "	July 1978 - 2 weeks
3. Selection of host countries/institutions for each of the six programmes	AAITO Secret. and funding Agency	July 1978 - 2 months
4. Selection of internationally recruited consultants to assist in organizing and conducting the programmes	do.	Aug. 1978 - 1 month
A. <u>Training Workshop in the Selection, Appraisal, Acquisition and Transfer of Technology - in English</u>		
1. Elaboration of training programme	AAITO/Funding Agency	December 1978 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO Secret./ host countries	January 1979 - 2 months
3. Selection of participants	AAITO Secr/ host country/ funding Agency	March 1979 - 1 month
4. Finalization of local arrangements	Host country	Apr. 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO/Funding	May 1979 - 1 month
6. Conduct training programme	Host country	June 1979 - 2 weeks

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
7. Evaluation of programme	Host country	June 1979 - 2 days
8. Finalization and issuance of report of the programme, including evaluation and follow-up action	AAITO Secr.	July 1979 - 1 month
B. <u>Training Workshop in the Selection, Appraisal, Acquisition and Transfer of Technology - in French</u>		
1. Elaboration of training programme	AAITO Secr/ Funding Agency	January 1979 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO Secr/ host countries	Feb. 1979 - 2 mo.
3. Selection of participants	AAITO/host country/Funding agency	April 1979 - 1 mo.
4. Finalization of local arrangements	Host country	May 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO/Funding agency	June 1979 - 1 month
6. Conduct of Training Programme	Host country	July 1979 - 2 weeks
7. Evaluation of programme	Host country	July 1979 - 2 days
8. Finalization and issuance of report of the programme, including evaluation and follow-up action.	AAITO Secr.	Aug. 1979 - 1 month
C. <u>Training Workshop in Project Identification, Preparation and Evaluation - in English</u>		
1. Elaboration of training programme	AAITO/host country/funding agency	Feb. 1979 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO/host countries	Mar. 1979 - 2 mo.
3. Selection of participants	AAITO/host country/funding agency	May 1979 - 1 month
4. Finalization of local arrangements	Host country	June 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO/funding agency	July 1979 - 1 month
6. Conduct of training programme	Host country	Aug. 1979 - 2 weeks
7. Evaluation of Programme	Host country	Aug. 1979 - 2 days
8. Finalization and issuance of report of the programme, including evaluation and follow-up action.	AAITO Secr.	Sep. 1979 - 1 month

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
D. <u>Training Workshop in Project Identification, Preparation and Evaluation - in French</u>		
1. Elaboration of Training Programme	AAITO Secr/ Host country/ Funding Agency	March 1979 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO Secr/ host country	April 1979 - 2 mo.
3. Selection of participants	AAITO Secr/ Host country/ Funding Agency	June 1979 - 1 month
4. Finalization of local arrangements	Host country	July 1979 - 1 month
5. Issuance of Training materials, travel instructions and tickets	AAITO Secr/ Funding Agency	Aug. 1979 - 1 month
6. Conduct of Training Programme	Host country	Sep. 1979 - 2 weeks
7. Evaluation of Programme	Host country	Sep. 1979 - 2 days
8. Finalization and issuance of report of the Programme, including evaluation and follow-up action	AAITO Secr.	Oct. 1979 - 1 month
E. <u>Training Workshop on the Management of Technological Institutions - in English</u>		
1. Elaboration of Training Programme	AAITO Secr/ Host country/ Funding Agency	April 1979 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO Secr/ Host country	May 1979 - 2 months
3. Selection of participants	AAITO Secr/ Host country/ Funding Agency	July 1979 - 1 month
4. Finalization of local arrangements	Host country	Aug. 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO Secr/ Funding Agency	Sep. 1979 - 1 month
6. Conduct of Training Programme	Host country	Oct. 1979 - 2 weeks
7. Evaluation of Programme	Host country	Oct. 1979 - 2 days
8. Finalization and issuance of report of the Programme including evaluation and follow-up action	AAITO Secr.	Nov. 1979 - 1 month

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
F. <u>Training Workshop on the Management of Technological Institutions - in French</u>		
1. Elaboration of Training Programme	AAITO Secr./ Host country/ Funding Agency	May 1979 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO Secr/ Host country	June 1979 - 2 mo.
3. Selection of participants	AAITO Secr/ Host country/ Funding Agency	Aug. 1979 - 1 month
4. Finalization of local arrangements	Host country	Sep. 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO Secr/ Funding Agency	Oct. 1979 - 1 month
6. Conduct of Training Programme	Host country	Nov. 1979 - 2 weeks
7. Evaluation of Programme	Host country	Nov. 1979 - 2 days
8. Finalization and issuance of report of the Programme, including evaluation and follow-up action	AAITO Secr.	Dec. 1979 - 1 month

V. PROJECT BUDGET

A. External Assistance Inputs

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. <u>Experts</u>						
a) Three consultants to assist in the preparation of an outline for the programme of each workshop	2	10	2	10	-	-
b) Six chief consultants (One for each of the six workshops) to assist in the organization and conduct of each workshop and elaboration of the programme	18	90	6	30	12	60
c) Six other consultants (one for each of the six workshops) to provide international experience in the deliberations of each workshop	3	15	-	-	3	15
Sub-total	23	115	8	40	15	75
2. <u>Training</u>						
Travel and per diem of 90 participants (15 for each of the six workshops)		130		-		130
Sub-total		130		-		130
3. <u>Miscellaneous</u>						
a) Special training material and facilities		5		-		5
b) Reproduction and distribution of training material		2		-		2
c) Sundry and contingencies		3		-		3
Sub-total		10		-		10
GRAND TOTAL	23	255	8	40		215

B. AAITO Inputs (in-kind) *

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. Personnel						
a) 1 Technical Information Officer	12	20	-	-	12	20
b) 1 English/French Translator	12	18	-	-	12	18
c) 1 Documents reproduction equipment technician	12	13	-	-	12	13
d) 1 Research Assistant	12	13	-	-	12	13
e) 1 English/French Bilingual Secretary	12	11	-	-	12	11
f) 2 Shorthand/Typists (one English, one French)	24	18	-	-	24	18
g) 1 Messenger	12	7	-	-	12	7
Sub-total	96	100	-	-	96	100
2. Training						
3. Land and Equipment						
a) Premises (including rental, insurance and utilities)	:	15		4		11
b) Office equipment		25		5		20
Sub-total		40		9		31
4. Miscellaneous						
a) Reproduction of AAITO Documents and Newsletter		2		-		2
b) Operation and Maintenance of equipment		2		0.5		1.5
c) Communications (e.g. mail, cables, telephone, etc.)		5		0.5		4.5
d) Sundry and contingencies		1				1
Sub-total		10		1.0		9.0
GRAND TOTAL		150		10		140

* With regard to each training workshop, the AAITO will, in addition to these inputs, provide, through the host Government/institution, the local meeting services and facilities including, in particular, secretarial services, local transportation, hotel reservation, conference room, meeting rooms, offices and office material and stationery.

ANNEX

SUMMARY OF INFORMATION ON
SHORT-TERM TRAINING WORKSHOPS

Training Workshops	Language	Number of Participants	Scheduled Starting Dates and Duration	Possible Host Country	Estimated Cost of External Assistance Inputs
Training Workshop on:					
1. The Selection, Appraisal, Acquisition and Transfer of Technology	English	15	June 1979 2 weeks	Egypt, Kenya	US\$ 42,500.-
2. The Selection, Appraisal, Acquisition and Transfer of Technology	French	15	July 1979 2 weeks	Cameroon Senegal	US\$ 42,500.-
3. Project Identification, Preparation and Evaluation	English	15	Aug. 1979 2 weeks	Nigeria, Tanzania	US\$ 42,500.-
4. Project Identification, Preparation and Evaluation	French	15	Sep. 1979 2 weeks	Ivory Coast, Zaire	US\$ 42,500.-
5. Management of Technological Institutions	English	15	Oct. 1979 2 weeks	Ghana, Sudan	US\$ 42,500.-
6. Management of Technological Institutions	English	15	Nov. 1979 2 weeks	Algeria, Burundi	US\$ 42,500

PROJECT PROPOSAL NO.5

REQUEST OF THE AFRICAN GOVERNMENTS
through the
SCIENTIFIC, TECHNICAL, RESEARCH COMMISSION (STRC)
of the
ORGANIZATION OF AFRICAN UNITY (OAU)

and the
ASSOCIATION OF AFRICAN INDUSTRIAL TECHNOLOGY
ORGANIZATIONS (AAITO)

for technical assistance in the
Organization and Implementation of

IN-PLANT GROUP TRAINING PROGRAMMES FOR TECHNICIANS

IN

1. Food Processing
2. Textiles Processing
3. Building Materials Processing
4. Repair and Maintenance of Testing Equipment
and Instruments

Lagos, Nigeria
29 May 1978

CONTENTS

<u>CHAPTER</u>	<u>Page</u>
I. BACKGROUND INFORMATION AND JUSTIFICATION	3
A. General Background Information	
B. Specific Background Information	5
II. OBJECTIVES OF THE PROJECT	6
A. Development Objectives	6
B. Immediate Objectives	7
III. DESCRIPTION OF THE PROJECT	7
IV. WORK PLAN	8
In-plant Group Training Programmes for Technicians in	
A. Repair and Maintenance of Testing Equipment and Instruments - In English	9
B. Repair and Maintenance of Testing Equipment and Instruments - in French	9
C. Building Materials Processing - in English	10
D. Building Materials Processing - in French	10
E. Food Processing - in English	10
F. Food Processing - in French	11
G. Textiles Processing - in English	11
H. Textiles Processing - in French	11
V. PROJECT BUDGET	13
A. External Assistance Inputs	13
B. AAITO Inputs (in-kind)	14

ANNEX

SUMMARY OF INFORMATION ON IN-PLANT GROUP TRAINING	15
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BACKGROUND INFORMATION AND JUSTIFICATION

A. General Background Information

Most developing countries place high priority on industrial development to facilitate the achievement of their social and economic goals. There is general recognition that the rate of economic growth in general and of industrial development in particular is greatly enhanced by the level of technology in the country and the rate at which technological research results and "know-how" are applied. Accordingly, there has been an increasing movement within the developing countries towards the development of their technological capacities through, inter alia, the establishment of national technological institutions as a means of aiding industrial development.

The Lima Declaration and Plan of Action on Industrial Development and Co-operation stressed, among other things, the stimulation of the development of technological activities and the elaboration of technological policies and programmes adapted to the individual requirements of developing countries, the establishment and strengthening of industrial and technological machinery and institutions and the strengthening of regional activities and institutions for the promotion of economic co-operation between developing countries.

While industrial and technological activities have developed significantly in most Asian and Latin American countries, they are still very much at the conceptual stage in most African countries. The importance of developing industrial and technological activities in Africa has been stressed at various meetings of the OAU and at the Conferences of African Ministers of Industry. The meetings and conferences have stressed the need to create national, regional and sub-regional technological policies, programmes and institutions. The Africa aspirations for technological development are reflected in several documents, the most important ones of which include the "Addis Ababa Declaration of Industrial Development in Africa in the 1970's"; the Cairo Declaration on "Industrialization in Africa - Principles and Guidelines for Co-operation and Development"; and the OAU Resolution CM/Res.569 (XXIX) on industrial and technological activities in Africa adopted by the OAU Council of Ministers at its 29th Regular Session held in Libreville, Gabon, from 23 June to 3 July 1977. The recommendations included in these declarations and resolution are essentially the same as those highlighted in the resolutions adopted at the Conference of Ministers

of African Member States Responsible for the Application of Science and Technology to Development organized by UNESCO with the co-operation of the United Nations Economic Commission for Africa and the Organization of African Unity, which was held in Dakar, Senegal, from 21 to 30 January 1974.

In the light of the above and in accordance with a recommendation adopted at a regional Joint Consultation on the Promotion of Industrial Research and Services in Africa held in Lagos, Nigeria, in September 1975 and sponsored by UNIDO, the Nigerian Government and the World Association of Industrial and Technological Research Organizations (WAITRO), the African Governments, with the assistance of UNIDO and the Nigeria Government undertook a number of preparatory activities leading towards the establishment, in December 1977, of the Association of African Industrial Technology Organizations, AAITO. The main objectives of AAITO include:

- To promote co-operation among the African countries in Industrial and Technological Research and Development through, inter alia, the establishment of links between African institutions concerned with industrial and technological research and development for the exchange of information, experience capabilities and facilities, as appropriate;
- To promote co-operation between African industrial and technological research institutes, relevant departments and units of Universities and the organized industrial sectors;
- To contribute towards the identification and periodic review of the needs and requirements of Africa, on a regional or sub-regional level, in industrial and technological research and development;
- To promote and assist in defining joint industrial and technological research development projects and help, as need be, in locating finance for such projects;
- To contribute towards the co-ordination and planning of industrial and technological research and development in Africa;
- To contribute towards upgrading the level of skills of personnel and the development of manpower requirements for industrial and technological research and development in Africa;

- To collaborate with the OAU/STRC in expressing Africa's viewpoint on industrial and technological research and development matters;
- To promote the effective transfer of industrial technology, particularly the commercialization of research and development results.

The establishment of the Association has been welcomed by the OAU which has accorded the Association with the responsibility of advising the OAU on all matters related to industrial and technological research and development activities in Africa.

In order to translate the Association's objectives into concrete operations, a Joint UNIDO/OAU/AAITO Panel of Experts, consisting essentially of the Executive Committee members of the Association met in Nairobi from 22 to 24 March 1978 to define projects for the implementation of the Association's work programme adopted at its inaugural meeting in Lagos in December 1977. The projects defined in Nairobi cover such activities as training, information and co-operation on industrial and technological activities in Africa.

B. Specific Background Information

In addition to the above, and noting particularly that industrial technology means the marriage of machines and men in the execution of work orders of social and economic value on a large scale, the AAITO realizes that the transfer and effective utilization, as well as development of industrial technology in Africa requires competent technicians. In virtually all African countries shortages of skilled manpower place serious constraints on development. There are shortages of persons who combine engineering and agricultural expertise with managerial skills, industrial designers, production and process engineers, engineering draughtsmen, food technologists, quality control personnel, management accountants - to name only a few cadres. Among the skilled manpower now available, such imbalances exist as an unfavourable ratio of middle-level technicians to professionals, and a general lack of correlation between skill requirements and the training provided. These shortages and imbalances have been perceived to a degree in a number of countries, but these countries have not been able to initiate adequate measures both in policy and in practical terms towards a meaningful solution.

With regard to the training of technicians, in particular, various countries appear not to have adequate training facilities. This has resulted in shortages of technical personnel, who are therefore in great demand in most African countries. These technicians are required especially for industrial production, quality control and for the installation, operation and maintenance of industrial machinery and equipment. This project proposal is designed to contribute towards the development of industrial technicians, initially in food processing, textiles and building materials. The knowledge to be gained through the training programme would help increase the smooth running of industrial machines and equipment; consistency in product quality; greater operational economy; and maximum return on investments in the procurement of industrial equipment.

II. OBJECTIVES OF THE PROJECT

A. Development Objective

The development objective of the proposed project is to assist the African countries both at the national and at the regional levels, to raise their industrial and technological capacities and capabilities in order to enhance their ability in the acquisition and adaptation of appropriate foreign industrial technologies and in the development and commercialization of local ones.

It is expected that this will contribute towards: increasing the production and the improvement of the quality of locally manufactured goods and services; the development of local industrial manpower resources; and the development and more effective utilization of local raw materials, thereby increasing the share of Africa in the world industrial production.

It is also expected that the results of the project will have several multiplying effects on the economic development of the African countries by, for example, helping to reduce their dependence on foreign industrial technologies; optimizing the utilization of investments in the acquisition and adaptation of technologies and the development and commercialization of local ones. This would help to reduce the enormous amount of foreign exchange currently involved in technology transfer and to enhance the development of rural areas.

B. Immediate Objectives

The objective of this project is to provide high level technicians engaged in food and textiles processing and building materials with specialized knowledge and techniques in production management; quality control; machinery maintenance and repair; packaging; environmental preservation; and industrial safety.

Another aspect of this project is to prepare high-level technicians for the maintenance, repair and servicing of testing equipment and instruments. The training will, in addition to fundamental principles of measurement and instrumentation, include routine servicing of instruments; collection, storage and utilization of information on major instruments; recovery of useable parts from scrapped instruments; instrument calibration; detection and correction of instrument malfunctions; protection of instruments from environmental conditions.

III. DESCRIPTION OF THE PROJECT

It is planned to organize in-plant group training programmes for technicians in the food, building materials and textiles processing, as well as in the repair and maintenance of testing equipment and instruments. Two programmes, one in English and one in French, will be organized and conducted in each of the four areas in selected African countries, through AAITO member organizations. About 15 participants consisting of high level technicians from industrial enterprises and technological institutions will be invited to attend each programme which will last for about 10 weeks.

Each programme will commence with an about one-week seminar at the beginning to introduce the programme and to discuss the fundamental principles of the work being carried out by the technicians. This will be followed by four weeks of practical training, whereby each participant, or a group of participants, will be attached to one or more industrial enterprises or relevant institutions, under the guidance of internationally recruited consultants and experts in the enterprise, so that they could gain experience in the practical approach of solving the problems with which they constantly come across. The participants would then be placed, again individually or in groups, in technological organizations undertaking testing, analysis and quality control of industrial products to enhance their experience and

expand their knowledge of industrial testing and quality control. Towards the end of the programme, the participants will re-assemble for about one week to perform specific assignments aimed at assisting each participant to further assimilate what has been learnt, evaluate the programme and make recommendations.

Concerning the programmes for food, building materials and textiles processing, special emphasis will be placed on production management; stock control; quality control; repair and maintenance of equipment; packaging; industrial safety; and environmental preservation. With regard to the programme for the repair and maintenance of testing and quality control instruments, emphasis will be placed on planning and development of schemes for periodic servicing and maintenance of laboratory instruments and testing equipment; diagnose of instrument failures; collection, storage and utilization of information (e.g. operational manuals) on major testing equipment and instruments; recovery of usable parts from scrapped instruments; instruments calibration and protection from environmental changes; and, repair, where possible, of instruments including local production of simple spare parts.

The AAITO would require assistance in the implementation of the workshops. This assistance essentially entails the financing for each of the six workshops, of two short-term internationally recruited experts to design, elaborate and conduct the courses; two short-term experts from the host country to assist in the local arrangements; the travel and per diem of the 15 participants; as well as miscellaneous expenses for such items as preparation and reproduction of course material.

IV. WORK PLAN

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
1. Securement of funds for the 8 programmes	AAITO Secr.	June 1978 - 2 months
2. Selection of short-term consultants to assist in the preparation of outlines for each of the four areas of training - Food, Textiles and Building Materials Processing and Repair and Maintenance of Testing Equipment and Instruments.	AAITO Secr.	July 1978 - 2 weeks

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
3. Selection of host countries/institutions	AAITO Secr/ Funding Agency	July 1978 - 2 mo.
4. Selection of experts from host countries to elaborate detailed programmes and supervise their implementation.	AAITO Secr/ Funding Agency	Aug. 1978 - 1 mo.
A. <u>In-plant Group Training Programmes for Technicians in Repair and Maintenance of Testing Equipment and Instruments - in English</u>		
1. Elaboration of Training Programme	AAITO Secr/ host country	Sep. 1978 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO Secr/ host country	Oct. 1978 - 2 months
3. Selection of participants	AAITO Secr/ host country/ Funding Agency	Dec. 1978 - 1 month
4. Finalization of local arrangements	Host country	Jan. 1979 - 1 month
5. Issuance of training material, travel instructions and tickets	AAITO Secr/ Funding Agency	Feb. 1979 - 1 month
6. Conduct of training programme	Host country	Mar. 1979 - 2½ mo.
7. Evaluation of Programme	Host country	May 1979 - 1 week
8. Finalization and issuance of report of the programme, including evaluation and follow-up action	AAITO Secr.	June 1979 - 1 month
B. <u>In-plant Group Training Programme for Technicians in Repair and Maintenance of Testing Equipment and Instruments - in French</u>		
1. Elaboration of Training Programme	AAITO/Host/ Funding Agency	Oct. 1978 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO/Host	Nov. 1978 - 2 months
3. Selection of participants	AAITO/Host/ Agency	Jan. 1979 - 1 month
4. Finalization of local arrangements	Host country	Feb. 1979 - 1 month
5. Issuance of training material, travel	AAITO/Agency	Mar. 1979 - 1 month
6. Conduct of training programme	Host country	Apr. 1979 - 2½ mo.
7. Evaluation of Programme	Host country	June 1979 - 1 week
8. Finalization and issuance of report of the programme, including evaluation and follow up action	AAITO	July 1979 - 1 month

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
C. <u>In-plant Group Training Programme for Technicians in Building Materials Processing - in English</u>		
1. Elaboration of Training Programme	AAITO Secr/ Host Country	Nov. 1978 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO/Host	Dec. 1978 - 2 months
3. Selection of participants	AAITO/Host/ Funding Agency	Feb. 1979 - 1 month
4. Finalization of local arrangements	Host country	Mar. 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO/Agency	Apr. 1979 - 1 month
6. Conduct of Training Programme	Host country	May 1979 - 2 months
7. Evaluation of Programme	Host country	July 1979 - 1 week
8. Finalization and issuance of report of the programme, including evaluation and follow-up action.	AAITO	Aug. 1979 - 1 month
D. <u>In-plant Group Training Programme for Technicians in Building Materials Processing - in French</u>		
1. Elaboration of Training Programme	AAITO Secr/ Host country	Dec. 1978 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO/Host	Jan. 1979 - 2 months
3. Selection of participants	AAITO/Host/ Funding Agency	Mar. 1979 - 1 month
4. Finalization of local arrangements	Host country	Apr. 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO/Agency	May 1979 - 1 month
6. Conduct of Training Programme	Host country	June 1979 - 2½ mo.
7. Evaluation of Programme	Host country	Aug. 1979 - 1 week
8. Finalization and issuance of report of the Programme, including evaluation and follow-up action.	AAITO	Sep. 1979 - 1 month
E. <u>In-plant Group Training Programme for Technicians in Food Processing - in English</u>		
1. Elaboration of the Training Programme	AAITO/Host Country	Jan. 1979 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO/Host	Feb. 1979 - 2 months

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
3. Selection of participants	AAITO/Host/ Funding Agency	Apr. 1979 - 1 month
4. Finalization of local arrangements	Host country	May 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO/Agency	June 1979 - 1 month
6. Conduct of Training Programme	Host country	July 1979 - 2½ mo.
7. Evaluation of Programme	Host country	Sep. 1979 - 1 week
8. Finalization and issuance of report of the Programme, including evaluation and follow-up action.	AAITO	Oct. 1979 - 1 month
F. <u>In-plant Group Training Programme for Technicians in Food Processing - in French</u>		
1. Elaboration of Training Programme	AAITO Secr/ Host country	Feb. 1979 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO/Host	Mar. 1979 - 2 months
3. Selection of participants	AAITO/Host/ Funding Agency	May 1979 - 1 month
4. Finalization of local arrangements	Host country	June 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO/Agency	July 1979 - 1 month
6. Conduct of Training Programme	Host country	Aug. 1979 - 2½ mo.
7. Evaluation of Programme	Host country	Oct. 1979 - 1 week
8. Finalization and issuance of report of the Programme, including evaluation and follow-up action.	AAITO	Nov. 1979 - 1 month
G. <u>In-plant Group Training Programme for Technicians in Testiles Processing - in English</u>		
1. Elaboration of Training Programme	AAITO Secr/ Host country	Mar. 1979 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO/Host	Apr. 1979 - 2 months
3. Selection of participants	AAITO/Host/ Funding Agency	June 1979 - 1 month
4. Finalization of local arrangements	Host country	July 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO/Agency	Aug. 1979 - 1 month
6. Conduct of Training Programme	Host country	Sep. 1979 - 2½ mo.

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
7. Evaluation of Programme	Host country	Nov. 1979 - 1 week
8. Finalization and issuance of report of the Programme, including evaluation and follow-up action	AAITO	Dec. 1979 - 1 month
<u>H. In-plant Group Training Programme for Technicians in Textiles Processing - in French</u>		
1. Elaboration of Training Programme	AAITO Secr/ Host country	Apr. 1979 - 1 month
2. Preparation and issuance of aide-mémoire and letters of invitation	AAITO/Host	May 1979 - 2 months
3. Selection of participants	AAITO/Host/ Funding Agency	July 1979 - 1 month
4. Finalization of local arrangements	Host country	Aug. 1979 - 1 month
5. Issuance of training materials, travel instructions and tickets	AAITO/Agency	Sep. 1979 - 1 month
6. Conduct of Training Programme	Host country	Oct. 1979 - 2½ mo.
7. Evaluation of Programme	Host country	Dec. 1979 - 1 week
8. Finalization and issuance of report of the Programme, including evaluation and follow-up action.	AAITO	Jan. 1980 - 1 month

V. PROJECT BUDGET

A. External Assistance Inputs

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. <u>Experts</u>						
a) 4 Consultants (one for each of the 4 areas of activity) to assist in the preparation of outlines for the programme in each area of activity	2	10	2	10	-	-
b) 8 internationally recruited chief consultants to assist in the organization and conduct of programme and elaboration of training syllabus	32	160	8	40	24	120
c) 8 locally recruited consultants to assist in conducting the training	24	60	-	-	24	60
Sub-total	58	230	10	50	48	180
2. <u>Administrative Support Staff</u>						
Secretary/typist		25				25
Sub-total	-	25	-	-	-	25
3. <u>Training</u>						
Travel and subsistence allowance for 120 participants (15 for each of the eight programmes)		360		-		360
Sub-total		360		-		360
4. <u>Miscellaneous</u>						
a) Training material and facilities		15				15
b) Reproduction and circulation of training material		5				5
c) Sundry and contingencies		5				5
d) Programme evaluation		10				10
Sub-total		35				35
GRAND TOTAL	58	650	10	50		600

B. AAITO Inputs (in-kind) *

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. Personnel						
a) 1 Technical Information Officer	12	20	-	-	12	20
b) 1 English/French Translator	12	18	-	-	12	18
c) 1 Documents reproduction equipment technician	12	13	-	-	12	13
d) 1 Research Assistant	12	13	-	-	12	13
e) 1 English/French Bilingual Secretary	12	11	-	-	12	11
f) 2 Shorthand/Typists (one English, one French)	24	18	-	-	24	18
g) 1 Messenger	12	7	-	-	12	7
Sub-total	96	100	-	-	96	100
2. Training						
3. Land and Equipment						
a) Premises (including rental, insurance and utilities)	:	15		4		11
b) Office equipment	:	25		5		20
Sub-total		40		9		31
4. Miscellaneous						
a) Reproduction of AAITO Documents and Newsletter		2		-		2
b) Operation and Maintenance of equipment		2		0.5		1.5
c) Communications (e.g. mail, cables, telephone, etc.)		5		0.5		4.5
d) Sundry and contingencies		1				1
Sub-total		10		1.0		9.0
GRAND TOTAL		150		10		140

* With regard to each In-plant Group Training Programme, the AAITO will, in addition to these inputs, provide, through the host government/institution, the local meeting services and facilities including, in particular, secretarial services, local transportation, hotel reservation, conference room, meeting rooms, offices and office material and stationery, placement of participants in industrial enterprises and technological institutions as need be.

ANNEX

SUMMARY OF INFORMATION ON
IN-PLANT GROUP TRAINING

Training Workshop	Language	Number of Participants	Scheduled Starting Dates and Duration	Possible Host Country	Estimated Cost of External Assistance Inputs
In-plant Group Training Programme for Technicians in:					
1. Repair and Maintenance	English	15	Mar. 1979 10 weeks	Egypt, Sudan	US\$ 81,250.-
2. Repair and Maintenance	French	15	Apr. 1979 10 weeks	Algeria, Senegal	US\$ 81,250.-
3. Building Materials	English	15	May 1979 10 weeks	Egypt, Nigeria	US\$ 81,250.-
4. Building Materials	French	15	June 1979 10 weeks	Cameroon Ivory Coast	US\$ 81,250.-
5. Food Processing	English	15	July 1979 10 weeks	Kenya, Nigeria	US\$ 81,250.-
6. Food Processing	French	15	Aug. 1979 10 weeks	Algeria, Ivory Coast	US\$ 81,250.-
7. Textiles Processing	English	15	Sep. 1979 10 weeks	Ghana, Tanzania	US\$ 81,250.-
8. Textiles Processing	French	15	Oct. 1979 10 weeks	Cameroon Mali	US\$ 81,250.-

ANNEX VIII

PROJECT PROPOSAL NO.6

REQUEST OF THE AFRICAN GOVERNMENTS

through the

SCIENTIFIC, TECHNICAL, RESEARCH COMMISSION (STRC)

of the

ORGANIZATION OF AFRICAN UNITY (OAU)

and the

ASSOCIATION OF AFRICAN INDUSTRIAL TECHNOLOGY
ORGANIZATIONS (AAITO)

for technical assistance in the
Preparation and Production of the First Issue of the

"AFRICAN JOURNAL OF INDUSTRIAL TECHNOLOGY"

Lagos, Nigeria
29 May 1978

CONTENTS

<u>CHAPTER</u>		<u>Page</u>
I	BACKGROUND INFORMATION AND JUSTIFICATION	3
	A. General Background Information	3
	B. Specific Background Information	5
II.	OBJECTIVES OF THE PROJECT	6
	A. Development Objectives	6
	B. Immediate Objectives	6
III.	DESCRIPTION OF THE PROJECT	6
IV.	WORK PLAN	7
V.	PROJECT BUDGET	9
	A. External Assistance Inputs	9
	B. AAITO Inputs (in-kind)	10

I. BACKGROUND INFORMATION AND JUSTIFICATION

A. General Background Information

Most developing countries place high priority on industrial development to facilitate the achievement of their social and economic goals. There is general recognition that the rate of economic growth in general and of industrial development in particular is greatly enhanced by the level of technology in the country and the rate at which technological research results and "know-how" are applied. Accordingly, there has been an increasing movement within the developing countries towards the development of their technological capacities through, inter alia, the establishment of national technological institutions as a means of aiding industrial development.

The Lima Declaration and Plan of Action on Industrial Development and Co-operation stressed, among other things, the stimulation of the development of technological activities and the elaboration of technological policies and programmes adapted to the individual requirements of developing countries, the establishment and strengthening of industrial and technological machinery and institutions and the strengthening of regional activities and institutions for the promotion of economic co-operation between developing countries.

While industrial and technological activities have developed significantly in most Asian and Latin American countries, they are still very much at the conceptual stage in most African countries. The importance of developing industrial and technological activities in Africa has been stressed at various meetings of the OAU and at the Conferences of African Ministers of Industry. The meetings and conferences have stressed the need to create national, regional and sub-regional technological policies, programmes and institutions. The Africa aspirations for technological development are reflected in several documents, the most important ones of which include the "Addis Ababa Declaration of Industrial Development in Africa in the 1970's"; the Cairo Declaration on "Industrialization in Africa - Principles and Guidelines for Co-operation and Development"; and the OAU Resolution CM/Res.569 (XXIX) on industrial and technological activities in Africa adopted by the OAU Council of Ministers at its 29th Regular Session held in Libreville, Gabon, from 23 June to 3 July 1977. The recommendations included in these declarations and resolution are essentially the same as those highlighted in the resolutions adopted at the Conference of Ministers

of African Member States Responsible for the Application of Science and Technology to Development organized by UNESCO with the co-operation of the United Nations Economic Commission for Africa and the Organization of African Unity, which was held in Dakar, Senegal, from 21 to 30 January 1974.

In the light of the above and in accordance with a recommendation adopted at a regional Joint Consultation on the Promotion of Industrial Research and Services in Africa held in Lagos, Nigeria, in September 1975 and sponsored by UNIDO, the Nigerian Government and the World Association of Industrial and Technological Research Organizations (WAITRO), the African Governments, with the assistance of UNIDO and the Nigeria Government undertook a number of preparatory activities leading towards the establishment, in December 1977, of the Association of African Industrial Technology Organizations, AAITO. The main objectives of AAITO include:

- To promote co-operation among the African countries in Industrial and Technological Research and Development through, inter alia, the establishment of links between African institutions concerned with industrial and technological research and development for the exchange of information, experience capabilities and facilities, as appropriate;
- To promote co-operation between African industrial and technological research institutes, relevant departments and units of Universities and the organized industrial sectors;
- To contribute towards the identification and periodic review of the needs and requirements of Africa, on a regional or sub-regional level, in industrial and technological research and development;
- To promote and assist in defining joint industrial and technological research development projects and help, as need be, in locating finance for such projects;
- To contribute towards the co-ordination and planning of industrial and technological research and development in Africa;
- To contribute towards upgrading the level of skills of personnel and the development of manpower requirements for industrial and technological research and development in Africa;

- To collaborate with the OAU/STRC in expressing Africa's viewpoint on industrial and technological research and development matters;
- To promote the effective transfer of industrial technology, particularly the commercialization of research and development results.

The establishment of the Association has been welcomed by the OAU which has accorded the Association with the responsibility of advising the OAU on all matters related to industrial and technological research and development activities in Africa.

In order to translate the Association's objectives into concrete operations, a Joint UNIDO/OAU/AAITO Panel of Experts, consisting essentially of the Executive Committee members of the Association met in Nairobi from 22 to 24 March 1978 to define projects for the implementation of the Association's work programme adopted at its inaugural meeting in Lagos in December 1977. The projects defined in Nairobi cover such activities as training, information and co-operation on industrial and technological activities in Africa.

B. Specific Background Information

In addition to the above, it is worth mentioning in connexion with this particular project proposal that the Journal will be the first of its kind in Africa. As an element of information it will provide an outlet for the publicity of new discoveries in industrial technology, and for the application and adaptation of existing and new industrial technologies in Africa. The Journal will also serve as a medium for AAITO to announce important scientific and technological break-throughs of interest to Africa. By projecting the organization and Africa in the world scene, the Journal will promote co-operation in scientific and industrial and technological activities in Africa.

II. OBJECTIVES OF THE PROJECT

A. Development Objective

The development objective of the proposed project is to assist the African countries both at the national and at the regional levels, to raise their industrial and technological capacities and capabilities in order to enhance their ability in the acquisition and adaptation of appropriate foreign industrial technologies and in the development and commercialization of local ones.

It is expected that this will contribute towards: increasing the production and the improvement of the quality of locally manufactured goods and services; the development of local industrial manpower resources; and the development and more effective utilization of local raw materials, thereby increasing the share of Africa in the world industrial production.

It is also expected that the results of the project will have several multiplying effects on the economic development of the African countries by, for example, helping to reduce their dependence on foreign industrial technologies; optimizing the utilization of investments in the acquisition and adaptation of technologies and the development and commercialization of local ones. This would help to reduce the enormous amount of foreign exchange currently involved in technology transfer and to enhance the development of rural areas.

B. Immediate Objectives

The immediate objective of the project is to initiate the publication and wide distribution in and outside Africa of the AAITO African Journal of Industrial Technology.

III. DESCRIPTION OF THE PROJECT

The production of the first edition of the Journal would require a number of preparatory activities for which AAITO would require technical and financial assistance. First of all, wide publicity would be made among the industrial and technological community in Africa, as well as among institutions and experts outside of Africa working on technological activities relevant to

Africa of the plans to produce the Journal. This publicity will also include a request for articles or intentions of those to be contacted to contribute to the Journal.

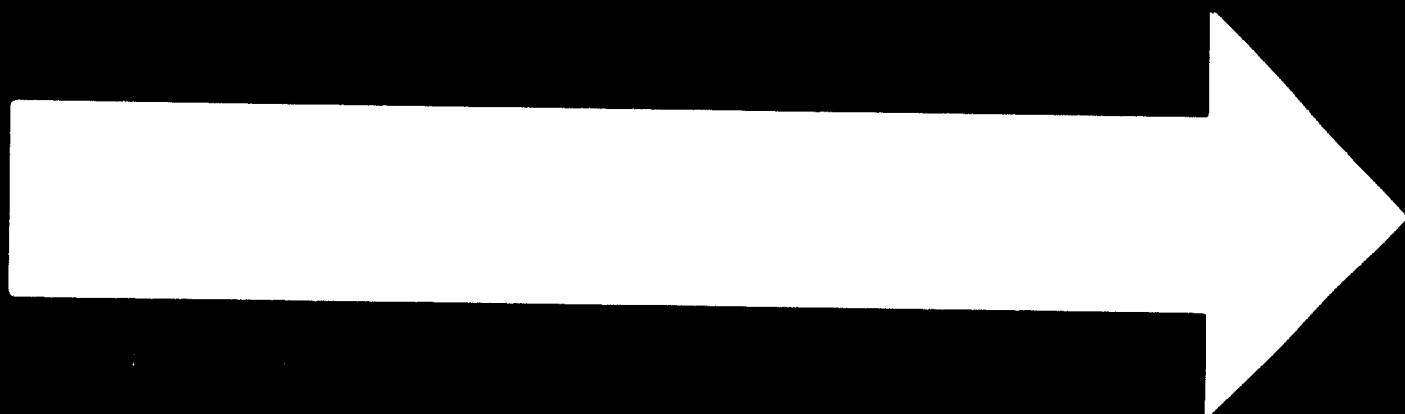
On the basis of the response received, an editorial board would be set up which will then establish its own rules of procedures and working methods. An appropriate format for the presentation of articles by authors and a suitable lay-out of the Journal will be developed and the criteria and conditions for the selection of articles established. Prior to the production or printing of the Journal, the selected articles will need to be edited, their summaries translated in the appropriate language and the Journal printed. A distribution list, as well as the cost of the Journal will need to be agreed upon and a system for the sales of the Journal and collection of revenue, especially in non-convertible currencies, worked out.

In order to carry out the above mentioned activities, the AAITO Secretariat would require the services of experienced experts, one in the editing of technical journals and the other in the review of technological papers. In order to effect the production and distribution of the first issue of the Journal, the AAITO will also require financial assistance.

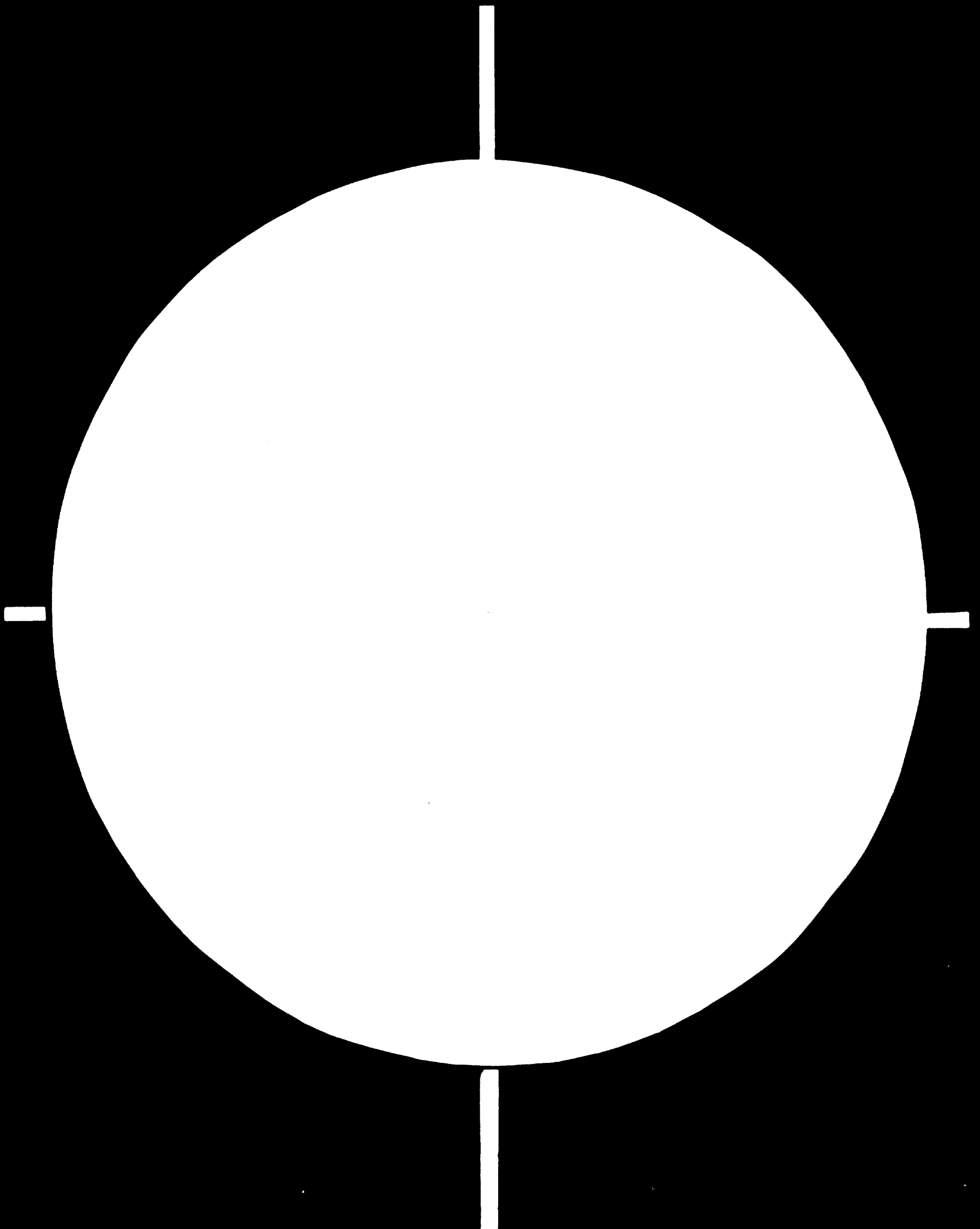
IV. WORK PLAN

<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
1. Securement of external funds for the production of the first issue of the Journal	AAITO Secret.	June 1978 6 months
2. Recruitment of expert to assist in organising the preparatory work for the production of the first issue of the Journal	" "	January 1979 4 months
3. Establishment of an operational programme or plan for the production of the first issue of the Journal	" "	March 1979 1 month
4. Design and distribution of questionnaire on the production of the Journal	" "	March 1979 2 months
5. Collection and analysis of references to questionnaire	" "	May 1979 1 month
6. Establishment of Editorial Board of the Journal	" "	June 1979 4 months

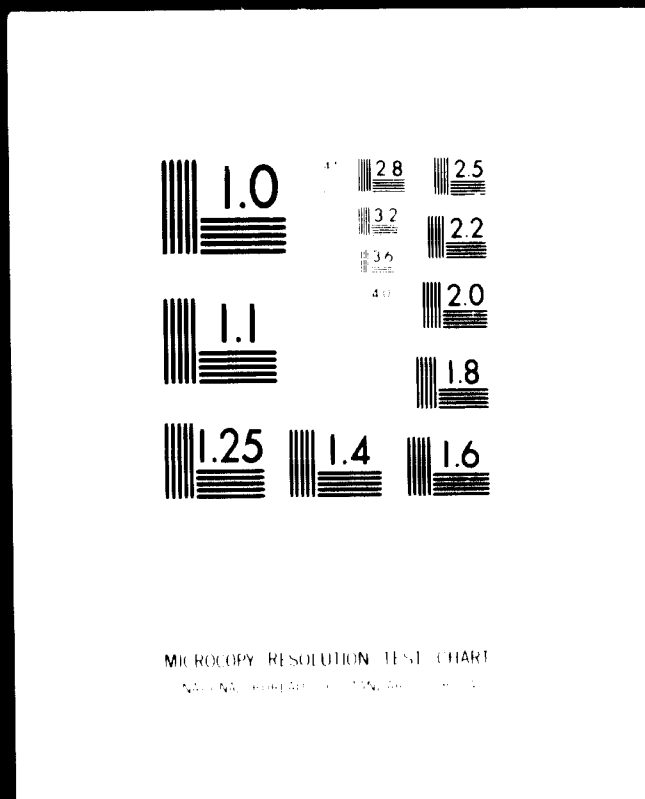
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<u>Activity</u>	<u>Location</u>	<u>Estimated starting date and duration</u>
7. Elaboration of rules of procedure of the Editorial Board and other financial and operational procedures for the production of the Journal	AAITO Secret.	August 1979 1 month
8. Design of formats and request for the submission of articles for the Journal	" "	August 1979 2 months
9. Design of format and lay-out of the Journal	" "	September 1979 1 month
10. Collection, review and selection of articles, with the assistance of a consultant	" "	October 1979 2 months
11. Editing and translation of summaries of the articles	" "	December 1979 1 month
12. Production and distribution of first issue of the Journal	" "	January 1980

V. PROJECT BUDGET

A. External Assistance Inputs

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. <u>Experts</u>						
a) Consultant in the organization and editing of Technical Journals	6	30	-	-	6	30
b) Consultant in the technical evaluation of scientific articles	2	10	-	-	2	10
c) Short-term English/French translator of scientific materials	1	5	-	-	1	5
Sub-total	9	45	-	-	9	45
2. <u>Administrative and technical support staff</u>						
a) Draftsman	2	3	-	-	2	3
b) Bilingual English/French shorthand/typist	2	3	-	-	2	3
Sub-total	4	12	-	-	4	12
3. <u>Miscellaneous</u>						
a) Reproduction and distribution of publicity material and the first issue of the Journal		12		-		12
b) Sundry and contingencies		1		-		1
Sub-total		13		-		13
GRAND TOTAL	13	64		-	13	64

B. AAITO Inputs (in-kind)

Item	TOTAL		1978		1979	
	m/m	000US\$	m/m	000US\$	m/m	000US\$
1. Personnel						
a) 1 Technical Information Officer	12	20	-	-	12	20
b) 1 English/French Translator	12	18	-	-	12	18
c) 1 Documents reproduction equipment technician	12	13	-	-	12	13
d) 1 Research Assistant	12	13	-	-	12	13
e) 1 English/French Bilingual Secretary	12	11	-	-	12	11
f) 2 Shorthand/Typists (one English, one French)	24	18	-	-	24	18
g) 1 Messenger	12	7	-	-	12	7
Sub-total	96	100	-	-	96	100
2. Training						
3. Land and Equipment						
a) Premises (including rental, insurance and utilities)		15		4		11
b) Office equipment		25		5		20
Sub-total		40		9		31
4. Miscellaneous						
a) Reproduction of AAITO Documents and Newsletter		2		-		2
b) Operation and Maintenance of equipment		2		0.5		1.5
c) Communications (e.g. mail, cables, telephone, etc.)		5		0.5		4.5
d) Sundry and contingencies		1				1
Sub-total		10		1.0		9.0
GRAND TOTAL		150		10		140

COOPERATION BETWEEN THE OAU AND CID

The Organisation for African Unity (OAU) has given the Association of African Industrial and Technical Organisations (AAITO) responsibility for acting as the technical arm of the OAU on matters related to industrial and technical and development in Africa. At Nairobi in March this year AAITO defined a plan for the development and implementation of a Programme of Action. This Programme concerns six projects :

- Project Proposal No. 1 : Inventory of African Industrial Technology Organisations, Experts and Research and Development Programmes
- Project Proposal No. 2 : AAITO Information Unit
- Project Proposal No. 3 : Development of Industrial and Technological Manpower in Africa
- Project Proposal No. 4 : Short-term Training Workshops
- Project Proposal No. 5 : In-plant Group Training Programmes for Technicians
- Project Proposal No. 6 : "African Journal of Industrial Technology"

The President of AAITO, Dr. Koleoso (acting Director of Research, Federal Institute of Industrial Research, Lagos) and Dr. Tutuwan (consultant) today, 31st May, 1978 paid an official visit to the Centre for Industrial Development to discuss the role which the Centre may play with regard to these projects.

Agreements in principle were reached on cooperation in two of these projects.

Project 2

The Centre for Industrial Development will act as an extra source of information to AAITO on Western technology. The CID is establishing access to data bases of the Community and other technologies of advanced nations in order to provide this service. If possible, the Centre will also undertake to provide training for a maximum of two documentalists who will serve at the African end of this link.

Project 4

The Centre for Industrial Development undertakes to collaborate with AAITO to define and operate a minimum of two Product Identification Workshops. These workshops, one in French, one in English, will each be held in an ACP State. The workshops will concentrate on the identification and evaluation of small to medium industrial projects likely to be suitable for the Member State of OAU.

The initiative of the CID was highly appreciated by the OAU delegation and recognised as forming a major contribution to the achievement of the aims and objectives of OAU in the field of industrial development.

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AFRICAN REGIONAL CENTRE FOR TECHNOLOGY

Draft work programme for 1978 and 1979

<u>Activity</u>	<u>Timing</u>
(a) Establishment of basic services for the Centre	Jul. 1978 - Dec. 1979
(b) Preparation of detailed financial regulations, staff rules and regulations and other administrative manuals	Sep. 1978 - Dec. 1978
(c) Recruitment of initial staff	Jul. 1978 - Dec. 1979
(d) Procurement of equipment and supplies	Oct. 1978 - Dec. 1979
<u>Training</u>	
(a) Establishment of basic services and facilities	Oct. 1978 - Dec. 1979
(b) Formulation of a detailed work programme for 1979 with projections to 1980	Oct. 1978 - Dec. 1978
(c) Planning and organization of three subregional training seminars on critical issues in technology in Africa	Dec. 1978 - May 1979
(d) Identification of training needs in the field of technology through consultations and contacts with Governments and the public and private sector in various African countries	Jan. 1969 - Dec. 1979
(e) Review of the work programme for 1979	June 1979
<u>Information and documentation</u>	
(a) Establishment of basic services and facilities	Oct. 1978 - Dec. 1978
(b) Formulation of a detailed work programme for 1979 with projections to 1980	Oct. 1978 - Dec. 1978

- (c) Planning of the Centre's library Jan. 1979 - Mar. 1979
- (d) Identification of needs for technological information as a factor in the development and transfer of technology among African countries, and design of a system to meet these needs Jan. 1979 - Dec. 1979
- (e) Review of work programme for 1979 June 1979
- (f) Compilation of a register of registers of African institutions in: research and development, development promotion and development finance Jan. 1979 - Dec. 1979

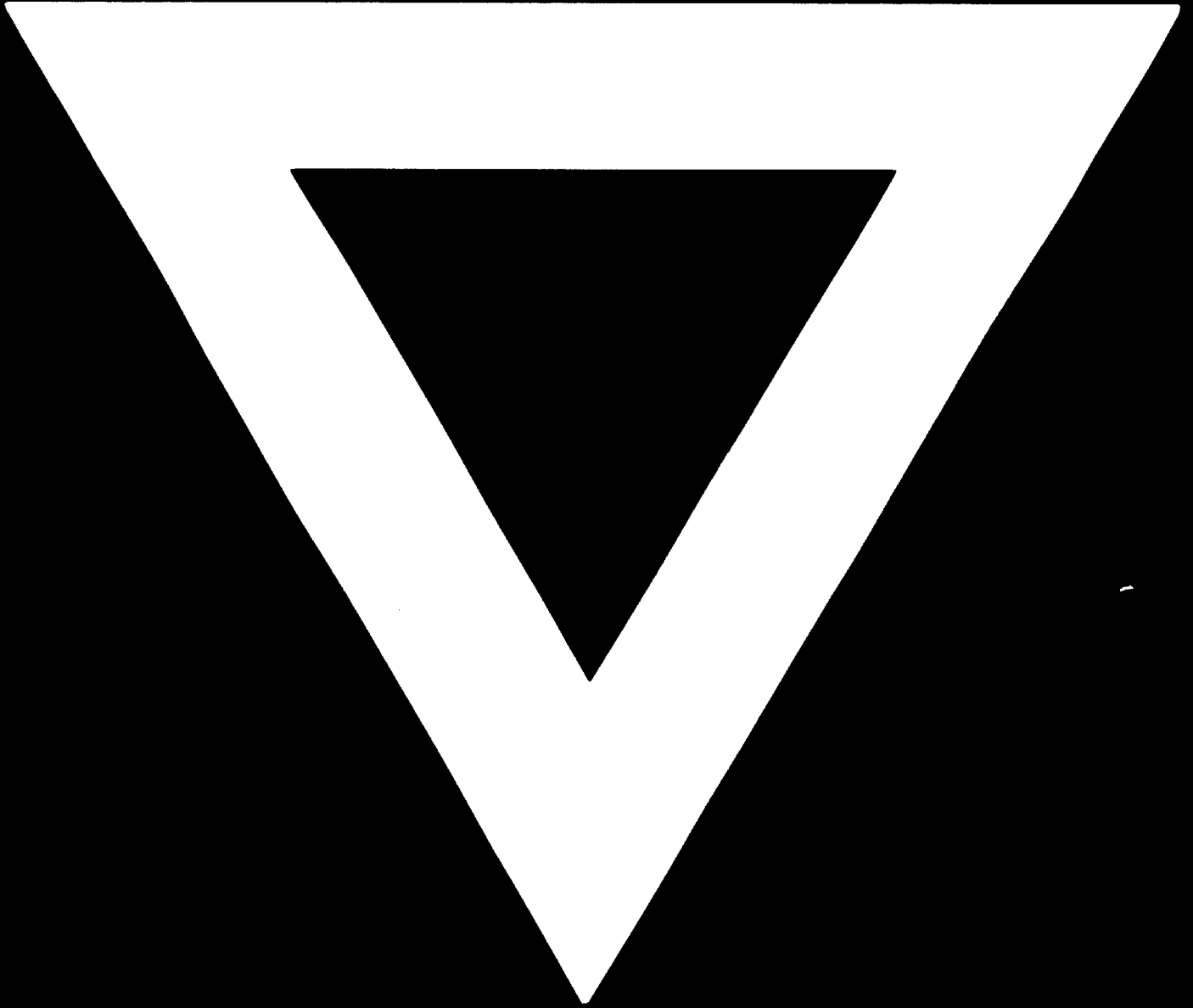
Technological consulting services

- (a) Establishment of basic support services and arrangements for providing consultancy services to member States Oct. 1978 - Dec. 1978
- (b) Formulation of work programme for 1979 with projections to 1980
- (c) Consultancy missions to African countries in response to specific needs in the field of technology Jan. 1979 - Dec. 1979
- (d) Assistance in planning and establishing national centres for technology Jan. 1979 - Dec. 1979
- (e) Organization of a regional seminar for senior government experts to familiarize them with the provisions and application of the International Code of Conduct for the "Transfer of Technology" July 1979



We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche

F - 675



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