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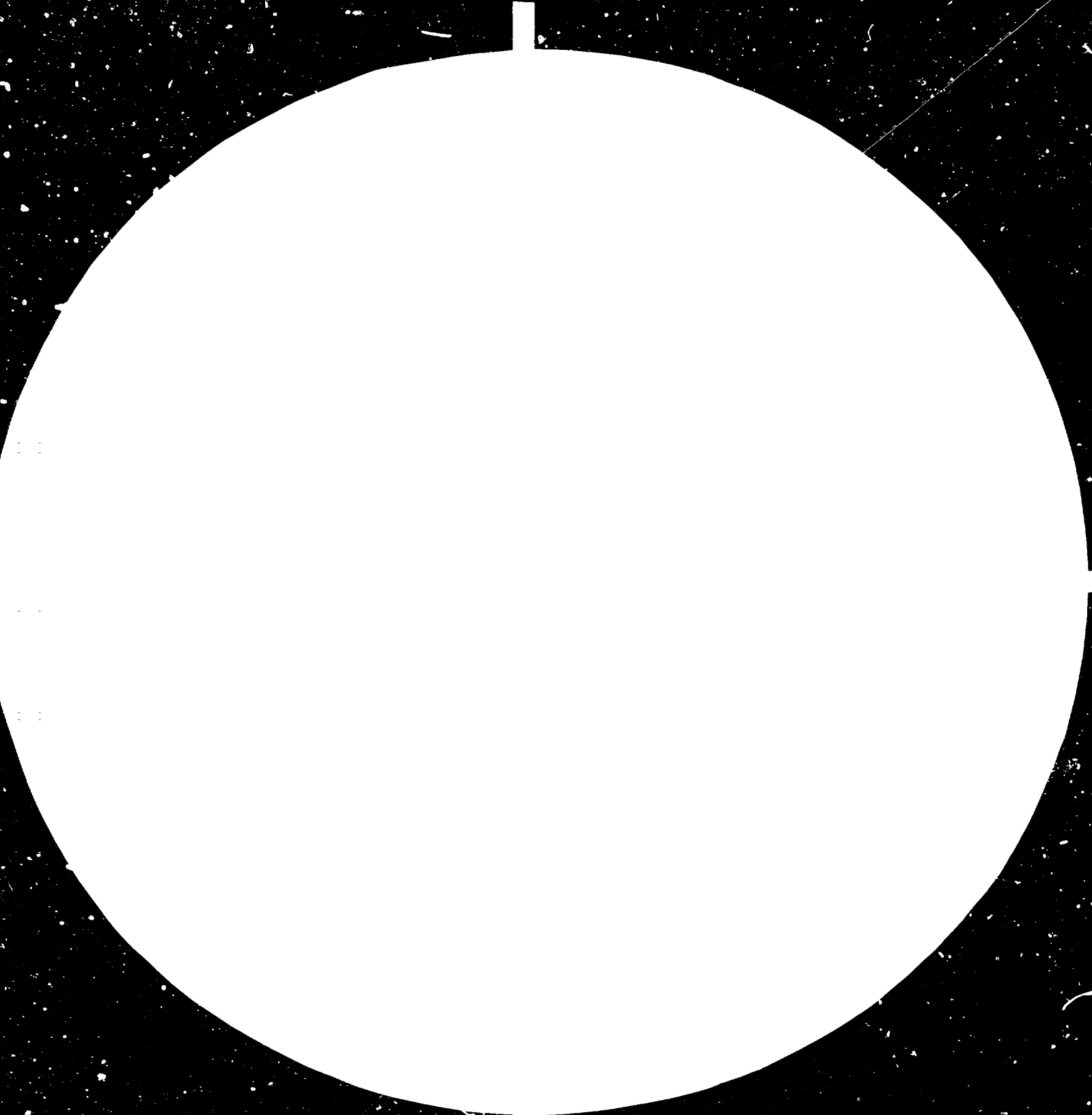
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ASSISTANCE TO THE
TANZANIA INDUSTRIAL RESEARCH AND DEVELOPMENT ORGANIZATION
TIRDO
PROJECT T/12/11-7
TANZANIA

Technical report: The development of TIRDO's capability to
provide technological information services for industry*

Prepared for the Government of the United Republic of Tanzania
by the United Nations Industrial Development Organization,
within its executive agency for the United Nations Development Programme

1970

United Nations Industrial Development Organization
Technical Information Centre for Developing Countries
and Technology Institute

Tanzania Industrial Development Organization
Dar es Salaam

*This report was prepared as part of a project funded by
the United Nations Industrial Development Organization under
contract T/12/11-7.

INTRODUCTION.

This report is the final contribution within a twelve month assignment of the rapporteur to the TIRDO/UNIDO development project - DP/URT/78/019/1307/31.3.J.

The assignment has been aimed at, establishing for TIRDO a technological information service for industry - an operational unit providing extension-cum-advisory service, with affiliated reference collection and documentation service - in collaboration with a documentation expert, Mrs. Leticia Aquino.

The task has included development of an organizational structure, a programme structure, strategies, methods and procedures - all the while the counterparts have been trained for operation of the services.

The services are meant to be an intermediary between industry (the final users) and the TIRDO reference collections, the TIRDO staff and other centers of specialized knowledge within Tanzania and abroad.

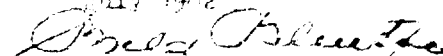
The whole operation of a technological information/documentation service is aimed at - stimulating industry to and assisting in furthering the transfer of technological knowledge into and application by the individual enterprise.

The rapporteur - having for many years taken an active and integrating part in similar projects of furthering industrial development find it appropriate - not only to report what has been done within the project, within the assignment frame and provide recommendations for this - but to take a broader view on TIRDO's role in furthering the economic and social evolution of the United Republic of Tanzania by integrating various services for industry in a programme structure.

It is my hope, that this report will be received and considered for taking actions in an innovative strategy, i.e. means and methods are only appropriate, if they further more effective utilisation of resources available - in particular human resources and the intellectual capabilities, which can be invested in the human resources.

D r es S e l n a r

July 1982



Kjeld Klentoe

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A. Acknowledgements.

During my assignment period with the TIRDO/UNIDO project - September, 1981 to August 1982 - I have been given the opportunity to visit more than 150 enterprises, institutions, associations and authorities in the regions of Dar es Salaam, Tanga, Kilimanjaro and Arusha of the Mainland and Zanzibar of the Isles.

I am most grateful to all the busy people, who gave me of their precious time and in an open and friendly dialogue exchanged with me viewpoints and experiences in their striving for industrial development by application of knowledge, and commented upon ways and means of transfer of technological information and expertise for effective application.

None of the conversations can be quoted or referred to as all were confidential, but they form the background for my statements and recommendations, and are in such way made available to TIRDO in shaping client-relevant and appropriate programmes, services and working-methods.

Further thanks must be conveyed to the TIRDO Organization, to the Director General, Mr. G.L. Tarimu and to the staff members for their patience and support during launching a number of concepts and suggestions for actions to be taken, these suggestions are to be found as annexes to this report.

In particular I want to thank the two direct counterparts I have worked with - Mr. A. John Tingo and Mrs. W. Nyonyi - having responsibilities for extension services, respectively documentation services. It has been a pleasure working with them - from a human point of view, as well as from a professional point of view - always interested, motivated to learn and always in good mood. I wish them all the best in their progress.

Further, my thanks goes to my colleague, Mrs. Leticia Aquino, and to Mr. C.A. Stone, Chief Technical Adviser for the TIRDO/UNIDO project, for valuable cooperation and to Mr. Kimmo Hintanen for his assistance and good colleague spirit. I also want to thank Mrs. Karin Hintanen for her ready assistance in typing many of the papers necessary for organising an information service, at a time we needed such qualified assistance.

Finally, I want to thank Mrs. Stella Shoo for typing this report.

B. Principle concept for a technological information service for and within industry

The universal demand for socio-economic evolution by upgrading more effectively national resources - raw materials and intellectual capabilities - is a pressing issue.

It has made up for an increasing demand for a more effective transfer into and application by enterprises - parastatals and private - of technological information *), of know-how and of expertise, to be a must for Governments of all countries.

It is natural for the Government of the United Republic of Tanzania to entrust the Tanzania Industrial Research and Development Organisation, with the task of arranging for such activities to be carried out, building upon experiences of other countries.

Experiments carried out and experiences gained have lead to an understanding of developing ways, means and strategies to stimulate enterprises - parastatals and private - to regard and recognize technological information, know-how and expertise to be the intellectual raw material for improvement and innovation - a "commodity", which has to be marketed - applying pragmatic methods and means and communication basic principles for interfacing "converters of knowledge" (the enterprises) with "centers of specialised knowledge" (the infrastructure of reference collections, units of expertise, learned institutions, etc.).

The experiences gained in other countries are in the project and the report used, modified to Tanzania conditions.

It is characteristic for technological services for industry, that they operate very open and according to very simplified principles and structures - regarding information and communication services to be a management tool - a tool to be geared exclusively towards the users needs and level of understanding - with the final aim of upgrading the professional competence and alertness within the operating units.

*) Technological Information is by ITD/II (the International Committee on Information Services For Industry of Federation International de Documentation) defined as:

- any kind of knowledge - technical; commercial; economic; managerial; social; legal, etc. - which by application will further improve and innovate - thus leading to steps of practical progress.

C. Application of the marketing approach on technological information and expertise as a commodity

TIRDO is by act and excerpts given the role of being a center of excellence, with regard to technological knowledge and competence relevant and appropriate to further industrial development - with particular emphasis as to foster more effective use of national resources of raw material.

It distincts TIRDO to establish competence and activities geared to stimulate, advise and support enterprises already in operation, with improvements and innovations, but it also calls for an active looking up of the enterprises - the marketing approach.

1. The industrial market by structures.

For shaping a structure of programmes and operations, it is important to establish a **simplified picture of the market** to be served - especially when available resources - manpower and financial means are limited.

Various sources are available for such analysis - they are not at present immediately compatible with each other - and it is recommended, that the Government takes steps accordingly, because this industrial information (Information on industry - to distinct from information for industry) is so very important in outlining a stimulating industrial development policy and strategy for the supporting services.

a. By sizes of enterprises.

(Measured by no. of people employed)

Source: Directory of Industries, 1979.

<u>Employing</u>	<u>No. of Enterprises Mainland</u>	<u>No. of enterprises - The Isles</u>
10 - 19 persons	489	31
20 - 49 persons	347	18
50 - 99 "	149	14
100 - 500 "	74	6
more than 500 persons	47	-
	<u>1,006</u>	<u>71</u>

These figures include public, parastatal, private and a number of service enterprises - but do not provide detailed information on the number of manufacturing units, each having an individual product programme.

The TISCO Directory has applied another characterization of enterprises, leading to counting 876 enterprises on the mainland, while figures on the Isles will only appear in next edition.

b. By geographical location of enterprises.

Using the TISCO Directory 1981 the geographical distribution of enterprises is as follows:

Dar es Salaam region	395 enterprises
Tanga region	102 "
Mwanza region	77 "
Kilimanjaro region	73 "
The Isles	71 "
Arusha region	67 "
Morogoro region	42 "

while the remaining regions have each less than 25 enterprises.

While these figures have great importance for the regional development plans - including location of centers of specialised knowledge to support the development - and for TIRDO in support and services to offer for the enterprises in the regions - none of these 2 set of figures illustrates directly the needs and character of technological information, technological services and advise potentially demanded by the enterprises.

c. By technological profile of enterprises.

Enterprises are characteristic by the product-range they are operating with, and their demand for technological services vary from enterprise to enterprise according to their chosen product-range, i.e. "product-branch".

TIRDO information department has established for its own use a clients - index according to this characterisation principle - profiling the individual enterprise (See annex 2.15).

<u>Product/Branch No.</u>	<u>Profile</u>	<u>No. of Enterprise</u>
200	Agriculture etc.	59
800	Beverage ind.	20
900	Bricks, tiles, etc.	10
1000	Building, cement, etc.	10
1200	Ceramic ind.	6
1300	Chemicals, Fertilizer, Pharmacy	48
1400	Construction Industry	9
1700	Dairy Industry	12
1800	Edible oil industry	33
2000	Electr. ind. High v.	7
2100	Electr. ind. Low v.	5
2300	Engineering ind.	37
2500	Feedstuff ind.	9
2900	Food ind.	9
3400	Glass ind.	2
3500	Graphic arts ind.	28
3700	Tanning, Leather, Shoe	21
4600	Milling, Bakeries	58
4700	Mining, minerals	21
4800	Non-Ferrous metal	11
5200	Paint, varnish, etc.	6
5300	Paper and pulp	14
5400	Plastic ind.	22
6100	Soap, detergent ind.	20
6200	Steel ind.	50
6300	Sugar ind.	24
6500	Textile ind.	109
6600	Tobacco ind.	2
6700	Transport equip.	3
7000	Wood ind.	106

These figures are more relevant for choosing a strategy for active looking up services, such as an extension, active information, digest, workshop/seminar services.

Parameters for setting priorities with regard to which target groups to be served first could be:

Highest added value, export valued products, products-based on national raw materials, etc.

2. Industrial enterprises as prospective clients for technological information and expertise.

From September, 1981 throughout June, 1982 round 100 enterprises and 45 centers of specialized knowledge as well as services, authorities, etc. have been visited.

An evaluation of impressions gathered and described below, does not tend to indicate specific technological problems, but to describe, what kind of services are mostly demanded from the TIRDO technological information/documentation/communication service center supplied and backed up by the TIRDO staff members and/or other specialists in Tanzania.

a. Qualifications of personnel.

It appears, that education at higher level in Tanzania has a good academic level and standard - but it is obvious, that in most cases the education is not geared enough towards practical application of technology, towards organisation of work and towards achievement of results of application.

There are not yet older generations of practitioners to learn from, which results in, that young graduates disappears in research and administration instead of being challenged by organising work and operations including supervision of quality and productivity.

Even programmes of obligatory attachment to industrial enterprises during study, does not appear to have offset effects and call for operative jobs in industry. The reason may very well be that the students are not involved in the company operations, they are not supervised or stimulated to see their work needed, used and appreciated - they are just academic guests in industry.

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Graduates from technical colleges - in particular this was observed visiting Arusha Technical College - appears to be much stronger motivated, when sent on practice, for being useful, and host companies were very carefully selected.

For both categories counts, as it appears for other categories of personnel, that stronger appreciation of contributions need to be reflected in incentives - intellectual and physical - and in remuneration.

b. Enterprise-organisation towards technological activities.

It appears, that most enterprises are too heavily organised towards administration and are not cultivating or building up among the staff-members technological competence and alertness towards productivity, improvement, innovative thinking and acting.

There is a very big need for changing attitudes and develop understanding and skill in these areas - strengthening the internal professional horizontal communication to optimize the utilization of knowledge and skill in the enterprises and to put knowledge to work.

c. Stimulation of alertness to relevant and appropriate technological information and expertise.

It is obvious, that the scarcity of foreign currency has had a very heavy and dangerous effect on the flow into Tanzania of technological information in form of journals, primary and secondary - even the many projects operated with assistance of expatriates.

It appears in libraries as well as in industries, that during the past 7-8 years, there has been a continuous cut down of inflow in Tanzania of information material in form of technology oriented journals and the like. The result has been, that even education has improved by level, the maintenance and upgrading of the professional knowledge standard, once established via education, has not been stimulated by this inflow. On the opposite initiative to improve and innovate processes, methods and productivity has deteriorated.

When efforts are taken by individuals to look up libraries and documentation services searching information, their main findings are, that sources have dried out long time ago - the demotivating effect is dangerous in particular for all economic sectors of a country.

Something has to be done very effectively to cure that situation - active information service from TIRDO is an important means.

d. The profile of needs in industry for technological information and services.

Observations, interviews and requests indicate, that just as serious as are the demands for raw materials and spare parts - is the need for to know - how to overcome problems of maintenance and repair, of day to day improvements, etc. etc.

Needs can be grouped in two main categories - general engineering activities and specific information.

- General engineering problems are about - materials and production flow, maintenance and repair of plants, machinery, equipment, instruments, supervision of quality, of standards, of working performance, productivity, etc.

It calls for a corps of consultants, who can add qualifications, capacity and spirit to the enterprise staff, until need is fulfilled and advises put into operation - and it needs an attitude of persistence in getting things done. And it needs follow-up, follow-up and follow-up.

The consultants must be backed up by an effective documentation service.

- Specific technological information service.

Most of these needs are caused by lack of information sources, lack of knowledge about information sources - locally and abroad.

Observations made indicate that it is not enough to provide the information retrieved, in most cases it is necessary also to provide advices on how to apply the information, that means there must be a strong backing of the information/documentation service by the TIRDO staff members.

e. Inter-enterprise relations.

The above mentioned shortcomings in professional communication within enterprises also counts between enterprises and among enterprises.

Enterprises are isolating themselves - and in particular their technology oriented staff members, to a degree that they do not communicate with their industrial neighbour next door - why they are not alert to, or know of, that he may have capability to become sub-contractor, supplier or just an experienced colleague.

It appears, that the pattern of local or branch oriented clubs of technologist and of industrialist is totally missing - in Dar es Salaam, as well as in the other regions - even this is one of the strongest elements in growing industrial competence broadly.

f. Enterprise relations with the infrastructure of centers of specialised knowledge and expertise.

It is a universal problem, that enterprises know too little about the many centers, where specialised technological information, knowledge and expertise can be procured.

Enterprises must to a certain degree be excused - their main occupation is to manufacture for and serve their clients - and even being alert to their needs they often find it too time consuming to search and consult for assistance.

The centers should be more alert to their obligation for promoting their expertise - to market themselves towards those target-groups in the community most relevant to benefit from their assistance.

In too many cases the centers have an academic attitude - and in particular there are too many demanded services to be carried out only on project basis.

There is a demand for changing attitudes in the inter-facing between industry and centers - and to apply more "business oriented" approach by the centers - knowledge is a commodity of need and value to the economic sectors of the community.

CONCLUSIONS:

Much progress can be made and more traditional problems and shortcomings can be made less dominant for industry, if attitudes and organizational patterns are recognised and modified and changed - in enterprises toward openness within enterprises themselves, between and among enterprises - but even more important is it, that

institutes and services adapt a more industry and business oriented approach towards their selected target groups in the economic sectors and stress more upon services than upon research.

Strategies and programmes suggested for TIRDO information department are geared for such attitudes, intended to mobilise TIRDO' potentials, but also potentials of other centers.

D. The TIRDC Information Department.

A summary of the model and structure of programmes chosen - and of practical steps taken, to establish and operate a technological information/documentation service center.

1. Preparatory work.

Prior to the arrival of the two experts assigned for this part of the TIRDO/UNIDO development project (Mr. Kjeld Klintøe arrived by mid September, 1981 and Mrs. Leticia Aquino arrived by end November 1981) the Tanzanian counterparts - Mrs. Winifred Nyonyi, Information/Documentation Officer and Mr. A. John Tingo, Information/Extension Officer - had prepared for establishing the nucleus of an information/documentation service.

Some 200 books, 80 monographs, 200 reports and a number of journals were gathered and field purchase orders issued for subscription to journals and microfiche editions of journals of R&D - level.

Steps were taken to gather material for a 57 items register - Directory of Technical Information Resources in Tanzania - published December 1981 in cooperation with TANRIS, TISCO, SIDO.

Further Mrs. Nyonyi had been on fellow-ship training to UNIDO headquarter and to Ireland (IIRS) and fellow-ship training was agreed upon for Mr. Tingo to UNIDO headquarter and to Denmark (DTO) for November-December, 1981.

2. Preliminary tasks.

The preliminary tasks to be carried out were:

- a. To organise the physical arrangement for the information department to become an information/documentation/communication service center.
- b. To work out lists of office equipment, office supplies, forms for registration of information material, for registration of prospective clients of the services, etc., all to be ordered from abroad.

- c. by memo of 4th October, 1981 (see annex no. 2.1) to outline a general structure of external and internal activities of the information/documentation/communication services - providing concepts, guidelines and training background for the counterparts.

This document was discussed and approved by principle with Director General, Mr. C.L. Tarimu and with Chief Technical Adviser, Mr. C.A. Stone.

- d. To start the on-the-job training of Mrs. Nyonyi and Mr. Tingo by visits to centers of specialized knowledge and to selected industrial enterprises - training for interviewing, for reporting, for evaluation of follow-up reference material, etc. - gradually building up understanding, routine and skill in carrying out an intergration of the various elements of an information service for industry.

Due to arrival of short-term experts and limited transport facilities a number of visits had to have multi-purpose character.

- e. Due to Mr. A.J. Tingo's departure early November a briefing of the research staff for extension visits was carried out (see annex 2.18), and staff members were requested allocated for extension service visits during November and December.

3. Progress report.

Referring to the above mentioned memo (annex no. 2.1) the main structure of activities to be established were organised - and progress is below reported activity by activity:

External activities:

Extension services,
Active information services,
Question and answer services,
Information analysis services,
Promotion services

Internal activities:

Indexes and files on clients - prospective and actual.

Indexes and files on centers of specialized knowledge,
expertise and resourcefulness.

Indexes on reference material, characterized according
to need profiles of product/branch groups in industry.

Indexes and registers on professional records and files of
TIRDO.

Telephone, telex and telecommunication.

Reprographic services,

Means of furthering the internal professional communication
within TIRDO,

The physical environment for the information/documentation/
communication service.

It should in general be mentioned, that progress has been inhibited
by several factors, such as delays in provision of office equipment, office
supply, stationary, etc. from overseas and especially due to that office
assistance for typing has not been available.

a. External activities:

1. Extension services:

Were carried out as from 20th September, 1981 rather
systematic as to reach as many different product/branch
groups in the the Dar es Salaam region to form a consolidated
picture of main problems within technological information
areas soonest possible.

For all visits counted, that they were followed up by
provision of information on references in the TIRDO collections
being relevant and appropriate for the individual client.

When Xerox - machines are in full operational condition,
by beginning of July, the follow-up should be by provision
of some photocopies - in limited amount - just to stimulate
curiosity and raise requests for more information.

By the end of June, 1982 round 150 visits have been paid
- two thirds to enterprises and one third to centers of
specialized knowledge and expertise.

The visits have mainly been paid in the Dar es Salaam region, but also tours to the Isles, to Tanga, Kilimanjaro and Arusha regions have been carried out.

Evaluation of observations on main problems and needs in industry has been provided earlier in this report.

From each visit the extension officer has written a report upon return to TIRDO - all evaluated by the expert - the reports be kept in a confidential file on the individual client - the file becoming a depository for all TIRDO relations with that particular client.

Similar files are established for centers of specialized knowledge. On such visits have Mrs. Nyonyi and the documentation service expert Mrs. Aquino most often participated, to strengthening of relation and sharing of knowledge on information sources. Also industrial visits are subject to interest for the documentation officer.

Due to observations made and mentioned above, there is a need for intensifying the extension visits programme.

First of all it will have an amplifying effect to offer subscription to extension service visits. (See annex 2.9 - 2.12). A limited number of enterprises will during July be invited to take part in a trial scheme to be carried out over a period of 6 month - gratis.

Second it will be an advantage to draw more upon the researchers to participate in follow-up visits - and ensure a more detailed technological dialogue take place - to the advantage of the client but also to the staff members. It takes in Tanzania stronger efforts, than in other countries to establish a serious technological dialogue (see annexes 2.23 - 2.25).

Not very many extension service visits have for the same reasons resulted immediately in questions and requests for service - but the follow-up with reference material has been appreciated.

2. Active information services.

As notified earlier - most industries are suffering from not being able to subscribe to or having access to foreign journals.

It should be a main task of TIRDO - in particular of the TIRDO staff members - to compensate for this by scanning and evaluating from industry oriented primary and secondary journals TIRDO is subscribing to, articles of special interest to enterprises to be applied into improvement and innovation.

Due to limited manpower capacity, this important activity has not been taken up yet, but soonest possible such a programme of cooperative reading plus writing digests has to be taken up - of benefit for industry and for the improvement of the staff members capabilities.

The programme should result in target-group oriented digest services provided on subscription basis.

The term digest is used to emphasise, that the style, by content and phrasing, must be geared to - why this information is important, how it can be applied and what results can be expected. (In the DTC manual provided, **such activities are fully described**).

3. Question and Answer - Information Analysis Service.

This is a major task of the information/documentation officer to organize and manage.

A number of questions have been taken care of - originating from industry as well as from TIRDO staff (see quarterly reports annexes 2.34 & 2.35).

Procedures for registration and handling incoming tasks, either by the information officers themselves, or by involving staff members of TIRDO to be consulted have been worked out, trained in - and further training will be provided.

It has already been observed, that there is a need for a fund of foreign currency to allow allow TIRDO to pay for information (and postage), when specific questions are to be answered.

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4. Promotion services.

External:

A TIRDO brochure was early 1981 distributed widely to industrial enterprises.

The visits to industrial enterprises and centers of specialised knowledge have also had promotional effect.

Further have the following actions been taken towards the same objectives by the rapporteur and the information/extension officer.

Ministry of Industry, Mr. E. I. M. Hanti, Director of Industries:

A general introduction to the scope, the programme structure of TIRDO information/documentation services and of achievements expected.

The National Library (Tanzania Library Service), Mr. E.E.

Kaunganno, Director - National member of FID. General introduction to TIRDO information/documentation services for industry - and at a later occasion request to nominate Mrs. W. Nyonyi and Mr. A.J. Tingo for membership of FID/II the committee for Information services for industry - aimed at TIRDO benefiting from being a member of a networking arrangement of 35 countries.

TANRIS (the Tanzania Research Information Service) agent for National Technical Information Service of USA.

MEIDA (The Association of Metal Engineering Industries) resulting in membership for TIRDO and establishment of working relationship with Svenska Mekanismaker.

TISCO (Tanzania Industrial Studies and Consulting Organisation) the information service for regular exchange of information on acquisitions.

SIDO (Small Industries Development Organisation) to institute collaboration and common approach with regard to stimulation of industrial development in particular in regions in which SIDO Industrial Estates have been established.

The Dar es Salaam Chamber of Commerce, Mr. C. Mwalongo - President - information on TIRDO services - later a lecture was given at a meeting for members, "Effective transfer of technological information into industry" (see annex 2.31).

The Institution of Engineers, Mr. G.W. Chohan, honorary secretary to request next years national meeting to deal with technological information and industrial development.

The Library Association, a lecture at a meeting for members - same theme as at Chamber of Commerce.

NATTAC (National Technical Training Advisory Committee) - entrusted with elucidation of the structuring of technical **information services in Tanzania.**

Lecturing and consultation on international and national policy structures for scientific and technical information and documentation services as well as for information services for industry, and programmes carried out overseas. (OECD-EEC-NORDINFO-DANOK-FID-FID/II-DTC)

SEMINAR on Technological Information Services for and within Industry, (3x2 hours) (see annex 2.32) Participants from: Ministry for Industry, Board of External Trade, Tanzania Bureau of Standard, TISCO, TIRDO, SIDO, MEIDA, Institute of Engineers, Institute of Productive Innovation.

The primary aim was to establish a common understanding among institutes supplementing each other. The seminar concluded in establishment of a club to meet regular for exchanges of ideas methods applied, experiences gained in the intermediary services between industry and supporting centers. Mr. A. John Tingo was elected as future coordinator.

Internal:

As the concept and the programme structure of an information service for industry was obviously new for the TIRDO organisation, the staff members - and at the same time the staff members should become most important users and contributors to the services to be carried out - a general training became arranged by Mrs. Aquino and the rapporteur - a 20 hours programme. Mr. G.L. Tarimu and Mr. C.A. Stone made themselves **available as resource persons.**

Prior to that a briefing session had been carried out for the researchers to participate in the extension service visits.

An in-house training programme has been designed by Mrs. Aquino and Mr. C.A. Stone providing for Mrs. Nyonyi and Mr. Tingo in-depth training in information/documentation techniques. Length 25x2 hours.

b. Internal activities.

These are aimed at being the backbone of organizing, managing, measuring achievements of operations.

It has been the objective to establish a simplified business-like user-oriented structure of programmes, strategies, working methods and tools - to arrange for learning by doing - and to stimulate to that the service is kept flexible, dynamic and effective.

The basic guidelines are to be found in the catalogue of annexes 2 to this report - and further guidelines are to be found in the 2 sets of the DTO MANUAL provided for the counterparts.

1. Indexes on clients - prospective and actual.

Drafts for a master-index on all manufacturing enterprises to be identified in the UNITED REPUBLIC of TANZANIA (896 in number) was established before end of October 1981.

Regretful enough typing capacity has not yet been allocated for the information department, that is why the diversification of the master-index in indexes arranged by consecutive number of the enterprises, by their geographical location and further by their product/branch group within the regions are not established, which inhibit a systematic approach to the "market".

Files have been established for all enterprises visited - to be retrieved by the individual number of the enterprise - and used for storing all information on relations with that particular enterprise as a background for further services to be provided.

2. Indexes on centers of specialised knowledge, expertise and resourcefull persons.

These are established also in drafts - 86 and 30 respectively, numbers which will increase rapidly and consolidate TIRDO as being a service for establishing personal professional contacts between persons have a need to know and persons having a **potential of knowledge.** (See annexes 2.26 - 2.28). Files have been established on all centers having been visited.

3. Indexes on reference material.

It has been chosen to use a simplified characterisation principle, whereby all material is characterized by: a) type of publication and b) content, i.e. the content being of particular interest to a product/branch group - the target groups of industries - the indexes arranged for cross-references. (see annex 2.15). Special indexes can be made up by photocopies of the master-index-cards.

1177 items have been characterized by end of June - but only 436 have been typed due to lack of office manpower capacity, which means that the reference collection is not ready for full utilization and benefit in searching information.

4. Indexes and registers for record.

Registers for visits paid and received, on acquisition of information material and subscribed to journals and on question and answer services are established.

5. Telephone, telex, telecommunication services.

The information department is still suffering from lack of own telephone line - a necessity for an information service for industry.

Telex has been established by mid June, 1982.

Terminal for connection to information data banks is not yet a demand.

6. Reprographic services.

The department is now in dispose of Xerox-machines, of microfiche-reader/printer (not yet functioning), stencil burner, duplicator, paper-cutter and puncher-binder.

The room for reference collections and indexes has been equipped with visual-aids installations and functions as meeting room, reading room and lecture room.

7. Means of furthering the internal professional communication.

- a. The first step to plan manpower allocation two weeks ahead has been taken. (See annex 2.24).
- b. Acquisition lists for incoming material are issued monthly.

- c. Internal newsletter is planned for but not yet established. (See annex 2.21).
- d. Monthly meetings between management, staff members and expatriates have been instituted by mid June 1982.
- e. Quarterly reports on achievements by the information department have been established as from January 1982. (See annexes 2.34 & 2.35).

CONCLUSIONS:

The TIRDO information/documentation service is in operation with a minimum programme.

The information officers are operating qualified and well motivated for gaining experiences and competence, through services offered to enterprises, and to staff members.

The present level of operations have to be supported and consolidate by assistance from office staff and the TIRDO professional staff.

No expansion of programmes can be expected before the operations at professional level and at office level runs smoothly.

The staff needs possibility to require consultancy and assistance from staff members - and need to have a speedy qualified service at office and reprographic level.

Steps have been taken to employ assisting officers but it must be taken into consideration that for at least 6 months this will only diminish the working capacity of the department.

Further over-seas training of the senior information officers, and over-seas training of assisting officers must be planned so the department is kept in operation.

These conclusions will be reflected in the recommendations.

E. RECOMMENDATIONS:

1. TIRDO, being, by act of 1979, instituted as the focal point, with regard to furthering in industry effective application of technological information, know-how, expertise, development and research - is recommended to consider this role carried out by a structure of three major programmes of actions, the achievements of one programme being an important input and background for the others.

A. Technological information-documentation-communication services - meeting the day to day needs.

Operation of a multi-disciplinary technological information - documentation - communication service nation-wide (the elements be extension, active information, documentation, referral and workshop/ seminar services)

- applying a clients (marketing) approach to interface between established enterprises and sources/ resources of knowledge and expertise,
- aimed at furthering in enterprises an increase of technological competence to improve and innovate.

B. Technological and engineering services.

By evaluation of needs in industry, exposed by the technological information services and communication services, as well as via other channels,

- develop and operate with a business approach by staff members an infrastructure of technological and engineering services.
- these services be provided either as important back-up/follow-up of information services, or operated as specific programmes, such as instruments maintenance and repair services.

C. Research and Development projects.

Due to identification by the above mentioned interfacing programmes, the most pressing problems of



It is further recommended that Mrs. Nyonyi and Mr. Tingo are not on overseas training at the same time.

- D. It is recommended, that next part of Mrs. Nyonyi's and Mr. Tingo's overseas training is arranged by allowing for week-long stay in a number of different research associations. Their personal qualifications at present level of experiences, will best be further consolidated, by becoming familiar with a number of slightly different approaches to information/documentation services shaped towards different target groups of users.

There are strong reasons for suggesting research associations in United Kingdom as their working form are very appropriate for Tanzania conditions.

- E. It is recommended, that overseas training for newly recruited officers, is only provided, when Mrs. Nyonyi, as well as Mr. Tingo has completed their second part of overseas training by mid 1983, and that the new officers are not on overseas training at the same time - this to ensure that the information/documentation services are not suffering from lack of manpower.
- F. It is recommended, that steps are taken soonest possible to allocate qualified full-time office assistance for the information department.

To establish an effective information/documentation service demands qualified, motivated and skilled office personnel.

There is an immediate need for one to two typists and telex operators, a reprographic assistance and a general office assistant - all full time - and the need for office assistance will grow with the number of professionals employed.

- G. It is recommended, to gear soonest possible, the services of the information department into paid-for services - with the aim of via income a) to motivate for effective and appreciated services, b) to obtain means for consolidating the service structure of the departments programme and operations.
- H. It is recommended, that TIRDO information department gets its own telephone line, that telex to a higher extent is used to confirm appointments and that transport capacity for extension services and liaison with centers of specialized knowledge is given highest priority.
- I. It is recommended, that careful planning of operations of the information services are made 2-3 weeks ahead, continuously up-dated, made available for the TIRDO management and staff - inviting for reciprocal information to ensure that client-oriented services can be made available on short call.
- J. It is recommended, that the subscription to foreign industry-oriented journals become more effectively utilized, by organized obligatory reading schemes for the researchers to evaluate for industrial enterprises articles to be digested for application by target-groups of readers. The subscribed-to active information service.
- K. It is recommended, that the information/extension service develop a programme for workshops/seminars as a means to activate a group of enterprises and their staff members, primarily at high level, for technology-oriented dialogues among themselves and with a few by TIRDO invited resourceful persons.
- L. It is recommended, that the TIRDO information department with its services is given freedom to experiment with untraditional methods of furthering their goals, provided that such experiments are well planned and measured for achievements.

Even if it appears that the two information officers - Mrs. W. Nyonyi and Mr. A. John Tingo - have good qualifications, are well motivated, and are gaining experiences every day - and even

they will have advise and assistance from Mrs. Leticia Aquino - at least for a couple of more months - the conditions in Tanzania calls for, that this part of the TIRDO/UNIDO project be followed and supported by experienced foreign advice over the coming 3 years successive period.

It is important, that the senior information officers gets a period, where they are on their own and learn from experience, but it is also important, that they know they can be and will be backed up regularly.

- M. It is recommended, that a follow-up advisory programme is established for the project period 1983-86 aimed at providing information management advisory service at regular intervals - 2 - 3 times a year each time for a maximum of 3 weeks.

Such a programme will provide evaluation of operations and administration - of achievements obtained and provide assistance in building up new services.

ANNEX 1.List of background documents: (not enclosed)

1. Act No.5 of 1979 on the establishment of the Tanzania Industrial Research and Development Organization.
2. Excerpts from the Tanzania Industrial and Development act. (23 January 1979)
3. Final report, preparatory assistance to the Tanzania Industrial Research and Development Organization. (TIRDO) by C.J. Wilder, I. Nagy and F.J. Soede. 17 August 1979.
4. Project document, URT/78/019/C/01/37, signed October 1979.
5. Report of a preparatory mission by Renald Lafond. 23 December 1980.
6. Mission to Tanzania of Frans J. Soede, 10 August 1980.
7. Job description DP/URT/78/019/11-07/31.3.J of 26 December 1980.
8. Report on the Tripartite Review Meeting held on 22 July 1981. Dated 18 August 1981.

ANNEX 2.

List of documents provided for the establishment and operation of the extension/information/documentation/communication services. (enclosed, arranged mainly according to programme structure)

- 2.1 The TIRDO INFORMATION DEPARTMENT, memo of 4th October 1981. (12 pages)
- 2.2 Structure of a manual for TIRDO Information Department. 20.5.1982. (4 pages)
- 2.3 Terminology and concepts applied. 27.1.1982. (3 pages)
- 2.4 Main guidelines for procedures. 8.4.1982. (2 pages)
- 2.5 The TIRDO information department - concepts, aims, objectives, strategies. March, 1982. (3 pages)
- 2.6 The information-documentation service center. March 1982. (2 pages)
- 2.7 Procedures extension visits. 10.4.1982. (2 pages)
- 2.8 Planned extension services. January-December 1982. 5.3.1982. (5 pages)
- 2.9 Subscription to TIRDO technological information services. 17.3.1982. (3 pages)
- 2.10 Programmed extension service visits to a selected group of enterprises in the Dar es Salaam region. 8.5.1982. (2 pages)
- 2.11 Promotion letter for the above. 8.5.1982. (2 pages)
- 2.12 Extension service subscription applied to the regions. 6.4.1982. (2 pages)
- 2.13 Reporting uniformly. 26.1.1982. (2 pages)
- 2.14 The objectives and use of reports on extension visits. 18.3.1982. (2 pages)
- 2.15 Characterization of information material and pro-filing of enterprises/product branches. October 1981. Rev. January 1982. (11 pages) (2 revis. 2nd July 1982)
- 2.16 Organizational principles. 18.3.1982. (2 pages)
- 2.17 Division of responsibilities in department operations. March 1982. (11 pages)

- 2.18 Briefing of **B&D** staff members on use of and contribution to extension/documentation services. 10.11.1981. (3 pages)
- 2.19 General training of TIRDO staff members. 27.1.1982. (2 pages)
- 2.20 Communication within TIRDO of items of professional interest and value. January 1982. (3 pages)
- 2.21 TIRDO newsletter. (internal) 30.4.1982. (2 pages)
- 2.22 Personnel policy recommended for TIRDO information/documentation service. 1 December 1981. (2 pages)
- 2.23 Development of clients services. 6.4.1984. (5 pages)(restricted)
- 2.24 Allocation of professional manpower resources. 22.2.1982. (1 page)
- 2.25 Priorities under circumstances of limited manpower capacity. 20.4.1982. (2 pages)
- 2.26 Updated index on TIRDO projects and on distributed tasks and assignments of the research staff. 3.5.1982. (1 page)
- 2.27 Index on resourceful individuals throughout Tanzania (confidential) 20.5.1982. (1 page)
- 2.28 Index on identified needs for technological assistance, etc. 20.5.1982. (1 page)
- 2.29 Programming and budgeting the external and internal activities of the information/documentation service center... 5.1.1982. (5 pages)(restricted)
- 2.30 Contributions of the information/documentation service center to the TIRDO records and files. December 1981. rev. February 1982 (7 pages)(restricted)
- 2.31 Effective transfer of technological knowledge into industry - paper to Dar es Salaam Chamber of Commerce (15.4.1982) and to Tanzania Library Association (18.5.82) (6 pages)
- 2.32 Seminar on Technological Information Services for and within Industry. 14. - 15. - 18. June 1982. Programme. (2 pages)

- 2.33 Workshops, seminars, conferences. June 1982. (1 page)
- 2.34 Quarterly report on activities - 1 January - 31 March 1982.
(2 pages)
- 2.35 Quarterly report on activities - 1 April - 30 June 1982.
(2 pages)
- 2.36 Active Information Services. July 1982. (2 pages)

• Only for limited distribution

TO: S.S.
C.A.S.
K.K.

FROM: E. KLINTCE

TIBS CT: THE TIRDO INFORMATION DEPARTMENT

The purpose of this memo is to give way to some consideration at high level with regard to roles and tasks to be given ID,

- to institute as soon as possible
- to develop in near future (1-2 years)
- to plan for and develop when appropriate

It is suggested, that the overall role of the ID is identified as:

- to care for the appropriate professional, i.e. technological based, communication (i.e. to and from)
 - 1) Trans-departmental within TIRDO
 - 2) between TIRDO and its prospective and actual clients,
 - 3) between TIRDO and collaborating domestic centers of specialized knowledge
 - 4) between TIRDO and foreign R&D institutes and sources/services for technological information.

This indicates a number of areas to be developed as service functions for TIRDO:

- an information/extension service geared towards industry (TINFORIND)
- an information/documentation service geared towards the R&D departments of TIRDO
- a reprographic service for departments of TIRDO
- a promotion service for TIRDO, TIRDO - services and services of other Tanzanian institutions established to further the industrial evolution in Tanzania
- a professional records - management service

These functions can be developed out of the information/extension service, which for marketing reasons should be named TINFORIND (Tanzania Information Service for Industry)

A nucleus of this service is already established.

It is suggested to consider and evaluate the below mentioned guidelines for what has to be developed, trained for and managed.

TINFORIND - development guidelines

AIMS: - to stimulate, assist and serve industrial enterprises and their supporting institutions in application of technological* information and of R&D results for practical progress, i.e. improvements** and innovations.***

OBJECTIVES: - to identify with enterprises and institutions - by an extension service - needs and demands for

- technological information
- technological services (testing, analysis, instrument maintenance).
- advisory and consultation service
- R&D services.

- to establish accessibility to and liaison with R&D centers and other centers of specialized knowledge, qualified and having capacity - relevant and appropriate for the individual enterprise - within Tanzania and abroad.

- by this promote TIRDO's activities directly, as well as promote other Tanzanian institutions established to further industrial progress.

- to operate a Question and answer service as well as an Information Analysis/for industrial enterprises and for TIRDO's staff members, identifying information sources, procuring material, evaluating information and preparing the material and reports by content and formulation for practical application and decision making.

- to establish reference collection on Tanzanian and relevant foreign knowledge appropriate for application in industrial enterprises and technological services.

service

In order to further these objectives there has to be established:

- an updated index on prospective and actual clients in industry
-
- an updated index on domestic centers of specialized knowledge and of technological services.
 - an updated index on TIBDC-projects, expertise and technological achievements.
 - an updated index and corresponding collection of handbooks, directories, annual reports etc on foreign sources of technological information and expertise
 - an updated index on foreign correspondents for acquisition of technological information
 - a networking with foreign services by telex, telecommunication, terminals etc - and in using these means cooperate with other Tanzanian institutions
 - a reprographic service and report preparation service

- ~~~~~
- x Technological information is to be understood as any kind of knowledge - technical, economic, marketing, managerial, social, legal, etc. - which by its application further practical progress.
 - xx Improvements, i.e. adjusting processes and methods applied by means of testing, analysis quality control, maintenance etc.
 - xxx Innovation; new ways of approaching problems, diversification etc. applied R&D.

- 3 -

Guidelines for Gearing the Various Activities
to form a Programme Structure

EXTERNAL ACTIVITIES

1. Extension Services:

-
- take initiative to call upon, to visit and to interview managers and their staff members, in their enterprises, respectively institutions - assisting them in identifying and analysing areas, problems and opportunities for practical improvements and innovation - explaining ways and means for procurement of technological information, of technological services, of R&D-assistance - evaluated for relevance, appropriateness and in form shaped to meet the demand and the level of understanding of the enterprise - offering such services - and when having provided such services follow-up upon them to ensure the clients benefit from the service.

2. Active information service:

- having gained insight of the interests, areas of problems and demands of the individual enterprise - respectively of the product - branch - groups of enterprises - technological information, technological services, R&D results have to be identified from domestic and foreign services - in form of articles, reports, publications, abstracts, reviews, digests etc. which represent knowledge and know-how to be applied in and by domestic enterprises to foster progress. The identified technological information must be procured, evaluated and digested to Tanzanian conditions and distributed - preferably in form of TINFORIND-BRIEF-NEWS to evaluated target groups of subscribers.

Specific examples can be used for promotion in newspapers, journals or in direct mail to industrial enterprises.

3. Question and Answer Service

- receive telephone calls, letters, telex and visits, posing questions - interview to ensure identification and correct formulation of real demand and of background for demand, as well as level of understanding and experience.

- answer as promptly as possible from reference material at hand or material to be procured immediately from domestic services.

4. Information Analysis Service:

- Questions and requests that cannot be answered or met immediately must be analysed more in depth - and the reformulation has to be confirmed by the inquirer.
- Identify various domestic and foreign sources of technological information - pose requests for assistance in searching relevant and appropriate information - later when terminal access has been established search directly - procure collection of material - evaluate and digest material into a report stating the state of art - referring to documents enclosed and sources identified - concluding in an advisory statement on how best to apply the findings and add a list of competitors, suppliers, sources of technological information and services, domestic and foreign. Follow-up on provided report to ease application and ensure clients benefit.

5. Promotion Services

- the extension service and visits paid by R&D staff members.
- announcements, digests and case stories or achievements gained, to be published in newspapers, journals, by circular letters to target-groups or individual letters to enterprises.
- by seminars, conferences, courses etc. to illustrate ways and means to further practical progress in industry by more effective use of technological services of various kind.

INTERNAL ACTIVITIES

To be established with the aim of:

- form a basis for external activities

- ~~procure a feed-back from external activities~~ - to be retrieved and evaluated as an impact for planning future activities of TIRDO departments
- to assist the staff in solving tasks, carrying out projects, providing reports etc
- to support the development of the professional competence of the staff
- to ensure a relevant and appropriate professional trans-departmental communication within TIRDO.

1. INDEX on CLIENTS

2. INDEX on domestic Centers of specialized knowledge in providing TIRDO's own departments.

3. INDEX on professional records of TIRDO (feed-back)

- a) Reports on extension service and other visits
- b) Issued digests and provided answers to digests
- c) Index on Q and A services provided
- d) Index on Information Analysis provided
- e) Index on Technological Services provided
- f) Index on R&D projects
- g) Index on Promotion Services carried out
- h) Index on visitors to TIRDO
- i) Index on visits and study tours paid by TIRDO staff members (and experts) (except extension services)

4. Telex, telecommunication services

5. Reprographic services

6. Means of furthering the internal professional communication within TIRDO

With regard to demands and request from staff members, ~~these~~ should be identified as clients.

With regard to TINFORIND external activities - staff members should be identified as "centers of specialized knowledge and competence" and mobilized ad-hoc as such.

With regard to furthering the internal professional communication a number of guide-lines for producing internal summary reviews for circulation have to be worked out.

- 7 -
8

Present Situation:

The ID is to be established in TIRDO-house plot 16 very soon - with

a room for reference materials and files

a room for Mrs. Nyony, documentalist

a room for Mr. Tingo, extension officer

a room for reprographic services - microfiche-reader
printer and telex

a room for storing ID stationery etc.

The room for reference materials and files will provide reading space for staff members and space for meetings, lectures, training etc. and be equipped for use of visual aids.

Indexes are to be established with Mrs. Nyonyi and Mr. Tingo gradually.

The preliminary training in information/documentation and extension service for Mrs. Nyonyi has been carried out and will continue throughout October - during establishment of ID.

The preliminary training abroad of Mr. Tingo will take place 1 November, 1981 - 28 February, 1982 followed up by on the job-training.

It is suggested that a preliminary training of TIRDO R&D staff members is carried out by the resident expert to illustrate how staff members can be served, may be requested to serve, and how they can benefit from active participation in the outlined programme for ID.

Nearest futures:

Extension service activities - towards enterprises and towards domestic centers of specialized knowledge has been taken up.

It is recommended, that, when Mr. Tingo starts his further training abroad - 1 November 1981 - 28 February, 1982, R&D staff members are mobilized - either ad hoc or by temporary assignment - for extension service during the period mentioned.

It will provide good insight in the enterprise environment, in analysing and evaluation of needs and be a training in industry geared performance.

To meet expected interests and requests for services from industry, I.D. will soon need staff - an assistant for Mrs. Nyonyi, a typist, and an assistant full time for reprographic services.

Mid 1982

It is presumed that ID by mid 1982 will need the following personnel:

Mrs. W. Nyonyi,
an assisting documentalist,
Mr. John Tingo,
two assisting extension officers,
a typist,
a clerk,
an assistant for reprographic work

It is suggested that the new documentalist and the two extension officers are appointed as per 1st April, 1982.

1. Index on Clients

Identify, register and keep updated indexes on potential clients (i.e. manufacturers) for TIRDO, in particular for TINFORIND.

Characterize the individual client by:

a) Physical data: name

address

P.O. Box No.

Telephone No.

Telex No

etc.

persons: DG and staff
members.

b) Status:

Parastatal

Ltd

Ltd foreign affiliated

etc.

c) Product Branch: i.e. customer orientation

d) file no.

Establish a file on each client in which all news, requests, tasks etc. on that client is kept.

2. Index on Centers of specialized knowledge (domestic)

Identify, register and keep updated index on centers being qualified and having capacity to provide specialized knowledge at various level (scientific R&D, engineering, consultant, etc.) in collaboration with TIRDO or directly.

Characterize the individual center/or service by:

a) Physical data: name

address

p.o. box no.

teleph. no.

telex no

etc

persons: DG and staff members

b) Status & level: University

Association

Parastatal,

etc.

c) Produced branch: special knowledge of particular value for product branches no, no...

d) File no: Establish a file on each center in which all news, requests, offers, tasks etc. on that center is kept.

Index on Records (Feed Back)

Establish records on:

1. Reports on extension service activities

- a) one copy in numerical order for statistics
- b) one copy for clients or centre's file
- c) one copy assorted according to
 - 1) problem areas
 - 2) product branches

2. Issued digests and provided answers to digests

- a) one copy in numerical order for statistics
 - 1) digests
 - 2) answers
- b) one copy for clients or centre's file
- c) one copy assorted according to
 - 1) problem areas
 - 2) product - branches

3. Question and Answer Service

4. Information Analysis

When received journalized

date/no. (consecutive no. within a year)
clients name and no.
problem and request
how to tackle
continued date
proposed economic frame
when answered
invoice no.

- Confirmation:
- a) one copy numerical order
 - b) one copy clients or Centres
file
 - c) one copy for officers use

Answer: Copy of collected material in case file stored in numerical order.

Copy of answer .

- a) one copy with confirmation
- b) one copy in clients file
- c) one copy referred to in product-branch index.
- d) one copy of reports in numerical order

5. Promotion services

When was what activity carried out - by what means - to which target group (test of individuals)

6. Visitors to TINFORIND

Where and why

- a) Tanzanians
- b) Foreigners

7. Visits and study tours paid (except extension services)

By whom - where - what purpose - which achievements

Reports stored a) in chronological order

b) by TIRDO staff members name

K. Klintge/kk

20.5.1982

MANUAL

Aims:

Containing updated documents on concepts, objectives, programmes, measurement of achievements, records, cost analysis, as well as guidelines and procedures for the department and its interactions with the TIRDO organization. Policy documents have to be approved by TIRDO management and dated accordingly - original kept in TIRDO master file.

STRUCTURE

A. Basic programme

i.e. establish, building up and maintain stand-by organization, qualifications and capacity of material and intellectual resources. Measurement by accounting, by statistics and cost analysis on achievements/costs.

B. Promotion programme

i.e. looking up and cultivation of relations with prospective and actual clients, Tanzania centers of specialized knowledge, associations and authorities - regional, foreign and international correspondents and services.

C. Client programme

i.e. activities provided upon request and based upon a fee plus reimbursement of expenses involved.

.. Basic programme

1. Searching, acquisition, characterization, indexing of information material of any kind.
2. Identification, profiling, indexing of
 - a) prospective clients in industry
 - b) centers of specialized knowledge
 - c) associations
 - d) individual resource persons.

Establishment of files on enterprises, and centers etc. when cor. ...

3. Upgrading of qualifications and competence of professional and office staff of center.
4. Planning, outlining operations and methods to evaluate accomplishments by feed-back, accounts, statistics and cost analysis.
5. Establishment, organization, maintenance and operation of premises and equipment.

.../.

A. Basic programme

6. Publicity and public relations
7. Manpower services.

B. Promotion programme

1. Planning, executing and reporting on extension and field liaison services.
2. Interaction with centers of specialized knowledge, with associations, with authorities and with individual resource persons.
3. Question and answer service by telephone and visits to TIRDO.
4. Active, target group oriented, technological information service.
5. Referral services - domestic, regional, foreign, international - identification, profiling, interaction.
6. Resource sharing - domestically.

C. Clients programme

1. Procurement of publications on request.
2. Procurement and evaluation of information analysis.
3. Information analysis.
4. Advisory services on management of information activities and application of information.
5. Seminars, conferences, courses - planning, conducting, reporting.
6. Reprographic services.

MANUAL. (Structure)

- A. Content
- B. Preamble
- C. The Information department as a part of the TIRDO organisation
 - a. Administrative rules and regulations
 - b. Budgetary and accounts regulations.
 - c. Rules for dispositions with regard to supply, acquisitions, and services like telephone, telex, terminal, transport, etc.
- D. Concepts, aims, strategies, policies.
 - a. Technological information services for applied research and industry.
 - b. Programme structure.
 - c. Strategy and policies.
 - d. Achievements evaluation and feed-back.
 - e. Cost analysis
- E. Organisation
 - a. Division of responsibility.
 - b. Recruitment and training.
- F. Internal communication.
 - a. Within the department.
 - b. Between the department and the TIRDO organization/ services.
 - c. Registers to be established and updated.
 - d. Files to be established and kept updated.
 - e. Reporting and recording activities.
 - 1. External
 - a. Visits and meetings
 - b. Correspondence
 - c. Tasks and assignments
 - 2. Regular meetings with TIRDO staff.

G. Functions and procedures.

a. Information alertness, material

1. Searching and acquisition
2. Characterisation
3. Cultivating collections and indexes
4. Use of collections
5. Auditing collections

b. Information alertness, personnel

1. Upgrading qualifications and competence
2. External orientation and training
3. Study tours
4. External relations

c. Extension services

1. Industry
2. Centers of special knowledge
3. Promotion of TIRDO
4. Workshops, seminars, conferences

d. Active information services

1. Evaluation of relevant and appropriate material
2. Production of repackaged information
 - a. Public dissemination
 - b. Target-group oriented.
 - c. Newsletters for subscription

e. Net of correspondents

1. Domestic
2. East-African Region
3. Foreign countries
4. International organisations
5. Data banks
6. Information Service Associations
 - a. Domestic
 - b. Foreign and international

f. Information and advisory services.

1. Question and answer service
 - a. Request for material
 - b. Request for information
2. Information analysis
3. Advisory services.

g. Office and reprographic services

1. Reception and telephone
2. Telex and terminal
3. Correspondence and filing
4. Indexes.
 1. Collections
 2. Clients and centers
 3. Resourceful persons
5. Duplication and binding
6. Xeroxing
7. Microfiche reader/printer

h. Inventories

1. Equipment
2. Furniture
3. Supplies
4. Information material

Terminology and Concepts professionally recognized and used within the intermediary services operating between the final converter of knowledge into practical steps of progress and the various specialists and specialized services providing knowledge.

TIRDO, the Information Department, is expected to become the Tanzania national focus, within the East-Africa region, for services assisting in and supporting the furthering of industrial growth and the socio-economic evolution.

It means that the Information-Documentation Service Center, operated by the TIRDO Information Department, is supposed to become a member of a net-working arrangement with national, regional and international orientation.

It is recommended - being appropriate for future full recognition and cooperative operation - that TIRDO approve the use of terminology generally applied by professionals in this area of operations.

Extension Services

A common term used for any activity initiating to look up potential and/or actual users of technological knowledge for application.

Extension services are assisting the 'clients' in analyzing their situation as an enterprise, with regard to present operations and plans for improvements and for development and innovation.

They are expected to assist in identification and formulation of problems and needs for assistance, in identification of relevant and appropriate sources of technological knowledge and expertise (persons or documents), to procure requested assistance, to see for it is provided in an adequate form - and by follow-up ensure that the client benefit from the services offered.

Mostly extension services are provided by experienced generalists - in many cases assisted by specialists - but may well be carried out by specialists broad minded enough to approach the situation as a problem of industrial operation.

Extension services must be carefully planned and reported.

27.1.1982

Technological knowledge

Technological knowledge and technological information is understood to be - any kind of knowledge - technical, economic, marketing, managerial, social, legal etc., which by its application will further progress in the form of improvement and innovation.

Industrial information

A term, which by its very sense means information on results of industrial operations, i.e. data to be used in measuring, comparison and evaluation of achievements for adjustment or regulations and conditions, but not adding anything of new intellectual value.

Information for industry

Pertains to an intellectual effort to stimulate, advise and serve management and staff members of individual enterprises within the private and public sector, in order to enable them to improve present operations and to stimulate innovation by developing methods, processes and services through the acquisition, evaluation and conversion into practical results of relevant knowledge in appropriate form.

It is an active professional service geared to the needs of the end-user by concept and content, applying methods and means geared to the end-users level of understanding. The service should be aimed at creating a favourable environment for innovation, in which, with the proper motivation, the conversion of knowledge into practical results can take place.

It is a service for marketing intellectual raw material or knowledge, in this case technological information.

Technological services

Are generally understood as provision of professional experienced manpower offered to supplement the clients own staff with qualifications, capacity and experience, which the client for the actual situation is not in possession himself. The areas are multiple and can be vertical oriented as well as horizontal oriented.

Technical services

Are understood to be specialized to more distinct sector of techniques serving a specific purpose, solving a specific problem or providing a special technique, i.e. chemical analysis.

Documentation service

Are ascertaining and characterization of records, files, documents and documented knowledge, i.e. knowledge of any kind fixed on paper, film, tape etc. - so it is arranged for retrieval and use by the organization it is aimed to serve, and it is an active service assisting in

27.1.1982

Documentation service

formulation of a searching strategy, in searching, compilation, evaluation of documents and information, as well as information resources relevant and appropriate to the users interests and level of understanding.

Library services

Are acquisition of books, reports, documents, journals, including establishment of indexes, arrangement of collections and operation of a lending/loan service.

Records management

Establishment of filing and indexing structure for collection, storage and retrieval of internal produced information of an organization - the records being made the living memory of past and actual technological activities and operations - being the background for and used as a means for planning and decision making for the future. A plan of professional communication within the organization is an important part of records management.

Decision has been taken to name the organizational unit responsible for information-documentation service the TIRDO INFORMATION DEPARTMENT.

It is for promotional reasons recommended to call the physical set-up and locality

TIRDO Information-Documentation Service Center.

Becoming the national focus in a regional and international information service net-working arrangement it is recommended to approve the services to be internationally known as

TINFORIND, Tanzania Information Service for Industry,

which is a well-formed verbal address, telex address and illustrated to everybody, what the activities are about.

PROCEDURES

The market for:

- technological information,
- technological services,
- R & D advisory services.

TIRDO's role:

TIRDO leads to stimulate, assist and serve that technological information and expertise is more effectively applied in and by Tanzanian enterprises.

Concepts:

1. Knowledge of any kind only gain community value by application
2. Enterprises are established with the purpose of providing products and services - and need technological information only - if it can further their progress.
3. Products and services are results of application of technological knowledge - i.e. technological information and expertise is the intellectual raw-material - a commodity to be "marketed".
4. The potential clients have to be profiled for their needs - related to their products and services.

Aims:

Knowledge of the market structure has to be established in indexes and files and updated continuously - by input gathered from:

- directories,
- associations,
- meetings, seminars, etc.
- extension visits,
- services provided.

Objectives:

1. Indexes: Will provide all fixed data the "client", the enterprise and its location, its product-profile and its staff.

8.4.1982

2 (2)

Objectives:

The indexes will have to be arranged in:

- a. Alfabetic name order.
- b. Consecutive file-number order.
- c. Grouped in product branches (subarranged in alfabetic order).
- d. Grouped by geographical location in regions (subarranged in alfabetic order).

2. Files: One for each enterprise (and each center of specialized knowledge).

- are arranged in consecutive number order,
- contain confidential information on the level of understanding of the "enterprise" and its staff, their alertness and services provided to them.

Procedures:

1. Responsibility of organizing indexes and files mentioned above is that of the senior-extension officer, assisted by all staff members of the TIRDO INFORMATION DEPARTMENT.
He can demand that every member of the TIRDO organization is contributing input of any kind to the indexes and files.

2. Guidelines for:

- a. Lay-out of forms.
- b. Filling in forms.
- c. Arrangement of indexes and files.
- d. Use of indexes and files.

Have to be developed in consultation with all professional staff members of the information department.

Updated prototypes have to be registered in the information department as well as in the TIRDO master file index.

- PS.
- a. The indexes should cover as many enterprises identified as possible.
 - b. Remember to confer all gathered data with existing indexes and files, to avoid duplication and errors.
 - c. Even a file-number has been allocated in enterprises (or a center), do not establish the file before first contact and report has been established.
 - d. See for that all reports, notes, R & D cases etc. carry the company file-number, product branch -number and ensure copies of any communication is included in the enterprisefile.

THE TIRDO INFORMATION DEPARTMENT

The TIRDO information department is the administrative/legal/economic frame for a structure of operations and activities carried out by and in the information-documentation service center, as services for

- industrial enterprises,
- elements of the Tanzania infrastructure of centers of specialized knowledge and excellence,
- TIRDO management and staff.

The Information-Documentation Service Center is the physical frame for professional activities geared to further effective professional communication within technological knowledge of any kind in any form - and is meant to develop into the national focus in that area.

Concept: Knowledge - technological in particular - is regarded to only gain community value by application - why technological information is defined as: any kind of knowledge - technical, economic, marketing, legal, social etc. which by application can further progress - inform of improvements and innovation - contributing to socio-economic evolution.
Knowledge is a commodity and has to be managed as such.

Aims: To stimulate, assist and serve industrial enterprises and their supporting institutions in application of technological information originated in Tanzania, in the African region or abroad.

Objectives:

To identify within enterprises and institutions needs and demands for:

- technological information,
- technological services,
- technological advisory, consultation and communication services,
- application geared R & D services.

To identify domestically, in the region and in foreign countries potentials and services of technological information and expertise relevant and appropriate for application in Tanzania.

Objectives:

09

To establish reference collection of identified selected technological information and promote it to selected potential users.

To liaise users with relevant and appropriate sources.

To serve users on request in identifying technological information and expertise, procuring the information and expertise, repackaging the information and to see for that clients benefit from the technological information and expertise provided.

Strategies:

To further the aims and objectives a structured programme of activities has to be developed and continuously updated.

1. Extension services:

To visit enterprises and centers of specialized knowledge uninvited to identify needs and potentials of technological information.

To keep updated records on the findings.

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2. Acquisitions:

To run an intelligence service on domestic and foreign technological information and an evaluating acquisition of material for the reference collection, be arranged according to product branch structure for simplified retrieval.

3. Question and Answer Service:

To develop a clients oriented service geared to assist clients in identification and formulation of problems and resulting needs for technological information and expertise - procuring evaluated and repackaged information gathered into a form and language which will ease and further application.

4. Active information service:

To develop - when capacity is available - a technological digest service, providing an subscription digests of foreign originated technological information of special importance for application in Tanzania.

5. Training-courses, seminars, conferences.

To develop an expertise in arranging and conducting courses, seminars and conferences geared towards effective transfer of technological information into various target groups within industry, centers of specialized knowledge and the community.

To further these strategies a number of means and procedures will have to be developed and managed - i.e. monitored and evaluated to form a set of policies - the important measures been taken from records and information management and a cost-analysis scheme.

K. Klintše/ek

March 1982

1 (2)

THE INFORMATION-DOCUMENTATION SERVICE CENTER

The information-documentation service center has the responsibility to develop a structure of activities, which altogether are aimed at furthering more effective application in Tanzania of technological information and expertise, available domestically and abroad.

It is the objective that all activities, by concept, out-lining and procedure and means applied should stimulate and fasten effective professional communication within TIRDO and between TIRDO and users of technological knowledge, actual and potential - involving when relevant and appropriate other centers of specialized knowledge.

To further these aims and objectives the main structure of activities should be:

A. Resource establishment - cultivation and monitoring.

- a. physical
- b. intellectual.

B. Promotion - of services as a means of transfer from source to users.

- a. by persons
- b. by material.

C. Services (paid for)

- a. Question and Answer services
 - 1. inquiries and requests for material,
 - 2. information analysis,
 - 3. elucidations (state of the art reports)
- b. Digest services.
- c. Technological and advisory services.
- d. Training services.

C. Services (paid for)

e. Office services

1. photocopy,
2. printing: - stencils
- duplication
- binding.

D. Information management

- a. Regards management.
- b. Professional internal communication (newsletters)
- c. Cost analysis.

RESOURCE ESTABLISHMENT

1. Physical

Within the frames of available funds an abstractive center should be established:

- 1.1. Stimulating for making the center a clearing-house forum for the professional staff and for TIRDO clients.
- 1.2. Making TIRDO's collections of reference material, and other records as easy accessible as possible.
- 1.3. Building up funds of technological knowledge most relevant and appropriate to industrial operations already established or under establishment in Tanzania.
- 1.4. Acquiring the most effective tools, accessories and equipment for keeping operations simple and effective.
- 1.5. Provide for the center operation office machines, telephone, telex, transportation for effective communication with sources and clients.

2. Intellectual

The center must be manned with well educated, retrained, expert and motivated professionals.

- 2.1. For mainly internal work and services - documentalists.
- 2.2. For mainly external work and services - engineers/economists being multi disciplinary oriented.

As effective information-documentation-communication services are dependent upon skill, accuracy, reliability - the office staff has to be very carefully selected - both for manual skill and for personal qualities.

TIRDO
Information Department

K. Klintge/kk

10.4.1982

1 (2)

PROCEDURES
EXTENSION VISITS

The concept:

TIRDO's role is to assist enterprises and established organizations to utilize technological information more effectively for application into improvement and innovation.

The identification of needs for technological information and expertise can only take place in the enterprise during real life observations, while extension visits have to take place on TIRDO initiative.

The aims:

TIRDO's extension-officer has to plan for and see to that enterprises of all product branches and all regional locations are visited on TIRDO's initiative, taking into account, limited manpower capacity, limited transport capacity, limited financial means.

To a certain extent TIRDO's R & D staff can be mobilized to take part in this visiting program, in particular visits to enterprises having been visited before. By planning the visiting programme it must also be taken into account that capacity for services promoted must be available.

The aims of the visits are:

- to get familiar with the products of the company, processes and working methods applied,
- to analyse interests, alertness, level of knowledge and competence of the management and the staff,
- to analyse problems and needs area by interviewing the management and the staff,
- to assist in formulate needs and requests,
- to gain confidence for serving the enterprise.

10.4.1982

2 (2)

Strategy: From indexes at hand - assorted

- a. alphabetically,
- b. in product branch groups,
- c. in geographical location,

enterprises subject to visits are evaluated.

First priority: Clients (subscribers).

Second priority: Enterprises having been visited before.

Third priority: New enterprises.

Plan for max. three visits per week by one person.

5.3.1982

PLANNED EXTENSION SERVICES
JANUARY-DECEMBER 1982

1 Enterprises to be visited by region

a	Dar-es-Salaam	107
b	Arusha	6
c	Tanga	6
d	Kilimanjaro	6
e	Mwanza	6
f	Morogoro	6
g	Dodoma	6
h	Iringa	6
i	Zanzibar	6
		<u>155</u>

Total number of firms 155 out of 876 representing 18 % of firms in Tanzania.

2 It is intended to pay three visits per week for firms located in Dar-es-Salaam region.

3a One week will be spent for paying visits to six firms in regions.

3b Some visits will also be paid to key persons/institutions in the regions.

4 Programme for Extension Visits

Region	No. of firms	Dates 1982
Dar-es-Salaam	5	January
Dar-es-Salaam	9	February
Zanzibar	6	March 22. - 26.
Dar-es-Salaam	9	March
Dodoma	6	April 27. - 30.
Dar-es-Salaam	9	April
Tanga	6	May 24. - 29.
Dar-es-Salaam	9	May
Mwanza	6	June 21. - 25.
Dar-es-Salaam	9	June
Arusha	6	July 26. - 31.
Dar-es-Salaam	9	July
Kilimanjaro	6	August 21. - 27.
Dar-es-Salaam	9	August
Iringa	6	September 20. - 24.

2.1.1982

4 Programme for Extension Visits

Region	No. of firms	Dates 1982
Dar-es-Salaam	9	September
Morogoro	6	October 25.-30.
Dar-es-Salaam	9	October
Dar-es-Salaam	12	November
Dar-es-Salaam	9	November

Distribution of Firms in Tanzania

Manufacturing Industries	324
Service Industries	<u>52</u>
Total	376

Centres of Specialized knowledge: 63

Region	No. of Industries
Arusha	67
Coast	7
Dar-es-Salaam	395
Dodoma	9
Iringa	19
Kagera	14
Kigoma	3
Kilimanjaro	73
Lindi	7
Mara	6
Mbeya	14
Morogoro	42
Mtwara	3
Mwanza	77
Rukwa	2
Ruvuma	4
Shinyanga	14
Singida	4
Tabora	20
Tanga	102

Firms to be visited in Dar-es-Salaam

1	Vegetable oil Industries Ltd. Box 1211, Tel. 40197 DES
2	ALUCO (A Division of aluminium Africa Ltd.)
3	Bobby Soap Factory (T) Ltd.
4	Dar Brew Ltd.
5	Dar-es-Salaam Oil mill
6	Dawa ya Mbu Ltd.
7	Cotex Metal Machinery Ltd.
8	E.A. Salt Works Ltd.
9	Fit-Tight Nuts & Bolts Ltd.
10	Gloria Bakeries Ltd.
11	Graphics & Signs Ltd.

2.1.1982

Firms to be visited in Dar-es-Salaam

12	E.J. Stanley & Sons Ltd.
13	Industrial Agriculture Spares & Services
14	Jandu Industries
15	Kalmu Industries
16	Kibo paper Industries Ltd.
17	Kilimanjaro Paints (T) Ltd.
18	Kilimanjaro Textile Corporation Ltd.
19	Kico Ltd.
20	Kisarawe Bricks factory
21	Kunduchi Quarry
22	Kunduchi Saltworks
23	Metal Box (T) Ltd.
24	Mwananchi Engineering & Contracting Co. Ltd.
25	N.C.G. Chemical Industries (Plastics) Ltd.
26	National Bicycle Company Ltd.
27	National Engineering Company
28	NMC, Canning Division
29	NMC, Foods Division
30	National Steel Corporation Ltd.
31	Palray Ltd.
32	Paper products Ltd.
33	Pattex Knitwear Manufacturing (T) Ltd.
34	Permasharp (T) Ltd.
35	Popular oil Mill
36	Poultry Feeds Co. Ltd.
37	Rajan Industries Ltd.
38	Rubber Industries Ltd.
39	Sadolins Paints (T) Ltd.
40	Sapa Chemical Industries Ltd.
41	Scinba Plastic Co. Ltd.
42	Steel Wool Tanzania Ltd.
43	Suitcases Manufacturers (T) Ltd.
44	Surat Oil Mills
45	Tanganyika Dyeing and Weaving Mills Ltd.
46	Tanganyika Packers Ltd.
47	Tanganyika Sisal Spinning Co. Ltd.
48	Tangwood Ltd.
49	TANITA
50	Tanzania and Italian Petroleum Refining Co. Ltd.
51	Tanzania Biscuits Co. Ltd.
52	Tanzania Bottlers Ltd.
53	Tanzania Breweries Ltd.
54	Tanzania Chemical Industries
55	Tanzania Cigarette Co. Ltd.
56	Tanzania Distilleries Ltd.
57	Tanzania Film Co.
58	Tanzania Fishnet Industries Ltd.
59	Tanzania Kalmu Co. Ltd.
60	Tanzania Plastic Industries
61	Tanzania Portland Cement Company Ltd.
62	Tanzania Shoe Co. Ltd.
63	Tanzania Sisal Spinning Company
64	Tanzania Tin Industries Ltd.
65	Tanzania Wine Products Ltd.

2.1.1982

Firms to be visited in Dar-es-Salaam

66	Twiga Paper Products
67	Mbungo Farm Implements Co. Ltd.
68	Vitamin Foods Ltd.
69	Wire Drawing & Allied Industries
70	Vegetable Oil Industries Ltd. Box 1211 Tel. 40197 Telex 46361, DAR
71	Friendship Textile Mills Ltd. (URAFIKI)
72	Asbesco (ALAF) Puzu Rd. Box 9293 DAR, Tel. 64011-19
73	Tanzania Pharmaceutical Industries
74	Keko Pharmaceutical Industries
75	Mabibo Vaccine Industries
76	Sabuni Industries
77	Polysacks Co. Ltd.
78	Tanzania Hides & Skins Ltd.
79	Mangula Mechanical and Machine Tool Co. Ltd.
80	Tanganyika Tegry Plastics
81	Tanzania Leather Associated Industries
82	Vitanda Manufacturing Company Ltd.
83	Blankets Manufactures Ltd.
84	Tanzania Cables Ltd.
85	Super Chemical Industries
86	Taj Sweet Meet Mart
87	Soxy Ltd.
88	Standard Knitting Factory
89	Sabcon Tanzania Ltd.
90	Saini Engineering Works
91	Popular Oil Mill
92	Sunderji Manji Ltd.
93	Tanzania Brush Products Ltd.
94	Tanzania Mechanical Engineers Co-operative Society Ltd.
95	Tanzania Sewing Machines Assembly and Manufacturing Ltd.
96	Ubungo Garmets Ltd.
97	Zulu Engineering & Enterprises Co.

Firms to be visited in Tanga

1	TIP SOAP and Glycerine Ltd.
2	Commercial & Industrial Combine Ltd.
3	Giraffe Extract Co. Ltd.
4	Handen Development Corporation
5	Polishes Manufactuners Ltd.
6	Ziwani Mills Association

Firms to be visited in Dodoma

1	Dodoma Wine Company Ltd.
2	Dodoma Bricks & Tiles Works
3	National Milling Corporation, Winwy & Canning Unit

Firms to be visited in Mwanza

1	Vegetable oil Industries Ltd.
2	Tanzania Cosmetics

2.1.1982

Firms to be visited in Mwanza

-
- 3 Nyanza Fishing and processing Co. Ltd.
 - 4 Lake Soap Industries Ltd.
 - 5 Casement & Hardware Manufacturers Co. Ltd.
 - 6 Makufuli Ltd.

Firms to be visited in Morogoro

- 1 Kilosa Ginnery
- 2 Mongula Mechanical and Machine tools
- 3 Morogoro Tanneries Ltd.
- 4 Tanzania Carpet Company Ltd.
- 5 Morogoro Ginnery
- 6 Morogoro Industries

Firms to be visited in Iringa

- 1 Mwangaza Industries
- 2 Tanganyika Wattle Company Ltd.
- 3 Ruaha Concrete Co. Ltd.

Firms to be visited in Zanzibar

- 1 Kiwanda Cha Mafuta/Sabuni
- 2 Kiwanda Cha Saateni IA
- 3 Kiwanda Cha Rangi
- 4 Kiwanda Cha Mbata
- 5 Kiwanda Cha Mafuta Yu Karafuu
- 6 Kiwanda Cha Madawa

TIRDO
Information-Documentation
Service Center

1 (3)

K. Klintøe/kh

17.3.1982

SUBSCRIPTION TO TIRDO TECHNOLOGICAL
INFORMATION SERVICES

It is proposed that TIRDO institutes a subscription arrangement for enterprises, who are interested in insuring they continuously benefit from TIRDO extension advisory visits and from informative service capabilities of TIRDO.

Against an annual "membership-fee" as subscription fee TIRDO should ensure that

- a the enterprise is visited on TIRDO's initiative four times a year - each time for a one-two hours consultation
- b the enterprise can call upon TIRDO to pay up to two extra visits a year for a one-two hours consultation
- c the enterprise can pay consultative visits to the information-documentation service center two times a year each time up to two hours
- d the enterprise can place up to four requests to TIRDO per year for Question and Answer Service/Information Analysis Service at a rate 50 % reduction of what non-subscribers would have to pay.

Taking limited capacity of TIRDO into consideration, this arrangement should be open only to real interested clients - and TIRDO should reserve the rights of restricting the members of subscribers for reasons exclusively of limited capacity.

17.3.1982

Calculation:

Expenses:

a	visiting time, 4 x 2 hours @ 30 sh	240 sh
	transportation time, 4 x 1 hour @ 30 sh	120 "
	transportation costs, 4 x 10 km @ 1 sh	40 "
		<u>400 sh</u>
b	visiting time, 2 x 2 x 30	120 sh
	transportation time, 2 x 1 x 30	60 "
	transportation costs, 2 x 10 x 1	20 "
		<u>200 sh</u>
c	consultation in TIRDO, 2 x 2 x 30	120 sh
d	requests - are met at cost recovery level as actual charges of costs multiplied by 2.	--
	total	<u>720 sh</u> =====

Income:

one year subscription 3000 sh

The risk is minimal - as well for overselling qualification as capacity.

TIRDO is offering:

A systematic initiation and active visiting consultation and advisory programme (adding temporarily qualification and capacity to the staff of the enterprise).

The enterprises know what they can expect to get - and how much effort they have to invest themselves to benefit from what TIRDO is offering.

The enterprises are kept updated on possible services to benefit from, domestic and abroad.

The enterprises get informative services at 50 % of what non-subscribers have to pay - but the same service.

Subscribers are "recognized" by TIRDO of being enterprises in progress.

Restricted admission to the "club" makes it more attractive to become ~~members - and members contribute more than non-members - i.e. TIRDO will be~~ able to shape their services and the extending of these on actual realistic needs.

TIRDO
Information - Documentation
Service Center

3 (3)

17.3.1982

PS. Clients attention has to be paid to outlining that proposal and contracts are stimulating in their form, distinct in their specifications - so clients as well as TIRDO - invest all their innovative efforts to mutual benefit.

TIRDO
Information Department

K. Klintõe/kk

8.5.1982

1 (2)

**PROJECT: PROGRAMMED EXTENSION SERVICE VISITS TO A
SELECTED GROUP OF ENTERPRISES IN THE DAR-ES-SALAAM
REGION**

To investigate and evaluate for development of a scheme for Extension service on subscription, it has been approved to carry out a test-programme in agreement with a limited number of industrial enterprises located in the Dar-es-Salaam region.

Programme structure and guidelines

In agreement with the top-management of the selected industrial enterprises, a schedule will be fixed for a test-period of six months - according to which the TIRDO-information-extension service officer, will pay the enterprise a visit, once every second month, each visit lasting up to two hours.

Management of the enterprise has to prepare for the meeting by gathering on beforehand - preferable one week before the agreed upon meeting - from the technical, the commercial and the financial staff, information on problems recently met, and worthwhile to seek a solution for.

During the two hours extension service meeting - after a short briefing by the management - a round-table discussion/interview will be arranged with the management and the staff members - the aim be to provide the background for understanding the character of problems and needs described, possibly by demonstration in the plant.

The information-extension officer is acting as a rapporteur of the meeting and has to reach to a formulation of needs and requests.

Upon return to TIRDO, the information-extension officer has to:

1. Write his extension service report - including evaluation of the enterprise as a counterpart, and the manager and the staff as users of technological information and services.

../.

6.5.1962

2 (2)

Programme structure and guidelines

2. Check the FIRDO reference collections for relevant and appropriate information material and information on sources.
3. Discuss with the information-documentation officer his findings - probably consulting with members of the research staff.
4. If FIRDO is found not to have qualifications or capacity for advisory-assistance at hand, investigate where to find such - domestically or abroad.
5. Write:
 - a. A summary of the findings at the meeting.
 - b. A report on his findings of information and expertise to provide solutions.
 - c. Statement on time for next regular meeting.

If appropriate - a FIRDO research staff-member has to be introduced to the enterprise, when summary and report is delivered. That member or any other research staff-member relevant may participate in future regular meetings on initiative of the information-extension officers.

The enterprise is requested to prepare for these meetings - and to evaluate if such regular meetings prove to have such value, that the enterprise is willing to pay an annual subscription fee, when the six-month test-period has expired.

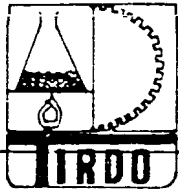
The information-extension officer has to establish and record on the cost of such a programme - enterprise by enterprise.

- | | |
|--|---------------|
| a. Preparation time | (per meeting) |
| b. Time spent at meetings | (") |
| c. Time and mileage spent | (") |
| d. Time spent on reporting and immediate follow-up | (") |
| e. Expenses on reproduction | (") |
| f. Miscellaneous. | |

SHIRIKA LA UTAFITI NA MAENDELEO YA VIWANDA TANZANIA

Tanzania Industrial Research and Development Organization

Anwani ya Simu: } TIRDO
Telegraphic Address } Dar es Salaam
Simu }
Telephone } 68822
Telex }



8.5.1982

S. L. Posta }
P. O. Box } 23235
Dar es Salaam

Kumbukumbu Na. IRD 4/2
Reference No.

Dear Sir,

RE: PROGRAMMED EXTENSION VISITS

Developing TIRDO's service activities - in particular the technological information-documentation service - we are anxious to find the form most appropriate to industrial enterprises.

It is our impression from visits already paid - and it is the experience from a number of other countries - that enterprises benefit most, when the information-documentation service pays visits regularly to the individual enterprise.

It is recommendable that the visits are scheduled to be at fixed time, and that the management and the staff has prepared for making the visits to a "round table" exchange of information, i.e. interview, dialogue, question and answer, problem identification and formulation.

TIRDO Information Department is inviting your company to participate at no charge in a test-programme, running over a period of 6 months.

We suggest, that the information-extension officer of TIRDO, Mr. John Tinga visits your company once every second month, on an agreed upon week-day at a fixed time - ex second Monday in the months of at 9.30 a.m. for a 2 hours visit.

We further suggest, that prior to these meetings - ex one week before - management, technical, marketing and financial staff have met to analyse and identify topics, areas and problems your enterprise would like to present to TIRDO for information on assistance you would like to procure for your enterprise.

At the meeting Mr. Tinga should meet with you and your staff to further analyse your requests, asking for further clarification of the character of your needs and problems.

Mr. Tinga will act as rapporteur of such a meeting - taking back to TIRDO the requests agreed upon - investigating possibilities of producing evaluated information, relevant and appropriate technological services or identification of sources to be analysed for solutions.

He will produce for your company:

~~a report of the meeting,~~

- an advisory report on suggested solutions - how to organize them - and an estimation on costs of external assistance.

The benefit for your enterprise would be:

1. A neutral person - used to work on confidential conditions - not familiar with the "traditions" of your enterprise may be able to ask "odd and refreshing" questions, which will challenge to seek the "core of the problems".
2. A person qualified and acquainted with the present infrastructure of domestic sources of expertise will act as resource person with regard to broadening of the alertness of your staff and their insight in sources of expertise your enterprise needs to benefit from.
3. By being a person being domestic as well as international well acquainted with resources of technological knowledge - having in TIRDO access to in-house reference collections - and having as primary task to spend the time in searching for solutions your own staff can hardly spare, you add competence and capacity for improving and innovation of your operations.

If you agree to this suggested programme TIRDO will appreciate, that you and your staff keep a keen eye on your benefits from the programme and on how you benefit - just as we would appreciate to have your evaluation of, how much you would invest annually in subscription to such a service.

Yours faithfully,

for: Director General

KK/kk

K. Klintee/kk

6.4.1982

1 (2)

EXTENSION SERVICE SUBSCRIPTION APPLIED
ON THE REGIONS

While the suggested subscription service by structure and calculation should be uniform over the entire country - it is necessary to request subscribers in the regions to reimburse the costs of travelling and accommodations for the extension officer(s).

Subscribers in a region should only be accepted, when there are minimum six in that particular region.

Experiences from an extension service visit to Zanzibar - 28th March - 1st April shows, that it is possible to visit three locations per day, provided good planning and preparation and that a hired car is available for all local transportation.

The regions being primary subjects to such a programme are:

Zanzibar
Tanga
Arusha
Mwanza
Dodoma
Iringa
Morogoro
Tabora.

Transportation to the region should take place by air - the six subscribers sharing the cost of the individual air-ticket.

Hotel costs and accommodation for the extension officers is according to experiences from Zanzibar - Tsh 350.- per day.

6.4.1982

2 (2)

Local transportation sums to Tsh 350.- per day.

Example: A Zanzibar-subscriber:

Subscription to 4 TIRDO initiated visits and 2 called visits
Fee Tsh 3.000.- per year.

Reimburse unit per year:

Air Fare:	1/6 of 6 x 380 =	380.-
Hotel & accommodation:	1/6 of 6 x 350 =	700.-
Transportation:	1/6 of 6 x 2 x 350 =	700.-

Tsh 1780.- per year

Capacity for extension visits:

An information/extension officer can overcome spending 25 % of his working hours on visits, when he also has to take active part in Question and Answer services and other activities within the Information Department - and that should be a must.

There are 90 working days allocated for visits per year.

Each client in a subscription programme demands 2 days (the regions), i.e. 6 x 1/3 day, 3 days (Dar-es-Salaam) spend directly on visits - which makes capacity available to c. 40 subscriptions in all per offices.

Not taking reimbursements into account that makes

TIRDO income on 40 subscriptions per year Tsh 120.000.-

Expenses at present salary load per year Tsh 29.000.-

PS.

If TIRDO is prepared for an incentive sheme, 10 % of the subscription fees could be received for that, allocation to the officer having obtained a new and accepted subscriber or renewal of a subscription.

Annex 2.13

FIRDO INFORMATION-DOCUMENTATION SERVICE CENTER.

Re: Reporting, uniformly:

With the aim of building up for FIRDO - within the FIRDO information-documentation service center - the best possible knowledge and memory on the "market" in which FIRDO has its role - to provide services for furthering technological progress and socio-economic growth - it is recommended to institute

That all professional staff-members of FIRDO are given responsibility for reporting on the contacts and communications they have with persons/enterprises/Centers of special knowledge/associations, etc.,
and that the reporting is given a uniform lay-out and style.

The basic structure of such a report is described by the enclosed form - which has to be followed by the rapporteur as well as by the typing secretary.

Beside reporting on the data requested, it is the responsibility of the rapporteur, to state - in his own personal style and evaluation -

what was the reason to establish the meeting,
what situation did he find,
which problems could be identified,
what formulation of requests was mutually developed,
is it worthwhile for FIRDO - limited resources taken into account, to invest further in this case,
why and how, by whom?

The office assistance in typing and filing the reports -
in chronological order,
by enterprise, (file no),
by product/branch,
by key-word of problem identified,

will allow for, that the information-documentation service center can provide for management, for the staff and for the project-development inputs to become guidelines for where to allocate manpower and other resources most appropriately.

To institute this procedure needs authorization by the FIRDO management and when so it will be included in the training - programme offered to the FIRDO-staff members to illustrate its importance, value for FIRDO and for the individual to apply carefully the principal procedures.

26. January 1982

Kjeld Klintaë - L. Aquino

REPORT no. / 82.

Type:

Extension visit:
Technological service:
R & D visit:
Teleph./Meeting:

DATE:

Company/C. of spec. Knowl.:

(Name)
(Address)
(P.O.B.)
(Telph.)
(Telex)

Prod./Branch no.

FILE no.

Persons met:

(Name & position)

Visited by:

The Company:

(Status)
(No employees)
(No proff.)
(Import/Export)
(Manufact.)
(Rawmatr.)
(Equipm.)

Products/Markets:

Operations:

(Rawmaterials)
(Processes)
(Product fl w)
(Lab.support)
(Maintenance,
Instr./Machinery)

Areas of interests for TIRDO services:

Relevant ref.material:

How and when follow - up:

Follow - up by whom:

TIRDO
Information Department

K. Klintge/kh

18.3.1982

1 (2)

THE OBJECTIVES AND USE OF REPORTS ON EXTENSION VISITS
(Reports on visits to enterprises, to centers of specialized knowledge,
to associations, authorities etc.)

Concept of extension visits

- to promote TIRDO services,
- to identify actual and future needs for services,
- to identify and profile potential sources of specialized knowledge expertise and services,
- to identify areas for mutual benefit of collaboration.

Strategy: All external contacts must be reported upon in a form that observations can be

- recorded in a systematic way,
- used for communication within TIRDO,
- used for follow-up to satisfy client's needs,
- completion of TIRDO's knowledge of clients, specialists,
- gathering and evaluation of subjects and subject areas for new acquisitions to the reference collections,
- gathering and evaluation of areas for new services.

Responsibility for actions

- John Tingo.

Actions

1. Planning of visits.
2. Registration of visits.
3. Reports on visits.
4. Use of reports.
5. Filing of reports.
6. Index on feedback keywords.

18.3.1982

2 (2)

1. At present - MARCH 1982 - TIRDO has not capacity for paying more than three visits to enterprises per week. A general plan has been worked out for 1982 - resulting in identifying 155 enterprises - countrywide - of which 107 are from Dar-es-Salaam, the rest gathered six from each of eight regions.
2. As soon as a visit has been approved it must be registered for file No. and visit No. and product branch No.
3. Planning goes to include preparation for the visit with regard the enterprise and with regard to material of interest to the product group in question.
4. Reports must be delivered within 24 hours - the draft scanned for data and professional evaluation of observations.
5. Typing in five copies
 1. Consecutive No. order.
 2. Via Mr. Klintöe to company file.
 3. Via Mrs. Nyonyi - Mrs. Aquino to be evaluated for keywords indicating need areas (evaluation together with extension officers) - and end up in product/branch oriented looseleaf binders in Mrs. Nyonyi's possession.
 4. For UNIDO project information Mr. C.A. Stone - K. Hintanen.
 5. For the reporters.

No. 3. - evaluation: This evaluation to which Mrs. Nyonyi takes initiative has several aspects:

1. The reporting technique (to be adjusted by J. Tingo if necessary).
2. The level of understanding of the enterprise.
3. The product area and its coverage in TIRDO's reference material collections - new acquisitions.
4. Subjects of future interests for services - information, technological services, R & D project etc.
- keyword subject index in Mrs. Nyonyi's possession.

TIRDO
INFORMATION DEPARTMENT

CHARACTERIZATION OF INFORMATION MATERIALS
AND
PROFILING OF ENTERPRISES/PRODUCT BRANCHES

By

KAREL KLINTZE
LECICIA B. AQUINO
UNIDO Information / Documentation Experts

JOHN TINDO
W.N.A. NYONYI
TIRDO Extension/Documentation Officers

Tanzania Industrial Research
and
Development Organization (TIRDO)
Dar es Salaam, Tanzania
1982

INTRODUCTION

Organizing information materials is one of the key elements in achieving maximum efficiency in information and extension services for industries. Information materials should be organized by using a system appropriate to achieve the maximum efficiency in storing and retrieving such materials.

Acceptable international standards of classification/cataloguing/indexing of documents for industries have been used by various Documentation Centres, to organize their document collection, however, the level of effectivity is varied. For some, the system adapted was effective but for others not. This experience indicates that it is important that any system can be adapted as long as it is appropriate to the needs, objectives, programmes/activities of the organization and/or clients to whom the Information/Documentation Centre has to serve. Therefore, any system appropriate for an organization can be applied as long as information materials when stored can be retrieved when needed at a maximum speed and accuracy.

It is in this context that IIRDO Information Department has designed a system characterizing information materials and profiling of enterprises/product branches, based on the needs, objectives, programmes and activities of IIRDO and its clients.

Effort was made to ensure the compatibility of descriptors with existing industrial standard descriptors now being used by various international organizations to facilitate exchange of information. How effective this system will be, remains to be seen. However, testing of the system will be done within the year to determine the level of its effectivity.

EXPLANATORY NOTE

Information materials are classified by the type of publication as it appears on the present holdings of TIRDO. The types of publications are briefly defined and appropriate symbols adapted as stated under the heading "Definition of Terms" and "Types of Information Materials with corresponding Symbols."

Characterization of information materials and profiling of enterprises/product branches comprise selected product branches expressed in numerical form and subject/discipline branches, key words and/or descriptors in textual form.

Broader terms are explained in scope notes with the symbol IS before it, which simply means INCLUDES or extent of coverage and/or limitations. Narrower terms are further clarified by a bracket and RF meaning REFER TO *for meaning*.

Example:

300 Aluminum Industry
IS- Aluminum foil, Bauxite(RF-Aluminum ore)

All subject/disciplines, keywords/descriptors are acceptable terms for use and related terms appear in numerical order with a symbol CONF; meaning CONFER.

Example:

400 Applied biology
Conf: 200-600-1700-1800

Product branches are arranged in numerical order and subject/disciplines, keywords/descriptors in alphabetical order.

DEFINITION OF TERMS

1. ENCYCLOPEDIAS:[†] Publications which provide information of general to specific nature on a large variety or specific subjects. Wide scope is covered but information is usually too brief but reliable.

2. HANDBOOKS : Informative publications which attempt to provide techniques of technology application. They are discipline oriented and deals with technical know how. They are more detailed than encyclopedias but less academic than textbooks.
3. DATABOOKS : The contents provide specific numerical data that is technical, mathematical statistical and related categories.
4. TEXTBOOKS : Publications whose contents are intended for the upgrading of knowledge. Coverage is general to specific discipline. Example are books on application of science to produce technology. The language is very complex as compared to that of Handbooks and encyclopedias.
5. CONFERENCES : These are publications containing original contributions, reports presented and proceedings at workshops, seminars and symposia. The information contained in this type of publication has not been evaluated for practical application but it represents the most up to date knowledge in any particular field.
6. DIRECTORIES[†] : Information sources and/or guides to products, processes, manufacturers, trade names, etc.
7. DICTIONARIES AND THESAURI⁺⁺ General language dictionaries are vocabulary oriented. Technical dictionaries are sources of technological information for research and industry. Thesauri specify synonyms within a discipline and give widely accepted/preferred terms within a given field.
8. STANDARDS/SPECIFICATIONS/REGULATIONS:⁺ Publications that specify the most up to date statistical facts about the state of knowledge in a given area, recommend practices and specifications. Particularly useful as a technical/technological source of specifications often sought by industrial manufactures, salesmen and consumers. (E.g. Standards, Almanacs.
9. GOVERNMENT PUBLICATIONS: Issued monthly by government bodies inter-governmental departments and related categories. (E.g. Publications by Ministries covering a variety of subjects ranging from laws, budget, speeches, five year development plans, economic surveys etc.

10. BIBLIOGRAPHIES & INDEXES: + Publications that list bibliographic details of other publications. (E.g. Reference sources, Science citation index, Agrindex, etc.)
11. PERIODICALS : These are serial publications of original contributions contained in primary journals, and secondary form in Abstracts, Newsletters, News and Digests etc.
12. ANNUAL REPORTS: Yearly publications giving a brief account of the activities, achievements of an organization or departments and forthcoming programmes. Brochures and announcements are included.
13. GENERAL PUBLICATIONS: These are publications that provide useful information for the success of an enterprise. The information can be managerial, economic, social or even technological but not on the Research and Development level.
14. REPORTS : This category contains technical/technological oriented reports of work done/accomplished in a specific R + D area.
(E.g. 1. MIRD reports 2. Tanzanian reports
3. Foreign country reports 3. United Nations reports, etc.)
15. CATALOGUES : Publications that aid in the selection and purchase of equipment/instruments, chemicals, furnitures, books etc.

+ Not to be brought out of the Information Department.

TYPES OF INFORMATION MATERIALS AND SYMBOLS

<u>TYPE</u>	<u>SYMBOL</u>	
1. ENCYCLOPEDIAS	E E	
2. HANDBOOKS.....	H A	
3. DATABOOKS.....	D A	
4. TEXTBOOKS.....	T E	
5. CONFERENCES.....	C O	
6. DIRECTORIES	D I R	(TA)
Use country, region initials in brackets to indicate origin.		
7. DICTIONARIES AND THESAURI.....	D I C	
8. STANDARDS/SPECIFICATIONS/REGULATIONS.....	S T	
9. GOVERNMENT PUBLICATIONS	G O	(TA)
Use country, region initials in brackets to indicate origin.		(FOR) (INT)
9. BIBLIOGRAPHIES & INDEXES.....	B I	
11. PERIODICALS		
Science, R & D level.....	P	(RD)
Primary journals, technology level.....	P	(IND)
Secondary journals, abstracts, digests etc.....	P	(AB)
12. ANNUAL REPORTS.....	A R	(TA)
13. GENERAL PUBLICATIONS	G P	
14. REPORTS		
TIRDO reports	R E P	(TR)
Tanzanian reports (record of publisher)..	R E P	(TA)
Foreign, country or international institution	R E P	(FOR) (INT)
15. CATALOGUES.....	C A	

Key to the other symbols used:

- TA- Tanzania
- AB- Abstracts
- FOR- Foreign
- TR- TIRDO
- INT- International
- IND- Industry
- RD- Research and Development

LIST OF PROJECT BRANCHES (Vertical) and of
SUBJECT DISCIPLINE BRANCHES (Horizontal) for the
CHARACTERIZATION OF INFORMATION MATERIAL & COMPANY PROFILES

100 ADMINISTRATION

IS: Public, parastatal, private, industrial estate, development project, industrial programming, (RF: methodological aspects of industrial planning on a regional or national basis), structure, systems & techniques.

CONF: 700-1900-2700-3600-3900-4000-4100-6000-6700

200 AGRICULTURE, FORESTRY, HORTICULTURE

IS: Agricultural mechanization, agricultural waste, equipment, machinery, Agro-industry (RF: industrial methods applied to the integration of agricultural production, processing and marketing).

Forest products (RF: gums, resins, rubber, timber, etc.)
Horticulture (RF: greenhouse, hybridization etc.)

CONF: 400-800-1700-1800-2400-2500-2900-3000-3700-4400-4600-
~~5000~~-5300-5900-6500-6600-7100

300 ALUMINUM INDUSTRY

IS: Aluminum foil, Bauxite (RF: Aluminum ore)

CONF: 4400-4800
4500 4700

400 APPLIED BIOLOGY

CONF: 200-800-1700-1800-2400-2500-2900-3000-3700-4400-4600-5900-6300-6600
5500

500 APPLIED CHEMISTRY

CONF: 800-900-1200-1300-1500-1700-1800-2400-2500-2900-3300-3400
3500-3700-4000-4400-4600-4700-5200-5300-5500-6200-6500-6600
4300 5400 6000 6200

600 APPLIED MATHEMATICS

CONF: 700-1900-2100-2700-3900-4000-4300-5000-6000-6700

700 APPLIED PHYSICS

CONF: 1400-2000-2100-4200-4300-4900-5700-5800-6000-6400-7000
2200 2300 5000

800 BEVERAGE INDUSTRY

IS: Alcoholic and non-alcoholic beverages

CONF: 200-400-500-1300-2400-2900-3000-5100-5900-6400

900 BRICK TILES AND MORTAR INDUSTRY

CONF: 1000-1200-1400-1500-3800-4700-6500

1000 BUILDING INDUSTRY

IS: Building design, building machinery, building material
clay building material, prefabricated building, housing.

CONF: 900-1100-1200-1400-1500-2000-2100-3400-5200-7000-7100-6300

1100 CEMENT INDUSTRY

CONF: 1000-1400

1200 CERAMIC INDUSTRY

CONF: 500-900-1300-4700

1300 CHEMICAL INDUSTRY

IS: Pharmaceutical industry

CONF: 500-1500-1800-2400-2900-3300-4600-5000-5200-5400-6200
6100 6300

1400 CONSTRUCTION INDUSTRY ¹¹⁰⁰ ⁵⁰⁰⁰
CONF: 700-900-1000-2300-~~3000~~-6200-6900-7000

1500 CORROSION ¹⁴⁰⁰⁻²⁵⁰⁰ ³⁴⁰⁰
CONF: 500-1300-2000-2100-3800-4900-5200-~~5500~~ 5600-6200-6700-6700

1600 COTTAGE INDUSTRY

IS: Handicrafts industry ³²⁰⁰
CONF: 200-~~1500~~-2900-~~5000~~-3700-6500-7000

1700 DAIRY PRODUCTS INDUSTRY

IS: Milk processing, butter, casein, cheese, etc.
CONF: 200-400-500-1800-5900
⁸⁰⁰ ²⁰⁰⁰

1800 EDIBLE OIL INDUSTRY

CONF: 200-400-500-3300-6100-~~6500~~
¹⁵⁰⁰ ²⁵⁰⁰

1900 EDUCATION AND TRAINING

IS: Education and training methods and means, programmes, etc.

2000 ELECTRICAL INDUSTRY - high voltage ⁵⁶⁰⁰
CONF: 2700-1500-2300-3800-4200-4300-4800-6400
²⁰⁰⁰

2100 ELECTRICAL INDUSTRY - low voltage
CONF: 500-700-3000-4200-5700-6400
²²⁰⁰ ⁴⁵⁰⁰

2200 ELECTRONICS INDUSTRY

CONF: 2000-2100-2200-4200-4300-6700

2300 ENGINEERING INDUSTRY

CONF: ~~2000~~-2000-2100-2400 - 3600-4000-6400-6700

2400 ENVIRONMENTAL PROTECTION

IS: Environmental engineering, air pollution, pollution control
sanitation, pest control, waste utilization, water treatment
and weed control.

CONF: 200-400-500-1400-3300-5000-6400-6700

2500 FEED STUFF INDUSTRY

IS: Animal feeding; (IS: processes and methods of feeding),
feed (IS: what they have to eat).

CONF: 200-400-500-~~1000~~-1300-1700-1800-3000-4400-4600-5000 5500-6300
²⁸⁰⁰⁻²⁹⁰⁰⁻³⁰⁰⁰

2600 FERTILIZER INDUSTRY

CONF: 400-500-5000-6400
³⁰⁰⁰ ³⁵⁰⁰

2700 FINANCIAL ASPECT

IS: Public and self financing, industrial/working capital, bank
credit, product costing/pricing

CONF: 100-600-1000-1400-3100-3400-4000-4900-5700-6100-6700
³⁵⁰⁰ ⁵⁰⁰⁰

2800 FISHING INDUSTRY

IS: Fishery products, processes etc.

CONF: ~~2000~~-2500-2900-~~4000~~-5000-6000

2900 FOOD INDUSTRY

IS: Food products that do not fall under specific categories
as stated in this list.

CONF: 200-500-1700-~~2000~~-3000-4600-5500-5500-6500
⁴⁰⁰⁰ ⁴⁸⁰⁰ ⁴⁴⁰⁰

3000 FOOD TECHNOLOGY

IS: Bottling, canning, food preservation, smoking etc.

CONF: ~~2000~~-1700-1800-2300-2900-5900
⁴⁴⁰⁰ ⁴⁶⁰⁰ ⁵⁵⁰⁰ ⁵⁵⁰⁰

1400 CONSTRUCTION INDUSTRY ^{1100 500}
CONF: 700-900-1000-2300-~~3000~~-6200-6900-7000

1500 CORROSION ^{1000 2500 3400}
CONF: 500-1300-2000-2100-3800-4500-5200-~~5300~~ 5600-6200-6700-6800

1600 COTTONS INDUSTRY
IS: Handicrafts industry ⁵²⁰⁰
CONF: 200-~~1500~~-2900-~~3300~~-3700-6500-7000

1700 DAIRY PRODUCTS INDUSTRY
IS: Milk processing, butter, casein, cheese, etc.
CONF: 200-400-500-1300-^{300 3500}5900

1800 EDIBLE OIL INDUSTRY
CONF: 200-400-500-3300-^{1500 2500}5100-6500

1900 EDUCATION AND TRAINING
IS: Education and training methods and means, programmes, etc.

2000 ELECTRICAL INDUSTRY - high voltage ⁵⁰⁰⁰
CONF: 2700-1500-2300-³⁰⁰⁰3600-4200-4300-4800-⁵⁰⁰⁰6700

2100 ELECTRICAL INDUSTRY - low voltage
CONF: 500-700-²²⁰⁰900-4200-⁴⁵⁰⁰5700-6400

2200 ELECTRONICS INDUSTRY
CONF: 2000-2100-2200-⁴²⁰⁰4300-⁴⁷⁰⁰4800-⁵⁷⁰⁰

2300 ENGINEERING INDUSTRY
CONF: ~~2000~~-2000-2100-2400-⁵⁰⁰⁰5100-⁶⁰⁰⁰6100-⁶²⁰⁰6300

2400 ENVIRONMENTAL PROTECTION
IS: Environmental engineering, air pollution, pollution control, sanitation, pest control, waste utilization, water treatment and weed control.
CONF: 200-400-500-1400-3300-5000-⁶⁴⁰⁰6700

2500 FEED STUFF INDUSTRY
IS: Animal feeding (i.e. processes and methods of feeding), feed, (i.e. what they have to eat).
CONF: 200-400-500-~~1000~~-1300-1700-1800-3000-4400-4800-5000 ^{5500 6000}
^{2800 2900 3000}

2600 FERTILIZER INDUSTRY
CONF: 400-500-5000-⁶⁰⁰⁰
^{3000 3500}

2700 FINANCIAL ASPECT
IS: Public and semi-financing, industrial/working capital, bank credit, project costing/pricing
CONF: 100-500-1000-1400-3100-3400-4000-4100-5700-⁵⁹⁰⁰6700-6700
^{3500 5500}

2800 FISHING INDUSTRY
IS: Fishery products, processes etc.
CONF: ~~2000~~-2000-2000-~~4000~~-5000-⁶⁰⁰⁰

2900 FOOD INDUSTRY
IS: Food products that do not fall under specific categories as stated in this list.
CONF: 200-500-1700-⁴⁰⁰⁰4100-5000-4600-⁴⁸⁰⁰5500-⁶⁵⁰⁰6500
^{4800 4800 4900}

3000 FOOD TECHNOLOGY
IS: Bottling, canning, food preservation, smoking etc.
CONF: ~~2000~~-1700-1800-⁴⁰⁰⁰4100-⁵⁰⁰⁰5100
^{4800 4800 5500 5600}

5100 FURNACE INDUSTRY & STEEL WORKS

CONF: 1400-2300-~~3200-4100-5000~~

4200 6000 6200 6400 6600

5200 FURNACE INDUSTRY

CONF: 6200-7000

5300 FUEL INDUSTRY

CONF: 1400-2300-3200-4100-5000-5900-6800

5400 GLASS INDUSTRY

CONF: 1000-1400 500

5500 GRAPHIC ARTS INDUSTRY

CONF: 4000

5600 INFORMATION-DOCUMENTATION

IS: Economic, foreign trade, industrial information centre, information exchange, processing service, storage and retrieval, market information and technological information.

CONF: 1900-3900-4100-5900-6800

5700 LEATHER AND TANNING INDUSTRY

IS: Hides and skins, shoe industry

CONF: 500-3700

5800 MAINTENANCE

IS: Assembling, materials handling, repair shop, spare parts

CONF: 800-900-1200-1300-1700-1800-2000-2100-2200-2300-2400-3000

3100-3300-3500-4200-4400-4500-4600-4900-5100-5300-5500-5600

5700-5900-6100-6700-6900-7000-

5200 5400

6000 6200 6400 6600 6800

5900 MAINTENANCE

CONF: 100-1900-2400-2700-3600-4100-6000 5900

4000 MARKETING AND PROMOTION TECHNIQUES

CONF: 100-200-2700-3600-6000-6700-6800

4100 MASS MEDIA EDITING AND REPORT WRITING

CONF: 100-200-400-500-600-700-1900-3600-3900-5100 5900

4200 MEASURING INSTRUMENTS INDUSTRY

IS: Instrumentation

CONF: 2000-2100-2200-3500-5700-5800-6000-6400

4300 MEASUREMENT METHODS-

CONF: 400-500-700-2100-2300-3000-4900-5700

220

4400 MEAT INDUSTRY

CONF: 200-400-1700-2500-2900-3000-5700-6400

4500 METAL PROCESSING

IS: Beneficiation (RF: Classification and sorting ore particles into mineral concentrate and tailings), brazing, casting, die casting, direct reduction (RF: process for production of metal especially iron from iron ore not involving use of a blast furnace, and with the aid of fuels and energy other than coking coal), galvanizing, machining, metal cutting, metal drawing, moulding, ore dressing, plating, smelting, welding, metal working industry.

CONF: 700-1500-3000-4800-6700-6800-6900-6400-6500-7000

300

3800

1000 STEEL INDUSTRY
CONF: 100-1800-~~2000-2200-2400-2600-2800-3000-3200-3400-3600-3800-4000-4200-4400-4600-4800-5000-5200-5400-5600-5800-6000-6200-6400-6600-6800-7000~~

6200 STEEL INDUSTRY
CONF: 1400-3100-4600-~~6400-6700-6900~~
ISA 2300 2800

6300 STEEL INDUSTRY
CONF: ~~200-2800-3000~~

6400 TECHNOLOGY

IS: Technological change, appropriate technology, technology transfer, choice of technology (RF: deciding on labour intensive or capital intensive methods, choosing among various processes), intermediate technology (RF: technology which will improve on the productivity of traditional methods, yet not require the capital and training typically required for the adoption of advanced skills and technology), automation, patent and standards.

CONF: 200-800-100-1700-1800-1900-2200-2300-2400-2500-2600-2800-2900-3000-3100-3200-3500-3400-3700-4400-4500-5100-5300-5400-5500-6100-6400-6500-6900-7000

6500 TEXTILE INDUSTRY

IS: Dyeing, processes, raw materials (such as ute, hemp, sisal, wool, yarn etc.)

CONF: 200-400-500-6400-6400

6600 TOBACCO INDUSTRY

IS: Cigar manufacturing, cigarette manufacturing

CONF: 200-5100

6700 TRAFFIC, TRANSPORT

IS: Equipment and means, transportation

CONF: 100-6000-6800

6800 TOURISM

IS: Hotel industry, service industry

CONF: ~~3500-3600-4100~~

6900 WELDING, JOINERY INDUSTRY

CONF: 700-2300-~~4400-5000-6000-6200-6400~~

ISA 2300 3800

7000 WOOD INDUSTRY

IS: wood processing, wood technology, and wood waste/wood residue.

TIRDC
 Information-Documentation
 Service Center
 K. Klintøe/kh

1 (2)

18.3.1982

ORGANIZATIONAL PRINCIPLES

The department is operating as an intermediary technological information service between needs and potentials of information and information services.

The information-documentation service center will develop into a structure of external oriented services and internal auxiliary activities, the quality of which is the basis for external services.

Taking the limited professional staff into account it is important to distribute between the two available ~~senior~~ information officers the responsibility for optimal development and use of each of the various activities to be performed - leading to fair balance of working load, optimal mutual consultation and coordination, optimal use of internal, (TIRDC) and external resources and optimal service of clients.

During absence the senior information officer acts as deputy for each other with regard to responsibilities distributed.

The main guidelines for distribution of responsibilities is at present based upon capacity distribution.

Mrs. W. Nyonyi:

- | | |
|------|---|
| 60 % | Establishment, organization and utilization of reference material and on meeting user's requests. |
| 20 % | Cultivating relations with other sources of information. |
| 10 % | Extension services. |
| 10 % | Internal administration. |

Mr. John Tingo:

- | | |
|------|---|
| 60 % | Establishment of user's indexes and files, <u>content's indexes and files</u> , promotion and extension services. |
| 20 % | Assisting in meeting user's requests and in cultivating reference material collection. |

18.3.1982

Mr. John Tingo:

10 %	Cultivating relations with associations and their training activities.
10 %	Internal administration.

This pattern may change over time and should not be felt too restrictive - but indicates how important it will be with internal orientation of mastering each others "business".

Having responsibility for a function or an activity means having responsibility for that intended achievements have been obtained - even when certain actions have been referred to or delegated to another person.

Reorganization, improvements, development of new services or activities must be a result of sharing concepts and experiences and a distinct conclusion of who is responsible for what function or actions.

Referring to approved action plan of 4th October 1981 pag 4 - etc.

Extension services should be the responsibility of John Tingo.

It includes all needs of gathering, indexing and filing information on clients and resources outside TIRDO, (pag 6 + annex 1-2) - but the cultivation of relations with sources and specialists are responsibilities of Mrs. Nyonyi.

Active Information Service

Not yet developed but should be the responsibility of Mr. Tingo.

Reference collections is the responsibility of Mrs. Nyonyi.

It includes acquisition, characterization, indexing, filing - loan and lending - as well as assistance to utilize the material

Question and Answer, Information Analysis and Elucidations are responsibility of Mrs. Nyonyi.

It includes registration of incoming requests, confirmation; estimates for strategy, calculation etc.

Promotion services inclusive training is the responsibility of Mr. Tingo.

This main structure can be diversified further - and should be - alongside with development of the various guidelines for procedures.

DG

TIRDO INFORMATION DEPARTMENT

SENIOR EXTENSION/INFORMATION CPE
A. JOHN TINGO

SENIOR PROGRAMMATION/RESOURCES PM
SUN. NYONGU

MUTUAL CONSULTATION

RESPONSIBILITIES / FUNCTIONS:

MARKETING:

1. Clients indexes and files
2. C of base know. indexes and files
3. Records on video paid & received
4. Promotion
5. Direct services
6. Advisory services
7. seminars, conventions, conferences
8. Visual and equipment
9. Publications
10. Tirdo index and newsletters

RESPONSIBILITIES / FUNCTIONS:

SERVICES:

1. Program planning thru:
 - a) Adaptation
 - b) Reproduction, collation & index
 - c) Editing - service materials
2. Client's attention
 - a) Preparation of documents
 - b) Submission and retrieval service
 - c) Annual report preparation
 - d) Referral services
3. Reproduction services & equipment
4. Records on video & microfiche
5. Records on identified tapes

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10. November 1981.

To R & D staff members,

The aims fo this memo is to provide for you introductory
~~remarks and guidelines on~~

- the role of a technological information service geared towards industry and towards research and development,
- how you are expected to participate- as clients and as supporters - in the activities planned and programmed for the information/documentation service center,
- how you can benefit from the services provided - individually, in your work (day by day, choosing appropriate projects, carrying out usefull result) - and share your responsibility as a staff member in making TIRDO usefull and appreciated by tanzanian industries and the community.

The role:

A technological information/documentation service center has the role of assisting in furthering of usefull application of knowledge and know-how.

Application means, to ensure that knowledge is put into operation - to solve problems, to further improvements, to upgrade quality, to upgrade competence, to broaden horizon, to further innovation.

Industrialists are do'ers, i.e. they convert knowledge and skill into practical steps of progress. It is not their natural inclination to read how - they do not have time, they just want to know.

It is the obligation of information/documentation officers and of researchers - to identify relevant and appropriate knowledge, by which industrialists can make practical steps of progress -but they have to be convinced that they can benefit.

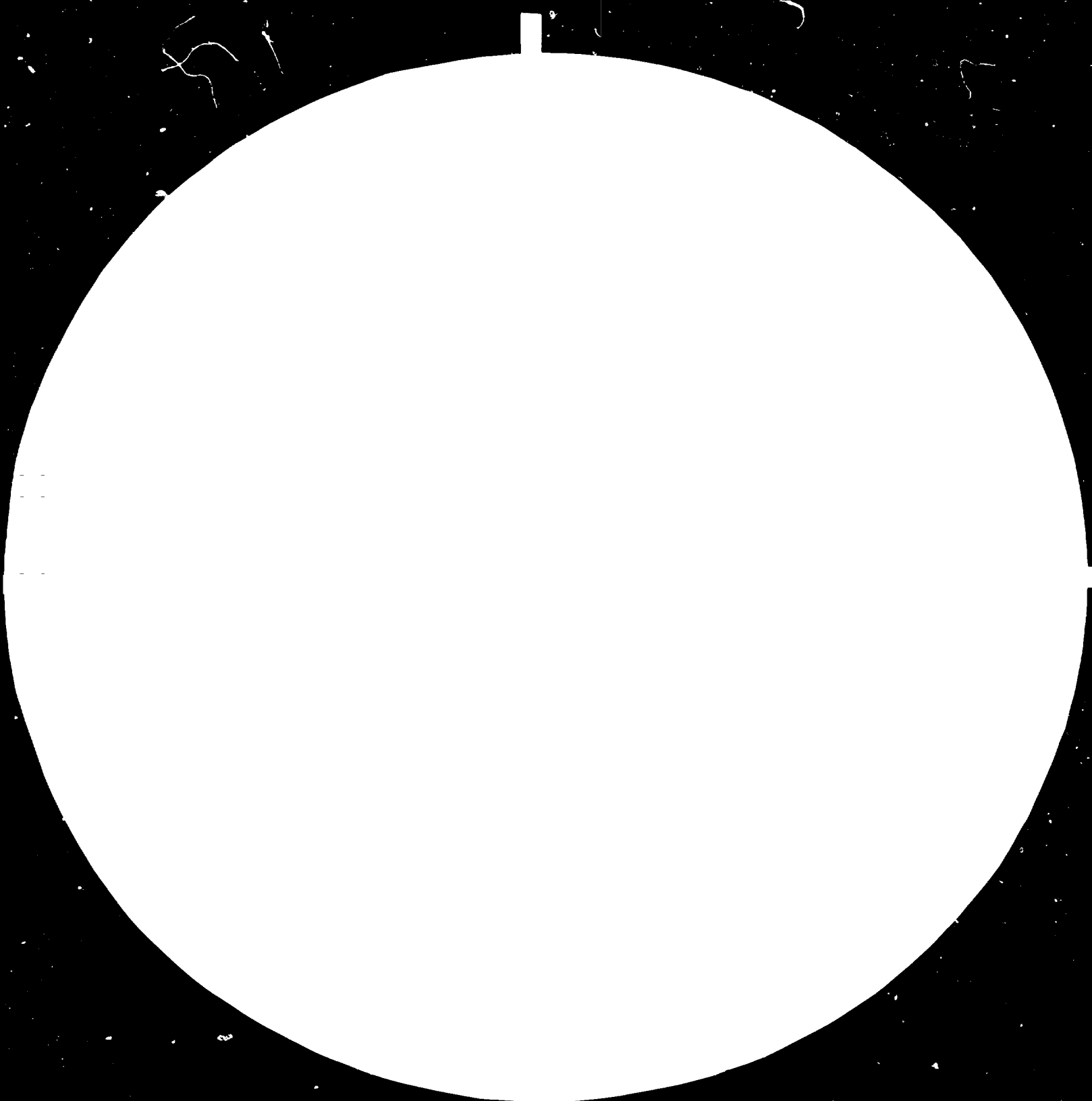
Very often industrialists grow blind to their own methods and processing -we have done so for years - all just because they are so fully occupied with meeting and satisfying their customers urgent demands. In most cases they are not alert to that they have problems, nor to the nature of problems they have faced, they are not aware that they could shift methods, processe, raw material, equipment, etc. -they may not have the understanding, the qualifications or capacity to ask their fellow industrialist next door, and they do not know the elements of the infrastructure of centers of specialized knowledge, such as TIRDO -they may have the sense that everything is not OK, but what to do about it?

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You as researchers have the necessary background of education and insight to analyse why and how - and having access to an information/documentation service center, you have access to the world sources and "banks" of knowledge - mostly freely available.

You can assist in formulating the problem and demand, you can select and combine knowledge and present it to the industrialist in a form and in a language which he can understand, and that will induce in him the challenge to apply - and to benefit.

How do you do it ?

You cannot assist anybody unless you know and understand his/hers situation, background, interest and motivation.

YOU HAVE TO PAY VISITS - TO GET RESULTS !

If Tirdo shall be usefull - if you want to feel usefull and appreciated - and I guess that all human beeing need that feeling, and has the right to get that feeling - you have to do something about it - come out of your shell and face life of realities around you.

NOTHING COMES FROM DOING NOTHING !

Technological information/documentation service means taking initiative to get a professional and usefull communication with end-users of knowledge and with sources of knowledge - the sources and specialists want clients for their beautiful "products" - and appreciate you to be their promoter and sales-agent.

Steps to take:

1. You identify - in the information/documentation service center - in the index of potential clients in industry - a number of companies to be visited.

Do not chose companies you already know - but chose companies you find interesting to learn to know.

Ask Mrs. Nyonyi or Mr. Tingo how to find out the "key-persons" in that particular company - and other data available on the company-operations.

Plan when you want to pay them a visit - fit it into your own planning of research work - and get agreement with the coordinator of extensionvisits (pt Kjeld Klintøe).

Agreed plans results in that you are taking contact with the company - getting an appointment with the Managing director - explaining very briefly, that you want to introduce TIRDO services and to learn how TIRDO best can provide services for the company.

2. You confirm the appointment - date and time - by letter, enclosing a TIRDO brochure.

3. Before going on visit - with Kjeld Klintøe - we dis-

cuss, what we expect to see - and what to look for and ask for.

4. During the first visits, Kjeld Klintøe will guide the presentation and the interview of the manager and the staff. A number of "guiding and naive" questions will have to be posed, allowing the company to explain their competitive situation, how they work, etc. etc.

5. We will ask for a tour of the plant, so we can make our own observations.

6. A company-visit should not last more than 1 1/2 hour.

7. Hopefully we have observed areas in which there can be confirmed agreement, that more knowledge would be useful.

8. Immediately upon return to TIRDO you write a report, with data collected on the company, the names and functions of persons met, where they get their information, etc. etc. and stating your personal evaluation of the observations made. You also formulate areas in which TIRDO services could be provided.

9. By assistance of Mrs. Nyonyi, you try to find information and answers or identify sources of information relevant and appropriate to areas identified - and digest very, very briefly in a memo to your client, that you have identified information you will find of interest to him - suggesting that you discuss this at a second meeting, suggesting a date.

10. You are now in the follow-up phase, providing assistance - upon request - on how to apply the knowledge you have identified - and now you hold on, with follow-up, follow-up etc. - until your client has applied - or by decision has refused to apply.

11. What did you learn ?

12. You have learnt realities of industrial life - good or bad.

You have learned to know areas in which industry could improve, areas relevant, appropriate and useful for TIRDO to invest your precious time, qualifications and capacity to do a study, i.e. first of all desk research - literature study, may be an elucidation of state-of-the-art report, or a proposal for a research project.

You are in business - you have brought TIRDO into business, you have become useful !

All your observations must be written down - and stored in TIRDO's memory - the indexes and files of the information/documentation service center - IT IS YOUR MEMORY - it is the place where all staff members are pooling their observations, their experiences, etc. - it is the professional communication center - you have an obligation for establishing and updating, and you should be interested in doing so - because it is also the resource, where you can get inspiration, and access to do-

mestic and foreign technological knowledge and know-how,

but you only benefit by active participation, nothing comes for free.

Do not ask what TIRDO can do for you - ask what you can do for TIRDO - and TIRDO will meet your requests!

All this was about:

providing technological services in any form
is application of Research and Development !

Kjeld Klintöe.

TIRDO INFORMATION-DOCUMENTATION SERVICE CENTER:

~ (S)

Re: General training of the TIRDO staff-members.

It is recommended, that the Information-Documentation Service Center arrange a series of meetings with the R & D staff-members to illustrate the role of information and documentation in R & D - activities and services of technological nature for industry - aimed at stimulating and training them in: How to use, contribute to and benefit from effective information-documentation services.

It is appropriate to chose the form of a workshop - i.e. lectures, dialogues, discussions, etc. applying visual aids, demonstrations as well as exercises - keeping the forum very open in its form, but structuring the items around effective professional communications and the use of intellectual resources for the benefit of potential and actual users.

The aim is to train users and contributors to effective identification, formulation and transfer of technological knowledge for application.

It is suggested, that the series of meetings are made obligatory for a group of researchers - 6-8 persons - and that the meetings are held on 10 consecutive Saturday mornings, kl. 9⁰⁰ sharp - 11³⁰, each meeting divided in two sessions. The meetings should commence Saturday the 13. February 1982.

The meetings will be conducted by Keld Klintø - Mrs. L. Aquino respectively - having Mrs. W. Nyonyi and Mr. A. Pingo alternating as secretary - to ensure, that notes and guidelines are taken as resulting from the meetings for later reproduction and distribution to the participants.

A confirmation (certificate) should be issued to participants having in a satisfactory way completed the programme.

The meetings should be arranged in the information-documentation service center.

The PROGRAMME:

1. The structure of industries in Tanzania - forming a "market" for application of knowledge - for R & D-services, for technological services, for information-documentation services.
2. Division of roles between industry/agro-industry and centers of special knowledge - such as TIRDO, as TISCO, as PBS, as SIDO, as University of Dar-Es-Salaam, etc.
3. The role and organisation of TIRDO. (D.G.C.L. Tarimu).
4. The TIRDO/UNIDO - project - its aim, structure and progress. (Chief technical Adviser C.A. Stone).
5. Communication with industry
 - a. Extension visits - and the techniques applied.
 - b. Interviewing an enterprise.
 - c. Identification and formulation of needs, problems and requests.
 - d. Advisory services.
 - e. Projects.

6. The reference collection of information - documentation material (books, journals, reports, etc.)
The structure, content, characterization, indexing, etc. - how to find about and use the collection.
7. The domestic, foreign and international resources of knowledge and sources of technological information and documentation material and services - how to find and benefit from them.

8. How to retrieve information in literature, files, records, etc.
9. How to use, evaluate, repackage and present information and stimulate for application, i.e. the client can identify it is relevant and appropriate for his problem-situation,
 - a. The industrial user.
 - b. The technological services.
 - c. The R & D project officer.
 - d. General promotion of the application of technology.
10. Division of roles and collaboration between specialists (R & D staff) and generalists (I & D staff).
 - a. Documentation.
 - b. Question and answer.
 - c. Information analysis.
11. The future.

It is expected, that when this training programme is completed, the staff-members will request regular meetings to be held in the information - documentation service center with the extension- information-documentation officers for exchange of professional ideas, news, experiences and for consultations.

Beside providing training of TIRDO staff-members, this workshop should become a laboratory for arranging an adequate structure of a training seminar for other groups of Tanzanian professionals.

27. January 1982

Kjeld Klintse - L. Aquino.

TIRDO Information-Documentation Service Center.

Re: Communication within TIRDO of items of professional interest and value.

With development of the infrastructure of services - information/documentation, technological, R&D services, there will be a growing need, that professional activities of individuals, of sections, of divisions and of departments - as well as of the TIRDO/UNIDO-project and its experts-are made known to everybody within TIRDO - to motivate, to assist and serve optimal use of resources.

It is recommended to use the information-documentation service center to compile such information, to edit it in a systematical way and to present it and circulate it.

During a trial period it should be strictly an internal communication pattern - but it may serve the purpose to become a model for a future parallel external newsletter-service.

It would be valuable to have three levels of compiling information for making reference to:

- a. Collecting via registers and daily time-sheets information so activities can be followed, and progress can be checked upon, and retrieved from the center upon request. (DAILY).
- b. On week-ly or bi-week-ly basis issue an internal TIRDO-NEWSLETTER making collected information available in a very brief form.
- c. On a monthly basis elaborate a summary of achievements made throughout TIRDO during the last month.

Such services are of course only possible to develop, when all staff-members will contribute, just as it only has a value if this contribution is made obligatory. Release of information from the management and the administration should also find its way through this structure.

1. Daily notification of incoming and outgoing communication.

There are certain types of communications, which should be stamped by the source - and notified - preferably in registers - one for each type of communication.

A. Incoming:

a. Telephone - calls:

Who has called who about what when ? (professional)
Who have produced final answer when ?
Answer provided by telephone, by telex, by letter, by personal message.

b. Letters:

Who have received letters from where, about what ?
Requests. Date, year, request no.
Bibliographical or factual data.
Loan of documents.
Copies of documents.
Call for visit.
Question & answer service.
Answers. To questions forwarded to colleagues abroad earlier. (Q&A no, file no)
Acquisitions. received, incl. procurement orders.

Subscriptions, received.

B. Outgoing:

a. Confirmations.

- 1. Appointments. Who are going to meet with whom, when, where ?
- 2. Orders accepted. On what subject, when expected delivery, at what costs ?

b. Requests forwarded.

By telephone, by letter, by telex.
What has been requested, from where, at what conditions, when expected ?

c. Active information.

Item, target group.

d. Digests.

Subscribers - product/branch, no, no digests, etc.

e. Arrangements like seminars, lectures, etc.

2. TIRDO NEWSLETTER. To be issued regularly - one copy to each individual staff - member - weekly or bi-weekly, depending upon amount of news, preferably not more than 4 pages. Intended only for internal communication.

a. Acquisitions. Title as registered, type & no, product/branches.

b. Requests received. From whom, about what, taken care of by whom, form of work.

c. Visits planned - and confirmed. To whom, file no, special subject, visit to be paid by whom, when.

d. Visits paid. To whom, file no, by whom, when. Interests/problems/needs identified and profiled. Reference material provided/not provided. Follow-up, when, by whom, how.

e. Visits received. Who, when, received by whom, items discussed, services provided.

f. External news. Subject, source, what to do about it.

g. Project news.

h. Personal news. Recruitments, promotions, retirements, vacations, training, tasks, etc.

i. New equipment, installations or services.

3. Monthly - summary reports on achievements.

a. Extension and promotion services.

No of visits, to how many different enterprises, belonging to how many different product/branches, located in how many different regions/districts.

Of the visits were: institutions, centers of spec. knowledge, enterprises.

No of visits demanding: Follow-up, Reference material, Adv. technological services.

Question and Answer service.
Information analysis.
R & D assistance.

Problem areas identified (Key-words)

b. Aquisitions.

No Books received	- no books ordered.
No Reports "	- no reports ordered.
No Journals "	- no journals "
No Answers "	- no answers "
No Searches "	- no searches "

c. Question and answers.

No received (Internal/External)
No answered (" ")
No still in work (" ")

Answers prepared by I & D
by I & D + R & D
by I & D + others

Hours charged ;
Expences reimbursed;
Invoice amount ;

d. Information analysis.

Same as for Q and A.

e. Active information.

No , subjects - to whom.

f. Digest services.

No of series to no of target groups.
How many issues of how many pages containing how many digests.
Subscription income.

g. Lectures and training.

No of target groups and no of participants.
Which target groups.
General -internal - no - hours - given by .
Special - internal - no - hours - given by .
General external - no - hours - given by .
Special external - no - hours - given by .

h. Reproduction.

Xerox - no masters - no copies - for who.
Stencil - no stencils - no copies - for who.
Microfishes - no pages - no copies - for who.
Reports produced - no - copies - pages - bound.

i. Telex.

No domestic.
No foreign - regional/Europe/ USA-Canada/L-A/ Asia.

j. Letters.

Same as for telex.

TIRDO
Information Department

NEWSLETTER

NO. 1

K. Klintse/dk

30.4.1982

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TIRDO NEWSLETTER (INTERNAL)

The purpose of this newsletter is to ensure that all staff-members regularly are kept informed about internal and external information and observations of interest to develop TIRDO as an organization.

It will contain information on incoming material and services, on contacts with actual and prospective clients and activities in which staff-members are involved.

All departments, sections, units and individuals are invited to contribute notes, inserts and suggestions, just as guidelines and information from management and administration of TIRDO will be included as well as information from the UNIDO-project.

All notifications will be given a form inviting the individual to seek more information where relevant and requested - indicating where such information can be found.

Editor: The information department, Mrs W. Nyonyi/Mr. John Tingo.

1. Acquisitions:

a. Books and reports: - title as registered (keyword),
- type and No.
- product/branches.

b. Periodicals: Name - year - No.

2. Requests received:

Request No./date - client - client file No. - subject area -
handled by whom - form of work.

3. Visits - planned and confirmed:

Client/center - file No. - region - visitor - where.

4. Visits - meetings:

Clients/center - file No. - region - visitor - where - report No.

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4. Visits - meetings:

Reference material provided/not provided.

Needs and services identified and profiled.

Follow-up.

5. External news:

Subject, service, what to do, by whom.

6. Administration

7. Personnel:

Recruitments, promotions, retirements, vacation, training, special tasks.

8. UNIDO project news

9. New equipments:

Installation and services.

TIRDO information department

MEMO Personnel policy.

To: C.A. Stone

D.G. C.L. Tarimu.

Re: Personnel policy recommended for TIRDO information/documentation service.

Recruitment, basic training, on-the-job training, fellow-ships, operational training, up-dating of professional competence and extended contact with colleagues abroad.

Related to the strategy for development of a programme structure, the activities and operational methods of a service is a personnel policy for the service.

Which people to recruit for the service, how to train them for the service, how to plan for that they are kept developing their skill, competence, knowledge of their field and their personality to grow the programme, the diversity of the programme, the quality and effectiveness of the programme and the services according to changing needs of the clients, actual and potential.

Recruitment: People graduated as B.Sc. or M.Sc. in one discipline or the other, preferably in technology or business administration - also preferably having worked within industry or within consultancy or industry-oriented R&D.

Basic training: Basic training, conceptual and methods training and skill improvement should be provided in the information/documentation service center by senior officers and expatriates - and it should be followed up by on-the-job training under supervision of the staff.

Fellow-ships: Should be provided on carefully selected programmes by the staff in consultation with UNIDO and UNIDO experts. It should be ensured that the training is relevant and appropriate to the present programme and activities of the service and the development planned, and relevant and appropriate to the situation and conditions with which the staff-members will be confronted when taking up work upon return. They must be challenged to apply immediately upon taking up work.

Operational training. Returning personnel must be given meaningful work of individual nature and responsibility, under supervision, allowing them to practise broadly within the programme of activities and learning from mistakes and achievements.

Up-dating of professional competence: Having practised for a year or so each staff-member should be given opportunity to apply for further fellow-ship or study-tour to become acquainted with new experiences gained abroad, new technological methods to be applied by the service when appropriate for their mother-organization.

Contacts with colleagues abroad: The staff-members should participate and contribute to activities of professional associations within the field of information/documentation, attend meetings, seminars and conferences - domestic, in the region and in foreign countries.

How to practise such a policy within TIRDO ?

1. Mrs. Nyonyi and Mr. A. J. Tingo are found personally qualified,

- motivated and competent to operate an initial information/documentation service from 1. Januar 1982. The should be recognised in operation.
2. After three months of operation - supervised by expatriates - the programme-structure should become established.
 3. 1st April 1982 there will be a need for an assisting documentalist and assisting extension officers to take up basic training, provided by the expatriates - supplemented by on-the-job training.
 4. As per 1. July 1982 the new staff-members should be ready to take a full share in operations - allowing Mrs. Nyonyi and Mr. Tingo - one after the other - to complete their overseas training during autumn 1982.
 5. When return of Mrs Nyonyi and Mr. Tingo, time has come to send assisting staff on fellowships - one after the other - preferably to different countries, to ensure that as broad spectrum of know-how as possible is procured for application within the information/documentation center of TIRDO.

Support in adjustment, consolidation, improvement, innovation and management of the information/documentation service should be requested from UNDP/UNIDO over a period of not less than three years after the expatriates have left - by calling them back on 2-3 shorter visits per year (3-4 weeks at a time) - but professionalism of the information/documentation staff is only really gained

- when they are on their own responsibility
- when they are ensured backstopping and moral support by foreign experience colleagues
- When they are wholeheartly supported by TIRDO-management.

DSM, 1. December 1981.

Kjeld Klintøe
Kjeld Klintøe.

K. Klintøe/kk

8.4.1982

1 (5)

DEVELOPMENT OF CLIENTS SERVICES

Response to promotion and extension services is expected to result in requests for

- a Document procurement on loan.
- b Reprographic services.
- c Question and Answer services.
- d Information Analysis.
- e State of the art/the business reports.
- f Technological services:
 - 1. Instrument maintenance, calibration, repair.
 - 2. Preventive maintenance, planning, training, supervision.
 - 3. Training: Information service, Supervisory courses etc.
- g Research & Development projects.

It is recommended that some considerations are given to procurement and allocation of manpower capacity, to planning and coordination of the use of manpower and some guidelines on what kind of services and capacity can be offered - just as on approval of estimates, strategy for individual task etc.

Above mentioned a - c can be handled by the staff of the information department - but d - g demands advice assistance and/or working capacity from the group of researches.

Below mentioned three cases illustrates the situation:

1. Tanzanians Brewery Ltd.

Mr. Ganyara has made a study and analytical report on use of chemicals in the process of cleaning bottles.

The report is good - and should be turned into a syntetic proposal to the plant manager - Mr. Mevada - on how to benefit from the findings, i.e. an operational plan for:

- 1 Quality control on incoming material - only payment for active agent in chemicals.

- b Storing conditions to avoid deterioration before use.

- ~~c Plan for uniforming the concentration used for the bath aimed at,~~
 - 1. Saving money on expenses for chemicals.
 - 2. Keeping for sanitary reasons a standard concentration.
- d Plan for internal supervision.
- e Plan for regular - non advertised - inspection, by TIRDO.

A number of meetings with Mr. Mevada and his staff will be necessary before a proposal can be worked out. How much is TIRDO prepared to invest in such a case?

2. Dawa ya Mbu:

Mr. Ganyara has - and other staffmembers - paid several visits to this enterprise.

The problems are mainly substitution of imported gel-material (German) and dye-stuff (British) with national rawmaterial.

- a Identifying a national resource of starch-rich material, being continuously available at reasonable costs.
- b Develop an extraction process and qualitycontrol methods and specifications - inclusive necessary apparatus and instruments.
- c Identify national rawmaterial for a strong-coloured dyestuff,
- d Develop a process for extracting the dyestuff, with specifications and guidelines for control.
- e Identify a "perfume" which can cover unpleasant ingredients in the smell of smoke - not harming the effect of the coils.

How much capacity is TIRDO prepared to allocate to serve this enterprise - who could develop an exportable product?

3. The Poultry-Feed Case:

A case to illustrate a typical result of extension services - leading to:

- a Identifying an important area for socio-economic development and application of appropriate technological knowledge.
- b Cross-institutional/enterprise communication with TIRDO information department as a catalyser.
- c Optimal collaboration between the information-documentation service center and the R & D staff.

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- d Training of all officers involved in working strategies, working methods, communication and reporting.
- e Realistic promotion of TIRDO services.

19. November 1981

An extension service visit was planned to be paid to Poultry Feeds Ltd., Mbagola, P.O.Box 4745, Dar-es-Salaam, by A. Ganyara, J. Tarimo and K. Klintøe. The company was identified in the TISCO Directory.

The company did not exist any longer. We were referred to it had been taken over by Vigunguti Chichen Hatchery, P.O.Box 9391, Dar-es-Salaam, Tel. 634 9.

Visit was paid to the project manager Mr. B.F. Rweyemamu, who immediately showed an interest in TIRDO's initiative and services. TIRDO could provide (see Mr. Ganyara's report No. 27 B).

Mr. Ganyara checked the reference collections immediately upon return and wrote Mr. Rweyemamu accordingly.

Due to leave requests for Mr. Ganyara and fellow-ship for Mr. Tingo no follow-up could take place before 18th of January - much too long a period of vacuum.

A telephone call indicated contact be taken with Mr. P.J. Kimati - Life Stock Development Authority (LIDA), to National Milling Corporation Ltd and to Agricultural Division in Morogoro of University of Dar-es-Salaam.

25. January 1982

A meeting with Mr. Kimati, LIDA was arranged for Mr. John Tingo, Mr. P. Victus, Mr. G. Njau and Mr. K. Klintøe to clarify our understanding of LIDA's position and interest in the area.

We indicated:

- a Poultry is a protein-rich meat of great value to all parts and groups of the population - in many countries - it could be developed into an export-article.
- b The by-product of producing poultry-eggs, are specially valuable for childrens development and for the food diet because of the variety of utilizations.
- c Poultry is the fastest growing animal food-stuff.

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- d Poultry can be grown systematic and complete controlled methods and standards - and a high level health condition can easily be kept - well in local production.
-
- e Poultry can grow by a variety of rather simple basic feed-stuff provided it is enriched up to a certain nutrition value, i.e. local available basic material can be utilized.
- f Produced locally transportation costs can be minimized - at present 50 % at least of the price for poultry feed is transportation costs.
- g Distribution of poultry and eggs from local producers to local consumers will be beneficial.
- h The necessary machinery for milling and mixing is rather simple assistance for maintenance and repair can be gained by SIDO local workshops.

Mr. Kimati became very interested, made internal confidential reports and statistics available for Mr. Njau and Mr. Victus and recommended contact with National Milling and SIDO.

The meetings have been held - but progress is very slow - because of Mr. Njau's work at the University and Mr. Victus's leave. Both officers have shown a very high committment to the case.

They have been met with enthusiasm everywhere they have searched for and gathered information.

Does TIRDO want to allocate manpower and systematic work on this project, which still is in the initial stage?

4. The SONGEA-projects

February 1982 Mr. A.J. Vadgama, P.O.Box 77, Songea, called for technical and technological assistance from TIRDO.

Items were:

- a Construction of a dam for hydro or hydro-electric running of a small maize-mill.
- b Establishment of a brick-factory.
- c Establishment of a wood-log sawmill.

The information department involved Dr. Haule, Mr. Chardo and Mr. Victus in the cases, for professional evaluation of information material available in Tanzania and elsewhere, professional knowledge and capacity available.

6.4.1982

5 (5)

It was obvious that such requests can at present only be met by producing an advisory report for inquirer to be used as basis for evaluating a contractor and for his own decisionmaking with regard to progress of his projects and to the investment strategy.

How far does TIRDO want to go in such cases?

TIRDO INFORMATION DEPARTMENT

Annex 2.24

Report Allocation of professional manpower resources

It is of importance for intended development of TIRDO services, for training of staff members and for optimal use of the limited manpower resources to have a better knowledge of who is/is not available and for what reason.

It is recommended, that the forms up to now used exclusively for planning extension visits are developed into obligatory planning forms, i.e. all TIRDO professionals have to report on request/voluntarily once per week on their intended occupation.

Reports and plans

What appointments/dispositions have been fixed which day what time for the first coming week?

Which appointments/dispositions are intended which day what time for the second week from now on?

Information will be gathered each Wednesday on JOHN TIRDO's initiative, and he is responsible for the gathering of information, for the typing and distribution of the plans to each staff member - to the management and to the UNIDO-project.

The plans are meant as an information tool - they must be as reliable as possible - and if changes have to be made it should be reported to John Tingo (in his absence to Mrs. H. Kyonyi), so they can request or inform - who is available/not available when.

And for information services.

22.3.82

KJELD KLIVIK

TANZANIA INDUSTRIAL RESEARCH AND DEVELOPMENT ORGANIZATION

MEMO

IRD/1/1/26

March 23, 1982.

TO: All TIRDO Professional Staff

From: C.L. Tarimu,
Director General,
TIRDO.

MANPOWER RESOURCE PLANNING

For the optimum use of available manpower and for training it is necessary that Management is kept informed at all times of the whereabouts of professional staff.

To achieve this, all professional staff are required to indicate, on a form to be supplied by the Information Department, their appointments and other activities for two weeks in advance. The forms will be kept by the Information Department and updated once a week.

The Information Department will circulate the information so gathered to Management and to all officers. It is most essential that officers consider their appointments critically before they fill out the forms as frequent changes during the course of the week will make planning almost impossible.

C.C. C.A. Stone

C.C. A.J. Tingo

TANZANIA INDUSTRIAL RESEARCH AND DEVELOPMENT ORGANIZATION

TIRDO INFORMATION DEPARTMENT

/e: TIRDO MEMO ON MANPOWER RESOURCES PLANNING
of 23rd MARCH 1982

1. The requested information will be gathered each WEDNESDAY on JOHN TINGO's initiative.
2. JOHN TINGO is responsible for gathering, typing and distributing the plans to all staff members and to the UNIDO project staff.
3. INFORMATION requested are:
FIRST - COMING WEEK: Which fixed appointments/occupations have been made - which day what time where?
4. Fixed appointments should be respected - and appointment - time kept - it is essential for having a fruitful meeting.
5. If changes in plans - fixed or intended - are to be made - report to John Tingo - in his absence to Mrs. W. Nyopyi - so they on request can inform who is available/not available - for what reason.

TIRDO
Information Department

K. Klintøe/kk

20.4.1982

1 (2)

PRIORITIES UNDER CIRCUMSTANCES OF LIMITED
MANPOWER CAPACITY

Taking into consideration that for a rather long time to come, TIRDO Information Department will face limited capacity - both with regard to own capacity, from the research staff - while it will be necessary to

restrict activities geared forwards certain product/branch areas with regard to

- extension services
- acquisition of reference material.

It is recommended to select a group of product/branches to be given 3rd priorities and a larger group to be given 2nd priorities.

3rd priority should be:

- 100 Administration
- 400 Applied biology
- 500 Applied chemistry
- 600 Applied mathematics
- 700 Applied physics
- 1600 Cottage industry
- 1900 Education & training
- 2700 Financial aspects
- 4100 Mass media & promotion techniques
- 4900 Nuclear & Isotope industries
- 5000 Oceanography
- 5900 Research & development
- 6800 Tourism.

20.4.1982

2 (2)

2nd priority should be:

200 Agriculture, forestry, horticulture
1400 Construction industry
1700 Dairy products industry
2400 Environmental protection
3500 Graphic Arts industry
4000 Marketing and promotion techniques
4700 Mining and mineral industry
5300 Paper & pulp industry
5600 Power industry
6000 Shipbuilding industry
6400 Technology
6500 Textile industry
6600 Tobacco industry
6800 Tourism.

TIRDO
Information Department

annex 2.26

K. Klintge/kk

3.5.1982

1

**UPDATED INDEX ON TIRDO PROJECTS AND ON DISTRIBUTED
TASKS AND ASSIGNMENTS OF THE RESEARCH STAFF**

The information-documentation service center has to support the Research etc. best possible with documentation and intelligence services.

I.e. making effective access to reference collections in-house, domestic and abroad, that includes a current awareness of journals, reports and other incoming material as well as on personal activities.

To contribute to optimal benefit from invested manpower both of researchers and of the information department staff it is suggested, that the above mentioned index - proposed in the memo of 4th October 1981 - now be initiated and exercised.

The consequence should be, that information on present distribution of tasks and assignments is listed, and whenever a new project, a task or an assignment is approved by TIRDO management and/or the UNIDO-project - the information-documentation service center should be informed by a written note, stating:

Date of approval: registration number
Subject approved:
Who is assigned:
Purpose of the assignment:
(Preliminary investigation, clients request, elucidation, project training, etc.)
Expected working time & time.

The registration number is then to be used by the researcher on his planning schedule, and by the information department in their registration of allocated time and specific expenses.

TIRDO
Information Department

K. Klintse/ck

20.5.1982

**INDEX OF RESOURCEFUL INDIVIDUALS THROUGHOUT
TERRITORY (CONFIDENTIAL)**

During external activities and relations all TIRDO staff members - and expatriates - gain knowledge on individuals and their accumulated knowledge, experience and influence - professionally.

They represent an enormous resource to be mobilized by consultation in connection with TIRDO's attempts to mobilize capabilities to stimulate, assist and serve for progress.

As the index should be confidential, the entrance should be kept exclusively on technological terms - so the total frame of the space of resourcefulness of the individual persons mentioned and referred to in the index.

K. Klintøe/kk

20.5.1982

INDEX ON IDENTIFIED NEEDS FOR TECHNOLOGICAL

- a) INFORMATION and DOCUMENTATION
- b) SERVICES of various kind
- c) COMPETENT ADVISORY SERVICES
- d) ANALYSIS and INVESTIGATIONS
- e) R & D

Due to limitations for a time to come in manpower and financial capacity, as well as professional experience - the promotion of TIRDO services has to be limited to develop users needs into demands and further into requests only to such areas, in which TIRDO staff (and its correspondents) has capabilities to offer for meeting requests.

During the external activities the Information officers, as well as other staff members of TIRDO - observations will be made on needs for services, for acquisitions of material, equipment etc. to be met, when conditions are favourable - or have been made favourable by systematic planning.

Such observations and ideas should be notified and stored in an index in the Information-Documentation service Center - providing by retrieval basis for developing and growing TIRDO's competence, usefulness and reputation.

CONFIDENTIAL

TIRDO INFORMATION DEPARTMENT

M E M O R A N D U M

to: (D.G.) *de info section*
C.A. STONE

from: Kjeld Klintse
L. Aquino.

Re: Programming and budgetting the external and internal activities of the information/documentation service center.

Having limited physical and intellectual resources at disposal, we find and recommend it very important, that the dimensioning of the programme takes its starting point in - What do we want to accomplish? When? Can we afford that? If not, which strategic measures should be taken? - either cutting down the programme, diminishing the speed of growth, or how can we get a stronger support?

Experiences are available on manpower demands for the various external activities, the figures are translated into the special Tanzanian conditions and are stated below.

Describing the external programme structure shows, what we would call an initial programme - not promising too big growth, but a solid growth.

With regard to necessary internal activities, the dimensioning calls for another approach - how do the professionals have to divide their time to ensure, that external activities are back-stopped by effective resource-management?

Both these approaches are described below.

Only when a strategy is chosen, the dimensioning of other expenses can take place - the dimensioning of communication costs (postage, telephone, telex, terminals, stationery, office accessories and supplies, etc), of transportation and travel costs etc., of reference materials, equipment, etc.

THE PROGRAMME STRUCTURE:

External activities:

- a. Question and answer service.
 1. Referral services.
 2. Document provision.
 3. Documentation.
- b. Information analysis.
(Participation by R&D and/or external specialists)
- c. Digest services.
- d. Publications (advisory booklets)
- e. Advisory services.
(Participation by R&D and/or external specialists)
- f. Extension services, by generalists and specialists.
- g. Active information service - not paid for.
- h. Lectures, seminars, etc.

Internal activities.

Resources:

- a. Procurement and acquisition of reference material.
- b. Establishment of networking arrangements, domestic and foreign.
- c. Indexes and files on potential and actual clients.

Training:

- a. General - Tirdo staff members.
- b. Special - Extension, information and documentation off.
- c. Special - overseas.
- d. Participation in associations, domestic and overseas.
- e. Development of visual aids and repro services.

Organizational development.

- a. Manual on policies and procedures.
- b. Cost analysis and monitoring procedures and achievements.
- c. Development of internal communication structure.

Manpower demands for various external procedures: (Experience)

a. Question and Answer, per question.		
Formulation, search and answer.	proff. 4.0	Office. 5.0
b. Information analysis, per anal. (incl. participation of R&D and/or foreign specialists)		
Reformulation, confirmation.	3.0	2.0
Search, evaluation, reporting.	15.0	5.0
Proofreading, delivery.	3.0	2.0
	21.0	9.0
c. Digest services, per one pro- duct/branch, 8 times a year, 3 pages.		
Search, evaluation.	50.0	--
Writing, editing.	200.0	160.0
Repro and distribution.	50.0	40.0
	300.0	200.0
i. e.		
per issue	37.5	25.0
per quarter year	75.0	50.0
d. Publications, advisory booklets. Per publication of ca 20 pages, participation of R&D staff.		
Gathering material	10.0	--
Writing and editing	30.0	15.0
Repro, binding, etc.	5.0	20.0
	45.0	35.0
e. Advisory services.		
Participation of R&D, etc.	?	?

f. Extension services,		
by generalists and specialists.		
Planning, preparation, appointment.	2,5	1,0
Visits	3,0	-
Reporting	1,5	0,5
Checking files for ref.mat.	2,5	-
Follow-up letters, etc	2,5	2,0
	<u>12,0</u>	<u>3,5</u>

g. Active information service-not paid for.		
Identification of problem areas or challenging subject areas	2,0	-
Writing a digest	3,0	1,5
Proof reading, repro, distr.	1,0	1,5
	<u>6,0</u>	<u>3,0</u>

h. Lectures, seminars, etc.		
Planning according to audience	2,0	-
Preparing paper and visual aids	4,0	2,0
Lecture and transport	3,0	-
Follow-up	2,0	2,0
	<u>11,0</u>	<u>4,0</u>

Working hours, available , for internal, external activities
and for unspecified routine work.

Per person		
per year	1800,0	1800,0
per quarter	450,0	450,0
per week in average	34,6	34,6

Recommended initial programme:

a. Question and answer service.

<u>Jan</u>	<u>Feb</u>	<u>mar</u>	<u>Apr.</u>	<u>May</u>	<u>Jun</u>	=	<u>1981/82</u>		<u>all 1982/83</u>
<u>External</u>									
5	3	11	15	15	15		69		160
<u>Internal</u>									
3	6	9	12	14	16		60		90
demanding man hours:									
Proff. 168				348			516		1000
Office 210				435			645		1250

b. Information analysis.

<u>External</u>									
-	1	1	1	1	2		6		15
<u>Internal</u>									
1	2	2	3	3	4		15		30
demanding man hours:									
proff. 147				294			441		945
office 63				126			189		405

c. Digest services.

No of product/branches of 3 pages per issue								
-	-	1	1	2	2		2	4
No of subscribers								
-	-	10	15	30	50		50	200
demanding man hours								

proff.	37,5	187,5		225		1200
office	25,0	125,0		150		800

d. Publications.

No, of 20 pages, of 50 copies								
-	-	-	-	-	1		1	5
demanding man hours								
proff.	--	45		45		225		
office	--	35		35		175		

e. Advisory services.

?

f. Extension services.

Visits.

Ext.	10	10	10	10	10	10	60	150
R&D	$\frac{5}{15}$	$\frac{6}{16}$	$\frac{6}{16}$	$\frac{6}{16}$	$\frac{6}{16}$	$\frac{6}{16}$	$\frac{35}{95}$	$\frac{100}{250}$

demanding man hours								
proff.								
180	192	192	192	192	192		1140	3000
office								
135	144	144	144	144	144		967	2250

g. Active information service.

No of digests distributed at no charge								
-	-	2	4	6	8		20	100
demanding man hours								
proff.								
-	-	12	24	36	48		120	600
office								
-	-	6	12	18	24		60	300

h. Lectures, seminars, etc.-.

No								
-	2	2	3	3	4		15	30
demanding man hours								
proff.								
22	22	33	33	44			154	308
office								
8	8	12	12	16			56	112

Demanded man hours for
Resources,
Training, and
Organizational development
are not calculated, but by experiences is known, they
run to about 60 % of man hour consumption for external
activities.

Summary of an initial programme:

Professional staff.

	<u>Jan. - March</u>	<u>April - June</u>	<u>rem. 81/82</u>	<u>1982/83</u>
a. Q&A	168	348	516	1000
b. IA	147	294	441	945
c. Dig	37,5	187,5	225	1200
d. Pub	-	45	45	225
e. Adv	?	?	?	?
f. Ext	564	576	1140	3000
g. AI	12	108	120	600
h. Lect.	44	110	154	308
subtotal	<u>972,5</u>	<u>1668,5</u>	<u>2641</u>	<u>7278</u>
+60%	<u>583,5</u>	<u>1001,0</u>	<u>1584,5</u>	<u>4367</u>
	1556,0	1769,5	4225,5	11645
		i. e. persons	4 2/3	6 1/2

Office pers.

a. Q&A	210	435	645	1250
b. IA	63	126	189	405
c. Dig	25	125	150	800
d. Pub	-	35	35	175
e. Adv	?	?	?	?
f. Ext	423	544	967	2250
g. AI	6	54	60	300
h. Lec	16	40	50	112
subtotal	<u>743</u>	<u>1359</u>	<u>2102</u>	<u>5292</u>
+60%	<u>446</u>	<u>815</u>	<u>1261</u>	<u>3175</u>
	1189	2174	3363	8467
		i. e. persons	3 3/4	4 3/4

15. January 1982

PIRDO Information Department.

Comments to PIRDO file index.
December 1981.

To: D.G. Farimu
C. A. Stone.

Re: Contributions of the information/documentation service center
to the PIRDO records and files.

Provided the information department is given responsibility as outlined in K.K.'s paper of 4. October 1981, which by principle was agreed upon - the consequence is the department has to operate the information/documentation services, and its necessary collections, files, records, indexes and resources as the PIRDO professional communication center and service.

That includes:

- to be kept informed about approved plans, distributed professional tasks, accepted services and contracts. (the reason be to be able to gather and acquire, as well as to retrieve from PIRDO sources and holdings as much relevant and appropriate information prior to action or decision-making)
- to keep departments and individuals continuously informed of who are doing what, and what has been achieved by whom, when - the reason be to stimulate individuals to pull information and assistance from the organisation and make themselves as usefull as possible by assisting when and where they have knowledge, know-how, capability and ideas to offer - still caring primarily for tasks and jobs being given to them. (Summaries of the various activities carried out within Pirdo must be circulated to all members of the professional staff and management to optimize utilization of manpower and capabilities)
- to ensure the flow of professional knowledge to and from - internal/external users, clients, sources of knowledge - gathering, evaluating and reporting in summaries identified needs, products, and achievements of the organisation.

These activities are in our opinion vital supplementary functions of an information/documentation service center and must be trained for from establishment. The aims are, as said before

- to acquire information, to get it evaluated for relevance and appropriateness, to get it stored and indexed for retrieval, to get it used prior to action and decision-making, and to record achievements.

The information/documentation service center has to operate within PIRDO's structure of administrative rules and regulations, it has to provide for management summaries of all professional activities regularly, and in certain cases to propose actions and decisions to be taken. The summaries are aimed at providing background for such actions, decisions and for planning.

The information/documentation service center should not in any respect be involved with, or be given responsibility for administrative procedures or dispositions beyond their own operations to be carried out within the frames of their approved programme and budget.

Example 1. In relation to training - domestic or overseas - the total practical arrangement of such training, with all its related documents and paperwork is beyond the service centers obligations, even if it is one of its own staff members - the information/documentation service center need to know : Who is going where, when, with what purpose, when is he/she coming back - and when

ensuring that a professional report is delivered to the center for indexing, stored for retrieval and mentioned in the summary of acquisitions (records of TIRDO's accumulated knowledge and know-how)

Example 2. All detailed communication with clients - Question and Answer service, Extension service, Subscriptions to Brief News, Technological services, etc. should be stored, ~~filed and indexed by and in the information/documentation~~ information/documentation service center - provided

- a) that a monthly summary of professional content and data is produced for management and the staff (Which clients have requested what, who are working on that request, how far has progress been made, when is the task finalized, etc.)
- b) the contracting procedure (legal, financial, allocation of manpower, charging and invoicing is beyond the responsibility of the information/documentation service center).

Having illustrated so far our recommendations we further recommend, that all areas for which the information/documentation service center is given responsibility to operate acquisitions, collections, stores, files and indexes are mentioned individually in the TIRDO file index and all within one heading INFORMATION/DOCUMENTATION = IDR/4.

ACQUISITIONS	IDR/4/1
Principles, policies, criterias, procedures, etc	IDR/4/1/1
Acquisition lists, books-monthly	IDR/4/1/2
-- -- , reports, internal	IDR/4/1/3
-- -- , reports, extern.	IDR/4/1/4
-- -- , prim. Journ. subs.	IDR/4/1/5
-- -- , - - , free	IDR/4/1/6
-- -- , secd. - , subs.	IDR/4/1/7
-- -- , - - , free	IDR/4/1/8
-- -- , microfiche	IDR/4/1/9
-- -- , catalogues	IDR/4/1/10
-- -- , misc.	IDR/4/1/11
RECORDS, EXTENSION activities	IDR/4/2
Principles, policies, programmes, procedures, etc	IDR/4/2/1
Extension visits, plans	IDR/4/2/2
- - - - - , reports	IDR/4/2/3
Other visits paid	IDR/4/2/4
Visitors received, domestic, reports	IDR/4/2/5
- - - - - , foreign, reports	IDR/4/2/6
Study tours, domestic, reports	IDR/4/2/7
- - - - - , foreign. - -	IDR/4/2/8
Training, domestic, reports	IDR/4/2/9
- - - - - , foreign, - -	IDR/4/2/10
Meetings, Conf., Sem., domestic, reports	IDR/4/2/11
Meetings, etc. , foreign, reports	IDR/4/2/12
Meetings arr. by TIRDO	IDR/4/2/13
(may be subdivided acc. to type)	
Identified problem -, needs- and subject areas subject to TIRDO services.	IDR/4/2/14
RECORDS, INFORMATION activities	IDR/4/3
Principle, policies, programmes, procedures, etc	IDR/4/3/1
Information brief news, subscriptions	IDR/4/3/2
Resulting requests	IDR/4/3/3
Miscellaneous	IDR/4/3/4

COMMUNICATION MEANS

Guidelines for establishments and use
Telephone, telex, cables
Terminal activities
Postal services
Transportation

IDR/4/9
IDR/4/9/1
IDR/4/9/2
IDR/4/9/3
IDR/4/9/4
IDR/4/9/5

BUDGET, STATISTICS, COST-ANALYSIS

Budget for the I.-Department
Cost-analysis for -----
subdivided into
Time sheets
Expenses
Supplies
Achievements

IDR/4/10
IDR/4/10/1
IDR/4/10/2

IDR/4/10/2/1
IDR/4/10/2/2
IDR/4/10/2/3
IDR/4/10/2/4

INVENTORY for the I & D service center

Furniture
Equipment
Supplies

IDR/4/11
IDR/4/11/1
IDR/4/11/2
IDR/4/11/3

	IRD	Central Inf. Dep't	
ACQUISITIONS	IDR/4/1		
Principles, policies, criterias, procedures, etc	IDR/4/1/1	X	
Acquisition lists, books-monthly	IDR/4/1/2		X
-- -- , reports, internal	IDR/4/1/3		X
-- -- , reports, extern.	IDR/4/1/4		X
-- -- , prim. Journ. subs.	IDR/4/1/5		X
-- -- , - - , free	IDR/4/1/6		X
-- -- , secd. - , subs.	IDR/4/1/7		X
-- -- , - - , free	IDR/4/1/8		X
-- -- , microfiche	IDR/4/1/9		X
-- -- , catalogues	IDR/4/1/10		X
-- -- , misc.	IDR/4/1/11		X
RECORDS, EXPENSION activities	IDR/4/2		
Principles, policies, programmes, procedures, etc	IDR/4/2/1	X	
Extension visits, plans	IDR/4/2/2		X
- - - - - , reports	IDR/4/2/3		X
Other visits paid	IDR/4/2/4		X
Visitors received, domestic, reports	IDR/4/2/5		X
- - - - - , foreign, reports	IDR/4/2/6		X
Study tours, domestic, reports	IDR/4/2/7		X
- - - - - , foreign, - -	IDR/4/2/8		X
Training, domestic, reports	IDR/4/2/9		X
- - - , foreign, - -	IDR/4/2/10		X
Meetings, Conf., Sem., domestic, reports	IDR/4/2/11		X
Meetings, etc. , foreign, reports	IDR/4/2/12		X
Meetings arr. by CIRDO	IDR/4/2/13		X
(may be subdivided acc. to type)			
Identified problem -, needs- and subject areas subject to CIRDO services.	IDR/4/2/14		X
RECORDS, INFORMATION activities	IDR/4/3		
Principle, policies, programmes, procedures, etc	IDR/4/3/1	X	X
Information brief news, subscriptions	IDR/4/3/2		X
Resulting requests	IDR/4/3/3		X
Miscellaneous	IDR/4/3/4	- 5	X

		Central	Inf Dept
RECORDS, DOCUMENTATION activities	IDR/4/4		X
Principles, policies, programmes, procedures, etc	IDR/4/4/1	X	
Correspondents, domestic	IDR/4/4/2		X
- - - - , foreign (may be subdivided in regional, foreign national, international)	IDR/4/4/3		X
Information/documentation services- terminal services	IDR/4/4/4		X
(may be subdivided)			
Document delivery services	IDR/4/4/5		X
(may be subdivided)			
Question & Answers	IDR/4/4/6		X
Information analysis	IDR/4/4/7		X
Information consultancy	IDR/4/4/8		X
R&D programmes	IDR/4/4/9	X	(X)
R&D reports	IDR/4/4/10		X
Experts reports	IDR/4/4/11	X	
Miscellaneous	IDR/4/4/12		X
CENTERS of SPECIAL KNOWLEDGE	IDR/4/5		X
How to profile, collaborate, use, etc	IDR/4/5/1		X
Internal, the R&D staff	IDR/4/5/2		X
Domestic centres	IDR/4/5/3		X
Foreign centres (may be subdivided)	IDR/4/5/4		X
International	IDR/4/5/5		X
PROFESSIONAL ASSOCIATIONS	IDR/4/6	X	
Policies, etc for membership	IDR/4/6/1	X	
Domestic, R & D	IDR/4/6/2	X	
- - - - , I & D	IDR/4/6/3	X	
Regional, R & D	IDR/4/6/4	X	
- - - - , I & D	IDR/4/6/5	X	
Foreign, outside region, R & D	IDR/4/6/6	X	
- - - - - - - - - - , I & D	IDR/4/6/7	X	
International, R & D	IDR/4/6/8	X	
- - - - - - , I & D	IDR/4/6/9	X	
ASSISTANCE PROJECTS ASSISTANCE PROJECTS	IDR/4/7	X	
Principles, policies, structures, conditions, etc.	IDR/4/7/1	X	
UNDP/UNIDO	IDR/4/7/2	X	
UNESCO	IDR/4/7/3	X	
EEC	IDR/4/7/4	X	
Bilateral (may be subdivided)	IDR/4/7/5	X	
REPROGRAPHIC SERVICES	IDR/4/8		X
Principles, guidelines, criterias for internal/external services	IDR/4/8/1	X	
Leasing services for equipment and operators	IDR/4/8/2		X
Visual aids, own production and use	IDR/4/8/3		X
- - - - - , subcontractors	IDR/4/8/4		X
- - - - - , clients	IDR/4/8/5		X
Printing, duplicator (subdivided int/ext)	IDR/4/8/6		X
- - - , Xerox (subdivided int/ext)	IDR/4/8/7		X
- - - , Microfiche (subdivided int/ext)	IDR/4/8/8		X
Binding (subdivided int/ext)	IDR/4/8/9		X
Editorial assistance	IDR/4/8/10		X
UNDP internal proff. communication	IDR/4/8/11		X
UNDP external communications	IDR/4/8/12	X	

		Central	Inf Dep't
COMMUNICATION MEANS	IDR/4/9	X	
Guidelines for establishments and use	IDR/4/9/1	X	
Telephone, telex, cables	IDR/4/9/2	X	
Terminal activities	IDR/4/9/3	X	
Postal services	IDR/4/9/4	X	
Transportation	IDR/4/9/5	X	
BUDGET, STATISTICS, COST-ANALYSIS	IDR/4/10	X	
Budget for the I.-Department	IDR/4/10/1		X
Cost-analysis for -----	IDR/4/10/2		X
subdivided into			
Time sheets	IDR/4/10/2/1		X
Expenses	IDR/4/10/2/2		X
Supplies	IDR/4/10/2/3		X
Achievements	IDR/4/10/2/4		X
INVENTORY for the I & D service center	IDR/4/11	X	
Furniture	IDR/4/11/1	X	
Equipment	IDR/4/11/2	X	
Supplies	IDR/4/11/3	X	

Kjeld Klintøe
M.Sc.
TIRDO/UNIDO
Information Management Consultant
Dar-es-Salaam
Chamber of Commerce

Tuesday 15th April 1982
7.30 pm.

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E F F E C T I V E T R A N S F E R O F T E C H N O L O G I C A L K N O W L E D G E
I N T O I N D U S T R Y

Kjeld Klintøe
M.Sc.
TIRDO/UNIDO
Information Management Consultant

15.4.1982

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Mr. Chairman - Gentlemen,

My topic is about professional communication to further improvement and innovation in industry and commerce.

Being in communication - I have the understanding - that my message will more effectively be put across to you by your knowing a bit of my background.

I have for a number of years practiced as an industrial and business manager - before starting a technological Information Service for Industry in Denmark in 1955.

It was a parastatal organization ment to assist in the industrial evolution of an agriculture based economy.

I practiced that for 26 years and was at the same time running top-management training seminars for industry.

For a number of years I have been consultant for UNIDO and OECD in setting up Information Services for Industry in countries in development.

This will explain, that some of my remarks have a flavor of philosophy - because they are summaries of observations, reflexions and experiences from implementation in very varied environments.

My main conclusion is that man is of the same construction all over the globe - while if we master to simplify our means, we can put across to him technological knowledge, where by he can improve and innovate - i.e. We can assist him to help himself to contribute to progress.

The Tanzanian industry and commerce is forced into a corner position these years - shortage of foreign currency, limits of essential rawmaterial, lack of original spareparts, poor utilization of the industrial production capacity - resulting in less contribution to the badly needed economic and social evolution.

Is there a way out of this situation - may be it would stimulate^{you} as managers of industry and commerce to get some insight in concepts and experiences developed and gained in a number of countries having changed their situation during the last 20 - 30 years - even many of them have seen themselves into new difficulties - not reflecting enough to evaluate means so they are also economic confused - but at a higher economic level.

The development I am referring to is from the situation of changing from exploitation of natural resources into planned manufacturing of goods, products and services of a higher community value.

Goods, products and services of higher value means, that knowledge and know-how is built into the products, so they can do more for their users, be easier maintained, last longer and still have a reliable function.

It demands that manufacturers become increasingly aware of - who they are serving with their products and what the expectations are - and what the needs and conditions of their customers are, and will be.

It means that the manufacturers must use all their skill and know-how - plus what they can acquire elsewhere of skill and know-how - to plan, to organize, to produce, to supervise - that working methods, quality of work, productivity etc. are continuously improved - and need ideas are applied.

There is always a better method, knowledge of any kind - only gain community value where applied.

The primary objective of an enterprise - regardless of status - private, parastatal, public, - is to serve the purpose of why it was established - developing their range of products and services and make themselves known for providing what customers and clients expect.

If the quality and reliability is in accordance with clients expectations the enterprise will have few problems.

Traditionally we have a picture of an enterprise being a militant organization dominated by rules, regulations and control.

I have quite another understanding - an enterprise is a living organism - in so far that it is made up of human beings - to serve and satisfy human beings' needs.

An enterprise has to be vital, strong, self-conscious, but flexible - because it has to survive in a society with continual changing conditions.

An enterprise can be compared to an amoeba - the one cell mechanism, consisting of a nucleus (the fundamental purpose or idea of the founders) - of the protoplasm (the living matter - the talents, skill, vitality and competence of management, staff and workers) and the cell-wall (strong but very flexible - the enterprise policies and strategies - the order of the house and criterias of performance).

It is of vital importance to all enterprises that they cultivate their fundamental idea and purpose - cultivate their corporate image to attract clients and motivated employees, attention of suppliers, economic institutions, authorities etc. - because they are community contributors by increasing standard of performance.

Management is responsible for that. At his disposal managers have two sets of resources - the physical assets (always limited) and the intellectual assets which is his staff - the staff may be occasionally limited - but then he can buy temporary assistance from a center of specialized knowledge.

The staff must be carefully recruited - not to fill a chair - but to contribute by talent and will.

The staff must be meaningfully employed so they are stimulated to use their talents and develop skill.

The staff must be maintained in skill and competence - and must be developed to contribute to improvement and innovation. - What is innovative thinking?

The management tool to further this maintenance and development is an organized flow of technological information.

Technological information is any kind of knowledge in any form: technical, commercial, managerial, social, legal, economic - which by application will further progress - i.e. improvement and innovation.

This is a continuous process which management can hardly delegate to any with less authority and accountability than himself.

It characterizes many enterprises - all over the world - that they operate within a very short planning horizon - why they are taken by external constraints and have to fight for survival - instead of looking for openings and possibilities for gaining **new** ground.

My observations in my seven month stay in Tanzania from visiting rather many companies are that enterprises isolate themselves with their problems and are not aware of that their neighbour next door may have the knowledge and capability which could help in an acute **fringe** position.

A technological information service for industry is an enterprise - marketing oriented.

That means it regards knowledge to be a commodity - the intellectual raw-material which must be marketed.

In all countries exists an infrastructure of centers of specialized knowledge and centers of **excellence**.

It is not possible for the individual enterprise fully occupied by running its business to keep themselves updated with regard to, where in the world is stored that piece of technological knowledge I will need to overcome that **shortage** of know-how I will face soon.

Do I know exactly what consequences my shortage will mean - what will really be my problem?

This is the reason why in more than 35 countries they have established technological information-documentation service as TIRDO now has under establishment.

The concept is:

Knowledge is a commodity which only gain community value by application -
it has to be marketed.
It is necessary to pay visits to get results.

The objectives are:

- to take initiative to visit managers and staff of enterprises, and during interview become familiar with that particular enterprise's situation - background, constraints, possibilities, etc.
- to establish a mutual level of confidence and on behalf of the enterprise to search information relevant and appropriate - repackage the information for application and assist in that process.
- to operate an industry oriented reference collection of information selected to be appropriate for Tanzanian industry - such as evaluated impressions from extension service visits have indicated.

Appropriate means - appropriate for progress by application.

Other institutions at scientific level will have referececollections of another characteristics.

- to operate a Question and Answer service Where companies can turn to where they become aware they need information and advice.
- to operate an information advisory service on how to formulate a problem or a need for a technological assistance, where to find such assistance in Tanzania or abroad. Because TIRDO Information Department will be a national focal point in an international networking of such centers.
- to promote technological services of TIRDO such as electrical instruments, maintenance and repair shop, mechanical engineering services and to liaise enterprises with centers and services having a special expertise and capacity TIRDO may not have it self.

I guess that my audience agrees with me that Tanzania's future is in a more effective exploitation and conversion of the natural resources into valuable products of high quality - mostly by intellectual efforts.

That means - that all managers must strive for in their enterprises to organize effective utilization of technological information - to be procured from all over the world - selected carefully for relevance & appropriateness to Tanzanian actual conditions - and for reliability - repackaged for easy application - possible by required Technological assistance.

Kjeld Klintøe

M.Sc.

TIRDO/UNIDO

Information Management Consultant

15.4.1982

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A service is under establishment and it will be shaped according to industrial companies interests. As knowledge is a commodity - it will not be a service free of charge - nobody really cares for what can be obtained for free.

SEMINAR
ON
TECHNOLOGICAL INFORMATION SERVICES
FOR AND WITHIN INDUSTRY.

14th - 16th and 18th JUNE 1982,
all days 9.00 - 11.00 a.m.
at
TANZANIA BUREAU OF STANDARDS auditorium.

Aims: To provide insight in recognized methods of practicing effective liaison between industrial enterprises and centers of specialized knowledge and expertise - furthering application of technology resulting in improvement and innovation.

Objectives:

Present concepts, strategies, policies and working methods applied in other countries in development - and by a forum of professionals - Tanzanians and expatriates - get evaluation of a relative brief seminar suitable for professionals from Tanzanian enterprises.

Form: LECTURES and DISCUSSIONS

It is requested that participants are very active in making the seminar an open forum aimed at pooling and evaluating - how to apply to Tanzanian conditions.

Lecturers & Conductors:

KJELD KLINTØE, TIRDO/UNIDO project

LETICIA AQUINO. TIRDO/UNIDO project.

FINAL PROGRAMME:

MONDAY 14th JUNE

1. Technological information as a commodity - the intellectual raw-material.

KJELD KLINTØE

2. Infrastructure of industries.

KJELD KLINTØE

.../.

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MONDAY 14th JUNE

-
3. Infrastructure of centers of excellence and of special knowledge and expertise.

KJELD KLINTØE

4. Division of roles between Information, Documentation, Library services, Technological services.

- for industry
- for engineering and development services
- for science and education.

LETICIA AQUINO

WEDNESDAY 16th JUNE

1. Marketing technological information and expertise, - how to bridge the gap between industry and sources of knowledge.

KJELD KLINTØE

2. Technological information as a management tool.

KJELD KLINTØE

3. How to meet requests for - not literature and documents - but technological know-how and expertise.

LETICIA AQUINO

FRIDAY 18th JUNE

1. How to organize exploitation of domestic, regional and foreign resources - and use information data banks and networks.

LETICIA AQUINO

2. Training of information and advisory service officers.

KJELD KLINTØE

3. Exchange of experiences and evaluation of programme for seminars for industry.

ANNEX: List of participants.

WORKSHOPS, SEMINARS, CONFERENCES
(Communication service for transfer of
technological knowledge)

With the aim at stimulating to an improved professional communication within enterprises, among enterprises and between enterprises and centers of specialized knowledge and expertise TIRDO should build up an activity of arranging and conducting workshops, seminars and conferences - affiliated with the country-wide extension service programme.

Such meetings should be TIRDO arrangements but involve resourcefull persons from other organizations as contributors.

The meetings should be arranged as roundtable workshops within a headline-frame indicating how to apply technological knowledge and expertise for progress - and the contributions geared to advise on how to organize for operation and supervision.

Meetings should last the maximum of 2 full-days (max 8 sessions of 1½ hour) and conducted in a way to optimize the dialogue between the guest speaker and all members of the audience.

Participation should only be on invitation enterprises - max 10 in number but each enterprise participating with 2-3 senior staff members.

The meetings have to be paid for.

Target groups for such meetings should be carefully selected so participating companies could benefit from interrelations established during sessions

TIRDO
Information Department

June 1982

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either either because they belong to the same product/branch, they have relation contractor/subcontractor and/or they are operating in the same region.

TIRDO information department should be the organizer and conductor and a TIRDO R & D staff member should become rapporteur, editing handouts and summary of discussions.

ACTIVITY REPORT - 1ST JANUARY - 31ST MARCH 1982

1. Reference - collection

1.1. Aquisitions

Books received	57
Reports received	60
Journals, foreign received	H/C 13
	M/F 6
Journals, domestic received	-
Books ordered	5
Reports ordered	70
Journals, foreign ordered	-
Journals, domestic ordered	-

1.2. Characterization

Encyclopedias	-
Handbooks	4
Databooks	-
Textbooks	-
Conferences	-
Directories	-
Dictionaries	4
Government publications	-
Bibliographics	-
Annual reports	-
General publications	-
Reports	179

2. Extension visits

Number of visits total 31 of which	
to enterprises	23
to centers of specialized knowledge	5
to associations	3

Regions visited Dar-es-Salaam - Arusha.

Product/branches visited 12.

5.4.1982

2 (2)

2. Extension visits

Analysis : Follow up demanded 8 enterprises
Reference material demanded 3 enterprises
Question etc. raised -

3. Question & Answer service

Number received			ext.	int.
	January	4	2	2
	February	5	3	2
	March	5	4	1
	Total	14	9	5

Of 14 received questions 7 are answered
7 are still in work.

Total charge:

NONE, because charging policy is free for the first three requests per enterprise, free to TIRDO staff and some selected cases.

K. Klintøe/kk

4.7.1982

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ACTIVITY REPORT - 1ST APRIL - 30TH JUNE 1982

1. Reference-collection

1.1. Aquisitions

Books received	24
Reports received	134
Journals, foreign received	H/C 47
	M/F 8
Journals, domestic received	-
Books ordered	8
Reports ordered	42
Journals, foreign ordered	-
Journals, domestic ordered	2

1.2. Characterization

Encyclopedias	-
Handbooks	181
Databooks	16
Textbooks	19
Conferences	57
Directories	51
Dictionaries	4
Government publications	-
Bibliographics	17
Annual reports	
General publications	838
Reports	

2. Extension visits

Number of visits total 59 of which	
to enterprises	39
to centers of specialized knowledge	16
to associations	4

Regions visited The ISLES (Zanzibar), Dar-es-Salaam-
Tanga-Kilimanjaro-Arusha.

Product/branches visited 18.

../.

1.7.1982

2 (2)

2. Extension visits

Analysis:	Follow up demanded	30 enterprises
	Reference material demanded	20 "
	Question etc. raised	-

3. Question & Answer service

Number received:	April	3	3
	May	5	5
	June	2	2
	<u>Total</u>	<u>10</u>	<u>10</u>

Of 10 received questions: 6 are answered
 4 are still in work.

Total charge: 300 Tsh (1 case).

ACTIVE INFORMATION SERVICE.

By the end of June 1982 TIRDO information department has confirmation of subscription to 86 foreign journals, of which 25 have not yet been received.

Of the 86 journals 54 appears to be of interest to industry and represents a fund of technological information by articles, comments, advertisements, etc., mostly needed to stimulate and assist industrial enterprises towards improved operations.

It should be the obligation of each of the research staff members to act as "scouts" on behalf of enterprises, who at present do not have access to journals of their own, to drain these journals for relevant and appropriate technological information.

Such reading schemes are practised in many countries for two benefits:

- a) Production of evaluated and commented information in digested form to make enterprises alert to the existence of relevant and appropriate information and promote the application.
- b) By searching, evaluating and rewriting technological information the research staff members are challenged to grow their own insight also in areas outside their special field, they become more competent and will gear their knowledge towards application.

The scheme is known as "cooperative reading." (For further insight see DTG manual, Vol. 1, No. H 1, H 2, J 4 and J 5)

A brief outlining of how to organise for cooperative readings:

- 1) The 54 journals are distributed equal among the researchers, each confirming his responsibility for on behalf of TIRDO and the other staff members to scan and read that journal - articles, comments and advertisements. The journals are submitted directly to the "duty-reader" upon arrival.
- 2) The duty-reader scans/read the journal immediately, during working hours and make himself a list of notes on items, which
 - aroused his interest, curiosity and why,
 - who could apply this information for what (enterprise, product-branch(es))
 - what would be the expected benefit of successful application.

3) Once every two weeks - at 3.00 p.m. to 4.30 p.m. - the readers should meet - under the Chairmanship of one of the information officers - and each "duty-reader" should report orally, what he has found where, stating his notes but not more. Comments have to be submitted by the other participants.

4) When agreement upon the value of the identified item, the "duty-reader" produce a digest - within one to maximum of two weeks.

5) A digest is the professionals advise to a potential user, a digest must be written in a style which will stimulate curiosity, application and is reliable.

Tips: Chose an interesting headline.

Write maximum one page handwriting.

State how to apply

State expected benefit

Give bibliographical ref. Journal, no. page.

Digested by whom.

6) The information department arrange for typing, editing, printing and distribution in form of Target-group-oriented subscribed-to newsletters.

In subscription price should be reserved for incentive payment for the authors.

