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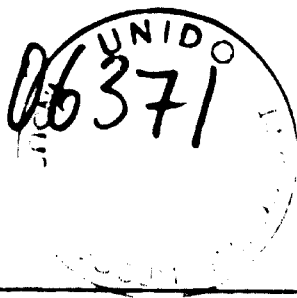
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Distr.

~~UNIDO/ISID.11~~  
UNIDO/ISID.11  
23 March 1977

Original: ENGLISH

UNITED NATIONS INDUSTRIAL  
DEVELOPMENT ORGANIZATION

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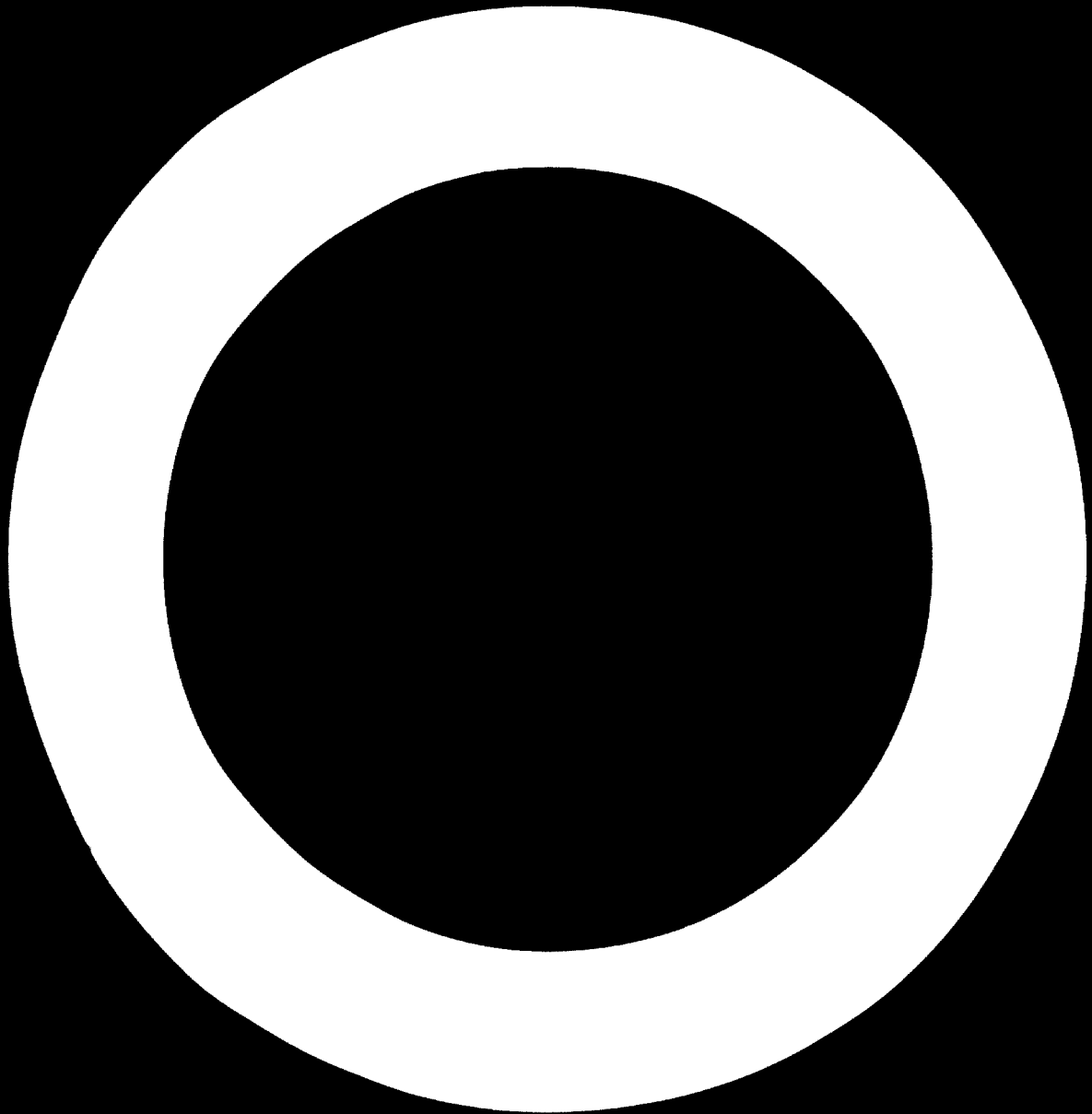
INDUSTRIAL INFORMATION

A guide to better understanding and indications of how to use  
assistance and services offered by UNIDO in introducing  
information as an instrument of industrialization

by

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



## Introduction

The United Nations Industrial Development Organization (UNIDO) was established to assist developing countries in their efforts to accelerate industrialization. The types of assistance and services offered by UNIDO for this purpose are marked by a distinct trend towards pragmatic action for immediate usefulness rather than to elaborate concepts aimed at long-run perfection. This applies in particular to the field of information needed for the purposes of industrialization.

The Industrial Information Section, one of the five Sections of the Industrial Services and Institutions Division of UNIDO, is therefore offering advice and assistance to developing countries for the establishment and the management of national or regional facilities for industrial information. This assistance includes all efforts to organize such facilities, to identify the real needs for such information, the best ways and means to collect information and how to supply it to prospective users and clients.

Technical assistance to establish industrial information facilities in developing countries will be accompanied and supported by various industrial information services supplied by UNIDO's Clearing-House for Industrial Information providing a full Inquiry Service on all problems pertinent to industries, a referral service on industrial equipment, information services on technologies and equipment produced by developing countries themselves, the services of a roster of consultants, a documentation covering all UNIDO generated reports, studies and publications and finally a number of printed periodical publications.

The Clearing-House for Industrial Information which is presently at the disposal of governments, industrial enterprises and other industrial institutions from developing countries should finally become one of the major sources of information for local and national industrial information facilities.

This paper endeavours to combine practical advice for establishing local or national facilities for industrial information in developing countries together with some explanations and comments on the substance and the purpose of industrial information as an essential component and instrument of industrial day-to-life.

### 1. Education - training - information

Education, training and information are three main instruments to develop, update and upgrade human skills and knowledge. They are the really important mechanisms for the transfer of knowledge and know-how in the field of technology as well as all other fields pertinent to the process of industrialization. Education, training and information are essential pre-conditions for successful activities, especially on those higher levels where responsibilities for decision-making are involved. They are complementary to each other in building up human personalities and improving professional qualifications. While education and training are limited in time and size, information has to play the predominant role in what is called the life-long process of learning. In this century of quick and fundamental changes at all levels and all fields of activities, the need to be up to date is justifying the increasing demand for permanent inflow and absorption of information in order to keep abreast of new developments, innovations and perspectives. Information is no longer a privilege of small groups. Modern mass media such as newspapers, radio and television are characteristic of a growing supply of information covering the needs of large masses of population.

### 2. Industrial information - background for action and decision

The regular supply of information is especially important for all those engaged in industrialisation. Corresponding to the far-reaching issues involved, the high amounts of financial

investments at stake and the socio-economic significance of industrial production and employment in industry, decisions related to industrialization can only be made after careful consideration, taking into account possible alternatives and combining technical as well as commercial aspects. Industrial information is, however, not only important for entrepreneurs and management. In most developing countries governments are deeply involved in the planning and programming process of industrialization and large public sectors of industry are developed in addition to private enterprises. Governments and government agents are therefore called to play their roles in programming and administering industrial development and they will also have to base their decisions and actions on as broad-based information as is available.

3. A tentative list of areas of information for industry

It seems impossible to provide complete inventories of subjects to be covered by industrial information. The following list may therefore indicate only some of the areas and fields of information which are essential to justify decisions in establishing and running industrial enterprises.

- (a) Market information in the broadest possible sense - domestic and foreign markets - consumer habits and fashions, tariffs, taxes and other market restrictions - prices, including prices of goods produced by competitors - availability of transport and distribution schemes etc. (Market information is the basis for most decisions on the type, the design, the capacity and the purpose of factories to be established).
- (b) Information on industrial equipment, machinery and technologies - available alternatives, appropriateness to local climate and labour conditions, prices, capacities, spare parts situation - maintenance and repair facilities. This information is indispensable to make the right decision on the purchase of appropriate equipment and technologies. Such decisions are in most cases a precondition for future success or failure.

- (c) Information on raw materials and semi-finished goods - opportunities to substitute imported raw materials by domestic ones - new raw materials such as artificial fibres, synthetics, resins, etc., prices, qualities, local appropriateness.
- (d) Infrastructural information, availability and supply costs of energy, water, transportation, quality of electric current as a pre-condition for the utilization of certain types of machinery - labour situation, training opportunities, wages, social insurances - availability of highest qualified managerial personnel.
- (e) Information on the industrial environment, services, research facilities, industrial legislation including legislation on patents and licensing, industrial chambers and associations, inquiry and extension services, export promotion, etc.

Incomplete as it may be, this list includes information from domestic sources as well as from abroad. However, the list may give a very rough indication of the large variety of problems which have to be considered before establishing, or in running, industrial enterprises, and for which information is essential.

#### 4. How to approach the establishment of sectoral or national facilities for industrial information (stage 1)

Assistance to the establishment of facilities for industrial information in developing countries should be based on firm grounds, taking into account that the situation in different countries is not exactly comparable.

- (a) Establish as complete an inventory as possible of local and national industrial sectors and enterprises and of other possible users of industrial information, such as ministries of industry, planning organizations, chambers of industry and other institutions dealing with industry and industrialization.



- (b) Collect as much data as possible on existing industrial enterprises, their size and output, their equipment and technologies, employment, the use of raw materials and semi-finished goods, present markets, sales and prices.
- (c) Investigate and carefully evaluate available sources of information, if any, such as information services, local and imported journals and periodicals, libraries, documentation centres and other local sources of information, including statistics, official and semi-official publications of patent bureaus, bulletins published by standards and quality control offices, university publications, the inflow of information from abroad, e.g. through multinational corporations, local agencies of foreign enterprises and their publicity, activities of foreign embassies, trade commissioners, etc.
- (d) Establish, in close co-operation with local and national industrial authorities, organizations and industries themselves, a detailed catalogue of their needs on information. Specify as far as possible these needs for information (ad hoc information and recurrent information).

This preliminary stage of project for technical assistance for the establishment of national industrial information facilities should be implemented as the initial project. An experienced consultant should be in a position to implement this preparatory project within three to four months. However, he should be assisted from the very beginning by local counterpart staff which, during later stages, should guarantee the continuity of local efforts to the purpose. The result of this preparatory action should be a detailed proposal for a work programme to be performed by the future industrial information centre and a detailed project proposal document including figures, facts and targets.

5. Industrial information: a flexible, extensible and sometimes even vague field of activity

In discussing the work programme, the size and the purpose of an industrial information centre to be established, one should keep strictly to what may be called the identified needs at a certain moment. A strict limitation to cover needs for a certain purpose and of a specific group of users is imperative if any practical results are to be accomplished. There is a constant danger that, in the field of information, too ambitious plans and too far-reaching systems are developed, overcharging the possible capacity of an information centre and especially the absorptive capacity of those for the benefit of which these centres are allegedly established.

The considerations should of course not exclude the possibility of future higher needs for information. The institutional framework should be kept flexible for future demands.

This should be especially stressed in view of a new possible dimension of information which may become needed at a later stage when industrial research and development become an integrated component of industrialization efforts of a specific country, and when large-scale activities in the field of research and development may include the development of local technologies or locally produced equipment, the adaptation of imported technologies, the better utilization of local or new raw materials, etc.

At an even earlier stage, additional information may be required to satisfy the needs of locally established industrial research units and institutions dealing with international industrial standards or in charge of quality control and testing. We may also assume that in addition to the information supplied in a first stage of industrialization, with the purpose of enabling better decisions in all fields of practical industrial

life, the need for more sophisticated scientific and technical information may increase in specific countries or in relation to some industrial enterprises or industrial sectors. These needs, resulting from possible future development, should be taken into account as early as possible once they are identified. However, it would be a major mistake to delay the establishment of industrial information facilities based on present needs in order to wait for world-wide systems which, according to present experiences, will need much time and much money to be realized. This is the reason why efforts should be made to improve the chances of industrialization of developing countries within the next five or ten years - a period which may be decisive - and why these efforts should be undertaken on the basis of realistically identifiable needs as expressed by all those responsible for industrialization.

6. A second step towards the establishment of local or national facilities for industrial information (stage 2)

Once a catalogue of identified needs for information is determined, outside assistance for establishing local industrial information facilities in developing countries should be supplied at two different levels:

- (1) Assistance must include efforts to organize the supply of industrial information to newly established centres.
- (2) Advice and assistance are needed on how to transfer incoming information to clients and how to adapt incoming information in such a way that it will become understandable and usable by the addressees of information services.

Their "information gap" is an old complaint of developing countries, and they mostly believe that this is due to the lack of free access to available information. This is not the full truth.

An outside expert should therefore be in charge to organize, on the basis of identified needs, an appropriate inflow of industrial information from available sources, bearing in mind the most economical ways to purchase information, and the need for selectivity from various sources of information. This must be done in order to avoid a disorganized information explosion overcharging the staff capacities of an industrial information service and in some cases the absorptive capacity of recipients. Very clear proposals must be elaborated for selecting the best possible sources of information and in making certain that these sources of information are safeguarding the continuity of information supplied. To maximize the success of an information service, it is absolutely necessary to use, as far as possible, the same sources of information over many years and to limit the sources of information to a manageable number.

7. UNIDO's Clearing House - a valuable resource for industrial information

To assist national industrial information services in developing countries in their effort to collect information, UNIDO has built up during the past years a Clearing-House for Industrial Information, concentrating on specific services at the disposal of industrial information centres in developing countries and - especially where no such centres are yet in operation - at the disposal of governments, industrial enterprises and industrial institutions in developing countries.

UNIDO's Clearing-House for Industrial Information can provide at present the following services:

- (a) An inquiry service answering questions from developing countries in all fields of industrial activity on an ad hoc basis, using the accumulated experience of staff members of UNIDO and the know-how of a network of correspondents including more than

200 international agencies, institutions and consultants. This service covers problems to be solved and questions to be answered.

- (b) A roster of consultants providing information on international consultants, their specialization and their experience.
- (c) A referral service for the purchase of industrial equipment and technologies, specialized on problems of appropriate equipment and technologies.
- (d) Information on technologies and equipment emanating from developing countries and which may be of interest to other developing countries.
- (e) A series of publications under the title "Guides to Information Sources" at present available for the following industrial branches:

Leather and leather goods

Cement and concrete

Foundry

Agricultural implements and machinery

Building boards from wood and other fibrous materials

Furniture and joinery

Pulp and paper

Pesticides

Vegetable oil processing

Meat processing

Animal feeds

Clothing industry

Printing and graphics

Quality control

Six new issues are published yearly, providing information on professional, trade and research organisations in each sector, directories, statistics, marketing data, handbooks, periodicals and other potential sources of information (fairs, patents, standards).

In addition to these services which UNIDO offers free of charge, or for modest fees (sales publications), advice and assistance of UNIDO experts is available to help developing countries organize the supply of other information material available from international organizations (United Nations, Organisation for Economic Co-operation and Development, etc.).

## 2. Purchase of information on the market

In establishing industrial information services, an appropriate amount of funds should be earmarked in the budget to allow information centres to purchase a certain number of books, especially reference books, hand-books, bibliographies, the most important international journals dealing with industrial and trade problems, some specialized periodicals and, if necessary, the special services offered by many organizations, agencies and publishers around the world. The size and the costs of these materials should be determined in accordance with actual needs of users and funds available.

It should be mentioned in this connection that among the major sources of industrial information are international fairs and exhibitions, especially in the fields of machine tools, industrial equipment and industrial goods. Fairs and exhibitions have increasingly become the most important sources of information on technical innovations.

In addition, individual efforts must be made by industrial information centres in developing countries to establish direct links with major industrial enterprises in other developing or in advanced countries. These enterprises regularly issue information material, including reports, price lists, prospectuses, hand-outs, catalogues, etc. Information centres should develop within 3 to 5 years their own network of contacts and correspondents. It should include contacts with some research institutions, universities, etc.

9. Exchange of information covers expenditure

The purpose of information can be facilitated to a large extent if, in a not too distant future, local industrial information centres start to refer not only to research institutions as sources of information on their local industries. Much industrial information is the result of mutual exchange, based on a give and take system. Collecting local information and offering it to other countries may become a two-fold successful activity, facilitating not only the purchase of information but also developing into an important instrument for local industries to improve their productivity and to get known on foreign markets.

10. There are too many sources of industrial information

It is not possible to locate and to identify all sources of industrial information, but it is relatively easy to identify three major groups of sources of information.

The first and the major source of industrial information is industry itself, especially major enterprises which dispose of their own research and development facilities, their own laboratories and testing installations dealing with the development of new types of machinery, of new technologies, of new raw materials and of new kinds of uses made of them in the constant search to improve their products. This group of information sources generally has a direct interest in disseminating information as widely as possible. In fact, there are not so many secrets as one may think. In general the commercial interest to become known, to get publicity for new products, to increase sales and to gain new markets normally overrules over-all tendencies of confidentiality. Industry spends hundred of millions of dollars per year to supply prospective buyers with information. The publicity made by industry for its products and innovations is the main factor behind the so-called information explosion, manifesting itself in a flood of hand-outs, press

releases, prospectuses, catalogues, price lists, films, demonstrations, participation in fairs and exhibitions, etc. Most newspaper and periodicals live from information deliberately disseminated and even paid for by industries.

Paradoxically, this flood of information does not always reach developing countries. Most of them are still considered as being unimportant clients. No special interest is therefore vested in disseminating this type of information to them.

A second group of information sources is the markets. Greatest importance is given especially to fluctuation in offer and demand on commodity markets as well as to information about the international flow of goods (trade). Information on the market and production situation of raw materials, food stuffs, etc., is so valuable that even regular information on the status of crops is considered as a commodity offered for sale and for which high prices are paid. Obtaining this and similar kinds of information is different from the one discussed above. The main interest is vested with those who need this type of information as a basis for their calculations. On the other hand, the collection of this information is rather expensive and is mostly done by international agencies. Finally, time is important as this type of information is a perishable commodity which may lose its value after even a few hours. For this type of information hundreds of millions of dollars are paid each year, but by different people and for different reasons. The metal industry, for example, is paying very high fees to have day-by-day information on the situation on copper or tin markets. Again, most of the developing countries have not been included in the flow of this type of information because it is considered as being too expensive for them and because there are not many clients in these countries who could justify the high costs for telecommunications.



The third group of sources of industrial information comprises governments, government agencies and semi-official institutions in developing as well as in developed countries. They generate mostly national information, including statistics on industrial production, employment, foreign and domestic trade and foreign publications of patent offices and of national standards bodies, local publications such as official government issued industrial legislation, tax and tariff legislation, labor legislation, etc., bulletins from chambers of industry, price statistics, etc. In addition to these materials, some governments make available the reports they get from their trade commissioners about industrial situations and industrial opportunities. Of the same group of sources of industrial information belong some international organizations providing valuable documentation, reports and other information including, for example, International Labour Organization, United Nations Industrial Development Organization, International Organization for Standardization, the International Coal Secretariat, international associations of traders and producers, and many others.

#### 11. Looking for an appropriate system of providing industrial information to developing countries

This short survey on the multiplicity of sources of industrial information proves that it is not the problem of whether industrial information is available or accessible, but rather the much more subtle problem of how to develop a system for the collection, the transport and the supply of information which can provide, within certain limits, such selected information which is essential and appropriate for individual users, groups of users by industrial sectors or by countries, at reasonable costs and in spite of all the technical difficulties involved in collecting and evaluating the information available. In fact, it is the problem of "transport" of information from the place where it is generated to the place where it is needed and the problem of its "translation" into a form and a language understandable by prospective users.

Let us briefly note here that this activity is done in advanced countries by hundreds of agencies, publishers, editors, associations, etc., who get paid either for disseminating information or for collecting and disseminating and especially for processing, coordinating, evaluating out of a real information explosion the material which can be absorbed and used. This system of trading information is the result of long experience and is based on commercial considerations. There is no problem as long as industry is prepared to pay for information received and equally to pay for information distributed on its behalf. However it is a very big problem for those enterprises and governments in developing countries which have neither the experience, the funds nor the people to participate in this activity.

The establishment of national or local industrial information facilities under the present circumstances may be the only way to remedy, within a relatively short time, a situation which, under all aspects, is a detriment to the industrialization efforts of developing countries. It is a system based upon the principle of collective action, undertaken by or with the support of governments, trying, however, to avoid bureaucratic problems.

It is obvious that an organization like UNIDO, created to assist developing countries in their efforts to accelerate industrialization, had to include in its work programme the offer to assist in the establishment of industrial information facilities and to provide information services to developing countries.

The activities of UNIDO in this field are strongly supported by the Industrial Development Board, the General Assembly and by the First General Conference on UNIDO in 1971. The number of projects in this field is still rather limited and a certain reluctance must be overcome, due to ignorance about the importance of industrial information on the one hand, the lack of experienced

counterparts in the field of information in general on the other hand, misgivings about the size, the costs and the staff involved, and finally the to some doubts about an innovat. effort which cannot orient itself on identical undertakings in advanced countries.

The initiative for such new institutions should therefore be supported by national governments, which should also be prepared, at least for the first years, to provide financial support in addition to the technical assistance provided by UNCTAD. Only gradually may it be expected that industrial enterprises using the services of industrial information institutions could be asked to pay fees for these services.

Industrial information centres, or whatever the name of such institutions may be, must not necessarily have an independent institutional status. They may be attached to a ministry, to a chamber of industry, to industrial associations or to already existing major documentation centres. Their size will definitely depend on the number of industrial enterprises and their order of magnitude, on plans for future industrialization or, in other words, on the value and the type of information required.

As already mentioned earlier, the costs of such institutions may be considerably reduced if they start as early as possible to collect industrial information from their own country and to supply this information to other developing countries or to advanced countries in exchange for incoming information.

## 12. Do first things first

The establishment of industrial information facilities has nothing to do with far-reaching plans to develop general and international information systems in the fields of economic and social development or in the field of scientific and technical

information at present under examination by OECD, United Nations Educational, Scientific and Cultural Organization, (UNESCO) and the Canadian International Development Research Centre. While these and other efforts to establish global systems of information built upon co-operation between institutions and governments should be welcomed and supported, they are still at a preliminary stage and may encounter many problems in trying to realize plans which seem rather ambitious and expensive. The existence of a world-wide and inter-sectoral system of information will not change the need for individual enterprises to obtain selected information tailored according to their individual needs and taking into account their specific situations. It cannot be expected that a world-wide system of information will duplicate industrial information facilities oriented towards the specific needs of industrial enterprises in a particular country or sector. This does not prevent national industrial information services from serving as a valuable input and component of international systems. In establishing such services immediate attention should be paid to co-operating and not to competing with already existing institutions such as library facilities and documentation centres.

The establishment of national industrial information services should be considered as an urgent and first step towards international co-operation in the field of information. It is an urgent step because industrialization should be accelerated now and because developing countries should be given all instruments to support them in their efforts.

13. Terms of reference for the establishment of local or national facilities for industrial information (stage 3)

Once the possible users of industrial information and their specific needs have been identified, and once possibilities have been explored on how to organise the inflow of information required, the third big problem which has to be solved is the

institution itself, its status, staff, budget and organization. Essential decisions are expected at this stage for which the advice of an experienced INTCO expert should be requested.

- (a) A decision should be taken on the legal and organizational status of the industrial information centre. As already mentioned, it can be established as a department attached to a ministry or to another already existing institution or as an independent institution or coupled with other institutions for industrial purposes, such as industrial research centres, etc. However, whatever solution is envisaged, it should be included in a well defined regulation explaining in detail the purpose, status, supervisory authority, internal constitution, etc. of the new services.
- (b) It is a matter of course that the status of a new service can only be decided after the establishment of a work programme, a draft budget and the organizational chart of the new institution.
- (c) The main function within the services should be defined corresponding to an initial allotment of staff. These functions include:
  - (i) An industrial information extension officer  
He keeps permanent contact with recipients and users of industrial information. He collects additional demands for information and deals with complaints on the services supplied. He makes sure that individual inquiries from industrial enterprises are dealt with quickly. In summing up: he is the real responsible liaison officer between the clients of the services and the services themselves. He should take care that the services supplied harmonize as far as possible with the needs for information. His activity should avoid the danger that an information institution becomes an ivory tower.

(ii) The central-desk information officer

This key function consists in watching carefully day by day the inflow of information, taking immediate decisions in which way each information should be handled (abstracted, reproduced, shortened, classified, photocopied), to whom the specific piece of information should be directed and by which means this should be done (individual information, selective dissemination of information services, bulletins, etc.). Parallel to these actions the credibility of information and its value should be checked and, if necessary, marked. In fact this function represents the central brain of an industrial information service where the flood of incoming material and information is selected, evaluated, "translated" and dispatched to the various types of recipients, without overburdening their consumptive capacity.

(iii) Translation service

Most incoming information may be in foreign languages. A small translation unit should be prepared to translate the texts or abstracts into national languages.

(iv) Librarian - documentalist

A small but efficient documentation centre plus library should represent another essential function of the services. All valuable information should be included in the documentation files (country and subject files) in order to build up an archive of background material. A documentalist/librarian should belong to the staff of the services and be responsible to organize the current awareness of important background information.

(v) Printing - reprography

Smooth performance of all these functions depends on availability of some efficient technical equipment in

addition to telephone and telex connections. The central need is for photo-copying equipment which allows the incoming information to be used for several purposes at once. A small duplicating and printing installation could also provide the service with the possibility to issue daily or weekly bulletins. At a later stage the necessity to produce micro-film copies may become necessary.

An information centre should have enough space. It is an old experience that too small, with just office equipment, including plenty of book shelves, is a precondition to the quality of the services.

Needless to say, an information service needs highly qualified staff combining intellectual capabilities with educational backgrounds in science, administration or business. Especially valuable is the ability to provide shortened written formulation of somewhat complicated texts. The structure of a well-designed industrial information centre should comprise normally a library-cum-documentation service in charge of collecting, cataloguing, organising and retrieving information, and a number of services dealing with dissemination of information, namely providing information upon request or unsolicited information. Depending on the stage of development of the centre, these services may include: a Selective Dissemination of Information Service, an Inquiry Service, an Extension Service, and a Promotional Publications Service.

#### 14. How to proceed

It has already been mentioned that this paper was written under the assumption that developing countries might ask for assistance from UNIDO in establishing and in running industrial information services. In co-operation with the Industrial Information Section of UNIDO and the local Resident Representative

of the United Nations Development Programme, the project document should be drafted and agreed upon. Assistance which UNIDO can provide consists in:

- (a) Experts assisting local counterpart staff in the performance of the various functions as indicated above. Normally one expert for 12 to 18 months as project manager will suffice if supported by two or three short-term (six-month) experts (librarian - documentalist, reprography-technician, extension officer, etc.).
- (b) Assisting in training counterpart personnel in the field of industrial documentation and information in specialized industrial information centres abroad or in UNIDO.
- (c) Providing financial assistance for an initial library outfit, and
- (d) Providing continuing assistance through the supply of information material available within UNIDO's Clearing-House for Industrial Information and UNIDO's own documentation centre. This includes the supply of answers to individual questions.

Governments should be aware that in no country of the world, including the most advanced ones, are industries alone in a position to finance a functioning industrial or economic information service. A national budget contribution should therefore be envisaged from the beginning to cover the costs of the premises, locally available equipment, salaries of counterpart staff, telecommunication costs, general secretarial and administrative costs.

The budget for the establishment of national information services should be considered as seed-money which may within a few years bring about good results. Once more it should be mentioned that national industrial information centres should try



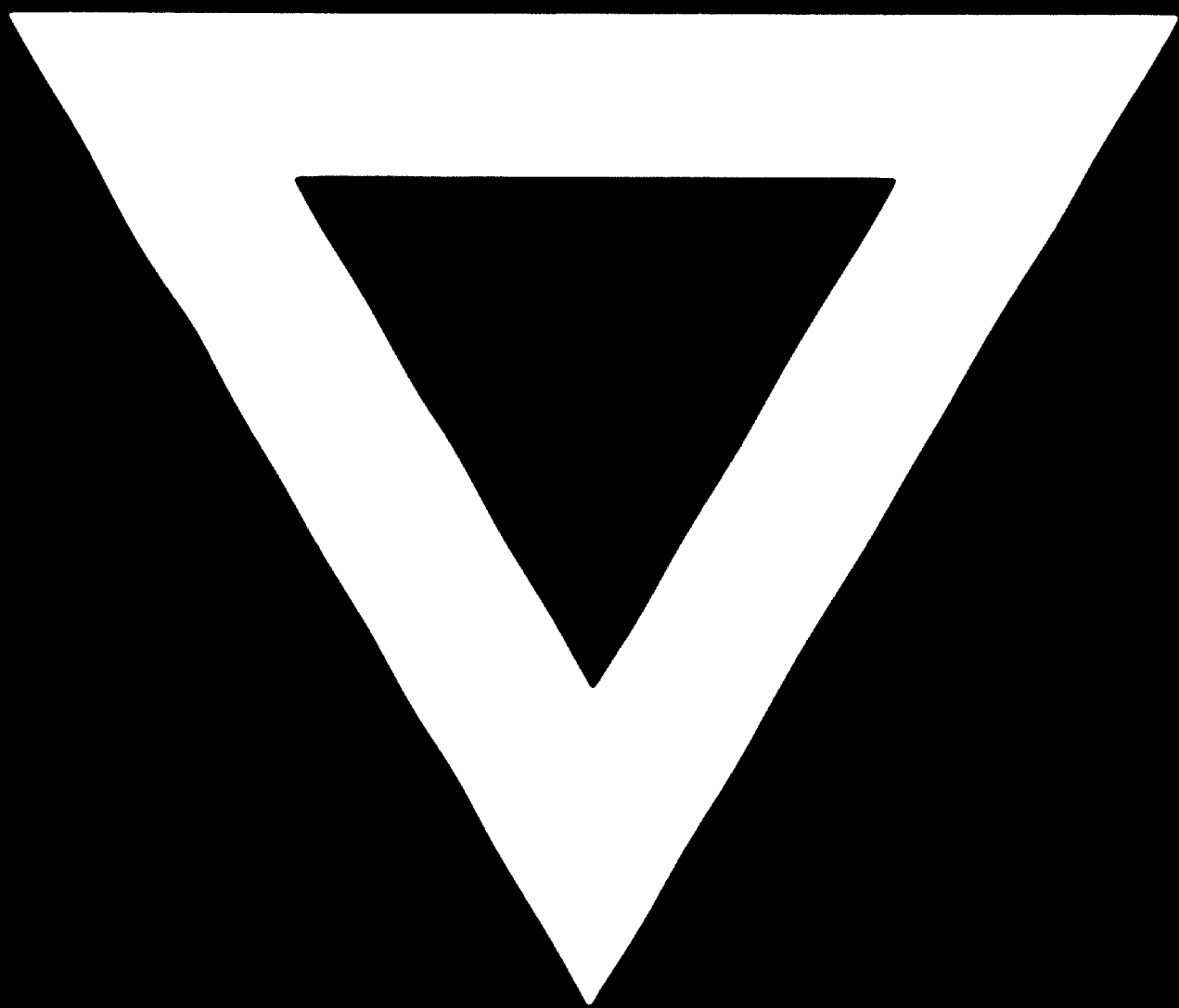
to ensure as early as possible the two-way traffic of information in supplying not only local industries with information they need but also the outside world with information and publicity on the industrial performance and achievements of the countries themselves. Under these conditions, and in taking over some marketing functions for your industries, national industrial information services will make a valuable contribution to industrialization.

15. Concluding remarks and what about stage 12?

Contrary to the establishment of a new factory which can only start production once the whole factory is ready, the machinery mounted, the full staff on board, etc., an industrial information centre should start to work at the earliest possible moment, even before everything is settled and every function staffed. The success of an information service is closely connected to certain routine and routine can only be acquired by experience, even if this experience starts on a tentative and still incomplete pattern. An industrial information service should therefore start once the first information flows in, even if it is only the recent issue of the "Financial Times". Many hit agencies have started by scanning newspapers and by producing newspaper or periodical clippings, sending them to the few clients available. This daily exercise over a period of one, two or three months, based upon a steadily growing inflow of information from various sources, is still the best method to train industrial information officers, to make them conscious of the information value of a certain article and to give them the feeling of responsibility as a connecting link between a local industrial enterprise and a flood of information which is available from the outside world. A pragmatic approach, starting as early as possible, may even facilitate the decisions to be taken and avoid mistakes.

It probably needs about 2 to 3 years and a lot of idealism and devotion before an industrial information service can stand on its own feet. Once the UNIDO experts are gone, UNIDO's Clearing-House for Industrial Information will continue to exercise its function as one of the major suppliers of information to developing countries. As in the past, continuing assistance will also be provided by UNIDO for the training of national industrial information officers. Finally, UNIDO will continue to hold regional seminars for the purpose of exchanging views and of establishing regional networks of industrial information centres for the exchange of information and mutual assistance. It is with these intentions that this paper is published, as an answer to many questions and hopefully as a guide for future action.





**76.07.01**