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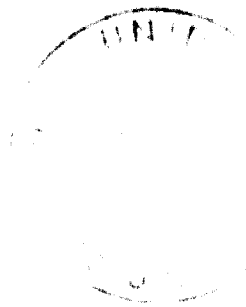
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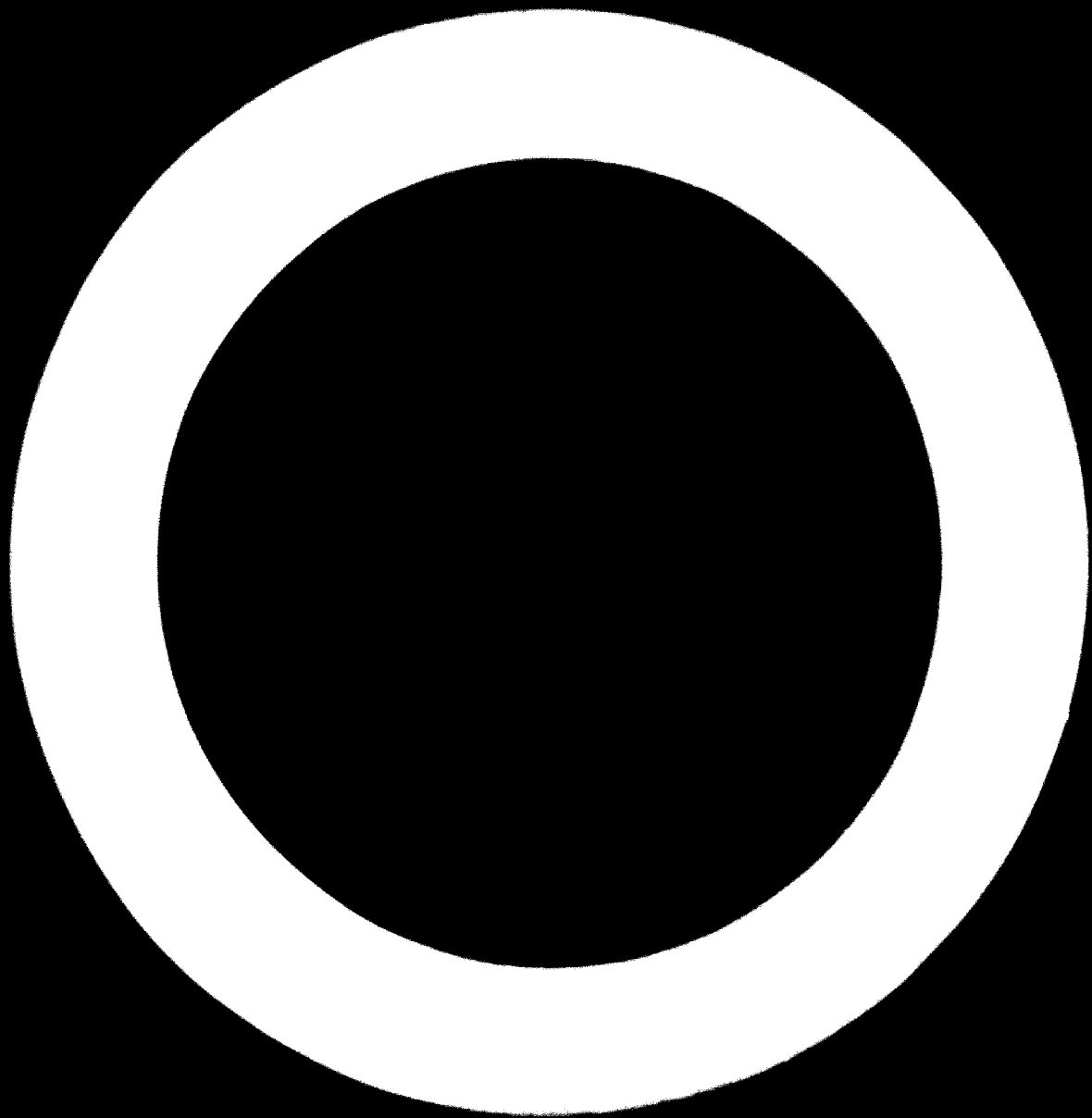
ESTABLISHMENT OF A NATIONAL INDUSTRIAL INFORMATION CENTRE
IN MEXICO ✓

by

Bruno Hofer
UNIDO Expert

(MEX/72/004/11-01/00)

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0. INTRODUCTION

This report contains the findings of an expert for industrial information (I. Hofer) hired by UNIDO for a six-weeks -- follow-up mission to another UNIDO staff members exploratory mission on the establishment of an industrial information center in Mexico (see Gilgus G. "Proyecto para el Establecimiento de un Centro de Información en la Secretaría de Industria y Comercio". Vienna UNIDO internal report. 1972, 22+11 pp.). The assignment started 27th October 1972.

Although the following material is arranged according to the items of the relevant job description DP/MEX/72/004/11-01/09 concentration was made on such items which after the aforesaid exploratory mission still remained uncertain. These items include for instance.

- recruitment and training of personnel (chapt.6)
- actual cooperation with existing information units.
- equipment needed for the center
- publications and other contacts of the center with its users.
- details on users and their information demands.
- extension or field service.

0.1. Legal situation

In order to comply with the objectives of several Mexican laws aimed at promoting industrialization of this country the necessity is felt to create a center specifically furnished to disseminate relevant information for industry according to these laws especially in the fields of:

- Technical assistance
- Assistance in obtaining credits
 - Pre-investment and feasibility studies
- Market research and raw-material situation
- Assistance in establishing a company
- Assistance in selecting and purchasing equipment and production processes.

These information activities will be supplemented by information on technology transfer regulated by another law recently issued.

This law for instance necessitates the retrospective -- screening of all Mexican contracts re patents, liaison, know-how and joint-venture agreements for 3 years and the permanent control of any future contracts. Both evaluation of the contracts already established - and presented in statistical way - and intimate knowledge of the procedures involved in such - agreements will be most necessary information for the industrial information center. Therefore one of the consultants needed - for the question and answer section should take especial care of close liaison with the "Registro de Transferencia de Tecnología" which is now under construction at the Secretaría de - Industria y Comercio.

Typical users of the center are also specified by law: - it will be those enterprises that have an invested capital of \$50,000 to \$5,000,000.

It is important to note these limitations because they - will at the same time yield the basis for a co-operation and - division of work with other existing sources of information.

The final objective should be a "network of information - sources" cooperating very closely on the basis of a "decentralized coordination".

2.2 Economic situation.

Out of the about 120,000 establishments in Mexico about - 60,000 belong to the handicraft type, another 55,000 are small companies and about 3,500 may be regarded as medium-sized.

It is a well known fact all over the world that specially small and medium-sized firms often need encouragement for necessary innovations, because they often have outgrown the "one--man-show" type of business but may not yet have found their -- home among the well-organized "labour-division" type large --- firms.

This encouragement for innovations should come from an industrial information system for which successful examples exist in many countries.

The Mexican situation is certainly marked by the strong interest government takes in industrial promotion. Therefore the hard core of non-technological industrial information -- should come under the jurisdiction of a government agency -- having access both to internal sources and to immediate problems of industry. (see also chapter 4).

1. Information requirements of the users of the information center.

The users of the Industrial Information Center can be divided into 3 categories, namely:

- Small and medium-sized industries, respectively industrialists.
- Government departments and officials.
- Collaborating information units or centers.

1.1 Information requirements of industrial users

usually are investigated by means of questionnaires, interviews, case studies etc. In many cases however, the results are not completely satisfying because it is quite typical that the average industrialist is often not conscious of what a well-functioning information service really could do for him. The real problems are usually only revealed at a later stage, that is, when a climate of mutual confidence has been established, or in other words: after a certain period of successful operation of the service.

Nevertheless some observations on industrial users information requirements will be reported below.

1.1.1. Under the "Programa Nacional de Fomento y Control Industrial"

Officials of the Secretaría de Industria y Comercio have interviewed numerous industrialists state officials, representatives of Chambers of Commerce, cooperatives etc.

The main fields of interest found among smaller industries are:

- Assistance in getting credits
- Technical assistance
- Industrial profiles for specific projects
- New material sources and prices.

Evaluation table of a user investigation led by COTACRI among 109 enterprises of the metallurgic and metalworking industry located in the Federal District.

Tabla 2.- Opiniones sobre necesidades de información en las empresas

CATEGORÍA DE EMPRESAS	LA INFORMACION ES MUY NECESARIA			LA INFORMACION ES MUY MEDIANAMENTE NECESARIA		
	(%)	(%)	(%)	(%)	(%)	(%)
TODAS LAS EMPRESAS	61.2	20.4	18.4	57.6	16.5	26.7
INDUSTRIAS Y SERVICIOS DE MAQUINAS INDUSTRIALES	66.0	17.5	17.5	69.0	12.4	18.6
INDUSTRIAS Y SERVICIOS DE MAQUINAS DE JUEGOS	70.0	18.6	11.4	51.5	27.8	19.7
INDUSTRIAS Y SERVICIOS DE MAQUINAS DE HERRAMIENTAS Y MAQUINARIA TECNICA DE HERRAMIENTAS	28.8	23.8	42.4	59.8	18.6	21.6
INDUSTRIAS Y SERVICIOS DE MAQUINAS DE HERRAMIENTAS Y MAQUINARIA TECNICA DE HERRAMIENTAS	65.6	14.6	19.8	65.0	19.6	15.4
INDUSTRIAS Y SERVICIOS DE MAQUINAS DE HERRAMIENTAS Y MAQUINARIA TECNICA DE HERRAMIENTAS	66.7	14.2	19.1	59.8	17.5	22.7
INDUSTRIAS Y SERVICIOS DE MAQUINAS DE HERRAMIENTAS Y MAQUINARIA TECNICA DE HERRAMIENTAS	53.6	21.6	24.8	53.6	15.5	30.9
INDUSTRIAS Y SERVICIOS DE MAQUINAS DE HERRAMIENTAS Y MAQUINARIA TECNICA DE HERRAMIENTAS	39.6	19.8	40.6	70.4	7.2	13.4
INDUSTRIAS Y SERVICIOS DE MAQUINAS DE HERRAMIENTAS Y MAQUINARIA TECNICA DE HERRAMIENTAS	60.0	12.4	18.6	60.0	12.4	18.6

- Market studies
- Taxation problems
- Industrial parks
- Importation of equipment
- Local insecticides plants. (This was a frequent problem among agricultural groups)

The activity performed by this group of Secretaria de Industria y Comercio officials could be regarded as a starting point for the extension of field service (described in more details in chapter 3.7).

1.1.2 In the frame of an investigation conducted by CONACYT among 150 establishments of the metalworking and metallurgical industry of the Federal District 109 companies have answered and have expressed their information necessities as follows: Out of a total of 17 topics information regarded most necessary in this example is: National market, equipment, new products, foreign market and as is reported: planning (which was not among the 17 questions). Otherwise information on patents and licences, financing and legal aspects have a relatively poor rank.

This example shows, that the information service will certainly have to influence its clients towards higher acceptance rates of the latter quite vital problems.

1.1.3 Conclusions re information users' situation in industry

Taking into account that there is a considerable amount of newspapers, magazines etc. available in Mexico containing information for industry the only answer to a still lasting need for further information is as follows:

- information channelled so far does not always reach the right people.
- people reached by information are not in a position to put it into effect.

This situation can only be overcome by an information system providing not only information as it is but also its interpretation in a broad sense in order to secure innovative application.

Only a system most "friendly to the user" will succeed in this task.

The structure of the center will have to reflect this situation. (chapters 3 and 6)

A methodological investigation on actual industrial users information needs should be undertaken during the initial operating period of the center, again in close cooperation with CONACYT and if possible in compatibility with a large number of such investigations which have been conducted in other countries. For further information see:

Holm, B. L.
Directory of users studies
FID / II (manuscript)

1.2 Information for internal use

There is no question about the fact that Government and its Ministries and Departments--as will be shown in chapters-- are creators and mediators of a large volume of "industrial information". Another fact provided by experience is that only by taking part in an information system the individual departments and sections will permanently know of each others information facilities and problems.

Together with the "feed-back" information from industry the information channelled into the system by internal sources should yield valuable material for public initiatives.

1.3 Information in exchange with other collaboration centers and/or units.

A large proportion of the information for the system will have to be procured from sources of information outside government circles. Many of those will grow into permanent partners of the system.

With them a systematic exchange of information (mostly -- publications) should be foreseen and in case of already processed information compatibility of the material aimed at.

2. Present sources of industrial information available.

Already now a large variety of possible sources for information are available.

For reasons of time-lack there shall be listed only some examples but it will be one of the first operations of the center to make a thorough inventory of all these sources!

2.1. Internal sources.

As has been mentioned already government agencies will contribute a wealth of industrial information from their own work and / or sources.

Among the potential contributors to the system are:

Dirección General de Estadística.

Dirección General de Estudios Económicos.

Dirección General de Fomento Cooperativo.

Dirección General de Industrias.

Dirección General de Integración Económica.

Dirección General de Muestreo estadístico.

Dirección General de Normas.

Dirección General de Pesca e Industrias Conexas.

Dirección General de Precios.

Dirección General de la Propiedad Industrial.

Dirección General de Relaciones Públicas.

In annex 12 - 2 the organigrama of the Secretaría de Industria y Comercio showing the interconnections of its individual departments is reproduced. Another annex gives a list of the publications issued by these agencies. A description of the history and scope of the Secretaría de Industria y Comercio may be found in:

Secretaría de Industria y Comercio

Internal document TRK/ihm of 29 -VI-72, 16 pp.

Of course similar information should be secured also from other ministries and agencies.

Of course all relevant publications from government sources shall be announced in the frame of the centers "active information" (see chapter 3.5).

2.2. Local (Mexican) sources of industrial information.

Instead of listing here all individual potential sources of industrial information - a task that would have to be done by the center in its initial stage - rather a break down of categories of such sources is given below:

- Research institutes for commerce trade and economy --- (including market research institutes).
- Associations of industry.
- Banks and other institution for financing industry.
- Information and documentation centres or units including

specialized libraries.

- *Commercial Departments of Foreign Embassies
- *Other institutions aiming at promotion of industrialization, productivity, etc.
- *Relevant Departments of the States governments (if not -- included already under item 2.1)
- *National members of international organizations which -- often have a lot of relevant information at hand.

Because of their specific importance for a cooperation -- some institutions shall be described in more detail.

2.2.1 Center of information and documentation services of the Consejo Nacional de Ciencia y Tecnología (CONACYT)

As shall be outlined in chapter 8 this organization is -- specially well equipped to help in this project mainly for 4 --- reasons.

- 1.- They have already established an information service that covers the technological field - an important - however not so prominent part of industrial information within this project (see chapter 0)
- 2.- They have undertaken investigations into information users' needs into establishing of specialized information centers and are involved in theoretical and -- methodological aspects which certainly will help in adjusting the centers operations to actual needs.
- 3.- They have established interesting contacts on the international level.
4. They have taken up initiatives in teaching information personnel.

The Center of information and documentation services of CONACYT sees its role as a coordinating body for an information network including agricultural, biomedical, and industrial information services.

It has a staff of about 50 people and is active in coordinated library systems, education and training (including users), industrial information systems, designs of specialized information centers, methodology of identifying needs of users.

A service of specific interest for the industrial information center is CONACYT'S "S.I.T." (Technical Information Service) under the direction of Eng. José Cuevedo Procel.

They are at the present conducting experiments in two main fields.

- 1.- Technical inquiry service (including visits) for small and medium sized industries, with the objective to create a favorable climate for innovation.
- 2.- Dissemination of "Technical News" (Noticias Técnicas) so far in the fields of:
 - Metal working industry
 - Chemical industry
 - Food industryand in the "horizontal" fields of
 - Administration and
 - Pollution.

(This is actually a very good selection because these seem to be most receptive industries and very interesting general -- themes:).

As the cooperation of CONACYT in the industrial information system will be most necessary the chapter 8 of this report is dedicated to this specific aspect.

2.2.2 National Productivity Center (Centro Nacional de Productividad.

The National Productivity Center should be another partner of the industrial information network. It is primarily operating in the field of teaching, training and consulting, and among the typical subject fields should be mentioned: macro-economic investigations and production/productivity aspects (specially nontechnical ones like administration, safety, industrial relations, etc.)

The close contacts the center has established with industry (specially small and medium sized) lends to it favourable position as a mediator for both information to be disseminated and for investigating information needs.

Especially the consulting service works in close contact to industry and has already gained some experience in handling problems brought to its attention. In cases these problems fit into the larger frame of the centers on activities they are tackled immediately, if not, the clients would be referred to other more adequate institutions. This actually will be exactly the

of the typical operations for a "nodal point" in the industrial information network to be set up.

The productivity centers future program contains also case-studies to be conducted among smaller industries to demonstrate their efforts in the field of innovations. This would also be typical material to be fed into the planned system.

By its publications and through its decentralized network the productivity center can reach a large part of industry and assist in disseminating the industrial information or material or selected by the industrial information center.

Top ranking among the so far found theories of innovation among its clients Ingeniero Carlos de la Peña head of the research department, lists "practical know-how" to apply results of information within the individual small company. This is a serious argument in favor of a field activity of the industrial information service (see also chapter 3.7)

2.2.3 Banco de México, S. A.

Servicio Bibliografico y Archivo Técnico del Departamento de Investigaciones Industriales.

Under its head Lic. Alfonso Ayensa and with a surprisingly small staff this service selects and evaluates material primarily for the investigators of the bank itself. As a result of this activity two series of bibliographies are issued:

- Boletín Bibliografico Mensual and
- Bibliografía Industrial de México (annually)

The latter contains in its 1971 issue about 4,500 titles of magazine articles, books, brochures and reports from all over the world. Actually about 320 Mexican and about 350 foreign magazines were screened for this issue.

This information material also forms the input for a card-index file to allow for retrospective retrieval. The breakdown of the collection is only coarse but is reported to be sufficient.

In its archives the service also holds a collection of newspaper clippings, a collection of foreign university curricula, reports on special investigations, industrial maps and statistics. There are also a lot of directories, catalogues and other useful information material which makes the service an attractive partner for industrialists, investors and students. Their records show that there are about 3,000 external visitors per year.

The work performed by this service can certainly be regarded as most valuable for the Industrial Information Center, especially its documentation section (see chapter 3.4)

2.2.4 Other Mexican sources of industrial information.

2.2.4.1 Original sources.

The following sources are partly taken from a list of a --- "Committee for the Development of an Information Service for --- Industry" and partly from observations made by the expert (with exclusion of those listed already in preceding chapters).

- Banco Nacional de Comercio Exterior, S. A.
- Confederación de Cámaras Industriales
- Centro Nacional de Enseñanza Técnica Industrial
- Cámara Nacional de la Industria de la Transformación
- Consejo Nacional de Fomento Industrial y Desarrollo Regional
- Instituto Mexicano de Comercio Exterior
- Laboratorios Nacionales de Fomento Industrial
- Nacional Financiera S. A.
- Servicio Nacional de Adiestramiento Rápido de la mano de obra.
- Universidad Nacional Autónoma de México
- Instituto de Investigaciones Económicas
- Asociación Mexicana para la Protección de la Propiedad Industrial.
- Centro de Estudios Económicos de Sector Privado, A. C.

2.2.4.2 Periodicals

Of course Mexican commercial and trade journals and magazines should be mentioned here as well as lists of trade directories, addresses of organisations, "who-is-who" type almanacs etc.

All these sources should be located, classified by subject -- (and if possible by their cooperativeness) and listed by the industrial information center as soon as possible.

A selected list of Mexican trade magazines which form the basis for the "Bibliografía Industrial de México" of the Banco de México, S. A. (see chapter 2.2.3) is attached to this report as annex...

This list of about 300 periodicals and the results of an offer of CONACY to reach a certain concentration among Mexican industrial periodicals will certainly form the hard core of a final list that could be recommended for industrial information work.

2.2.4.1. Directorios, etc.

Another wealth of industrial information is contained in various Mexican directories, listing the addresses and sometimes extremely useful additional details of many possible sources for information as for instance companies, organisations, associations, libraries, scientific institutions, consultants, individual experts, etc.

A few examples may be cited from a list contained in

Proyecto para la Creación del Centro de Información Metalúrgica, Vol. 1 México, D. F. CONACIT 113 pp.

• Asociación de Industriales del Estado de México.

Directorio de Industrias, 1960-1970 México, 1970

• Asociación Nacional de Instituciones de Educación Superior, México.

Directorio Nacional de Instituciones de Educación Superior, 1971 México, 1971.

• Barberena, E. Directorio de Bibliotecas de México.

Directorio de Bibliotecas de México, 1970 y sus. México, Universidad de las Américas, 1970.

• Directorio de México, 7. ed. México, Banco de México, 1969

• Directorio Industrial Mexicano, 1968-1969. 6ed. México 1969.

• México. Secretaría de Educación Pública, Departamento de Bibliotecas. Directorio de Bibliotecas de la República Mexicana. México, 1970

• Rodríguez Sala de Gómez Gil, M.E. Las Instituciones de Investigación Científica en México. México, UNAM. Inst. de Investigaciones Sociales, 1970.

• Robles, P. y P. y P. Nueva Guía de Asociaciones de la República Mexicana. México, UNAM. Inst. de Investigaciones Sociales, 1970.

• Robles, P. Las Bibliotecas científicas de México (s.p.t.)

2.2.4.2. Bibliotecas, etc.

It should always be borne in mind that in every country there exists a national network of communication supplementing the official channels. The principal working of the I.I.C. will be understood to also take use of these facilities and to maintain contact therewith.

2.3 Foreign sources of information.

Again instead of blowing-up this report by giving a complete list which would not be easy anyway because of the diversity of industrial information sources all over the world - some "sources of sources" are quoted below:

- World Guide to technical information and documentation -- services Paris: UNESCO 1969.
- Information activities of major international organizations Paris: OECD 1970, 170 pp.
- Abstracting Services
Vol. I Science, Technology, medicine agriculture
Vol. II Social sciences, humanities
Den Haag: FID 1969
- National technical information services
World wide directory
Den Haag: FID
- The world of learning, 2nd. ed.
London: Europa 1971
- Ruppert F.
IETI-As. Abkürzungen internationaler Organisationen
München, Berlin, Verlag Dokumentation.
Essen: Vulkan - Verlag 1966, 224 pp.
- FID.- Yearbook 1972
Den Haag: FID 1972
- Guide to European sources of technical information
Guernsey: F. Hodgson Ltd.
- Directory of Scientific directorates
Guernsey: F. Hodgson Ltd.
- Kruse, A.T.
Encyclopedia of Information Systems and services
Ann Arbor, Mich.: Edwards Brothers, Inc. 1970, 1171 pp.
- Internationale Bibliographie der Fachpresse über
Wirtschaft, Wissenschaft, Technik 20th ed.
München: Verlag Dokumentation 1970
(vol. 5 of "Handbuch der technischen Dokumentation und Bibliographie")

The center will be well-advised to get hold of as many samples of foreign information services publications as possible, to screen them carefully and decide to which of them it would like to subscribe regularly.

In completing the inventory of sources of information, it is most necessary for the I.C.C. possible sources of information to be taken into account.

2.3.1 Some examples of typical foreign sources for information

There are several large documentation centers covering a wide range of technology and economy, although technological topics still lead the way. For instance should be mentioned:

All Union Institute for Scientific and Technical Information of the Academy of Science VINITI, Moscow.
(Publication: Izvestiya i Zhurnal)

National Technical Information Service NTIS, Springfield, Mo. (Publication: "Government Research Announcements")

Centre National de la Recherche Scientifique C.N.R.S. Paris
(Publication: "Bulletin signaletique")

Centro de Informacion y Documentación CID Madrid.

Here in the field of strictly industrial information are the activities of the following institutions:

American Management Association (AMA)
Harvard Business School, Boston

British Institute of Management (BIM), London

Centro di Ricerche sull'Impresa e lo sviluppo, (CIRIS) Torino.

Centre National D'Informations pour la Productivité des entreprises, (CAIPE) Courbevoie-France

Technical Information Service of the NRC, (TIS) Ottawa

Dansk Teknisk Oplysningscenter, (DTC). København

The list could be continued almost indefinitely. It will be the task of the center to find the most convenient partners by making direct contacts.

In the field of transfer of technology contacts with for instance:

World Intellectual Property Organization (WIPO) and

Asociación Internacional para la protección de la propiedad industrial, (AOMPI)

could help in its activities.

2.3.2 International Organizations

It should be noted that international organizations being concerned with transfer of technology at the same time often have a wide range of other activities. Actually they

have the largest world-wide network for information and the exchange of knowledge.

Among those who could be very helpful in many practical and theoretical questions are the followings:

- United Nations Industrial Development Organization (UNIDO)
- United Nations Educational Scientific and cultural organization. (UNESCO)
- United Nations Institute for training and research. (UNITAR)
- Organization for Economic Cooperation and Development. (OECD)
- Federation International de Documentation. (FID)
- International Federation of Library Associates. (IFLA)

3. Main tasks and organizational structure of the industrial information center.

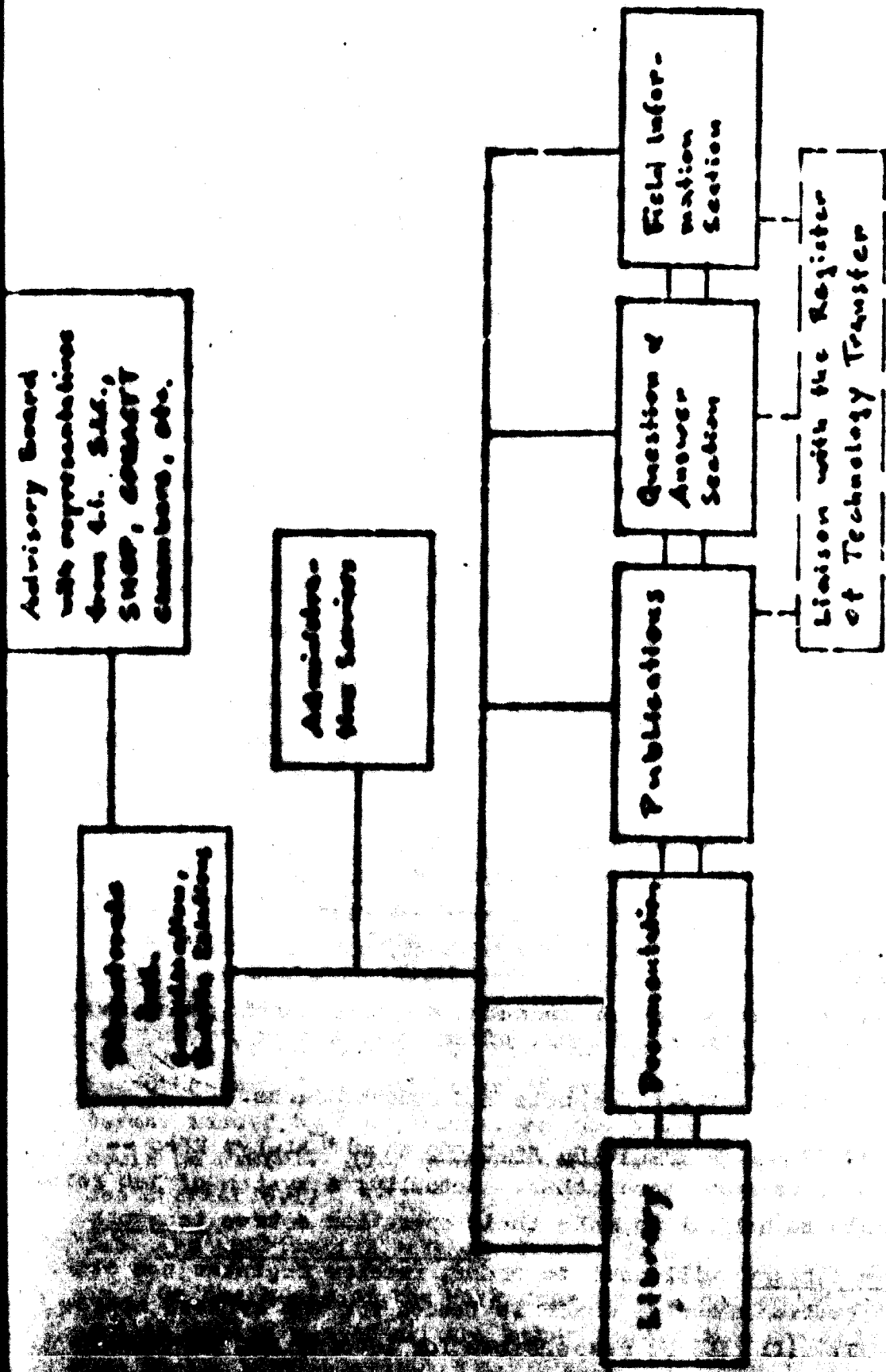
The task of the industrial information center will be to:

- Collect and/or secure access to all sources of information relevant to Mexican industrial problems.
- Select, transform and disseminate information which may -- have an innovating effect on small and medium sized Mexican firms.
- Create adequate vehicles for bringing such condensed information to industry.
- Assist industry on request in their problems.
- Maintain good relations with other existing organizations with the objective to establish a network of industrial information in Mexico.
- Propagate the reasonable use of industrial information
- Educate the industrial users of the information system in how to make best use of information offered to them.

In order to comply with the necessities of this task the following organizational structure of the industrial information center is suggested.

3.0

Organigramme of the industrial information center



3.1 The Director will be responsible for the internal - coordination of the center and for its external relations - (especially international and public relations).

It will be further responsible for recruitment of adequately qualified personnel (as stated 6.1) and for the current training of the staff.

It will have to plan and to control the budget.

It will have to evaluate feedback information and criticism from all partners or clients of the service.

3.1.1 Public relations of the center's operations - especially the public activities will have to be carried out.

Agreement upon a system of classification by which our needs and collaboration with other centers will be guaranteed.

Speeding-up recruitment of personnel.

Agreement upon amount and date order of documents to be fed into the system.

Establishment of working contacts with other centers in order to arrange for a division of work.

Securing the budget, also for future operations.

The necessary qualifications for the Director and his assistant will be outlined in chapter 6.1

3.2 The "Administration" office will have to fulfill the following tasks:

Financial transactions

Mail - service including "pool of addresses"

Typists pool for copies, notices and reports

Administration of office equipment, all staff and other services.

Maintaining personnel records including working time, travel, training, qualifications, efficiency, absences through illness etc.

Drawing up activity reports and budget drafts.

The following working relations should always keep in close contacts among each other. Actually, a system of information could be helpful to make these operations a true system.

3.3 The library will have to order, receive registers and store the information material which is needed for the current operations. It will also be responsible for handling and preservation

As for the services from which material is to be collected in cooperation with administrative offices should be indicated (qualifications, etc.)

1.1 General Information

In close cooperation with the library, and with the persons and departments from industry, this unit will be responsible for the selection, analysis, and classification of material which should be included in the "reference service" (see 1.2, publications).

At the same time it will have to collect and analyze questions and answer cards (see 1.2, see reports to be made and forwarded to industry (see 1.2), together with the material selected from the library; this information should be used to lay the basis for a "selective" documentation, that is a well-organized collection of material forming the basis for retrieval (which again will be necessary to supply information on the questions and answer cards).

At a later stage this course shall prepare the way for a "selective documentation of information" service, but, however, not according to individual companies profiles, as even small companies hardly have a steady profile of interests, and their problems rather tend to shift frequently, but according to profiles of interests that should be constructed independently of industry, for instance branches, local groups of a given region, a given standard of development, etc.

One of the main tasks of this unit will be to determine the classification that is by which means of arranging the data that will result from the collection. In the field of technology the "VDE", "Encyclopaedia of engineering and technical terms, in German and English". For the purposes of the V.D.I. "Encyclopaedia", a basic list of economic and social development terms, issued by UNO, Paris, or the ILO - Encyclopaedia of terms could be useful. The qualification of documentation personnel is also being dealt with.

1.2 Publications

In the course of the work done by the documentation section, the following will be the other information channels open to

the center (including feedback information from industry) this section should be responsible for the "active" part of information work which means that it will primarily send out information automatically to certain groups of users ("subscribers")/

It is recommended to have 3 kinds of publications:

3.5.1 Journal or Bulletin-preferably a monthly one-should be edited, printed and disseminated.

It is important that this bulletin should be as "readable" as possible. For instance it should contain one or two short articles reporting on up-to-date industrial developments. Then there should be a part consisting of literature hints, i.e. abstracts of articles from current literature made up as eye-catching as possible but still containing all the necessary bibliographical data of the original. Last not least the periodical - which all in all should not have more than 8 pages - should contain "tear sheets" for putting orders for copies of the cited literature to the center. Another tear sheet should invite enquiries from industry.

3.5.2 Manuals. Apart from a periodical publication there should be a series of brochures giving information on various aspects of industrial operations.

The theme for such publications which should be written in a very clear, simple, easy-to-read language should be for instance:

What is necessary when going into export

How to make a market survey

How to make a feasibility study

What is quality control

What is productivity and so on.

3.5.3 A short but well-designed leaflet or the "hand-out" type - describing the services of the center should be printed in large quantities and sent to each person or group the center makes contacts with. (For special qualifications of the publications personnel see chapter 6.1)

3.6 The creation and maintenance of a central file can be regarded as the most critical part of the center's operation. Based on the material accessible through "passive documentation", the personal knowledge of the information officers and their knowledge of all available sources for industrial information inside and outside the center

this service will have to give individual, specific, and rapid information on request.

It should be noted that the individual working situation of the enquirer has to be obeyed. The answer will have to take into account his background of knowledge (including language). Principally it can be said that industrialists in general do not appreciate the typical kind of information more or less commonly used in science, namely to provide citations and bibliographies. What industrialists want is rather a short report about the hard core of the problem and one or two photographs of articles on the subject instead of having a long list of references which might at the end be hard to obtain anyway.

The service after it will have been announced properly will be contacted by telephone, mail or through visits.

As it is not easy to formulate the problems the enquirer has in a way to have them handled by the established information system, a working sheet containing all the data, etc. relevant to the problem should be designed to cover the most important essential information needed for the solution of that problem (this questionnaire should for instance ask whether the inquirer has already tried out other means of solution for the problem, whether there will be a time limit, for a cost limit, etc.)

As this service maybe comparatively new for Mexico additional information of its practical functions are given in an annex.

It is self evident that the question and answer section will work in close contact with all other sectors of the center itself and also with all the other sources of information mentioned already.

The working sheets worked-out will serve as another very important source of information. They should be classified, registered and processed like other information material. In using parts of these reports for further information purposes, however, care has to be taken not to violate the right of absolute confidentiality of the original data.

The evaluation of the problems brought to the attention of this service will be unvaluable material for permanent roadjustment of the information policy of the centers directorate.

3.7 Field Service section.

Medium and small sized industries in all countries tend to be not over whelmingly conscious of the possibilities of information service. The important-if not the only-tool to overcome this - situation of reticency seems to be establishing personal contact by means of field information officers services securing both the propaganda for the center and the feed back of actual information needs from the users.

Although the establishment of the field information officer service require especially well qualified people (see chapter - 6.1), it should be regarded as a must especially for developing - industries.

Actually, it seems to be the only way to reach an important part of industry which on its own initiative would never contact the service.

An extension service is extremely helpful in case the govern ment, or the information service itself, may wish to influence its users in a certain way. It is quite clear for instance that the necessity for promoting exports involves a lot of preceding information work.

For the individual industrialist the whole complex of linked aspects might be too difficult to understand, which might discolor him from an otherwise possible extension of his company's activities. Now, a field officer could do a lot of "educational" work by discussing some of the aspects with a client, pointing out -- for instance some of the more important aspects of exporting, like market research, foreign competitor's prices, knowledge of foreign standards, transport and packaging problems involved, special delivery conditions with possible effects on production rates and so on. The advantage of discussing these problems with a competent person instead of filling in forms or just reading about it is evident.

In a first trial period in which not so much the solution of problems but rather additional information on users' needs should

be collected, and the availability of the service is announced, possibly a team of field officers could be sent - consisting of a technologist and an economist - to cover a specific area of industry together. The elevated costs should be compensated by the multiplied observations a well-balanced team could collect on a tour of visits.

A vivid exchange of experience among field officers themselves and with colleagues in their local center and the national center should be maintained systematically.

There are several countries which have established services like this.

Some of them are so successful that visiting them should be obligatory for the personnel which is going to take up this activity in Mexico. Training possibilities should be effectuated -- through UNIDO fellowship program and will be described in more details in chapter 7. Some more information on field information sources are contained for instance in the following literature:

1. Quevedo-Frocel, J. Fernandez-cueto, J.
Reporte de la visita a los servicios de información de la Gran Bretaña, Holanda, Dinamarca y Canadá
México D. F. : CONACYT, 1971 41 pp.
2. Mc. Burney, R. E.
The Technical Information Service of the National Research Council of Canada
Ottawa: T.I.S. 1970, 8 pp.
3. Nefer, B.
Mission of a European Technical information Officer to Canada. Final Report, EPA - Project No. 5/2
Paris: O&EC 1959 (Document EPA/D/7123)

4. Most suitable location of the center

As has been stated already the center should take care primarily of "industrial information" with the exclusion of purely -- technological information (which will be taken care of by ----- CONACYT) (see chapters 2.2.1 and 8)

Now, the typical topics, namely economical, commercial, -- statistical, market and transfer of technology information are -- administered already under the supervision of government. Some of this information could be regarded as confidential, but if it could be processed in a statistical way of anonymous presentation it would be most valuable information.

As the information sources the center should come under the

jurisdiction of the government, in this specific case the S.I.C.

As the actual location for the center is concerned there should be as close a neighbourhood to the present S.I.C. building as possible. At least easy transportation facilities --- (also for books, etc.) should be available.

As regards space required provision should be made for the following rooms:

1 large room (library)	100 m ²
3 medium rooms (conferences administration storage) a 25 m ²	75 m ²
4 small rooms documentation a 12m ²	48 m ²
3 rooms (directorate a 20 m ²	60 m ²
5 rooms consultants & visitor) a 18 m ²	90 m ²
2 toilets a 10 m ²	20 m ²
2 wardrobes a 10 m ²	20 m ²
<hr/>	
Total space required:	413 m ²

It should be noted that the overall tendency for space requirement shows a duplication of space within 10 years. Therefore it should be possible to rent additional rooms after a given time.

The rooms should be preferably on the first floor ("easy access") of a stable building with adequate climatization and a noise level which will allow for high mental concentration at work.

As there is much paper work involved special precautions re fire hazards should be taken.

5. Establishing an information network.

As the potential sources for information have been reviewed in chapter 2 and the main users in chapter 1 the next step should be to create "information channels" between those "nodal points" of the system. This could be effectuated on the basis of:

5.1 A standardized presentation of the information material - (for instance using the established standards for bibliographical description).

5.2 A classification which should be commonly understandable and compatible with other information systems (especially in view of

future computerization) A relevant example for instance is the "Macrothesaurus" a basic list of economic and social development terms issued by OECD.

5.3 An established form of contracts for securing regular contributions from external sources (especially for subcontracting consultants, etc.)

5.4 A short but well-designed leaflet describing the information system and all its services. This leaflet should be handed out also to clients for industry.

5.5 An order form by which clients and partners can either ask for original literature or more information on subjects described in the "active" part of the information service, or formulate a question referring to an ad-hoc or latent problem, the solution of which should be made possible by the aid of the service. ("passive information").

5.6 A coordinated policy for charging fees for the services rendered to industry. Clients in industry should learn that information is a commodity which also has a certain price.

5.7 An important tool for establishing and maintaining an information network is the field information service described already in chapter 3.7. It usually plays a prominent part in "lubricating" the information channels.

6. Personnel, equipment and budget of the industrial information center

6.1 Qualifications of personnel.

The most important prerogative for the excellent function of any information service is recruiting and motivating qualified personnel. Below a break-down of requested qualifications according to the structure of the center is given:

6.1.1 Directorate

Broad economical background, sense for interdisciplinary approach, Contact mindedness.

Command of foreign languages
Basic knowledge of information and documentation

Public relations mindedness.

6.1.2 Administration (head)

Knowledge about
Financial matters

6.1.3 Library

Personnel management
Office routine matters

Library qualifications
Some knowledge of documentation

6.1.4 Documentation

Multilanguage talent
Multidisciplinary mind
Capability to search out the most relevant data from a large stock.
Practical and theoretical knowledge of documentation and information.

At least one person should have specific experience with --- evaluating patents, license agreements, and so on as this will --- constitute an important part of the information material input -- of the center.

6.1.5 Publications

Editors qualification with industrial/economic background

Easy wording for even complicated matters.

Good formal and informal contacts

Knowledge of graphic presentation

6.1.6 Question and Answer

Ample industrial experience

Interdisciplinary mind

Context-mindedness

Techno-economical back ground

Excellent knowledge of information channels.

In view of the important part transfer of technologic problem will play in the centers information at least one man of the group should have special training & experience in this field.

Actually he should serve as a liaison officer to the Registro de Transferencia de Tecnologia specially in the period of reviewing backdate contracts so to make sure they are adequately classified and that material useful for the industrial information center will be channeled to it.

6.1.7 Field service

like above but including also
readiness for travelling
Excellent health condition.

As especially the personnel for the latter service is hard to be found some special remarks on the qualifications are given below:

The person recruited for this service should be an economist with industrial experience or come from a field of technology the wide application of which will have confronted him with different branches of industry already. Such fields are for instances:

- Maintenance (including corrosion prevention)
- Work studies
- Safety in industry
- Packaging and materials handling
- Quality control
- Standardization
- Application of plastics
- Mechanization and automation

As the field officer can be regarded as the "selling agent" of information it should only be natural that he would help his clients sell their goods, in improving quality or productivity, reduce variety of products or selling prices, raise production by incentive plans or prevent accidents.

Besides, the field officer must know details about any regional development plan, about possibilities of tax exemptions or reductions for specific kinds of production, he should know about --- conditions by which a local or federal bank would give a loan, and all this on top of a good technical knowledge of practical industrial operation under local conditions of the labour market, the social conditions of the area and the political situation, too.

As the operation of a small company very often can be influenced in a positive way by just pointing out certain possibilities of improvement, the field officer should by any means have a technical background however, he should skilled in the other fields -- mentioned too. From this it already follows that a major problems will be to find suitable personnel for this job.

Special motivation should be maintained with this type of -- personnel. Once they are interested in t is type of work their experience will be invaluable in the course of time. Good payment alone may not be sufficient, a high rate of personal motivation will be necessary.

6.2 Equipment needed

6.2.1 Equipment for 1973

24 desks	8 750	610,000
20 reading lamps	150	3,000
10 typewriters	3,000	30,000
2 electric typewriters	10,000	20,000
15 card index cabinets	1,000	15,000
120 m. library shelves	150	18,000
1 microfilm reading and copying apparatus	15,000	15,000
1 microfilm file	4,500	4,500
4 telephones		15,000
1 xerox printer (rent annually)	20,000	20,000
Miscellaneous equipment		1,500
	T O T A L	810,000

For a later period of operation the following additional equipment should be foreseen.

1 Offset printing machine	1	130,000
1 punched tape typewriter		75,000
1 Punched tape storage cabinet		30,000
1 Telex station		?
1 Computer terminal		400,000

As these items have to be imported to Mexico UNRWA assistance will be asked for (see also chapter 9.)

6.3 Budget

6.3.1 Budget for the initial period (1973)

SALARIES

Directorate	1 Director	6	200,000
	1 Assistant Dir.		100,000
	1 Bilingual Secy.		40,000
Administration Office	1 coordinator		40,000
	4 typists		16,000
	1 messenger		20,000

Library	2 librarians	\$ 72,000
Documentation	4 documentalists	216,000
Publications	2 editors	120,000
	2 layout/printers	72,000
Question and Answer	3 consultants	216,000
Field service	2 consultants	144,000
		<hr/>
		\$ 1,470,000

In addition to the salaries the following costs will have to be borne:

BUDGET

Travelling costs	80,000
Training costs	20,000
Total personnel costs	<hr/> 1,570,000
Accommodation (see chapter 4)	180,000
Equipment (see chapter 6.2.1)	160,000
Office material	40,000
Mail, telephone fees, etc.	50,000
Information material (books, reports, subscriptions to magazines and documentation services, registers, etc.)	350,000

TOTAL FOR 1971. \$ 2,350,000

6.1.2 Budget for 1971.

Provided that no additional equipment will be needed the following expenses have to be anticipated:

Total personnel costs	\$ 1,727,000
Accommodation	190,000
Equipment (purchasing and maintenance costs)	34,000
Office material	44,000
Mail, telephone fees, etc.	55,000
Information material	290,000

TOTAL FOR 1971. \$ 2,350,000

7. Further UNIDO assistance (especially 1973 and 1974)

7.1 Provision of one long term assignment of an expert as a permanent adviser to the center, duration 2 years,

U.S.\$ 60,000

7.2 Provision of expert advice through several shorter assignments, preferably

- 1.- Assistance during launching period
early 1973, 3 months U.S.\$ 90,000
- 2.- Trouble shooting after 4 months of
independent operation, 3 instalments
with a total of 6 months U.S.\$ 18,000
- 3.- Follow-up mission after one year,
3 months. U.S.\$ 9,000

Component total U.S.\$ 36,000

7.3 Granting of fellowships to local personnel.

It is of utmost importance that the top personnel of the center not only gets permanent training within Mexico but --- additionally there should go two persons at a time (for reasons of permanent discussion of what they learn). Proposals for - countries to see:

- 1.- Canada, TIS (Ottawa and at least one field office)
4 weeks U.S.\$ 3,000
- 2.- Netherlands, RND 1 1/2 weeks U.S.\$ 3,000
+ Denmark, PIO 2 1/2
- 3.- Berlin East, ZIID 2 weeks U.S.\$ 3,000
+ Hungary, CPKK 1 1/2 weeks
+ Austria, (UNIDO, APC)
- 4.- Israel, ISSLIC 4 weeks U.S.\$ 3,000

Component total U.S.\$ 12,000

7.4 Assistance in procuring especially hard to get information material from abroad should be foreseen and a sum of

U.S.\$ 40,000

covering 2 years be allocated

7.5 Among the equipment which will be needed for the center the following items appear to be necessary during the first two years (see also chapter 6.2)

1 offset printing machine	U.S.\$	10,000
1 punched tape typing machine (+ storage cabinet for tapes)		8,000
1 E.D.P. Terminal (+ auxiliary equipment)		35,000
	Component total	<u>53,000</u>

7.6 In order to secure stability of operation of the center also after the launching period further assistance should be foreseen details of which cannot be given today but a financial frame of U.S.\$ 150,000 spread-out over three more years seems to be adequate, taking into account the important --- influence the center's successful activities will have on the country's industrialisation. (see also annex ...)

8. Coordinating plans of I.I.C. and CONACYT

It cannot be denied that CONACYT has already made a most valuable contribution to an improved infrastructure of information in Mexico (see also chapter 2.2.1).

To draw the exact line for division of work is not quite easy but should be envisaged in a way that CONACYT will concentrate on scientific and technological information and proceed in methodological information work, while the I.I.C. of S.I.C. will accumulate and disseminate mainly non-technological industrial information.

As both centers shall cooperate very closely, actually -- some staff members of CONACYT should be lent-out to the I.I.C. especially during the first stage of operation.

Country should also be an important partner when it comes to train management officers (another partner will be UNIBO).

It is of great importance that both centers will classify their information in a possible way which at a later stage - will facilitate cooperation. It is suggested to have "descriptions" (see also annex 2.1)

The centers should also try to coordinate their publications in a way that they may appear similar in presenting the material to the users in industry.

A coordination of workshops, forums and other routine tools should also be undertaken.

Especially in the initial stage (i.e. one year near from CONACYT and one year from the I.I.C.) should one gather most useful experience especially during the first period of operation of I.I.C.

There are a lot of further possible ways of cooperation, i.e. it might be the case that an industrialist might have more confidence in a non-government agency (this has been found occasionally in other countries) or it might be necessary for a given problem to call in an expert in a specific field who may come from the other center.

As CONACYT is pretty far advanced already now they certainly are in the best position to judge and assess a cooperation coming from a government agency.

Coordination should also take place in international relations in international institutions.

Within a foreseeable period the industrial information system will grow into a data bank the input of which will be prepared by several centers and with a periodic information output, that could be screened from external terminals located at various "nodal points" of a national industrial information system.

9. Conclusions and recommendations

To make the industrial information center work successfully the following steps should be taken:

1. Assignment and permanent training of adequate personnel to comply with the tasks as described under chapter 3 of this report.
2. Registration and classification of all potential sources of industrial information internal, local and foreign.
3. Establishing a working agreement with one of the more advanced partners in the field of industrial information especially CONACYT.

This agreement should include:

1. Compatible classification
2. similar presentation of "active" information
3. coordination of work to be done

4. Mutual assistance in terms of inter-
national manpower and exchange of reports.

5. Increasing the availability of the center by all possible
means of public relations open to the B.I.C.

6. Securing feedback information from the industrial user -
level, especially by:

- 1. "Team-works" facilitating contact with industrial users
- 2. Field information service
- 3. Follow-up activities of a given line after the
contact.

7. Maintaining a flexibility of policy and up-to-date
build up a reputation of being extremely "user-oriented".

8. Permanent exchange of experience with other national or
international centers, especially working in the same field.

UNITED NATIONS



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO

1 June 1979

PROJECT IN THE UNITED STATES

SECRET

JOB DESCRIPTION

DP/IND/17/DOA/11-01/79

COST TITLE

Report in Industrial Information

DURATION

Two months

DATE REQUIRED

As soon as possible

DUTY STATION

Mexico City

PURPOSE OF PROJECT

To assist the Government as well as the Secretariat of Industry and Commerce, in determining the justification and feasibility of establishing a National Industrial Development Information Centre for small and medium size industries in Mexico, and to indicate practical steps for its implementation.

DUTIES

The expert will be expected to:

1. study the information requirements of the industries to be assisted in order to determine what main subject fields the future Centre should cover;
2. identify the present sources of information available locally and abroad and advise on the possibility of integrating them into the system of the new Centre;
3. advise on the organizational structure of the Centre;
4. study, with the Government authorities, the most suitable location for the Centre within an existing organization in Mexico;
5. study the possibility of establishing an information network in order to ensure close relationships between the National Centre and the small and medium size industries throughout the country;

6. advise the Government authorities on the budget, equipment and personnel required to start the Centre;
7. assist the Government authorities in drafting a request for further UNIDO assistance including provision of expertise, equipment and fellowships;
8. to examine the possibility of co-ordinating plans to establish the national industrial development information centre with the National Council of Science and Technology's plan to also establish some kind of information system.

LANGUAGES

English; Spanish desirable.

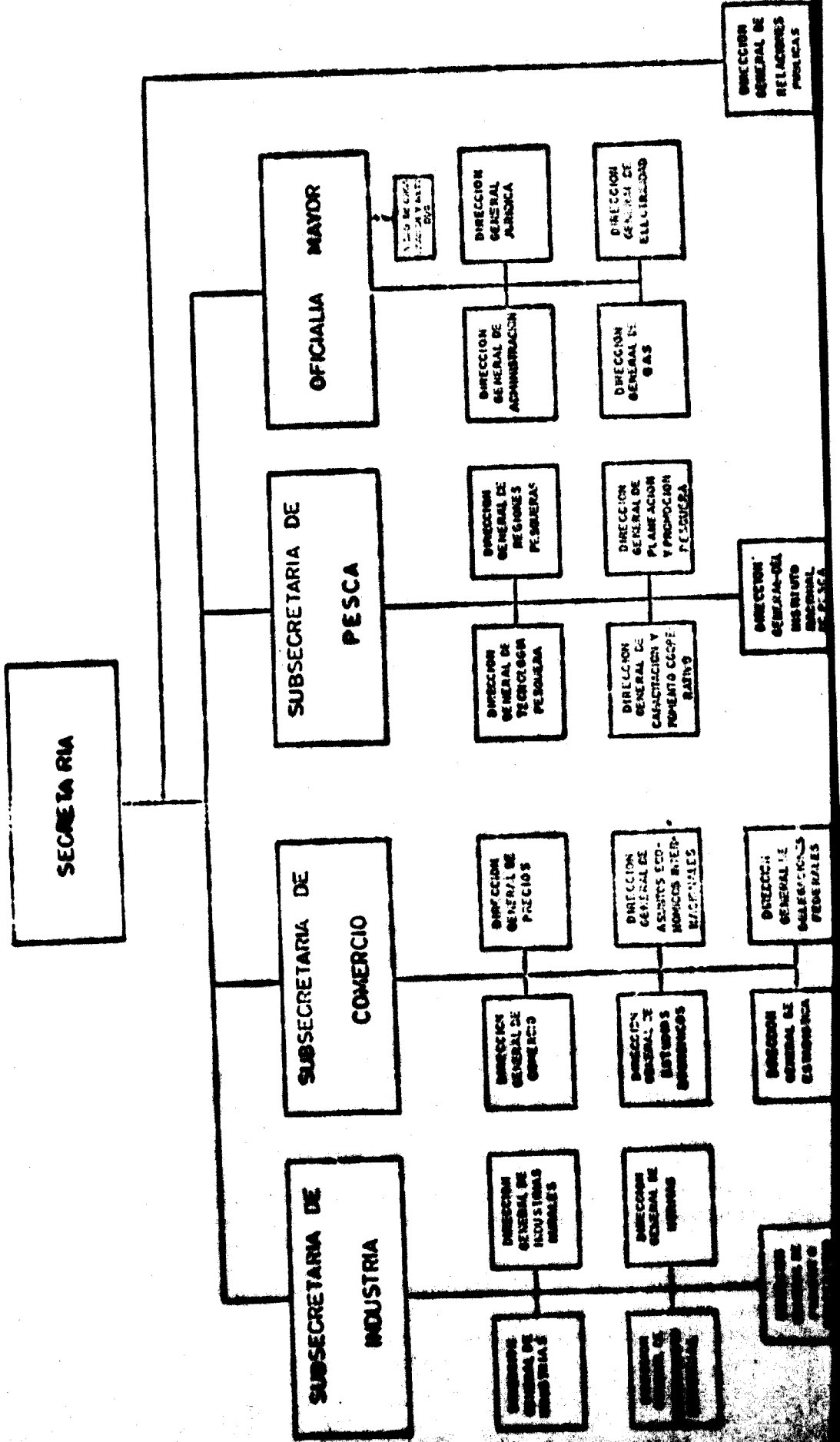
QUALIFICATIONS

University degree or equivalent in engineering or industrial economics. Extensive experience in the planning, organization and operation of industrial information services including dissemination of industrial and trade information.

BACKGROUND INFORMATION

The Government of Mexico is at present carrying out development plans in order to establish new import substitute industries and to expand and diversify the existing small and medium size industries. The major problem of small and medium size industries, however, lies in the lack of technical information and assistance. The small and medium size industrialists require assistance in various problems connected with setting up or developing industries such as: preparation of loan applications, type of equipment, building construction requirements, how to expand the market of products, plant lay out, quality control, packaging, product design, production cost, inventory control, productivity, etc. It is felt that the establishment of a National Industrial Development Centre for Small and Medium Size Industries will help the industrial development of the country in this respect.

SECRETARIA DE INDUSTRIA Y COMERCIO



List of SIC publications

RELACION DE PUBLICACIONES EDITADAS POR LA SECRETARIA DE INDUSTRIA Y COMERCIO

DIRECCION GENERAL DE ESTADISTICA

ANUARIO ESTADISTICO DEL COMERCIO DE LOS ESTADOS UNIDOS MEXICANOS CON LOS PAISES DE LA ALALC

RESUMEN DEL INTERCAMBIO COMERCIAL DE MEXICO CON LOS PAISES DE LA ALALC

ANUARIO ESTADISTICO DE COMERCIO EXTERIOR

ANUARIO ESTADISTICO COMPENDIADO

ANUARIO ESTADISTICO DE LOS ESTADOS UNIDOS MEXICANOS

BOLETIN ESTADISTICO DE COMERCIO EXTERIOR

CATALOGO GENERAL DE LAS ESTADISTICA NACIONALES

CENSO AGRICOLA GANADERO Y EJIDAL

CENSO AGRICOLA Y GANADERO POR ENTIDADES FEDERATIVA

CENSO COMERCIAL Y DE SERVICIOS (RESUMEN GENERAL)

CENSO AGROPECUARIO

CENSO INDUSTRIAL

CENSO INDUSTRIAL (PARTE ESPECIAL)

CENSO INDUSTRIAL POR PRODUCTOS

CENSO DE TRANSPORTES (RESUMEN GENERAL)

CENSO DE POBLACION POR ENTIDADES FEDERATIVA

CENSO DE POBLACION (RESUMEN GENERAL)

CENSO DE SERVICIOS

DIVISION MUNICIPAL DE LAS ENTIDADES FEDERATIVAS

INDUSTRIA INDUSTRIAL ANUAL

INDUSTRIA INDUSTRIAL MENSUAL

INDUSTRIAS MICHOCANENSES

INDUSTRIAS DE PLAZA Y DE SALARIOS INDUSTRIALES

INDUSTRIAS MICHOCANENSES BASICA SOBRE MEXICO

PRINCIPALES INDICADORES ECONOMICOS DE MEXICO

PROYECCIONES DEMOGRAFICAS DE LA REPUBLICA MEXICANA (POBLACION)

REVISTA DE ESTADISTICA

DIRECCION GENERAL DE ASUNTOS ECONOMICOS INTERNACIONALES

BOLETIN DE ASUNTOS ECONOMICOS INTERNACIONALES

DIRECCION GENERAL DE NORMAS

BOLETIN INFORMATIVO DE LA NORMALIZACION

NORMAS

DIRECCION GENERAL DE COMERCIO

DIRECTORIO DE EXPORTADORES DE LA REPUBLICA

DIRECTORIO DE IMPORTADORES DE LA REPUBLICA

DIRECCION GENERAL DE LA PROPIEDAD INDUSTRIAL

GACETA DE LA PROPIEDAD INDUSTRIAL

DIRECCION GENERAL DE ESTUDIOS ECONOMICOS

MEMORIA DE LA SECRETARIA DE INDUSTRIA Y COMERCIO

SUBSECRETARIA DE PESCA

ACTIVIDAD PESQUERA

PESCA (BOLETIN)

ESTADISTICAS BASICAS DE LA ACTIVIDAD PESQUERA NACIONAL

List of Mexican Industrial journals

taken from *Bibliografía Industrial de México 1971*
Banco de México, S.A.

- El Abarrote* — (Revista de la Industria de alimentos) — México, D. F.
- Acción Indigenista* — Instituto Nacional Indigenista — México, D. F.
- Acta Mexicana de Ciencia y Tecnología* — Instituto Politécnico Nacional — México, D. F.
- Acta Politécnica Mexicana* — Instituto Politécnico Nacional — México, D. F.
- Actividad Económica* — Centro de Estudios Económicos del Sector Privado, A. C. — México, D. F.
- Actividad Pesquera* — Secretaría de Industria y Comercio — México, D. F.
- Actividades del CEED* — Centro de Estudios Económicos y Demográficos — México, D. F.
- Actualidades de la Vida Política y Social* — México, D. F.
- Administración Pública* — Secretaría de la Presidencia. Dirección de Estudios Económicos. Biblioteca — México, D. F.
- El Agricultor Sonorense* — Confederación de Organismos de Agricultores del Estado de Sonora, A. C. — Guaymas, Sonora.
- Agricultura Técnica en México* — Chapingo, México.
- Agropecuaria en Sinaloa* — Escuela Superior de Agricultura — Culiacán, Sin.
- Agro-Situais* — México, D. F.
- Algodón Mexicano* — Unión de Productores de Algodón de la República Mexicana, A. C. — México, D. F.
- América Indígena* — Instituto Indigenista Interamericano — México, D. F.

Anuario de la Sociedad Agrícola de Simulacros — Calcutta, Sin.

ANFEI — Asociación Nacional de Facultades y Escuelas de Ingeniería — México, D. F.

Asociación en México — México, D. F.

Apante — Universidad Nacional Autónoma de México — México, D. F.

ARBO — Acreditamiento Rápido de la Mano de Ochoa — México, D. F.

Asociación Industrial Vallejo, A. C. — México, D. F.

Asuntos Económicos Internacionales — Dirección General de Asuntos Económicos Internacionales — México, D. F.

ASCP — Asociación Mexicana de Técnicos de las Industrias de la Celulosa y del Papel, A. C. — México, D. F.

Auto Noticias — México, D. F.

Avante — Almas Nuevas de México, S. A. — Monterrey, Coah.

Boletín Agrícola — Asociación de Agricultores del Río Calcutta — Calcutta, Sin.

Boletín ANSBA — Asociación Nacional de Banqueros, S. A. — México, D. F.

Boletín A.F.I.E.A.M. — Asociación Nacional de Ingenieros y Exportadores de la República Mexicana — México, D. F.

Boletín Anuario de Banqueros — Unión Nacional de Productores de Azúcar, S. A. — México, D. F.

Boletín — Colegio Nacional de Ingenieros, A. C. — México, D. F.

Boletín — Colegio Nacional de Ingenieros y Arquitectos de la Ciudad de México — México, D. F.

Boletín — Instituto Mexicano de Promoción y Operación de Industrias — México, D. F.

Boletín — Instituto Mexicano de Promoción y Operación de Industrias — México, D. F.

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Boletín Bimestral — Centro de Investigaciones Económicas — Monterrey, N. L.

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Boletín del Centro de Estudios Monetarios Latinoamericanos — México, D. F.

Boletín COFIDE — Comisión de Fomento Industrial y Desarrollo Económico del Estado de Nuevo León — Monterrey, N. L.

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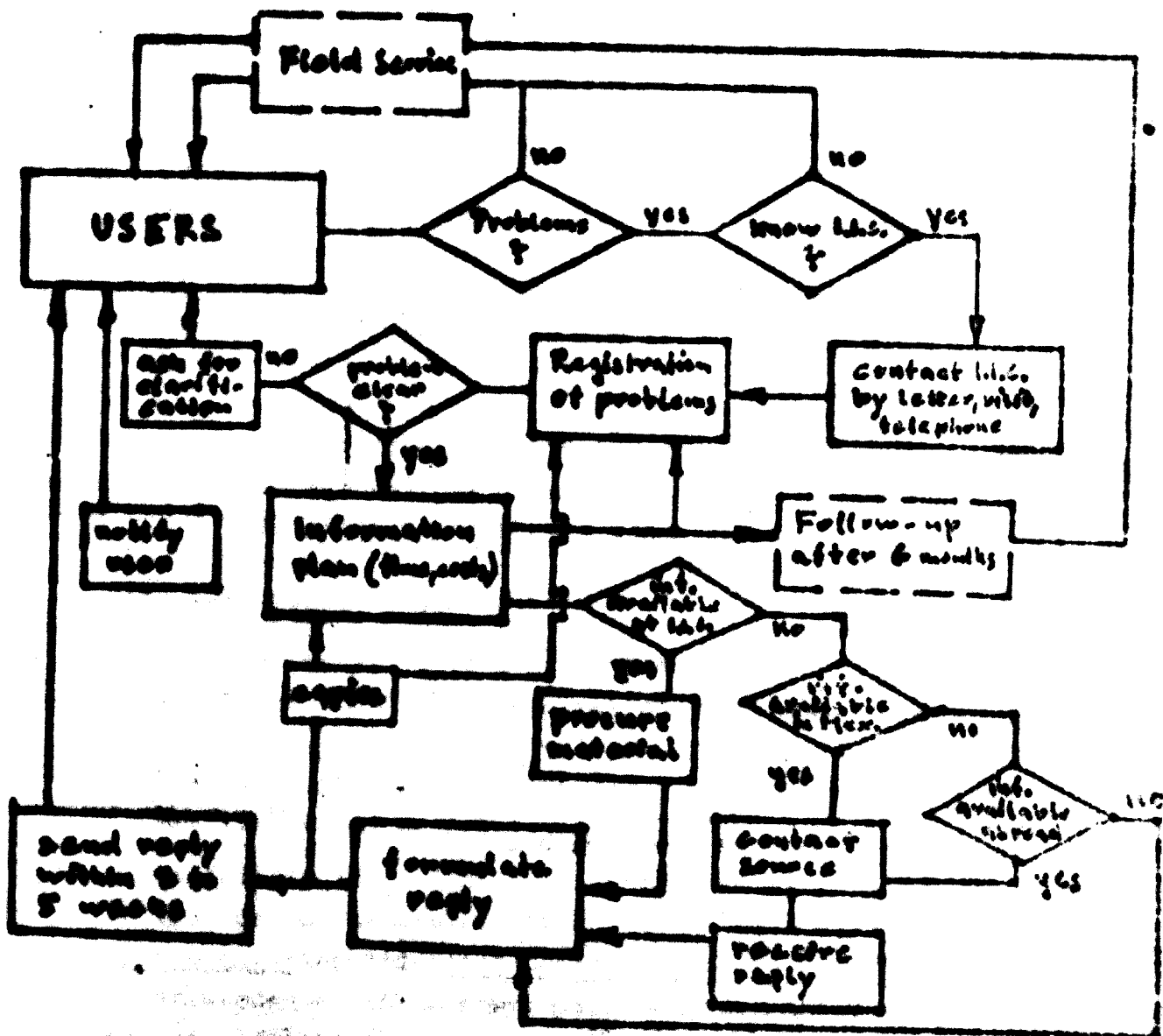
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*C.F.E. Comisión Federal de Electricidad — México, D. F.
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Ferrocarriles — México, D. F.
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Los Contos — Fondo de Cultura Económica — México, D. F.
Grupo Agrícola — Guadalupe, Jal.
Grupo Anónimo — México, D. F.
Grupo EPAS — Organismo de la Asociación de Maestros del EPAS — México, D. F.
Grupo de Productividad — Centro Nacional de Productividad — México, D. F.
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Grupo de Maestros — México, D. F.
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Grupo de Maestros — Centro Nacional de la Industria del Hierro y del Acero — México, D. F.
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Información sobre Valores — Crédito Bursátil, S. A. — México, D. F.
El Informador Apícola — Mérida, Yucatán.
Informador General Frutícola — Comisión Nacional de Productores — México, D. F.
Informe Económico — Centro de Estudios Económicos del Sector Privado, A. C. — México, D. F.
Ingeniería — Facultad de Ingeniería — Universidad Nacional Autónoma de México — México, D. F.
Ingeniería Civil — Colegio de Ingenieros Civiles de México — México, D. F.
Ingeniería de Costos — Sociedad Mexicana de Ingenieros de Costos — México, D. F.
Ingeniería Hidráulica — Secretaría de Recursos Hidráulicos — México, D. F.
Ingeniería y Electricidad — Asociación Mexicana de Ingenieros Mecánicos y Electricistas — México, D. F.
Ingeniería Química — México, D. F.
Instituto Mexicano del Café — México, D. F.
Instituto de Maestros — Biblioteca Universitaria — México, D. F.
El Invernal — Maestros — México, D. F.
Instituto de Maestros — Secretaría de Recursos y Cultivos Públicos — México, D. F.

Flow-chart for question and answer section operation



Draft for a large-scale project document

UNITED NATIONS DEVELOPMENT PROGRAM
PROJECT OF THE GOVERNMENT OF
MEXICO

Title: Establishment of a National Industrial Information Center.

Number: MEX/7 04/77-04/80 Duration: Five years (Phase 1: year 1, Phase 2: year 2)

Sector: Industry

Subsector: Industrial Services and Institutions

Government Co-ordinating Agency: Secretaría de Industria y Comercio
Executing Agency: United Nations Industrial Development Organization (UNIDO)

Date of Submission: Starting date: February 1977

Government contribution: 1,600,000 Pesos

UNDP contribution: 350,000 Dollars.

Approved _____ Date: _____
On behalf of the government
(signature)

_____ Date: _____
On behalf of Executing Agency
(signature)

_____ Date: _____
On behalf of UNDP
(signature)

2 Background Information

Industrial Information in the Industry

Industrial industry is contributing a growing part to the economy's growth, increasingly the business environment, promoting industrial development by relevant laws. One of the main objectives pursued is at the highest level of government to collect and transfer of commercial and technical information to industry.

In order to collect, assess and disseminate this information an industrial information center is needed to coordinate the various scattered efforts in this field.

To reach especially small and medium size industries, a decentralized operation by obtaining the local information offices will be necessary, following examples like the office like the for instance Canada, Australia, Germany.

Industrial Information

The secretariat of Industry, Commerce, and Finance has a wealth of industrial information within its department already now. For instance, this is true for information in the fields of statistics, standards, economic studies, patents and industrial property.

Especially in connection with the new Mexican Law on the Transfer of Technology an important task will be to review the existing licensing contracts and to spread both the knowledge on their contents and fundamental information on contract conditions.

In the field of practical operation the industrial information center will maintain closest coordination and cooperation with the Consejo Nacional de Ciencia y Tecnología, CONACYT,

C. Provisions for Government Follow-up

The Mexican government has already granted an amount of --- 2,350,000 pesos for the establishment of the center including the costs for the first year of operation.

The government is aware of the necessity to contribute a yearly sum to the operating budget of the center.

The center will have a staff of a total of 24 people of which 15 are professionals with a university degree in economics, engineering, information science. The rest is secretarial and auxiliary personnel. In the budget section of this -- document only the proportion of salary is listed that corresponds to specific counterpart activity which for the -- initial phase is about a quarter of the total personnel -- costs.

It will also be a permanent task for the government to --- recruit, motivate and train the highly qualified staff -- needed for the industrial information center.

D. Other related activities

Under the assistance of UNDP a "Registro de Transferencias de Tecnologia" will be established to comply with the necessities of the relevant law, issued recently.

The information accumulated by this register will be most - valuable for the center and close cooperation is foreseen.

E. Further UNDP assistance

After elapse of two years, which by international standards is the experimental and planning stage, further assistance - is foreseen according to which in this second phase the --- appropriate design will be drawn in agreement to the specific experience gained during the first phase.

II Objectives of the Project.

A. Long range objectives

To establish a "network" of industrial information within ---

Mexico which will take into account also the international information network, which is under construction.

Industrial information will be pooled at a data bank the output of which will be handled on a decentralized basis so to ensure close contacts to industrial users.

2. Immediate objectives

To assist in putting the industrial information center into practical operation, securing both international experience and cooperation from Mexican sources of industrial information.

III WORK PLAN

A. Description of project activities

Project activities	Location	Proposed duration
Expert advise in the practical operation of an industrial information center	Mexico City + internal.	two years early 1973.
Expert advise in establishing the information policy of the industrial information center.	Mexico City	three months early 1973.
Expert advise in specific fields of industrial information f.i. documentation, field service, computerization ("trouble -- shooting" after 4 moths of independent operation)	Mexico City	three instalments of one to three -- months duration September 1973.
Training abroad of 4 teams of local information officers at various centers (parallel to permanent local training)	Ottawa Den-Haag Copenhagen Berlin East Budapest (including Vienna) Tel Aviv	four fellowships of 1 month duration -- each March 1973.
Follow-up mission of an international expert (after one year of independent operation)	Mexico City	Three months October 1974.

	Preparatory	1973	1974
<p>Other obligations or preparatory activities by Government</p>	<p>Securing budget Securing premises Assignment of adequate local staff Collection of Mexican sources</p>	<p>Expert in Information policy Expert in practical running an industrial information service</p>	<p>of industrial information Follow-up expert</p>
<p>Assignment of independent experts</p>		<p>Experts in different disciplines</p>	
<p>Assignment of counterpart personnel</p>	<p>Assignment of directors heads of sections</p>		
<p>Training schedule</p>		<p>Fellowships to Canada Netherlands and Denmark Berlin and Hungary</p>	<p>Israel</p>
<p>Delivery of major items of equipment</p>		<p>offset-printing machines</p>	<p>punched-tape typing machine computer terminal</p>
<p>Availability of Government supplies and equipment</p>	<p>premises equipment needed for the start</p>		

B. Description of UNDP inputs

1. Assignment of international staff

The expert for the long-term assignment should have - a broad practical experience in running an industrial information service. He will work in close co-operation -- with the director of the center and assist in co-ordinating the work of the individual departments.

The expert for the initial operation period should be a - decision-maker in information policies. As his task shall be especially to assist in establishing the working agreements with other institutions taking part in the information system he should have a background enabling him to -- define and organize with government officials and heads -- of information services on highest level the flux of specific information.

The experts for the "trouble-shooting" missions should be specialists in their fields-which, however, will only be identified only after a given period of operation. They will work within the individual sectors of the center, -- where problems will arise. Of course, permanent contacts with the directorate and the long-term expert will have - to be maintained.

The expert for the follow-up mission should have ample -- experience in the successful management of an industrial - information service. His counterpart will be the director the heads of the sectors and the other local personnel --- trained abroad. His advise-based on international expe---rience - should enable the local staff to continue indepen- dently the center's successful operations.

The necessary Secretarial and clerical services will be -- made available at the time of arrival of the experts.

2. Provision of subcontractual services. None

3. Training provisions The four fellowships for a team of two fellows each will be provided as follows:

The holders of the fellowships should be

For Canada:	The head of the field service section plus another consultant from the --- question and answer section.
for the Nether- Lands and Denmark:	The head of the question and answer - service plus another field officer.
for Berlin-East and Hungary:	The head of the documentation section plus one librarian
for Israel:	One director plus The head of the publications section.

4. UNDP-provided supplies and equipment

<u>Expendable equipment</u>	<u>Delivery date/cost</u>
Information material - total \$ 40,000 during 1973/74 from abroad, especially subscriptions to documentation services	
<u>Non-expendable equipment</u>	
Offset-printing machine	\$ 10,000 July 1973
Punched tape typing machine plus storage cabinet for -- tapes.	\$ 8,000 January 1974
Computer terminal plus auxiliaries	\$ 35,000 July 1974

The equipment contributed by UNDP is of such nature as to enforce by its operation the "Compatibility" of information input and output of the center. The equipment applied for has to be imported to Mexico.

5. Description of Government inputs

1. Pre-requisite activities

A collection of all available Mexican sources for industrial information is necessary to establish working agreements with them.

2. Assignment of national staff

The directors and heads of sections will be designated by the end of January, 1973.

The director will be the counterpart of the first international expert for the information policy guidelines.

The director plus the heads of sections will be the counterparts for the long-term expert.

The heads of individual sections will be counterparts for the "trouble shooting" experts.

The director, the heads of all sections and the staff members having taken part in fellowships will be the counterparts of the "follow-up" expert.

The necessary secretarial, clerical and other services will be made available at the time of arrival of the first expert.

3. Government-provided supplies and equipment.

The project will be accommodated in the premises of the Secretaría de Industria y Comercio (SIC) office accommodations for all experts will be provided.

The government will assist in finding suitable housing accommodation for the long-term expert.

The government will provide necessary local transport.

(in US Dollars)

Table 1: Investment in Fixed Assets

Year	1973	1974	1975	1976	1977
Investment in Fixed Assets	30,000	30,000	30,000	30,000	15,000

Year	1973	1974	1975	1976	1977
Investment in Fixed Assets	30,000	30,000	30,000	30,000	15,000

Year	1973	1974	1975	1976	1977
Investment in Fixed Assets	30,000	30,000	30,000	30,000	15,000

Grand total 350,000 390,000 390,000 390,000 111,000 58,000 33,000

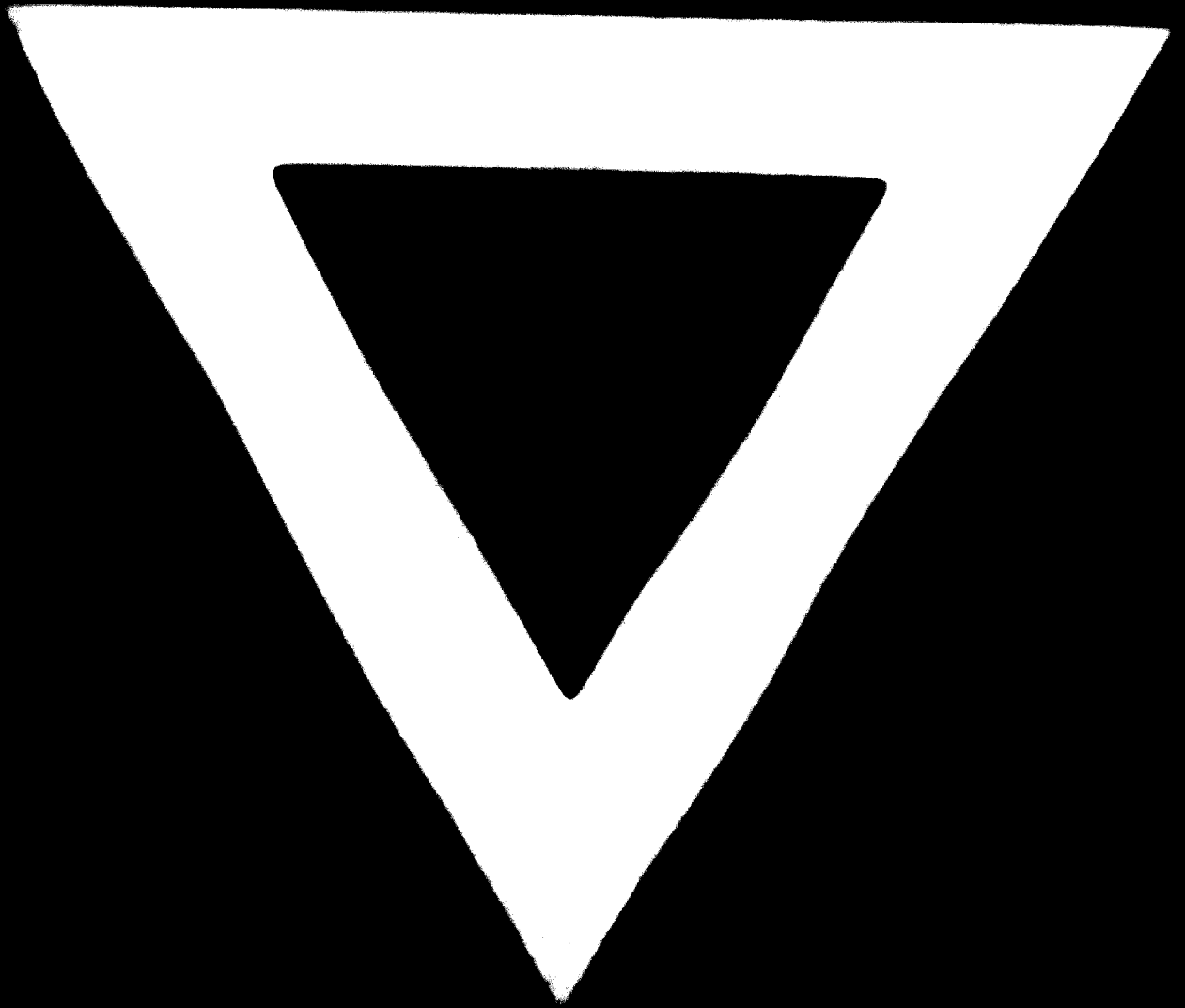
Project Budget Covering Government Contribution
(in Pesos)

Country: Mexico

Project No./ MEX/72/004/11-01/09

Title: Establishment of a National Industrial Information Service

	1973		1974		phase I	phase II	1976	1977
	m/m	Pesos	m/m	Pesos				
10. PROJECT PERSONNEL								
1 director	12	240,000	6	120,000				
1 assistant director	12	160,000	6	84,000				
4 heads of sections	32	192,000	16	96,000				
4 trainees	8	32,000	4	16,000				
1 secretary	24	72,000	12	36,000				
1 driver/messenger	8	12,000	4	6,000				
component total	96	716,000	48	358,000	180,000	180,000	180,000	160,000
	II	460,000						
	I+II	1,176,000						
20. TRAINING								
Salary for trainees abroad	8	40,000	6	30,000	10,000			
internal training (incl. travels)		210,000		10,000	110,000			
component total	I	250,000						
	II	300,000						
	I+II	550,000						
40. EQUIPMENT								
Expendable equipment		600,000		350,000	250,000			
Non-expendable equipan.		160,000		160,000				
Primitives		370,000		160,000	190,000			
component total	I	1,130,000		690,000	440,000			
	II	1,000,000						
	I+II	2,130,000						
60. MISCELLANEOUS								
Operations and maintenance costs		34,000		90,000	34,000			
Sundry, etc.		169,000		90,000	99,000			
Component total	I	223,000		90,000	133,000			
	II	405,000						
	I+II	628,000						
Grand total		4,484,000		1,268,000	1,051,000		745,000	720,000



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