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17306

Distr.
LIMITED

CONF./7
10 March 1989

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Third Meeting of the Advisory Group
of Industrial and Technological Information Bank (INTIB)

Vienna, Austria, 13-17 March 1989

INTENSIVE EXPLOITATION OF INFORMATION RESOURCES
FOR SMALL AND MEDIUM SIZE INDUSTRIAL ENTERPRISES*

A Project Proposal
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The purpose of the paper is to propose concrete UNIDO long term programme action aiming at improvement of industrial information transfer for small and medium size enterprises within the UNIDO-INTIB Network.

The paper contains a short background information describing among other things the present development of INTIB Network as well as proposals for launching new innovative UNIDO projects based on recommendations made by UNIDO-INTIB Workshops.

I. INTRODUCTION:

In the recent years, UNIDO, within its Industrial and Technological Information Programme has developed a series of facilities located at UNIDO Headquarters in Vienna and in the Member States, which offer a combination of on- and off-line information access to data bases and other services facilitating information transfer in twenty selected industrial sectors.

Among the most frequently used services the "Industrial Inquiry Service", "Technological Information Exchange System (TIES)", "Investment Promotion Information System (INPRIS)", Industrial Development Abstracts (IDA)" could be mentioned.

In the same time UNIDO has encouraged in the Member States the creation of INTIB National Focal Points as industrial information generators and National INTIB Networks for industrial information storage, exchange and dissemination. At present such focal points exist in more than 50 countries.

The UNIDO services both at the Hq and at national levels, and especially the bibliographic and factographic information services, are often underutilized and not sufficiently linked with local market and customers needs. In several cases information contained in data bases is tailored to macro-economic solutions and not to solution of small, situation oriented, problems confronted by the small and medium size enterprises.

First they need critical technologies which are the blocks of knowledge from which products develop. Critical technologies give the company a direct advantage over its competitors and can even lead to the monopoly of a particular market.

Secondly enabling technologies to make use of its critical technologies. The enabling technologies are the tools and equipments indispensable to operate the critical technologies and without access to them the company cannot do its job.

Thirdly strategic technologies which are the critical technologies for the future, without which the enterprise cannot be properly developed and be competitive in the long term.

The main sources of obtaining such information on critical, enabling and strategic technologies are dispersed and linked with exhibitions, technical visits, information channels, research and literature search.

The direct and easy access to these sources will facilitate the owner or the manager of an enterprise to take the appropriate decision.

UNIDO's role in the field of industrial and technological information consists of providing necessary guidance to the SME namely: How and where to find the appropriate technological information and how to use it.

The projects listed below suggest rather to strengthen the existing UNIDO information mechanisms, than to develop a new costly infrastructure. They are envisaging:

- The improvement of the quality of provided services;
- Better exploitation of existing information resources; and
- Better response to the local market requirements of small and medium size enterprises (SME).

II. STUDY ON INTERACTION BETWEEN MARKET - SMALL AND MEDIUM SIZE INDUSTRIAL ENTERPRISES AND - RESEARCH

The market is a driving force for any product which should be commercialized. It is the main factor for new ideas which become products and the place to develop the products through competition.

There is no need to provide any additional justification to this effect. It is also obvious that the technology is a key factor for industry in meeting the demands of new markets. If technology is available on the market the question is only of an economic nature. But the increasing competition of markets and the pressure to develop new or improved products and services for increasingly sophisticated users required new technologies not yet available, and the analysis of the markets must be fed back to the research institutions so that they can produce the knowledge needed to develop the required products.

An interaction between market - industry and - research should be a subject of a UNIDO study which would guide the entrepreneur in its efforts to be competitive.

Project Objectives

The study should describe the relationship between market, small and medium size enterprises, industry and research and their interaction. It should provide:

- The characteristics of the markets, industry and research; and
- Highlight the exploitation cycle which provides market information to the industry and research, transfer of science and technology through development and the integration of the applied research with the industry and the market.

III. IMPROVEMENT OF EXPLOITATION OF LOCAL INDUSTRIAL INFORMATION SOURCES AND QUALITY OF SERVICES - A PILOT PROJECT

Recommendation No. 7 addressed to the Member States during the Workshop for UNIDO-INTIB National Focal Points on Industrial Information Networking and Co-operation, Moscow, 30 May - 3 June 1988, suggests: "To examine the suitability of all technical means of communication available locally to improve their telecommunication infrastructure and facilities."

This recommendation although restricted to technical means of communication, implies improvement of local communication channels.

The Workshop also stressed that the existing resources of industrial information are not properly exploited and asked UNIDO to demonstrate how the industrial information, "the lifeblood of business" could circulate in enterprises and at local level. The Workshop recommended to study - do the SME make the best use of information available and what can be done to enhance the quality of communication having in mind that the ability to create and exploit on information resource is a key to competitiveness in many enterprises.

An enterprise depends on two types of information flow: The formal and the informal. At present the former receives all attention, the latter is often taken for granted and therefore ignored. The proposed project foresees the ways of improvements of both kinds of information flow.

Project Objectives

The purpose of the proposal is to outline practical solutions for improvement of use of industrial information in small and medium size companies. The project consists of:

Expected Results

The pilot project which will demonstrate the possibilities of better use of existing communication channels and innovative information facilities at local level will serve as a demonstration project and a guide for similar efforts to be undertaken in other countries and enterprises. It also could serve as a teaching material for seminars and courses on effective industrial information transfer and use. The project could among other things:

- Help to rationalize relationships between customers and suppliers and better manage internal resources;
- Keep information up-to-date;
- Save the enterprise paperwork, improve management.

IV. MODEL OF AN INTERNATIONAL TECHNOLOGY TRANSFER CENTRE

The informal information channel, however important and useful, cannot be considered as the only efficient industrial information source of technology transfer for small and medium size enterprises.

The existing practice and tendencies show the usefulness of creation and functioning of International Centres for Technology Transfer and Know-How Data Banks.

The Economic Commission for Europe, at its Working Party on Engineering Industries and Automation, 22 - 24 February 1988, discussed a proposal for the creation of a Consulting System for Industrial Technologies (CONSIST) based on outcome of a Task Force for Science and Technology meeting held in 1986. The Chairman of the Task Force described the need for such a centre as follows: "In all of our countries industrial development is handicapped by a pronounced lack of overview of what technologies, in total, are available, what plant and equipment is most reliable, appropriate and cost effective, and how the most appropriate technology may be transferred. Remedial requirements would include

4. The Centre shall also serve as a clearinghouse for industrial investment projects, experts available and requested industrial advisory services in the broad sense.
5. The Centre should be a forum for information exchange among entrepreneurs and place for meetings, workshops and seminars.

Modalities of Execution

1. The Centre should be established by UNIDO and a national body based on existing national facilities similar to the objective of the International Centre and which can serve the international community.
2. The Centre should dispose sufficient logistic and intellectual capabilities to host the International Centre.
3. The Centre should work on a non-profit basis and be supported by local authorities, UNIDO and external sponsors.
4. UNIDO will negotiate with its Member States the possible location of the Centre preferably in a place with easy access via modern communication media.
5. The beneficiaries will be expected to pay a fee for the service rendered by the Centre.

Expected Results

Creation of a model Centre for Technology Transfer will first of all demonstrate an effective national involvement in international technology transfer within the framework of UNIDO-INTIB programme and serve as an example for similar efforts in other Member States or regions.

The communication between the user - UNIDO - information source - UNIDO - user - is very long and sometimes lengthy.

To speed the communication and to shorten the way from the user to the information source as well as to broaden the basis of information providers and in the same time to improve the services, it is proposed to set up an International Referral System for Industrial Information with a Referral Centre located within UNIDO.

Referral Centre is an agency which refers inquirer to the source most likely able to provide the desired information. A "source of information" is an entity able and willing to supply information to request.

The number of information sources and systems is now such that is impossible to find information without assistance of good directories and specialists trained in their use.

The problem with information sources is not limited to the growth in volume. As the knowledge grows and develops new concepts appear and new areas are open for research and industry. Information sources have consequently become highly specialized and an adequate understanding of the structure of technology and industry is necessary if questions are to be directed to the correct sources.

UNIDO-INTIB using its Referral Centre for industrial information should consider and gradually develop a Referral Network within its Member States based on voluntary co-operation.

The Workshop for UNIDO-INTIB National Focal Points on Industrial Information Networking and Co-operation at its meeting in Moscow, 30 May - 3 June 1988, has requested UNIDO to offer advice and technical support in developing communication facilities and acquiring hardware as well as to provide technical support and advice for the development of national nodes in the national and international networks.

This request merits a special attention of INTIB which is developing the INTIB Network with application of electronic technology.

Lack of advice on compatible or harmonized norms and standards in the field of industrial information handling and transfer jeopardize seriously national and international co-operation in this field.

It is proposed to set up an INTIB advisory service in the field of industrial information handling and networking.

Project Objectives

To provide advice and technical support to UNIDO Member States and industrial information centres, services and INTIB Focal Points in the field of electronic industrial information handling and networking having in view harmonization of existing procedures and application of international standards and norms to improve access to industrial information sources.

A due attention shall be paid to:

1. Elaboration of common criteria for INTIB database description which will facilitate access of users to bibliographic and factographic data.
2. Harmonization of connection procedures for INTIB Network.