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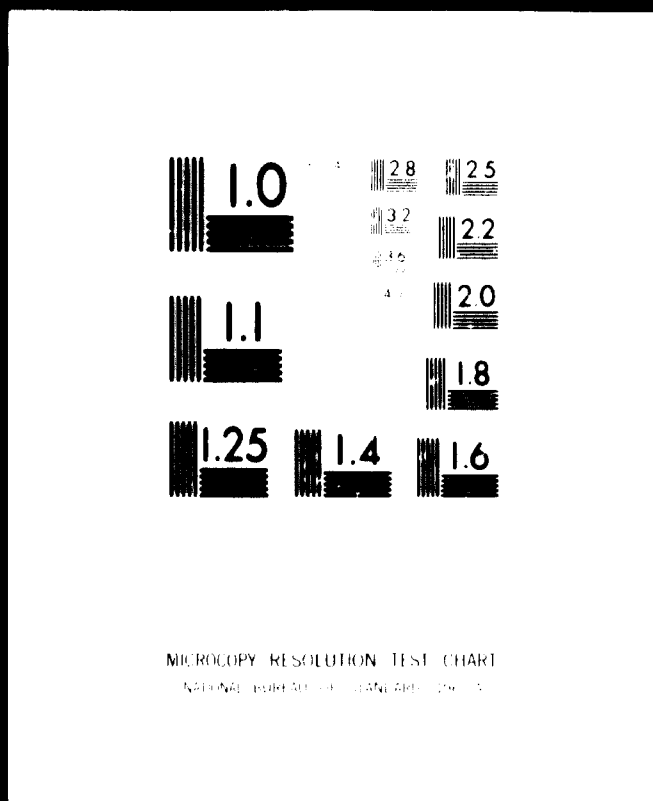
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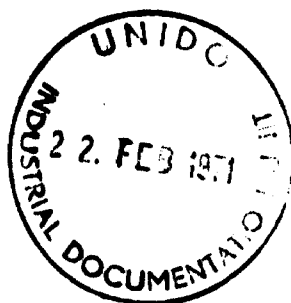
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FINAL REPORT.

CONSULTATIONS ON INNOVATIVE APPROACHES TO THE
DISSEMINATION OF INDUSTRIAL INFORMATION
THROUGH EXTENSION SERVICES

Vienna, 25 to 29 January 1971

14.71-018

TABLE OF CONTENTS

	<u>Page No.</u>
I. RECOMMENDATIONS	3
II. INTRODUCTORY STATEMENTS	7
III. APPOINTMENT OF OFFICERS	8
IV. KEY ISSUES FOR DISCUSSION	8
A. Infrastructure of information systems	9
B. The role of field liaison, field advisory and extension services in the transfer of industrial information	10
C. Evaluation of policy-making seminars and of training courses for industrial information personnel	14
D. UNIDO's industrial inquiry and advisory services	17
E. Publications, audio-visuals and other mass media as disseminators of industrial information	19
F. Design of information systems and presentation of information tailored to meet the requirements of the industrial user	20
G. Experts and consultants	21
H. Co-operation between UNIDO and other international agencies	22
ANNEX I. Extension Services: Main Issues for Discussion	23
ANNEX II. List of Suggested Background Reading	25
ANNEX III. List of Participants	27

Consultations on Innovative Approaches to
the Dissemination of Industrial Information
through Extension Services

I. RECOMMENDATIONS

1. At the conclusion of its consultations, the group adopted the following recommendations:

- i In view of the fact that the transfer of knowledge, followed by its application in industry, is fundamental for industrial development, governments of developing countries should assume responsibility for the establishment and operation of effective local information transfer services. When setting up or reinforcing these services, the authorities should ensure that information activities are organized or co-ordinated centrally in order to make the maximum use of, and to improve, all local information resources, while catering for the needs of every type of industrial consumer in the country.
- ii Person-to-person dialogue between extension officers and industrialists is recognized as the most effective means for the transfer and interchange of technological and managerial know-how. When reviewing and improving their systems for the transfer of information to industry, therefore, governments of developing countries should pay particular attention to the creation of effective local industrial information field liaison and extension services. UNIDO should assist governments in this task by acting as an international clearing-house for the exchange of experience on the effective operation of such services.

- iii Field liaison and extension services should act as intermediaries between the demands of industry for information and the reservoirs of knowledge available in documentation centres, research centres, etc., since the effective transfer of knowledge depends on an interrelated system of creation, collection, analysis, selection, dissemination and application of information: feedback should be an integral part of this system.
- iv UNIDO should give priority to the organization of one- to two-week regional or interregional seminars for top-level policy-making officials in the field of industrial information. The interchange of views and experience which takes place at such seminars can help the participants to influence and adapt their national industrial information systems on their return home, and will guide UNIDO in the establishment of programmes relevant for the participating countries.
- v UNIDO should continue its other training and upgrading activities, with particular reference to training courses and fellowships for industrial information officers and documentalists, such as the course arranged by UNIDO at VINITI, Moscow, in cooperation with UNESCO and the Government of the U.S.S.R. (see paragraph 29, page 15 of the attached report).
- vi UNIDO should organize regular follow-up seminars to enable industrial information officers to exchange experience and to improve their work.
- vii When fulfilling its task of providing industrial information in reply to specific requests, UNIDO should ensure that such information is transferred through national industrial

information services. These local services should screen and evaluate the information to ensure that it meets the needs of the requester and follow up its practical application in industry.

- viii In order to increase the effectiveness of its publications programme, UNIDO should consider the creation of an industrial information news service for developing countries. Such a news service would provide local newspapers, or other media for mass diffusion, with a flow of suitable news and information, and serve to exchange technological information between developing countries as well as to report on industrial opportunities available in developing areas.
- ix UNIDO should pay increased attention to the use of advanced audio-visual means, particularly training aids and other materials suitable for the demonstration of operative workshop techniques for industry. UNIDO should assist and advise developing countries in the selection of industrial films.
- x UNIDO should, when providing industrial information experts and consultants, give priority to requests for top-level advisers to be put at the disposal of developing countries for short periods to give policy guidance (see paragraph 50, page 21, of the attached report).
- xi UNIDO should further reinforce its ties with international and regional governmental and non-governmental organisations which play an active role in the supply and dissemination of industrial information, as well as in the provision of

methodological guidance on the processing of information, with a view to furthering the joint development and improvement of these activities.

- xii UNIDO should request UNESCO to make every effort to reinforce the network of scientific and technological documentation and information centres in developing countries since such centres constitute a basic source for the provision of information for application in industry.
- xiii UNIDO should ensure that the above recommendations and the attached report be brought to the attention of governments of industrialized and developing countries as well as to the international, regional and national organizations concerned.

Summary Report of the
Consultations on Innovative Approaches to
the Dissemination of Industrial Information
through Extension Services

II.

INTRODUCTORY STATEMENTS

2. Mr. Stepanek, Director of the Industrial Services and Institutions Division, welcomed participants on behalf of the Executive Director of UNIDO, who was unfortunately unable to be present in person as foreseen. He pointed out that developing countries request aid firstly in the form of capital and equipment, then by the provision of experts, thirdly for training counterparts through fellowships, but that the provision of information is not given comparable priority. He referred to the difficulties of evaluating the results of development aid and hoped that the experts would be able to advise on the design of self-evaluating information systems while discussing innovative approaches to the extension of industrial information.

3. Mr. Schwoerbel, Adviser to the Director of the Industrial Services and Institutions Division, observed that the sums now spent on information were perhaps higher than the turnover of some big commodities in world trade, i.e. that there is an increasing "information-mindedness". The problems are: that the value of information is still underestimated as compared with other types of aid; and that while there is no lack of sources of information in the industrialized countries, the same spectrum of sources does not exist in many developing countries. He appealed to the group to assist UNIDO by defining a policy with regard to building up facilities for the flow of industrial and technical information and to indicate ways of giving information on the individual level rather than storing it in institutes and leaving the initiative to the industrialist to request the information.

III. APPOINTMENT OF OFFICERS

4. At the proposal of Mr. Donn, Mr. Mikhailov was unanimously elected as Chairman. In order to assist the Chairman in his work, Mr. Ghosh and Mr. Klint~~be~~ were co-opted as Rapporteurs to counsel the Secretariat in the preparation of the report.

IV. KEY ISSUES FOR DISCUSSION

5. The Chairman drew up a provisional annotated agenda, based on the Industrial Information Section's Work Programme with the addition of some sub-items, and the present report follows, in the main, the headings contained in this agenda.

6. Mr. Einhaus, Chief of the Industrial Information Section, complemented the introductory statements of Mr. Stepanek and Mr. Schwoerbel by introducing the Draft Work Programme for 1970-72 for UNIDO, Group 9: Industrial Information (as revised on 17 December 1970). He indicated three main areas of concern:

- activities in the field: building up information facilities for developing countries;
- provision of information on specific request: Industrial Inquiry and Advisory Services;
- dissemination of information through publications and other mass media.

7. After drawing attention to the clearing-house nature of UNIDO's industrial information activities, Mr. Einhaus indicated certain problems which call for the attention of the group: the nature of information systems which should be recommended to developing countries and the role which should be assigned to field liaison and extension services; evaluation and follow-up of UNIDO industrial information activities, especially training; feasibility of charging for certain services; methods of

following up locally whether the information supplied is applied practically; the impact of the Industrial Information Section's publications in relation to their costs; increased use of audio-visual media.

A. Infrastructure of information systems

8. The group pointed out that the transfer of knowledge, followed by its application in industry, is fundamental for industrial development but that this transfer is part of a complex system for the creation, recording, analysis, selection, dissemination and application of information which, in its entirety, calls for the special attention of policy-makers at the national level.

9. It was felt that the approach to be adopted by national Governments would have to depend on the individual conditions prevailing in each country. The most effective and economic approach is to improve and make the maximum use of existing facilities and structures, as well as integrating them into a coherent national system, rather than endeavouring to build up new institutions.

10. In this connection, the group fully subscribed to the statement contained on pages 18-19 of UNIDO Monograph 13: Industrial Information:

"Governments in developing countries should assume responsibility for the establishment and operation of effective local information transfer services. When setting up or reinforcing these services, the authorities should ensure that information activities are organized or co-ordinated centrally in order to make the maximum use of all local information resources, while catering for the needs of every type of industrial consumer in the country. The information service may be attached to an existing institution, such as a ministry of economic planning and development, or a national centre for industrial research, or even a chamber of commerce, provided that this link does not restrict the service in its nation-wide application."

11. National facilities are, in the group's opinion, essential for effective work at the regional level. Regional centres could then, for example, distribute work on an industrial branch basis among especially qualified national centres. The Industrial Development Centre for Arab States is working along these lines: a centre in the United Arab Republic has been designated to supply information on the textile industry, a centre in Algeria to supply information on the iron and steel industry, and so on.

12. Once this national, respectively regional, infrastructure has been established, the centres can link into the world-wide networks which include the information systems set up by international organizations.

B. The key role of field liaison, field advisory and extension services in the transfer of industrial information

13. The group agreed that industrial information field liaison, field advisory and extension services are one of the main means of promoting the effective application of advanced technology and new managerial techniques in industry. There was a consensus that this type of service can make a major contribution towards compensating the shortage of technical and managerial expertise in industry, as well as acting as an intermediary between the demands of industry for knowledge and the reservoirs of knowledge available in documentation centres, research centres, etc.

14. The group drew attention to the different types of industrial information field liaison, field advisory and field extension services, depending on different institutional structures and other local conditions, for example: services concentrating mainly on the catalytic liaison and promotion function, oriented on the one hand to increasing industry's receptiveness to and demand for information

from all available sources and, in return, feeding back the results of this work to the sources of information so that they can improve their effectiveness and user-orientation; services endeavouring to provide a package of managerial and technological advice on the spot mainly from their own resources; services which are specialized for one branch or sector of industry and act as extensions of research or development institutes in that branch.

15. An industrial information field liaison, field advisory or field extension service might have an advisory board on which representatives of industry or of industry associations have a majority. This advisory board should be approved by, and report to, the national government.

16. It was stressed that, even though they may be attached to an existing institution, industrial information field liaison services should be free to develop their own methods of performing the tasks assigned to them, bringing into play all other national information resources which they consider to be appropriate.

17. The principal task of industrial information field liaison services was identified as taking the initiative in calling upon local industry uninvited to discuss individually or in groups the problems of development, improvements, exchange of experience, co-operation between enterprises, etc., by means of conferences, courses, visits, tours, consultations, etc.

18. It is further the task of industrial information extension and field liaison offices to provide established groups or individual inquirers with information on local, national, regional and international sources of information which, by more efficient utilization, can help to improve the activities of the individual company.

19. By providing information from all these sources, the industrial information extension and field liaison services should play a key role in transferring technologies most appropriate to the specific conditions obtaining in each country and region, on the basis of local demand, raw materials and the availability of capital and (skilled or unskilled) labour.

20. One important new activity which industrial information extension and field liaison services could initiate would be to explore the possibility of actively promoting forms of inter-enterprise co-operation by stimulating the creation of groups of industrialists to undertake, under the guidance of information extension services, a systematic programme of mutual consultancy, training and exchange of experience (self-management groups, "TCP operations", sub-contracting exchanges*).

21. One industrialized country has organized vertical field advisory teams for specific branches of industry: these teams consist of a mixed group of five engineers and five operators under the leadership of a technologist and cross-feed experience between five industrial plants or workshops with similar equipment and technology.

22. The specific activities which industrial field liaison services should perform, on their own initiative, were defined as follows:

- to become personally acquainted with the individual enterprises in the local region or sector, their activities and their personnel;
- to become intimately acquainted with the institutions important for the development of the region or sector, i.e. centres of specialized knowledge such as research, education and training institutes, information, documentation and library services, at home and abroad;

* See paragraph 47, page 20, for more details.

- to provide an active information service - individually selected and tailored for the sector - on technical, commercial and economic developments;
- to visit the enterprises in the sector and discuss topical and development-oriented problems;
- to assist by formulating the problems and the demands for information of these enterprises;
- to find and make contracts with experts or institutions willing to solve problems;
- to follow up and evaluate the results of such contracts;
- to organize and/or co-operate in organizing courses, conferences, etc., aiming at exchange of experience within the sector and the further training of the staff of the enterprises;
- to arrange study tours to firms, research centres and fairs at home and abroad, in order to promote the free exchange and sharing of experience among industrialists, as well as between industrialists and specialists in various fields of relevance to the development of industry.

23. Person-to-person dialogue between extension officers and industrialists was recognized as the most effective means for the transfer and interchange of technological and managerial know-how, as well as for ensuring proper follow-up of the information supplied and feedback to the institutional sources of information.

24. The initiative of industrial information field liaison and extension officers in constantly promoting the use of their service was underlined and, in this connection, the group agreed that the initial unsolicited provision of information to industry had to be free of charge. However, services rendered in response to specific requests by industry should be against payment on the national level.

25. As to the selection of personnel for industrial information field liaison and field extension services, the group agreed that an economics or engineering background with extensive practical experience in industry was required. The vitality of services can only be maintained through

a constant entrepreneurial approach to information, which must be regarded as a commodity to be distributed on the basis of constant marketing. The problem of acquiring and keeping highly-qualified personnel was examined and the importance of adequate remuneration and rotation of this staff from and back to industry was emphasized. One established service deals with this problem by recruiting its liaison staff from industry after a minimum of 10 years' experience, and deliberately plans for a maximum of 5 years' employment after which they are expected to reintegrate into industry.

26. In conclusion, the group recommended that governments of developing countries should assume responsibility for reviewing and improving their systems for the transfer of information to industry and should recognize the key role played by effective local field liaison and extension services in this connection. It also recommended that UNIDO should assist governments in this task by acting as an international clearing-house for the exchange of experience on the effective operation of such services.

C. Evaluation of policy-making seminars and of training courses for industrial information personnel organized by UNIDO

27. There was a general consensus that seminars for top-level policy-making officials are most valuable. The interchange of views and experience which takes place during such seminars can help the participants to influence and adapt their national systems on their return home, as well as providing guidance for UNIDO in the establishment of programmes which are relevant for the individual countries concerned. Seminars may profitably be organized (on a regional or interregional basis) for groups of countries which face similar problems and have reached a comparable level of industrialization.

28. The programme of the seminars should not be too formalized: one or two consultants might outline the framework of thinking by giving short talks, but the emphasis should be placed on an analytical (rather than descriptive) exchange of experience on the present situation and on the problems of application of methods of dissemination of industrial information and technological transfer. Such discussions can help countries to identify their needs and to draw from the experience of others which have already dealt with these problems. The group recommended that the maximum duration of such seminars should be fixed at one to two weeks, since policy-makers cannot absent themselves for longer periods.

29. With regard to the training courses for industrial information officers and documentalists at VINITI in Moscow (organized by UNIDO in co-operation with the Government of the USSR and UNESCO), while recognizing that the 1970 course was useful and well-prepared, the group felt that, in order to enable participants to obtain a wider spectrum of experience within the fixed period of the course, some slight modifications to the 1970 programme should be made. The course should become auto-evaluative through weekly sessions where the participants could discuss its practical applications in their own countries: this would promote greater understanding and appreciation of the training. Visits should be organized to several information and documentation centres within different industrial branches in the USSR so that participants can learn about a wide spectrum of information transfer practices: consequently, the training course in Moscow may need to be somewhat condensed. Participants should visit individually at least one other country which runs an industrial information liaison service on their way home. Participants should also visit UNIDO Headquarters after the course for a detailed briefing on UNIDO information activities as well as to discuss the course.

30. It was stressed that visits to other countries need not necessarily be organized for the group as a whole, but that participants should visit countries where information systems correspond most closely to their national systems - e.g. the "package service" concept (i.e. the service endeavours to answer questions itself in addition to approaching other sources), or the concept of "marketing information as a commodity" (i.e. the service acts uniquely as a clearing-house and concentrates on selling the idea of using information to the industrialist). Such visits will not only give the trainees wider experience but will enable them to see, in practice, how information could be transferred to the industrialist-consumer: in this connection, meetings of information users might profitably be arranged so that both the host information services and the trainee can hear at first hand how the information supplied is transformed into practical application.

31. The group suggested that UNIDO should give more emphasis to individual fellowships for industrial information personnel in future. They agreed that fellowships for visiting various industrial information extension and field liaison services with different approaches would give industrial information officers valuable insight into the different methods used to ensure that information reaches, and is applied by, industry.

32. The group recognized that the selection of participants in industrial information seminars and training courses and of fellows is the prerogative of governments, but they pointed out that UNIDO should formulate criteria carefully and specifically indicate the level expected (i.e. top-level policy-makers for seminars, directors of industrial information centres for workshops - since it is at management level that the highest multiplier effect is attained, industrial information officers for fellowships, documentalists for formal courses in information collection, storage and retrieval techniques).

33. With regard to UNIDO's future activities, the group recommended that its present programme of policy-making seminars and the training course in the USSR should be continued (the latter with the modifications mentioned in paragraphs 29 and 30 above). It also recommended that Member governments should be encouraged to take advantage of the fellowships available for industrial information personnel. New activities suggested were: the organization of one-week round-table conferences where policy-makers from developing countries would discuss the prevailing conditions and working methods in industrial information services in developing countries and then explore how the training of industrial information and extension officers should be arranged so that it is really geared to these conditions; the organization of regular follow-up seminars for information officers to review progress, to exchange experience and to examine whether recommendations made at previous seminars have been implemented; and that UNIDO should take advantage of the offer made by Mr. Mikhailov (UNESCO) to send up to five additional participants, at UNIDO's expense, to the refresher courses for documentalists arranged by UNESCO.

D. UNIDO's industrial inquiry and advisory services

34. While reviewing the Industrial Inquiry Service and the Advisory Service on the Supply of Industrial Equipment, the group paid particular attention to the roles of the national, regional and international strata in the selection and provision of information to industry.

35. It was emphasized that, to ensure the dissemination of information appropriate to the specific needs of local industry, the national, respectively local, service is required. Ideally, replies to inquiries should be channelled through national, respectively local, services which are acquainted with the national industrial policy as well as with the prevailing local conditions. Consequently, it was suggested that

UNIDO should complement its network of industrial information liaison services in industrialized countries by finding at least one such centre in each developing country which would act as a bridgehead for the channelling of inquiries and answers. The directory of national referral centres compiled by the International Federation of Documentation (FID) was mentioned in this connection, as well as the documentation and information services acting as correspondents for the OECD Development Inquiry Service network. One important role which regional services can play lies in the cross-feeding of information on industrial problems and experience within their region of competence.

36. The group recommended that greater use be made of trade periodicals to familiarize the public with the available spectrum of information services for industry. The selective lists of recognized technological journals drawn up by the Industrial Information Committee of FID might be consulted for this purpose.

37. The organization of the international network of inquiry services for which OECD acts as a clearing-house, and co-operation established within this network for the indexing of documents and other unpublished literature on the basis of a common system and a common list of descriptors, was outlined, together with the distribution of competence among international organizations for the main subject areas of interest to the developing world (OECD - economic development, ILO - social and labour questions, FAO - agriculture, UNIDO - manufacturing industry).

38. The group advised against international organizations charging any fee for the preparation of answers to inquiries. It was considered, however, that a charge for information specifically requested by industry from national centres is justified and might be desirable since recipients place a higher value on material they have paid for and will evaluate it in a more critical light.

E. Publications, audio-visuals and other mass media as disseminators of industrial information

39. It was recommended that UNIDO should assist the efforts of developing countries to encourage the use of weekly or monthly publications for the promotion of information-mindedness through general or specific items of industrial and technological news and information. To this effect, it was recommended that UNIDO should consider launching a news service which would provide such publications as well as other local media with a flow of suitable news and information, and serve to exchange technological information between developing countries as well as to report on industrial "opportunities" available in developing areas. Each country would, of course, be free to choose among this selection of material the items most appropriate to its needs.

40. It was agreed that neither the UNIDO Newsletter, nor any of the other UNIDO communications examined, were suitable vehicles for arousing the interest of the press in UNIDO operations.

41. It was suggested that the role of the UNIDO Newsletter should be redefined and that, when the profile of its readership is clearly established, its target should be more precisely delineated. The usefulness of the Industrial Research and Development News was questioned and it was suggested that its role and content should be reconsidered.

42. As to the role of UNIDO in the area of audio-visuals, it was reconfirmed that it should assume a clearing-house role and assist developing countries in the selection of industrial films.

43. It was also recommended that UNIDO should keep abreast of new technical developments in the field of audio-visuals, particularly with regard to training aids and other materials suitable for the demonstration of operative workshop techniques for industry.

F. Design of information systems and presentation of information tailored to meet the requirements of the industrial user

44. The Chairman, as well as other members of the group, presented an impressive picture of the comprehensive systems established in certain industrialized countries for the collection, analysis and dissemination of information through regional and specialized industrial documentation and information services.

45. It was recognized that effective documentation centres geared to the various industrial activities of each particular country should constitute the basic sources for the provision of information for application in industry.

46. As to the presentation of industrial information, the group agreed that newspapers, trade publications and popular technical journals as well as mass media, including broadcasting and television, should be used increasingly for the dissemination of unsolicited information to industry. The presentation should be brief, clear and attractive, and even the cartoon approach was mentioned as an effective way of putting across new technological ideas. The group agreed that the industrialist and the potential entrepreneur are seldom prepared to read specialized primary and abstract journals.

47. Three innovative methods of increasing the receptiveness of industry to information through the direct involvement of enterprises were brought to the attention of the group: 1) Self-management groups: these groups, which consist of up to 20 enterprises, co-operate by undertaking auto-critiques, diagnosing each others problems, mutual training, establishing joint managerial programmes and inter-changing active information. They work under the guidance of an extension officer; 2) "TOP" (technique-organization-productivity) operations: 4 or 5 large firms lend their technical and management specialists to about 50 small firms, under the

aegis of the local information service which guarantees the impartiality of advice given. Through the direct involvement of the firms concerned, this active transmission of information overcomes passive attitudes;

3) Sub-contracting exchanges, which also play an important role as information disseminators, e.g. on industrial equipment.

48. Information and documentation services might improve their relations with industry by organizing meetings of users where the relevancy of the information provided by these services, and the practical use which has been made of it, could be discussed.

49. The group recognized that UNESCO has an important role to play in creating interest among the young in technological matters. This should encompass the whole range of education, including books, magazines, toys, etc.

G. Experts and consultants

50. The group expressed its concern at UNIDO's present policy of sending experts or consultants to countries on three- to six-month assignments to advise on the setting up of industrial information services. They felt that the most qualified people for these assignments - i.e. directors of operative industrial information services - are seldom available for such long periods and that in any case a foreign expert might, even in the long term, have difficulties in coping with the specifically local psycho-sociological barriers which have to be overcome in the selling of information services to industry.

51. They recommended UNIDO to advise the authorities in developing countries, when formulating their requests for assistance in the form of experts and consultants, that better results would probably be achieved by sending top-level experts, as a rule for not more than one month at a time, and following up these visits after a few months or a year by further two- to three-week visits.

52. However, the group recognized that where package services (including workshop facilities and shop-floor advice) are provided by industrial extension services, the provision of engineers and consultants over longer periods (more than a year) may be essential: this would apply, for example, to a request for a documentalist to assist in the initiation of an information storage and retrieval system and, at the same time, to train counterpart staff.

H. Co-operation between UNIDO and other international agencies

53. The group urged UNIDO to make maximum use of the expertise and capacities available from UNESCO and other bodies within the UN system, from governmental organizations such as OECD, COMECON and OAS as well as from non-governmental organizations playing an active role in the field of documentation and information, with particular reference to the International Federation for Documentation (FID) and its Committees for Industry, Developing Countries and Training.

54. The task of giving developing countries selective access to the vast fund of applicable knowledge now being generated makes the pooling of available resources through a well co-ordinated universal programme imperative.

Consultations on Innovative Approaches to
the Dissemination of Industrial Information
through Extension Services

Vienna, 25 to 29 January 1971

MAIN ISSUES FOR DISCUSSION

In accordance with the recommendations of the International Symposium on Industrial Development and with the overall objectives of UNIDO embodied in its Programmes of Work, an expert group meeting has been convened to examine innovative approaches to the dissemination of industrial information through extension services.

The participants in the meeting are expected to examine and to evaluate the present methods of industrial communication in general and, in particular, the operation and impact of extension services in their own region and/or field of special interest. The participants are expected to generate new ideas and to indicate new approaches to industrial communications with a view to increasing their effectiveness as transmitters of technology to government agencies, institutions, to managers, and to the shopfloor level of industry in developing areas.

It is expected that the deliberations of the meeting will result in policy guidelines for UNIDO's programme of work.

The issues mentioned below are indicative. It is expected that the participants will raise other issues:

1. The role of extension services in promoting the application of technological and managerial innovations in industry. To what degree can extension services compensate the shortage of technical and managerial expertise? The success and shortcomings of existing services.
2. How to initiate extension services. When new industrial services are set up, should extension and advisory services be a built-in component from the outset? Where should they be based organizationally

and institutionally (e.g. ministry of industry, productivity centre, research institute, federation of industry)?

3. The role of extension services in activating local resources of know-how, data and documentation in developing countries; feed-back of information and experience.
4. The function of extension services in making industry aware of the advantages to be derived from keeping up to date with industrial advances and applying them where appropriate: creation of "information-mindedness".
5. Should extension services be devised for a specific branch of industry or for industry as a whole?
6. The psychological factors facilitating the assimilation of new knowledge in industry (media, presentation and frequency of impact).
7. The value of individual contacts in the effective transfer of technological and managerial know-how: dialogue between extension officers and industrialists: follow-up to ensure the solution of new problems and to evaluate services already rendered.
8. The organization, management and working methods of extension services.
9. Selection, training and status of extension service personnel.
10. Information as a commodity: its marketing and costing. Should information initially be provided free-of-charge?
11. UNIDO's role as a promoter of the flow of industrial information on the international and national levels.

5 January 1971

Consultations on Innovative Approaches to
the Dissemination of Industrial Information
through Extension Services

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LIST OF SUGGESTED BACKGROUND READING

I. Books:

UNIDO. Monographs on industrial development. Industrialization of developing countries: Problems and prospects. No. 13. Industrial information. New York, UN, 1969. 56 p.

Science Council of Canada. Scientific and technical information in Canada. Part I. The Queen's Printer, Ottawa, 1969. 62 p.

Stepanek, J.E.: Small industry advisory services; an international study. Bombay, Asia Publishing House, 1962. 227 p. (Stanford Research Institute, International Development Center publications).

OECD. The communication of scientific and technical knowledge to industry. Paris, 1965. 188 p.

OECD. Promotion of small and medium-sized firms in developing countries through collective actions. Paris, 1969. 373 p.

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Consultations on Innovative Approaches to
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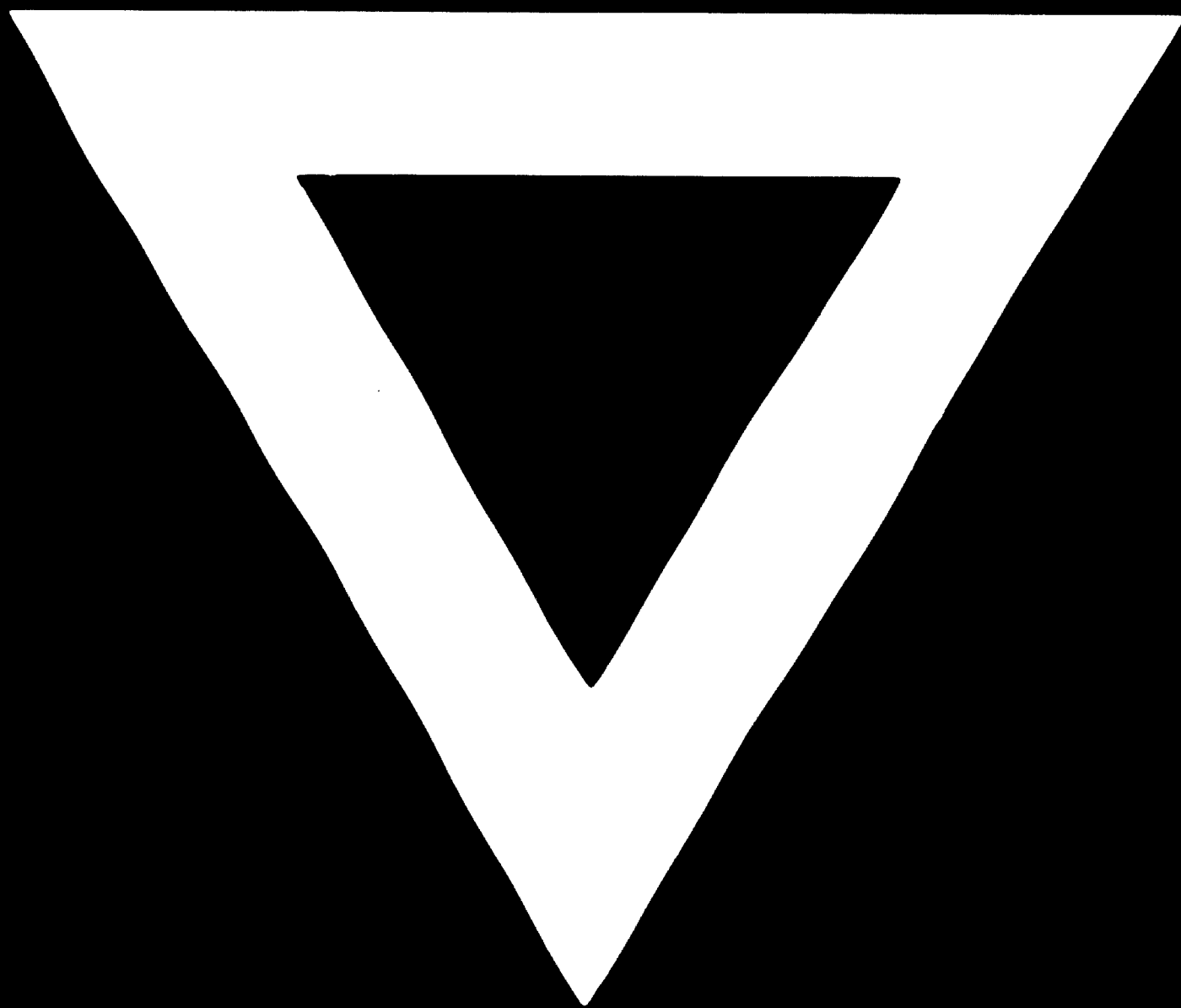
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