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NATIONAL COMMITTEES FOR UNIDO

In the course of the regional and international symposia on industrialization held in recent years, close contacts were established between the representatives of public and private institutions whose activities give them an interest in the programme of work of UNIDO.

These contacts were further strengthened by the establishment of the Industrial Promotion Service during the International Symposium on Industrial Development which was held in Athens, Greece, from 29 November to 19 December 1967. Delegates to the Symposium recognized the advisability of setting up, at the national level, a permanent machinery which would enable the various public and private bodies concerned with industrial development and desiring to co-operate with UNIDO, to meet, to co-ordinate their activities and to advise governments on questions concerning UNIDO.

The International Symposium on Industrial Development adopted unanimously the following recommendation concerning the establishment of National Committees for UNIDO:

> "It is recommended that Member States consider the establishment of National Committees for UNIDO, composed of representatives of government departments and agencies as well as representatives of academic and research institutions and public and private industrial and business establishments concerned with industrialization. The National Committees would serve in and advisory capacity to the governments and to the member institutions in regard to all questions related to the activities of UNIDO. Member States might assign the functions of National Committees to already existing organizations in their countries with any additional mandate as may be appropriate to enable them to perform their functions in an adequate manner".

As of September 1973 forty one countries, following the recommendation of the Symposium, had established National Committees for UNIDO. These are. Bulgaria, Burundi, Central African Republic, Chile, Cuba, Czechoslovakia, Dominican Republic, Ecuador, Egypt (Arab Republic of), Finland, Ghana, Honduras, Hungary, India, Korea (Republic of), Kuwait, Laos, Lesotho, Madagascar, Malaysia, Marocco, Netherlands, Nicaragua, Norway, Pakistan, Philippines, Poland, Rwanda, Singapore, Somalia, Sudan, Syrian Arab Republic, Tanzania (United Republic of), Thailand, Togo, Tunisia, Upper Volta, Uruguay, USSR, Vietnam (Republic of) and Yugoslavia.

In most cases, the existing National Committees for UNIDO are chaired by the Minister of Industry or of the governmental department in charge of industrialization or by the Minister of Foreign Affairs of the countries concerned; in some cases they are chaired by a top official of one of the governmental departments referred to above.

The areas in which National Committees for UNIDO could support the efforts of governments in questions relating to industrial development and UNIDO are the following:

1. Advising their respective Governments on all questions relating to industrial development and, in particular, participating in the promotion, study and submission of technical assistance projects;

2. Co-operating with the professional institutions in their respective countries, depending on the case, such as chambers of commerce and industry, economic groupings, trade unions, etc., in order to interest them in the activities of UNIDO and induce them to support the promotional activities and projects of UNIDO in their respective spheres of interest;

3. Contributing towards making UNIDO more widely known in academic institutions and research institutes and centres, as well as in institutions and organizations concerned with industrial development;

4. Keeping abreast of the activities and projects undertaken by UNIDO, particularly in the following areas: industrial information and promotion, economic studies, manpower training programmes, and the future programme of UNIDO to assist developing countries in setting up specialized repair shops and maintenance centres for industrial and agricultural equipment;

5. Co-operating with the United Nations Information Centres in their respective countries in order to ensure a wide distribution of information on the activities of UNIDO and of the National Committees;

6. Contributing towards the drafting of proposals which governments could submit regarding the preparation of the international development strategy for the Second Development Decade;

7. Drawing the attention of Governments to the importance of their participation in the Pledging Conference for voluntary contributions to UNIDO which takes place each year during the regular session of the United Nations General Assembly and constitutes a valuable instrument for providing additional financing for the operational activities of UNIDO;

8. Making suggestions on the part that UNIDO could take in the programmes of research institutes;

9. Making suggestions on assistance that UNIDO could render in order to reactivate certain industries which are stagnating at the present time.

Within the framework of its relations with the National Committees for UNIDO, the Secretariat of UNIDO keeps them informed of the current activities of the UNIDO, and in particular, of training programmes in the field of industry and of all the technical meetings organized by UNIDO such as symposia, workshops, expert group meetings, seminars, etc. Arrangements are also made to inform the National Committees of technical assistance missions sent by UNIDO to their respective countries. The Committees also receive information about UNIDO technical assistance projects in their respective countries.

The creation by Member States of National Committees for UNIDO has added another dimension to the work of UNIDO at the level of the countries. By bringing together the officials of the governments, representatives of different institutions and organizations concerned with industrial development in a particular country, the National Committees have provided a focal point for co-ordination of the work of UNIDO at the level of the countries. The Committees facilitate the flow of information about UNIDO, to the relevant institutions and organizations in the respective countries. They are also instrumental upon request, in providing to the interested organizations in the particular countries data obtained from UNIDO on technological processes and experiences of other countries in the establishment of their manufacturing enterprises. The National Committees are also potential sources of information on the specific needs of the countries in industrial development.

Know-How and its Transfer — Do We Know How?

By J. C. Ramaer*

From: INDUSTRIAL RESEARCH AND DEVELOPMENT NEWS Vol II No. 1

Know-how

The article in the first issue of *Industrial Research News* (vol. I, No. 1), "The Role of Industrial Patents in the Transfer of Technology to Developing Countries", provokes thinking in the whole field of know-how, and especially on its transfer between enterprises. Patents are a key element in know-how, but just as a key has no meaning without a lock patented know-how often has no meaning without its complement of non-patented know-how. That non-patented know-how consists of a countless number of details on how to run organizations and machines; how to handle materials, and how to sell, finance and administer. The majority of all these details in themselves need not be original, but knowing them all is essential to a successful industry.

A short description may clarify this point.

Research and development continually leads to new know-how on materials, parts, processes and products. Even if materials, products and processes are already well known, laboratories will continually have to conduct tests in order to check quality. That information in itself constitutes a body of know-how on the state of quality. A similar point can be made in general on up-to-date information, and efficiency, cost and personnel policy.

As far as products are concerned, drawings and parts lists setting out in detail the construction of the products are an essential element. Standardization sheets specify chemical and physical properties of materials, parts and products, as well as tolerances setting limits for variations in these properties.

Improvements leading to modifications cause continuous change in know-how on most products—especially those that are affected by rapid technical change.

Similar points can be made on manufacturing processes; market, technical and cost estimates are necessary to make proper production planning possible. Later, in the plan execution stage, continuous checks have to be made so that plans can be changed in time and future plans drawn up.

Factory design and layout, technical details on machinery, tools, maintenance, lighting and ventilation of buildings in accordance with requirements set by efficiency and safety regulations are essential elements of manufacturing know-how. Working instructions are necessary for correct storage, assembly and inspection of parts and products. As a result of improvements in working methods, such instructions are continually altered, even in cases where the product design remains the same.

In order to man, finance and administer the industry, to buy what it needs, and to sell what it makes, bodies of know-how will have to exist. Once they are in the hands of buyers, many industrial products will require service, an activity that may involve more people than production of the article proper (e.g., in the case of many durable consumer goods, professional equipment etc.). Again, part of this know-how will be included in manuals and sheets, and part of it will be stored in the hands and brains of people who have acquired it over the years.

This brief summary of industrial know-how may already demonstrate how many-sided that element of an industry is.

Industrial development means finding an answer to the problem of how to transfer know-how successfully from one enterprise to another. Here we touch upon a field that is very old, but in which many mistakes are still being made. Therefore it seems appropriate to raise the question: What are the conditions for a successful transfer of know-how?

Conditions for transfer

A first condition is that proper and relevant manuals are produced. This means that the enterprise supplying the know-how should have technicians and other staff members who not only possess a thorough knowledge of the process involved, but who also master the art of preparing good manuals. The fact that manuals for relatively simple consumer goods are sometimes very poor shows that writing clear, comprehensive manuals really is an art. Of course the authors of the manuals should also have proper insight into the level of competence of the technicians of the enterprise at the receiving end. If the differences in level and background are great, special problems present themselves. Thus, a simplification of text and drawings may be necessary, as a way of adapting techniques to conditions in a developing country.

A second condition is that written know-how be supplemented by having people go to the party absorbing the knowledge to provide on-the-spot guidance. A certain amount of learning on the job will inevitably have to take place. There are always details that can be demonstrated more clearly by persons already experienced in a particular process. Anyone who has learned a trade during his life—e.g., carpentry—will readily understand this.

Enterprises concerned with transmitting know-how to other firms will therefore require a special staff for this purpose. This staff should not merely "know its business", but also know how to find out what know-how is valuable to the receiving party and how to pass it on. Successful execution in this respect is also an art.

Thirdly, the transfer of know-how from one industry to another takes time for the simple reason that it involves so many details, and donor and recipient technicians must

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develop mutual trust. The failure of many contracts of short duration is due to insufficient time to complete the job of transfer of know-how. In other words, continuity is missing. This is particularly true if the transfer of know-how involves a complete process that is quite new to the receiving firm. If the receiving party lacks only a few details of know-how and already has considerable experience, absorption may take less time.

Fourthly, the men sent out to transfer the know-how know themselves that techniques cannot always be copied exactly, particularly when the transfer takes place in countries with a different climate and different raw materials. Often the experienced man will have to co-operate with his apprentices to work out solutions or "gimmicks" in addition to those he has brought along. If such "gimmicks" lead to changes in machinery and similar radical measures, we may speak of "adaptation of techniques". There is always some degree of adaptation taking place, owing to differences in raw materials, degrees of moisture and temperature. The entire process involves technical co-operation, not just technical assistance, as well as expense and time. Properly prepared manuals are vital in preventing such waste.

Because technical change and technical adaptation is going on all the time, owing to inventions (source of new patents), new designs and new products, the transfer of know-how will continue. This is another reason why continuity is a condition for success. The receiving firm then in fact buys a subscription to new know-how. Here a "buy or make" problem presents itself for the subscribing enterprise. Owing to the rising cost of research and development "know-how autarky" becomes unbearable and specialization is on the increase. This is one of the reasons why the flow of know-how between enterprises within industrialized countries is also on the increase.

Fifthly, something that could be called an "integrated" provision of know-how is essential. It is often pointless to send out a man who is a capable technical specialist, but who has no eye for the indirect changes inevitably brought about by the transfer of new techniques. The introduction of a new process or product will have consequences in the field of personnel policy, or organization management and structure; or cause wage system revisions and consequences in sales and servicing. All this must be taken into account. The provision of pure technical know-how will have to be accompanied by the provision of know-how in all fields that will be indirectly affected. Here we touch upon an iron law: real life cannot be divided into neatly separated compartments.

In summary, we can say that the transfer of patented and non-patented know-how from one enterprise to another can only take place successfully if it involves (*a*) properly prepared manuals; (*b*) learning on the job, and the right staff to undertake both of these jobs; (*c*) continuity; (*d*) technical co-operation; and (*e*) an integrated provision of technical know-how with know-how in other fields indirectly affected by the technical change.

On paper it appears simple to mention five conditions for success. Unfortunately, it is considerably more difficult to deal with real-life complications that develop when people have to learn and co-operate!

Similarly, it is easier to talk and write on the transfer of know-how in general terms than it is for two enterprises to come to an agreement in a concrete case.

Know-how, being an expensive item in itself, is also expensive to transfer because a proper transfer requires highly capable staff. A potential buyer of know-how will often consider the cost very high. On balance, this transfer is also a delicate matter for the supplying enterprise, because its success or failure has a bearing on the name of that company. A successful transfer then becomes vital to maintaining goodwill with other enterprises; consequently the potential supplier will want certain guarantees. Thus the two parties will often decide to make an agreement.

It seems appropriate to specify the items that have to be included in licence or technical assistance agreements.

Agreements: What to consider?

The Japanese National Committee of the International Chamber of Commerce has drawn up a list that deserves careful attention. The list includes the following items:

(*a*) Name of licenser and licensee;
(*b*) Description of licence: whether it is a patent or know-how or combination of both, and whether it includes all the patents and know-how that the licenser expects to possess in the future;
(*c*) Area where licence is granted;
(*d*) Whether it is an exclusive licence prohibiting sub-licence;
(*e*) Method of payment of royalties: lump payment or payment in instalments or payment in proportion to sales or production;
(*f*) Whether minimum guaranteed royalties are required;
(*g*) Dispatching of technical instructors and share of expenses of dispatching;
(*h*) Foreign exchange rate to be applied to royalty payment;
(*i*) Share of payment of taxes levied in connexion with agreement;
(*j*) Licensee's obligations concerning quality control, maintenance of price and promotion of sales;
(*k*) Use of licenser's trade mark on the products of licensee;
(*l*) Supply of materials and production equipment by the licenser;
(*m*) Obligation of licensee to inform licenser of all patents and know-how developed by licensee;
(*n*) Licensee's obligation to report on production, production plans, sales plans and other matters; especially, obligation to report on sales made through sales agencies;
(*o*) Licenser's right to inspect plant facilities of licensee;
(*p*) Licensee's obligation to maintain secrecy of know-how during the period of the license and for a specific period after its expiration;
(*q*) Measures to be taken in the event of the other party's suspending business, changing management or transferring business to a third party;
(*r*) Obligation of licenser to assure the effectiveness of patent and know-how;
(*s*) Period of agreements;
(*t*) Payment of damages and compensation in case of violation of terms of the agreement.

At the time of concluding the licence agreement, there are cases in which agreements are made for the selling price

Transfer of "know-how" in action. Technician being trained in use of electronic measurement apparatus.

of products, the designation of areas in which the products are to be sold, the control of production, compulsory purchases of designated materials and other matters. In such cases, care should be taken that such agreements do not violate the anti-monopoly regulations of the countries concerned".[1]

A proper agreement protects parties against misunderstandings and the resulting waste and frustration.

Role of international organizations in the transfer of know-how

In conclusion, mention should be made of the fact that the United International Bureau for the Protection of Intellectual Property (BIRPI) and the United Nations are studying legal problems connected with know-how. BIRPI specialists have worked out a "Model Law for Developing Countries on Inventions", which has been studied by a "Model Law Committee". The Committee was composed of representatives of twenty-two developing countries and observers from the United Nations and other international organizations. The Committee took the viewpoint of the "average developing country" and concluded that the draft respects the special needs of the developing countries and represents a useful model for legislation.

In comparison to the transfer of capital, the transfer of know-how seems to have received relatively little attention in private, governmental and international circles alike, yet the international transfer of know-how is as important as that of capital. Hopefully, this gap will soon be closed.

[1] See "Promotion of Joint International Business Ventures in Asia and the Far East", report by the Japanese National Committee of the I.C.C., document No. 520/75, 4 March 1964, v. 1, pp. 11-12.

DEMONSTRATION PLANTS

Purpose and Definition of Demonstration Plants

At the request of the Governments of developing countries, UNIDO can undertake through the Special Fund Component of the United Nations Development Programme and with the approval of the Governing Council of the UNDP to supply, construct, commission and assist in the operation of industrial scale processing plants. As the term "demonstration plant" would indicate, the purpose of this form of technical assistance is to achieve some or all of the following objectives:

- Development of the use and upgrading of locally available raw materials.

- Seeding and subsequent development of domestic markets for products made in such a plant.

- Demonstration of the feasibility and development method of a particular sector of industrial activity.

- Development of know-how and skills in the country receiving assistance and, in particular, training of staff and operators in factory management, operation and maintenance.

- Stimulation of the development of local ancillary and service industries.

- In short, the purpose of a demonstration plant is to act as a catalyst and to stimulate in practical terms the development of a sector of the manufacturing industry in the developing countries. This concept does not normally include setting up of extensions to industrial manufacturing operations which already exist in the country nor setting up of "pilot plants" conceived in the engineering sense, where the purpose is to bridge the gap between laboratory and large industrial scale operations and to provide design data for plant design purposes.

Scope of Assistance

This form of technical assistance which can be provided by UNIDO can cover any sector of the manufacturing industry, providing the

technical and economic feasibility of the development of this sector has been satisfactorily demonstrated. For example, current UNIDO projects include supply, construction and operation of demonstration plants for the production of phosphatic and compound fertilizers, sulphuric acid, bromine recovery from spent bitterns, and production and formulation of pesticides. Because of UNDP policy and financial considerations, however, the amount of investment by the UNDP and therefore the size of the demonstration plants are limited.

In the case of the above mentioned examples of demonstration plants the maximum total investment, including provision of working capital and cost of plant operation for a limited period, is of the order of US$2-3 million, including both the UNDP and Government contributions.

It is clear therefore that this programme of setting up demonstration plants contemplates only relatively simple industrial operations and precludes setting up large scale industrial complexes.

Method of Execution

This type of project is usually developed after an initial feasibility study which has proved the desirability of UNIDO setting up a demonstration plant. The project is implemented over a period of years and is financed through the Special Fund component of the United Nations Development Programme, subject to the administrative and financial policies governing this programme. In general, the UNDP Special Fund allocation for this type of project includes the supply of some or all of the following items, as required:

- Design, procurement, supply, erection, and commissioning of the plant and ancillary equipment. This part of the project supply is normally provided by a sub-contract with one or more engineering contracting companies.

- Export services, including staff for project management, supervision of plant construction and start-up, plant operation, product quality control.

- Miscellaneous advisory and engineering services such as civil engineering design, assistance in market development and marketing of the products of the plant.

- Training of local plant management, operating and maintenance staff.

- Provision of miscellaneous supplies such as equipment spares, first filling of catalysts and consumable materials for plant operation, maintenance tools and equipment, vehicles, laboratory equipment for product quality control or process development.

The Government receiving assistance is expected however to provide a counterpart contribution according to the terms governing the Special Fund component of UNDP. Such contribution usually includes the supply of some or all of the following:

- Provision of land for the plant.
- Supply and construction of buildings or of building materials.
- Provision of professional and other staff, and skilled and unskilled labour for plant construction, operation and maintenance.
- Miscellaneous locally available equipment and supplies.
- Local handling and transport of imported equipment and supplies.
- Insurance of plant and equipment, and plant construction and operating personnel.
- Provision of the working capital and supply of raw materials, utilities such as water, electricity and fuel, consumable materials, etc. for plant operation.
- Provision of housing for expatriate project staff.

Maintenance and Repair in Developing Countries

Introduction

Developing countries are giving increasing attention to the fostering of economic and industrial growth. Acquiring capital equipment is one of the very important pre-requisites for industrial development; what is more important, however, is the safeguarding and efficient use of such equipment. Poor utilization of capital equipment, resulting in low output and shorter life, is a waste of capital, one of the scarcest resources in developing countries, and is a very great hindrance to growth.

While many reasons lead to poor utilization of capital equipment, inadequate maintenance and repair are certainly amongst the most important ones. Economic development is not an easy process and developing countries have to overcome many difficulties in order to attain a reasonable rate of growth. It is imperative that developing countries should not burden themselves with greater difficulties and higher costs than necessary, by neglecting their capital equipment and not paying due attention to its maintenance and repair. The increasing financial limitations on the purchase of equipment, material and repair requirements resulting from the increasing indebtedness of most developing countries makes the safeguarding of capital and securing the optimum industrial output of crucial importance.

Unfortunately, however, industrial surveys in developing countries show that maintenance and repair are generally greatly neglected. Almost all attention and efforts are directed towards new investment and new factories and very little is directed towards getting the most from the safeguarding of investments already made. It is recognized that relatively small attention and inputs directed towards maintenance and repair of existing equipment would lead to considerable gains both in the short and long run and is certainly one of the most effective ways of stimulating industrial development.

Requirements and implications of maintenance and repair

The objectives of maintenance and repair are:

a) To avoid to the greatest possible extent emergency stops and accidents;

b) To secure at all times the maximum efficiency of production equipment and the required quality of industrial products;

c) To prolong the life of capital equipment;

d) To increase to the maximum the availability of capital equipment for production;

e) The above objectives should be attained with the lowest possible cost. An efficient maintenance and repair should lead to a lower overall production cost.

Maintenance and repair are a long-term operation which entails many inter-related aspects, activities and techniques. The economic and organizational aspects of maintenance are as important, if not more, than the technical aspects. It is a big mistake to think of maintenance only in terms of repair operations at the floor level; maintenance is much more than this. The system is still prevailing in many enterprises of waiting until a machine breaks down to then try to repair it as efficiently and quickly as possible. This leads to a very inadequate and costly maintenace, a very high consumption of spare parts and unexpected stoppages which upset delivery programmes. Neglecting other aspects of maintenance, mainly the economic and organizational and managerial aspects leads to the wrong type of maintenance being carried out, and to a very low level of performance. As a matter of fact, it is recognized, that a proper organization of maintenance would solve many of the maintenance problems in developing countries without the need for additional repair facilities and skill. A typical example is the crucial problem of spare parts and the lack of sufficient foreign currency to import the required spares. Reducing spare parts consumption by organizing maintenance would go a long way towards solving this problem without need for extra hard currency.

There are many maintenance approaches and techniques adopted for solving maintenance problems. Each of these serve a particular purpose and any complete maintenance plan should entail all these techniques, but to different degrees according to local conditions.

The most important technique is maintenance prevention. The idea is not to spend effort and resources on any activity if it can be avoided. Such approach is more important for developing countries where capital and skill are scarce. Maintenance prevention means trying to eliminate as much maintenance and repair work as possible. This takes place in two stages. The first is when equipment is ordered and specifications are made. Any effort directed towards the securing of a design suitable for local conditions and guaranteeing a supply of adequate maintenance and technical information is worthwhile. The second state of maintenance prevention starts when the equipment is actually in operation. Failures should be studied carefully in order to eliminate them as much as possible. This could be attained through

change of design, of material or of working conditions. The latter may necessitate training of maintenance personnel or production personnel or both.

Not all maintenance and repair work can be avoided through maintenance prevention. However, the maintenance and repair work to be carried out must be carefully planned, otherwise, maintenance can never be performed efficiently and economically. In most developing countries, there is very little hope of overcoming maintenance and repair difficulties unless planning is given ample consideration.

Maintenance planning includes many activities in addition to the routine maintenance operations, such as preventive maintenance, corrective maintenance, predictive maintenance and others, all of which should be carefully considered in the process of planning and programming maintenance activities.

To assist the developing countries in their efforts to improve local maintenance and repair facilities UNIDO has launched a campaign by offering a number of different types of technical assistance services including field projects. By organizing meetings of experts, symposia and working groups, UNIDO intends to disseminate the knowledge in the field of maintenance and repair and impress its importance upon the responsible people in the developing countries.

A number of studies on different aspects of maintenance and repair have been prepared with the assistance of the UNIDO secretariat for distribution and use in the developing countries. In the field, UNIDO provides expert advice and implements projects of different types through its Special Industrial Services programme, thus satisfying the urgent requests for technical assistance, while the larger projects are usually financed from country programmes or from Voluntary Contribution Funds and deal with the establishments of services and workshops when local conditions call for them. A number of mobile workshops have been delivered to a number of developing countries to serve the needs of more remote areas and specific types of equipment.

Currently there are more than twenty-five projects under implementation and an equal number of projects is being negotiated with the respective governments.

INTERNATIONAL SUBCONTRACTING PROGRAMME

Basic Features

As a means of accelerating the transfer of technology from developed to developing countries, the programme of International Subcontracting is organized by UNIDO to promote production arrangements between firms in the developed and developing countries. These arrangements can be defined as a contractual agreement between a company from a developed country, (the contractor), and a company from a developing country, (the subcontractor), whereby the contractor orders products or components from the subcontractor, who manufactures or transforms them according to the design and specifications of the buyer.

Although it is a familiar feature of the business relations between industrialized countries, international subcontracting activities are still a novelty and an unexplored field for most industries in developing countries. However, it is obvious that the fact that several developing countries at present dispose of a surplus of relatively inexpensive and yet sufficiently skilled labour force and have a considerable amount of excess capacity in their industrial network will result in a determining factor for the development of such international arrangements.

Added to that an increasing number of firms in industrialized countries are interested in obtaining supplies of components from abroad, particularly in order to be able to maintain their competitive position and fill up growing volumes of orders without further strain on the domestic economy and with considerable economies in production costs.

Functions of the Programme

UNIDO, being aware of this upward trend, plays an intermediate role and is trying to identify subcontracting offers from developed country firms and propose suitable partners from developing countries. For that purpose an International Subcontracting Programme has been established to act as an intermediary between firms with the following functions:

(1) to identify, in the industrialized countries, manufacturing processes which could be subcontracted in developing countries;

(2) to locate firms in developed countries which are interested in subcontracting part of their production to developing countries;

(3) to locate firms in developing countries which are able to participate in such arrangements and act as sub-contractors;

(4) provide basic information and contacts to potential partners so as to prepare the grounds for the negotiations of the contract.

In principle, the Programme is geared to operate on existing unutilised manufacturing capacity of potential subcontractors. In order to carry out these functions in an expedient manner, UNIDO has established a network of contact points with the business communities of the following countries:

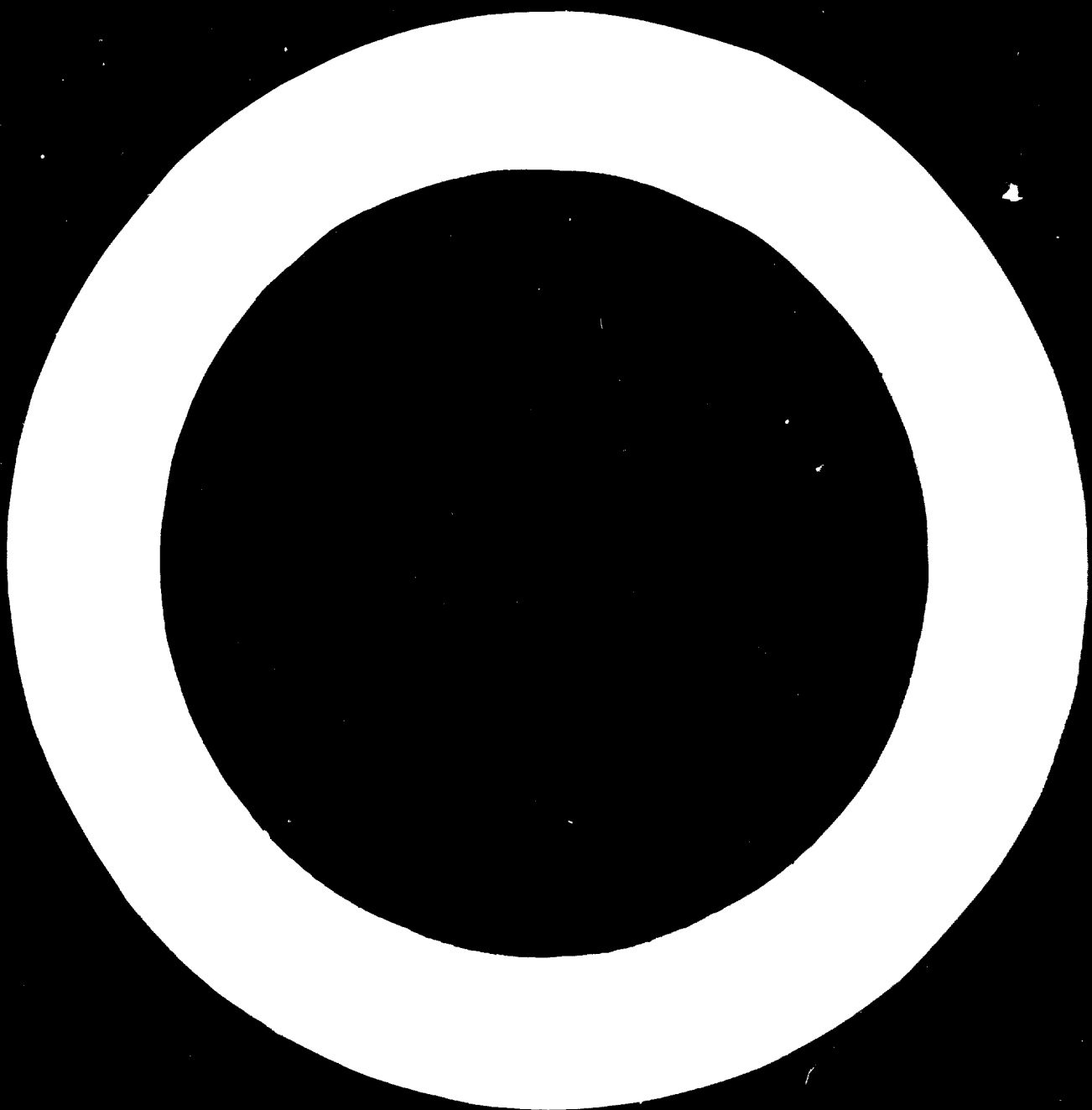
Argentina	India	Peru
Brazil	Iran	Philippines
Cameroon	Korea (Republic of)	Senegal
Chile	Ivory Coast	Singapore
Colombia	Lebanon	Thailand
Cyprus	Malaysia	Tunisia
Ghana	Malta	Turkey
Greece	Mauritius	Uruguay
Guatemala	Morocco	
Hong Kong	Pakistan	

Practical Implementation

The procedure to be followed when entering into an international subcontracting arrangement has been kept to the strict minimum of administrative burden to the business community and is being guided by the fundamental necessity of prompt and expedient action. It is carried out in such a way that the firm interested in an international subcontracting arrangement addresses its request to UNIDO, by specifying the kind of production which it intends to subcontract, together with all details necessary for the implementation of the subcontracting work. The subcontracting offer is channelled through UNIDO to suitable subcontractors and their reply, together with the relevant details on the operations of their firm is subsequently communicated to the contractor. It is normally from this stage onwards that the contractor enters directly into negotiations with the subcontractors which he considers the most suitable for the purpose.

In order to accelerate the process of establishing contacts between firms in developed and developing countries, UNIDO has established a roster of industries from developing countries which have indicated their interest in subcontracting work. This roster contains important information such as type of products manufactured by the firm, capacity of production, number of employees, hourly salary rates, the type of products, parts or components the firm is in a position to manufacture under subcontracting arrangements and detailed technical characteristics and specifications of the machines used in the production. A summary of these details is included in "Lists of Capacity Available" which are forwarded to interested companies upon request.

Further details on this project can be obtained from the Export Industries Section, Industrial Policies and Programming Division, UNIDO, Vienna.



INTERNATIONAL SUBCONTRACTING PROGRAMME

BACKGROUND

International subcontracting also called "contract manufacture", is a form of industrial co-operation, whereby the main contractor orders products or components from a subcontractor, who manufactures or transforms them according to the design and specifications imposed upon by the buyer. The terms of the subcontracting agreements normally provide for assistance, which may range from technical advice, supply of materials to be used, to financial assistance in the form of loans or direct investments.

International subcontracting has become a current feature of the business relations between industrialized countries and is extensively practised in the automobile industry, agricultural machinery industry, electrical equipment industry and also in the confection sector. Unfortunately developing countries have not yet succeeded in capturing a significant share of this new flow of international trade and only a few of those countries have acquired any experience at all in international subcontracting. Managers in industrialized countries have often not given any serious thought

to placing subcontracting orders in developing countries and yet it appears that several European firms are interested in obtaining increased supplies of components from abroad, so that they can fill growing volumes of orders without further taxing their domestic resources. It has been brought to the attention of UNIDO that the supply of equipment from Western Europe has been backordered in many cases due to the lack of capacity for component manufacture. Firms in the United States, Japan, Australia, and also in several Eastern European countries have indicated interest in stimulating the manufacture of components in the developing countries. The main advantages for developing countries of such manufacturing industry are that:

1. It contributes to the diversification of export products and helps prevent a lop-sided export structure with excessive dependence upon foreign exchange earnings from one or just a few products;

2. It creates additional outlets which allows exploitation of economies of scale and greater scope for specialization;

3. It enables developing countries to be competitive since, as the main contractor sells the product under his own trademark, no marketing costs are involved;

4. The manufacture according to strict specifications and under control of the main contractor affords excellent experience and provides manufacturing and export know-how;

5. The subcontracting activity may have a multiplying effect and act as a catalyst in attracting additional capital both to widen the scope of locally added value and to diversify the range of products.

Being convinced that the development of this particular form of co-operation between firms in industrialized and developing countries is of benefit to both, UNIDO is currently preparing a programme to promote international subcontracting involving developing countries.

TENTATIVE OUTLINE OF THE PROGRAMME

UNIDO intends to act as an intermediary between industrial firms in developed countries and potential subcontractors in developing countries, and would assume the following functions:

1. Identify in the industrialized countries manufacturing processes amenable to subcontracting in developing countries;

2. Locate specific firms which are interested in subcontracting a portion of their operations to developing countries. For this purpose interregional advisers with experience of negotiating at top management level will be recruited. They will be expected to visit federations of industries, subcontracting exchanges and firms in industrialized countries in order to collect specific subcontracting proposals and evaluate the technical and economical feasibility;

3. Locate firms in developing countries, which are able to participate in such an arrangement;

4. Provide technical, economic and legal assistance to potential subcontractors;

5. Fellowships would be provided to train nationals of developing countries in all phases of these promotional activities.

The developing countries wishing to participate in this programme are invited to inform UNIDO at their earliest convenience. They should also indicate in which fields they have manufacturing potential, or other resources which could be harnessed for subcontracting.

DEVELOPING AN ENTREPRENEURIAL SPIRIT[1]

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I am very pleased to have the opportunity to address this National Management Conference, particularly because you have chosen to focus on the role of the entrepreneur in Ireland's economic development. I have observed that those who share the responsibility for economic policy and planning in most nations too often concentrate almost exclusively on economic factors such as capital and capital equipment, tax incentives for essential and preferred industry, protective tariffs and interest rates. This is particularly true in the underdeveloped nations where rates of economic growth are so critical in the process of nation building or improving the society. These leaders tend either to neglect the role of the entrepreneur or, when they do recognize his value, they are not quite sure how to identify and encourage him. Economic development cannot be implemented by parliamentary decree. It is implemented by men of great ambition, energy, and imagination.

Recently, more and more economic planners have emphasized the importance of human factors in economic development. They have learned from observing economic development in developing as well as highly industrialized nations. Joseph E. Stepanek, one of the first internationally recognized planning experts to focus on entrepreneurialism, has observed that during his first planning attempts, he:

> ". . . wasted much time while learning that no amount of capital equipment, no number of enthusiastic government planners, and no team of foreign consultants can compensate for lack of individuals eager and able to seize opportunity to develop."[2]

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[1]A speech given to the National Management Conference of the Irish Management Institute, April 23, 1970, Killarney, Ireland.

[2]Joseph E. Stepanek, Managers for Small Industry: An International Study (Glencoe, Illinois: The Free Press, 1960).

The economists and economic planners who recognize the critical importance of human factors in economic development are often frustrated. Economic factors are tangible; one can measure them and manipulate them. But how do you cope with intangible human factors? How do you know whether or not a nation has entrepreneurial resources, and how do you identify individual entrepreneurs and provide positions for them where their activity contributes to economic growth? And if there is found to be a shortage of entrepreneurs, how can they be developed and trained?

What in fact, is an entrepreneur? Let me define the term "entrepreneur" as I will use it, that is, to refer to individuals who have certain specific and measurable personality characteristics. According to my definition, entrepreneurs think differently than other people. Their thoughts are occupied with concerns about doing well: about achieving a certain standard of excellence they have set for themselves, or doing better than they have done before. They like to win in competition. In fact, they need to succeed because doing well at a challenging task provides them with their major source of pleasure or satisfaction in life.

You may be thinking that I have described a very common characteristic of human beings, or certainly of Western man as we think of him. But this is simply not so, and it is vital to my discussion that we realize that this is not so.

Although the type of personality that I have described--and will describe in greater detail later on--occurs with greater frequency among businessmen than among other occupational groups, there are many businessmen who, according to this definition, cannot be considered entrepreneurs. We have found, however, that those businessmen who are "entrepreneurial" are generally more successful as owners or proprietors, and as corporate managers, than those who are not "entrepreneurial."[1] There is also evidence that nations which have a high proportion of entrepreneurs tend to enjoy a faster rate of economic growth.[2]

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[1]David C. McClelland, The Achieving Society (Princeton, New Jersey: D. Van Nostrand Co., Inc., 1961).

[2]Ibid.

Entrepreneurialism: A Factor in Ireland's Economic Growth

Now let us turn our attention to Ireland. A review of your Third Economic Programme has led me to the conclusion that Ireland's prosperity is linked closely to Ireland's ability to become more entrepreneurial.

The Third Economic Programme forecasts overall economic growth during the period 1969 to 1972 at 4 percent per annum, with industrial output growing at 6.7 percent.

Because of Ireland's relatively small population, and therefore small home market, you must concentrate on the development of industries oriented toward the export market, and you must compete successfully without protective tariffs during a period of rising prices and wages in Ireland.

Although during the period 1969 to 1972 the labour force is expected to increase by only 4,000, at least 30,000 more people must be employed by the industrial sector to reduce unemployment and to absorb workers moving away from the agricultural sector into industry.

Clearly, focusing on the unemployment problem and introducing or expanding labour intensive industries to provide more jobs for more people is not the solution. The only answer is to develop highly efficient industries oriented toward export markets. Such industries will compete successfully in world markets and reduce unemployment to the extent that these industries are efficient.

There appear, then, to be two major challenges: (1) the development of new industry oriented toward export markets, and (2) greater industrial efficiency. To meet the first challenge you need entrepreneurs; to meet the second, you must develop an "entrepreneurial climate"--an atmosphere which encourages people to set high work standards and to strive for and take pride in achieving excellence.

Where does Ireland stand today with regard to entrepreneurial resources? Does Ireland have enough indigenous entrepreneurs to achieve the goals of the Third Programme and ultimate economic prosperity?

I have observed that in Ireland it is frequently the immigrant or the foreigner, not the native Irishman, who exploits commercial opportunities. I read of your considerable success in bringing in foreign companies and foreign

managers. Obviously direct capital investment is desirable, but do you import foreign entrepreneurial talent as well because you do not believe that you have enough indigenous businessmen who are, in Stepanek's words, " . . . eager and able to seize opportunity to develop"? Will foreign firms hesitate to make direct investments in Irish firms because they too do not believe that Ireland has sufficient entrepreneurial talent?

Foreign firms have seized the economic opportunities in Ireland. I understand that the Irish government's policy of offering attractive terms to foreign firms in the way of grants, tax remissions, stable political conditions, and a large pool of labour has attracted 200 new industries in the past five years--a success far beyond Irish expectations.[1]

Importing entrepreneurial talent along with foreign investment may meet the short-term objectives of increasing exports and the gross national product, but it seems to me that it also has some shortcomings as a development strategy. First, it strikes me as politically dangerous. The Irish people are notoriously sensitive to foreign domination. What will happen when more and more decisions are made by stockholders who are not indigenous to Ireland, and whose decisions are not based on what is best for Ireland? What has happened in many countries--the examples are too numerous and well-known to mention--is that the climate becomes decidedly inhospitable to foreign companies and managers. Ultimately foreign corporations leave, taking their entrepreneurs with them.

It is essential that Ireland work toward making large deposits of Irish entrepreneurs in its human resources bank. A few foreign companies do a reasonably good job of developing local personnel into entrepreneurial managers, but most do not. I would make the development of Irish entrepreneurs a top priority, because ultimately only they can lead Ireland to economic prosperity and economic independence.

We have been discussing the problem of importing entrepreneurs. At the same time, wouldn't it be ironical if you

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[1] New York Times (February 21, 1970).

were exporting entrepreneurial talent? This may very likely be going on. The Third Programme states:

> *Since those who immigrate are often the very people who bring about change and growth in the economy, there is a double loss here, because their departure means diminished capacity to increase national output.* (p. 7)

It is possible, of course, that Ireland has as many potential entrepreneurs as a nation recognized for its entrepreneurialism, but they remain inactive because the social environment does not encourage, or may even discourage, entrepreneurial activity. There is, in fact, some evidence that the type of entrepreneurial thinking I described earlier is fairly prevalent in Ireland.[1]

In most modern societies, the entrepreneur is most likely to come from a middle class family. Does peer group or family pressure discourage individual initiative or the pursuit of careers in business and industry? Does a middle class Irishman have access to entrepreneurial opportunities? Can he raise capital for a business venture? Must he be successful to have access to new opportunities and important economic information? Does the Church and the ethics of the Church in Ireland discourage entrepreneurial behavior? There are many possible factors that might inhibit entrepreneurial development in Ireland.

The statement I just quoted from The Third Programme strongly suggests that Ireland is losing some of its best human resources through emigration. At the very least, a nation loses any investment it has made in those who emigrate as well as losing a home consumer. Statistics for 1966 show 7.2 percent of your university graduates unemployed. These are people you want to stay, and these are the people who are among the disgruntled and who are emigrating.

Also, there is empirical evidence that entrepreneurial types will go farther away from their homes than others to seek opportunities, and that explorers and colonizers are highly motivated individuals who, for reasons of special

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[1]David C. McClelland, The Achieving Society (Princeton, New Jersey: D. Van Nostrand Co., Inc., 1961), pp. 90-91; p. 100.

social bias against them, are denied access to opportunities in their own homeland.[1]

Is Ireland doing all that it can to make the economic terrain an exciting place for potential homegrown entrepreneurs to explore and colonize? Is enough being done to identify the entrepreneur and to encourage his development by providing special kinds of training and opportunity?

My specific topic is developing the entrepreneurial spirit. It may be academic to argue whether Ireland has or has not developed enough entrepreneurs to meet its needs. What I wish to argue is that for the first time in history it is possible to develop entrepreneurs and to create entrepreneurial spirit.

The Entrepreneurial Personality

Let me begin my discussion of the entrepreneurial spirit with a simple exercise. I would like all of you to participate if you will. In a moment I am going to show you a picture for about ten seconds. I would like you to take a piece of blank paper and make up a story about the picture that you see. Be as imaginative as you can. Tell what is happening in the picture, what led up to the situation and what the outcome will be. Give your story a beginning, a middle and an end. I will give you only a few minutes to write your story, so work quickly.

Since we have carried out this exercise in one form or another hundreds of times, I have a pretty good idea of the kinds of stories you wrote. Many of you, probably about 25 percent wrote a story something like this:

> A group of men are sitting around a table discussing a project they are working on. Perhaps they are developing a plan to market a new product their company is planning to manufacture. One of the men has just stated that they must do a better job than they have ever done before, because the future of the company depends upon their ability to sell this new product. They

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[1] Ibid.

Just look at the picture briefly (10-15 seconds), turn the page and write out the story it suggests.

FIGURE 1

> have had several brainstorming sessions, but every time they think they have achieved a breakthrough, someone points out a fatal flaw, such as the size of the marketing budget or the fact that it is too late to modify the product. Finally they hit upon the perfect solution, and everyone present is delighted that their work has finally paid off. They anticipate that next year's sales will be twice what the company needs to make up for poor sales during the current year. The marketing program is implemented, sales continue to decline, and the company goes bankrupt. The men feel they have failed the company in its hour of greatest need.

This story contains a great deal of what we call "achievement thinking." The characters in the story are competing against a standard of excellence: they are trying to do a better job than they have ever done before. They have an achievement goal. Moreover, they are taking action steps to achieve their goal: they have been brainstorming to come up with a plan. They have encountered obstacles to success, such as an inadequate marketing budget and a product that cannot be modified. Finally, the characters in the story experience a good deal of emotion associated with achieving or failing to achieve the goal. The men are delighted when they hit upon a solution; they are upset when they ultimately fail. Figure 2 presents a schematic view of achievement thinking.

To summarize, the character or characters have an achievement goal and they are taking steps to reach the goal. They encounter obstacles--sometimes in their environment and sometimes in themselves--which stand in the way of achieving the goal. But they want to achieve the goal, and they experience pleasure when they anticipate or experience success, and displeasure when they anticipate or experience failure.

Others of you, I would estimate about half of this particular audience, wrote a different type of story:

> A group of men are trying to reach a decision about something. They have been debating and arguing for some time. The man who is standing up feels very good because he thinks he has won his case, and that his point of view will prevail. The leader of the opposition is very

ELEMENTS OF THE ACHIEVEMENT MOTIVE

N	NEED
G_A +	GOAL ANTICIPATION, POSITIVE
G_A −	GOAL ANTICIPATION, NEGATIVE
F +	FEELINGS, POSITIVE
F −	FEELINGS, NEGATIVE
A	ACTIVITY
B_P	PERSONAL BLOCK
B_W	ENVIRONMENTAL BLOCK
H	HELP
TH	THEME

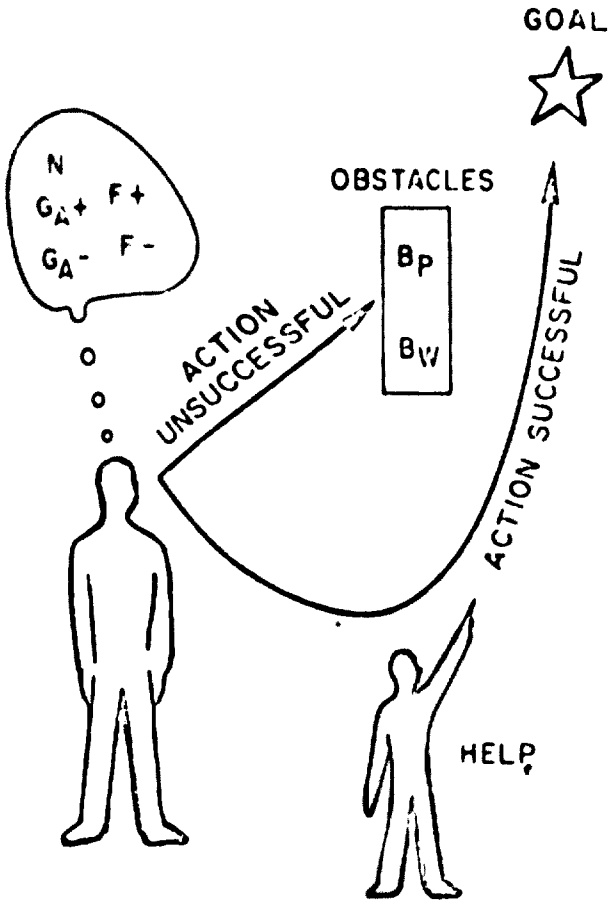

FIGURE 2

> upset, but he hasn't given up yet; he is still trying to gather support by talking individually with members of the group. In the end, the group reaches a stalemate; nobody wins and no decision is reached.

We would label this power imagery, or power thinking. Characters in the story are concerned about influence, about persuading others to accept their point of view. They are taking action steps to gain influence or control. When they gain influence, they are pleased; when they lose it, they are upset.

Still others of you, probably about 25 percent, wrote a third type of story:

> A group of friends are sitting around a table in a pub or in a clubroom, planning a party for the weekend. They meet together periodically, perhaps every week, and they thoroughly enjoy each other's company. In an hour or so they will leave, but their party will be a great success and they will all have a fine time.

This story has what we call an affiliation theme; it is concerned with friendship, with establishing, restoring or maintaining close, warm relationships with other people. The goal, the action steps and the feelings expressed all have to do with friendship as opposed to achievement or power.

It should be obvious to you that there was nothing in the picture you looked at that required you to tell a story with an achievement, power or affiliation theme. If there was, you all would have told a similar story, and I assure you that is not the case. Whatever led you to tell a story with a particular theme is inside of you. I can show the same picture I showed you anywhere in the world, and I will get stories similar to the ones you wrote. However, there will be very significant and revealing differences in the frequency with which different types of stories are told by different groups. For example, I would get many fewer achievement stories in Belgium and Chile than I would in Ireland, Russia or the United States. I suspect I would get more power stories in Ireland than in many other countries, although I cannot document it.

Some things, however, we have documented very carefully. I know that businessmen will tell an achievement story more frequently than other occupational groups, and that successful businessmen will tell more achievement stories than less successful businessmen. Our assumption is that if you tell stories filled with achievement thinking, then you tend to think in achievement terms rather than affiliation or power terms during a normal day. That is, you tend to go through life thinking in terms of achievement goals, the steps you will have to take to reach those goals, the obstacles you will encounter and how you will overcome them, and how wonderful it will be when you reach your goal and how terrible it will be if you fail. People who think in these terms will end up in challenging occupations, like business, and they will tend to do better than other people. If you think too much in affiliation or friendship terms, then chances are that you will not be particularly successful in business. It should be obvious that no one thinks just in terms of achievement, affiliation or power; all of us have concerns in all three areas. However, usually one concern or motive is dominant.

There is also evidence that countries where a lot of people tend to tell achievement stories, and whose popular literature, films, childrens' stories and leaders' speeches are filled with achievement imagery tend to have a faster rate of economic development than countries where this is not the case. Ireland, by the way, is fairly strong in this regard. An analysis of your childrens' stories in 1925 and 1950 revealed that they were relatively high in achievement imagery compared with about thirty other countries. The achievement imagery did drop off between 1925 and 1930, however, which would lead to the hypothesis that there was more entrepreneurial energy expended between 1925 and 1950 than there will be between 1950 and 1975.[1]

The point I want to make is that there is a certain type of thinking characteristic of individuals who are unusually successful in commercial enterprises. Successful businessmen or entrepreneurs think in achievement terms more than other people. In this room today, some of you think in achievement terms more than others, just as some of you spend more of your time thinking about your friends and loved ones, or about gaining influence. I do not want to imply

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[1] Ibid.

that one type of thinking is superior or inferior to another. The world needs all kinds of people.

The second point I want to make is that men who think predominately in achievement terms tend to behave differently than other people. Their "unique" behavior can be summarized in three categories:

- they like to take personal responsibility for results;
- they aggressively seek feedback on the results of their actions and decisions, and they use that information to modify their behavior and revise their goals; and
- they set goals that are challenging yet realistic. That is, they prefer moderate risks to either safe or extreme risks.

If we keep in mind that a major source of satisfaction and pleasure for such people is successfully completing a challenging task, then their behavior makes a good deal of sense. They cannot fully enjoy a success unless they know they were responsible for it. If the responsibility belongs to several people, they feel little personal satisfaction.

Feedback tells the entrepreneur both how well he is doing and how he must modify his behavior to insure success. If he cannot get clear feedback on actions and decisions, he can never be sure how well he performed, and he misses the full measure of satisfaction that comes with being absolutely sure that he performed well.

It is interesting to note that for the true entrepreneur, money or profitability is more important as an indicator or success than as an end in itself. Businessmen know they are doing well when they are making money; when they are losing money they know they are performing poorly. Real entrepreneurs do not retire when they have made all the money they need to live on; they continue to work because their chief source of satisfaction lies in overcoming challenges, not simply in making money that they rarely take the time to enjoy.

A true entrepreneur gets little satisfaction from succeeding at a sure thing. He also gets little pleasure from winning the long-shot. He knows that his success was not

due to his efforts; it was either inevitable, or it was due to luck.

It is easy to see why such men like to start and operate their own businesses. Business proprietors are by definition responsible for results. There is no more meaningful feedback than monthly sales figures, or a financial statement. And almost all business decisions involve an element of risk.

It is interesting to note that entrepreneurs generally get very little satisfaction from gambling. They derive pleasure from winning or succeeding only when it is the result of their own effort or skill. The entrepreneur is not likely to feel much satisfaction if he wins the Irish Sweepstakes. He'll feel rich, but not satisfied.

Entrepreneurs Can Be Developed

During the last several years, my organization--the Behavioral Science Center of Sterling Institute--has been experimenting under the direction of Professor David C. McClelland with ways to make individuals more entrepreneurial. The basic approach is a simple one: whereas most training programmes concentrate on technical knowledge and interpersonal skills, we focus primarily on thought content. That is, we train people to <u>think</u> differently.

With one to two weeks of intensive training, we have been able to change the thought and behavioral patterns of businessmen in the United States and several other countries so that these men have become significantly more effective and successful in their jobs.

Tables 1, 2 and 3 summarize the results of two extensive research projects which studied the effects of this type of training.

Table 1 summarizes the results of a U.S. Government-sponsored project to conduct achievement or entrepreneurial training for black, small businessmen in Washington, D.C. The 49 trained subjects underwent an intensive five-day residential programme which I will describe shortly. Compared to a matched group of untrained businessmen, even after as short a period as six months, more of the trained businessmen had started new enterprises, improved their operating

TABLE 1

Six Month Follow-up Report

Black Businessmen from Washington, D.C.

With and Without Prior n Ach Training

Activities	Untrained	Trained
	N = 63	N = 49
New Business Starts	0	8
Improved Operating Procedures	10%	33%
Greater Community Involvement	24%	43%
New Capital Invested		
Average	$ 1,420	$ 4,259
Total	$89,000	$208,000
New Jobs Created		
Average	.60	1.25
Total	38	70

From Report on Business Leadership Training Project to Economic Development Administration by the Behavioral Science Center, Sterling Institute, October 1, 1968.

TABLE 2

Two-Year Follow-up Report

Indian Small Businessmen

With and Without Prior n Ach Training

Activities	Untrained	Trained
	N = 73	N = 76
Distinctly More Active	18 25%	39 51%
New Businesses Started	6 8%	17 22%
Men In Charge of Their Firms Only	N = 45	N = 47
Making Fixed Capital Investment	18 40%	35 74%
Average Investment	Rs. 12,190	Rs. 24,030
Total Investment	Rs. 548,500	Rs. 1,129,500
Employing More People	15 33%	28 59%
Averaging New Jobs per Businessman	2.74	5.86
Total New Jobs	126	258

From D. C. McClelland and D. G. Winter, Motivating Economic Achievement, The Free Press, 1969.

TABLE 3

Cost-Effectiveness of Business Leadership Training

Washington/Oklahoma Results Included

(6-Month Follow-up Data)

Projected Cost per Trainee -- $250

	Minimum	Maximum
	N = 90	N = 116*
Mean New Jobs Created	.85	2.42
Cost per New Job	$ 290	$ 97
Mean Increase in Investment	$3,765	$25,600
Ratio Public/Private Investment Mobilized	1/15	1/100
Mean Increase in Profits	$ 286	$ 1,800
Estimated Tax Flows per Trained Man (from Profits and Personal Income) 6-Month Basis	$ 207.70	$ 1,194.00
Time Required by Government to Collect Enough Additional Taxes to Pay Back Cost per Trainee	11 mos.	1-2 mos.

*Included members of Steering Committee, not matched by equally prominent untrained men.

From Report on Business Leadership Training Project to Economic Development Administration by the Behavioral Science Center, Sterling Institute, October 1, 1968.

procedures, and become more involved in helping to rebuild their community--much of which had been burned during riots. They had raised and invested more capital and created more new jobs through expansion than their untrained colleagues.

Table 2 reports similar findings for a group of 76 businessmen in India. In this case, the training covered a period of about two weeks. The results indicate differences between the trained businessmen and an untrained, matched control group two years after the training took place. You will note that a much larger proportion of the trained than of the untrained group are distinctly more active in their businesses, have started new enterprises and have made fixed capital investments in their businesses. The average and the total investment of the trained group is much larger than for the control group, and the trained businessmen have created significantly more jobs through business expansion.

The results of a cost-effectiveness analysis prepared for the U.S. Economic Development Administration are presented in Table 3. The computations are based on a projected cost of $250 per businessman trained. The results of the training are presented both in terms of the minimum and the maximum results that might be expected, on the assumption that the actual results will be somewhere in between.

To summarize, the results indicate that it will cost the U.S. Government between $97 and $290 to create a new job if it invests in entrepreneurial training for small businessmen. For every dollar of public money invested, between $15 and $100 of private capital will be invested. The government can expect to retrieve its investment through taxes on the increased profits and personal income of the trained businessmen in between one and eleven months. We were particularly pleased by this last result, because there are not very many public programmes in the United States, if there are any at all, where the government can expect to regain its investment in the forseeable future.

The only difference between the groups referred to as "trained" and "untrained" in Tables 1, 2 and 3 is that each trained group underwent several days of achievement training, or Business Leadership Training, which is basically a form of psychological training; no attempt is made to teach business concepts or technical skills.

Let me briefly describe the nature of this unique type of training. Initially, participants collect information on themselves, first by writing several stories, such as the one you wrote earlier, to sample their own thought content, and second, by participating in a number of simulations or "games" which reveal to each participant his characteristics in regard to accepting personal responsibility for results, using feedback, and taking risks. Participants are then introduced to exercises which help them think through their life goals--what is really important to them, what they can really commit themselves to. If becoming more successful in business is one of their goals, then we expose them to a model of an effective entrepreneur or achiever--a model that has been developed through years of careful research--and ask them to compare themselves to that model. Most people find areas where they differ substantially from the model that is presented. We then tell the participants that if they choose to become more entrepreneurial, they can do it.

At the point where a participant actually commits himself to changing, the most difficult part of the training has been accomplished. It is surprisingly easy to teach people who really want to change to think and behave like entrepreneurs, and to use an approach to personal goal-setting which greatly increases the probability that they will achieve the goals they set for themselves.

If you will review the curricula in the colleges and institutions which train your managers and entrepreneurs, you will find that, whereas they are very up-to-date on modern management methods, no emphasis is placed on developing entrepreneurial attitudes and motives. If you accept my thesis that their development is critical for economic development, then I would urge you to look carefully at educational programmes designed to increase the entrepreneurial spirit of small businessmen and corporate managers.

Encouraging Entrepreneurial Behavior

All of our efforts to train entrepreneurs have not been equally successful. We have been most successful in increasing the motivation and effectiveness of owners of businesses, who return to a situation where they have ample opportunity to test out their newly developed entrepreneurial skills. Others whom we have trained--some corporate managers, for example--have returned to jobs where they are given little personal responsibility, where they experience little challenge,

and where objective feedback on performance is scarce. In such organizations, entrepreneurs will tend to become frustrated and leave, or else their entrepreneurial drive will dissipate.

Although something of an oversimplification, we can say that effective motivation--the intensity of a given motive in a specific situation--is a function of two things: the strength of the latent need or motive that the individual brings with him to the situation, and the cues in the situation which engage or arouse that particular need or motive. This can be diagrammed as follows:

$$Mot_{eff} = f(\text{need X situation})$$

Consider the case of a entrepreneur, a person who thinks very often in achievement terms. He has a very strong achievement need, which we will arbitrarily value at 20. Assume that this person works in an organization where he is given very little responsibility, where standards of performance are low, rewards are more closely related to longevity or popularity than to performance, and he has only a vague idea of how his job and the work that he does contribute to the goals of the organization. I have described a situation nearly devoid of cues which might arouse or engage achievement motivation. Let us arbitrarily assign a value of 1 to the situation to reflect the fact that it contains almost no cues of the sort which arouse concern with achieving or doing well. If we insert these values into our formula, we find that our entrepreneur is in fact a latent entrepreneur--his achievement motivation in this particular situation is 20.

$$\text{Achievement } Mot_{eff} = f(20 \text{ X } 1) = 20$$

An individual with a considerably weaker need for achievement who works in an organization where he is given responsibility for results, where high standards and challenging goals are set, and where rewards are closely related to performance and thus serve as feedback on performance, may in fact have higher effective achievement motivation than our first example.

$$\text{Achievement } Mot_{eff} = f(5 \text{ X } 20) = 100$$

The achievement or entrepreneurial training I described earlier focuses on changing personality characteristics; it effects the "need" variable in our formula. If you accept

this simple analysis of motivation, then you will recognize the necessity for changing situational cues as well.

A more common term for situational cues is organizational climate, which I like to think of as the sum total of the cues in a situation as perceived by the members of the organization. It is now a fairly simple matter to measure the climate in an organization and to determine the extent to which it encourages entrepreneurial behavior.

Developing an Entrepreneurial Climate

The impact of a number of major American management innovations of the past decade or two can be traced to their effect on organizational climate and ultimately on motivation. However, some new management practices assume a certain minimum level of motivation, particularly of achievement motivation. Without that minimum level, it is very difficult to introduce the new practice successfully.

Let me give an example. Many of you, I am sure, are familiar with Management by Objectives. It is basically a goal setting approach to management, wherein managers and subordinates agree on a series of goals that the subordinate will strive to achieve during the forthcoming year. The goals can be reviewed at any time at the initiative of either the manager or the subordinate, but ultimately the performance of the subordinate will be evaluated in terms of his success in achieving these goals.

This system, despite its logic and potential impact on climate, has not worked well or has been very slow to take hold in many American companies. The reason, I believe, is the unwarranted assumption by top management that American managers are psychologically "set" to work under such a system. The fact is that many American managers do not naturally think in terms of goals, action steps and obstacles. They are bureaucratic managers, not entrepreneurial managers.

Recently, I was talking with a manager in a major corporation which is having difficulty introducing a Management by Objectives programme. He said that he and his superiors had agreed to a list of not less than 28 objectives for 1970. It did not surprise me to learn that he was highly committed to achieving only some of the objectives. This concerned me, however, because I knew that the corporation in question had introduced the programme to develop a more entrepreneurial

climate. If objectives were being established with little commitment on the part of those responsible for achieving them, the programme was doomed to failure.

Perhaps the greatest contribution to management practice during the last decade or two has been the management information system. As you know, a management information system is nothing more than a feedback system, a way of providing information on the results of past decisions and actions to a manager quickly to enable him to improve his performance.

It is naive, however, to assume that the information, however valuable, will automatically be used to improve decisions and modify actions. One characteristic of an entrepreneur, or an entrepreneurial manager, is that he carefully scans his environment for information, whether positive or negative, bearing on his business. He is the type of manager who will personally telephone a client who has just cancelled an order to learn whether his own company's performance had in any way contributed to the decision to cancel. Studies have shown that other businessmen are neutral to feedback from the environment; they neither seek nor reject it. Still others actually reject or distort any <u>negative</u> feedback that comes to them.

It is easy to understand, then, why a management information system does not automatically lead to more effective performance. Ultimately men must use the information, and some use it better than others. The type of person I have been scribing to you--the entrepreneur or entrepreneurial manager--is untiring in his pursuit of information about his performance. He tends to anticipate obstacles or problems before they occur, and to take corrective action before the fact.

In many American corporations, and I suspect in many Irish companies as well, it will be necessary to take a much more direct approach to the problem of climate management. One approach which we have tried with considerable success is presented schematically in Figure 3. The major application to date has been in a manufacturing company with several operating divisions.

The company in question is in the metal fabrication business and is a major supplier of parts for the American automotive and refrigeration industries. Located in a mid-western state, it does about 100 million dollars worth of

A PROGRAM FOR DEVELOPING AN ENTREPRENEURIAL ORGANIZATION

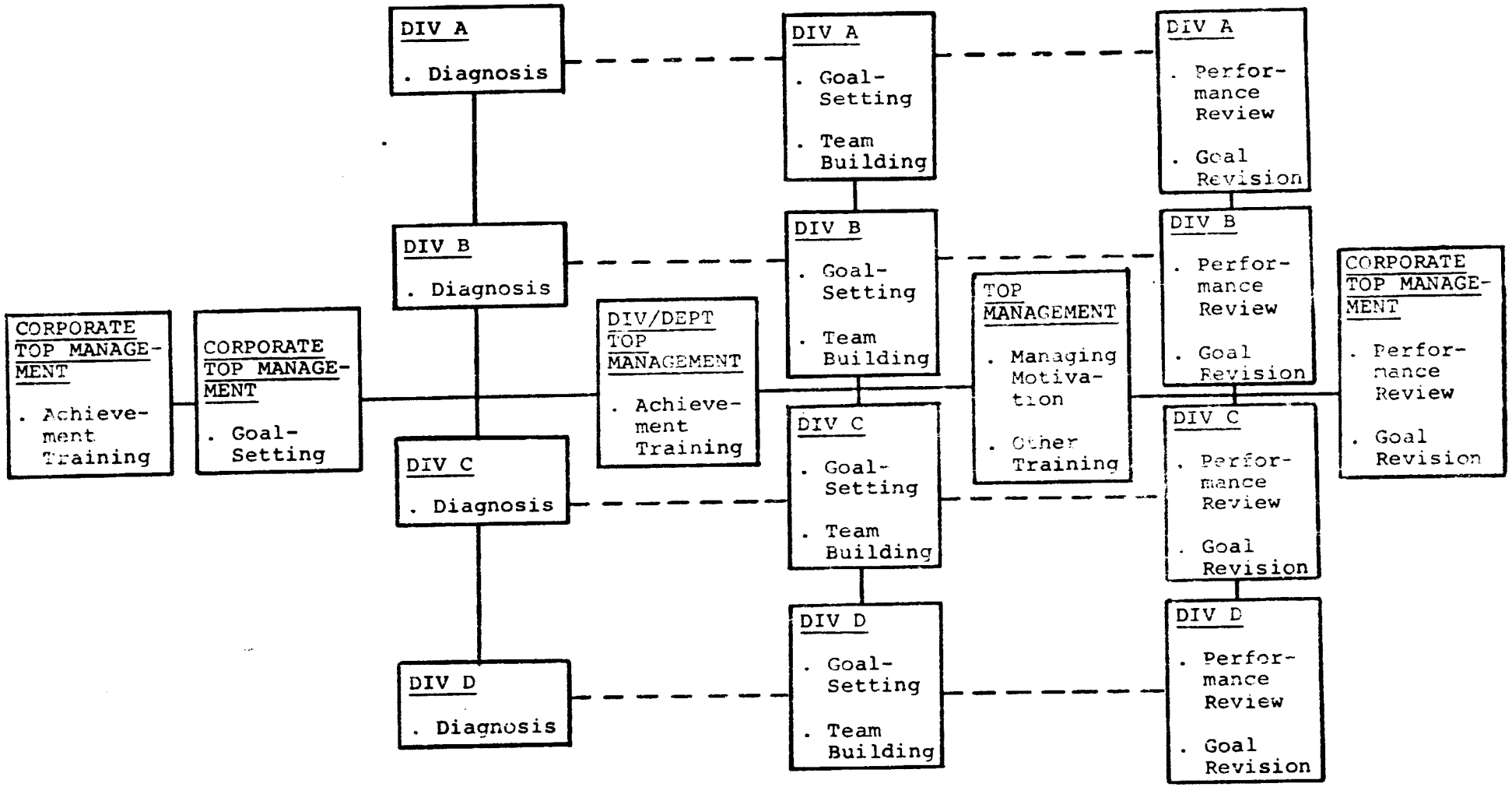


FIGURE 3

business annually. This company, which I shall call the Family Corporation, was established at about the same time that automobiles began to be mass-produced in the United States. Because it held exclusive patents, it established a virtual monopoly on the manufacture of certain automotive parts, and as the automobile industry boomed during the 1950's and 1960's, the Family Corporation grew and prospered.

The founder of the company ran a traditional, paternalistic business. Members of his family and his friends were given important positions in the Corporation. He took good care of his employees; salaries were high; pressure was low, and people were rarely fired. The employees were very loyal to the Corporation; it was a good company with a good product, and it took good care of them.

In the mid-1960's the picture began to change. The founder died and the presidency passed to one of his sons. The son, a highly intelligent and sensitive man, was used to seeing the company run itself, so his hand at the helm was not a firm one.

During the 1960's, competition began to emerge. The Corporation's patents were running out, and new materials were being developed that might make parts manufactured by the Family Corporation obsolete. The Corporation maintained a research and development operation, but it was poorly run and had not been given high priority.

In 1969, two younger members in top management positions persuaded the President of the Family Corporation to expose the corporate top management to achievement or entrepreneurial training. By this time the alternatives were clear: the Family Corporation had to take a more entrepreneurial posture, or it would lose its commanding position in the industry.

The result of the four-day workshop with the top management was a decision by the corporate President and his officers to create an entrepreneurial organization.

This first workshop was followed a month later by a three-day top-management session devoted to setting corporate goals for the next five years, spelling out the actions required to reach those goals, and carefully considering obstacles to their attainment. Not surprisingly, one of the goals was to change the climate so that it would encourage and reward entrepreneurial behavior on the part of managers and employees.

Following the goal-setting workshop, the vice president and general manager of each division of the Corporation went through a similar process with his top management team. First, they were exposed to achievement training, and then they met as teams to set goals for their divisions, to decide upon action plans, and to anticipate obstacles. It was agreed beforehand that if the goals set by the management of a division did not coincide with the tentative goals for the division arrived at during the corporate, top-management goal-setting workshop, the general manager of that division woudl be free to renegotiate those goals with the President.

By the end of the round of goal-setting meetings, the entire management of the Corporation was committed to a series of highly challenging goals and action plans.

Perhaps even more important, both the corporate and divisional executives carried out an exhaustive study of obstacles which might prevent them from reaching their goals. One important series of obstacles involved the climate in the organization. The top management of the Corporation felt they themselves had become more entrepreneurial as a result of achievement training, and their behavior confirmed this. However, it was clear to them, both from their own observations and from diagnostic data provided by consultants, that the climate in the Corporation as a whole was anything but conducive to entrepreneurial behavior. Most employees felt they did not have responsibility for results, and that performance standards were relatively low.

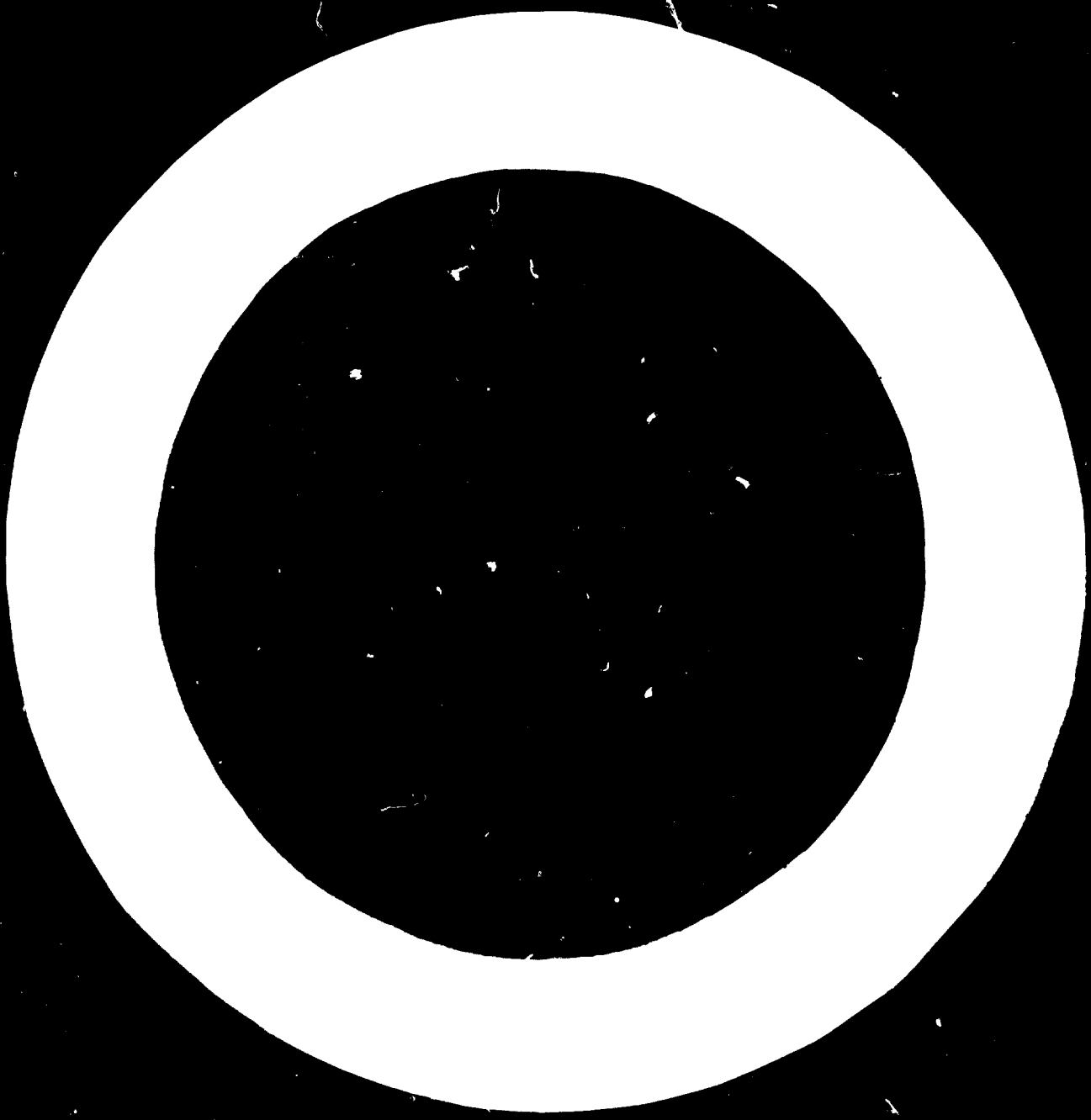
At the same time, most employees felt a strong sense of loyalty to the Corporation, which made it easier to change the climate.

In order to create a more entrepreneurial climate--a step that management felt was necessary if the new goals were to be reached--the Corporation's middle management, and in some cases even first-line management, was exposed to achievement training. Most senior and middle-level managers participated in a second phase of training which helped them assess their personal styles of management, and determine its effect on climate, and ultimately on the motivation of their subordinates. They then learned new management techniques to develop the kind of climate they felt was optimal for their situation.

This intensive effort to develop an entrepreneurial climate is still underway. A few months from now, the corporate officers and division management teams will meet to review their performance in terms of the goals they set for themselves, and if necessary, to revise both their goals and action plans.

This project is being carefully followed by university researchers. Thus far, the evidence is overwhelming that significant changes have occurred both in managerial behavior and organizational climate. The Family Corporation is well on the way to becoming an entrepreneurial organization.

I hope that I have been successful in giving you some new insights into entrepreneurialism and the role that it can play in Ireland's economic growth. In particular, I hope that I have persuaded you that human resources can be quantified and managed just as economic factors can be measured and manipulated to bring about socially desirable ends. I do not mean to imply that we have all the answers, because that certainly is not the case. However, new technologies for developing entrepreneurs and creating entrepreneurial organizations are evolving. If my assessment of the situation in Ireland is correct, you cannot afford to take the Irish entrepreneur for granted. This National Management Conference devoted to the role of the entrepreneur is an encouraging sign.



DIVISION OF ADMINISTRATION, CONFERENCE AND GENERAL SERVICES

TECHNICAL EQUIPMENT PROCUREMENT AND CONTRACTING OFFICE (DA/TEPCO)

1. GENERAL

Project implementation, regardless of the source of funds, frequently calls for the provision of equipment and/or services.

According to United Nations Financial Rules and Regulations, contracting for equipment or services is carried out by officers specially authorized for this purpose. In UNIDO, the work is performed by the Technical Equipment Procurement and Contracting Office (TEPCO) in the Department of Administration, Conference and General Services.

The office is staffed by professionally qualified purchasing and contracting officers with the necessary clerical personnel and comprises three units: a Procurement Section, for supplies and equipment; a Contracts Section, handling consultant services; and a Control Unit dealing with documentation, invoices, project inventories and other administrative matters.

2. PROCEDURES

2.1 Equipment Purchases

When supplies and equipment are required, the specifications are prepared by the UNIDO Project Manager or by UNIDO experts in consultation with the recipient government. Minor items may be purchased by the UNIDO Project Manager in the field, otherwise procurement is generally effected by UNIDO/TEPCO on the basis of international, competitive

sealed bids issued to selected vendors/manufacturers. Orders are placed with the lowest acceptable bidder, with due consideration to such factors as standardization of equipment, warranties and local servicing arrangements. Besides the actual purchasing operations, TEPCO arranges for delivery of the consignments to destination and is responsible for periodic inventory controls. UNIDO retains title to the equipment during the life of the project and on its completion, TEPCO arranges for transfer to the recipient government.

The purchase arrangements also include, when appropriate, the installation and start-up of equipment and the training of local personnel.

The time cycle for delivery of supplies and equipment to destination port varies from six to twelve months, according to the manufacturer's delivery time for the particular equipment and shipping time. This does not include port and customs clearance or inland forwarding to project site. The early determination of adequate specifications and prompt submission of requisitions is therefore of utmost importance. It is also important that specifications should be prepared in neutral form to permit properly competitive bidding.

2.2 Contracts for Services

This part of TEPCO's activities is sometimes referred to as sub-contracting. In effect, it covers the provision of any type of engineering or management services under a commercial-type contract with a consulting organization. The consulting organization may be a private firm, an institution, a State enterprise, or any corporate body.

A contract may cover execution of laboratory tests, the provision of one or more specialists, a pre-investment or feasibility study, or the design and erection of a pilot plant. The contract value may range from $200 to in excess of a million dollars, and the duration from one week to a period of years.

Many larger projects and particularly those requiring teams of specialists and/or substantial back-stopping can be more suitably and speedily implemented by the use of "sub-contracting". Current policy is therefore to decide in the initial stage of project planning whether execution can more appropriately be carried out by the recruitment of individual experts, or by sub-contracting, whichever is more suitable.

When "sub-contracting" is employed, suitable terms of reference are prepared by the UNIDO Substantive Division concerned, in collaboration with the recipient government. The terms of reference detail, inter-alia, the services to be performed and the schedule for their performance. On the basis of the terms of reference, TEPCO invites costed proposals from a short list of consulting organizations selected, among other criteria, on the basis of their qualifications and experience for the particular assignment. The selection criteria also takes into consideration geographical distribution, including both developed and developing countries, and the utilization of available financial resources.

The selection of invitees is approved by a UNIDO inter-divisional panel and is officially cleared through the UNDP Resident Representative with the recipient government. The government may delete specific names from the list or suggest alternative names for consideration; it does not, however, select or indicate priorities.

Contract proposals are invited by UNIDO/TEPCO from the approved list of organizations with a closing date of four to six weeks. The proposals, on receipt by TEPCO, are evaluated by the UNIDO Substantive Division for technical acceptability, and by TEPCO on a commercial basis. In accordance with UN Financial Rules, and with the approval of the UNIDO Advisory Panel and the UNIDO Contracts Committee, the award is made on the basis of the lowest <u>acceptable</u> offer, and the organization and recipient government are informed accordingly.

The Contractor has total responsibility for the execution of the contract but maintains close liaison with the UNIDO Project Manager and/or UNDP Resident Representative. UNIDO/TEPCO is responsible for administration of the contract, in collaboration with Technical Co-operation Division and the Substantive Office with respect to the programme and technical aspects. Progress and performance in contract implementation are controlled through periodic reporting, and the terminal report is reviewed in draft form by the UNIDO Substantive Section before its finalization and subsequent submission to the recipient government. On conclusion of each contract, an evaluation report is prepared by the Substantive Office, Technical Co-operation Division and TEPCO, as a guide for future selection.

The time-cycle for contracting depends in part on the rapidity with which the recipient government clears invitee lists. Under favourable conditions, initiation of work by contractor's personnel can be achieved in four to six months from receipt of full documentation by TEPCO. In the great majority of cases, work is completed on schedule and the results have given general satisfaction to all parties concerned.

3. REGISTRATION OF VENDORS AND CONSULTING ORGANISATIONS

World-wide lists covering vendors/suppliers of equipment and consulting organisations are maintained in UNIDO/TEPCO. These records serve as the primary basis for the selection of bidders for equipment and invitees for contractual proposals. Interested vendors and consulting organisations seeking registration with UNIDO are requested to address their enquiries to:

Chief, Technical Equipment Procurement
and Contracting Office (TEPCO)
UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
P.O. Box 707
A-1011 Vienna, Austria

UNIDO/TEPCO provides the necessary registration forms and all relevant information and instructions.

4. OPERATIONS

4.1 Equipment Purchases

Equipment purchased by TEPCO comprises principally machinery and industrial laboratory equipment, plus vehicles, audio-visual equipment, spare parts, etc.

The volume of purchasing activities commencing in May 1968 has increased steadily as shown in the following table:

Table I

Equipment Purchases

Year	Number of Purchase Orders	Value of Purchase Orders in US$
1968	76	62,000
1969	382	482,000
1970	548	1,139,000

Orders for supplies of equipment have been placed with vendors in more than twenty-eight countries.

4.2 Contracts for Services

Contracting is being employed to a steadily increasing degree to speed project implementation - as a matter of policy in both UNIDO and by UNDP - to tap all available sources of expertise and as one of the means to increase the capacity of the U.N. system. The growth rate for use of contracting in UNIDO-executed projects is illustrated by the following table:

Table 1/

Contracts for Services

Year	Number of Contracts	Value of Contracts in US$
1968	2	41,000
1969	26	1,516,000
1970	111	2,610,000

As an example, SIS projects implemented by contracting in 1970 included the provision of 109 field experts involving 192 man/months of field services. Expert services in the field are also being provided for projects financed by Special Fund and Voluntary Contributions.

Consultant services are available in the developed and developing countries, and in both the socialist and industrialized market economies. UNIDO contract awards have been made to organizations in more than twenty-four countries since commencement of operations in 1969.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

June 1969

GUIDELINES FOR THE PREPARATION OF JOB DESCRIPTIONS

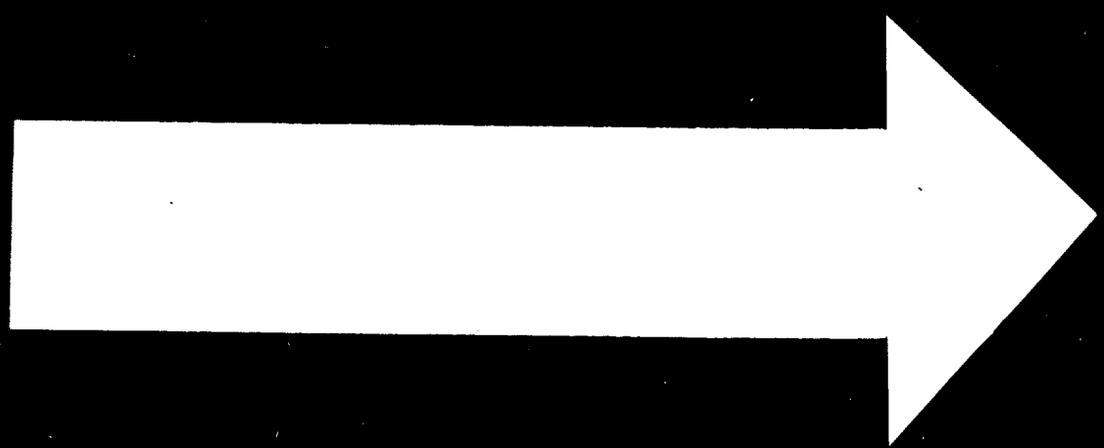
PURPOSE AND IMPORTANCE OF JOB DESCRIPTIONS

1. The successful and orderly execution of technical assistance programmes depends to a great degree on the timely delivery of well chosen experts. Continued growth of programmes and ever increasing diversification of projects has made the search for experts a complex and difficult task.

2. Ever since the inception of United Nations technical assistance to developing countries, job descriptions containing pertinent information concerning the objectives of the project and the expertise needed for its implementation have been used as the main instrument in the recruitment of experts. It is the job description that explains to the outside world what is the job that needs doing, and why, where, when, for how long and by which kind of person it should be performed. The job description is used to define a project, to attract qualified candidates, to assess their suitability and to evaluate their performance. A clear, accurate and informative job description can greatly facilitate the prompt and effective accomplishment of these tasks. Past experience, on the other hand, has amply demonstrated that unclarity, inaccuracy or inadequacy of the information provided can result in considerable delay in project implementation or misjudged selection of candidates. The job description therefore exercises a powerful (even decisive) influence on the success or failure of projects.

DRAFTING OF JOB DESCRIPTIONS

3. Job descriptions should be drafted in a clear, precise and comprehensive fashion in the UN working language which is indicated in the job description as essential for the execution of the project. For bilingual posts, job descriptions should be drafted in either language, not in both.



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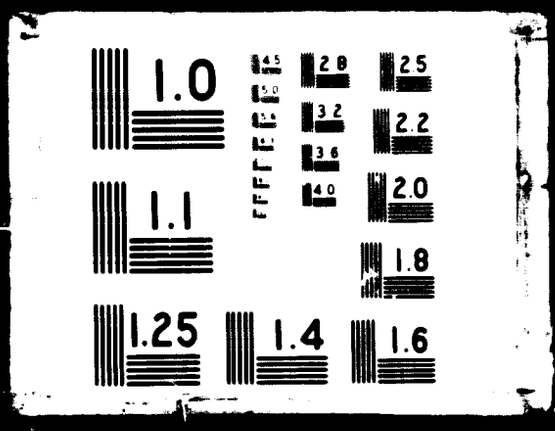


Standard Form of Job Description

.... 4. The attached job descriptions which have been selected as models contain all elements essential for the standardized drafting of a job description. The following guidelines are arranged in the order in which the headings are listed on the basic form.

Heading of Job Description

5. Since the job description reflects the official governmental request for an expert, the full official title of the country should be indicated in the heading - e.g. Jordan should be shown as the Hashemite Kingdom of Jordan.

6. Requests for an associate expert should be spelled out in the heading of the job description: "Request from the Government of ..... for an Associate Expert".

Post Title

7. The post title should be chosen after the formulation of Duties. It should indicate the specific function to be performed rather than the general area of work - e.g. "Expert in Textile Fibres Research" or "Expert in Stainless Steel Rolling" - not "Industrial Engineer", "Chemical Engineer", "Industrial Economist", etc.

8. The post title of the Project Manager of a Special Fund Project should reflect both his position as the manager and the field of activity of the project - e.g. "Project Manager (Small-Scale Industries)".

9. The words "adviser" or "consultant" should be used whenever an assignment is of an advisory or consultative nature.

10. In case of OPEX posts, use the official administrative title which the expert would enjoy serving as a civil servant or employee of the recipient country - e.g. "Group Executive - Food Industries".

11. When the official administrative title of an OPEX post does not reflect the required duties and qualifications, it would be advisable to add, in brackets, a supplementary post title defined according to the preceding paragraphs.

12. Specify clearly the level of expertise whenever a senior or junior expert is needed; the words "adviser" or "expert" used without a qualifying adjective indicate an average level of expertise which could reasonably be expected of an expert for the execution of the project. Avoid any discrepancy between a level of expertise indicated in the post title and the requirements listed under Qualifications.

13. Remember that an associate expert by definition can only be a junior or assistant expert.

Duration

14. The duration of an assignment must be realistically determined according to the task to be accomplished. State for how long the expert's services are required. Indicate whether there is any likelihood of an extension or follow-up return visit. Sometimes there are options that could greatly facilitate the recruitment of experts - e.g. a possibility of two or more short-term round-trips instead of one assignment of longer duration. Certain types of mission do not necessarily require the continued presence of an expert in the country of assignment; time-consuming laboratory work and the writing of reports could be done at home. In such cases, an obvious alternative to a longer assignment would be a mission of shorter duration with one or more follow-up visits.

15. Job descriptions for projects that clearly could not be executed within the initial period of one or two years indicated in the job description (e.g. for a Special Fund Project) should always stress the possibility of extension of the assignment. As a rule, posts having a total duration of several years have to be shown in the job description as being for "one year with possibility of extension up to — years". For financial reasons it is important to try to avoid the issuance of job descriptions requiring the assignment of experts for periods of more than six months but less that one year (e.g. nine months).

Expected Starting Date
(Date Required)

16. It is essential to allow sufficient time for the search, evaluation and appointment of experts. The normal minimum period for the accomplishment of these tasks is two months. Some additional period of time (e.g. one month) is usually necessary to enable experts to settle their personal matters. Consequently, it would be sensible to say that the expert is wanted "as soon as possible after ..... (date) ..... but before ..... (date) .....". Alternatively, the formula "between ..... (date) ..... and ..... (date) ....." may be used. The latest acceptable starting date should be determined by programming needs and the requirements of the job that the expert had to do.

17. Remember that unrealistic (too early) proposed starting dates of assignments cause great difficulties in recruitment, programme management and project implementation and are often self-defeating. Great care should therefore be taken to avoid requests for urgent appointment of experts unless it is really justified.

Duty Station

18. State main duty station, indicating whether frequent or occasional travel away from the duty station is envisaged. If, as often happens, the duty station is a town which is not internationally known, indicate the province or the geographical location within the country. If dual assignment for simultaneous implementation of identical projects in two or more countries is envisaged it should be clearly stated under Duty Station and fully explained in Background Information.

Purpose of Project

19. Give a succinct statement, in one paragraph, of the project's objectives. This should present, near the beginning of the job description, the professional challenge and interest of the problem in the developing country which requires solution or assistance. The statement should be interesting and must make sense. Factual details, historical background, etc., should be given under Background Information.

Note: the foregoing is a new element designed to improve UNIDO job descriptions.

Duties

20. The scope of the duties to be performed must be realistically tailored to the capacity of one man and the duration of the assignment.

21. Indicate the Ministry, Institution or Organization[1/] to which the expert will be assigned or expected to work with and state clearly the nature of the assignment and the functions the expert will be required to perform covering, where relevant, the following aspects:

(a) Nature of assignment:

Is the expert expected primarily to advise and/or assist and participate in performing certain duties or to undertake or direct certain operations? A concise general statement of the duties required should be provided at this point.

(b) Nature of advice:

Is the expert expected to advise on policy questions, practical managerial, administrative, operational or production problems, or design and scientific research questions, etc.?

(c) Nature of operations:

A statement of the specific duties required should be given. Is the expert expected to take part in a governmental administration or factory management or in technical manufacturing operations?

(d) Level of advice or operations:

At which level of the recipient government's administrative machinery or business administration is the expert expected to operate?

(e) Do the advisory or operational duties relate to general or specific aspects or problems? If the former, state all salient points to which the expert has to pay special attention. If the latter, enumerate all main specific problems and duties. In both cases, state in order of priority.

1/ Beware of unexplained abbreviations!

(f) Is the training of local personnel required and, if so, at what level? Is training of national associates (counterparts) required?

(g) Are any lectures or demonstrations an essential part of the project? If so, state what is the level of the audience or participants likely to be involved.

(h) Name any technological process or type of equipment with which acquaintance is considered to be essential for the execution of the project.

22. If the assignment concerns an associate expert, state the post title, name and nationality of the expert whom the associate expert is to assist. Bear in mind that he is a young professional with only a few years of practical experience at best and that his duties should be planned accordingly.

Qualifications

23. State the specific skills essential for the execution of the project. In so doing, it is most important to avoid demanding a combination of skills or variety of experience which is unlikely to be encountered in the case of any individual expert.

24. As regards academic requirements, the formula "University Degree or equivalent experience" should be used rather than the restrictive requirement of a University Degree alone, unless this is deemed essential. Avoid ambiguous definitions such as "appropriate academic background". If two disciplines are considered as equally suitable qualifications, name them.

25. State the professional field or fields in which the expert should have practical experience. When specifying the degree or length of experience which is deemed desirable, the recruitment source should be given as much latitude as possible. Avoid such formulations as "10 years (or 15 years) experience essential". They are unnecessarily restrictive and might exclude valuable candidates. Use general terms such as "extensive", "considerable", or "some" experience.

26. When specific technological processes or equipment are listed under Duties as essential for project implementation, full acquaintance of the expert with the process or equipment should be made essential as a qualification.

27. Age or personality requirements should not be included. The minimum age is related to the academic training and practical experience required, and the primary consideration is the individual professional and technical qualifications for the post. The nature of some assignments may impose a limitation of maximum age. In such cases it should be phrased as a warning in general terms without mentioning an exact age limit.

28. Personal qualities are assessed and evaluated only by professional interviewers or on the grounds of references given by persons who are directly acquainted with the candidate.

29. Avoid any statement that a candidate must have experience in a developing country. Such experience may be preferred but it cannot be essential. Recruitment is difficult enough without adding this kind of limitation.

30. Any statement indicating specifically or by implication that selection should be made on the grounds of a particular nationality, race, or sympathy with certain cultures or traditions should normally be avoided. However, an exception may be a preference for a particular country or area of origin because of common experience and the employment of similar techniques or equipment.

31. Membership in world-wide professional associations should not be made an essential qualification but may be given as an example of qualifications needed.

Languages

32. The language requirements have to be considered from three angles: the professional work of the expert in his assignment; the fact that he is representing UNIDO in the field; and the necessity of communication with UNIDO headquarters (on both substantive and administrative questions) including the writing of his final report.

33. State in which one of the working languages of the United Nations the expert will be required to work. State other languages that would be an asset. State clearly whenever there is a need of a bilingual expert.

34. Knowledge of languages other than the working languages of the UN should not be made an essential requirement and should only rarely be indicated as a preference - i.e. when there is a strong justification.

35. In such cases, the following type of formula is acceptable: "Language: English; knowledge of (e.g. Portugese, Arabic) an advantage".

36. It should be noted that unrealistic language requirements often render the search for experts unproductive. Language requirements should therefore be formulated to correspond to the real needs of a project (e.g. a factory foreman should not be expected to have the same mastery of a language as an adviser in industrial planning; and the latter does not necessarily have to possess the same linguistic proficiency as a lecturer).

Background Information

37. Remember that job descriptions are basically tools to assist in the search for experts; they are not intended as detailed terms of reference of the expert. Within these limits provide:

(a) A brief description of factors that led to the request for assistance;

(b) Relevant information which might facilitate clear understanding of the nature and scope of the work that the expert will be required to perform and which could have an influence on the selection of the expert, but do not add any duties over and above those already listed in the section on Duties, nor duplicate that section;

(c) Answers to the following questions where appropriate:

(i) What, in brief, is the organization or composition of the unit the expert is to help or work with? (Beware of unexplained abbreviations).

(ii) To which officer will the expert report (title only), if this question has not already been answered under Duties?

(iii) Who will be the expert's immediate counterpart (title only)?

(iv) What has already been done to solve the particular problem(s and with what results? Has there been any form of outside assistance, particularly UNIDO or UN assistance; any currently being given in the same or inter-related fields? If so, give particulars.

If the assignment is a continuation of work done previously by another expert (UNIDO or otherwise), describe briefly the scope of the previous incumbent's mission and the work accomplished by him.

(v) What technical facilities related to the expert's work are available locally (equipment, documentation, research institutes, trained personnel, etc.)?

(d) A listing of post titles of all members of the team whenever the project calls for more than one expert, and a listing of subcontractors when they participate in the execution of the project.

SOME COMMON DEFECTS OF JOB DESCRIPTIONS

38. The following are the most common defects encountered in the preparation of job descriptions:

(a) Unrealistic demands as to qualifications of candidates and the scope of work to be performed; such demands are particularly harmful. They result in protracted searches for experts and often in changes of projects with the loss of much time and effort. They often breed recipient government's disappointment with subsequent project execution;

(b) Inadequate information about the nature of work, or ambiguity of job description;

(c) Unrealistic (too early) starting date of assignment;

(d) Unrealistic (too short) duration of assignment;

(e) Restrictive requirements regarding candidate's previous experience;

(f) Verbosity and bad drafting.

39. In considering some of the recurrent defects of job descriptions, it may be recalled that no job description exists by itself; it reflects a government's request. That request, in turn, is an attempt to define the government's need for outside assistance in the implementation of a national project. There are, in fact, three preliminary stages: first, a national project, its concept and design; second, the government's ideas concerning the scope and nature of foreign expert help needed to carry it out successfully; third, the formulation and expression of those ideas in the shape of an official request. It follows from this that the prerequisites of a good job description are a project which is sound and viable; a plan for UNIDO assistance which is sensible and realistic; and an explanation of both that is clear, complete and convincing. If any of these elements is unsatisfactory, it is, regrettably, impossible to prepare a good job description. It was for this reason that UNDP issued in March 1968 a similar set of guidelines for the preparation of job descriptions to all Resident Representatives and other Field Officers of the United Nations Development Programme. It is hoped that the present guidelines intended for the staff of UNIDO will also play their part in improving the supply of well selected experts for the implementation of well designed projects.

U N I T E D N A T I O N S

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO

27 March 1969

Request from the Government of the Kingdom of Thailand
for Special Industrial Services

JOB DESCRIPTION
(No. of Post)

POST TITLE	Textile technologist (bast fibres)
DURATION	Five months
DATE REQUIRED	As soon as possible
DUTY STATION	Bangkok, with travel to other jute and kenaf produoing and processing countries.
PURPOSE OF PROJECT	The Government is interested in supplementary research on the particular end-uses of kenaf, the possibilities of substituting kenaf for jute in the spinning process, and the supply factors operating on the world market. The Technological Research Institute, which is a UNIDO Special Fund Project, has been carrying out research into many aspects of the Thai kenaf growing and processing industries. The present study would build on and complement the basic studies made by the Insitute.
DUTIES	The expert will be one of a team of three experts, the others being a Marketing Specialist and a Commodities Economist (the latter is to be recruited through the Food and Agricultural Organization). He will be expected to examine the jute and kenaf processing industry in Thailand and other countries with a view to developing new outlets for this raw material. He will further examine, from the technological point of view, the impact of the increasing utilization of synthetic fibres as substitutes for jute and kenaf, and suggest measures to be taken to adapt the kenaf processing industry to the new situation.

QUALIFICATIONS Textile technologist with extensive experience in the processing of bast fibres, especially jute and kenaf.

LANGUAGE English

BACKGROUND INFORMATION Kenaf or "Thai jute", a hibiscus fibre, is a major agricultural product of Thailand and after a rapid development over the past five years it is now an important revenue earner, being the third most important export commodity. Thailand at present contributes more than 15 per cent of the combined volume of jute and kenaf fibres entering the world trade, the only other substantial exporters being India and Pakistan (exporting mainly jute).

Over the past few years spinning and weaving mills using mainly kenaf (with small quantities of jute) have been set up in Thailand to produce gunny sacks, and the country is now self-sufficient in this commodity. Proposals have been made to increase this capacity and export gunny sacks, wool packs, hessian and other kenaf-based commodities.

Certain factors may adversely affect the long-term prospects for such products, including:

The world trend to bulk-handling of commodities such as grain, sugar etc., traditionally packed in jute sacks.

The impact of synthetic fibres, especially polypropylene, on the end-uses of jute and kenaf.

The Commodities Division of FAO and the FAO Study Group on Jute, Kenaf and Allied Fibres (with its Consultative Sub-Committee) have made extensive general studies in this field.

UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO

4 March 1969

Request from the Government of the Argentine Republic for Special Industrial Services

JOB DESCRIPTION
(No. of Post)

POST TITLE	Expert in instrumental analytical chemistry
DURATION	Four months
DATE REQUIRED	As soon as possible
DUTY STATION	Buenos Aires
PURPOSE OF PROJECT	The work of the expert is likely to have permanent application and to produce continuous improvements in the active life of the National Institute of Industrial Technology (INTI), an organization empowered by law to carry out technological research and channel technical assistance through national institutions in the country. The use of computers and of modern analytical techniques is an important stage in the process of the transfer of technology which has been entrusted to INTI.
DUTIES	The expert will be assigned to and advise the Central Laboratories of Chemistry of INTI on modern analytical techniques being used in chemistry and its application through the utilization of computers; he will also give lectures in Spanish in the field of modern instrumental analytical chemistry, for the chemists and technicians at the Central Laboratories of INTI.

QUALIFICATIONS	University degree in Analytical Chemistry, with substantial experience in modern instrumental analytical techniques and knowledge in computer programming.
LANGUAGE	Spanish
BACKGROUND INFORMATION	The Chemistry Laboratory of INTI has sections equipped with modern instruments for analysis, such as gas chromatographs, Shandon electro-chromatographs, spectrum-photometers for the infra-red, visible and ultra-violet, a Jarrel-Ash emission spectrograph, Philips equipment for diffraction and fluorescence of X-rays, a Methrom potentiograph and a Methrom polarograph. Its main activities are the analysis of metals, minerals and hydraulic agglomerants, verification of the qualities of chemical products, oil-by-products, fats and oils, soap, food products, paints and varnishes, and the determination of physical and chemical characteristics. The Natural Products Section investigates the possible industrialization of indigenous raw materials, such as local woods and seeds and by-products of the food industry.

U N I T E D N A T I O N S

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO

Date

Request from the Government of .....
.....

JOB DESCRIPTION
(No. of Post)

POST TITLE	Expert in industrial project evaluation
DURATION	One year, with possibility of extension
DATE REQUIRED	As soon as possible after ..... (date) .....
DUTY STATION	....., with travel as required
PURPOSE OF PROJECT	The evaluation of specific public and private industrial projects for the purpose of selecting those projects to be incorporated into the National Industrial Development Programme, to be approved and licensed by the Government for private investment, to be accepted for investment loans by the Industrial Development Bank and to be considered for special tariff and tax protection when necessary.
RESPONSIBLE TO	The expert will be responsible to the Permanent Secretary of the Ministry of Oil, Electricity and Execution of Industrial Projects. In his day-to-day duties he will be responsible to the Under-Secretary of the Ministry. He will be expected to work closely with members of the Industrial Project Section and members of the Project Loan Department of the Industrial Development Bank.

FUNCTIONS AND SCOPE OF WORK

In co-operation with other government bodies concerned with industrial development, the expert is expected to:

1. Identify all the major objectives of the Government, as expressed in its national strategy for industrial development, and relate these objectives as quantitative parameters for use in the context of evaluation of national economic profitability of individual projects.

2. Study the existing industrial feasibility reports and concrete industrial project proposals, as well as new incoming proposals submitted to the Government in order to advise the Government on their expected effect on the industrial development of the country as a whole.

3. Advise the Government on any further studies or investigations that need to be undertaken by the substantive unit or consultant in charge of preparing the feasibility study of the project under evaluation, with respect to the necessity for providing additional information or data required for a more comprehensive accurate appraisal of the project. (Such additions might include additional sub-sector studies, additional market research, needs for laboratory tests, the addition of new elements into the costs or benefits of the project, additional breakdown of component parts of inputs and outputs, etc.).

4. Set up a system for co-ordinating interrelated projects and especially co-ordinating plans for new projects with already existing similar and related industrial enterprises.

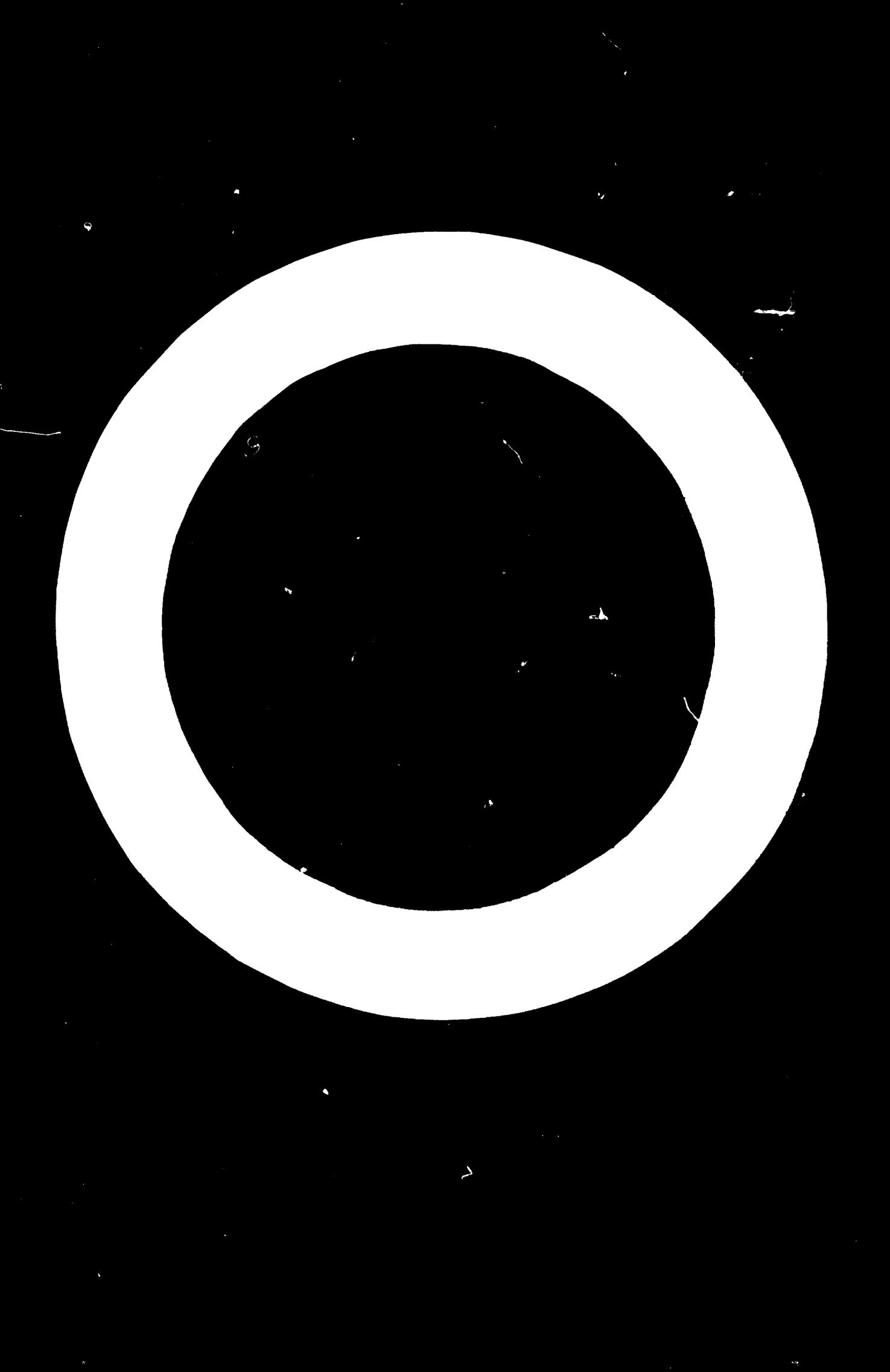
5. Evaluate all projects in terms of their commercial profitability (using discounted cash flow techniques evaluate for present value, rate of return and return to equity capital). In addition, using the above techniques and quantitative parameters to reflect national goals, evaluate the national economic profitability of the projects.

6. On the basis of the above national profitability evaluations assign priorities to each project within the framework of the existing plans for industrial development.

7. Help to organize a unit for carrying out project evaluation and train local counterpart staff in the above-mentioned duties.

8. Recommend further concrete steps to be taken by the various organizations for the implementation of these projects, including additional forms of necessary technical assistance from the United Nations or other sources.

EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS	Advanced degree in economics or industrial economics
RELEVANT PRACTICAL EXPERIENCE	Extensive practical experience in industrial planning and programming especially with respect to the formulation and evaluation of industrial projects in developing countries.
OTHER USEFUL EXPERIENCE	Experience in industrial investment financing would be a considerable asset.
LANGUAGE	English essential
BACKGROUND INFORMATION	The Government has accumulated a considerable number of feasibility studies and concrete proposals for the establishment of industrial enterprises. It is considered necessary to make an overall review of the existing studies together with an evaluation of new proposals in order to check on the benefits which the country may receive from the implementation of the projects and to determine their appropriateness within the context of the overall plans for industrialization of the country. It will also be necessary to advise on the overall organizational arrangements between the different bodies which may be involved in the evaluation, approval and implementation of these industrial projects.



UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO

Date

Request from the Government of .....
.....

JOB DESCRIPTION
(No. of Post)

POST TITLE	Adviser on Industrial Policies
DURATION	One year, with possibility of extension
DATE REQUIRED	As soon as possible after ..... (date) .....
DUTY STATION	..... with travel as required
PURPOSE OF PROJECT	The Government of ..... has decided to establish a task force to review the strategy and objectives of its industrial development programme over the next five years and the policies and measures required to implement it. The expert will act as chief adviser to this task force.
RESPONSIBLE TO	The Permanent Secretary, Ministry of Industry. However, in his day-to-day duties, the expert will report to the leader of the task force (an Under-Secretary in the Ministry), and he will be expected to work closely with other members of the task force drawn from the staff of the Ministry and other Government departments such as the Planning Organization.

FUNCTIONS AND SCOPE OF WORK

The expert will act as Consultant and Adviser in formulating the programme of work for the task force and is expected to assist in the implementation.

The scope of work of the task force is expected to include the following:

1. Review the targets established for industrial development over the last ten years and the extent to which they have been realized, paying particular attention to the targets established for the output of major industrial sectors.

2. Identify the obstacles and disincentives which may have hindered the rate of growth in recent years.

3. Examine the structure of industry which has emerged and the extent to which this has been influenced by past policies and measures.

4. Examine past experience and proposed sources of financing for new industrial investment and the policies, measures and institutions used to mobilize finance for the industrial sector.

5. Examine existing and planned policies for regional co-operation in the field of industrial development.

6. In the light of the above review, and taking into account physical targets established by the Planning Organization, recommend modified industrial policies and measures in such fields as: policy on financing; tariffs and other forms of protection; incentive policies and measures; measures to facilitate foreign investment, etc.

7. Recommend policies to be followed for the further development of manufacturing industries in the public sector.

8. Review the existing machinery used to implement industrial policies and measures and recommend modifications needed to accomodate policy changes suggested for the next five years.

EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS

Advanced University degree in economics

RELEVANT PRACTICAL EXPERIENCE

Practical experience in the formulation of economic policies, preferably industrial policies at the government level.

OTHER USEFUL EXPERIENCE

It would be useful if the candidate also had experience of working in industry at the enterprise level.

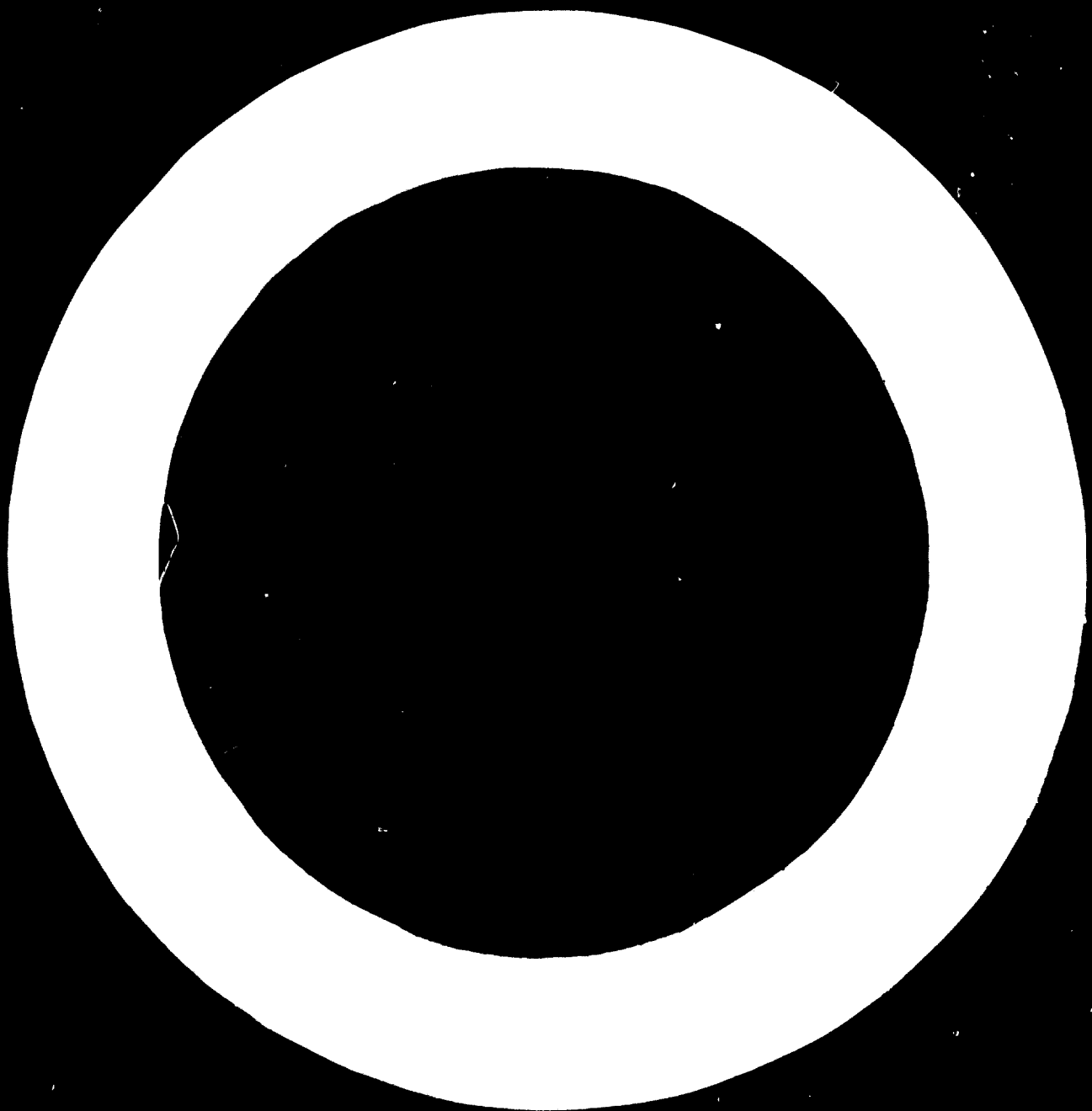
LANGUAGES

English essential and preferably Spanish in addition. The working language of the task force will be Spanish and the expert will be expected to learn this language during the assignment.

BACKGROUND INFORMATION

The Government of ..... has requested UNIDO assistance to review the broad outline of their industrialization strategy and policies for the next five years. Over the last ten years the value added in the manufacturing sector has grown by an average of 6 per cent per annum, and the Government feels that this performance can be improved upon. Furthermore, visiting missions have stressed that the cost structure of many branches of local industry is too high.

The Government is a signatory of the ..... Free Trade Area agreement, and has a number of bilateral agreements for co-operation regarding the development of specific industries. Regional economic co-operation therefore forms an important element of the background against which new policies will be formulated.



COUNTRY PROGRAMMING

In June 1970, following its consideration of the Study of the Capacity of the United Nations Development System prepared by Sir Robert Jackson, the Governing Council of the United Nations Development Programme approved a Consensus which, among other things, established a new United Nations Development Co-operation Cycle. The first phase in this cycle is the formulation of the UNDP country programme.

In January 1972, the UNDP Governing Council approved country programmes for nineteen countries. By the end of its seventeenth session, in January 1974, the Governing Council is expected to have approved country programmes for 111 countries, establishing the framework for UNDP-financed assistance until the beginning of the next development cycle in 1977.

The UNDP country programme is intended to identify as specifically as possible the use of UNDP-financed assistance over a period of three to five years within the framework of the country's development priorities and objectives, as determined by the national development plan or by other means. The order of magnitude of the resources expected to be available from the UNDP during the programme period is given in the indicative planning figure established for each country by the UNDP Governing Council.[1/]

The government of the recipient country prepares the UNDP country programme, based on national development plans, priorities or objectives and on the indicative planning figure, and in close co-operation with the UNDP Resident Representative and other representatives of the United Nations system as appropriate. The UNIDO industrial development field advisers should participate fully at every stage of the programming exercise. The timing of the programme should, wherever appropriate, coincide with the period covered by the national development plan.

Formulation of the country programme involves

- a broad identification of the needs which arise out of the country's objectives in particular sectors, within the framework

1/ The list of approved indicative planning figures for 1973-1977 is attached as Annex I.

of its overall development objectives, and which might appropriately be met by UNDP assistance;
- as precise an indication as possible of the internal inputs, UNDP inputs and wherever possible other United Nations inputs to meet these needs; and
- a preliminary list of projects to be subsequently worked out for financing by UNDP to implement the country programme.

In preparing the country programme, the government should take into account other external inputs, both multilateral and bilateral. In addition, efforts should be made at all levels to co-ordinate all sources of assistance in the United Nations system to achieve an integrated approach at the country level. The assistance provided by UNDP receives its coherence and balance from its relationship to the country's development objectives and to other multilateral and bilateral assistance activities; it need not in itself be balanced or evenly spread over all sectors.

General description of the country programming exercise

The UNDP country programming exercise must be adapted to the individual situation and programming needs of the country concerned. Different development priorities and objectives, varying political and administrative organization and other circumstances require different types of programming exercises. The two key elements in any exercise, however, are the country's development objectives and the indicated resources available for programming in the chosen period. Such resources would be the total of the annual parts of the indicative planning figure for the years covered by the period less the costs of previously incurred project commitments extending over that period.

The immediate purpose of the country programming exercise is to prepare a formal document to be submitted to the UNDP for eventual approval by the Governing Council. Such documents have generally been prepared through a series of consultations between the co-ordinating authority of the government and the UNDP Resident Representative and between both of them and

representatives of the sectoral ministries, the participating organizations of the UN system and, where appropriate, other assistance programmes. Officials from headquarters of the UNDP and other organizations of the UN system have, in certain cases, participated in discussions with the government co-ordinating authority to agree on a final draft. Governments should not hesitate to request agency headquarters to send representatives whenever required to participate at any stage in the country programming discussions.

Experience has shown the importance of making careful financial estimates for the projects listed in the country programme to avoid either exceeding the resources available for the period or failing to utilize such resources fully. For this reason, an important activity in the country programming process is the detailed review of ongoing projects to ensure that sufficient provisions for them are included in the country programme. Under-costing could result in an undesired reduction of project activities. Experts assigned to the projects and executing agency headquarters should be consulted in the preparation of appropriate financial allocations for the programme period. It is equally important to make realistic budget estimates for the new projects included in the country programme. Ideally, this would be done through preparation of individual project documents during the programming exercise. This, however, is not always feasible or practicable especially since projects included in the programme may not be scheduled to begin before several years have passed. Therefore, the advice of agency representatives should be sought concerning the most appropriate costing and scheduling of projects before the final country programme document is prepared.

As an initial step in the country programming exercise, the Resident Representative prepares a background paper, incorporating the considered and co-ordinated views of the organizations of the United Nations system on the country's sectoral and inter-sectoral problems and possibilities for development as expressed in agency country briefs. The background paper includes an evaluation of present assistance and suggestions for future activities. On the basis of the background paper, the organizations of the United Nations system offer further suggestions for assistance,

supplementing those made previously in their country briefs. These suggestions are intended for consideration by appropriate government officials before the country programme document itself is prepared.

The country programming exercise itself requires about eighteen months. The final country programme document must be submitted to UNDP Headquarters about three months before the UNDP Governing Council session at which it will be considered (1 October for January sessions and 1 March for June sessions). This means that the draft country programme should be submitted three months earlier to permit review by UN agencies and UNDP and possible revision by governments. The background paper should be prepared and circulated five months before the circulation of the draft country programme, to permit appropriate consultations among agencies, UNDP and governments during the preparation of the country programme itself. Agency country briefs should be submitted to the Resident Representative about two months before the background paper is circulated. Preparation of agency country briefs and of the background paper usually begins about two months before the submission of agency country briefs. The table below shows the general schedule of the country programming exercise activities:

September	January	Country programming exercise begins
15 December	15 April	Agency country briefs received by Resident Representative
1 February	1 June	Resident Representative background paper circulated
1 March	1 July	Agency comments received by Resident Representative
1 July	1 December	Draft country programme circulated
20 August	1 February	Agency and UNDP comments received by Resident Representative
1 October	1 March	Final country programme document submitted
January	June	UNDP Governing Council approval

Once approved by the UNDP Governing Council, country programmes are reviewed periodically, at intervals of about one year. The nature of the

review depends upon the circumstances in each country and should be agreed upon in advance by the government and the UNDP with the advice of the United Nations system organizations concerned. In the final year of the approved country programme period, or whenever the government wishes to re-submit a revised programme for approval, the review will be replaced by a new programming exercise.

The purposes of the overall periodic reviews are

(a) to examine the progress of the country programme as a whole;
(b) to consider in a systematic and comprehensive way any changes in the light of
  - estimated resources available for the remainder of the programme period;
  - implementation of the programme to date;
  - changes in the country's development priorities, objectives and circumstances;
(c) to enable the government to prepare any amendment requiring Governing Council approval;
(d) to enable the UNDP to prepare a report to the Governing Council as necessary; and
(e) to review the country's participation in UNDP-financed intercountry projects.

The principal inputs required for the review are

(a) data on cumulative commitments against the IPF;
(b) expenditure accounts for the period preceding the review;
(c) revised estimates of resources available;
(d) results of systematic monitoring and evaluation of the projects in the programme and of the programme as a whole; and
(e) results of similar monitoring of relevant intercountry projects.

The review does not automatically call for a re-evaluation of ongoing projects. When a project has already been evaluated to a satisfactory extent during the preceding year in the normal course of events, the assessment need only be verified or up-dated for the purpose of the programme

review. However, ongoing projects whose relevance, efficiency and actual or potential effectiveness have not already been satisfactorily established or confirmed must be evaluated in time for the programme review.

27 June 1972

INDICATIVE PLANNING FIGURES FOR THE PERIOD 1973-1977 BY REGION

(as listed in document DP/L.237 of 9.5.72 and DP/GC/XIV/CPR.5/Corr.1)

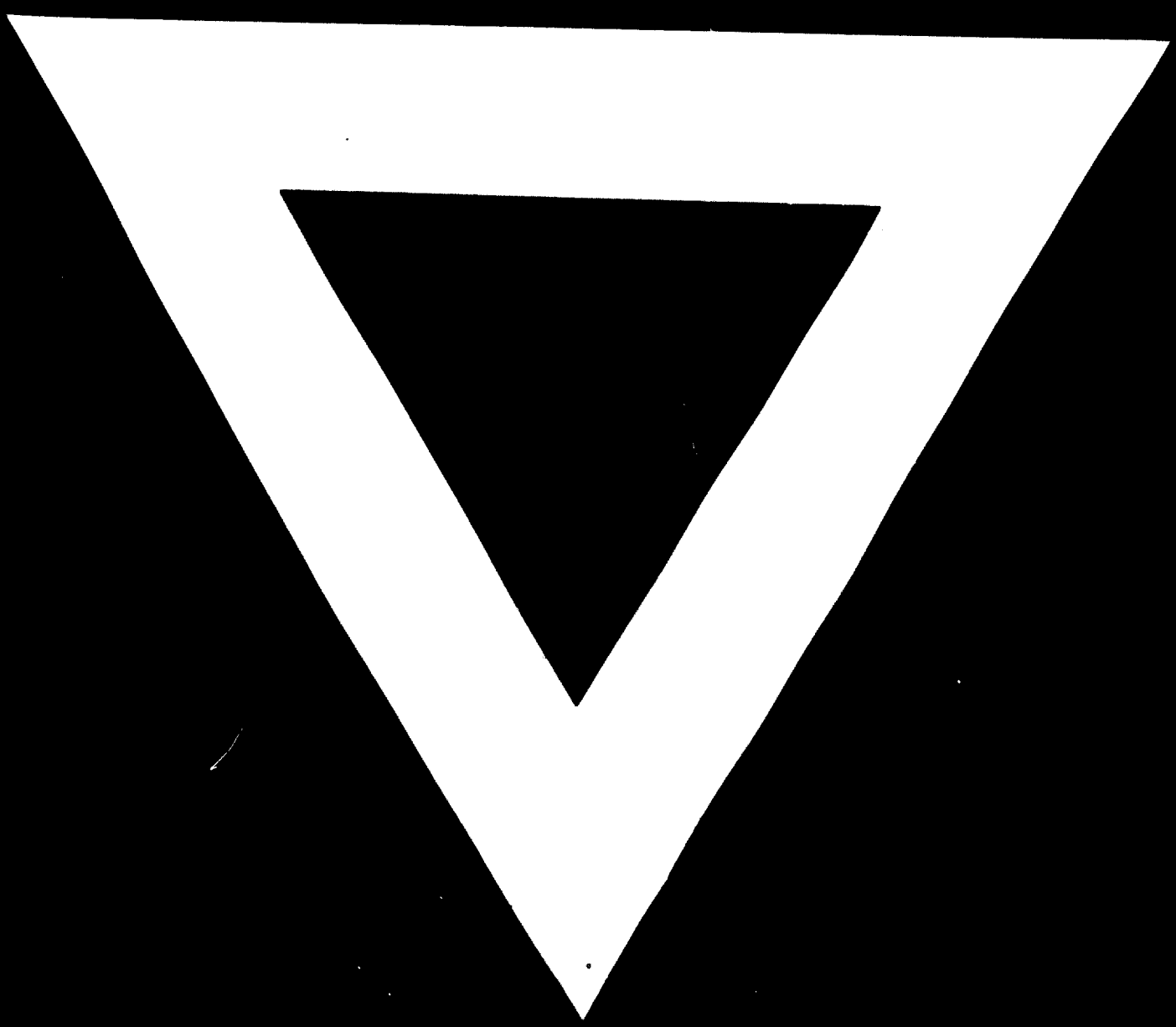
AFRICA

Country	IPF in US$ Millions	Country	IPF in US$ Millions
Algeria	20	Madagascar	10
Arab Republic of Egypt	27.5	Malawi	7.5
Botswana	5.8	Mali	10
Burundi	10	Mauritania	5
Cameroon	15	Mauritius	5
Central African Republic	7.5	Morocco	20
Chad	7.5	Niger	10
Congo, People's Republic of	7.5	Nigeria	30
Dahomey	7.5	Rwanda	10
Equatorial Guinea	3.5	Senegal	10
Ethiopia	20	Sierra Leone	7.5
Gabon	7.5	Somalia	15
Gambia	2.5	Sudan	20
Ghana	15	Swaziland	5.7
Guinea	15	Togo	10
Ivory Coast	15	Tunisia	15
Kenya	15	Uganda	10
Lesotho	8.3	United Republic of Tanzania	15
Liberia	10	Upper Volta	10.7
Libya	5	Zaire, Republic of	20
		Zambia	15

LATIN AMERICA AND THE CARIBBEAN

Argentina	20	Guyana	5
Barbados	2.5	Haiti	6
Bolivia	15	Honduras	5
Brazil	30	Jamaica	7.5
British Honduras	1	Mexico	20
Chile	20	Nicaragua	5
Colombia	20	Panama	7.5
Costa Rica	5	Paraguay	7.5
Cuba	10	Peru	15
Dominican Republic	7.5	Surinam	2.5
Ecuador	15	Trinidad and Tobago	5
El Salvador	5	Uruguay	10
Guatemala	7.5	Venezuela	10

Country	IPF in US$ Millions	Country	IPF in US$ Millions
ASIA AND THE FAR EAST			
Afghanistan	20	Malaysia	15
Bangladesh	18.5	Maldives	1
Bhutan	2.5	Mongolia	10
Burma	15	Nepal	15
Ceylon	15	Pakistan	18.5
Fiji	5	Papua and New Guinea	5
Gilbert and Ellice Islands	.5	Philippines	20
Hong Kong	.5	Singapore	7.5
India	50	Solomon Islands	1
Indonesia	35	Thailand	15
Iran	20	Tonga	1
Khmer Republic	10	Vietnam, Republic of	10
Korea, Republic of	15	Western Samoa	5
Laos	5		
EUROPE, MEDITERRANEAN AND THE MIDDLE EAST			
Albania	1	Lebanon	10
Bahrain	2.5	Malta	2.5
Bulgaria	7.5	Poland	7.5
Cyprus	5	Qatar	1.5
Czechoslovakia	2.5	Romania	7.5
Greece	7.5	Saudi Arabia	10
Hungary	7.5	Spain	5
Iceland	1	Syrian Arab Republic	15
Iraq	15	Turkey	20
Israel	5	Yemen Arab Republic	15
Jordan	15	Yemen, People's Democratic Republic of	10
Kuwait	1	Yugoslavia	7.5



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