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DP/ID/BER.B/10  
8 August 1978  
Original: English

06784

# INTERNATIONAL SUBCONTRACT EXCHANGE

DP/PAK/78/052

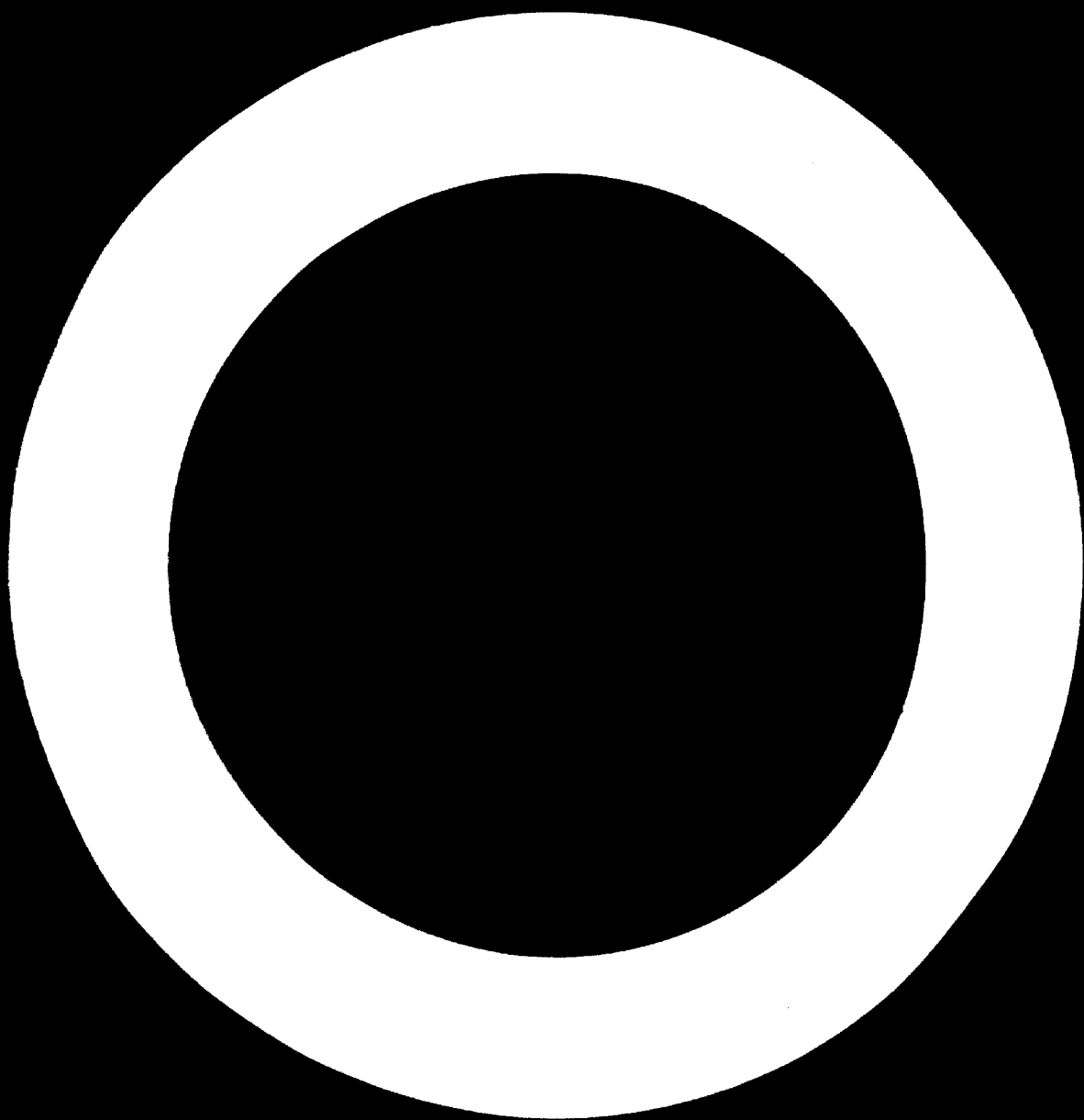
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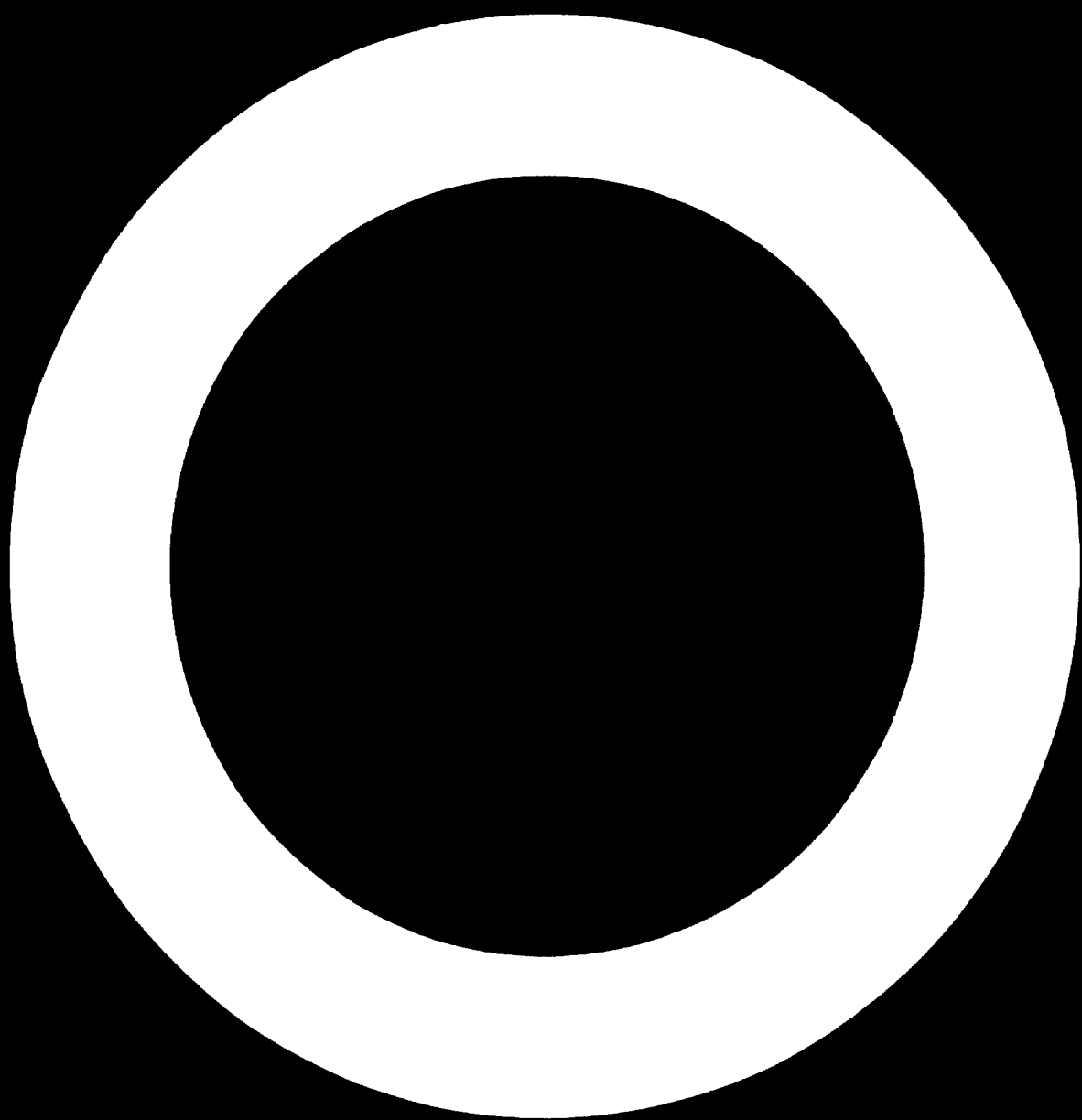
TERMINAL REPORT

Prepared for the Government of Pakistan by the  
United Nations Industrial Development Organization,  
executing agency for the  
United Nations Development Programme



United Nations Industrial Development Organization





United Nations Development Programme

INTERNATIONAL SUBCONTRACT EXCHANGE

(DP/PAK/73/052)

PAKISTAN

Project findings and recommendations

Prepared for the Government of Pakistan by  
the United Nations Industrial Development Organization,  
executing agency for the United Nations Development Programme

Based on the work of E. Rivarola, expert in the establishment  
of international subcontracting exchanges

United Nations Industrial Development Organization  
Vienna, 1975

Explanatory notes

Reference to "dollars" (\$) indicates United States dollars.

A full stop (.) is used to indicate decimals.

A comma (,) is used to separate thousands.

The following exchange rate is used in the conversion of Pakistan rupees (PRs) to United States dollars: \$US 1 = PRs 9.90.

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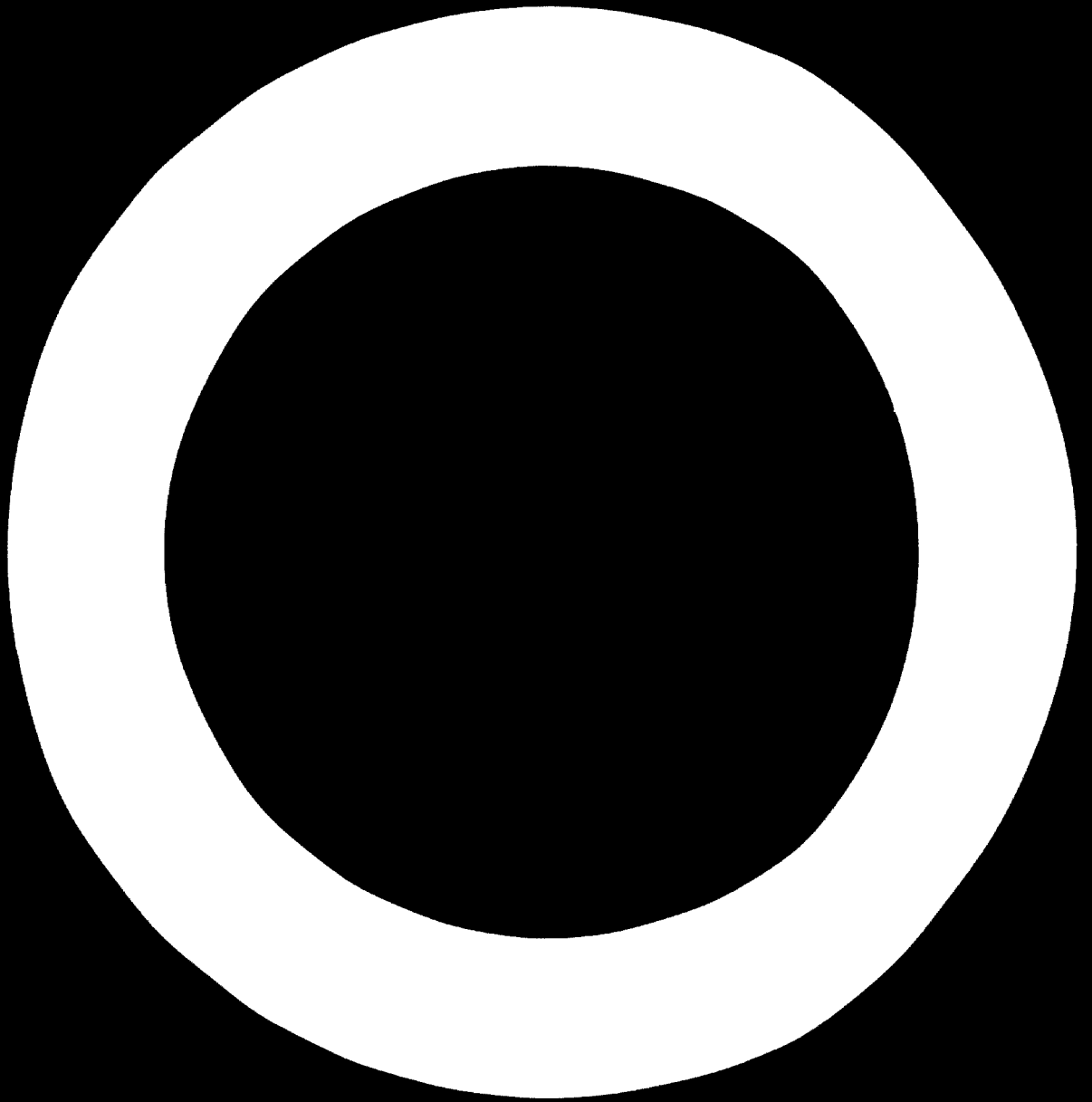
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## SUMMARY

This report describes a six-month mission to establish an international subcontract exchange in Karachi. Annex IV sets out in great detail the philosophy and mode of operation of a subcontract exchange.

The progress of the mission was slower than that experienced in other countries. This was mainly due to a lack of knowledge and understanding of the project's objectives and of the basic idea of the exchange. It was not appreciated that an exchange, although small in size, demands the best. At the end of the mission, 120 units had been visited, and information on their capacity and capabilities had been recorded. However, a working exchange did not exist, because some of the essential facilities had not been provided and some of the hardware had still not arrived from England.

Generally, the products seen were of good quality, but some were spoilt by simple mistakes which could have been avoided. The same faults were often seen in more than one company in a particular field. Only a few companies had any clear idea of quality control, and most of these were to be found amongst the larger units.

There appeared to be no effective means of handling inquiries originating overseas. It was also found that there were instances where local sources of supply were not known.

The report recommends the establishment of exchanges in Karachi and, at a later date, in Lahore, to cover most of the industrial sectors listed. It suggests that the exchange is best controlled by a governing body representing interested parties. It also recommends that the fullest publicity be given to the service abroad, especially during exhibitions.

The establishment of "inverted" display centres is advocated as a means of advising local manufacturers of the competition they face abroad. These centres are places where typical samples of products on sale in a foreign market can be seen by Pakistani manufacturers.

The report stresses the use of films and the Pakistan Television Service to disseminate on the widest possible basis new ideas on technology and managerial techniques, in order to improve the quality and productivity of industry.

It also recommends that the Commercial Service of Pakistan's embassies abroad should be revitalized by the introduction of young professional officers with business or industrial experience, using a system based on the Australian model.

It recommends that during the present lull in world trade, the opportunity should be taken to build up the exchange ready for an eventual upswing in business. Even now, the information being gathered can be used to launch a marketing campaign to inform foreign buyers of capacity available in Pakistan.

It stresses that having good units in Pakistan is of little value unless their existence is made widely known abroad on a continuing basis.

## INTRODUCTION

### Background

The Government of Pakistan wishes to develop all sectors of its exporting industries in order to increase its foreign exchange earnings and develop its industries through close contact with the technology of industrially more developed countries. It endorsed the Programme of International Subcontracting sponsored by the United Nations Industrial Development Organization (UNIDO) in 1971 and subsequently expressed an interest in establishing an international subcontract exchange to encourage foreign principals and local manufacturers to conclude subcontracting agreements. In May 1973, the United Nations Development Programme (UNDP) was asked to provide an expert to advise the Government and the Pakistan Chamber of Commerce and Industry on the establishment of an international subcontract exchange.

### Official arrangements

UNDP approved the project in May 1974 and appointed UNIDO as the executing agency. It contributed 19,000 United States dollars (\$US). The Government of Pakistan appointed the Investment Promotion and Supplies Department of the Ministry of Industries as counterpart agency and contributed 37,000 Pakistan rupees (PRs). The project ran for six months from September 1974.

### Objectives of the project

The project was designed to:

- (a) Identify sectors with export potential;
- (b) Collect detailed information on representative industries in such sectors;
- (c) Establish an information centre where this data can be held to answer inquiries from prospective foreign and local buyers;
- (d) Launch a marketing programme using this information to make foreign companies more aware of the manufacturing capabilities of industry in Pakistan.

Such an information centre is usually called a "subcontract exchange"; in this context it will be called an "international subcontract exchange".

### General observations

It must be emphasized that throughout this report a very broad view has been taken of the term "subcontracting". It has been used as a short-hand

notation for the supply of any item (ranging from a component part to the whole) manufactured or produced in Pakistan for the use of a local or foreign company.

The project was entrusted to the Karachi office of the Investment Promotion and Supplies Department, Ministry of Industries. The unit was located in an office made available by and in the Export Promotion Bureau (Ministry of Commerce) who also provided secretarial facilities.

No attempt was made to investigate the export possibilities for cotton grey-cloth and yarn or for rice. To do so would have been beyond the modest resources of the project. The determination of the most suitable export sectors to meet foreign requirements is a marketing project in its own right. Suitability will differ for each sector from country to country and will also vary with time. Up to now, the project has therefore concentrated on the preliminary steps of visiting units to explain the function of the exchange and to collect detailed information on the capacity and capability of both actual and potential exporting units. The sectors selected are based partly on experience and partly on visits to European companies for the UNIDO International Subcontracting Programme. The sectors investigated are listed in annex III.

At the end of the six-month mission, about 120 units had been visited. It is encouraging that in only a very few instances was the product quality not acceptable. Several of the companies compared very favourably with similar units in Europe.

When the expert left on 22 February 1975, the position was as follows: about 110 questionnaires had been checked and typed out; a few companies still had not returned completed forms. The completed questionnaires were being analysed and coded before being recorded in the information processing system. The dictionary on which this system operates was nearing completion. The hardware for storing the concept and item cards (see annex IV) was still awaited from England.

A modest start had been made by writing directly to the heads of foreign companies, sending them detailed information on worthwhile capacity available in Pakistan in their specific fields. Their reaction has generally been favourable. A UNIDO expert based in Tokyo also visited Pakistan and made brief visits to engineering companies in Karachi and Lahore. Copies of all completed

questionnaires were sent to UNIDO, Vienna. The Pakistani counterpart official had been trained in the use of the system and had accompanied the expert on all visits to units.

Progress throughout the mission was disappointingly slow. This was generally due to a lack of understanding of the precise objectives of the mission and of the basic function and method of operation of a subcontract exchange.

The basic ideas on which the exchange is built, the method of collecting, analysing and recording the information, and its final use to answer inquiries are set out in great detail in annex IV. All facets have been fully discussed with the counterpart throughout the mission.

## I. CONCLUSIONS AND RECOMMENDATIONS

Whether a subcontract exchange operates on a national or international scale, the basic idea is very simple. It is a centre where any buyer can quickly obtain accurate and detailed information on available capacity. Unfortunately, few realise the tremendous potential of an exchange in the industrial field, a potential acquired because of the need to visit industry if the exchange is to operate satisfactorily. As a result of the visits, the exchange has an entrée to a large number of companies and has an intimate knowledge of their weaknesses and how they may be overcome. It has access to sources of information and expertise and, perhaps most important of all, the trust and respect of the companies with which it works to have its suggestions accepted. An exchange can therefore be a very effective spearhead of a drive towards higher quality and productivity.

The expert was told only too often during the mission of the many fine products available in Pakistan. Of this he was well aware, having personally visited the factories where such products are being made. However, as he has continually pointed out, the existence of capacity is of little value to Pakistan unless this information is made known to buyers abroad on a wide and continuing basis.

The work of a subcontract exchange extends into many fields. It is for this reason that it cannot be run effectively by any one organization. The expert recommends that the first exchange should be established in Karachi under the control of a compact executive council consisting of one representative from each of the following bodies:

- Export Promotion Bureau (Ministry of Commerce)
- Federation of Pakistan Chambers of Commerce and Industry
- Industrial Development Bank of Pakistan
- Investment Promotion and Supplies Department (Ministry of Industries)
- Karachi Chamber of Commerce and Industry
- Lahore Chamber of Commerce and Industry
- Overseas Investors' Chamber of Commerce and Industry
- Pakistan Industrial Credit and Investment Corporation

The Council will assure the necessary finance, accommodation and staff and will determine the over-all objectives of the exchange. The exchange will operate in all the industrial sectors listed in annex III.

The present system of multiple entry points for inquiries leads to duplication of effort, to delay in transferring inquiries from one system to another, and even to inquiries being lost in the process. Through the proper development and use of this exchange it should be possible to provide any buyer, and especially buyers from abroad, with precise and almost instant information on the capacity available in Pakistan.

The existence of the exchange's service should be given the widest publicity abroad. One of its staff should be present at every foreign exhibition organised by the Export Promotion Bureau. Through the use of telex, for example, it should be possible to accept for processing enquiries handed in by a businessman visiting the Pakistan stand.

It would be premature to try to establish a second exchange in Lahore before the first one Karachi, is working effectively. This will take perhaps a year. It will then be a simple task to train personnel for the exchange in Karachi.

The existing display centres in Karachi and Lahore are to show foreign buyers products manufactured in Pakistan. The expert recommends the opening of two "inverted" display centres in these cities. These would show Pakistani manufacturers typical examples of products on sale in their main foreign markets (Japan, European Economic Community, United States of America, Canada, etc.). Such centres would enable a manufacturer to see actual examples from his product field on sale in a particular country (e.g. men's shirts in Holland) and to see the competition he faces from locally manufactured goods or from those imported from other (and competing) developing countries. The articles should be representative of the quality ranges which are of interest to Pakistani producers. Each article would bear a label listing the country where it was on sale, the sale price and the date when it was purchased. At a later date one can envisage a more ambitious system, where a Pakistani manufacturer can buy any sample on display to take away to his own factory for closer inspection. (Obviously, several samples of each article would be required.) The buying side of these centres would, of course, entail close co-operation with the Commercial Service of Pakistan's embassies abroad.

This would be a very simple but powerful way of up-grading quality. Nothing is more salutary than to find a product of better quality than your own, offered for sale at a lower price than you thought possible. This service would be especially useful for the small- or medium-sized company with limited funds for visiting markets abroad.

The expert also suggests that even in protected industries, the admission of a small quantity of imported goods should be considered. Local buyers would then have a means of comparing the quality/price advantage of Pakistani products with that of similar imported articles. The manufacturer is then also less likely to become complacent in his protected environment.

Fashion and technical magazines and periodicals should also be made available in the centres so that a manufacturer can keep himself abreast of the latest trends in his product field in any given country.

Quality is not an absolute. The production of any article of given quality depends on several factors:

- (a) The desire and the will to manufacture;
- (b) The technical knowledge and skill to manufacture;
- (c) Machinery and tools to produce to the standard demanded;
- (d) A checking system to see that the standard is reached and maintained at all times.

Allied to quality is the knowledge of how to schedule and control production so as to produce the right number of items at the right time.

There is no "magic" solution to these problems. The expert does not favour a cumbersome and laborious system of inspection of each and every export shipment. The Japanese system of spot checks, with the legal power to order the remaking of any sub-standard articles, has much to recommend it. However, as with any control system, success ultimately rests on the integrity of the inspectors. One very simple step which can be taken is to make the granting of an exporter's licence contingent on the satisfactory inspection of his factory. This might be a useful service which could be performed by the staff of the exchange.

The real development to be expected in the production of quality products will depend on educating companies to produce quality. A company may have the desire to produce, but this is of little value without the requisite technical



knowledge and machinery. The desire to produce quality is one which can be fostered through contact with other people's ideas and products, through a process of education. The expert is not, of course, advocating a narrow and rigid system of formal school-type education, but rather an enlightened campaign using all the best modern techniques to communicate the relevant ideas to the industries which need them.

One effective method is the use of film, shown either to small groups of local industrialists or trade organizations, or more widely on Pakistan television. There is already available in the United Kingdom a wide range of films on industrial, technical and managerial subjects. They are produced by several organizations, notably the British Broadcasting Corporation television service and the British Productivity Council. (These are of course not the only sources of English-language films on these subjects, but sources with which the expert is familiar.)

These films can be grouped in three categories: films of general interest suitable for widespread audiences, showing modern developments in industry and business; films showing modern industrial management techniques; and films explaining to specialized audiences specific manufacturing or process techniques. Some typical titles are: "Profit by Control", "Exporting", "Industrial Relations", "Work Study".

Many of these films comprise a ten-part series, generally in colour. There is often published material accompanying them which can be used as a basis for discussion following the screening of each film. It is significant that this was one of the methods used by Japan to improve its productivity and quality during the mid-1950s by giving the widest publicity to any new methods or ideas which would improve Japanese export products.

As has already been stated, the exchange can perform many services other than the obvious one of collecting and disseminating information on available capacity. It can advise specialized bodies of demands for their services, and can put companies which need such assistance in touch with the relevant service.

The expert recommends the use of a travelling information centre. This can be organized using a trailer or caravan (built on an old bus or army trailer chassis). The service would visit places for a few days on a regular and pre-advertised basis. This idea has already been used by the Production Engineering Research Association (PERA) in the United Kingdom. The trailer is usually

stationed on the grounds of a large local company that acts as host. Often the company's managing director is an official of the local trade body. Heads of companies can visit the trailer to consult the experts on their current problems, without being away from their factories for any great length of time. (This is especially important to the director of a small company, who has to play many roles.) The trailer can be equipped to show some of the films mentioned above to small groups of interested people.

The expert has found that having information is not sufficient. It must be put before those who need it on a highly selective basis. The contacts built up by these visits can be developed to the point where seminars can be arranged to discuss the problems of a given industry in a particular locality. Alternatively, consultancy work can be done for a company or for a small group of firms with similar problems.

Stress is laid here, as throughout annex IV, on the vitally important part which personal visits play in all the exchange's work. The use of some of the ideas sketched out above will go some way to reduce the sense of isolation which we have noticed in many small units.

It is no use having an efficient information centre listing Pakistan's industrial capacity, if this capacity is not advertised abroad. It is here that the Commercial Services of Pakistan's embassies can play a very important part. They are in fact a shop window, and perhaps a potential buyer's first contact with the country.

The expert recommends that the activities of the Trade Commissioners and Commercial Attachés, especially in the more important markets, should be revitalized through the recruitment of young officers with graduate or professional qualifications and some years relevant industrial or business experience. The Australian system for selecting, training and developing Trade Commissioners could be a very suitable model on which to build.

As the immediate future is one of low business activity throughout the world, it should be used to build up the exchange's store of information and working system, so as to be ready for the up-turn when it comes. First, many more units must be visited in order to build up the stock of information. Secondly, with the information gathered, a forceful and planned marketing

campaign must be mounted. It must be co-ordinated with future exhibitions in the various sectors. This need not be an expensive project, but can use the information already gathered to inform heads of companies of specific capacity available for future use in their specific fields.

Visiting units is an essential part of an exchange's work. The exchange is therefore in a favourable position to act as a sales outlet for some of the specialized agencies operating in the fields of technical education and assistance and productivity improvement. It is not sufficient to have information available: it must be presented directly and very selectively to the units by people who are aware of the detailed nature of the company's problems and needs.

The lack of marketing information about local and foreign companies results in firms working in too many fields. This is the antithesis of subcontracting, which depends on specialization. Too often, the volume of subcontracting is less than it might be, because of the difficulty of locating specialized subcontracting units. Furthermore, such units, which would cease to exist if they specialized in only one field, diversify their field of work and are then no longer specialists. Accurate market information will enable a company to compete more effectively in a foreign market, and even to sell products of its own design there. Lack of market information is not only ignorance of the names of likely customers, but also of the quality standards and design, colour and taste preferences of the country of sale.

## II. FINDINGS

The lack of knowledge of the project's objectives and of the basic function and method of operation of a subcontract exchange has already been commented on. The Investment Promotion and Supplies Department, which was the counterpart agency, had seen neither the project document nor the expert's job specification.

There have been earlier missions of a similar nature (India, 1970; Turkey, 1971); the experience gained from them could have been used to provide the authorities with background information for this project. In 1969, UNIDO commissioned a study on subcontracting exchanges (ID/WG.41/9, 29 May 1969). There was also an Expert Group Meeting in Paris in October 1969, organized jointly by UNIDO and the Organization for Economic Co-operation and Development (OECD), at which the various aspects of subcontracting were discussed at length. The meeting was attended by working experts from many countries, including Israel, Japan and the United States.

A great deal could have been done before the expert's arrival to collect even rudimentary information on companies on which to base the exchange's preliminary work.

In India, two exchanges were set up in four months - the one in Madras in only 18 working days. In Turkey, despite language difficulties, an exchange was established in three months. The reasons for the disappointingly slow progress of this mission are many.

It was generally assumed that the object of the mission was to carry out a survey and write a report. Very few people realized that an effective exchange was to be established, capable of handling inquiries from foreign and local buyers. Others thought that the exchange would be confined to the engineering sector, and would be located in Lahore. There was also insufficient realization that an exchange can operate only with very detailed information whose accuracy can be guaranteed only by visiting companies, that this data must be analysed and organized for easy retrieval to answer inquiries from client companies, and that the exchange must be operated by high-calibre personnel with extensive industrial experience, supported by a well-run office equipped with all modern communication facilities.

With very few exceptions, the products seen in the various sectors were of good quality. When they failed, it was usually due to lack of attention to detail, especially the finish. This was due more to carelessness or indifference (couldn't-care-less attitude) than to deficient technique. Companies sent abroad for approval samples with simple faults which would cast doubt on the companies' technical competence as suppliers. If samples were rejected at the first attempt, the companies believed that they could, without prejudice, re-submit them in amended form for inspection.

The best companies of the 120 or so visited would compare favourably with companies of a similar size in that field in Europe. They were well laid out and organized and had dynamic and intelligent management. Many had built their own complex machines for the production lines. Several had progressive training schemes for their technical personnel. The good firms were not exclusively the large ones, but we found that the managerial and technical personnel of such units had had some formal technical training, not necessarily abroad.

Other units, generally the small ones, showed an abysmal ignorance of simple workshop practice. Examples include: foundry sand on the beds of machine-tools, badly lit areas for assembling precision machines, machining carried out on obviously faulty castings, etc. Very few of these units had any idea of the meaning of quality control. The general reply to question 14 (d) of the questionnaire (see annex IV, appendix I) was "yes". The same faults were often found in factory after factory. A general lack of sources of information was observed in all companies. This might apply to knowledge of foreign markets, to local suppliers, to sources of specialized items, to technical expertise, or to adaptation of designs. The expert was often able to suggest from his own experience solutions to current problems, or to recommend suitable local suppliers to replace imported items.

Companies were found with a particular collection of machines to make a specific product. These machines could also be used to make other products, which would be outside the present conception of the company. The exchange, with its potential for internal and international contacts, is in a good position to suggest new outlets to companies. This has been developed to a high degree by some of the European exchanges under the title of "innovation".

The general lack of interest shown by organizations which would benefit from the exchange's successful operation was surprising. Assistance was verbal rather than practical. In industry, on the other hand, the idea was well received, both as a means of finding local suppliers, and also for contacting potential foreign buyers. Industrialists doubted that a successful system would be operated by a government department, or that they would be able to recruit suitable personnel to operate the exchange.

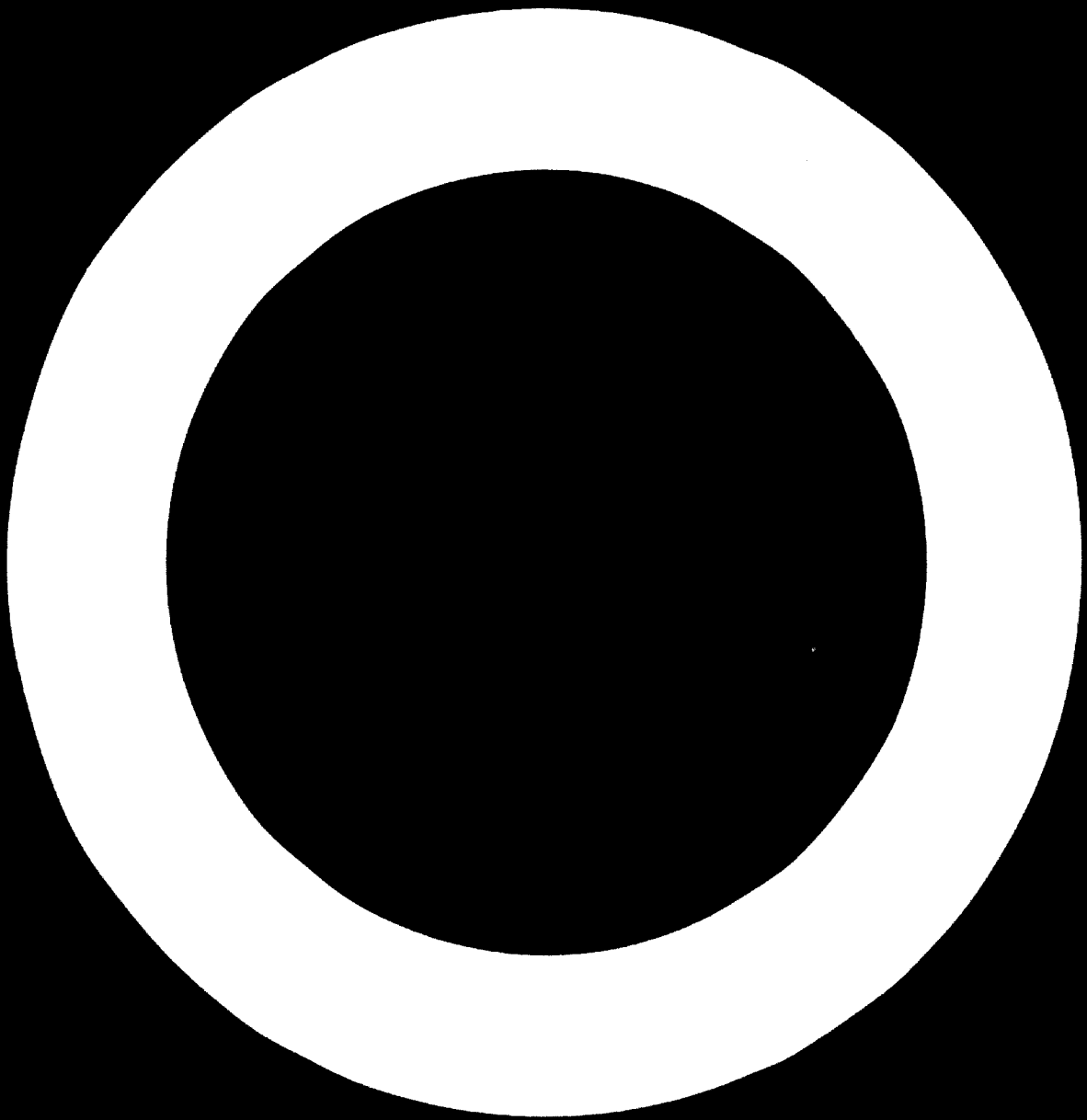
Information on different companies and sectors is scattered through the files of many organizations. Different companies carry out their own surveys of local subcontracting capacity within Pakistan. At present, it appears that there are several routes by which inquiries enter the country. The exchange is designed to establish one highly organized and effective information centre, operated by experienced technical personnel. It will have at its disposal detailed information on a large range of companies, and an efficient communication system for both internal and international traffic.

One of the sources of market information is Pakistan's Trade Commissioners and Commercial Attachés abroad. Companies visited commented unfavourably on their usefulness. Their criticism ranged from lack of interest to inaccuracy of the information supplied.

Annex I

**EQUIPMENT SUPPLIED FOR THE PROJECT BY UNIDO**

- 1 Roneo Multicard storage unit type M/30/11/12 complete with 100 separators
- 1 Roneo Stripdex visible index system HD/50 S complete with 50 panels and 5,000 8" separators
- 2 Autospot 1/12" hand punches
- 1 Visiscan Mk. V manual punch complete with 1/12" cutters  
Concept cards (see annex IV)  
Item cards (see annex IV)  
Special forms (see annex IV)





Annex II

INTERNATIONAL SUBCONTRACT EXCHANGE - KARACHI

(a) Budget for the period 1 July 1975 to 30 June 1976

<u>Item</u>	<u>Quantity</u>	<u>Details</u>	<u>Cost (PRs)</u>
1.	3	Cars	120,000
2.	4 pkts	8 $\frac{1}{2}$ " x 11" sensitized paper for photocopier (PRs 200/500 sheets)	800
3.	-	Telex machine, annual rental	2,700
4.	-	Line rental, annual	375
5.	-	Special paper for telex	1,000
6.	1	Roneo 5-level lateral filing cupboard complete with 300 linked pockets	1,560
7.	3	Assistant directors (one electrical, one mechanical, one textile/garments) at PRs 18,000 per annum	54,000
8.	1	Stenographer (PRs 600/month)	7,200
9.	1	Accounts clerk/typist (PRs 500/month)	6,000
10.	1	Peon (PRs 300/month)	3,600
11.	3	Drivers (PRs 500/month)	18,000
12.	-	Depreciation (over 10 years) - 1 year	12,000
13.	-	Petrol (500 days x PRs 50/day)	25,000
14.	-	Maintenance at PRs 2 000/car/year	6,000
15.	500 days	Travel allowance for directors (PRs 90/day)	45,000
16.	1	Office typewriter	3,000
17.	-	Telephone call/rental charges (PRs 1,000/month)	12,000
18.	1	Technical Director (PRs 2,000/month)	24,000
19.	-	Stationery, contingencies (PRs 3,000/month)	36,000
		Total	<u>378,235</u>

Note: Items 3 and 4. Since rental is payable quarterly, half of the annual rentals (machine and line) will already have been paid for in the supplementary budget (1 March to 30 June 1975).

Item 7. Based on the assumption that one assistant director field officer can visit 750 units in a year. (Total of 2,250 units visited in a year, with the above establishment.)

(b) Supplementary budget for the period 1 March to 30 June 1975

<u>Item</u>	<u>Quantity</u>	<u>Details</u>	<u>Cost (PRs)</u>
1.	1	Lateral filing cabinet complete with 5 rails 300 linked pockets	1,500
2.	-	Transport (hired car) Approx. 4 days/week at PRs 250/day	20,000
3.	1	Photocopier (dry)	16,750
4.	1000 sheets	Sensitized paper for above 8 $\frac{1}{2}$ " x 11" at PRs 200/500 sheets	400
5.	500 sheets	Ditto 10" x 14" PRs 350/500 sheets	350
6.	1 bottle	Activator	450
7.	1	Type T100 automatic telex machine (complete with tape-reader and perforator) annual rental	5,400
8.	-	Line rental	750
9.	-	Installation charge (non-recurring)	250
10.	-	Security deposit (non-recurring)	500
11.	1	Assistant-Director (PRs 1,500/month)	6,000
12.	1	Stenographer (PRs 600/month)	2,400
13.	1	Peon (PRs 300/month)	1,200
14.	30 days	Travel allowance (PRs 90/day)	<u>2,700</u>
		Total	<u>58,650</u>

Note: Item 3. The machine should be suitable for up to 10" x 14", copying either side of a two-sided paper document. It must also be capable of copying books, catalogues etc. This machine is for sending photo-copies of the questionnaires of all units who have quoted to a foreign buyer for submission with their quotations.

Items 7 and 8. The machine and line rental figures represent the annual cost, one half of which will probably be due in the above four-month period.

(Line rental PRs 150/mile up to 3 miles from C.T.O. thereafter PRs 100/mile.)

Annex III

LIST OF SECTORS INVESTIGATED

Automobile engineering	Jeep engines, pistons and rings, cylinder liners, radiators, water pumps, leafsprings, gear-boxes, back-axle assemblies, sparking-plugs
Canvas products	Webbing equipment (army), tents, shamianas
Carpets	Wool, hand-knotted, in traditional designs
Cutlery	Kitchen and table
Domestic appliances	Air conditioners and refrigerators
Electrical engineering	Airport approach lights (glide-path), furnaces (induction), fuses and fuse-boxes, induction motors, meters (kWh, voltmeters, ammeters, thermometers), switchgear and distribution boards, transformers up to 33 KV 5 MVA. welding transformers, current and voltage transformers, wires and cables
Electronics	Components: transistors, diodes, capacitors, high-stability resistors, potentiometers
Fire-arms	Revolvers, rifles, shotguns
Foot-wear	Army, beach, casual, town, sports; canvas, plastic (solid and foamed) and leather
Fruit and vegetables	Canning and bottling, whole, concentrate and juice
Furniture	Wooden, in modern, period and traditional Pakistani style, carved or inlaid
Garments	Mens: shirts, casual and town in cotton or cotton/polyester; Bush-shirts, shorts, industrial, medical and hospital wear; Combat jackets, snow suits (army), karate and judo suits; Womens: boutique/hippy styles, modern (conventional European) women's and children's fashions
Gloves	Leather, leather/cotton, cotton, for town or industrial use; sports gloves
Handicraft products	Handloom fabrics, brassware, carved wooden products
Hand-tools	Automobile, engineers', gardening and kitchen
Hollow-ware	In aluminium or stainless steel, for kitchen or table use

Hospital equipment	Furniture (metal) and equipment for wards and operating theatres
Leather goods	Accessories: belts, handbags, notecases, wallets; cricket, football and hockey balls; garments
Linen goods	Bed sheets, napkins, pillow cases, table cloths, towels for home and institutional use; mill and handloom cloth; plain dyed, woven patterns
Marble	Marble tiles and slabs; marble products (handicrafts)
Mechanical engineering	Agricultural balers, cultivators, harrows, threshers; bicycles and tricycles, invalid chairs, diesel engines; fasteners; foundry, grey and nodular iron, alloy steel, non-ferrous; engines; gear-cuttings; heavy-machining and fabrication; hosiery machinery; injection moulding; Looms (cotton); machine-tools; pumps; road-making machinery, road-rollers, bitumen tankers; sewing machines; tool-making gauges, jigs and fixtures, press-tools, moulds (for rubber and plastic), cutters; valves
Pipes and tubes	Cast-iron, rubber, plastic, welded-steel galvanized
Radio and Television	
Rolled sections and bars	
Shipbuilding and repair	
Spectacle frames	
Sports Goods	Racquets for tennis, squash and badminton; hockey and lacrosse sticks, cricket bats
Surgical instruments	Surgical, dental and veterinary instruments; Surgical hollow-ware; syringes
Travel goods	Briefcases, suitcases in natural and imitation leather, airline-type lightweight cases

Annex IV

THE ESTABLISHMENT AND RUNNING OF A SUBCONTRACT EXCHANGE

Introduction

The Pakistan subcontract exchange is an organization for putting a buyer or main contractor in touch with suppliers inside Pakistan. The buyer may be outside or within the country. His inquiries may relate to any manufacturing or producing field: garments, sports equipment or clothing, engineering goods, machine-tools, fruit juice, etc. The product can comprise the whole, or merely a part thereof: a milling-machine, the frame of the machine, or the tooling.

The system must be speedy in operation, and reliable in fact. This implies quick and reliable communication between the buyer, exchange and subcontractors. The information supplied to the buyer, in addition to price and delivery, must also include detailed information about the companies taking part in the inquiry.

To cover such a wide field with detailed information on all producing companies, and to be able to find quickly the relevant facts when required, demands an efficient information retrieval system. In this exchange, a post-ordinate indexing system is used.

The information retrieval system, the method of acquiring and listing detailed information, and the communication system are all explained below. In addition, the equipment, accommodation and personnel requirements of the exchange are detailed.

It is stressed that this exchange does not publish any directory. Published information is historical and is difficult to keep up to date. (The information being collected requires one or two A-4 pages for each unit; volume of a directory for 4,000 or more units can be imagined.) The information is given to the exchange in confidence. It is for use by a foreign buyer and not for publication for all and sundry to read.

Code of conduct for the operation of a subcontract exchange

1. The exchange operates as a centre for finding out those companies capable of carrying out a particular task at a particular time. At no time will the exchange undertake to be responsible for the manufacture of a specific item or the performance of a specific service.
2. The exchange agrees:
  - (i) To compile a list (the information file) based on information supplied by the company of all the machines, equipment, processes and skills which the company wishes to make available to other companies;
  - (ii) To keep this list accurate and to amend it at any time on receipt of written instructions from the company.

The exchange will not wilfully disclose the details of the information file of the company to any other company except to a foreign buyer against specific inquiry.

3. When asked a specific question by the company within or outside Pakistan the exchange endeavours to find companies technically capable of carrying out the specified work or service. The exchange then communicates with these companies to find those able and willing to do the work or give the service required. These names are then communicated to the inquiring company which itself approaches the companies of its choice. If expressly asked by the inquiring company, its identity will not be disclosed to any of the companies able to do the work.
4. Information received by the company under the provisions of this agreement is to be used solely for the purpose of the work or services to be performed for or by the company and shall not be disclosed for any other purpose to any person or persons unless the written consent of the exchange is first obtained.
5. Under no circumstances does the exchange warrant or guarantee the quality or suitability for any particular purpose of any work or service performed by any companies and under no circumstances will the exchange be liable for loss or damage or expense which may be incurred by the company as a result of information supplied to the company by the exchange whether such information be supplied negligently or otherwise.

6. At no time will the exchange prefer or recommend any one company rather than any other company nor will it report to one company on the activities of any other company.

7. The exchange offers the service as an information service. Although the exchange will endeavour to the best of its ability to advise a company of inquiries suited to its capabilities and available capacity, this agreement implies no contractual obligation on the part of the exchange to supply the said company with work.

#### Collecting information from industry

The successful operation of the subcontract exchange is founded on facts: specific, accurate and up-to-date facts about the production facilities and competence of units in the different manufacturing and producing sectors.

A buyer is happier in his mind if he knows that the company with which he is dealing has already been visited and assessed by an experienced technical person. He does not expect an "auditor's report", nor does he demand a meticulous catalogue of productive capabilities. He accepts the information as a useful preliminary: a filtering of irrelevant and sub-standard information. He does not have to carry out a depressing search through a mass of unsuitable companies, often only vaguely related to his field. The exchange's service narrows down his task to the inspection of a few preselected units.

The information required can only be obtained by visiting a unit, and by discussion with the management of the company. The information will include the personal observations of the interviewer on the general atmosphere of the factory and its staff. All this information is recorded temporarily on a printed questionnaire form (appendix I) and is typed out in its final edited form on an item card. The date of the interview is also noted.

The information required is obtained by interview and discussion. The completion of the questionnaire is not to be a police-type interrogation, with questions barked out in numerical order, as the interviewer goes down the form. It is often better to start with "line of business" (question 13), as most people are only too willing to talk about their company's products. This, of course, leads on to output figures, exports, and quality control. By this time, a rapport should have been established with the manager or director giving the

information. The visiting officer can now ask the more routine questions about the company's full name, address, associate companies, authorized capital, banks etc.

The information gathered is not static; it should be checked each year and up-dated when necessary. Firms buy new machinery and dispense with the old. They take up new lines of business or modify their normal pattern.

It should not be forgotten, however, that visiting is not merely to collect information for the exchange. It is also, and most importantly, a means of establishing and maintaining that person-to-person relationship on which all business is based. The service is then no longer, I.P. and S. or E.P.B., but a man with a name and a familiar face. Every company visited will have some problems, some simple to solve, some more difficult. As the visiting officer is in contact with many companies in different fields, he is often able to solve on-the-spot problems which merely require sources of information.

To visit each unit, to assess and record its capacity and capability, is a lengthy process. The expert does not think that there is any other reliable way of collecting this information. If one merely sends out questionnaires to units, several courses are open. Some units will never return the form. Others will do so, but with vague information. Some important facts often only come to light through a casual remark made during a tour of the factory.

Important facts are often left off the form. For example, the existence of an apprentice training scheme, design office, professional and technical qualifications of the management and technical staff, well-known clients for whom they work (especially if internationally known), are all important selling-points when put before a foreign buyer.

Visiting will also eliminate the firm, graphically described by one trade commissioner as a "man with a typewriter in a bedroom" who merely collects inquiries and delivers them to local subcontractors. Visiting can be a check on the accuracy of statements made by the company. The expert has visited units extravagantly described in expertly produced sales leaflets as "precision engineering units". The workshops were deep in grit, and the machines were old and badly maintained.



The questionnaire can quite simply be thought of as a job application form, but for the company and not for an individual. The information based on the questionnaire is placed before the foreign buyer with the quotations of units involved in the inquiry. It should be such as to sell one unit in preference to another, other things being equal. It should be a word-picture of the factory. If the interview has been properly carried out and the foreign buyer visits the factory, he should feel that he has been there before.

The reminder is added that the information gathered on the questionnaire is given to the exchange on the express understanding that it is to be made available to a foreign buyer only, in response to a specific inquiry. It is not for publication in any directory, nor is it available, however useful it may be, to other government departments or official bodies who might wish to have access to it.

#### Item cards

The information collected on the questionnaire is listed on a plain yellow A-4 card called an item card. Like the concept cards (see next section) the item cards are notched along the bottom edge so that they can be fanned out for rapid visual searching and access to any card.

#### Co-ordinate indexing system for information storage and retrieval

In this system there is no rigid classification like that found in a library catalogue. The classification is determined by the questioner at the time the inquiry is made. The method of operation depends on the association of ideas. A particular inquiry is built up from its component ideas. For example, "men's cotton sports shirts" would be thought of as being formed from the concepts MEN-SHIRTS-SPORTS (WEAR)-COTTON.

To set up the system, the first step is to compile a type of basic English dictionary in the sectors of interest. The words of the dictionary will define the ideas that are expected to arise in dealing with the inquiries sent to the exchange. The list will be of some 300 words at the outset, and will be modified by deletions and additions in the light of the exchange's operating experience. This dictionary is usually called a thesaurus (for sample page see appendix II).

To improve the precision of the thesaurus in use, synonyms must first be removed. Clothing will be listed as "Clothing Garment(s)". This means that "Clothing" is not a preferred word, and is recorded in the system under the word (idea) "Garment(s)". Further, since a woman's blouse comes under this heading, we may list "Blouse (Garment(s))". This means that this item is part of the garment field. If, for example, an inquiry for a new type of blouse is being processed, a search can be made under the higher and more general category of "Garment(s)" to widen the field of possible subcontractors.

The converse of sub-division is the general term. "Surface-coating" embraces all types of "covering of a surface", such as galvanising, anodising, electroplating, plastic-coating etc. Similarly, the term "Fasteners" covers such items as screws, bolts, nuts, clips etc. If a supplier for one item in this class cannot be found, a search is made in the general group of "Fasteners", to find a company making a similar device.

#### Concept cards

In the practical system used in the exchange, each Concept/Idea in the thesaurus is assigned a grey concept card. A concept card is an A-4 card printed with 4,000 small squares (1/8"; (3mm) side) numbered from 0000 to 3999. Each unit to be recorded in the system is assigned a four-digit number (corresponding to one of the 4,000 squares). This number is similar to the accession number in a library, and is unique to that firm.

The basic concept card has only 4,000 squares, but its range can be extended by edge-punching the top right-hand edge. This will give Series 1 (0000 to 3999) Series 2 (4000 to 7999) and Series 3 (8000 to 11999) etc. When superimposing cards, care must be taken to make sure that all the concept cards being superimposed at the same time have the same edge-punching.

To register the capacity of a company, an analysis must first be made of the information recorded on the item card (see preceding section). A number of concepts (taken from the thesaurus) will then be extracted which define the company's line of business, products, machinery and facilities. On all the relevant concept cards a hole is punched in the square bearing the serial number of this unit. This operation is carried out once, at the initial registration. Further concepts may be listed when the information is up-dated during later visits to the unit.

It is stressed that the information shown on the item card falls into two classes: that which can be retrieved, and that which cannot. The latter includes such information as the number of Directors, number of employees, authorized capital, factory area etc. This information is listed merely as part of the total information sent to the foreign buyer with the firm's quotation. The retrievable information comprises the products, line of business, machinery etc., by which the selection of the unit is made during an inquiry.

It may be thought that the system deals only in facts directly related to the company's production. This is not so. It can list such ideas as quality, the size of factory, the number of shifts, and the countries to which exports go, if these items are necessary during the selection process of an inquiry. An example of this is the use of a yellow concept card to define geographical location. The word Lahore is written on a yellow concept card into which are punched the serial numbers of all units in the area, irrespective of their sectors.

If units are required in the Lahore district to cast and machine a heavy grey-iron casting, the searcher would select the grey concepts card for "casting-ferrous" "grey-iron" and "horizontal-boring". They are then superimposed on the yellow concept card marked Lahore. The squares where the light passes through the three grey cards and one yellow one indicate the numbers of the units in Lahore, able to do this work. Firms able to carry out this inquiry, but outside Lahore, are shown by yellow discs seen through the holes in the grey cards stacked on top.

The use of the yellow concept card is further described in the section "Distribution of inquiries". Generally, the yellow concept card is used to separate firms which meet the requirements specified on a particular yellow card, and those which do not. For example, a yellow card marked "exporters" would show holes for firms who have exported, and yellow discs for non-exporters, all however, being capable of doing the particular work specified by the superimposed grey concept cards.

In searching the information file, the system must be used intelligently. For example, if there are 4,000 item cards (i.e. registered units), selection of the concept "garment(s)" will immediately rule out any firms not making garments or some type of clothing. If there are perhaps 20 clothing firms in

the system, this selection immediately cuts out 3,930 units. If further concepts are selected, the field can be narrowed down between these 20 garment manufacturers. This process of selection can be continued of course, until the desired precision is achieved. In doing so, however, a firm can be missed which is just on the borderline of one class, and is rejected by selection of a further concept. Also, it is often quicker, when the system has thrown up a handful of item cards, to scan through them, in order to make the final selection of subcontractors.

The use of a light-box can assist the reading of the numbers of the punched holes in a stack of concept cards. A light-box is a small wooden box with internal illumination, which gives a uniform bright field on the ground-glass sheet forming the top of the box. On this are placed the stacked concept cards. Firms meeting all the requirements specified by the inquiry, are shown by bright light spots, firms lacking in one or more of the essentials, are indicated by dimmer light spots. The use of a coloured filter over the illuminated screen can increase the contrast, and assist the reading off of the serial numbers of the units.

From the foregoing, it should be evident that the information retrieval system is to be used intelligently, not blindly with the expectation of push-button answers.

#### Processing an inquiry

A methodical procedure is described below for handling all types of inquiries. It should be realized that this is a basic system which the director of the exchange can modify to suit the conditions of each inquiry. The standard forms used are an inquiry form and a check sheet.

Before handling any inquiry, it is essential that:

- (i) The inquiry is fully understood (outside experts must be consulted if necessary);
- (ii) The inquiry is complete in every detail.

When there is any query or lack of information, the buyer must be advised by telex, and the inquiry held until the information is forthcoming. The inquiry is entered in an inquiry register which records the inquiry number, the date it is received, the name of the company, and brief details of the work involved.

In most business letters, the gist of the inquiry is contained in a few words and phrases scattered through the letter. It is the job of the exchange to gather together the relevant parts of the inquiry in the letter. (It is often useful to underline these parts with a felt-tip pen, and to rough out a draft inquiry on a yellow inquiry form.) When this has been done, the inquiry can be typed out on the pink master inquiry form. At the same time, 8 copies are taken on blue inquiry forms. The master inquiry form is the reference text for all further work on this inquiry. The blue sheets (4 pairs) are for sending out to the subcontractors. The pink inquiry form and a pink check sheet are stapled on opposite sides inside an inquiry folder. The buyer's identity (company) is written (in brief) at the top of both forms. On the top of the check sheet is written or stamped the date, and the inquiry number, taken from the inquiry register.

The person dealing with the inquiry writes down on the second line of the check sheet the concepts defining the inquiry. These must be all acceptable words which appear in the thesaurus. For example, radiographic inspection will be found under "X-Ray". In engineering and similar inquiries, the exchange may simply be sent drawings and asked to locate suitable subcontractors. It is then the responsibility of the exchange personnel to decide from their experience the machining operations and facilities (turning, milling, anodising, heat treatment etc.) necessary to carry out the work. These ideas, in acceptable concepts, are similarly written down in the appropriate space.

The concept cards bearing these words are then taken from storage and superimposed. The numbers of those squares where light passes through the stacked cards are noted. These numbers are the serial numbers of the subcontractors and are noted down on the check sheet in spaces marked "subcontractor" and numbered 1 to 10. This information merely establishes information about units with installed capacity suitable for the inquiry.

Bearing in mind the details of the inquiry typed out on the pink master inquiry form, the searcher consults the item cards of these units to make the final decision of which units to select. It must be realized that the concept card system is a rough sieve which narrows the search to a few item cards (units) out of a large field of potential subcontractors. The final analysis is made by consulting simultaneously the inquiry form and item card. If on reading the item card a subcontractor is ruled out, his number is simply crossed off the

check sheet. For example, if an inquiry specifies "50,000 dozens per month", the item cards will indicate that some of the subcontractors with entries for 20,000 dozens per month capacity will be unable to handle the inquiry.

Once the companies who are in all respects fitted to tender have been finally established, they must be approached to find if they in fact wish to do so. Contact is made by sending out a pair of blue inquiry forms to each of these units. Each one is invited to quote for the work described on the form, and to send back his quotation to the exchange, along with one of the blue inquiry forms. If time is limited, the subcontractors can first be telephoned before sending out the information. This avoids wasting time with units which, for some reason, do not wish to tender.

As quotations are received from each subcontractor, brief details (prices, etc.) are entered in the box opposite his name/serial number. Returned blue inquiry forms, correspondence from and to the buyer, telex messages, sketches and drawings are all temporarily filed in the pocket at the back of the file. When all subcontractors have replied, their quotations are sent off to the overseas buyer. The letter will also include photocopies of the item cards of all units who have sent in quotations. Telex can be used to send price details quickly with the advice that quotations and company profiles will follow by air-mail.

The inquiry is now completed. The pink inquiry form and the check sheet are filed in the buyer's correspondence file. Returned blue inquiry forms are filed in the relevant subcontractor's file.

The above procedure using standard inquiry forms and check sheets enables the "state" of any inquiry to be seen at a glance. This can be done by any person working in the exchange. He does not have to be the person who first took the inquiry and who may now be away on tour or on leave. Similarly, at a later date, it is possible to rebuild any inquiry. For example, a works manager may have received information by telephone regarding his inquiry while at the factory. He loses the scrap of paper on which he has written down the information. A week later, he asks for the information to be repeated. It is then necessary to know only the name of the company and the approximate date of the inquiry to find the master inquiry form and check sheet filed in his company's correspondence file.

The foregoing described the processing of an overseas inquiry sent by letter or telex. It is, of course, quite possible that a foreign buyer may call at the exchange with his inquiry. In this case, his request is first noted on a yellow inquiry form. The same rules about completeness and understanding still apply. The same procedure is followed to find suitable subcontractors by using the concept cards defining the inquiry. The relevant item cards are then withdrawn from storage and photocopied. The photocopies are given to the buyer, who retains those of specific interest to him. He may also require copies of pages of the relevant catalogues. It may be thought that the taking of photocopies which may be thrown away is wasteful. However, the information recorded on the item card can represent several hours of travelling and interviewing time on the part of the exchange's engineers. It is unwise to leave such valuable information unattended in the presence of a stranger. Also, excessive handling of the cards will result in their rapid deterioration.

It remains only to describe the processing of a telephoned inquiry from within Pakistan. The details are recorded on a yellow inquiry form. (It is convenient to have a few in a file near the telephone.) The search for and contact with subcontractors is as before. The names, addresses etc. of interested subcontractors are simply telephoned to the main contractor concerned. If required for record purposes, the yellow form can be later typed out on a pink master inquiry form before filing.

The concept card system identifies suitable units by means of their four-digit code, with which they are indexed into the system. It is necessary to have a dictionary which lists against the serial number of each unit the name, address, telephone number and person to contact. This information is typed out on a stiff card, which consists of a series of 1/3" strips lightly held together. Any one strip can be torn off, as required. The strips when typed are assembled in a flat 8" x 12" (20 x 30 cm) double-sided metal carrier. About 50 units can be recorded on one of these plates. The plates are pivoted about a vertical axis passing through the long side of the plate. In this way rapid access can be made to a company's telephone number etc. once its serial number is known.

Appendix III shows the flow diagram for the processing of an inquiry.

Inquiry folder, dictionary of serial numbers

As explained above, the inquiry forms, check sheet and all paperwork concerned with an inquiry are kept together in an inquiry folder.

This is simply a standard foolscap file, to the back of which is stapled half of a similar file forming a pocket to hold drawings, sketches, and letters. On the top right-hand corner of the outer front cover is affixed a white gummed label, 1½" (38 mm) wide, and about 3" (75 mm) long. This type of label can easily be bought at any stationery shop in the form of a perforated roll. Along the bottom edge of the file is punched a series of 3/8" (9 mm) semi-circles. (This can easily be done using a 3/8" leather punch.) This is to enable the Inquiry folders to be "fanned out" in a wall-mounted rack, like the concept and item cards in the storage-tub. Such a rack, beside forming a convenient storage place where any inquiry can be quickly found, also serves as a "barometer" showing directly the number of inquiries current.

When an inquiry has been completed and all paperwork filed in the relevant place, a new gummed label is put over the old, and the file is ready for the next inquiry.

Layout of serial No. company information dictionary

- 0000 Sind Shirt Manufacturing Co. Ltd., 173,  
1.1. Chundrigar Road, Karachi-2  
23 45 57 Karachi Abdul Malik, M.D.,  
Akhtar Sheikh, Works Manager.
  
- 0001 Gujranwala Cutlery Company Ltd.,  
Industrial Estate, Block F-6, Gujranwala.  
2487 Gujranwala Aslam Hasan,  
Works Manager.
  
- 0002 Pakistan Precision Tools Ltd,  
Jamruk Road, Peshawar,  
2346 Peshawar Mohd Sheikh Imran,  
Managing Director.

The names and addresses of companies and persons given above are fictitious. They are given purely by way of illustration.



Distribution of inquiries

The primary duty of any subcontract exchange is to the buyer or main contractor. It tries to place before him the quotations of firms willing to carry out the work or to supply the goods within the specifications of his inquiry. The exchange also advises the buyer, in detail, of the facilities and competence of the firms involved. The exchange also has a duty to the subcontractors: to be completely impartial in its dealings with them.

A buyer will eventually place his order with only one, or at the most two, units. If there are perhaps 20 eligible units, he will not want to consider quotations from all these companies. He will prefer to deal with a small number (say 4, 5 or 6). Fourteen units will then be left out of the inquiry. This, of course, conflicts with our objective of treating all companies equally.

A system is set out below which combines the buyer's desire to deal with a small number of selected units with that of the units themselves to be given an equal opportunity of tendering for all inquiries in their field. It is important to realize that the system will put before every unit in a particular field an equal number of inquiries. No system devised can assure equality of orders.

The method uses a yellow concept card, whose use has already been described, for defining the geographical locations of units. This time, instead of Lahore or some other word, "inquiry 1st round", "inquiry 2nd round", etc. is written on successive cards. The concept cards defining the inquiry are superimposed, and the numbers of the holes which pass through all these cards are noted on the pink check sheet. These companies are approached by telephone and/or letter with an invitation to tender.

Let it be assumed, for example, that ten firms are capable of handling this inquiry. The numbers of the first six units are recorded on the check sheet and the units are given the details of the inquiry. When their quotations are received, their numbers are punched into the yellow card marked "inquiry 1st round" (four firms will have been left out).

For the next inquiry in this field, the same procedure is used, and the "inquiry 1st round" card is placed behind the concept cards. Yellow discs appear through the grey concept cards. They represent the serial numbers of the four companies who were ignored on the first round. They are now called.

When they, in turn, send in their quotations, their numbers are punched into the inquiry card. If it is so wished the two lowest numbered units of the ten units in this sector can be approached (for the second time). This time however, their numbers are punched into the "inquiry 2nd round" card.

When several inquiries have been processed in any field, any new search must always be started with the first inquiry card, and proceed through the various inquiry rounds until yellow discs are found. These represent units in that sector which have received one inquiry less than their competitors. It should be understood that while one sector may be on the tenth inquiry, units in another sector may be receiving only their first inquiry.

The selection of six out of ten units in the above example is purely arbitrary. One could equally well choose four or five. However, the larger the number of firms involved in an inquiry, the longer (usually) the time necessary to complete it. The number of units chosen is, of course, a compromise between overloading the buyer and seeing that as many units as possible hear of each inquiry.

Personnel requirements for a subcontract exchange

The staff demands of an exchange are modest but the personnel, though few in number, must be of high calibre.

The staff are called upon to carry out two main tasks:

- (a) To visit units to assess and record their potential;
- (b) To process inquiries received from companies, both within and outside Pakistan.

The need to visit units, and the method of obtaining the detailed information required, have been fully described above. The number of people required to do this will now be considered. A suitable person for a field officer would be of assistant director level, preferably with at least three years experience in industry or commerce. His technical/professional knowledge should be that of a first degree (Bachelor) preferably in engineering or science. Intelligence and the ability to understand and absorb new ideas are more important than mere factual knowledge. He should also be able to meet people at all levels, from the proprietor of the small company to the managing directors of large public companies or state enterprises. Where several field officers are envisaged, it is useful to select them from various industrial sectors, so that their collective experience covers as wide a range as possible.

To construct a manpower table for the field officers, it will be assumed that:

- (a) One man can visit 750 units in one year;
- (b) Each unit must be revisited regularly, at least once a year, in the second and subsequent years. Such visits will be assumed to take 1/3 the time of the initial visit.

<u>Year</u>	<u>Number of first visits to units</u>	<u>Number of subsequent visits to units</u>	<u>Number of officers</u>
1	2,250	-	3
2	1,500	2,250	3
3	1,000	3,750	3
4	1,420	4,750	4
5	940	6,170	4
6	630	7,170	4
7	420	7,740	4
8	280	8,160	4
9	nil	8,440	4

In the ninth and subsequent years, four full-time field officers will be required to keep the information up-to-date, and to maintain contact with the units.

To carry out the exchange's second function, the processing of inquiries, one officer will be required in the exchange at all times. He will be assisted by two stenographers. In addition to their obvious function, they will do all the filing, and after training, should be capable of carrying out the routine parts of an inquiry. They will also make appointments for the visits of the field officers.

The work of the exchange will be controlled and co-ordinated by a person of at least deputy director and preferably director level. His qualifications will be similar to those of the field officers, but in addition he will be expected to have had a far broader and more extensive experience of industry.

So that all technical personnel are competent to handle inquiries they must be rotated from field service to the exchange for short periods of duty. The director-in-charge, must also visit units from time to time to maintain his contacts with industry. He must not become desk-bound.

The collection of information by the field officers, its transfer to the item cards, the recording of this information in the co-ordinate indexing file and its use to solve inquiries have all been simplified through the use of standard forms and procedures. There is little administration, and no administrative officer is required. The exchange exists to put a buyer in touch with a subcontractor or supplier. Hence, all personnel in an exchange must be working personnel. This applies particularly to the director-in-charge. He will determine the success or failure of the exchange.

Equipment required for a subcontract exchange

<u>Quantity</u>	<u>Details</u>
1	Automatic telex machine with tape perforator and tape reader
1	Dry photocopier capable of copying up to foolscap size (8" x 13"; 20 x 33 cm) and independently from either side of a double-sided printed sheet
1	Lateral-filing cabinet (5-level) complete with 300 suspended-filing linked pockets
300	Foolscap files for same
1	"Roneo" "Multicard" storage unit (for concept and item cards) type M/30/11/12 complete with 100 separators
1	"Roneo" "Stripdex" visible index system HD/50S complete with 50 panels and 5,000 strips (8" width)
2	"Autospot" hand-punch (1/12" cutters)
1	"Visiscan" Mark V manual punch (complete with 1/12" cutters)
1	Storage cupboard for stationery Concept cards (as required) Item cards (as required) Special forms
1	Inquiry rack (locally made)
1	Light-box (locally made) Inquiry files (as required) A typewriter and the usual office equipment (stapler, paper-punch etc.)

**Notes:** 1. Usually about 300 concept cards will be sufficient, and can accommodate up to 4,000 units, for which 4,000 item cards will be required. For more units, (more than 4,000) a further set of 300 concept cards will be required. These can extend the system to handle a further 8,000 units.

2. The number of inquiry forms and check sheets will depend on the number and type of inquiries received by the exchange.

Appendix I

QUESTIONNAIRE

1. Name of Company
2. Associate companies
3. Factory (Address/telephone number)
4. Office Address
  - (a) Telephone number
  - (b) Cable address
  - (c) Telex number (answer back code)
5. Person(s) to contact
6. Form of organization - public/private/partnership
7. Directors
8. Capital structure (including foreign participation)
9. Bank reference(s)
10. Trade Association/Federations
11. Factory area, access and loading facilities; bonded warehouse
12. Personnel:
  - (a) Managerial
  - (b) Supervisory
  - (c) Skilled
  - (d) Unskilled
  - (e) Number of shifts
13. Line of manufacture/business (incl. catalogues, brochures etc.); brand names/trademark/patents
14. Production:
  - (a) Annual output
  - (b) Export (% , countries)
  - (c) Well-known clients in Pakistan or abroad
  - (d) Inspection/Quality/Control (Personnel, Specialised Equipment)

15. Information on the company's machines, facilities, processes, etc. (for some companies, e.g. garments, this section will merely amplify information already given in item 13)
16. Any other information

**THIS INFORMATION IS REVEALED ONLY TO A FOREIGN BUYER  
AGAINST HIS RELEVANT INQUIRY**

Appendix II

THESAURUS (SAMPLE PAGE)

Hand Bag

Handicraft

Handloom

Hawser

Hippy

Hockey

Hoist

Hollow-ware

Hosiery

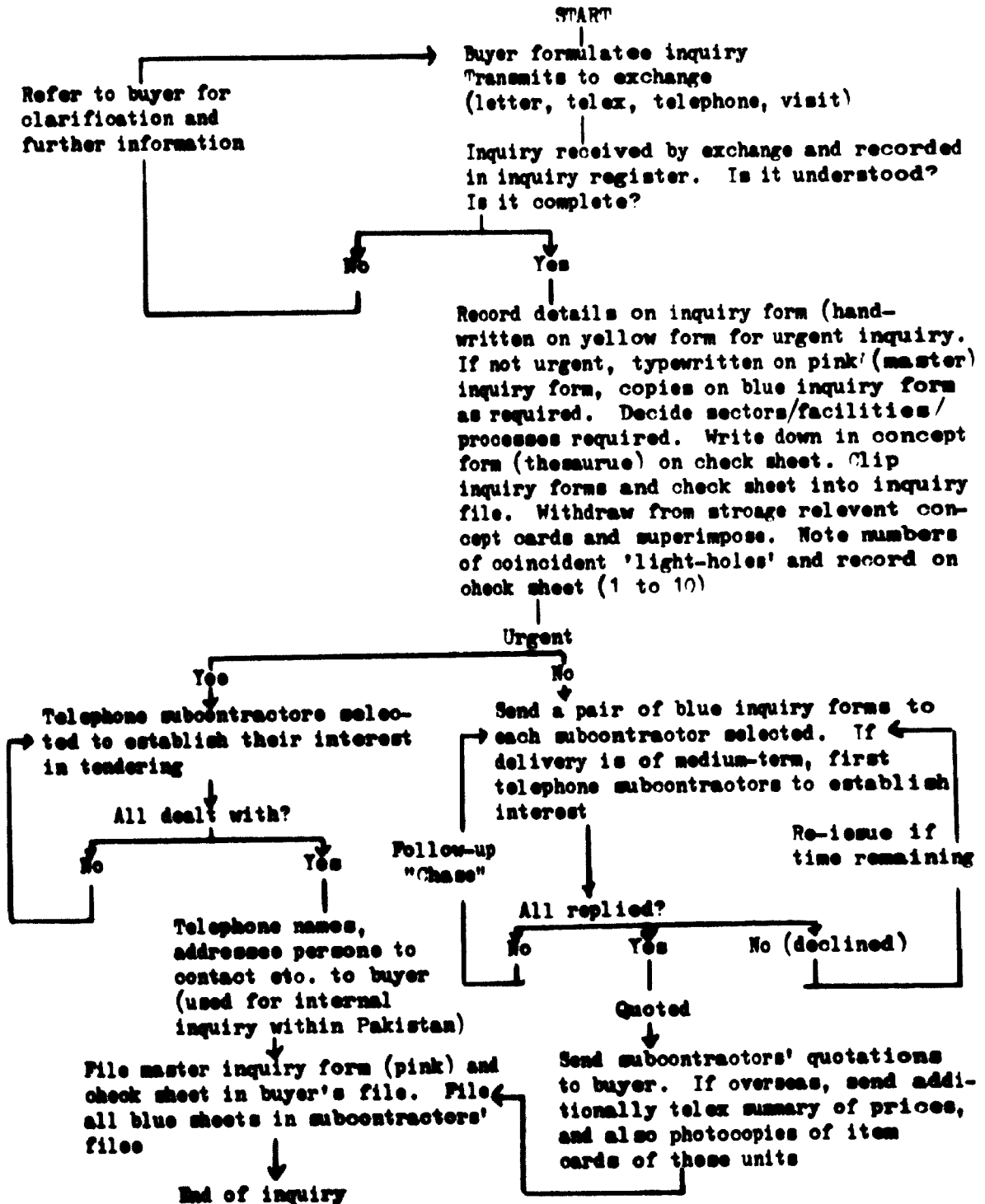
Hyderabad

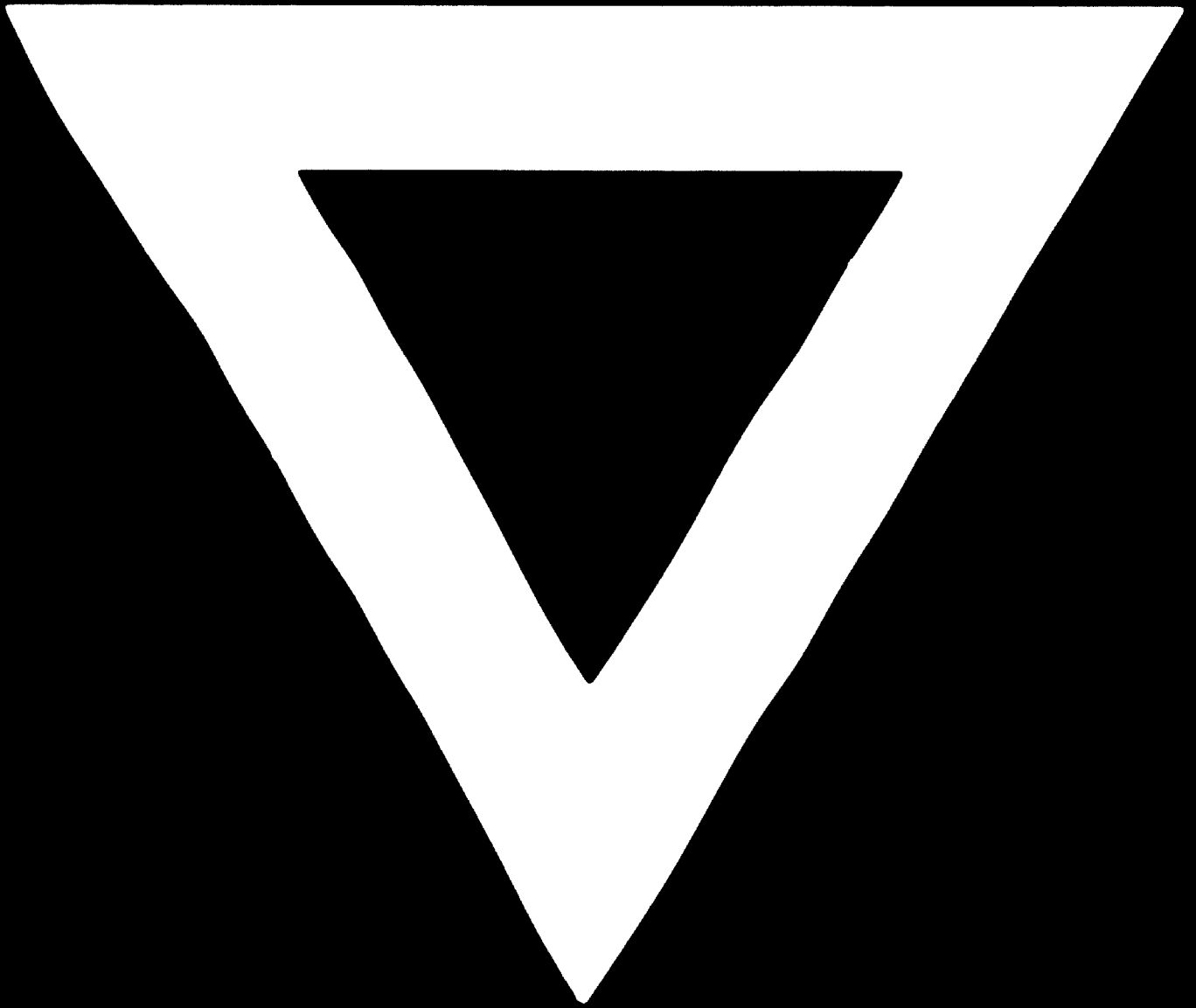
Hydraulic(s)



Appendix III

FLOW DIAGRAM OF AN INQUIRY





**76.01.20**