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INDUSTRIAL ADVISORY SERVICES TO  
THE MINISTRY OF INDUSTRY AND ELECTRICITY

DP/SAU/86/004

KINGDOM OF SAUDI ARABIA

Terminal Report\*

Prepared for the Government of Saudi Arabia  
by the United Nations Industrial Development Organization,  
acting as executing agency for the United Nations Development Programme

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### INTRODUCTION

The project SAU/86/004 which commenced in January 1987 was in operation till June 1990, and it was followed by project SAU/89/022 Industrial Development Support Services from July 1990 onwards.

This Terminal Report is on project SAU/86/004. The approach and content of the report is based on the framework suggested in "UNDP policies and procedure Manual - Part IV Terminal Reporting" and "Handbook for UNIDO Field Staff - Chapter V". It presents the main achievements, principal results, findings and lessons learnt, and recommendations under Chapters I to V.

The immediate objective of the project was to provide direct support services to the Industrial Affairs Agency (IAA) so as to strengthen its capacity to effectively play its central role in the promotion and regulation of the manufacturing sector in Saudi Arabia and the development of industry outside the oil sector.

The development of a modern manufacturing sector is of relatively recent origin in Saudi Arabia and has been associated with the oil boom of the 1970's and early 1980's. This sector consists of four main groups: first, petroleum refining managed by Saudi ARAMCO and SAMAREC (under the Ministry of Oil and Mineral Resources); second, large scale basic industries of petrochemicals, steel and fertilizers managed by Saudi Basic Industries Corporation (SABIC); third, the general manufacturing activities which are run entirely by private sector; and fourth, the small scale light industries with over 20,000 workshops. A fifth group is rapidly emerging, with the new advanced technology projects promoted through military offset projects.

The other government agencies and institutions involved in this sector are: Saudi Arabian Basic Industries Corporation (SABIC), public sector Corporation which operates 15 large joint venture petrochemical, steel and fertilizer projects; Saudi Industrial Development Fund (SIDF), which provides loans at concessionary terms to industry; Royal Commission for Jubail and Yanbu, which has developed infrastructure for the petrochemical and other major industrial complexes at Jubail and Yanbu; Saudi Arabian Standards Organization (SASO), which prepare standards for industrial products; and Saudi Consulting House, a government wholly owned consultancy company providing consultancy services to industry.

While the above organizations were staffed by qualified national personnel and expatriate experts, the Industrial Affairs Agency under the Deputy Minister for Industrial

Affairs which consists of the Departments of: Industrial Licensing, Foreign Capital Investment, Engineering and Projects, Protection and Encouragement, Industrial Statistics and Computer, and Export Development were short of qualified and competent national personnel. Therefore the government requested the assistance of UNIDO for international experts to supplement the limited personnel in the IAA through this direct support advisory services project.

In response to this UNIDO provided assistance in 1980-83 under phase I of project, which was followed up by phase II, i.e. project DP/SAU/81/008 which assisted the Ministry for three years ending in December 1986. Project SAU/86/004 i.e. phase III which is the subject of this report followed this.

During the implementation of the project the mandatory annual Project Performance Evaluation Reports (PPER) to analyse the progress of the project were prepared for the periods Jan-Dec 1987 and Jan-Dec 1989; and A mid-term In-depth Evaluation of the project was carried out by an independent Consultant in November 1988. Tripartite Review meetings were held on 2 March 1987, and on 26 and 28 February 1990.

CHAPTER I

DEVELOPMENT PROBLEMS AND IMMEDIATE PROBLEMS ATTACKED

Development Problems

The overall development objective of Saudi Arabia, to overcome the broad development problem of depending on a single depletable resource of oil (with its attendant uncertainties associated with fluctuating demand and volatile prices), is to attain structural change in the economy by diversification through the promotion and development of other sectors as industry, agriculture and the services.

This overall development strategy has continued through the Third (1980-1985) and Fourth (1985-1990) Development Plans and the relative role of oil in the economy during this period has declined as evident by the fact that: the value added by the oil sector as a share of GDP has fallen from 58 percent in 1390 (1970) to just 21 percent in 1409 (1989); oil revenues have declined as a share of total government revenues from 85 percent during the first three development plans to 64 percent in the Fourth Plan; and non-oil GDP has increased fivefold since 1390 (1970) while total GDP has increased four fold.(1)

Growth of the manufacturing sector is considered essential for the achievement of Saudi Arabia's above strategic economic objectives of diversification and transfer of technology and this has been emphasized in the Third and Fourth 5 Year Development Plans of 1980-85 and 1985-1990. The fall in oil prices and oil revenue during the period 1983-89 and its fluctuating price since 1983 has only accentuated the importance of this objective. During the decade 1975-1985 the manufacturing sector grew at an average rate of around 15% a year but still represented in 1985 9% of GDP and less than 4% if oil refining is excluded. The manufacturing sector was targeted to grow at an average annual growth rate of 10.5% during the Fourth Plan period 1985-90, but during the period 1985-1987 the output of the sector as a whole declined due to the slowing down of the economy during this period and the resultant fall in demand. However, in 1987-1988 there was an upturn with the industrial sector as a whole growing by 1.9% in 1987, 4.7% in 1988, and 4.1% in 1989 and the actual average annual growth during the Fourth Plan period 1985-1990 was 3.9%.

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(1) Fifth Development Plan 1990-1995, Ministry of Planning, Saudi Arabia. Page 7.

For the growth of the manufacturing sector the project identified the following areas mentioned in the Fourth Development Plan, that need to be developed.

- Quality feasibility studies;
- Management services;
- Market information systems;
- Technical training;
- Maintenance services;
- Industrial surveys to obtain data on industrial performance;
- Studies on investment opportunities.

The project through the achievement of the immediate objectives was to make some contribution to develop the above areas and thereby for the growth of the manufacturing sector.

#### Immediate Problems

The immediate problems in the IAA of the Ministry due to shortage of qualified and competent national personnel and expatriate professionals, was its limited capacity in:

- (a) review and evaluation of feasibility studies of large scale industrial projects submitted for licensing;
- (b) promotion of investment opportunities for foreign investment in joint venture industrial projects;
- (c) project identification and preparation of brief pre-investment studies/project profiles;
- (d) development and operation of a computerised industrial information system in the Ministry;
- (e) organising, supervising and monitoring a survey of industries to obtain reliable performance data on the licensed industries;
- (f) improving the operations of the technical services workshops in the industrial estates;
- (g) development of an export promotion programme and preparation of a scheme of export incentives;
- (h) review of multilateral and bilateral trade agreements.

Therefore the immediate objectives of the project was to provide direct support of advisory services to the IAA for the performance of the above activities and the production of the related outputs.

In addition to the above primary function of direct support the project had a secondary function of institution building through training of national staff, who functioned as part-time counterparts in some of the above activities.

The project was able to satisfactorily attack most of the above immediate problems with varying degrees of success. The extent of the contribution of the project towards the attainment of these immediate objectives is elaborated in the next two Chapters which analyses the progress of the project in the performance of the activities and the completion of the related outputs.

One of the major issues the project was faced with, was that (in view of the limited professionally qualified local personnel in the Ministry) the project experts had to provide direct services to the senior management in a wide range of subjects connected with Ministry's daily work priorities in addition to the activities related to the immediate objectives mentioned earlier.

The activities and corresponding outputs listed in the project document did not therefore fully reflect the nature of advisory services to be provided. This was mentioned in the annual Project Performance Evaluation Reports (PPER) and discussed and agreed at the Tripartite Review meetings. The In-Depth Evaluation Mission Report(2) also highlighted this.

Apart from this aspect which was not sufficiently reflected in the design of the project, the original project document and the project revision F which included additional resources including a GCCC budget, satisfactorily identified the advisory services to be provided to meet the earlier outlined immediate problems.

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(2) Report of Evaluation Mission - Industrial Advisory Services to Ministry of Industry and Electricity - SAU/86/004 DP/ID/SER. C/23 19 April 1989.



CHAPTER II

PRINCIPAL RESULTS AND PROBLEMS ENCOUNTERED

The expected outputs of the project were;

- (A) Reports, Reviews/Comments and related documentation in the different technical areas in which advisory services were provided.
- (B) Computerised Industrial Information System (which included purchase, installation and operation of Hardware and Software systems).
- (C) Trained National Staff in some of the technical areas of the project.

The principal results of the project can be evaluated in relation to the completion of these outputs and the extent to which the outputs were beneficial to the IAA of the Ministry.

(A) Reports, Reviews/Comments and related documentation.

The outputs produced in the form of technical reports, reviews/comments and related documentation is listed at Annex 3.

It is seen from Table 1 that a considerable number of technical reports, reviews/comments and other documentation was produced by the project. These reports, some in English and others in Arabic (the important ones in English with Arabic Translations) were of varying technical standard, depending on the extent of analysis and details covered. However, most of them maintained the technical quality and standard as required by the different Departments, other than the project profiles on petrochemical projects which were incomplete due to lack of market and economic data.(3)

This is also evident from the comments of UNIDO Headquarters in Part IV of the PPER which stated,

"The few (reports and studies) we have seen are of high quality. It may be of interest to note that this is also the opinion of the Consultant who did the in-depth review in November 1989".(4)

- 
- (3) Report of Tripartite Review Meeting held on 26 and 28 February 1990.
  - (4) PPER of SAU/86/004 for period Jan-Dec 1989.

The reports were used mainly by the senior management i.e. Deputy Minister and Asst. Deputy Minister and Directors, of Licensing Dept; Engineering and Projects Dept; Protection and Encouragement Dept; Export Promotion Dept. and other middle management.

How these beneficiaries made use of these outputs can be summarised as follows:

- (i) Reports and reviews on evaluation of feasibility studies used by Licensing Dept. for making decisions on licensing.
- (ii) Reports and documentation on Foreign investment promotion used by Foreign Capital Investment Bureau (FCIB) at Investment Promotion seminars/meetings in Switzerland, Japan and London.
- (iii) Brief project profiles and market studies used by Licensing Dept. and FCIB for circulation among potential investors and also for inclusion in list of project profiles prepared by MIE and SCH.
- (iv) Reports on technical service workshops used by Director of Engineering and projects for supervision of workshops and for review of procedures for their effective management in the future.
- (v) Reports and reviews on trade agreements and reports on export promotion used by Asst. Deputy Minister and Director, Export Promotion at inter-ministerial discussions and for preparation of policy papers on these subjects including framework for promotion of industrial exports.
- (vi) Reports and papers on priority work areas of senior management used for decision making on the specific subject of the report, eg. protection to be granted to an industry, to be briefed about subjects on which decisions to be taken at Board meetings (in cases where senior management of IAA function as Chairman or member of Board of Directors of public sector Corporations).

(B) Development and Operation of a Computerised Industrial Information System.

An expected output which was highlighted in Project revision F which provided additional resources with the creation of GCCC budget, was the Development and Operation of a Computerised Industrial Information System (DOIIS). This IIS was to serve the Departments of the IAA as (i) a Management

Information System (MIS) to assist management decision making and (ii) an Industrial Data Base (IDB) to provide data for analysis of the industrial sector.

The development and operation of the IIS was to be achieved by;

- (a) Sub-contracting Phase-I and Phase-II of the programme to a local Consultancy company competent in EDP and development of information systems through competitive bids.
- (b) Purchase and installation of the required Hardware and Software systems through competitive local bids from Computer system vendors/suppliers.

Scope of work of Phases I and II were as follows.

Phase I - identify the information systems to be computerised.

- preparation of specifications and bid documents for Hardware and Software bids; and assist in evaluation of bids.
- supervision of site preparation and installation of Hardware and performance of acceptance tests.

Phase II - review systems identified in Phase-I; system design and development of the application software.

- data entry and system operation;
- training of users Depts.

#### Phase-I Sub Contract

On the basis of the evaluation of proposals received this contract awarded in February 1989 to Consulting Center for Finance and Investment, (CCFI), Riyadh for SR 318,250 (US \$ 84,666). Summary of evaluation of proposals received at Annex 5.

The following outputs produced under Phase-I.

- (1) Request for proposals for Phase I (issued to local Consultancy companies) which included Scope of Work.
- (2) Evaluation Report of proposals received.

Outputs (1) and (2) before award of sub-contract by project staff.

- (3) Report on Conceptual Industrial Information System.
- (4) Proposed Organization Structure of Computer Department.
- (5) Invitation for bid proposals for purchase of Computer System with:
  - (a) Technical specifications for computer system including: Peripherals and System software; Data base management software; Decision support software; Network hardware and software; Site preparation and
  - (b) Draft contract.

Bids were invited from local vendors/suppliers/agents of Computer Systems.

- (6) Report on Evaluation of Bid Proposals for purchase of Computer system. Summary of bids received and evaluation at Annex 6

Project team and Computer Dept. also participated in preparation of (5) and (6) above.

- (7) Site Preparation Report (on completion of site by supplier).
- (8) Acceptance Test Report on Computer system (after installation by supplier).

#### Purchase and Installation of UNISYS Computer System

On basis of above evaluation report (see summary at Annex 6) contract for delivery, installation of UNISYS U5000/95 Hardware system and Software system and related services as Site Preparation and Training awarded in November 1989 to Arab Digital Computer Company (ARDICO) Riyadh for SR 1,795,852 (US \$ 478,893).

The items of UNISYS Computer System delivered and installed in the IAA under above contract by ARDICO is at Annex 7.

#### Phase II Sub-contract

After successful completion of the initial stages of Phase I and the award of the contract for the supply of the UNISYS Computer system, Phase II sub-contract awarded to Consulting Center for Finance and Investment Riyadh for SR 685,000 (US \$ 182,666) in April 90 on the basis of the evaluation of competitive proposals received. Summary of evaluation of proposals received at Annex 8.

The following outputs produced before award of Phase II contract by project staff.

- (1) Request for proposals for Phase II issued to local Consultancy companies which included: Scope of work; Details of Hardware and Software Systems (of UNISYS System); Outline of data bases of IIS (based on Phase I findings).
- (2) Evaluation Report of proposals received for Phase II.

After award of Contract CCFI was able to complete up to 30 June 1990 (the cut-off date of project SAU/86/004) a detail review of the proposed systems with closer interaction with User Depts; install ORACLE case tools (to be used in system design); make a preliminary outline of the system specifications; and make a presentation on these at a meeting with Deputy Minister and Heads of Depts.

As phase II could not be completed within the time frame of Project SAU/86/004 this is being continued under the Project SAU/89/022 which immediately followed SAU/86/004.

Therefore as the Phase-II and the commissioning of the IIS has not been completed under the project SAU/86/004 it is not possible, at this stage to indicate the significance and the benefits of the Computerised Industrial Information System to the IAA in this Terminal Report.

Nevertheless, it is seen from the above analysis, since the project revision F, considerable progress was made and substantial part of the activities and related outputs for the establishment and operation of the IIS has been completed.

#### (C) Trained National Staff

As mentioned in Chapter I the secondary function of the project was to train national staff mainly through on the job training.

The Ministry was not able to assign full time counterparts to the international experts due to, (i) each Expert providing advisory services in a wide range of areas, and (ii) the shortage of qualified and competent staff and the few available being busy with normal Departmental functions.

Therefore only part-time counterparts for specific activities of the project were provided. On the job training of these part-time counterparts in; evaluation of feasibility studies, preparation of project profiles, export promotion work and review of trade agreements, management and operation of technical service work-shops, and assessment of performance of some engineering industries, have taken place. The national

staff who functioned as part-time counterparts is at Annex 4.

In addition to on the job training of these counterparts, the following additional training programmes were carried out:

- (1) Workshop on "Financial and Economic Appraisal of projects and application of COMFAR" in Arabic by a UNIDC training Consultant from 4 - 22 March 1989. 10 officers attended this programme which included 5 from IAA of Ministry; 2 from SIDF; 2 from SCH and 1 from NIC.
- (2) Workshop on "Introduction to petroleum and petrochemical industries for non-specialists" by NPPP Industrial Chemist in July/August 1989 attended by 20 officers from Licensing, FCIB, and Protection and Encouragement Departments of IAA.
- (3) Training programmes for Computer Dept. staff under the Contract for purchase of Computer System and related services with ARDICO, during the period Jan-July 89.

(a) Local Programmes

- U5000/95 Concept (2 courses) - each
- UNIX V Configuration/Programming (2 courses)
- Introduction to ORACLE
- Advanced Application Building
- SPSS-X Training (2 courses)

(b) Abroad

- Advanced Unix Training
- Oracle DBA Training
- CASE Training:
  - CASE Method
  - CASE Directory
  - CASE Design

In addition, the Computer Dept. staff have actively participated in the activities connected with the development of the computerised industrial information system, particularly in preparation of the Scope of Work of Phase I and Phase II sub-contracts and evaluation of proposals; and with CCFI in the preparation of specifications for Hardware and Software systems, and subsequent evaluation of bids; in the identification of systems to be computerised; and in initial system design work.

**(D) Problems Encountered**

The main problems encountered were;

- (1) The inability of the international experts to devote sufficient time for more intensive training of counterparts as the experts were expected to provide consultancy services in other priority work areas of Ministry (not specifically identified in project document) in addition to project work areas.
- (2) Lack of suitable national staff to function as full time Counterparts.

These have been mentioned earlier and the proposals to overcome these problems will be discussed in Chapter IV.

### CHAPTER III

#### OBJECTIVES ACHIEVED OR LIKELY TO BE ACHIEVED IN THE NEAR FUTURE.

The immediate objectives of the project to strengthen the capacity of the IAA by providing direct advisory services in certain technical areas to the IAA was discussed in Chapter I. The project revision F highlighted the objective of Development and Operation of a Computerised Industrial Information System, for which additional resources were provided.

The specific areas mentioned as indicators to assess the achievement of the objectives (as stated in the original project document) are:

- (a) Improved capacity for project identification and preparation, review and evaluation of feasibility studies;
- (b) Improved capacity for promotion of foreign investment and joint venture projects;
- (c) Well established computerised industrial information system;
- (d) Improved capacity of the technical services workshops located in the industrial estates;

To this should be added two additional indicators,

- (e) Improved capacity for senior management to carry out important day-to-day work priorities;
- (f) Improved capacity for analysis of trade policy and promotion of industrial exports.

On the basis of the analysis in Chapter II which indicated the main activities carried out and outputs produced and considering the extent of international experts and NPPP made available to project as shown at Annex 2, it is possible to conclude that the immediate objectives related to indicators,

1. (a) (e) and (f) were fully achieved;
2. (c) likely to be fully achieved in the near future;
3. (b) and (d) were partially achieved.

The reasons for this assessment of the achievement of the objectives are discussed below.



1. The fact that the objectives related to (a) (e) and (f) were fully achieved are evident from:

- (i) Findings of the In-Depths Evaluation Mission which stated:

"The project has no doubt been useful to the Industrial Affairs Agency (IAA) of the Ministry of Industry and Electricity by its direct support of daily operations and in maintaining quality of analysis and advice in specific areas".(5)

It further stated;

"Phase III of the project has directly contributed particularly to improving the capacity of IAA in project preparation, review and evaluation of feasibility studies and has rendered quality service in the evaluation of the feasibility of large joint venture projects".(6)

- (ii) Comments of UNIDO Headquarters in Part VII of the PPER Reports.

"The direct support objective which enabled the senior staff at the Ministry to take policy decisions and to carry day-to-day work was fully achieved.(7)

2. The objective related to (c) is likely to be fully achieved in the near future due to the following reasons.

According to the progress of the activities and the production of outputs related to objective (c) (i.e. well established computerised industrial information system) described in Chapter II, it was seen that, Phase I outputs were completed, computer system was purchased, installed, and Phase II sub-contract was awarded and initial activities completed.

On an approximate assessment these can be considered as completion of 65-75% of the activities and outputs related to achievement of objective (c).

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(5) Report of Evaluation Mission - Industrial Advisory - Services to Ministry of Industry and Electricity - SAU/86/004 DP/ID/SER C/23 19 April 1989 page 3.

(6) *ibid* - page 3

(7) PPER of SAU/86/004 covering period Jan - Dec 1989.

As the balance of the Phase-II; namely preparation of system specifications and system design, data entry and commencement of system operation could not be completed within the time frame of this project, it is due to be completed under project SAU/89/022 Industrial Development Support Services (which commenced immediately from the cut-off date of project SAU/86/004) within the first 12 months of the project.

Therefore it could be concluded that it is very likely that this objective will be fully achieved in the near future.

3. The reasons for the inability of the project to fully achieve the objectives related to indicators (b) and (d) are as follows:

Though some pre-investment studies/project profiles were prepared in the engineering industries the quality of those prepared in the petrochemical sector (as explained earlier) were inadequate for promotional purposes. The project also did not have a mechanism to have close working relationship with the foreign and local investors to identify suitable potential investors that would be interested in these pre-investment studies. Proposals to overcome these shortcomings are discussed in Chapter V.

The project was however able to provide to the IAA as explained in Chapter II valuable documentation on foreign investment opportunities for presentation at three important foreign investment seminars held in Zurich, Tokyo and London; and also some documentation for presentation at Joint Commission meetings with China and Germany.

Regarding objective (d) i.e. to improve the operational capacity of technical workshops it is seen that, in addition to the project activities related to this, it requires (i) capital investment in equipment (ii) recruitment of qualified operational staff at the workshop and (iii) ability for the Engineering Industries expert to devote more time and attention to the supervision of these workshops.

The limitation of the first two requirements, which were external factors over which project had no control, acted as constraints. The Engineering industry expert was also required according to IAA work priorities to devote more attention to other activities and completion of outputs as, preparation of project profiles in engineering industries, advisory services on certain operating engineering industries, and other day to day operational matters of the IAA.

This was confirmed by the In-Depth Evaluation Mission Report which stated.

"However, less emphasis seems to have been given in this phase to the objective of improving the capacity of the technical services workshops in the industrial estates and more on project preparation, marketing studies on specific products, general technical backstopping and production of technical background papers".(8)

On the basis of the above analysis it is possible to conclude that of the six immediate objectives in the project, three were fully achieved, one likely to be achieved in the near future, and the remaining two were partially achieved.

The fact that the project was able to provide advisory services to satisfactorily meet the requirements of the IAA in most of the technical areas identified in the project and in the day-to-day work priorities of the senior management will also be evident from the following statement of H.E. Deputy Minister of Industrial Affairs as mentioned in the report on TPR meeting held on 28 February 1990.

"H.E. (Deputy Minister for Industrial Affairs) indicated that the Ministry was pleased with the performance of international experts and their contribution to the work of the Ministry".(9)

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(9) Report of TPR meeting held on 28 February 1990.

## CHAPTER IV

### FINDINGS AND LESSONS LEARNT

On the basis of an analysis of the activities carried out and related out-puts produced in Chapter II it was concluded in Chapter III that of the six immediate objectives of the project (five of which were related to improved capacity of the IAA in the technical areas in which advisory services were provided); three objectives were fully achieved, one likely to be achieved in the near future, and two were partially achieved.

This achievement is significant considering the available resources of only 3 international experts of which 2 were of shorter duration than the project period, and 3 NPPP all of shorter duration than project period (of which 2 were part-time). Details of this in Annex 2.

One of the immediate objectives likely to be achieved in the near future is the setting up of a computerised industrial information system, as nearly 65-75% of the activities and outputs related to this have been completed and the balance are being completed under project SAU/89/022, which immediately followed this project.

This is an important achievement as the Ministry since the early 1980 has been trying to set up a computerised industrial information system without much success. The reasons for the failures in the past had been due to: lack of a clear plan and framework for its development; existence of an out-dated Hardware System Data-General 350 C; shortage of competent staff in IAA; and ineffective supervision and monitoring of the work of local consultancy companies contracted earlier to develop and operate the system.

Two short term consultancy assignments under project SAU/81/008 (which preceded SAU/86/004) identified the main problems of the then existing computer system (which was then serving the Personnel and Finance Depts of the Ministry) particularly to meet the needs of the IAA; and recommend measures to overcome these.(10) On evaluation of the recommendations of this short term Consultant and after discussions with the Consultant Team of Arthur D. Little Inc. (then in the Ministry) and an Adviser of Saudi US Joint Economic Commission (in Ministry of Finance and National Economy), a programme for Development of Operation of Industrial Information System (DOIIS) was worked by the project team in consultation with the senior management of IAA.

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(10) Report on Short Term Consultant - Dr. Mohammed Aman  
SAU/81/008 Oct. 1985.

These were incorporated in project SAU/86.004 Revision F.

Two significant achievements in the setting up of the computerised IIS under this project has been: firstly, it has been carried out on a most cost-effective manner at just around SR 3.00 million \*(i.e. US \$ 780,000); secondly, it has developed local capabilities because most of the technical work has been by a local sub-contractor, NPPP and Ministry personnel, while UNIDO project personnel have been only co-ordinating, monitoring and effecting contractual arrangements along with the identification of the information requirements.

The cost-effective basis of the installation and operation of this system is evident, when compared with the cost incurred by other government organization to install and operate their computerised information systems which have for exceeded this amount.

The cost-effectiveness and the substantial progress has been possible due to;

- (i) local sub-contracting of Phases I and II and identifying the scope of work of these Phases clearly. Sub-contracting instead of recruiting international experts, has other advantages in addition to the cost factor, namely, (a) it provides a team which includes specialists in all the required areas as; information systems, Hardware aspects, systems analysis, programming, etc. (b) They are also able to work closely together as a team (which is important in assignments of this type) unlike experts. Also if experts recruited it is difficult to field them together at the time needed due to delays in recruitment

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\*Summary-of-Costs (SR 000)

Phase-I Consultancy	SR	318.3
UNISYS H & S System (inclusive of site preparation and training)	SR	1,795.9
Phase-II Consultancy	SR	685.0
NPPP part-time	SR	120.0
		<u>2,919.2</u>

The additional costs under SAU/89/022 would be NPPP Analyst/Programmer 24 m/m SR 240,000; NPPP Programmer 24 m/m SR 168,000 both for assistance in operation of the system after completion of phase II.

(c) payment is made on specific completion of tasks under the sub-contract unlike in case of UNIDO recruited project personnel.

- (ii) closer monitoring of the performance of sub-contractor.
- (iii) preparation of technical specifications with great care and diligence (to ensure that specifications over and above requirements are not included).
- (iv) detail evaluation of Hardware and Software bids.
- (v) recruitment of competent local NPPP (Director General of Information Systems of KACST) to assist in over-seeing and supervision of the programme.

Therefore an important lesson learnt is that, in programmes of work which require close team work from different specialities for which competent local Consultancy companies are available it is preferable to consider this option rather than recruitment of experts.

The project has not been very successful in its secondary function of institution building, through on the job training of counterparts other than in the programme for the development of the computerised IIS.

This has been due to the fact that firstly, IAA was not able to assign full time counterparts due to the shortage of qualified and competent staff and the few available being busy with normal Departmental functions; and secondly, the experts being too preoccupied with a wide range of technical areas, including providing advisory service in day-to-day priority work areas. Nevertheless they were able to provide a certain extent of on the job training in some areas as: evaluation of feasibility studies and use of COMFAR, preparation of project profiles, and trade policy analysis and export promotion.

This was confirmed by comments of UNIDO Headquarters in Part VII of PPER which stated:

"The institution building objective which would enable the local staff to carry out their functions without the help of outside assistance was partly achieved because of the scarcity of qualified local staff and because the few international experts attached to the project cannot devote enough time to training activities". (11)

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(11) PPER of SAU/86/004 covering period 1/1 to 31/12/89.

However, certain training programmes were conducted, as mentioned in Chapter II and these have also contributed to training national staff in specific areas.

The proposals to overcome these and to ensure more effective training of national staff is discussed in Chapter V.

Another important lesson learnt is that the need to provide direct advisory services to senior management in their regular work would be a continuing requirement in the Ministry of Industry and Electricity (and in fact in most government organisations in Saudi Arabia) for three reasons. First, the government organisations over the years have been accustomed to engaging Consultant teams from reputed international Consultancy companies or individual expatriate professionals to assist in important regular work of the organisations. Second, government organisations lack qualified and competent nationals as most qualified professional Saudis prefer the private sector or Government Corporations which provide better salaries and conditions of work.

Third, the non-oil manufacturing sector, with an investment of nearly SR 65 billion has established wide range of internationally competitive industries with modern technology. Through the offset programmes with US, UK and France the next phase of high technology industries would be developed. The Ministry of Industry which is responsible for the promotion and development of private sector will therefore continue to require advisory services in the future too.

The need for such advisory and consultancy services by government organisations will continue in the foreseeable future and UN projects should endeavour to meet this requirement, in addition to the secondary function of institution building which the UN agencies would be interested in. In cost-sharing projects in Saudi Arabia where government bears a large proportion of the cost, the government perceptions of its needs have to be satisfactorily reflected in the design of project document.

## CHAPTER V

### RECOMMENDATIONS

This Chapter would like to present some recommendations based on the main findings of this study. They are as follows.

1. The IAA of the Ministry of Industry and Electricity will continue to require direct support of advisory services to enable the senior officials to decide on policy matters and on other important aspects of work. This, as mentioned in Chapter IV is due to fact that firstly, government agencies over the years have been accustomed to engaging Consultants working on a regular basis because of the limited availability of qualified and competent nationals (who prefer to join the private sector and government corporations); and secondly, the MIE will particularly require Consultancy services to monitor and promote the private industrial sector which is high technology based and operating on internationally competitive levels.

UN agencies in view of their long experience in working with government organizations and their reasonable costs for such services compared to those of International Consultancy companies are best suited to provide such services. Therefore UN projects should endeavour to meet this requirement, in addition to the secondary function of institution building which UN agencies are primarily interested in. These aspects should be clearly reflected in the design of the project after a close assessment of the needs of the government agencies.

2. The findings in Chapter IV was that the project was not very successful in fulfilling its secondary function of institution building. The conclusion is that institution building objective cannot be effectively achieved according to the present design of the project where the provision of advisory services is combined and closely linked with on the job training. The latter objective is bound to be affected as the higher management pressures are for the project to provide the required advisory services of certain quality and within stipulated time constraints. The problem gets further compounded by the lack of suitable personal to function as full time counterparts. In view of the importance given by the government also for training and development of national personnel termed "Saudiization" a separate clearly worked out component of the project should be designed to meet this objective.

This component of the project should have an international expert exclusively for training and development of national staff. He should be expected to:



- (a) identify national staff that have potential for development and to work out their training needs over the project period.
- (b) Arrange suitable local and overseas training programmes and prepare necessary training material including intensive English language training where required.
- (c) Arrange for their effective involvement in on the job training in advisory services activities by liaising with the experts and following-up on these.
- (d) Assist the senior management in their deployment in the Ministry work.

The design of this component of the project should clearly identify attainable realistic targets of training and development which should include; the competency level to be attained and the criteria or indicators to assess the achievement of this, the means to do this, the resources required and the ultimate number of national staff to be trained and developed during the project period.

- 3. Programmes of work within a project which require closely co-ordinated work by a team of specialists should be sub-contracted locally, if competent consultant groups are available locally, otherwise internationally, rather than recruit 2-3 experts for separate components of the work programme. The advantages for such an approach as seen in this project is that: firstly, it is more cost-effective; secondly, it facilitates effective monitoring and control of the progress; thirdly, payment is made only on satisfactory completion of tasks under the sub-contract; fourthly, avoids problems of recruiting and fielding the team together at the required time.
- 4. It was seen in Chapter III that the objective of promotion of investment opportunities for foreign investment, which is an important activity of the Ministry, was not satisfactorily achieved.

The promotion of foreign investment projects requires:

- (i) preparation of good quality pre-investment studies; and
- (ii) close contact with local and foreign private sector investors through the local Chamber of Commerce and Industry and through the Foreign Investment Promotion network of UNIDO.

To effectly do this it is recommended that: firstly, a certain number of pre-investment studies/project profiles of small to medium sized projects of acceptable professional quality be prepared by critically reviewing and

updating those already in MIE and others available in the Kingdom, prepared by different organizations as SIDF, GOIC, Chamber of Commerce and Industry etc. This should be done by sub-contracting the assignment to a competent Consultancy company.

Secondly, for the promotion of the projects a special foreign investment promotional unit should be established which will have representatives of Council of Chambers of Commerce and industry, Saudi Consulting House, SIDF etc. co-ordinated by the FCIB of the Ministry. This promotional unit should identify interested local investors and also liaise with the UNIDO Investment promotion network to identify suitable foreign investors and later work with such investors until a decision is made by the investor to participate in the project. Future phase of the project should adopt this approach and also provide adequate resources to implement such a programme.

5. An important area in which advisory services should be provided by the project to the IAA would be in policy analysis to focus on medium term issues facing Saudi Industry. With the completion of industrial surveys in 1987 and 1989 by the Ministry through a Private Consultancy company, valuable information is available with the Ministry to analyse the strengths and weaknesses of the sub-sectors and to examine policy issues and the direction in which the industrial sector should develop. This work would also enable the Ministry to have close working relationships with the Ministry of Planning in the preparation of the 5 year Development Plans for the industrial sector and to closely monitor its performance.

ANNEX 1

UNITED NATIONS DEVELOPMENT PROGRAMME

SEMI-FINAL REVISION

Country : Saudi Arabia  
Title : Industrial Advisory Services to the Ministry of  
Industry and Electricity, Phase III  
Project Number : DP/SAU/86/004/I/01/37

The attached budget of the above project is amended to reflect semi-final expenditures of project upon completion of operational activities in June 1990.

The change to the project budget - UNDP input is as follows :

Previous UNDP/Govt. input : <u>US\$ 936,121</u>	Previous GCCC input : <u>SR 3,496,843</u>
Project Budget Code "II" (line 99 total)	Project Budget Code "II" (line 99 total)
Revised UNDP/Govt. input : <u>US\$ 765,255</u>	Revised GCCC input : <u>SR 2,587,070</u>
Project Budget Code "I" (line 99 total)	Project Budget Code "I" (line 99 total)
UNDP/Govt. input-Decrease : US\$ 170,866	GCCC input-Decrease : SR 909,773

*Sharouh M. Sharif*

Sharouh M. Sharif

Resident Representative a.i.

Approved on behalf of the Executing Agency  
(UNIDO's telex No. 15228 of 7 June 1991  
from Mr. L. Soumarakov)

9 June 1991  
Date

*Sharouh M. Sharif*

Sharouh M. Sharif

Resident Representative a.i.

Approved on behalf of the UNDP

9 June 1991  
Date

COUNTRY : SAUDI ARABIA ; DATE PRINTED: 10/06/91 ; PAGE 1 ;  
 PROJECT NUMBER : SAU/86/004/1/01/37 ; LAST REV: 23/05/90 ;  
 PROJECT TITLE : Industrial Advisory Services, Ministry of Industry  
 and Electricity, Phase III  
 PROJECT BUDGET COVERING UNDP CONTRIBUTION (in U.S. dollars)

PROJECT COMPONENTS	TOTAL AMT	1987 AMT	1988 AMT	1989 AMT	1990 AMT	1991 AMT
	M/M	M/M	M/M	M/M	M/M	M/M
*010 PROJECT PERSONNEL						
*11 Experts:						
011-001 Senior Industrial Economist	355,251	100,835	103,590	99,397	51,429	
	42.0	12.0	12.0	12.0	6.0	
011-002 Engineering Industries Expert	250,161	93,231	95,824	61,106		
	32.0	12.0	12.0	8.0		
011-003 Industrial Trade Adviser	77,496			25,186	52,310	
	9.0			3.0	6.0	
011-097 Short-term Consultants	27,100		12,743	14,357		
	2.5		1.5	1.0		
11-99 Subtotal (*)	710,008	194,066	212,157	200,046	103,739	
	85.5	24.0	25.5	24.0	12.0	
*13 Admin support personnel:						
013-000 Admin Support Personnel	21,516	10,168	11,348			
13-99 Subtotal (*)	21,516	10,168	11,348			
*15 Official travel:						
015-000 Official Travel	13,559	6,263	3,515	3,781		
15-99 Subtotal (*)	13,559	6,263	3,515	3,781		
*16 Mission costs:						
016-000 Mission Costs	8,699	2,971	2,572		3,156	
16-99 Subtotal (*)	8,699	2,971	2,572		3,156	
*18 Prior years adjustments:						
018-005 Prior Years Savings	-2,200		-285	-1,663	-252	
18-99 Subtotal (*)	-2,200		-285	-1,663	-252	
019 COMPONENT TOTAL (**)	751,582	213,468	229,307	202,164	106,643	
	85.5	24.0	25.5	24.0	12.0	

COUNTRY : SAUDI ARABIA ; DATE PRINTED: 10/06/91 ; PAGE 2 ;

PROJECT NUMBER : SA9/06/004/1/01/37 ; LAST REV: 23/05/90 ;

PROJECT TITLE : Industrial Advisory Services, Ministry of Industry  
and Electricity, Phase III

PROJECT BUDGET COVERING UNDP CONTRIBUTION (in U.S. dollars)

PROJECT COMPONENTS	TOTAL AMT	1987 AMT	1988 AMT	1989 AMT	1990 AMT	1991 AMT
	N/N	N/N	N/N	N/N	N/N	N/N
*040 EQUIPMENT						
041 000 Expendable Equipment	4,131		2,972	1,066	93	
048 000 Prior Years Savings	-31				-31	
049 COMPONENT TOTAL (**)	4,100		2,972	1,066	62	
*050 MISCELLANEOUS						
053 000 Sundries	10,599	1,549	5,326	2,445	1,279	
058 000 Prior Years Savings	-1,026		-46	-980		
059 COMPONENT TOTAL (**)	9,573	1,549	5,280	1,465	1,279	
099 BUDGET TYPE TOTAL (***)	765,255	215,017	237,559	204,695	107,984	
	85.5	24.0	25.5	24.0	12.0	
101 000 Government Cost Sharing	-558,771	-165,017	-181,427	-134,344	-77,983	
109 COMPONENT TOTAL (**)	-558,771	-165,017	-181,427	-134,344	-77,983	
999 UNDP TOTAL (***)	206,484	50,000	56,132	70,351	30,001	
	85.5	24.0	25.5	24.0	12.0	

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 : COUNTRY : SAUDI ARABIA : DATE PRINTED: 10/06/91 : PAGE 3 :  
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 : PROJECT NUMBER : SAU/06/004/1/01/37 : LAST REV: 23/05/90 :  
 : PROJECT TITLE : Industrial Advisory Services, Ministry of Industry  
 : and Electricity, Phase III :  
 -----  
 : PROJECT BUDGET COVERING COST-SHARING CONTRIBUTION (in U.S. Dollars) :  
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PROJECT COMPONENTS	TOTAL AMT	1987 AMT	1988 AMT	1989 AMT	1990 AMT	1991 AMT
	N/N	N/N	N/N	N/N	N/N	N/N
*100 COST SHARING						
: 101 000 Government Cost Sharing	558,771	165,017	181,427	134,344	77,983	
: 109 COMPONENT TOTAL (**)	558,771	165,017	181,427	134,344	77,983	
*150 COST SHARING OVERHEAD						
: 156 000 Support Costs (13%)	72,641	21,452	23,586	17,465	10,138	
: 159 COMPONENT TOTAL (**)	72,641	21,452	23,586	17,465	10,138	
: 199 BUDGET TYPE TOTAL (***)	631,412	186,469	205,013	151,809	88,121	

PAYMENT SCHEDULE

Date	Amount	Contributor
Paid December 1986	US\$ 341,825	Kingdom of Saudi Arabia
Transferred May 1987	136,175 <sup>1/</sup>	
Paid December 1987	312,663	
Paid March 1988	111,200	
Transferred to GCCC budget	325,972 <sup>2/</sup>	
Paid on 28 August 1989	58,195	
Paid on 21 November 1989	190,405	
Balance of Income :	US\$ 824,491	
Less expenditures	631,413	
Unutilized balance transferred to SAU/89/022, Rev. (C)	US\$ 193,078	

Cost-sharing is payable in U.S. Dollars. Cheques in English are to be made to the order of the "United Nations Development Programme" and forwarded to the UNDP office in Riyadh.

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- <sup>1/</sup> Transferred from SAU/81/008
  - <sup>2/</sup> Revision (E) of 19 November 1988  
Equivalent to SR 1,222,395 (1 US\$ = SR 3.750)

COUNTRY : SAUDI ARABIA ; DATE PRINTED: 10/06/91 ; PAGE 4 ;  
 PROJECT NUMBER : SAU/06/004/1/01/37 ; LAST REV: 23/05/90 ;  
 PROJECT TITLE : Industrial Advisory Services, Ministry of Industry  
 and Electricity, Phase III  
 PROJECT BUDGET COVERING GOVERNMENT CONTRIBUTION (in local Currency)

PROJECT COMPONENTS	TOTAL AMT	1987 AMT	1988 AMT	1989 AMT	1990 AMT	1991 AMT
	R/M	R/M	R/M	R/M	R/M	R/M
*010 PROJECT PERSONNEL						
*13 Admin support personnel:						
013 000 Admin Support Personnel	83,996			59,591	24,405	
13 99 Subtotal (*)	83,996			59,591	24,405	
*17 National Professionals:						
017 002 Export Promotion (Malik)	24,000			23,996	4	
	2.5			2.5		
017 003 Industrial Chemist (Sharabash)	230,929		37,500	150,506		42,923
	15.5		2.5	12.0		1.0
017 004 Computer Systems (Tassan)	22,977			7,999		14,978
	4.0			1.0		3.0
17 99 Subtotal (*)	277,906		37,500	182,501	4	57,901
	22.0		2.5	15.5		4.0
019 COMPONENT TOTAL (**)	361,902		37,500	242,092	24,409	57,901
	22.0		2.5	15.5		4.0
*020 SUBCONTRACTS						
021 000 Sub-contracts	286,433			286,433		
029 COMPONENT TOTAL (**)	286,433			286,433		
*030 TRAINING						
033 000 In-service Training	7,500			7,500		
039 COMPONENT TOTAL (**)	7,500			7,500		
*040 EQUIPMENT						
041 000 Expendable equipment	450				450	

: COUNTRY : SAUDI ARABIA : DATE PRINTED: 10/06/91 : PAGE 5 :  
 : PROJECT NUMBER : SAM/86/004/1/01/37 : LAST REV: 23/05/90 :  
 : PROJECT TITLE : Industrial Advisory Services, Ministry of Industry  
 : and Electricity, Phase III :  
 : PROJECT BUDGET COVERING GOVERNMENT CONTRIBUTION (in local Currency) :

PROJECT COMPONENTS	TOTAL AMT	1987 AMT	1988 AMT	1989 AMT	1990 AMT	1991 AMT
	N/N	N/N	N/N	N/N	N/N	N/N
042 000 Non-expendable Equipment	1,835,854			1,835,854		
049 COMPONENT TOTAL (**)	1,836,304			1,835,854	450	
050 MISCELLANEOUS						
053 000 Sundries	7,444			7,088	356	
059 COMPONENT TOTAL (**)	7,444			7,088	356	
090 AGENCY SUPPORT COST						
091 000 Agency Support Costs	87,487		1,313	83,264	883	2,027
099 COMPONENT TOTAL (**)	87,487		1,313	83,264	883	2,027
099 BUDGET TYPE TOTAL (***)	2,587,070		38,813	2,462,231	26,098	59,928
	22.0		2.5	15.5		4.0

PAYMENT SCHEDULE

Amount

Transferred from Cost-sharing budget	SR 1,222,395 <sup>1/</sup>
Paid on 8 November 1988	1,667,033 <sup>2/</sup>
Paid on 21 November 1989	607,415
<b>Total income :</b>	<b>SR 3,496,843</b>
<b>Less expenditures</b>	<b>2,587,070</b>
<b>Unutilized balance transferred to SAU/89/022, Rev (C)</b>	<b>SR 909,773</b>

<sup>1/</sup> Equivalent to US\$ 325,972 (US\$ = SR 3.750)

<sup>2/</sup> Equivalent to US\$ 444,452 (US\$ = SR 3.750)



ANNEX 2

PROJECT PERSONNEL JAN 1987 - JUNE 1990

<u>Post Title</u>	<u>Name</u>	<u>Period</u>	<u>M/M</u>
Chief Technical Adviser /Industrial Economist	Ranjith M. Withana (Sri Lanka)	1/87-6/90	40
Engineering Industries Expert	Samir Gindy (Austria)	1/87-5/89	29
Expert in Industrial Trade Policy and Promo- tion	Dr. Kamal H. Hassanein (Egypt)	10/89-6/90	9
NPPP-Industrial Chemist	Dr. K. Sharabash (USA)	10/88-1/90	15
NPPP-Consultant for Computer System (Part-time)	Mohammed Al-Tassan (Saudi Arabia)	9/89-6/90	9
NPPP-Export Promotion Officer (Part-time)	M. Younus Mallick (Pakistan)	6/89-6/90	12

ANNEX 3

LIST OF OUTPUTS-TECHNICAL REPORTS, REVIEWS/COMMENTS

1. Review and evaluation of feasibility studies of industrial projects submitted for licensing.

- (1) Evaluation and comments on Feasibility Study for establishment of Aluminium Smelter as Joint Venture prepared by ALCOA of USA.
- (2) Review of preliminary project proposal for Aluminium smelter by EBE and Ferrostaal of West Germany.
- (3) Updated Financial Analysis of Arabian Axle Manufacturing Company (AAMC) project using COMFAR.
- (4) Evaluation of Feasibility Study on Seed Crushing Project submitted by SAVOLA.
- (5) Evaluation of Feasibility Study on milk powder packing plant by Savola.
- (6) Evaluation and comments on market analysis report for carbon and graphite electrodes project in Arab Countries.
- (7) Evaluation and comments on Seamless Pipe Project and proposals for production of grade steel billets by HADEED in Jubail.
- (8) Review of Marketing/Pre-investment study on assembly of pick-up trucks submitted by National Industrialisation Company (NIC).
- (9) Evaluation and comments on feasibility study for establishment of Aircraft Modification Center (AMC). Peace Shield Offset Project.
- (10) Review and comments on steel wire drawing project in Jubail by NIC.
- (11) Evaluation of project for the production of ploughs, harvestors and reclamation machinery, providing specific proposals for increasing the share of local manufacture.
- (12) Evaluation of an extension to existing project to produce fixed cooling units and chambers.

(13) Evaluation of Technical and Economic Feasibility for Propylene/Polypropylene joint venture project in Saudi Arabia, by Xenel/Himel.

(14) Evaluation of Feasibility Study on Project for manufacture of PET.

2. Promotion of foreign investment in industrial projects in Saudi Arabia.

(1) "Industrial Investment Opportunities in Kingdom" and "Export Potential of Saudi Products."

Two Papers for presentation by Secretary-General of F.C.I.B. at Saudi Business Symposium in Zurich under Saudi-Swiss Joint Commission in July 1988.

(2) "Industrial Investment Opportunities in the Kingdom of Saudi Arabia". Paper presented by MIE at Conference on 'Industrial Cooperation between Arab Gulf States and Japan' at Tokyo 1-3 March 1989.

(3) Documentation including project profiles for (i) Saudi-Republic of China Joint Commission meeting (ii) Saudi-German Joint Commission meetings held in 1989.

(4) Review of "Framework of Programme for Optimal attraction of Foreign Direct Investment" by Sherson, Lehman and Hutton, Consultants to Saudi Economic Offset Committee.

(5) "Investment climate in Saudi Arabia" Paper presented by MIE at Conference on Business Opportunities in Saudi Arabia, organized by CBI held in London - June 1990.

(6) Guidelines and Proposals for promoting small scale industries in Saudi Arabia.

(7) Review and Comments on study "Small and Medium Industry in GCC region" by UNIDO.

(8) Preparation of list of main manufacturers of Capital goods in Europe with a view to promote local manufacturing activity.

(9) Review and comments on ESCWA studies on framework for a master plan for the development of technological capabilities in Arab world in, (a) Capital goods and engineering industries. (b) Iron and Steel industry.

- (10) Documentation on Al-Yamamah Offset Programme and Investment Opportunities for presentation at special session on Al-Yamamah Programme by MIE at Fourth Saudi Business Conference in Nov. 1989.

3. Project identification and preparation of brief pre-investment studies/project profiles and market studies.

- (1) Market study on wire mesh for fencing.
- (2) Market study on trailers, tankers and tippers.
- (3) Survey/study on pressure vessels and chillers.
- (4) Brief project profiles on:
  - Arc welding plant
  - Pumps assembly plant
  - Electroplating plant
- (5) Market study on Dyes and Tools for Engineering industries.
- (6) Project profile for automobile spare parts manufacture.
- (7) Report outlining a model and guidelines for establishment of center for servicing requirements of small industries.
- (8) Project profiles of industrial investment opportunities in:
  - Mineral crushing and sorting machinery
  - Fabrication of agricultural and reclamation machinery
  - Machinery for cleaning and filling containers
  - Production of paper and tissues
  - Shrink-wrap polyethelene.
- (9) Investment Opportunities on following Petrochemical projects in Final Report of NPPP Industrial Chemist.
  - (i) Acetic Acid/Acetic Anlydride
  - (ii) Vinyl Acetate manamar/Polyvinyl Acetate
  - (iii) Adipic Acid/Hexamethylenediamine
  - (iv) E-Ceproloctum
  - (v) 2-Ethylhexanal
  - (vi) Acetone/Phenol

**4. Operation of Technical Service Workshops in industrial estates.**

- (1) 4 Major Status reports on the operation of workshops indicating measures for the improved performance in 1987 and 1988.
- (2) Report on evaluation of tenders received for lease of Dammam Industrial Estate Technical Workshop.
- (3) Report on proposals for the future operation of the Technical Workshops in Riyadh and Jeddah (which are not leased to private firms).
- (4) Review and comment on in-plant Group training programme in the field of mould making.
- (5) Brief study on requirements for environmental protection for industrial estates effluents.

**5. Trade policy, promotion of industrial exports, export incentives and review of trade agreements.**

- (1) Background Papers and Review Reports including summary of main issues on the proposed Economic cooperation/ Investment promotion and protection agreements between GCC and USA; and GCC and EEC.
- (2) Briefing paper I and II on Global System of Trade Preferences.
- (3) The importance for Saudi Arabia to join GATT.
- (4) Prospects for EEC-GCC trade relations and comments on
  - (a) EEC proposals on a Trade Agreement with GCC and
  - (b) Working Paper on GCC Strategy for Cooperation with EEC. (c) Exchange of trade preferences as an alternative to Free Trade Agreement between EEC and GCC.
- (5) Comments on two prototype agreements of private barter and related inter-bank agreements.
- (6) Paper on "Counter Trade and the development of industrial exports in Kingdom."
- (7) Report on Saudi Arabia and the Global System of Trade Preferences (GSTP).
- (8) Analysis of four ITC studies on Export Promotion, Financing, Training and Trading Houses.

- (9) Analysis of Economic and Trade agreements between Saudi Arabia and Arab countries and its role in promotion of industrial exports.
  - (10) GCC Petrochemical exports to EEC and analysis of sensitive items.
  - (11) Comments on draft agreement on trade preference among Islamic countries.
  - (12) Comparative study on the export incentive schemes in developing countries and its application to Saudi Arabia.
  - (13) Kingdom and the Generalised System of Preferences (GSP).
  - (14) Framework for study for the establishment of an export credit guarantee scheme for the GCC countries.
  - (15) Economic Profile of Egypt with special reference to Trade.
  - (16) Economic Profile of Turkey with special reference to Trade.
  - (17) Report including data on Saudi imports from certain EEC countries as UK, Germany by 100 main tariff section from 1982 to 1988. (Data collection and analysis to assist in preparing position papers for GCC-EEC trade negotiations).
  - (18) Economic Profile of Iraq with special reference to Trade.
  - (19) Economic Profile of Jordan and North Yemen with special reference to Trade.
  - (20) Economic Profile of Switzerland with special reference to Trade.
  - (21) Comments with revision of paper by Saudi Industrial Export Company or Saudi Arabian industry. 20 years of dynamic development and diversification of exports.
6. Priority Work Areas Of Senior Management In IAA
- (1) Review and Comments on Board Papers for Board Meetings of Eastern Petrochemical Company (SHARQ) - Subsidiary of SABIC.

- (2) Review and Comments on 1987 Business Plan and Budget of SHARQ.
- (3) Proposal for SHARQ negotiation on Oxygen prices with National Gas Company.
- (4) Review of Present Problems and Recommendations for Improved Performance of Arabian Axle Manufacturing Company (AAMC).
- (5) Status Report of AAMC and Annual Progress Report of AAMC.
- (6) Background Papers on Items for Discussion in Agenda of Saudi-Swiss Joint Commission Meeting in July 1988.
- (7) Comments and Notes on UNIDO Country Profile on Saudi Arabia.
- (8) Briefing Paper and Review of documentation for UNIDO 2nd General Conference.
- (9) Special Reports on;
  - (i) - Review of Restructuring PETROMIN - Financial Structure and Subsidy Analysis of SAMAREC.
  - (ii) - Comments on SAMAREC 1989 Budget vs. 1988 Budget.
  - (iii) - Comments on 'Special Report' on PETROLUBE to the PETROMIN Board.
  - (iv) - Review of 28th and 29th and 30th Board Memos for National Methanol Company Board, (IBN-Sina - Subsidiary of SABIC).
  - (v) - Review of some Board memos of HADEED (Subsidiary of SABIC).
  - (vi) - Review of some Board memo of Saudi-German Investment Company SAGECO.
- (10) Guidelines and procedures for survey and licensing of small scale workshops and service industries.
- (11) Evaluation and comments on GOIC study on transport of industrial products and commodities from and to Arab world.
- (12) Comments and Review of papers relating to Saudi Economic Offset Committee.

- (13) Comprehensive report on Electrical Cables Industry, balancing of production lines, the unavoidable infusion of the semi-finished materials to the production line as practiced by the major world cable manufacturers with particular emphasis on the case of the Saudi Cable Company (SCC) Jeddah and entitlement for duty exemption on their imported semi-finished components for period 1985 to 1987.

Report also assists MIE to review its position on duty exemption to electric cables industry.

- (14) Status report on the technical comparison between Juffali and Al-Zamil refrigeration equipment manufacturers.
- (15) Status report on the technical comparison between Omega and Saudi Lighting Companies and Status report on Al-KHALDI electronic Company.
- (16) Specifications of transport equipment in accordance with ISO, SASO and traffic regulations in the Kingdom and effect of applying both traffic regulations and SASO standard No. 4230 on the transport industry.
- (17) Proposal for defining the local content of manufactured products for purpose of duty exemption within GCC countries.
- (18) Booklet on Industrial Cities in the Kingdom.
- (19) Status report on pick-up deck manufacture in the Kingdom.
- (20) Protective and Exemption measures in kitchen cabinet manufacturing case study TANNAH.
- (21) Comments on GOIC study on Aromatics.

#### 7. Special Reports

- (1) Preparation of project document for phase III - Industrial Development Support Services SAU/89/022.
- (2) Final Report of Industrial Engineer - S. Gindy.
- (3) Final Report of NPPP Industrial Chemist M. Sharabash.
- (4) Review and comments on "Survey of Industries 1408" conducted by CCFI for Ministry of Industry.



**ANNEX 4**

**NATIONAL STAFF WHO FUNCTIONED AS PART-TIME COUNTERPARTS**

- |                              |   |
|------------------------------|---|
| 1. Mohammed Ali Al-Mussallam | Asst. Deputy Minister for Industrial Affairs. Part-time National Project Coordinator. |
| 2. Khalid Al-Shelail         | Head Foreign Relations - FCIB   |
| 3. Mohammed Al-Muwainie      | Head Investment Promotion - FCIB  |
| 4. Ahmed Al-Saloom           | Investment Promotion - FCIB.  |
| 5. Abdul Aziz Al-Duwaig      | Project Evaluation Officers   |
| 6. Anwar Al-Sharif           | Licensing Department.   |
| 7. Awad Baheth               |   |
| 8. Omar Abdul Latif          | Acting Manager, Computer Dept.  |
| 9. Khalid Al-Kadi            | Asst. Manager and Systems Analyst   |
| 10. Eng. Othman Al-Babtain   | Director, of Engineering Dept.  |
| 11. Eng. Sulaiman Al-Solei   | Director, Industrial Estates Dept.  |
| 12. Eng. Saleh Al-Hadad      | Supervisor, Jeddah Workshop   |
| 13. Eng. Ibrahim Al-Thabith  | Supervisor, Dammam Workshop   |
| 14. Eng. Mohammed Al-Khulaif | Supervisor, Riyadh Workshop   |
| 15. Mohammad Al-Khateeb      | Director, Export Promotion Dept.  |
| 16. Mushabab Al-Saad         | Deputy Director, Export Dept.   |
| 17. Sulaiman Aba Al-Khail    | Marketing Section, Export Dept.   |
| 18. M. Rushdi                | Deputy Director, Protection and Encouragement Dept.                                   |
| 19. Abdul Aziz Al-Suwaid     | Economist, Protection and Encouragement Dept.   |
| 20. Khalid Al-Hazhei         | Economist, Protection and Encouragement Dept.   |
| 21. Ali Al-Ghamdi            | Economist, Protection and Encouragement Dept.   |
| 22. Khalaf Al-Haluwa         | Statistician, Statistics Dept.  |

ANNEX 5EVALUATION OF PHASE-I PROPOSALS

Name of Company	Total Cost SR	Capability and Experience	Team of Consultants	Coverage of Subject and Methodology	Implementation Schedule	Remarks	Overall Total and Ranking
Technically Acceptability Limits		65%	65%	50%	60%		
(1) Arabian Data Systems	174,839	78%	52%	75%	58%	Not Tech. Acceptable	263
(2) CCFI	459,839	76%	79%	80%	92%	Tech. Acceptable.	327
(3) Al-Fayez	197,400	40%	48%	63%	80%	Not Tech. Acceptable.	231
(4) Abdulaziz Al-Barrak Price-Waterhouse	598,400	65%	84%	83%	90%	Tech. Acceptable.	322
(5) Abdul Majid Mohandis with Arthur Anderson	680,000	40%	54%	90%	90%	Not Tech. Acceptable.	274

Contract awarded to CCFI for SR 318,300  
 CCFI proposal involves 18.75 m/m of Consultants  
 Therefore cost per m/m = SR 16,976 (\$4525)

ANNEX 6

SUMMARY OF EVALUATION OF HARDWARE AND SOFTWARE BIDS

Name	Total Bid Price (A+B+C+D+E+F) SR	Part-I Technical Evaluation on Key Parameters	Part-II Detail Technical Evaluation (Weighted Score for Items A thru D).	Price Performance Ratio
1. Saudi Business Machines Ltd.,  IBM.	2,857,591	Eliminated Insufficient Information	-	-
2. National Computer Systems Co.  DIGITAL	2,303,815	Qualified	52.80	40.89
3. Modern Electronics Est.,  HEWLETT PACKARD	3,266,693	Eliminated on I-O Rate	-	-
4. Arab Digital Computer Company  UNISYS	1,684,117	Qualified	51.80	30.67
5. Jeralsy Computer Services,  WANG	2,245,765 (Opt. 1) 3,074,090 (Opt. 2)	Eliminated on MIPS Rate and I-O Rate	-	-
6. Mohammad M. Al-Rumalh Est., Mideast Data Systems S.A.  DATA GENERAL	1,949,110 (Opt. 1) 2,460,719 (Opt. 2)	Qualified	52.57	42.27
7. Modern Electronics System Co. Ltd.,  AT & T	2,315,077 (Opt. 1) 2,439,510 (Opt. 2)	Eliminated on I-O Rate	-	-
8. International Sys. Engineering,  AT & T	2,501,027 (Opt. 1) 2,625,460 (Opt. 2) 2,966,837 (Opt. 3)	Eliminated on I-O Rate	-	-

Contract was awarded to Arab Digital  
Computer System Company for SR 1,795,900

ANNEX 7

UNISYS COMPUTER SYSTEM

(1) Main System

U 5000/95 MODEL Z System cabinet with two coupled 68020 pro-cessors which supports up to 128 users with 20 MG memory, 1.2 GB storage, 1½" tape drive, 1¼" tape drive, console terminal with 14" display and keyboard includes: U 5000/95 Sized Expansion Cabinet which can support up to 4 disk drives and one tape drive or 2 tape drives and 2 disk drives.

(2) Terminals

36 Alis Bilingual ASCII Terminals with 14" Mono Display 80/132 Ch. and Bilingual Keyboard.

(3) Printers

1 Alis System Printer Bilingual-Shuttle Matrix 800/600 LPM.

6 Unisys Model 37 Bilingual Printers 10 PPM (1 MB Memory, Serial/Parallel Interface, 300 X 300 dpi, A4 Paper Cassette).

5 Alis Bilingual Dot Matrix Printers 300/100 - 132 Col.

(4) PC's

19 Unisys PW 2/500 Micro Computers including: 640 KB RAM, 1.2 MB Floppy Disk Drive, VGA Controller, VGA Colour Graphics 14" Monitor, 40 MB Hard Disk.

1 Unisys PW 2/800 Micro Computer including: 10 MB RAM, 1.44 MB - 3.5" Floppy Drive, 1.2 MB - 5.25" Floppy Drive, 320 MB Hard Disk Drive 150 MB ½" cartridge tape drive, VGA Controller, 14" VGA Colour Display.

(5) System Software

1 32 + User UNIX System V Operating System including C and Assembly Languages.

1 RM Cobol Compiler, 1 SVS Fortran, 1 MUX-5000 Software and 1 Tektronic 4105 Terminal Emulator.

**(6) Data Base Management Software**

**1 ORACLE 5.1 including: Relational Data Base Management**

**contains the Kernal, SQL Plus, SQL Forms, SQL Reports, Utilities, Pre-Processors for Cobol and C and A subroutine interface to the two languages.**

**1 C-ISAM for U5000/95, 1 Oracle for PC.**

**(7) Decision Support Software**

**1 SPSS-X for U5000/95, SPSS-X integrates complex.**

**1 SPSS-X Tables for U5000/95 SPSS-X Tables Products.**

**(8) Network Hardware & Software**

**1 5000/95 PCI is PC Integration Software with DOS shared file support and Network Server programmes which links the U5000/95 with PC's running PC-PC software.**

**34 PCI-PC contains the basic terminal emulation functions.**

**34 JESSR Arabic Terminal Emulators.**

ANNEX 8

EVALUATION OF PHASE-II PROPOSALS

<u>Name</u>	<u>Price (SR)</u>	<u>Technical Evaluation (Percent)</u>	<u>Technical Acceptability (Min. 60% for technical acceptability)</u>
1. Arabian Data Systems	1,293,200	57%	No
2. Arab Digital Computer Co.	1,333,500	55%	No
3. Al-Fayez Consulting Office	476,818	47%	No
4. Allied Accountants In association with Arthur Anderson.	2,032,695 (Opt. 1) 2,283,800 (Opt. 2)	66%	Yes
5. Consulting Centre for Finance & Investment	692,000 (Opt. 1) 622,400 (Opt. 2)	79%	Yes
6. International Systems Engineering	1,073,215 (Opt. 1) 654,250 (Opt. 2)	61%	Yes

Contract awarded to CCFI for SR 685,000  
 CCFI proposal involves 49 m of Consultants/Professionals  
 Therefore cost per m/m = SR 13,980 (\$ 3728)