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**Project: US/BOL/84/115**

**"ESTABLISHMENT OF A TRAINING CENTRE FOR MEAT,  
DAIRY PRODUCTS, FRUIT AND VEGETABLE PROCESSING INDUSTRIES"**

**Terminal Report**

**Prepared by P.I.S.I.E.  
Politecnico Internazionale per lo Sviluppo Industriale ed Economico  
acting as a sub-contractor of the United Nations Industrial Development Programme**

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## A. Introduction

### Project background

In the frame of the Italian Technical Co-operation for the Developing Countries, the Government of Italy approved in October 1985 the Project Document prepared by U.N.I.D.O. under the title "Establishment of a Training Centre for the Meat, Milk, Fruit and Vegetables Products Processing Industries".

After the approval of the Project strategy by the Bolivian Ministry of Planning in 1986 U.N.I.D.O. prepared the Terms of Reference dated July 18th, 1986, further substantiated by the amendments set forth in the Minutes of the meetings between representatives of U.N.I.D.O. and P.I.S.I.E., held on October 20-21, 1986 in Vienna, which allowed the definition of the contract 86/84 signed on May 25th, 1987 between the project execution Agency U.N.I.D.O. and the sub-contractor P.I.S.I.E.

This institution, anyhow, in view of the formal signature of the contract and responsive to the urgency shown by the counterpart in having the project promptly implemented, already in December 1986 sent a mission composed by her Team leader and her architect to Bolivia to explore the local situation and to save time in the progress of the project.

Actually the scarcity of good quality foods produced in Bolivia was affecting not only the people welfare but also the economy of the country due to a great quantity of products smuggled in Bolivia from Argentina, Brasil and Chile.

P.I.S.I.E. has been selected as the most convenient organisation for the purpose due to its experience in the Food Processing sector and specially the corresponding transfert of technology technique.

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The vastness of the sector of reference along with the number of immediate objectives to be achieved by the Project may hardly find precedents in these type of projects, therefore the efforts made by PISIE's people in this case have been unique and original.

**Official arrangements.**

As a result of the approval in May 1986 of the Terms of Reference prepared by U.N.I.D.O. and after the identification of the sub-contractor, the Executing Agency of the Project urged informally P.I.S.I.E. to advance all possible activities while formalizing the contract.

For this reason P.I.S.I.E. sent the mission mentioned above to Bolivia so early as possible in december 1986 with the target of exploring the local situation in view of the next steps to be undertaken in the immediate future.

The realization of the mission was approved by the backstopping officer in charge at that time and the director of the Training Branch I. Lorenzo.

With the finalization of that mission the Project entered its implementation phase.

The technical assistance provided by P.I.S.I.E. culminated with the delivery to U.N.I.D.O. on March 1st, 1988 of the construction project of the Centre along with its corresponding Organisation Manual.

Later on, in March 1989, P.I.S.I.E. finalized at the extent permitted by the situation its commitments by handing over to U.N.I.D.O. the description of the Training Programmes for the experts to be employed in the Centre.

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**Objectives of the project**

The Terms of Reference of the Project US/84/115 joined to the Project DP/BOL/83/012 state clearly the Development Objectives as well as the Immediate Objectives that originated the aims of the contract 86/84 between U.N.I.D.O. and P.I.S.I.E.:

- a) To obtain the technical documentation for the Establishment of a Training Centre for the Meat, Dairy, Fruit and Vegetable Processing Industries, suitable for the local training needs and for the services to be rendered at national level;
- b) To produce the Training Centre Organization Manual;
- c) To produce some training programmes, which will be defined with the Government;
- d) To supervise construction and installation activities by spot-checks at the conditions set forth in the Contractor's Proposal No. 1257, Alternative "B", of August 22nd, 1986, as amended on October 21, 1986.

The above mentioned aims of the contract are to be assumed as the objectives of the project as for the participation of P.I.S.I.E. in the same.

The objectives of P.I.S.I.E. have never been changed by U.N.I.D.O., but the general development of the Project has been affected by reasons beyond the control of both organizations and therefore a lot of unforeseen activities had to replace the institutional ones to bring again the situation in the original frame of project implementation.

The objective a) has been fully met, but the final official approval of the Technical Documentation produced by P.I.S.I.E. with a great effort to meet the original schedule, could only be achieved after numerous extra-costly and redundant interventions of P.I.S.I.E. under different forms: when it was finally determined that the hinder towards the approval of the Centre construction project was caused by the lack of sufficient funds by the bolivian counterpart, P.I.S.I.E. went so far to endeavour an additional financing of the Project.

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The approval of the Technical Documentation produced by P.I.S.I.E. occurred officially only the 21st of June 1988 i.e. fifteen months after the date to be expected according to the contract 86/84.

A number of unforeseen missions had to be undertaken by P.I.S.I.E. to satisfy the requests of its counterpart aimed to clarify obvious questions, to provide unnecessary data on calculations for which P.I.S.I.E. had taken full responsibility and to introduce additional or modifications requested by various consultants entrusted with repeated evaluations of the construction project.

The objective b) has been fully met in a total accordance with the schedule and the forms set forth in the contract 86/84.

The objective c) has been met as far as the development of the project allowed the production of training programmes:

the documents describing the programmes were mailed to U.N.I.D.O. on March, 24th, 1989 and four times the teaching team has been alerted for the start of the various courses, but the fase of recluting the expert to be trained for the account of the counterpart underwent several stoppages related to the local financing of the Project.

After the repeated postponements proposed by the counterpart and facing the present stagnant situation of the Project, P.I.S.I.E. feels having fulfilled also this obligation according to the contract 86/84.

Noneless, should the need arise to once again organize one of the programmed courses, P.I.S.I.E. - within the lapse of the 3.5 years counted from the contract signature-will be willing to satisfy the corresponding request from U.N.I.D.O.

The objective d) - limitedly to the 3.5 years during which P.I.S.I.E. will remain associated to the development of the Project-is to be considered as met by P.I.S.I.E. that not only has engaged an own Engineer as a Technical Supervisor of the works as soon as the Technical Documentation was approved and for the period of 12 months, but is still available for spot-checks requested by the counterpart on the basis of Advisory Services.

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**Training**

As for the training programmes of the bolivian experts-which had to coincide with the formation programmes to be applied at a later stage also in the Training Centre- the situation has been described before, nevertheless it must be mentioned that a sort of similar activity was developed by P.I.S.I.E. during the Study Tour carried out by the bolivian representatives of the counterpart in Italy where a special training tour was organized with important specialized institutions.

**Equipment**

According to the contract 86/84 P.I.S.I.E defined the technical specifications of the equipment to be purchased by U.N.I.D.O. in order to equip the Training Centre for its proper run already in 1988. In addition to that P.I.S.I.E. endeavoured to assist U.N.I.D.O. also in the search of possible different suppliers and once the Executing Agency ordered the laboratory equipment a lot of work was done to organize packaging, deliveries, packing in containers, storage in a convenient harbour for shipment by cargo etc.

Further to dely in the shipment of the material ready in the storage, P.I.S.I.E. took care of the situation even in organizing an extension of the terms of guarantee offered by the suppliers at the moment of each single delivery.



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### B. Recommendations

1. **The experience gained with this project suggest a very careful investigation on the capability, possibility and convinced willingness of the counterpart to really and positively participate in the finalization of any project of this nature. The investigation to be finalized preliminarily and out of any political influence.**
2. **The Resident Representative agreement on the Project Document is essential for the necessary backup during the whole project implementation in order to avoid field personnel uneasiness which turns into unexpectedly ruinous results.**
3. **The project implementation schedule must be strictly respected by all parts taking part in a project implementation:  
the shortest the implementation, the lowest the risk of unpredictable troubles.  
Should the approval time of the Technical Documentation have been respected by the counterpart, the project wouldn't have entered the impasse period of local political troubles.**
4. **The organization activity of the backstopping officer is unvaluable to keep the situation under control and the continuity of his presence within the project implementation is essential for a smooth and conscious going on of all parts activities.  
It should be avoided any in-flight change of the pilot.**
5. **The backstopping officer should follow more closely the projects assigned to him and it would be convenient many times to pay a direct visit to the involved parts to judge the real instances of each phase of the project.  
In this project it would have been extremely useful a technical judgement of the work produced by P.I.S.I.E. to avoid tremendous time losses in purely instrumental evaluations and re-evaluations of quality standards when the sub-contractor had assumed the whole responsibility of his outputs.**

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**CHAPTER I. ACTIVITIES AND OUTPUT****A. Activities**

1. Preparatory Mission (Team Leader and Architect for one week) - Dec.1986
2. Survey Mission (Team Leader, Meat, Milk, Fruit, Vegetables and Organization Experts for one month visiting 8 departments of Bolivia) - January 1987
3. Preparation of three documents: Project Schedule together with proposed team work tactic, Study on the results of the four experts mission for the determination of the bolivian training and services needs, Preliminary drafting of the structure of the training Centre.
4. Presentation Mission to explain and discuss the three a.m. documents and to deliver an Addendum to the Study on the bolivian training and services needs (Team Leader and Architect) - April, 1987
5. Preparation of Preliminary Construction Project
6. Presentation Mission to explain and discuss the Preliminary Construction Project (Team Leader and Architect) - July, 1987
7. Preliminary Construction Project approval and relocation Mission (Architect) - November, 1987
8. Training Centre Organization Manual preparation Mission for one month (Team Leader and Organization Expert) - December, 1987
9. Preparation of the Final Construction Project and Centre Organization Manual
10. Delivery of the final Construction Project and the Centre Organization Manual- March, 1988
11. Final Construction Project discussion Mission (Team Leader) - April 1988
12. Preliminary achievement of additional project financing by the italian Government (PISIE's mgr.) - June, 1988
13. Preparation of the Technical Specifications of the Laboratory and Technological Equipment

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14. Recruitment of a bolivian civil engineer for the supervision of the construction works according to the building project.
15. Preparation of seven Formation Programmes for bolivian experts.
16. Search of suppliers for Laboratory Equipment, supervision of the purchased equipment, selection of packaging, organization of delivery times and logistic, search of proposals for insurance on account of U.N.I.D.O. etc.
17. Organization of supplies visits to the stored equipment for the extension of quarantees.
18. Preparation of additional technical documents for U.N.I.D.O. consultants entrusted with the Project Evaluation
19. Organization of the Study Tour for the counterpart bolivian representatives
20. Revision of the technical bolivian specifications for the tender of construction.

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## **B. Output**

- 1. Centre location study-December 20th, 1986**
- 2. Construction project Schedule and work tactic  
Document - March, 15th, 1987**
- 3. Study on the bolivian needs of training and services - March, 15th, 1987**
- 4. Preliminary outline of the Centre layout - March, 15th, 1987**
- 5. Addendum to the Study on the bolivian needs of training and services - April, 7th, 1987**
- 6. Text of a Centre description article to be published on the bolivian press - May, 19 th, 1987**
- 7. Preliminary Construction Project - May, 15th, 1987, comprising:**
  - Fundaments of the project**
  - Design of the construction**
  - Design of the operation rules of the Centre**
  - Appraisal of the investments**
  - Identification of the technical runnig cost of the Centre**
  - Forecast of the income sources**
  - Works execution schedule**
- 8. Centre re-location study - October 21st, 1987**
- 9. Final Construction Project of the Centre - March, 1st, 1988 comprising:**
  - Architectural specifications and drawings**
  - Construction engineering specifications and drawings**
  - Bill of quantities of all construction materials**
  - Utilities specifications and drawings**
  - Utilities materials bill of quantity**
  - Specifications of technological equipment**
  - Specifications of Laboratory Equipment**
  - Functions and Services Description**
- 10. Organization Manual of the Centre - March 21st, 1988**

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11. Specifications of the purchased Laboratory Equipment
12. Specifications of the laboratory equipment cases in the warehouse rented by U.N.I.D.O. in Mestre
13. Specific construction calculation details for U.N.I.D.O.'s civil engineering consultant

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## CHAPTER II. ACHIEVEMENT OF IMMEDIATE OBJECTIVES

### A. Comparison with Schedules

The schedule of the work to be carried out by P.I.S.I.E. was established in the contract 86/84 as follows:

- a) 1 - 1.5 months counted from the date of contract entering into effect, to produce a document on the needs of training in Bolivia based on a direct local inquiry.
- b) 2.5 months counted from the same date to produce a document, the so-called Preliminary Construction Project, indicating the basic layout of the Centre, its logical fundamentals, achievable results and detail of local and international investments
- c) 3.5 months counted from the approval of the Preliminary Construction Project by the counterpart to produce the Final Construction Project
- d) 2 - 3 months counted from a date between the start and the end of the Final Construction Project preparation to produce the Organisation Manual of the Centre
- e) 4 months counted from the same date for the preparation of some Formation Programmes

The schedule of the obligations of the counterpart is the following:

- m) 2 weeks counted from the delivery of the Preliminary Construction Project, to approve the same (see contract 86/84 and annexes)
- n) 1 month to approve the Final Construction Project (see project planning shown in the Preliminary Construction Project approved by the counterpart on September, 19th, 1987)

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The official date of the entering into effect of the contract 86/84 is May 25th, 1987 and P.I.S.I.E.'s commitments were satisfied

- a) on March 15th, 1987 and April 7th, 1987 (Addendum)
- b) on May 15th, 1987

The approval of the Preliminary Construction Project is dated September 19th, 1987, but (due to the re-location of the Centre) the official date of this approval is November 16th, 1987 when P.I.S.I.E. received a confirmation of the new Centre site and P.I.S.I.E.'s commitments were satisfied

- c) on March 1st, 1988
- d) on March 21st, 1988
- e) on March 24th, 1989

**Remarks:**

- P.I.S.I.E.'s obligations a) to d) have been fully satisfied
- The counterpart obligation m) to approve the Preliminary Construction Project took 18 weeks instead of two
- The counterpart obligation n) to approve the Final Construction Project took 15 weeks instead of four (Approval date: June 21st, 1988)
- P.I.S.I.E.'s obligation e) was delayed four times by the counterpart because of delay in their recruitment of personnel

### B. Comparison with objectives

The services to be provided by the Contractor are well explained in the Terms of Reference where the immediate objectives of the Project determine the evaluation criteria by which the quality of the work carried out by him can be weighed.

P.I.S.I.E.'s work for this project has gone far beyond the common concern of a contractor: besides the irreproachable technical content of the five volumes which illustrate in all details how any responsible constructor have to build the Training Centre, besides the experience contribution given with the Organisation Manual, the Fundamentals describing the principles on which this institution should operate show at what extent P.I.S.I.E. endeavoured to enterprete the targets of the financing country and U.N.I.D.O.

The philosophy proposed in this project by P.I.S.I.E.'s intelligentsia is the one which once in a while establishes the real link between Immediate and Development Objectives.

In other words, limited to the respect of the technical theme and target of urgency felt by all concerned parts this preliminary phase of the projects US/BOL/84/115 and DP/BOL/83/012 has been fully recognized by the counterpart, the several consultant called to its evaluation and by U.N.I.D.O.'s officials as highly correspondent to the output expected from the Contractor.

Unfortunately the results expected in the Project Document don't limit themselves to the design and definition of all organisation details of the Training Centre, but extend up to its finalisation and run.

For the time being it seems that the Project is hindered by financial obstacles of counterpart, nonetheless it has to be recognized that all activities for its implementation have been successfully carried out by P.I.S.I.E. according to contract.



### CHAPTER III. UTILIZATION OF PROJECT RESULTS

The heading of this chapter refers to the project, word that for P.I.S.I.E.' s sake indicates the works carried out to fulfil the obligations set forth in the contract 86/84 with U.N.I.D.O.

The results of this project have beer already utilized by the counterpart for the preparation of the Tender Documents which have been distributed among thirteen competitors in Bolivia.

Furthhermore the study of the necessary Laboratory Equipment and the identification of the corresponding manufactures allowed its purchase.

The study of the necessary Technological Equipment allowed the identification of possible suppliers and the achievement of corresponding offers for U.N.I.D.O.

The project designed by P.I.S.I.E. allowed also the identification, the size and characteristics of the land purchased by the counterpart for the construction of the Centre.

The technical documentation allowed also the selection of the winner of the tender.

The specifications given with regards to the forecast operation of the Centre allowed the search and selection of the personnel to be employed in the institution.

The information given with the project allowed the counterpart to determine the running cost forecast of the Centre.

A possible future utilisation of the project, should this necessity arise, will be the identification of investments split into separate projects.

The whole project being a package project may be utilized as such and possibly with few adjustments in other place or even sold in its entirety.

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#### CHAPTER IV. CONCLUSIONS

The work commissioned by U.N.I.D.O to P.I.S.I.E. consists of two types of services: the engineering of the Construction Project of the Training Centre to be built in Sucre-Bolivia and the Formation Services for its immediate and useful run for the achievement of the Development Objective of the joined projects DP/BOL/83/012 and US/BOL/84/115.

The nature of these services implies a total entanglement not only of technical origin but also of specific latin-american sociological experience, because the usefulness of the proposed Training Centre is strictly conditioned by the correct link among physical structure, philosophy of the training and interpretation of the regional instances.

Therefore P.I.S.I.E.' s work has been exciting but intellectually hard to design a development module entirely corresponding to the andean region as for present and future requirements.

The Construction Project has been fully recognized as complete and reliable, the Organisation Manual has been positively tested and the Formation Programmes have been completely approved by all parties: they couldn' t be finalized because of counterpart financial problems, but they can be further organized on the same basis if and when this necessity will arise.

Taking for granted that P.I.S.I.E. will remain associated to the project as per contract 86/84 and for the whole foreseen period of 3.5 years, it is to be assumed that U.N.I.D.O. will agree on the fulfilment of their still pending obligations as a final settlement of the contract 86/84 thus demonstrating not only the admission that it has been fully satisfied but also that P.I.S.I.E.' s work has been appreciated in its value of human effort to be at the idealistic level of the United Nations work.