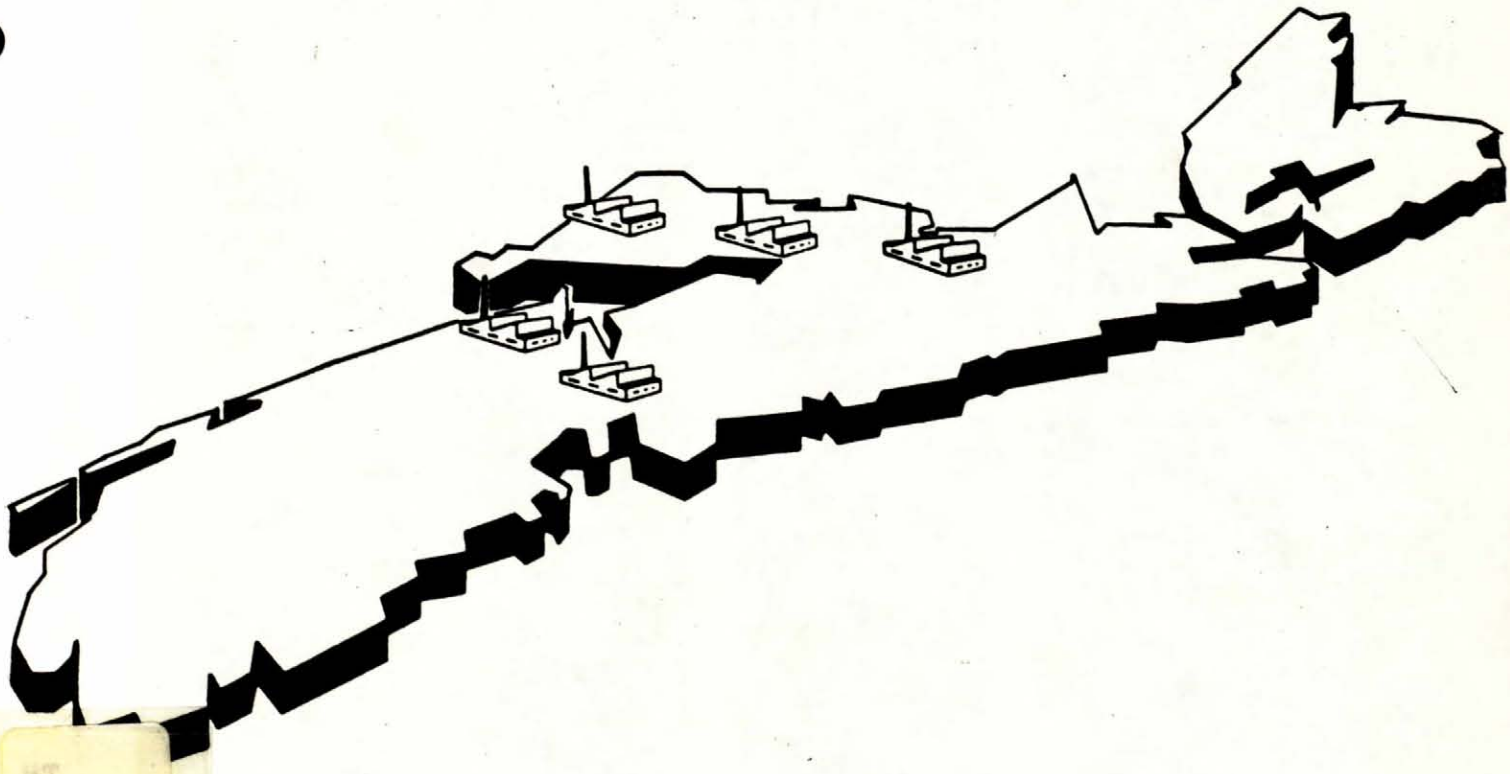
Evaluation of Industrial Development Subsidiary Agreement

FINAL REPORT

**Province Of Nova Scotia,
Department Of Development
And Canada,Department Of
Regional Economic Expansion , Nova Scotia**



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PLANNING AND RESEARCH DIVISION OF LAVALIN

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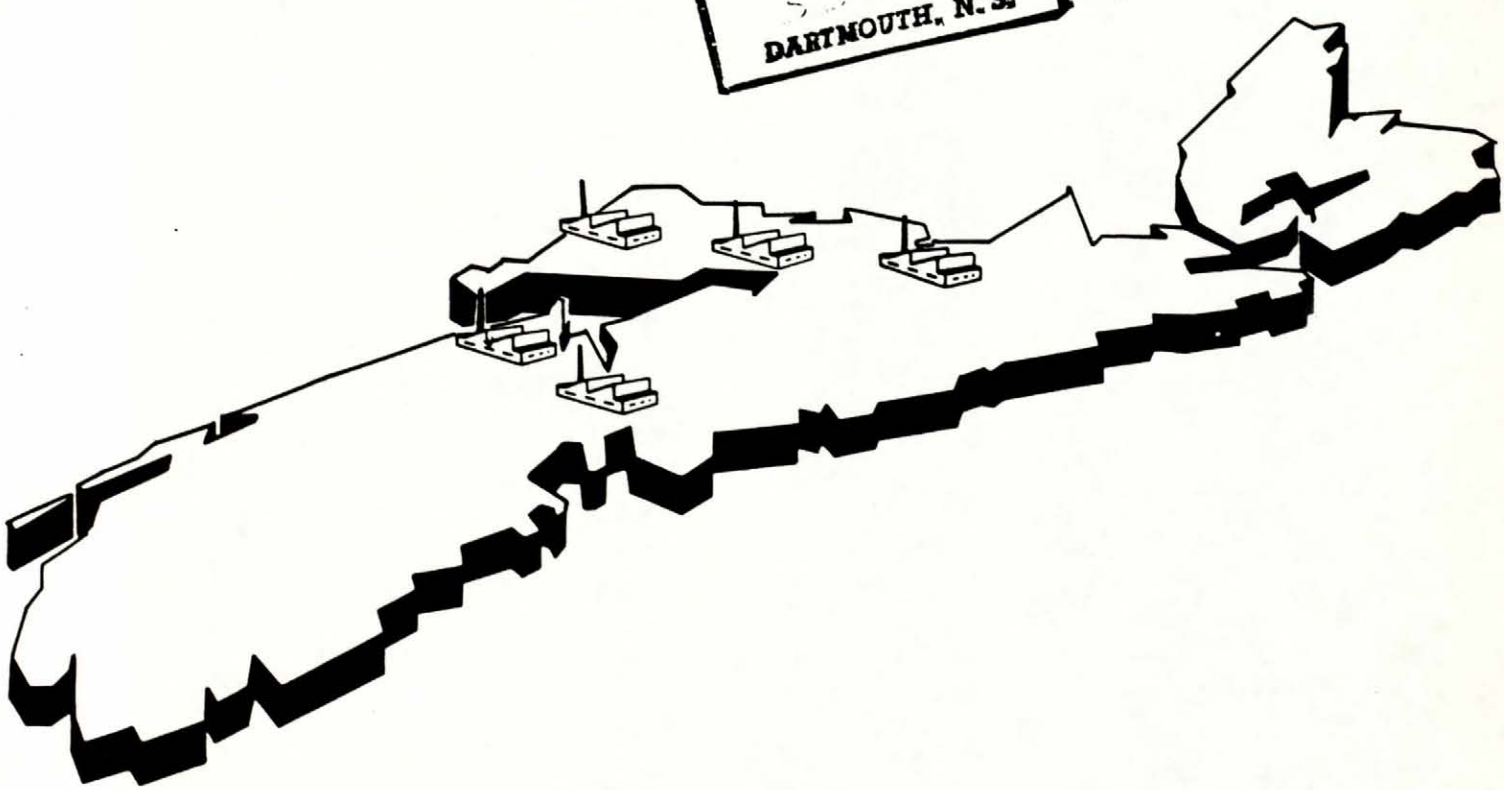

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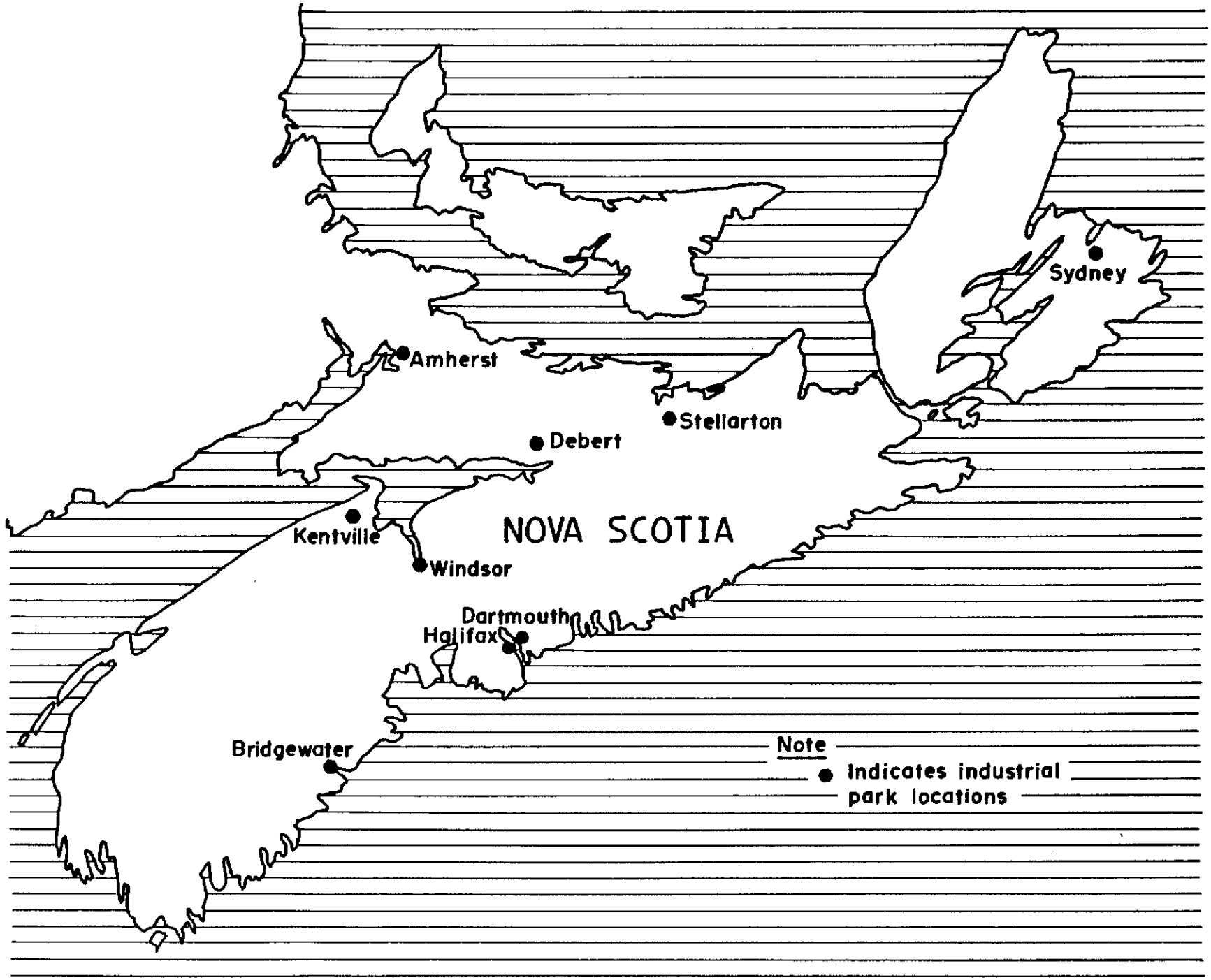
Sydney
Amherst
Stellarton
Debert
NOVA SCOTIA
Kentville
Windsor
Dartmouth
Halifax
Bridgewater
Note
Indicates industrial park locations

Introduction

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INTRODUCTION

The Introduction presents a general outline of:

- the Industrial Development Subsidiary Agreement between the Province of Nova Scotia and the Government of Canada;
- the mandate given to Plansearch Inc. to evaluate the Agreement;
- the methodology adopted.

0.1 DESCRIPTION OF THE SUBSIDIARY AGREEMENT

In September, 1974, the Government of Canada and the Government of Nova Scotia signed a "General Development Agreement" (GDA). A GDA is a joint declaration of principles, by both levels of government, on development potential and opportunities. Subsidiary agreements are subsequently concluded which spell out and define these opportunities. The Industrial Development Agreement signed in June of 1976, is a subsidiary agreement designed to encourage job creation and to raise incomes in a number of particular sectors of the Nova Scotia provincial economy.

The following section will:

- present the main elements of the Subsidiary Agreement;
- indicate the major modifications made to the Agreement during its implementation;
- summarize the distribution of funds among the various programs and projects covered by the Agreement.

0.0.1 The Industrial Development Subsidiary Agreement

As part of an overall strategy aiming at the development of new or expanded employment opportunities throughout Nova Scotia, the Industrial Development Subsidiary Agreement (IDSA) has the following three goals:

- To support the development of new employment opportunities in Nova Scotia in the secondary and tertiary sectors of the economy;
- To encourage the development, expansion and efficiency of indigeneous enterprises in Nova Scotia;

- To increase the variety of employment opportunities available, with particular emphasis on higher skill and higher wage employment, and with particular emphasis on certain intermediate-size communities in Nova Scotia.

The Agreement as signed in June 1976, defined four programs designed to attain these three goals. Table 0.1 illustrates the structure of these programs and the various projects and sub-projects within them. The four programs under the Agreement are:

- the Opportunity Identification, Analysis and Promotion Program, designed to concentrate the development efforts of the Province where the greatest benefits can be obtained;

- the Industrial Parks and Related Infrastructure Program, designed to provide assistance for Industrial Parks Development, for Industrial Commissions, and for specific pilot projects;

- the Industrial Infrastructure Program, designed to provide assistance for the construction of infrastructure to those identified industrial opportunities which cannot be assisted by other means;

- the Public Information and Evaluation Program, intended to keep the business community informed and to make provision for the evaluation of the Agreement and its programs.

The specific objectives of each of these programs and of their associated projects will be presented at the beginning of the appropriate chapters. However, the following points should be noted here in relation to the structure outlined by Table 0.1:

- The Opportunity Identification, Analysis and Promotion Program is shown as comprising three projects, each having a separate budget. Schedule "A" of the Subsidiary Agreement does not use the term

"project", but rather speaks of parts of the program. Since separate financing arrangements are provided for each of the different parts of this program, we have considered them as autonomous, though interdependent, projects.

- In the Industrial Parks and Related Infrastructure Program, the two sub-projects, Parks Associations, and Industrial Buildings, are presented as suggestions. Schedule "A" of the Agreement provides for the definition of other pilot projects in the course of execution of the Agreement.

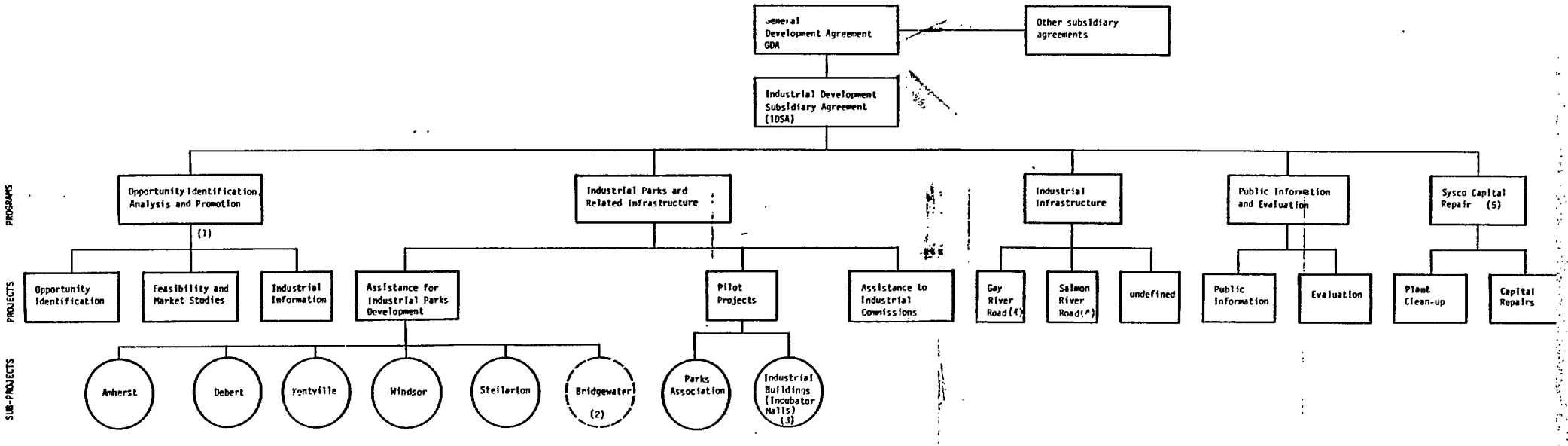
- In the Industrial Infrastructure Program, the Agreement does not specify any particular projects or sub-projects. However it is stipulated that the development of three projects of an approximate value of three million dollars would represent a realistic estimate of the work expected to be accomplished under this program .

0.1.2 Modifications to the Agreement in the Course of Implementation

A number of modifications were made to the Industrial Development Subsidiary Agreement between June, 1976 and January, 1981. While some of these were made simply to clarify aspects of the Agreement, others resulted in substantial realignment of the structure. These changes are listed in 13 official amendments and are included as an Appendix to this text. Following is a summary of the substance of the most important amendments.

In February of 1977, eight months after the signing of the Agreement, Amendment #2 was adopted, substantially modifying the structure of the Opportunity Identification, Analysis and Promotion Program. The three separate parts of the program, each with its own budget, were brought together under one heading and with one budget. The implications of this amendment are examined in the section dealing with the evaluation of this program.

TABLE 0.1
STRUCTURE OF THE INDUSTRIAL DEVELOPMENT SUBSIDIARY AGREEMENT (JUNE 1976)



(1) These 3 projects were combined under one budget in February 1977
(2) The Bridgewater Park was added in September 1978
(3) The Incubator Mall sub-project was defined in November 1978
(4) These 2 projects were defined in May and November 1978, resp.
(5) The program was added in November 1979

Two important modifications were made to the Industrial Parks and Related Infrastructure Program. Amendment #6 in September, 1978, added Bridgewater to the Assistance for Industrial Park Development Project. The second change, mentioned in the Project Brief for the Industrial Buildings Sub-project in November, 1978, involved substantial modifications to the Sub-project. Instead of encouraging some experimentation with shell factories as planned, this project brief proposed instead to experiment with the concept of the Incubator Mall. Two malls were proposed, one within both the Kentville and Debert industrial parks.

Two clarifications were also made to the Industrial Infrastructure Program. As noted, no specific sub-projects had been spelled out under this program. Amendments #4 (May, 1978), and #7 (November, 1978) thus further detail this program by defining the Gays River Road and Power Supply and the Salmon River Road Sub-projects.

Amendment #12, however (signed in November, 1979), constitutes a substantial modification to the structure of the Agreement. The amendment adds a fifth program to the Agreement, the Sysco Capital Repair Program. This addition extends the initial Agreement in terms of both budget (increase of $7 500 000) and geography (Cape Breton).

TABLE 0.2

DISTRIBUTION OF FUNDS AND CHANGES MADE
BETWEEN JUNE 1976 AND MARCH 1980

PROGRAM	PROJECTS	BUDGET (1976)	BUDGET (1980)	DIFFERENCE	%
Opportunity Identication Analysis and Promotion	-	2 850	2 850	0	0
Industrial Parks and Related Infrastructure	a) Assistance for Parks Development				
	. Amherst	3 669	3 321	- 348	- 9,4%
	. Debert	1 520	1 615	+ 95	+ 6,2%
	. Kentville	1 690	1 765	+ 75	+ 4,4%
	. Stellarton	1 000	675	- 325	-32.5%
	. Windsor	1 200	975	- 225	-18,7%
	. Bridgewater	nil	1 200	+1 200	-
		9 079	9 551	+ 472	+ 5,2%
	b) Pilot Project	850	2 840	+1 990	+ 234%
	c) Assistance to Industrial Commission	350	285	- 65	-18,6%
	Total	10 279	12 676	+2 397	+23,3%
Industrial Infrastructure		3 000	603	-2 397	-79,9%
Public Information and Evaluation		160	160	0	0
Sysco Capital Repair		nil	7 500	+7 500	-

0.1.3 Distribution of Funds among the Projects and Programs

Most of the amendments mentioned above resulted in major modifications in the distribution of funds amongst the various programs and projects. These modifications, and a number of other budgetary adjustments, are summarized in Table 0.2.

An examination of the table will show that two of the four initial programs (Opportunity Identification, Analysis and Promotion; and Public Information and Evaluation) have not undergone any budget modification. However, the two other programs have been adjusted significantly. The budget for the Industrial Infrastructure Program was cut by 79.9%, principally to allow for the inclusion of the Incubator Mall pilot project, and for the addition of the Bridgewater Industrial Park. Pilot project budgets increased by 234%, which accounts for a large part of the 23.3% increase in the total budget for the Industrial Parks and Related Infrastructure Program. It should be noted that the sub-projects of the Assistance for Industrial Parks Development Project have undergone several budgetary adjustments, the main one being the transfer of funds from Stellarton and Windsor Parks (decreases of 32.5% and 18.7% respectively) to the Bridgewater Park Sub-project.

There was also an 18.6% decrease in the Assistance to Industrial Commission Project budget.

0.1.4 Summary

The thirteen amendments to the Industrial Development Subsidiary Agreement between June, 1976 and January, 1981, modified the budgets allocated to particular programs or projects within the Agreement, and the structure and content of the Agreement itself. The main changes were:

- unification under one project heading of the three parts of the Opportunity Identification, Analysis and Promotion Program;

- substantial development of the Incubator Mall pilot project;

- addition of the Bridgewater Park to the Assistance for Industrial Parks Development Project;

- addition of the Sysco Capital Repair Program;

- a major reduction of the funds allocated to the Stellarton and Windsor Parks, and to the Assistance to Industrial Commission Project;

- the near disappearance of the Industrial Infrastructure Program, with a budget reduction of 79.9%.

0.2 THE EVALUATION MANDATE GIVEN TO PLANSEARCH INC.

The Industrial Development Subsidiary Agreement will terminate in March 1981. Schedule "A" of the Agreement provided for an evaluation of the Agreement upon its completion. The evaluation is therefore retrospective in nature. The basic concern is to summarize the accomplishments of the Agreement over its five-year term, and to draw some conclusions for future projects of this sort. In this sense, the study differs greatly from the prospective type of evaluation, which would focus on the planning of projects to follow immediately from the present Agreement.

This section will outline:

- the overall objectives of this evaluation:
- the scope of this evaluation.

0.2.1 The Overall Objectives of the Evaluation

The terms of reference refer explicitly to a comprehensive evaluation of the Subsidiary Agreement. The prime focus is therefore on measuring the effectiveness of the Subsidiary Agreement and its programs. However, to be useful to the decision-maker, it is not sufficient to demonstrate only whether the Agreement and its programs have or have not successfully met their objectives. It is also necessary to provide some explanation of the Agreement's and programs' particular strengths and weaknesses and to suggest opportunities for improvement.

The present evaluation, therefore, has the following objectives:

- to measure the effectiveness of the Subsidiary Agreement and its programs; that is, to determine the degree to which the Agreement and its programs have fulfilled their objectives;

- to identify the reasons for the degree of effectiveness;

- to recommend improvements which may be made in the future.

0.2.2 The Scope of the Evaluation

We have already described the general structure of the Subsidiary Agreement. The various levels of this structure were, starting from the top, the GDA level, the Subsidiary Agreement level, the program level, the project level and the sub-project or activity level.

The terms of reference specify that the present evaluation should focus on the level of the Subsidiary Agreement and its programs. An additional independent assessment is required at the sub-project level for the Industrial Mall pilot project.

In theory, any comprehensive evaluation should always proceed from the lowest level. For example, the overall evaluation of Program A is done through aggregating the evaluations and assessments of all the projects and sub-projects of that program. In effect, then, in order to evaluate the Subsidiary Agreement and its programs, we ought to study the results and performance of the Agreement at the level of the projects and sub-projects. However, no in-depth evaluation of these projects will be done; only that information and data directly bearing on the evaluation of the programs and the Agreement will be considered.

Finally, the terms of reference indicate that the evaluation should concentrate on three of the five programs covered by the Subsidiary Agreement. These are:

- the Opportunity Identification and Analysis Program;
- the Industrial Parks and Related Infrastructure Program;
- the Industrial Infrastructure Program.

In summary, the study is directed at assessing the effectiveness of the Agreement and its programs in meeting their objectives. In addition to this, the evaluation includes the assessment of the validity of the malls' underlying concept.

Plansearch's mandate did not include an evaluation of the effectiveness at the sub-project or activity level. It also did not include the evaluation of:

(i) the relevance of the objectives;

(ii) the mix of projects or programs within the Agreement and,

(iii) the level of funding of the various programs.

However, the full analysis of program effectiveness demanded that comments be made on the appropriateness of activities in achieving project and program goals and on the appropriateness of the program mix within the context of the complete Agreement.

0.3 METHODOLOGY EMPLOYED IN THE EVALUATION

As outlined in the preceding section, the terms of reference specify that the evaluation is designed to measure the degree of effectiveness of the Subsidiary Agreement and its programs. In brief, this is done by comparing actual program results with anticipated results and explaining any gap which is found between the two.

To ensure the rigour and comprehensiveness of the evaluation, a methodological approach is required which forces all aspects of the programs (objective, goal, output, input) and all steps of the evaluation (data collection, analysis, evaluation) to be made explicit.

This section will layout and explain this methodology in greater detail. Specifically, the following elements will be discussed:

- the Logical Framework used to describe the Agreement and its programs;
- the eight stages into which the evaluation may be broken down;
- the sources of information on which the evaluation is based.

0.3.1 Logical Framework Used to Describe the Agreement and its Programs

The Logical Framework used in this evaluation is intended to clarify and detail the different aspects of the programs under the Subsidiary Agreement. It breaks down each program and the Agreement itself into four separate and distinct levels.

At the lowest level are the program INPUTS. These are the resources and methods employed by a program to obtain certain results.

The second level are the OUTPUTS. These are the direct results obtained from the application of the inputs.

The outputs of a program are, however, not sufficient to justify the existence of a program. This justification is provided by the third level - the program GOALS. The goals are the anticipated results arising from achievement of the outputs.

Often a program will be part of a broader whole. In this case, the broader context is the Subsidiary Agreement, which is itself a part of the General Development Agreement. It is necessary, then, to define a fourth level, called OBJECTIVES, to relate a program to the broader context in which it is situated.

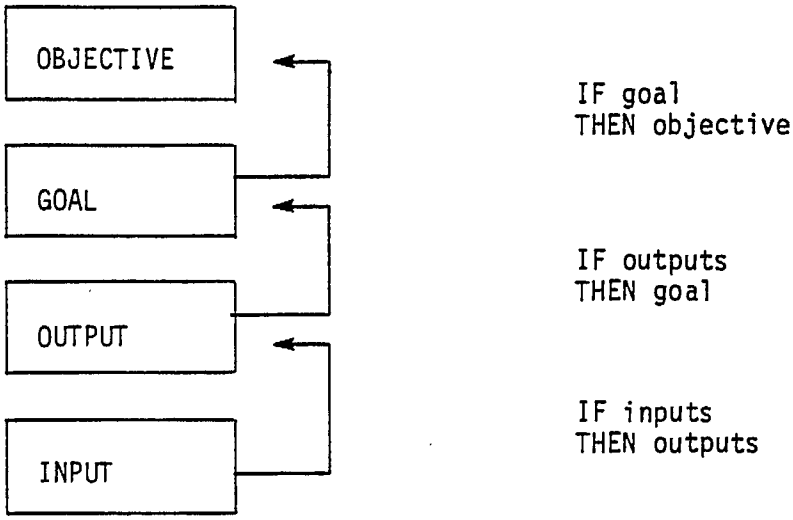
These four levels are closely linked by a series of hypotheses which may be formulated as follows:

1. IF the inputs are managed properly,
   THEN the outputs will be produced.

2. IF the outputs are produced,
   THEN the goal will be achieved.

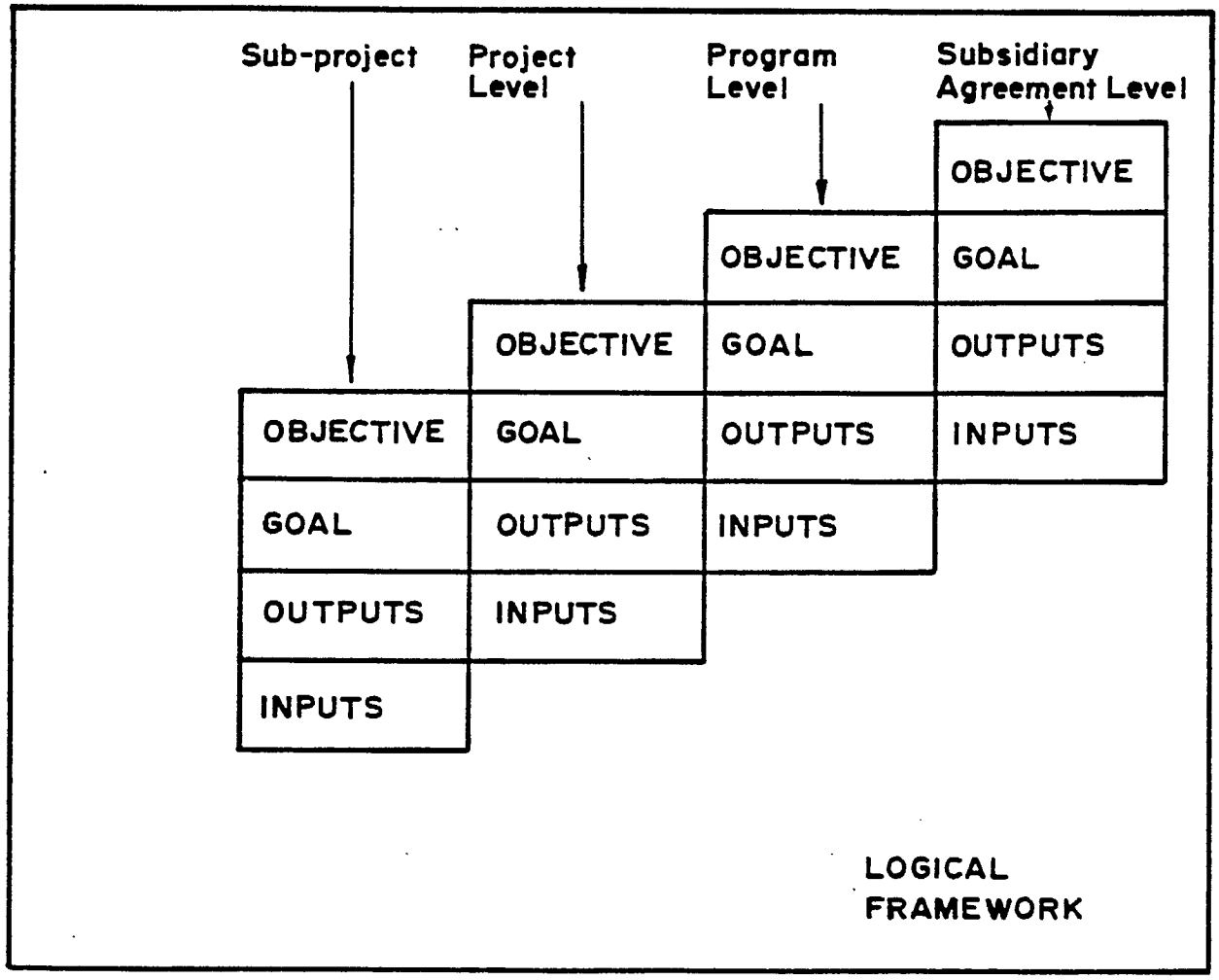
3. IF the goal is achieved,
   THEN this will contribute to achievement of the objective.

This Logical Framework is represented graphically as follows:



In this chart, the hypotheses that link the different levels of a program are laid out in a relatively simplistic fashion. In reality, it is also necessary to take into account a number of factors external to the program, such as strikes, the overall economic situation, and so on, which may have a significant impact on the degree of effectiveness of a program. Nevertheless, this Logical Framework brings the different dimensions of a program into sharper focus and makes it easier to understand how they relate to their larger context - in this case, to the Subsidiary Agreement as a whole.

The Logical Framework is explained above in terms of a single program. But a Logical Framework could also be used to describe the Subsidiary Agreement, as well as each of the projects and sub-projects within it. The following chart illustrates the relationship between different logical frameworks.


Sub-project
Project Level
Program Level
Subsidiary Agreement Level
OBJECTIVE
OBJECTIVE
GOAL
OBJECTIVE
GOAL
OUTPUTS
OBJECTIVE
GOAL
OUTPUTS
INPUTS
GOAL
OUTPUTS
INPUTS
OUTPUTS
INPUTS
INPUTS
LOGICAL FRAMEWORK

For example, in this evaluation, the Industrial Parks and Related Infrastructure Program is made up of three different projects. Each of these projects has its own particular inputs, outputs and goals; however, all share the same objective. As illustrated in the diagram, this joint project objective is also the goal of the program (of which the projects are constituents). In turn, each program has its own goal but all share a common objective. This program objective is the goal of the Subsidiary Agreement.

Each of the Logical Frameworks used in this evaluation will be presented at the beginning of appropriate chapter.

0.3.2 An Eight Stage Evaluation Process

The various Logical Frameworks make it possible to rigorously systematize all the aspects of the Agreement and the programs being evaluated. The FIRST stage of the evaluation is to define explicitly all Logical Frameworks, as explained above.

Once these Logical Frameworks are established, a set of indicators must be developed. By itself, a simple narrative description of objective, goal, outputs and inputs may be interpreted differently by persons involved. The identification of objectively verifiable indicators makes it possible to avoid such confusion. This is the SECOND stage of the evaluation process.

At the THIRD stage, expected values should be determined for each appropriate indicator. For example, the expected value of the output indicator "number of sites serviced" for the Assistance to Industrial Parks project may be 35. Normally, expected values will be determined from studies done prior to program implementation, but frequently they have to be determined or inferred indirectly. A good expected value should, as much as possible, specify not only the quantitative aspect

of the indicator (35 sites serviced), but also a qualitative aspect and a period of time (e.g. 35 sites serviced, built before January, 1978, and of a quality comparable to Park X).

At the FOURTH stage, the actual value of each indicator is determined by direct or indirect measurement. This is the main activity of the data collection phase.

The FIFTH stage consists of a direct comparison of expected and actual values of each indicator. This will indicate the degree of effectiveness of the projects or programs evaluated. This stage is the beginning of the analysis and evaluation phase of the evaluation process.

The SIXTH stage involves determining the extent to which the obtained results are acceptable. Ideally, the degree of acceptability would be evaluated by applying a range of pre-determined threshold values to the results obtained. In fact, however, it is not unusual for such threshhold values to be revised, or even to be established only after a program is completed. The determination of threshold values can be based on earlier studies, on the informed opinion of people who are involved in the project, or even on the judgment of the evaluation team itself. In all cases, the assessment of the degree of acceptability of the results obtained must be justified and supported by the appropriate explanations.

The work of the SEVENTH stage of the evaluation process is to determine the reasons for the existence of the gaps between actual and expected results. The explanation will normally comprise two types of factors: internal and external. "Internal factors" generally refer to the aspects of a program which can be controlled, for instance, the quantity of resources available or the type of management employed. "External factors" refer to changes in the environment which were not anticipated at the time of program implementation.

FIGURE 1

METHODOLOGICAL FRAMEWORK OF THE EVALUATION

Stages in the process / Logical framework	1 Define Logical Framework	2 Define indicators	3 Establish Expected Values	4 Establish Actual Values	5 Compare 3 & 4	6 Is it acceptable?	7 What are the explanations?	8 Determine ways of improving performance
OBJECTIVE								
GOAL								
OUTPUTS								
INPUTS								

The EIGHTH and final stage in the evaluation process involves recommending means of improving program or project performance, based on the analysis undertaken.

The chart on the preceding page presents these eight stages of the evaluation process, in terms of the Logical Framework of a program. This is the methodological framework that has been applied to the projects, programs and Subsidiary Agreement under evaluation.

0.3.3 Sources of Information on which the Evaluation is Based

This section describes the two main sources of information used in this evaluation: written documents and persons interviewed.

Written documents

Written documents were an important source of information at almost every stage of the evaluation.

Documents used included official ones such as the General Development Agreement, the Industrial Development Subsidiary Agreement and its Amendments, the Project Briefs and so on. As well, internal DOD, DREE and IEL documents including memos, progress reports, status reports, minutes of meetings, statistical print-outs and so on, were essential sources of information.

Persons involved

Persons involved in the conception and implementation of the Agreement, its programs and projects were another important source of information.

To ensure the validity of the evaluation, especially in cases where opinions differed with respect to the success or failure of a program or project, it was necessary to ensure that all parties involved in the Agreement were properly represented in the interviews. In the following table, the affiliation of persons interviewed is presented by program and project. The table indicates that the sample interviewed is representative of all main parties involved.

It is important to note that where a person provided information on more than one program or project, he is recorded under each appropriate column. Therefore, the total of 59 is higher than the total number of persons interviewed. Overall, 38 different people were interviewed:

- 5 from DREE
- 14 from DOD
- 5 from IEL
- 5 from OTHERS
- 9 from user's mall

Interviews were conducted using an interview grid containing two separate parts.

The first part was designed to collect quantitative information on actual achievement of various programs and projects. For these, specific interview grids adapted to each informant were prepared in advance.

For the second part of the interviews, a grid was designed to collect qualitative data on the degree of attainment of objectives, on problem areas encountered and on internal or external factors which might explain observed results. This second grid was the same for all persons interviewed.

Finally, a special standardized interview grid was designed for the evaluation of the Incubator Mall Project. This grid covered quantitative and qualitative dimensions of the project.

Copies of these interview grids are appended to this report.

AFFILIATION OF PERSONS INTERVIEWED, BY PROGRAM AND BY PROJECT

	Subsidiary Agreement	Opportunity Identification Analysis and Promotion Program	Assistance for Industrial Park Development Project	Incubator Mall Project	Industrial Commisions Project	Industrial Infrastructure Program	TOTAL
DREE	2	3	3	1	-	1	10
DOD	1	8	6	3	3	1	22
IEL	-	2	4	3	2	-	11
Mall Users	-	-	-	9	-	-	9
Others	-	-	3	-	2	2 (telephone contact)	7
TOTAL	3	13	16	16	7	4	59

The Opportunity Identification, Analysis and Promotion Program

CHAPTER 1

THE OPPORTUNITY, IDENTIFICATION, ANALYSIS AND PROMOTION PROGRAM

1.1 DESCRIPTION OF THE PROGRAM

The first element of the strategy underlying the Industrial Development Subsidiary Agreement called for "improving and refining the industrial opportunity identification and developmental efforts of the Province" in order to help the Province and DREE be more specific in identifying, defining and promoting viable investment opportunities.

The Opportunity Identification, Analysis and Promotion Program was developed to accomplish this purpose.

The expenditure of funds allocated to the program, the use of the designated human and organizational resources and the application of an analytical approach to opportunity identification was intended to produce a series of product and technical studies, to undertake promotional activities and to establish a computerized reference system of Nova Scotia industry. These outputs of the program were then to help identify VIABLE opportunities, ensure their implementation and aid DOD in various activities designed to promote industrial growth in the province. These were the program goals. In turn, these goals were to contribute at the Agreement level to the development of new employment in Nova Scotia and to the diversification of employment opportunities.

The Logical Framework, presented on the following page, summarizes both the intent of the program and the means defined to fulfill it.

LOGICAL FRAMEWORK

OPPORTUNITY, IDENTIFICATION, ANALYSIS AND PROMOTION PROGRAM

Narrative Summary	Objectively Verifiable Indicators
OBJECTIVES	
Development of new employment in secondary and tertiary sectors. Diversification of employment opportunities.	. Number of opportunities implemented. . Number of jobs created. . Wage levels of these jobs. . Sectorial composition of these jobs.
GOALS	
Identify viable investment opportunities at the product level in the manufacturing and service sectors.	. Number of potential opportunities and viable opportunities identified. . Type and quality of opportunities investigated.
Aid DOD in finding local suppliers for new industry, in notifying industry of market opportunities and in updating Directory of Manufacturing.	. List of activities undertaken to aid DOD.
OUTPUTS	
Product studies.	. Type of product studies done. . Number and size of product studies done. . Sectoral composition of product studies. . Quality of chosen opportunities.
Promotional activities.	. Type and quality of promotional activities done.
Technical studies.	. Number and type of technical studies done. . Use made of these technical studies.
Computerized reference system.	. Quality of computerized reference systems developed.
INPUTS	
Funds.	. Total expenditures. . Distribution of expenditures among categories of activity.
Analytical Procedures.	. Qualitative description of procedures used.
Human and organizational resources.	. Degree of involvement of parties to program. . Degree of participation of private sector.

1.2 SUMMARY OF THE EVALUATION

The overall effectiveness of the Opportunity, Analysis and Promotion Program has to be evaluated as low.

In effect,

- the implementation rate of the 39 identified viable opportunities was only 40%,
- the job creation record has also been poor, considerably below what was projected; this low rate of job creation has been disappointing to all parties involved in the program,
- the employment which has been created has not been concentrated in high skill or high wage categories,
- an analytical approach was not used to define opportunities; the list of opportunities was developed non-systematically, primarily on the basis of private sector requests,
- many activities were undertaken (close to 60% of the budget) which were not overtly anticipated or required,
- the expected computerized reference system was not developed,
- except for some straightforward promotion in the early stages, there was no promotion undertaken of the type anticipated.

On the other hand,

- through product studies, 107 part-time jobs and 100 to 150 full-time jobs have already been created or preserved, or else are in implementation. Another 54 to 91 jobs are in the early stages of implementation,

- Venture Founders has already created 83 net jobs as a result of their first two workshops. More jobs should result from their third workshop,

- several activities emerged from the program which, while not properly part of the Opportunity Identification program, are in themselves interesting new approaches to industrial development,

- a first attempt at developing "soft" programs has been made. A greater awareness of the difficulties inherent in them has been achieved amongst involved parties and a groundwork has been established for defining more effective ones in the future.

1.3 PROGRAM EFFECTIVENESS

1.3.1 The Inputs

Program inputs are discussed under three headings: expenditures, analytical procedures and parties to the program.

Expenditures

The entire program budget has been spent or committed. The nature of the expenditures, however, diverges markedly from what was specified in the Project Briefs.

According to the Project Briefs, the budget was intended to cover external services and staff. More specifically, it was meant to include the cost of consultants retained to identify opportunities and to perform market and feasibility studies of particular products or industries. Some further technical studies were anticipated, as were expenditures on special promotional efforts to attract clients interested in identified opportunities. The budget was also to cover the cost of developing a computerized reference system for the province.

The computerized reference system was never developed and no funds were applied to it.

There were virtually no expenditures related to the analytical identification of opportunities. Less than 30% of the program budget was actually spent on market, feasibility, technical or any other product-related studies. The bulk of expenditures (close to 60%) was spent on three major undertakings: Venture Founders, the Industrial Intelligence Project and the IEL European Contact Project. Venture Founders, which alone claimed nearly $1 300 000 (45% of total budget), is a program designed to develop local entrepreneurship. Industrial Intelligence is a system for identifying target firms for IEL and European contact is an IEL promotional program in Europe.

Virtually none of the program budget was ever used for promotional activities.

Over one quarter of a million dollars (almost 10% of budget) was spent on a variety of other consultant studies. These ranged from general policy papers to miscellaneous background studies. One of these was a study to develop a method of systematically and analytically identifying opportunities.

Salaries of contract staff account for the small remainder of the budget.

In summary, it is clear that only a relatively small proportion of the budget was applied towards product or technical studies (1). The majority of the balance of the budget supported activities which represent a definite change in focus from the one delineated in the Project Briefs.

Analytical Procedures

The intent of the Agreement is clearly that product opportunities be identified through an analytical procedure, with broad industrial sectors being systematically narrowed down to the product level. Fairly extensive market studies and some detailed feasibility studies would then determine the projected returns on capital investment for those identified products. Promotion of viable opportunities would follow, leading finally to the implementation of the opportunities by private enterprise.

The Project Briefs are less specific than the Agreement in their expectations of the process to be followed. While requiring that an analytical approach be adopted, the text proper drops any mention of arriving at opportunities through a process of gradually narrowing down broad industrial sectors. This is replaced by a

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(1) See appendix for complete breakdown of expenditures.

statement suggesting possible sources for an initial list of opportunities. These include federal and provincial departments and agencies "and other sources". A description of an analytical approach similar to the one contained in the Agreement, however, is maintained in an appendix to the first Project Brief.

The tension between the main text of the Project Brief and the description of the Industrial Development Process included in its appendix is the first concrete manifestation of a serious division between DOD and DREE and appears as a compromise permitting the Project Brief to have been drafted. The looser approach outlined in the text is closer to the DOD position, while the appendix represents the DREE position.

It is clear from this that even before the first expenditures were made, a shift in emphasis had occurred which downgraded the expected analytical inputs to the program.

In the actual implementation of the program, this shift was gradually carried even further. The change in orientation largely reflected DOD's understanding of the approach required. During the course of the Agreement DOD's direct control of Opportunity Identification increased.

In practice, analytical procedures were not employed in identifying opportunities (1). In the earliest months, most product ideas to be investigated originated from various sources both within government departments and agencies and within the private sector. Gradually the emphasis switched to being client-responsive, in effect transferring the onus for generating lists of potential opportunities from within the government to the private sector. This approach was effectively formalized by the signing of the second Project Brief in June 1978, which incorporated the Function I/Function II administrative procedures. Under Function I, most product studies

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(1) A small number of attempts at analysis were made early in the program, but these were not pursued and did not result in the identification of opportunities.

up to $25 000 in value no longer required immediate DREE approval. Following this change, the proportion of client-initiated studies rose from 50% to 80%. This represents a fundamental change to the analytical procedure outlined in the Agreement and an evolution of the one contained in the Project Briefs.

Although any analytical approach to opportunity identification was dropped, the program remained systematic in the procedures followed once a product idea was suggested. Generally an in-house examination would indicate whether further investigations were worthwhile. If an opportunity was considered to be potentially feasible, consultants were usually retained to undertake market and/or feasibility studies of the product concerned. Opportunities were judged on criteria of financial feasibility. No procedure was in place to encourage concentration on higher growth industries providing higher skill and higher wage jobs.

The need for promotion under the second Project Brief was greatly reduced since all product studies were already associated with a particular firm. Promotion was only required where the involved firm decided not to further pursue the idea.

The only serious step in the direction of being analytic in identifying opportunities in the sense originally intended, was the commissioning of a study to develop a suitable method of approaching the problem. The study recommended a complex and expensive computer-based system. DOD was convinced on the basis of previous experience with similar systems and on the basis of the cost and complexity of the one being proposed, that the system was unworkable. A feeling remains at DREE that it might have been possible to modify the proposal to have made it more practical. The proposed system was, in practice, dropped.

DOD views the removal of the analytic requirements and their replacement by a client-responsive system as reflecting a pragmatic approach to industrial development which was not ruled out by the Project Briefs and the success of which is indicated by the large number of product studies which were undertaken. DREE views the shift as an abandonment of the entire purpose of the program, as originally conceived.

Parties to the Program

Schedule "A" of the Agreement as well as the Project Briefs specify a number of groups and bodies which were to be actively involved in conducting the program or with whom work should have been coordinated. In practice, DOD emerges as a more dominant party than suggested, while the role of other groups is more limited.

The discussion in this section focuses on the identification of opportunities and the product and technical studies conducted under the Agreement. The role of parties to the program in the other activities conducted under this program is contrasted at the end.

The Agreement states that in the "opportunity identification" and "market and feasibility studies" phases of the program, the Province is to work closely with DREE and the federal Department of Industry, Trade and Commerce. More specifically, the opportunity identification phase is to be conducted by DOD and IEL.

The Project Briefs are slightly broader than the Agreement in that they mention the need to coordinate the work of DREE, DOD, IEL and other federal and provincial agencies in identifying opportunities.

Both sources stress that private sector participation should be sought wherever appropriate in undertaking the market and feasibility studies.

According to the Agreement, special promotional efforts are to be the responsibility of the Province, in cooperation with Industry, Trade and Commerce, where appropriate. The second Project Brief does not mention IT & C in this role but suggests IEL, DREE, DOD, FBDB, and private venture capital companies as examples of groups which may be involved in these efforts. No responsibility is assigned for "straightforward" promotion.

Until June 1978, while the first Project Brief was in force, DOD, IEL, DREE and MIL each contributed suggestions for opportunities to be examined. However, DOD alone accounted for nearly half the non-private sector contributions. IEL contributed just under 20% of these and DREE less than half this number. During this same period, the private sector contributed half the total opportunities examined. DOD, IEL, MIL, DREE each acted as the intermediary for some of these suggestions. Again, DOD was the most active in this function and DREE and MIL, the least. IEL had prime responsibility for promotion.

After the signing of the second Project Brief, as already mentioned, the program became almost entirely client-responsive and therefore the private sector accounted for the large majority of product or technical studies undertaken. For many of these, DOD field staff, and to some extent IEL and SCIDA as well, acted as the intermediary by which clients were channelled to the program. As IEL effectively withdrew from direct involvement, DOD field staff and project staff adopted prime responsibility for promotion. However, as mentioned briefly in the previous section, the orientation of the promotion had changed from promoting opportunities to promoting the program as a tool for the private sector. DREE was also involved in promotion but to a very much more limited extent.

The discussion thus far has focused on the contributions of each body toward the program as originally envisaged and it was seen

that DOD was dominant in the program implementation. On the other hand, in the dynamics and politics involved behind-the-scenes, both DREE and IEL were more active forces. This will be elaborated upon in subsequent chapters. However, their roles may be seen reflected in the large proportion of the budget which was expended on other activities, in particular Venture Founders, IEL Industrial Intelligence and the IEL European Contact program. While these activities are certainly not solely attributable to DREE and IEL, they were the groups primarily responsible for ensuring that the activities were approved. In particular, the latter two activities were considered by DREE as being, in a sense, the "quid pro quo" for having permitted DOD to conduct the rest of the program according to DOD's own terms. The Venture Founders program was also largely piloted through the approval stage by DREE, but debate was less partisan and the enterprise had proponents and detractors in all camps (1).

Finally, it is necessary to mention that a number of studies were initiated at the request of individuals or groups outside the program. For political reasons, the program management often felt obligated to respond to these requests. In a sense, the program became a convenient pool of funds permitting consultant studies to be quickly commissioned for a variety of purposes not necessarily directed towards the original tasks of opportunity identification. A significant number of the policy and miscellaneous studies conducted may be accounted for in this manner.

In summary, DOD took a much more dominant role in the program than was apparently expected. IEL also did play a role, particularly in the earlier stages. DREE's direct involvement was considerably more circumscribed.

IT & C did not become involved in any of the activities despite having been mentioned several times in both the Agreement and the Project Briefs. The participation or coordination with any other provincial or federal departments or agencies was also negligible.

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(1) Support for the first "cycle" was almost universal. Disagreements, however, increased at each subsequent cycle.

Private sector participation was a significant factor in the operation of the program. However their involvement came at an earlier stage than originally intended. In particular, it was anticipated that they would participate in the detailed examination of opportunities already identified. In practice, they became the dominant source of opportunities to be examined. It should be noted that this role is not necessarily excluded by the Project Briefs, but it does run counter to the general sense of the Briefs.

The actual roles as they developed of each party to the program are not surprising given that for purposes of implementation Opportunity Identification was placed within DOD. The lack of practical cooperation was further aggravated and emphasized by the fundamental disagreements on the nature of the program which existed between DOD, DREE and IEL.

All parties were active in the negotiations and trade-offs instigated by this basic divergence of opinions over the proper role of the program. The resulting politicking is in part responsible for the much wider range of activities undertaken under the program than was originally anticipated. It also helped to create an environment in which it was easier for political pressure to justify undertaking studies which would otherwise be considered very marginal to such a program.

SUMMARY OF INPUTS

OPPORTUNITY IDENTIFICATION, ANALYSIS AND PROMOTION PROGRAM

INPUT CATEGORY	EXPECTED INPUTS	ACTUAL INPUTS
EXPENDITURES	Budget to cover:	Budget actually covered:
	Opportunity identification studies	-
	Market & feasibility studies	Market & feasibility studies
	Technical studies	Technical studies
	Promotion	-
	Computerized reference system	-
	-	Venture Founders
	-	Industrial Intelligence
	-	European Contact Project
	-	Miscellaneous background, policy & other studies
	Market & feasibility studies to account for largest share of expenditures	Venture Founders was largest single expenditure (45% of total). Market & feasibility studies account for about 25% of expenditures
ANALYTICAL PROCEDURES	Opportunities to be identified through analytical approach	Analytical approach not used. List of opportunities developed non- systematically & primarily on basis of private sector requests for market or feasibility studies
PARTIES TO PROGRAM	DOD, IEL, in conjunction with DREE	Primarily DOD. Also IEL, DREE to more limited extent
	Where appropriate, IT & C to be involved in special promotion	-
	Such groups as FBDB & private venture capital companies may also be assisted in special promotional efforts	-
	Private sector participation in market & feasibility studies, wherever appropriate	Strong private sector participation in identification of opportunities & market, feasibility studies.
	-	DREE & IEL primary proponents of Industrial Intelligence & European contact programs
	-	Other groups & political pressure responsible for individual miscellaneous studies.

1.3.2 The Outputs

Four major outputs were expected from the program as conceived in the Agreement and Project Briefs: product studies, promotion, technical studies and a computerized reference system of Nova Scotia enterprises. This chapter discusses each of these in turn. An additional fifth section discusses outputs which were not originally specified or anticipated.

Product Studies

The Agreement and Project Briefs describe a process by which a potential product opportunity, once identified, is subjected to a short preliminary investigation of its feasibility. If it meets the appropriate criteria, fuller market or feasibility studies are undertaken. In practice, close to 185 separate products were examined. To fully understand the significance of this output, however, it must be viewed in the perspective of the size of the studies, their sectoral composition, the quality of the opportunities examined and the quality of the studies.

Expected Values

(i) Number and Size of Studies

Aside from a reference in the Project Briefs to "extensive market studies and some detailed feasibility studies", there is no reliable indication of the number of product ideas expected to be examined or of the size of study expected to be undertaken.

More concrete figures concerning the number of market and feasibility studies are suggested in the budget calculation contained in the Agreement. However, in fact, rather than specifying more precise expected values for the product studies, these indicate the acceptability of a wide range of study sizes.

The Agreement states that the budget for the market and feasibility studies phase of the program is arrived at:

> "on the basis of two major studies for the first year and an average of five per year thereafter, at an average cost of $40 000, with smaller studies making up the balance [of $1 320 000[1]]. This, however, is obviously an artificially derived estimate since any single study could cost much more than $100 000. On the other hand, it is highly probable that smaller opportunities in greater numbers could be found and investigated".

It is clear that the door was being left open to a wide range of possible combinations of number and size of studies to be undertaken.

While the governing documents were clearly non-committal on this issue, DREE did not feel that this reflected the "real" intent of the program. The controversy over program intent was aggravated by and, in a sense, fueled by the fact that many of those involved in drafting the Subsidiary Agreement

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1. The total program budget of $2 850 000 is allocated as follows in the Agreement:

   (i) $ 450 000 for opportunity identification activities
   (ii) $2 200 000 for market and feasibility studies
   (iii) $ 200 000 for the computerized reference system.

   In the Project Briefs these were all combined into a single budget.

left their positions prior to its implementation. Even more importantly, of the ones who did remain, all worked at DREE. None of the DOD parties to the drafting of the Agreement were active in its implementation (1). Consequently, the new persons at DOD responsible for implementing the program based their perception of its objectives on a reading of the Agreement and Project Briefs. These did not favour one size of study over another. Given DOD's role within the province as well as their general "philosophic" orientation, a natural bias in favour of smaller studies developed. In contrast, DREE implementors claimed emphatically that the actual intentions of the program were to identify medium to large opportunities. In a real sense, they understood their position as being heirs to the true tradition concerning the original program intent. In their view, despite what may have been written, this definitely did not include a large number of small opportunities. IEL, although not expressing as strong a view on the issue as DOD and DREE, did seem to tend towards the DREE position.

(ii) Sectoral Composition of Opportunities

The expected sectoral breakdown of products to be examined is described in Schedule "A" of the Agreement. The general thrust of the program was to be production-oriented, i.e. relating to secondary manufacturing. As well, however, the Agreement contains substantial references to the service sector and in particular to warehousing and distribution services. Overall, it may therefore be assumed that the expected sectoral composition of product studies was a majority dealing with secondary manufacturing and a significant minority dealing with the service sector.

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1. This was the result of circumstances unrelated to the Agreement per se. It involved a number of personal decisions on the part of individuals as well as a major internal reorganization of DOD which took effect in January 1977.

(iii) Quality of Opportunities and Studies

The Agreement lists a number of more specific industrial sectors which might receive first attention in order to indicate the "quality" of opportunity which should be sought. More particularly, the Agreement declares that "generally speaking, initial opportunity identification and promotion efforts will concentrate on higher-growth industries providing skilled jobs and higher-wage opportunities". Necessarily, therefore, the list of product studies undertaken must have been expected to meet the same criteria.

With regard to the studies themselves, the only general qualification was that they demonstrate the viability of opportunities for private investment.

Expected values for each of the variables may be summarized as follows:

(i) Number and Size

- the documents establishing and defining the program do not specify values and, in fact, seem to overtly leave open a wide range of possible combinations of the number and size of studies;

- DOD favoured a larger number of smaller studies, a view which they claim was in no way excluded by the terms of the Agreement;

- DREE's position was that such small studies specifically ran counter to the true intentions of the drafters of the Agreement, which were to undertake a limited number of large studies dealing with major opportunities.

(ii) Sectoral Composition

The majority of products were expected to be in the secondary manufacturing sector, with a significant minority in the service sector.

(iii) Quality

Products were expected to be concentrated in the higher growth industrial sectors providing higher skill and wage opportunities.

The studies themselves were to be structured so as to demonstrate the viability of the opportunities to the private sector.

Actual Values

(i) Number and Size of Studies

With DOD in charge of implementing the program, nearly 185 separate products were analysed. Consequently, the actual size of most studies was relatively small.

The average cost of the consultant studies in this group was only about $14 000 each (1). This was in direct contrast to DREE's desire to concentrate efforts on a more limited number of opportunities with major employment potential.

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1. Fifty of the 67 consultant studies may be classified as product studies. The remainder of the 185 studies were conducted in-house.

To DOD, the size of the studies was a consequence of what they considered a pragmatic decision to become client-responsive. Particularly given that DOD's mandate is limited to firms within the province, it is not surprising that the size of opportunity suggested was generally small.

(ii) Sectoral Composition

Almost all product ideas examined were in the secondary manufacturing sector. Services were virtually excluded. The program staff were under the impression that the only services eligible under the program were those creating high value-added employment. Since the criteria of eligibility were perceived as being more rigorous for services than for manufacturing, the distinct tendency was to seek out the latter while not putting equivalent effort into identifying ideas in the former sector.

(iii) Quality of Opportunities and Studies

The only criteria of acceptability which were applied to product ideas were ones of financial feasibility. No screening took place in terms of growth potential or skill and wage levels of potential employment. Size of employment may have been a criterion, but only in so far as an opportunity with high employment potential would tend to exact greater effort in analysis and promotion.

The studies were intended to demonstrate the viability of opportunities for private investment. There was a general consensus of all parties that the studies did accomplish this purpose. Debate centred on the nature of the opportunities examined and not on the studies, per se. The one exception was criticism expressed at IEL. This criticism is

significant because in the early stages of the program IEL made more direct use of the studies in promotion to the private sector than did any other agency.

The first criticism was that certain studies contained factual errors. These alleged errors became a matter of debate between the consultants and the interested firms. IEL, as a function of their role, had to accept their client-firm's view. Regardless of which set of facts were in reality correct, the important consequence was that IEL felt its credibility with its clients had suffered. It was one factor contributing to IEL's increasing disenchantment with the program.

The second criticism centered on the type of analysis undertaken. First of all, it was claimed that the studies were overly weighted towards market analysis, with insufficient detail or depth given to feasibility and production issues. Firms, according to IEL, almost inevitably know more about market conditions than consultants. Consequently, the main purpose of the market segment of the report should be to provide IEL with sufficient information to be able to deal credibly with potential investors. For that, however, much less effort need be expended than was actually done. Second, the study reports were not written in a form which could be directly used for promotional purposes. IEL personnel had to spend considerable time rewriting and summarizing the reports to make them suitable tools for their purposes. Finally, the studies did not indicate firms which were potential clients for the opportunities identified. This task consequently fell to IEL which was not at that time set up to perform it.

In summary, close to 185 product studies were undertaken, generally of relatively small size, almost all within the secondary manufacturing sector and with a bias toward market as opposed to financial analysis. Some criticism of the studies themselves has also been received, although most parties agree that their quality was generally acceptable.

Promotion

Expected Output

Promotion appears as a significant weak link in the enunciation of the industrial development process.

The Agreement and Briefs imply two general categories of promotion: (i) "straightforward" promotion and (ii) special promotional efforts. The latter is reasonably well defined. The former is not at all defined. It is briefly mentioned in the Agreement. In the Project Brief, while the need for it seems to be assumed, any explicit reference to it is eliminated.

The type of special promotional efforts which were anticipated include:

- special reports and brochures outlining the nature of the opportunity and the profitability of investment;

- special promotional missions to visit firms or to contact financial institutions to inform them of these opportunities;

- special receptions or invitational visits for potential investors.

Clearly these efforts were not intended to be the norm. Although no expected frequency of these special efforts is defined, it is stated that they will be used only where "potential benefits clearly outweigh the costs involved" (Project Briefs, p. 2).

Since in the Project Briefs it is assumed that all opportunities will require promoting and that the special efforts are reserved for certain particular cases, it must also have been assumed that simpler promotional procedures would be adopted as a matter of course in all other cases. This is made explicit in the Agreement which states that relatively straightforward efforts will suffice in most cases. No further definition is provided, although these "straightforward" efforts are to constitute the backbone of the promotional phase of the program.

Responsibility for the promotion is left equally vague. The Agreement and the Briefs mention only that identified opportunities will be passed to "the responsible agencies" for promotion. These are left undefined except for a reference in the Agreement to the possible involvement of IT & C in the special efforts, a reference which is dropped in the Project Briefs. As well, in the second Brief only, examples are added in parentheses of who might be considered "responsible agencies" with respect to the special efforts. These include IEL, DREE, DOD, FBDB and private venture capital companies.

In the description of the industrial development process appended to the first Project Brief, the Project Team is assigned the responsibility of drafting a promotional strategy. This, together with the product report, would be passed to the agency responsible for promotion.

The lack of attention given to defining promotional procedures does not reflect the degree of importance attached to the activity. On the contrary, the description of the industrial development process (Appendix 1 of the first Project Brief) states:

> "Under normal circumstances it is expected that promotional efforts will be continued until one or more firms are convinced of the validity of the opportunity, and interested in pursuing the matter further".

This almost naive sounding statement clearly indicates that the success rate anticipated from promotional activities was very high. As well, since the ultimate measure of success of the program is the number of firms implementing identified opportunities and the number of jobs created, this activity may be seen as a linchpin in the process. Under the circumstances, the lack of attention given to defining it, is all the more surprising.

Actual Output

To analyse the actual promotional activities undertaken, two phases in the operation of the program must be defined, both of which have already been mentioned. The first is the phase during which opportunities generated within the program were given to IEL for promotion. The second is the phase following IEL's withdrawal from the Project Team (about one year after signing of the first Project Brief) and particularly following the signing of the second Project Brief when the program became increasingly client-responsive. Some overlap between these stages must be recognized.

IEL's promotional procedures involved first identifying and then writing all firms outside the province who manufactured the identified or related product. In total, several hundreds of letters were written. Following this, IEL Development Officers would

arrange meetings with any firms expressing interest. Some one hundred firms were thus contacted, an average of less than ten firms per identified opportunity.

During the first year of IEL's involvement (1977/78), Opportunity Identification became the first priority of their four Development Officers. In cases where serious interest was expressed, these officers maintained on-going contacts with the firms which often continued over many months. Special efforts were undertaken where appropriate. In one case, for instance, samples of Nova Scotia clay were shipped to Europe for testing by a potential investor.

None of the opportunities promoted by IEL was ever implemented. IEL felt this reflected a basic flaw in the strategy of trying to attract industry by identifying opportunities. In addition to the frustrations they experienced in dealing with the ponderous seven-man Project Team (1), this conclusion led them to formally withdraw from the Project Team in the spring of 1979.

The suspicion remains at both DOD and DREE that the reason for the failure lies in a lack of commitment to the program on the part of IEL. As well, criticism has been voiced of the promotional methods they employed. More particularly, it is claimed that promotional officers should not be salesmen "selling Nova Scotia", but persons thoroughly familiar with both the product in question and the firms being dealt with. IEL, while accepting that the promotion might have been more sophisticated and better coordinated with other groups, are of the opinion that the bottom-line results would not, in any case, have been different.

Generally, the criticism of IEL's efforts in this area are made without an awareness of what activities IEL did, in fact, undertake. The responsibility for this lies primarily with IEL. As a result of their mandate and orientation, they are highly

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(1) The second Program Brief (1978) substituted a more manageable 2-man Project Team for the 7-man Team.

secretive about any information dealing with client firms. The result was that the other parties to the program were not kept informed of progress in promotion, except through cryptic status reports. DOD and DREE also do not appear to have been properly informed of the type of problems encountered by IEL or of IEL's overall criticisms of the reports. This lack of communication had serious ramifications for the program as a whole while poor communication generally was one of the principal problems afflicting the entire program.

Aside from the promotion undertaken by IEL during the first twelve to eighteen months of the program's operation, virtually no promotion of opportunities was conducted. DOD considered publishing an "Opportunity Bulletin", but rejected the idea because the number of opportunities being generated was not sufficient to permit the bulletin to be published regularly. "Straightforward" promotion was limited to personal contacts made by DOD field staff and by the program staff, but this was not done on any systematic basis.

As the program was made more client-responsive, the need to promote opportunities declined, but was replaced by the need to make known the existence of the program itself. This was necessary to encourage the private sector to come forward with their ideas. The DOD field staff was primarily responsible for this function, which was conducted on a non-systematic basis. As well, one issue of a DOD quarterly journal to manufacturers was largely devoted to explaining the program. This particular undertaking infuriated DREE in that it represented an explicit admission that the program was no longer to be analytic and generative but rather responsive.

In this second phase of the program, the only promotion required for opportunities was in cases where the participating firm withdrew or lost interest in the opportunity. In theory, the DOD field staff and the program staff would keep these "loose" opportunities

on file while seeking a new client. In practice, these opportunities were generally only attractive to the original firm having requested the study, and therefore little success in promoting them was possible.

In summary, no special promotional efforts as defined in the Agreement or Project Briefs were ever undertaken. "Straightforward" promotion was limited to IEL's activities early in the program (which were unsuccessful) and supplemented to a minor degree by efforts on the part of DOD field staff and program staff. After IEL's withdrawal from the Project Team, opportunity promotion was largely abandoned and was replaced by promotion of the program itself, directed to private entrepreneurs within the province.

The failure in the area of promotion may not be surprising in view of the lack of attention given to defining it in the Agreement and Briefs. It is a most significant failure, however, in view of the importance attached to it within the industrial development process.

Technical Studies

It was recognized in the Agreement and Project Briefs that even once an investor was interested in an opportunity, he might still face certain technical difficulties in establishing his enterprise. These might include problems of site selection, services, transportation facilities and so on. Provision was consequently made within the program to undertake studies to solve particular problems of this sort.

In practice, six such studies were undertaken. Two were related to site selection, one was a labour survey and three were equipment-related. One of the site selection studies was conducted as part of a larger feasibility study. Total expenditures for the other 5 studies was just over $60 000, with an additional $5 000 in client contributions.

Computerized Reference System

The Agreement and Project Briefs present an outline of a computerized reference system of Nova Scotia firms which was to be developed under the program.

The system was to include data on the location of firms' markets, the products produced by each firm, the nature and sources of their prime inputs, and any transportation constraints faced by the firms. In the first phase, the system was to cover only the manufacturing sector. In a second phase it was to be expanded to key service sector industries.

No such system was ever developed and the funds allocated to it were used elsewhere in the general program budget.

Other Activities

The Agreement and Project Briefs did not refer to or explicitly admit any activities or types of studies other than the ones already discussed. The Briefs did, however, caution that there would be "changes, improvements, additions, deletions as changing circumstances dictate". Although it might be argued that this was an escape clause permitting any type of changes to have been made to the program, it is more reasonable to assume that the clause was intended to cover changes at the margin related to the implementation of the program. More specifically, the clause should be interpreted in the light of the following principle enunciated in Appendix I of the first Project Brief:

"The Opportunity Identification, Analysis and Promotion Project is oriented to dealing with specific products, which will be selected from the range of products and services created by the industries considered to be desirable for Nova Scotia".

It seems clear that a product orientation was central to the conception of this program. Any changes to this fundamental orientation would, in effect, be defining a new program.

A number of activities and types of studies were, in fact, added to the program. These have all been mentioned briefly elsewhere in the chapter. In this section, their role and place within the program will be evaluated in terms of the principle presented above.

Activities to be discussed in this section include:

(i) consultant services or studies other than product or technical studies,
(ii) Venture Founders,
(iii) Industrial Intelligence project,
(iv) the European Contact project.

Thirteen non-product or technical studies were commissioned at a total cost of over $260 000. Of these, four expenditure items were related to the identification of opportunities, although they were not product studies, per se. Two of the four items were very small. Of the other two, one was a contract to an Ottawa consultant designed to provide the Province with early indications of federal government procurement intentions, particularly related to the purchase of a new national fighter aircraft. The second was the study previously mentioned to develop an analytical approach to identifying opportunities. These activities cost close to $65 000 in total.

The remaining studies were a grab-bag of what may be characterized as general background information and policy studies. Each study has its own history explaining its inclusion in the program. However, it is generally true that using the Opportunity Identification program came to be an expedient means of commissioning studies required by individuals or agencies and departments elsewhere in the federal and provincial governments. This does not reflect on

the validity of the studies themselves or on the reasons for commissioning them. It does, however, indicate that close to $200 000 of studies were undertaken whose connection to the rest of the program or to program goals were, at best, tenuous.

Each of the three other activities undertaken - Venture Founders, Industrial Intelligence and European Contact - in effect represents a different approach to the industrial development process or a different aspect of the process. Venture Founders concentrates on improving the level of entrepreneurship within the Province. The Industrial Intelligence and the European Contact projects concentrate on firms rather than on products or entrepreneurs. The former is a system of identifying the most dynamic, expansion- oriented firms in North America with the intent of targeting them for promotion (1). The second is a program of promoting Nova Scotia to European industry (2). Each of these activities represents a substantially different orientation from the one embodied in the underlying conception of the Opportunity Identification program. Instead of focusing on products, they focus on other parties to industrial development. It is especially interesting that DREE was a prime-mover in having the latter two activities approved. Implicitly, it is a major step away from the strategy of opportunity identification, although in DREE's view this would have been considered necessary given that the "real" strategy had, in practice, been abandoned already. To IEL, these activities are a next logical step in experimenting with approaches to industrial development, since IEL was already reasonably satisfied that the approach of first identifying opportunities and then matching these with firms had been a failure.

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(1) Program budget was intended to purchase access to a wide range of sources providing information on leading industries and companies. Most of the information is accessed through on-line computer hookups.

(2) Program budget was intended to retain consultants for special industry evaluation and prospect identification as well as to support other more conventional promotional techniques.

Venture Founders was the single largest item in the entire program budget. Including its third and final cycle, its cost is over $1.25 million. Industrial Intelligence cost $122 000 and European Contact, $245 000. Together these three items alone account for over $1.6 million or close to 60% of the total program budget, and yet none of them can easily be fit into the terms of the program definition. Again, this is a judgement on the legitimacy of their inclusion in this program and not a judgement on their intrinsic value.

The original addition of Venture Founders was supported by persons in DOD, DREE and IEL. It was viewed as an experiment worth attempting. Three cycles of the activity have now been approved. Opposition has grown with the addition of each cycle. The criticism has not focused on the value of the activity itself but on whether the very high cost entailed is justified. Debate over the issue is not strongly divided along departmental lines.

The inclusion of the last two activities must be understood in the light of the dynamics and tensions existing between DREE, DOD and IEL. As has been discussed, DREE was never satisfied with the direction taken by Opportunity Identification. The second Project Brief effectively turned the program's implementation entirely over to DOD with DREE maintaining only a degree of residual control. While this unblocked a stalemated situation, DREE was never comfortable with the solution. Particularly towards the spring of 1980, the feeling at DREE grew that things had gone far enough. In parallel with this, DREE's regard grew for IEL as a useful and competent partner in industrial development. They therefore became increasingly responsive to IEL's requests and suggestions. The Industrial Intelligence and European Contact projects, both IEL activities, were considered intrinsically worthy of experiment. They were also seen as a means of short-circuiting further work by DOD along the lines they had been proceeding.

In summary, close to two million dollars or two-thirds of the total budget was spent on "other activities". While an evaluation of the performance or value of these activities is not within the mandate of this study, it is clear that most of these did not belong in the Opportunity Identification program as defined.

SUMMARY OF OUTPUTS

OPPORTUNITY IDENTIFICATION, ANALYSIS AND PROMOTION PROGRAM

OUTPUT CATEGORY	EXPECTED OUTPUT	ACTUAL OUTPUT
PRODUCT STUDIES	Type of study Pre-feasibility studies to sort out most promising ideas Market & feasibility studies to determine projected returns on capital investments Number & size Agreement & Project Briefs: any combination of number & size of studies is possible. DREE: expectation was for smaller number of large studies. Plethora of small studies was excluded. Sectoral composition Majority in secondary manufacturing, but also service sector, especially warehousing-distribution "Quality" of opportunities Concentrate on higher growth industries providing skilled jobs & higher wages	Type of Study Pre-feasibility studies generally in-house Market & feasibility, both in-house and consultant Number & size Large number of generally small studies Sectoral composition Almost exclusively secondary manufacturing "Quality" of opportunities No selection on basis of stated criteria. Financial viability was determining factor
PROMOTION	"Straightforward" promotion sufficient for most opportunities. (Exact meaning was never defined).	In early stages, IEL identified target firms & then followed their own standard promotional procedures When IEL withdrew & program became client-responsibe, most need for opportunity promotion eliminated. Replaced by promotion of program itself to private sector. CONT'D

	Special efforts to be undertaken where benefits clearly outweigh costs. These may include: brochures, missions, special receptions or invitational visits for potential investors Normally expected that promotion would continue until one more firms convinced to pursue opportunity	No special efforts undertaken No firm was convinced to pursue an opportunity previously identified
TECHNICAL STUDIES	<u>Type</u> Would include factors relating to establishment of specific firms e.g. site selection, cost & availability of water supply, site servicing problems, etc. <u>Frequency</u> Where necessary to solve major technical problems in cases where investors have already expressed general interest	<u>Type</u> Site and equipment selection, labour supply <u>Frequency</u> 6 undertaken; 3 of these are in implementation. Other opportunities dropped
COMPUTERIZED REFERENCE SYSTEM OF NOVA SCOTIA FIRMS	To include market, supply and transportation data; in first phase for manufacturing enterprises and in second phase for key service industries as well	System was never developed
OTHER ACTIVITIES	No other activities overtly anticipated or required, although "escape clause" in Project Briefs recognizes that there will be "changes" improvements, additions deletions as changing circumstance dictate"	Miscellaneous studies of general background, information and policy type. Venture Founders Industrial Intelligence European Contact program

1.3.3 The Goals

First Goal

The first goal of the program was to identify viable investment opportunities at the product level in the manufacturing and service sectors of the economy.

Expected Value

No indication is given of the success rate expected from the product studies; that is, the proportion of all opportunities examined which would be shown to be viable. It was expected, however that the majority of them would be in the manufacturing sector, with a minority being in the service sector. Opportunities were expected to be in higher growth, skill and wage categories.

Actual Value

In practice, out of the nearly 185 products examined, just under forty viable opportunities were identified, most of these in response to client requests or suggestions. Virtually all were in the manufacturing sector. Only one small opportunity was in the service sector.

Higher growth industries providing higher skill and higher wage employment did not predominate. As well, most viable opportunities identified were of relatively small size. This was probably a function of the method employed in generating the initial list of product ideas. As already discussed, the primary source of ideas was existing Nova Scotia firms which, themselves, are generally small.

The program as conducted was therefore, in part, effective in attaining the first goal set for it. Viable opportunities were identified. However, the service sector was virtually ignored.

The quality of the opportunities with respect to their skill and wage levels and their growth potential was lower than intended. The average size of opportunity in terms of employment was also fairly small.

Had the full program budget been directed towards identifying viable opportunities, it may be assumed that the goal would have been more effectively attained, at least with respect to the total number of viable opportunities identified (1). In this light, the other activities actually conducted under the Opportunity Identification program were responsible for decreasing the effectiveness of the program in attaining its goals. Effectiveness with respect to objectives is the subject of the next section.

Second Goal

The second program goal was to aid DOD in finding local suppliers for new industry, in notifying industry of market opportunities and in improving the frequency and accuracy with which the Nova Scotia Directory of Manufacturing is updated.

The proposed means of attaining this goal was the computerized reference system to be developed under the program. The development of the system was abandoned. As a consequence, the program did not attain its second goal. Although the Directory of Manufacturing was updated, DOD did so on its own without input from the Opportunity Identification program. While this second program goal was not attained, it must be recognized that in the overall context of the program, its importance is minor as compared to the importance of the first goal.

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1. It must be recognized, that applying the full budget to product identification and study would have demanded a reorganization of procedures and probably an addition to staff in order to handle the increased work load.

SUMMARY OF GOAL ACHIEVEMENT

OPPORTUNITY IDENTIFICATION, ANALYSIS AND PROMOTION PROGRAM

GOALS	EXPECTED RESULTS	ACTUAL RESULTS
Identify viable investment opportunities in the manufacturing and service sectors	No. of opportunities identified Not specified Quality of opportunities Majority in manufacturing and minority in service sector Higher growth, skill and wage categories	No. of opportunities identified 39 viable opportunities out of nearly 185 products examined Quality of opportunities Service sector virtually excluded No concentration on higher growth, skill and wage categories
Aid DOD finding local suppliers for new industry, in notifying industry of market opportunities and in updating Directory of Manufacturing	Use of a computerized reference system to improve performance	Computerized system never developed: consequently goal not achieved Directory of Manufacturing updated by DOD but without input from program

1.3.4 The Objectives

The objectives of the program were to contribute to the Agreement goals by:

(i) supporting the development of new employment opportunities in Nova Scotia in the secondary and tertiary sectors of the economy;

(ii) increasing the variety of employment opportunities available, with particular emphasis on higher skill and higher wage employment.

The Agreement goal of encouraging indigenous enterprise was to be the responsibility of the Province and therefore cannot be considered a direct objective of this program. Similarly, the spatial aspect of the Agreement emphasizing certain intermediate-sized communities was not directly expressed in this program.

The effectiveness of the program in attaining its objectives will be evaluated using three major indicators. These are:

(i) the number of opportunities implemented,
(ii) the number of jobs created and wage levels associated with these jobs,
(iii) the sectoral composition of the jobs created.

Expected Values

The only indication of the number of opportunities expected to be implemented is the Project Brief statement quoted earlier that promotion of an opportunity would normally be continued until one or more firms were interested in pursuing it further. Apparently, it was assumed that nearly all identified opportunities would be implemented.

Neither the Agreement nor the Project Briefs contain any reference to the number of jobs expected to be created. However, two internal DREE studies dating from the end of 1975 estimated employment expected from the proposed Opportunity Identification program. The two documents present similar results. They estimate employment for years one, two and three to five of the program, according to three hypotheses. Following are the predictions of direct employment resulting from program activities, as presented in the later and more conservative of the two studies.

Year	Pessimistic	Most Probable	Optimistic
1	81	146	171
2	106	196	345
3-5	409	597	1279
Cumulative Total	596	939	1896

These predictions were calculated on the basis of the opinions of members of the staff of DREE Nova Scotia and the Nova Scotia Department of Development who were familiar with the proposed program. The range of estimates is wide, with a pessimistic view of nearly 600 jobs created over five years and an optimistic view of nearly 2000.

Evidently, projecting job creation of a program such as this one is hazardous. Nonetheless, these estimates appear excessive, even in the context of the time at which they were developed. One has to wonder if the tendency to promote and justify a proposed expenditure may not have been a principal factor in determining the optimism of these estimates.

Expected wage levels are a function of the type of opportunities which were intended to be pursued. As already stated, identification and promotion were supposed to concentrate on providing skilled jobs and higher wage opportunities. It is interesting to note that despite this, the DREE projections assumed average wage levels in their calculations of the economic impact of the jobs created.

As also described in previous sections, it was expected that jobs created would be primarily in secondary manufacturing with some in services. More specific suggestions contained in the Agreement include industries based on indigenous resources (e.g. wood), certain metal working industries suggesting growth potential, higher technology industries in such fields as oceanography, navigational and communication aids, and industries based on ocean-oriented activities and international transportation.

Actual Values

Of the thirty-nine viable opportunities identified, five have already been implemented (1) and three more are in the process of implementation. Seven other clients are in earlier stages of implementation, so the outcome of their efforts are less certain.

The opportunities already implemented have created or will in the near future create 17 to 48 full-time jobs. As well, a study was undertaken which resulted in the preservation and expansion of a firm. This adds another 41 jobs either preserved or created. Actual employment attributable to opportunities already implemented is therefore between 58 and 89.

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1. Not including one case of job preservation.

Opportunities in implementation should create between 42 and 62 full-time jobs and an additional 107 part-time jobs.

Opportunities in the early stages of implementation are likely to result in between 54 and 91 new jobs.

In addition to jobs attributable to the product studies, jobs were also created through the Venture Founders project. According to estimates by the Venture Founders group themselves, actual employment created to date and attributable to the first two workshops is 83(1). This includes start-ups, turn-arounds and expansions and improvements.

The total direct employment created or likely to be created through the Opportunity Identification program is summarized in the following table:

	Minimum (2)	Maximum (2)
Opportunities implemented	58	89
Opportunities in implementation	42(+107 part-time)	62(+107 part-time)
Clients in early stages of implementation	54	91
SUB-TOTAL	154(+107 part-time)	242 (+107 part-time)
Venture Founders	83*	83*
PROGRAM TOTAL	246	325

* does not include results of the third workshop.

1. It is still too early to evaluate results of the third and final workshop.
2. All employment figures were provided by DOD, except Venture Founders figures which were contained in Venture Founders' own evaluation. None have been independantly verified.

These results are considerably below what was projected for the program by DREE. However, as discussed already, the validity of those projections can be questioned. Nonetheless, the actual rate of job creation has been disappointing according to all parties.

The majority of jobs created under the program were generated through the product studies undertaken. A significant proportion, however, are also attributable to the Venture Founders project. The total consultant cost for the product studies was approximately the same as the total cost of the first two cycles of Venture Founders. If all employment related to all opportunities in some stage of implementation are created, then the product studies emerge as being more than twice as effective as Venture Founders in terms of job creation. Even if none of the opportunities currently in their earliest stages of implementation are, in fact, implemented, the product study approach maintains an edge over Venture Founders. This judgement is based only on the number of direct jobs already created or in some stage of creation. It does not include any possible longer-term benefits of either approach, whether direct or spin-off.

The jobs created are not concentrated in high-wage categories.

Of the total of sixteen opportunities in some stage of implementation, fourteen are in secondary manufacturing, one is in fishery and one in services.

More specifically, 51% to 56% of the jobs are metal, plastic or metal/plastic manufacturing. Another 18% to 28% are in textiles. The sectoral distribution of jobs is summarized in the following table. Only jobs created through product studies are included. Comparable figures for Venture Founders were not available.

NO. OF JOBS CREATED OR PROJECTED

Sector	Minimum	Maximum
Fishing	6(+107 part-time)	6(+107 part-time)
Food	8	15
Textiles	43	43
Metal, Plastic Metal/Plastic	79	138
Wood	14	35
Services	4	5
TOTAL	154	242

In summary, some opportunities have been implemented and some employment has been created through the Opportunity Identification program, but overall program effectiveness has been low.

The implementation rate of identified viable opportunities has only been 40%. Particularly in view of what became the client-responsive orientation of the program, a higher rate may have been expected. The relatively low actual rate may suggest that more rigorous screening criteria should have been applied to firms.

Similarly, the job creation record of the program has been poor. This is a function of the combination of small size of opportunity identified and the fairly low implementation rate of these opportunities. The employment which has been created has not been concentrated in high skill or high wage categories.

The Venture Founders project has contributed to program objectives through the creation of employment. The fact that it has contributed to the objectives without contributing to program goals (see previous section) is a clear indication that it did not belong within the framework of this program although it may have been usefully included in another (new) program.

With respect to the objective of job creation and measured in the short-term, the product study approach seems to have been more effective and more cost-efficient than the Venture Founders technique.

The sectoral distribution of employment created indicates the virtual exclusion of the service sector. High technology industry and industry with high growth potential have not been systematically emphasized.

The program has contributed to Agreement goals in one unintended way. Most of the program activities have been directed to small indigenous enterprises. This is the primary intent of Venture Founders. As well, this became the thrust of the rest of the program due to the basic DOD orientation and the dynamics of the program, as already discussed. This spin-off contribution to the Agreement goal, however, was not by specific design nor was it part of program objectives.

SUMMARY OF OBJECTIVES

OPPORTUNITY IDENTIFICATION, ANALYSIS AND PROMOTION PROGRAM

OBJECTIVES	EXPECTED VALUES	ACTUAL VALUES
New employment in secondary & tertiary sectors	No. of opportunities implemented Anticipated close to 100% implementation rate No. of jobs created Estimated range: 596 to 1896 over 5 years "Most probable" hypothesis: 939 over 5 years Wage levels Concentrate on high wage jobs	No. of opportunities implemented 16 of 39 opportunities in some stage of implementation (41%) No. of jobs created Total: 246 to 325, in some stage of implementation Wage levels No emphasis on high wage jobs
Diversification employment opportunities	Sectoral Distribution Majority in secondary manufacring with some in service sector Emphasis on higher technology industry and industry with high growth potential	Sectoral Distribution Virtually all secondary manufacturing; services generally ignored No particular emphasis on high technology industry or high growth industry

1.4 CRITICAL OVERVIEW OF THE PROGRAM

The previous section presented an analysis of the effectiveness of the program at the input, output, goal and objectives levels. The principal factors explaining the performance at each level were discussed.

This section focuses on the issues and the problem areas which affect the program as a whole.

In the previous section, it became clear that there were major disputes involving DREE, DOD and IEL over program objectives and the approach to be adopted. In particular, there were serious divisions of opinion on the importance to be attached to the use of analytical procedures in identifying product opportunities. As well, there was an on-going conflict regarding the size of studies to be undertaken and the size of opportunities to be identified.

It was seen in section 1.2.1 that the use of analytical procedures in identifying opportunities was clearly required in Schedule "A" of the Agreement. In the Project Briefs, however, the requirements for these procedures were downgraded. In fact, a tension was pointed out between the text proper of the first Project Brief and the appended description of the industrial development process. In practice, DOD in becoming client-responsive, chose to rely entirely on an alternate non-analytical means of identifying product opportunities. DREE insisted that this constituted a fundamental break with program intent.

The debate over size of opportunity was a chronic one. DREE maintained that the real intent of the program was to aim at a limited number of major opportunities. DOD preferred to focus on a large number of smaller opportunities. As was shown in the previous section, a reading of the Agreement and Project Briefs indicate that any size opportunity and study was acceptable within the terms of the program. However, in DREE's view this did not reflect the actual intent of the program.

The lack of accord on fundamental issues relating to the parties' conceptions of the program continued through the entire life of the program. A basic problem was that there was no common basis or framework to govern discussion. It may be true that some existing friction between the parties aggravated the difficulties. However, had they been able to agree on what principles or documents governed the program, resolution of the disagreements might have been easier.

DREE's position was that the "real" intentions of the Agreement had to be understood and were binding. Due to circumstance, they were the only ones who inherited the true tradition of the Agreement. DOD admitted no longer having on staff anyone who could interpret the original intent of the "fathers" of the Agreement. However, their position was that the program was governed by the Subsidiary Agreement and, more particularly, by the Project Briefs which had been duly signed and accepted by the responsible agents of both the Province and the Government of Canada. Consequently, in their view, discussion should have centered on the Briefs and the Agreement. Appealing to the higher authority of "real intent" was to effectively render meaningless the documents signed between the parties. IEL, which had not been involved in the drafting of the Agreement and whose role in the implementation of the program was never clearly spelled out in the Briefs, was primarily concerned with the practical use which they could make of the program, however formulated.

Many of those interviewed, reacting to the problems posed by this fundamental dispute, indicated the importance of having the drafters of an Agreement involved in its implementation. While this may be desirable, it is not reasonable or realistic to expect it to be so, given individual mobility and changing circumstances within departments. Under such circumstances, it would seem essential that a program's intent and approach be clearly defined in the program's governing documents signed by all parties. These must then be considered the basis for defining program intent and methods.

In summary, the first major problem which impeded resolution of the difficulties of the program has been identified. The lack of consensus between DREE and DOD on accepting the Agreement and Briefs, as written, as being the fundamental documents defining the program undermined a common basis for discussion and removed a framework within which issues might have been resolved.

The disagreement over approach and objectives led to a delay of months in the drafting of a Project Brief. Even once the Brief was signed, the disagreements continued and were reflected in the operations of the Project Team. This was responsible for retarding the rate of implementation of the program. The delays themselves had several effects. Time which might have been spent learning and experimenting with what was essentially an untried type of program, was lost. Pressure of time-lost created a pressure to spend money quickly. This may have been a factor in encouraging a large number of relatively small studies to be undertaken.

The fundamental problems surrounding the Opportunity Identification program were recognized early in the life of the program. As well, several serious organizational problems were recognized in the management structure of the program. It is normal for some problems to exist between the involved parties in the early stages of an Agreement. It is also normal for the problems to be gradually resolved as, in fact, they were in the case of the other programs in this Agreement. What is striking in the Opportunity Identification program is not so much the existence of the problems but rather the inability to resolve them throughout the entire life of the program. Part of the program management problems were reduced by the replacement of the oversized seven-man Project Team by a two-man Project Team. However, in a sense, this was simply a way of avoiding facing the more fundamental issues underlying the disputes.

The issues which had to be addressed were the ones of approach and objectives, as already dicussed, and the one of delineating responsibilities. Particularly in the earlier stages of the program, it was

not clear who were intended to be the "delivery agents" of the program. As was indicated in the section on promotion (1.3.2), it was never clear what action would be taken once an opportunity was identified or who would be responsible for taking it(1).

In a sense, making the program client-responsive was a reaction to this problem. The solution adopted, however, imposed an important change in orientation on the program. If, instead, the gap in the definition of the industrial development process had been addressed directly, it may have been possible to have resolved the problem while remaining truer to program intent.

The issues raised here involve basic decisions on concepts, content, methods and distribution of responsibilities. Any resolution of such fundamental issues would require decisions and agreements which could only be reached at the higher echelons of program management. In practice, the issues were continually pushed back down to the Project Team level. The result was that the debate tended either to center on the merits of particular studies or else on broad generalities which could never be resolved by the Project Team. Underlying the tension in the operations of the Project Team were the larger issues, but these were not and could not have been tackled head-on in concrete and constructive ways at that level of management.

The issues were not addressed at the Management Committee level partly because the members of that Committee, with their multiple responsibilities, did not have sufficient time to undertake a task which, admittedly, would have been both time and energy consuming. In addition to this, however, it represented a deliberate policy of trying to delegate responsibility and of forcing as many decisions as possible to be taken

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1. It may be noted that by combining the three parts of the program budget (Amendment 1; see p.5 above), the program was being pushed in the wrong direction. Whereas a stricter and clearer definition of each of the necessary activities was demanded, the amendment had the effect of encouraging a further blurring of the definitions of the activities.

at as low a level as possible. This also explains why the Project Team, per se, was never permitted direct official access to the Management Committee (1).

The second major problem of the program therefore emerges as being the lack of willingness of the upper level of program management to directly address the problems of substance which afflicted the program. (2).

A possible mechanism for resolving the problems had been provided in the Agreement itself, which required that a program evaluation be conducted after two years. This might have provided a stimulus for addressing the problems. The evaluation would likely have suggested directions in which solutions might have been sought. Such an

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1. Despite requests, the Project Team never once met with the Management Committee. On an individual informal basis, Project Team members might have met with Management Committee members but this informal access seems to have been much more prevalent on the DREE side than on the DOD side. This imbalance in access may in itself have tended to increase tensions at the Project Team level.

   The Coordinating Committee, located between the Project Team and Management Committee in the hierarchy, never met and was disbanded by the second Project Brief.

2. This appears to have been ultimately acknowledged in the so-called "Thornvale conferences" of 1979. These sessions which addressed the basic issues of industrial development strategies, involved the senior levels of involved departments and agencies. While the conferences may have been generally useful, they came too late to help the Opportunity Identification program.

evaluation was never conducted[1]. Instead, the solutions which were arrived at, particularly the simpler administrative arrangements entrenched in the Function I/Function II distinctions adopted in the second Project Brief, represented an unblocking of a stalemate but they were not solutions to the fundamental problems. The tension between each department remained and may well have been aggravated. Subsequently, attempts increased by each party to gain control of portions of the budget for use in activities in which they had particular interest. As was indicated earlier, the Venture Founders, Industrial Intelligence and European Contact projects, although perhaps each valid activities in themselves, were also means of short-cutting funds to avoid their use in the type of product study being generally conducted by Opportunity Identification staff. As a result of this dispersal of activities, the program lost any sense of a single direction or thrust. In such an atmosphere, it became difficult to resist pressure from elsewhere in the government or from political circles to conduct studies which did not properly fall within the terms of the program or else studies of opportunities which should probably not have been investigated at all. In certain cases, the Management Committee would approve a study without ever informing lower levels. Pressure from higher-levels to conduct studies was prevalent enough to be another significant factor in further dispersing the activities of the program.

These pressures were encouraged by the long delays in implementing the program. The fact of having a large pool of money available but unused, encouraged many individuals and departments to consider the possibility of using the funds for their own activities. Had the purpose of the funds and the criteria for their being expended been clearly defined and accepted, this pressure may not have developed to the same extent.

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1. In June 1978, an interim evaluation was presented by DOD. However this was primarily a summary of activities undertaken to date and did not constitute a full evaluation in the sense required.

The third and final problem affecting the program emerges. The program's efforts became dispersed into many different types of activities and any sense of specific direction was lost. The program's position in the departmental structure did not sufficiently isolate it from political pressures which acted to disperse efforts. As well, the program director was not of senior enough rank to permit him to impose a strong vision of goals and purpose on the program while resisting those influences active on the program which tended to degrade it.

In summary, three major problems impeded the resolution of the difficulties which beset the Opportunity Identification program.

(i) A reference point and possible common base for discussion disappeared when DREE refused to accept the Subsidiary Agreement and Project Briefs, as written, as the final authority governing the program. Instead, they referred to original "program intent", which in some cases was different from what was written and signed.

(ii) The upper echelons of program management did not address the fundamental disputes surrounding implementation of the program. Instead, they attempted to force decisions to be taken at lower levels.

(iii) The program's location within the governmental hierarchy did not sufficiently isolate it from political pressures and the program director was not of a sufficiently senior rank to permit him to resist the pressures. Consequently, the program as a whole could not resist the pressures which tended to disperse and degrade its efforts.

1.5 RECOMMENDATIONS

The overall effectiveness of the Opportunity Identification, Analysis and Promotion program was limited. Many problems emerged at the levels of both program design and program implementation. The issue of the fundamental appropriateness of highly analytical efforts being included within the framework of an industrial development agreement is addressed in the overview of the Agreement (Section 7.3). However, in the event that a similar program were to be defined in a future agreement, it is recommended:

(i) that promotional activity be more precisely defined and that it be separated into a distinct part of the program, equivalent in stature to each of the other three parts;

(ii) that, if changes be made in the methods designated for achieving the outputs, these be fully documented and justified in writing;

(iii) that when new activities are proposed which have not been previously defined in the Project Brief (e.g. Venture Founders), a written justification be presented detailing their contribution to program goals and objectives; this would permit the effects of the new activities on the total program to be documented and anticipated;

(iv) that discarding of approved activities (e.g. computerized reference system) be explained in writing;

(v) that each part of the program be assigned to a specific responsible agency and the extent of their responsibilities be clearly defined (e.g. "agency X has a role to play" or "agency Y could be useful in this" is unacceptable);

(vi) that, where doubt exists on the effectiveness of designated technical procedures or methods, an initial period for experimenting be defined, to be followed by a formal evaluation of the procedures' utility and appropriateness;

(vii) that, once the procedure(s) have been finalized, regular progress reports be prepared listing activities undertaken; these reports should include an evaluation of the degree to which the activities are appropriate to achieving program goals and objectives; the evaluation criteria should include both qualitative and quantitative measures;

(viii) that these progress reports serve as a basis for an annual evaluation;

(ix) that all expenditures be classified according to predetermined activity categories appropriate to the indicators to be used in the evaluations.

The 'Industrial Parks and Related Infrastructure' and 'Industrial Infrastructure' Programs

Part III

INTRODUCTION

Part III of this report deals with the evaluation of two programs, the 'Industrial Parks and Related Infrastructure' Program and the 'Industrial Infrastructure' Program. Their inclusion in the same part of the report was considered appropriate, since both deal with industrial infrastructure and both share the same objective.

In chapters 2, 3 and 4, the effectiveness of the three projects of the Industrial Parks and Related Infrastructure Program are evaluated. Chapter 5 evaluates the program as a whole by providing a synthesis of the three preceding chapters. Finally, Chapter 6 deals with the evaluation of the 'Industrial Infrastructure' Program.

CHAPTER 2

EVALUATION OF THE ASSISTANCE FOR INDUSTRIAL PARKS DEVELOPMENT PROJECT

2.1 DESCRIPTION OF THE PROJECT

The 'Assistance for Industrial Parks Development' was the most substantial of the three projects of the 'Industrial Parks and Related Infrastructure Program'.

The intent of this project was to implement the fourth element of the Agreement strategy - the facilitating and accommodation of industrial expansion through the provision of serviced industrial land and other basic infrastructure.

The Logical Framework used to evaluate this project is presented on the following page. It is important to note that all five parks which constitute sub-projects of this project are included in this Logical Framework. However, a summary of the detailed results by park are also presented in this chapter.

LOGICAL FRAMEWORK

ASSISTANCE FOR INDUSTRIAL PARKS DEVELOPMENT PROJECT

Narrative Summary	Objectively Verifiable Indicators
OBJECTIVE	
Encourage and accommodate industrial growth.	. Changes in number of inquiries to IEL or commissions. . Number of firms rejecting N.S. in past, for lack of facilities. . Number of jobs created.
GOAL	
Reinforce actual growth patterns in secondary manufacturing and warehousing - distribution sectors.	. Number of new users. . Occupancy rates of the parks. . Type of new park users. . Previous location of firms.
OUTPUTS	
Serviced sites at each park.	. Type of infrastructure constructed. . Total area serviced. . Quality of services provided.
Ownership.	. Owners of parks.
Prices and pricing system.	. Prices per acre. . Competitiveness of prices.
INPUTS	
Funds.	. Expenditures by parks. . Total expenditures.
Schedules.	. Date of Project Briefs. . Delays in implementation.

2.2 SUMMARY OF THE EVALUATION

Overall, the effectiveness of the 'Assistance for Industrial Park Development' program may be evaluated as acceptably high, given particularly the performance at the input and output levels.

In effect,

- expenditures were within 0.1% of the total budget,
- delays in the writing of certain of the Project Briefs may have been responsible for postponing some job creation, however, all construction was completed within the term of the Agreement,
- the type of infrastructure and total area serviced are not significantly different from what was forecast,
- all parties involved express general satisfaction with the quality of services provided.

With regard to the attainment of goals and objectives, the effectiveness seems lower. However, judgements must be tempered in view of the short time elapsed since the completion of construction.

Actually,

- twenty-four new firms have been attracted to the parks,
- half of the new industries are in the secondary manufacturing sector; two, in the warehousing - distribution sector,
- one-third (all in Debert) originate from out-of-province.

While the real degree of success will only become apparent in some years, initial effectiveness at this level has not been very high.

2.3 PROJECT EFFECTIVENESS

This section presents results with regard to the effectiveness of the 'Industrial Parks Development' project. A summary of results by individual parks will be presented first. Following this, the evaluation will proceed by evaluating and discussing, in order, the inputs, outputs, goals and objectives of the project.

2.3.1 Summary of Results by Individual Park

The purpose of the chapter is to evaluate the Industrial Parks Development project as a whole. The evaluation of individual parks is not within the mandate. However, while for some indicators the level of variation between park is low, for others it is considerable. In such cases, limiting the discussion to totals or averages might be seriously misleading. For this reason, the following table is included in order to present a summary of results by park and to provide an overview of their relative performance. In reading the subsequent sections, the reader may wish to refer back to the table.

2.3.2 The Inputs

Two types of inputs are discussed: funds and schedules. The indicators of these inputs are expenditures and adherence to schedules.

Expenditures

The total project budget after all amendments (see Introduction 0.1.3) was $9.55 million. Actual expenditures were virtually as budgeted. Individual parks departed more widely from their construction budgets than did the project as a whole, but on balance, individual cost overruns and cost-savings were very nearly equal. The greatest difference between actual and forecast expenditures at an individual park was only 1.3% of the amount budgeted.

SUMMARY OF DATA, BY INDUSTRIAL PARK

	Amherst	Debert	Kentville	Windsor	Stellarton	Bridgewater	TOTAL
Expenditures($) (% ± budget)	3 277 536 (-1.3%)	1 635 283 (+1.2%)	1 761 327 (-.2%)	985 243 (+1.0%)	677 393 (+.3%)	1 200 000 (0.0%)	9 536 782 (-.1%)
Construction completed	Summer '79	Summer '77	Summer '78	Summer '80	Summer '80	Fall '80	
Total serviced area	250 acres	290 acres	38 acres	26 acres	18 acres	220 acres	840 acres
Semi-serviced land available	80 acres	600 acres	40 acres				720 acres
Total number of users	18	14	9	2	-(1)	14	57
No. of new users(2)	1	10	4	1	-	8 (since '78 & includes 4 imminent)	24
No. of users lost	1	1	1	-	-	-	3
Occupancy rate	130/250 acres (52%)	140/290 acres(3) (48%)	16/38 acres(3)(4) (42%)	4/26 acres (15%)	0/18 acres -	75/220 acres (34%)	365/842 (43%)
No. of new acres occupied	2 acres	56 acres(5)	9 acres(6)	2 acres	-	?	
Type of new firm(7)	1 L.M.	9 L.M.; 1 Dist.	1 L.M.; 2 Serv.(8)	1 Serv.	-	1 L.M., 1Dist., 6 Serv.	12 L. 2 Dist. 9 Serv.
Previous location of new industries	1 local	2 local 8 out-of-prov.	1 local 2 corridor	1 local	-	all local or corridor	15 local or corridor 8 out-of-prov.
No. of new (9) jobs	12	280	14 (+80 seasonal)	3-4	-	83 (+12 part-time)(8)	392(+92 part-time or seasonal)

Note: Data gathered in November, 1980; updated as possible to January 1981

1. There are 4 users who pre-dated the Agreement but are located in entirely separate parts of park, not included in the 18 acres total.
2. Those who moved to the parks since the end of construction or with knowledge that construction was being undertaken.
3. Does not include Incubator Mall. An additional 3.7 acres of semi-serviced land is occupied at Kentville.
4. Does not include 3.7 acres of semi-serviced land which is occupied nor 1.1 acres occupied by bankrupt bottling plant.
5. Includes 9 acres committed but not yet sold to Remington Rand.
6. Includes 1.1 acres of bottling plant which has since gone bankrupt.
7. L.M. = Light Manufacturing; Dist. = Distribution; Serv.= Services
8. Excludes bankrupt bottling plant.
9. Includes expected employment of 82 at Debert and 75 at Bridgewater

One exception is not reflected in these general figures. Project expenditures for the Bridgewater park were exactly as budgeted. However this was true only because an $800 000 extension of an access road, considered by the Development Commission as an integral part of the construction plans, was ruled by DREE to be a non-shareable cost under the terms of the Agreement. Eventually, the necessity of the extension was recognized by the province who paid the full cost. Effectively, this meant that at Bridgewater, total construction costs were shared between the Province and the federal government on a 52:48 basis instead of on the 20:80 basis maintained elsewhere.

Adherence to Schedules

Two phases must be identified. The first is the period from the signing of the Agreement to the drafting of the Project Briefs. The second is the construction phase. The major delays to the program occurred in the first phase. Generally, the construction, once begun, proceeded without too many difficulties.

It is reasonable to assume that Project Briefs were to be prepared and Project Authorizations signed as soon as possible following the signature of the Agreement. In this manner, the designated funds would be released for the purposes outlined in the Agreement at the earliest possible date.

The Agreement was signed in June 1976. By the end of that summer, two of the Project Briefs had been approved(1). Another one (2) was delayed for nine months beyond this, due to technical difficulties related to water sources and sewer outfalls. Two parks,(3) however, did not have their Project Briefs written and approved until

1. Amherst and Debert.
2. Kentville.
3. Windsor and Stellarton.

three years after the Agreement had been signed. One of these was delayed while detailed site selection procedures were undertaken, necessitated by particularly difficult local soil conditions. The other one, Stellarton, was delayed partly for technical reasons and partly for political reasons.

According to sources at DREE, DOD and IEL, the Stellarton park was the last one to be included in the original Agreement. This was done with some reluctance and misgivings and the face of political pressures operating at the provincial level. However, even once the park had been included formally in the Agreement, DREE maintained a reluctance to proceed with it. A "test of need" was therefore applied to the park, requiring space in the area. Such a test was not applied to any of the other parks once the Agreement had already been approved. Uncertainties also arose concerning the possibilities of an open-pit coal mine being developed in the immediate vicinity of the park. This served to further delay signing of the Project Brief.

Once the Briefs had been accepted, construction generally proceeded according to schedules. The few delays which did occur were usually related to third party involvement; that is, situations in which construction depended on the actions of third parties to the Agreement and not on the province or DREE(1).

In summary, delays did not affect completion of the required infrastructure within the term of the Agreement. Delays, especially at the Project Brief stage, did however mean that certain parks were not completed until late in the life of the Agreement. This in turn may have been responsible for postponing the establishment of certain job creating activities, although it is difficult to ascertain the degree to which that was the case. The delays also had the effect of postponing the flow of federal funds into the province.

Overall, however, the effectiveness of the program at the input level may be evaluated as high.

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1. The most serious case of this occurred in Amherst where certain construction was dependent on the town building a new water reservoir. The construction was delayed for approximately one year while the necessary arrangements were made for funding and approval of the reservoir.

SUMMARY OF INPUTS

ASSISTANCE FOR INDUSTRIAL PARKS DEVELOPMENT PROJECT

INPUT CATEGORY	EXPECTED VALUE	ACTUAL VALUE
Expenditures	Total: $9 551 000	Total: $9 536 800(1) No single park departed from budget by more than 1.3%
Adherence to Schedules	Project Briefs to be written and approved as possible after signing of Agreement	One Brief delayed 9 months; Two Briefs delayed until June 1979
	No delays in construction	Construction schedules generally maintained, but some delays where third party involvement required.

1. Figure as available in November 1980. Includes some projection.

2.3.3 The Outputs

The project outputs will be discussed under four indicator categories: type of infrastructure constructed, total area serviced, quality of services provided, ownership and pricing.

Infrastructure Constructed

The infrastructure to be constructed for each industrial park was specified in the appropriate Project Brief. This included on-site construction and, in some cases, off-site construction as well.

All infrastructure has been completed as specified, with only minor modifications. None can be considered fundamental. The project has therefore been highly effective in constructing the intended infrastructure.

In the drafting of two of the Project Briefs, decisions were made to exclude activities which might otherwise have been included. The first was the decision not to include the access road extension at Bridgewater. As discussed in the previous section, the Province finally decided to undertake the work itself. The second omission related to hangar facilities at the Debert park. These were specified in Schedule "A" of the Agreement but were not included in the Project Brief, probably due to budgetary constraints. However, the decision does appear as a reduced commitment to the full concept of an Air Industrial Park as originally envisaged, and the missing facilities have proven to be a handicap in the park's operation.

Total Area Serviced

The minor modifications made to the infrastructure did not affect the area of land serviced under the Agreement. The area of land actually serviced therefore corresponds to the requirements of the Project Briefs.

It is difficult to establish a single figure to describe the area serviced under the project, since construction was not limited to servicing new areas but included also the upgrading of existing serviced areas and the provision of access or partial services to other areas. In total, however, there is close to 850 acres of land which is serviced at the six parks included under the Agreement, and an additional 720 acres of semi-serviced land(1).

It should be noted that while the area serviced met the requirements of the Project Briefs, in some cases these had been reduced from the original intentions as reflected in studies leading to the drafting of the Agreement(2).

Quality of Services

The Project Briefs required that parks be built to standards ensuring "good" or "high" quality parks. The precise meaning of this was never defined. One party interviewed, however, indicated that the intention was for these rural parks to be provided with services comparable to those that would be available in an urban area. The provision of a high level of fire protection was considered to be particularly important.

There seems to be general satisfaction on the part of all involved parties with the actual results of the construction. Fire protection has been provided in accordance with the Insurors Advisory Organization

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1. This is land which is available to industry having somewhat limited requirements, e.g. where a septic instead of a sewer system would be sufficient or where water pressure is not required at the level provided in the fully serviced sections of the park.

2. In particular, the Windsor and Stellarton Briefs defined smaller projects than had been originally anticipated.

standards and with the Project Briefs. Generally, the inter-park variations are limited to what may be termed "aesthetic", rather than substantial[1].

Overall, therefore, sites have been provided and serviced as intended.

Ownership and Pricing

According to the Agreement, the ownership of all parks was to be provincial. This is now the case, with the exception of Bridgewater where ownership is more complex. Of the 220 acres serviced, the bulk is still owned by the Bridgewater Development Corporation. The Town of Bridgewater owns a further 18 acres. The provincial share is limited to a joint ownership with the Development Corporation of the remaining 32 acres. It is this latter provincial share which permitted the park to qualify for inclusion in the Agreement.

The Agreement specified that serviced land be provided at general market prices but that competition on the basis of price be avoided. This included both competition with other parks in the provinces and with parks elsewhere in the Maritimes.

In practice, this pricing strategy has been adhered to. All parks in the Agreement charge similar prices. These generally range between

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1. For instance, the provision of rear underground, electrical supply does not affect the quality of service provided but does affect the overall appearance of the park. Generally, Amherst has been provided with the highest "quality" services on an aesthetic scale and has become the standard of comparison for other parks in the province. On the same scale, services at Debert are the poorest of the parks. Note that this does not necessarily reflect the relative visual attractiveness of the parks, since natural setting and topography are also factors in this.

$8 000 and $12 000 an acre, depending upon the quality of services provided and upon location(1). Lower rates can be negotiated for land within semi-serviced sections of the parks.

The only out-of-province park which could be considered in competition with Nova Scotia locations is the park in Moncton, N.B. Those interviewed assumed that the prices charged in the Moncton park were not significantly different from those charged in Nova Scotia parks. IEL is currently conducting a study of park pricing which will determine more precisely appropriate market prices for provincial parks as well as cost-recovery prices and break-even points.

Overall, the expected outputs of the program have been achieved with a high degree of effectiveness.

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1. The Bridgewater park, which had been charging lower rates, was required to raise theirs when they entered the Agreement.

SUMMARY OF OUTPUTS

ASSISTANCE FOR INDUSTRIAL PARKS DEVELOPMENT PROJECT

OUTPUT CATEGORY	EXPECTED VALUES	ACTUAL VALUES
Infrastructure Constructed	As specified in Project Briefs	As specified in Project Briefs, with only a few minor modifications
Total Areas Serviced	As specified in Project Briefs	As specified in Project Briefs Total area now serviced in the 6 parks: 840 acres (+ 720 semi-serviced)
Quality of Services	"Good" to "high" quality. Provide services at standards available in urban areas, with particular attention to fire protection	As required, and work considered satisfactory Fire protection to Insurors Advisory Organization Standards
Pricing	Competitive market prices, but not to undercut other N.S. or Maritime parks.	Strategy adhered to Common range: $8 000 to $12 000 per acres

2.3.4 The Goal

The goal of the Industrial Park project was to reinforce actual growth patterns in the secondary manufacturing and warehouse-distribution sectors of the economy.

Four principal indicators have been selected to evaluate the performance of the project with respect to these goals. They are: number of new users, occupancy rates, type of new user, previous location of new firms.

Number of New Users

A total of 24 new users have located in the six parks. A new user is defined as a firm locating in a park since the completion of the specified project construction or else with the knowledge and expectation that the construction was to take place shortly. Of the 24, one firm is now bankrupt.

It is difficult to judge the significance of this result. The time elapsed since the end of construction has been short and varies from park to park. However, one benchmark which may be applied is the average performance of all Atlantic Province industrial parks. A DREE study[1] has shown that a definite relationship exists in the region between age of parks and average number of firms located in these parks. However, this relationship camouflages much internal variation. As well, it cannot be applied directly to the problem at hand, since the concern here is growth since the new construction and not since the establishment of the park. This difficulty may be circumvented by assuming that a park's growth rate is linear (i.e. growth over any X number of years equals the growth during the first X years

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1. Atlantic Region Industrial Parks: An Assessment of Economic Impact, Atlantic Region Occasional Paper, DREE, October 1 979, p. 30.

after park establishment). In this way, a basis may be established for comparing the growth of the six Nova Scotia parks with the growth of all other parks in the Atlantic region. However, given both the variations normal between any two parks as a function of their particular situation and given also the simplifying assumption which has been made, this comparison must be taken as no more than a general point of reference.

The DREE study indicates that, on average, in parks between 1 and 2 years old, the number of firms established is 5. For parks between 2 and 3 years old, the number is 10.

On this basis, the six parks included in the Agreement divide into three groups. The performance of Debert and Bridgewater are about average and therefore acceptable. Amherst and Kentville are poor. It is too early to make judgements concerning Windsor and Stellarton.

Applying closer knowledge of the parks in question permits these judgments to be refined. Even though only a very short time has elapsed since the end of construction at Windsor and Stellarton, the level of interest expressed in them by industry has been low. Those interviewed, although refraining on a definitive judgement, tended to be disappointed with performance to date and did not express much hope for any dramatic improvement in the near future.

Amherst has been the most disappointing of all the parks. The only new user to enter the park was a small firm relocating from the town center. During the same period, one large employer moved out of the park. As well, although construction was only completed in summer 1979, serviced sites were available for some time before that.

Debert has been the most successful of the parks in attracting new users and its performance was considered most satisfactory by all those interviewed.

In summary, the performance of the parks in attracting new users may be rated as follows:

Acceptable to Good:	Debert, Bridgewater
Marginal:	Kentville
Poor to Unacceptable:	Windsor(1), Stellarton(1)
	Amherst

Occupancy Rates

Total occupancy rates vary from zero to 52 percent, expressed in acres occupied as a proportion of total serviced acres. These figures include all users, both new and old. The variation reflects the relative age of the parks. As might be expected, such a relationship was also found to exist over the entire Atlantic region, although it was not as strong as the relationship between age and number of users (2).

These figures do not indicate activity since project implementation and so can only serve as a general description of the parks' performances since their establishment. This is useful for placing the other indicators in a broader context. Of more direct interest are the number of new acres occupied. As might be expected, the figures indicate the same relative performance of each of the parks as was indicated in the previous section by the variable number of new users(3).

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1. Judgement on these two must be tempered in view of their very recent completion.

2. Ibid., p. 27.

3. Excluding Stellarton, the number of new acres, as shown in the table in section 2.3.1, varies from 2 in Amherst and Windsor to 56 in Debert. The only indication of expected values for new acres is contained in 1975 DREE projections for Amherst which assumed a new occupancy rate of 20 acres per year.

The occupancy rates, number of new users and number of new acres occupied are, as a group, suggestive of the ability of the parks to meet future demand for industrial space.

The Amherst and Bridgewater parks both have large tracts of land available and recent growth rates clearly indicate that serviced land will be sufficient to meet demand over, at least, the next five years. The Windsor and Stellarton parks are both quite small. However, growth rates in the Windsor area have generally been relatively slow in recent years and therefore it is unlikely that the park will become full in the near future. The Stellarton area is in an important industrial region of the province, however planning controls in the region are lax. Consequently, firms are relatively free to locate outside industrial parks. This should have the effect of maintaining a low demand for land within the Stellarton park. Barring any unexpected changes in the region, available land in the Stellarton park should probably be sufficient for the next five years.

The situation at Debert and Kentville is less clear. If the growth rates of the past three years are maintained at Debert, currently serviced land will be sufficient for more than five years. However, the Debert park has the highest growth potential of all the parks and, under favourable circumstances, is most likely to expand rapidly. Even so, the total area of land available is considerable, especially when the extent of semi-serviced area is included. It is therefore considered unlikely for the Debert park to require additional land within five years.

The situation at the Kentville park is the most difficult to foresee. The park is fairly small and, although its growth has not been rapid, only about 22 acres of fully serviced land are still available. As well, it is located in a region with a growth potential.

In summary, assuming no dramatic changes in regional growth patterns and growth rates or other changes which might affect demand for industrial space, the only park which might face a shortage of serviced land in the next five years is Kentville.

Type of New User

The project goal was to attract industry in the manufacturing and warehouse-distribution sectors.

Of the 23 new industries established, 52 percent are light manufacturing, 39 percent are service industries and only 9 percent are distribution firms. On the whole, therefore, the project would appear to have been only partially effective in attracting the type of entreprise desired. On the other hand, in the parks of the Atlantic region as a whole, only 26 percent of the users are manufacturing and processing firms while in Nova Scotia the average figure is only 18 percent (1). In comparison to this, the parks appear to be quite effective in attracting manufacturing entreprises.

The totals for all six parks camouflage a high degree of variability between parks, as can be seen in the table in section 2.3.1. In brief, of the 12 light manufacturing firms, 9 are located in Debert. A similar concentration is evident in the service sector, in which 6 of the 10 firms are located in Bridgewater(1).

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1. Atlantic Region Industrial Parks, op./cit. p. 37. These figures include parks of over 300 acres which has the effect of reducing the averages. However, even if these were to be excluded, the averages would still be considerably less than 50%.

In summary, project effectiveness in attracting a high proportion of manufacturing firms has been acceptably high to date. On the other hand, these results are primarily a function of the performance of one particular park, Debert. Effectiveness in attracting warehousing-distribution firms has been poor.

Previous Location of Firms

The goal of the project included reinforcing growth in the growth corridor of the province. To examine the performance of the project in this regard, the previous location of firms has been analysed. Firms have been divided into two groups: those with a previous location within the immediate locality of the park or elsewhere within the corridor, and those from outside the corridor(2).

A high proportion of new firms originating from outside the corridor will tend to indicate an effect of reinforcement. A high proportion from within the corridor will tend to indicate the opposite. It is recognized that this is an imperfect measures since some firms originating from within the corridor might, in the absence of the parks, have decided to locate outside. In such a case, the parks could still be attributed with reinforcing growth in the corridors. Similarly, in the absence of the parks, some firms originating from the outside might nonetheless have decided on locating within the corridor. In any case, the distinction is a reasonable first order measure of the effectiveness of the parks in reinforcing growth existing growth patterns.

Of the 24 new park users, 16 have a previous location within the corridor. Of these, the majority actually originate from the immediate vicinity of the park in which they are located. The remaining 8 firms are all from out-of-province.

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1. Three of the remaining service firms are in Kentville. There the expected result was a concentration of agriculturally related enterprises; to date, not one of the firms can be so classified.

2. For the purpose of this discussion, the corridor is considered as being the entire geographic band defined by the six parks.

As with previous indicators, results are not distributed evenly across all parks. In this case, all 8 out-of-province firms are located in Debert.

In summary, the project thus far appears to be more successful in acting as a magnet for enterprises already in the immediate vicinity of the parks(1), than in reinforcing growth in the corridor. Furthermore, of the positive results which have been identified, all are attributable to the Debert park.

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1. The Bridgewater Development Commission seems to have a specific policy of encouraging the relocation of firms from the town of Bridgewater to the park.

SUMMARY OF GOAL ACHIEVEMENT

ASSISTANCE FOR INDUSTRIAL PARKS DEVELOPMENT PROJECT

GOAL	EXPECTED VALUES	ACTUAL VALUES
Reinforced actual growth patterns in secondary manufacturing and warehouse-distribution sectors	Occupancy Rate Number of New Users Not specified	Occupancy Rate Number of New Users Total 25 Acceptable-Good: Debert, Bridgewater Marginal: Kentville Poor-Unacceptable: Stellarton, Windsor, Amherst
	Occupancy rates Only data is for Amherst where 20 new acres predicted per year (source:1975 Dree study)	Occupancy rates Total occupancy rates vary from zero to 52% as a function of age of park Total average occupied varies from zero to 56 acres (Debert)
	Types of New User Concentration in manufacturing and warehousing-distribution sectors	Types of New User 50% of new users in mfctg, only 8% in warehousing-distribution Concentration in manufacturing is acceptable as a whole; however, most of results contributed by Debert only
	Previous Location of Firms Reinforce corridor	Previous Location of Firms 16 from within corridor 8 from out-of province, all in Debert.

2.3.5 The Objective

The objective of this project, together with all those in the Industrial Parks and Related Infrastructure program, was the encouragement and accommodation of industrial growth.

Ideally, the performance of the project with respect to the objective would be indicated by changes in the level of interest on the part of industry in locating in the province as well as by the number of firms which in the past wished to locate in the province but failed to do so for lack of park facilities.

Such information is not available. Also, under the circumstances, it would not be fully indicative of the true impact of the parks. Prior to the completion of these parks, firms were not turned away by the lack of facilities. This was true since there were very few planning controls prohibiting firms from selecting locations outside industrial parks or designated areas. The development of industrial parks and an increase in planning controls have gone hand in hand.

Under the circumstances, the surrogate indicator of 'new employment in the parks' has been used. Given the increased planning controls, firms are now less free to locate outside parks than they once were. The level of employment therefore gives an indication of the amount of industry which has been accommodated by the parks. The question of encouraging growth will be analysed by distinguishing new employment in the province from transfer employment.

Number of Jobs Created

Prior to signing the Agreement, DREE undertook a series of forecasts of employment to be generated by the parks. However, by and large, the quality of the forecasts were poor. There was considerable inconsistency with respect to the time-frames employed. As well, the assumptions were generally unrealistic. A summary of results is presented in the following table.

SUMMARY OF EMPLOYMENT PROJECTIONS - 1975

PARK	Low	High	Assumptions and Time-frame
Amherst	960	1368	1975-80 incl.; 20 acres/yr; 8-12 employees/acre
Debert	345	1036	1977-80 incl. (part of 1972-84 series); based on list of suggested industries - was most serious attempt at forecasting
Kentville	350	400	1980-85 incl.; 7 employees/acre; 50 acres, 100% occupancy
Stellarton	350	400	1980-85 incl.; 7 employees/acre; 50 acres, 100% occupancy.
Windsor	?	?	

Generally, the assumptions seem unreasonable and the results grossly exaggerated given the short time-frame of the forecasts. As in the case of employment projections for the Opportunity Identification program, one must wonder whether the forecasts were not intended more as exercises in "program promotion" than as attempts at realistic forecasting. For this reason, these expected values have not been used as a measure of project effectiveness in creating employment.

A total of 240 full-time and 80 seasonal jobs have already been created. An additional 157 full-time and 12 part-time jobs are expected to be created by firms already having made some committment to locating in the parks(1). In total, therefore of 392 full-time, 12 part-time

1. These were firms which were also included in the new users figures. They include 3 firms at Debert and 4 in Bridgewater.

and 80 seasonal jobs have been created or are likely to be the near future. In addition, the Michelin plant at Bridgewater has expanded by 600 persons since 1971 and a further expansion of 250-300 is under way. These expansions occurred with the assurances that improved fire protection facilities would be provided. These were finally provided under the Agreement. It is difficult to determine if the expansions would have gone ahead in any case.

The total employment figures were very disappointing to most involved persons and were not considered acceptable. The only exception is the Debert park, which itself contributed the majority of the jobs.

It is difficult to establish an objective measure of acceptability for the rate of job creation. Park data cannot be compared to the Altantic region averages as was done for 'number of users' since employment is a function of both park age and size. To compare a single park on only one of those scales would be misleading. (1)

A possible method would be to sum all the years since the project construction in each park and compare this to the regional average for a park of that age. In effect, this assumes that employment for a given number of park-years is equivalent to employment in one park of that age. It also assumes that the distribution of sizes of the six parks is the same as the distribution of all park sizes in the Atlantic region. The number of park-years since project construction for the six parks is 10(2). According to the regional figures, a 10 year

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1. The Atlantic Region Industrial Park study conducted multiple regression analyses using a wide range of variables. Insufficient data, however, is provided to permit its use in this study as a bases of comparison.

2. Calculated as follows: Amherst, 1.5 years; Debert, 3.5 years; Kentville 2.5 years; Bridgewater, 2.5 years; Stellarton and Windsor are assumed to be zero. This is probably an underestimate since serviced land was availble in Amherst before the end of construction and it was well known that the park was being upgraded.

old park, on average, provides employment for 1100 persons(1). Total employment in the parks included in the project is considerably less than this, indicating a low level of effectiveness in job creation. However, the assumptions used in making the comparison were courageous ones and the results must be taken as only broadly indicative. It is therefore necessary to remain with the more general qualitative assessment of the performance of the parks as being poor with respect to job creation. Consequently, their performance to date in accommodating industrial activity must also be considered low.

As well as accommodating industrial activity, the parks were also intended to encourage industrial growth. To measure this, it is necessary to distinguish between employment which was transferred from elsewhere, and consequently does not represent industrial growth, and new employment to the province.

New employment was created in the parks by the out-of-town firms, all of whom are located in Debert. The total employment of these firms is 192 jobs already created plus an additional 72 in two firms expected to begin operations soon, giving a total of 264. This is a very substantial proportion of the total employment created to date.

In addition to this, to the extent that the Michelin expansions might be attributable to the project, then that employment (600 created and 250-300 projected) would also be considered new employment.

In summary, overall job creation in the parks has been disappointingly low, but the proportion of it which is new employment is high. To date, therefore, the parks' contributions to accommodating and encouraging industrial growth has been limited, the single exception being the Debert park.

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1. Atlantic Region Industrial Parks, op. cit., p.34.

SUMMARY OF ACHIEVEMENT OF OBJECTIVE

ASSISTANCE FOR INDUSTRIAL PARKS DEVELOPMENT PROJECT

OBJECTIVE	EXPECTED VALUE	ACTUAL VALUE
To accomodate and encourage industrial growth	Increased interest in locating and expanding industry in N.S. Employment Forecasts unrealistic and inconsistent between parks	Not verifiable Employment Total: approximately 400 full-time created or expected shortly Non-relocation employment approximately 260 Large majority of all employment contributed by Debert

2.4 CONCLUSION

The effectiveness of the project must be evaluated in two parts. At the level of inputs and outputs, effectiveness was generally high. That is, the budgets were respected while required infrastructure of appropriate quality was built and ownership and pricing policies were respected. The only serious problems were delays, primarily in the drafting of the Project Briefs. Some delays in construction attributable to third party involvement were also identified. The delays may have been responsible for the postponent or loss of job creating activities, but this is difficult to establish.

At the level of the goals, effectiveness was mixed, but generally low. The best result was in the proportion of manufacturing enterprises which were attracted, but most of these were accounted for by the Debert park. Similarly, the major impact on concentrating growth in the corridor was achieved by the Debert park. Most other parks primarily attracted enterprises already located in their immediate vicinity.

At the level of the objective, the results were similar. Total employment created was low and most of this was created in Debert. Furthermore, only the Debert park contributed to attracting and encouraging new industrial activity.

The overall results in achieving the goals and objectives have, to date, not been high. However, this evaluation is taking place too close to the end of the Agreement for any final judgements to be reached. In part, the results may be explained by the generally slow economy and rates of investment. A turnaround in the economy[1] might therefore permit much improved performance of the parks in the future. On the other hand, some degree of explanation must also be found in the original selection of parks. Improved performance in the future, would therefore depend upon factors more particular to each one.

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1. As, for instance, might be spurred by a high level of offshore oil and gas activity.

2.5 RECOMMENDATIONS

At the level of the inputs and outputs, the project was seen to be highly effective. The only significant problem identified involved delays, especially in the drafting of the Project Briefs. In view of the reasons for these delays as outlined in the previous chapter and in view of the consequence of the delays, the importance can only be stressed of proceeding with all due haste in the drafting and approving of the Briefs.

The effectiveness of the project with respect its goal and objectives was much lower. The achievement of goals and objectives in such a project is strongly affected by factors external to the project. Consequently, the establishment of realistic forecasts becomes particularly important. In view of this, it is recommended:

(i) that forecasts be based on serious studies which take into account the particularities of each park;

(ii) that all forecasts be established according to the time-frame of the Agreement, taking into account the particular phasing of the activity being forecast (e.g. employment must begin from projected date of the end of construction, taking into account also the time required for Project Brief approval);

(iii) that the variables forecast adhere strictly to the performance indicators to be used in later project evaluations;

(iv) that forecasts be reviewed annually;

(v) that the explanations and justifications for any modifications to the forecasts be detailed in writing.

CHAPTER 3

EVALUATION OF THE INCUBATOR MALL PROJECT

3.1 DESCRIPTION OF INCUBATOR MALL PROJECT

Initially, the Schedule "A" of the Industrial Development Subsidiary Agreement proposed a program dealing with two pilot projects, one to support Park Associations and the other to experiment with shell factories. Through Amendment No. 3 and its associated Project Brief, the shell factories experiment was converted to the Incubator Mall project.

The objective of this latter project was the encouragement and accommodation of industrial growth through the provision of facilities to improve the viability and growth potential of young firms. Accordingly, two multi-user industrial incubator mall facilities were planned.

The Logical Framework of this project, presented on the next page, details the inputs, outputs, goals and objectives of the project.

As required in the mandate, evaluation of this project is more comprehensive than that of the other programs and projects of the Agreement. It includes not only project effectiveness, but also an assessment of the project by the mall users and a critical review of the validity of mall concept.

LOGICAL FRAMEWORK

INCUBATOR MALL PROJECT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS
OBJECTIVE Encourage and accommodate industrial growth	. Occupancy rates of the malls . Number of jobs created . Income level
GOALS Permit certain small, potentially viable firms to attain financial viability and/or improve their efficiency and growth potential.	. Number and type of firms established in the malls . Evolution of tenants' financial viability, management ability and dependance on services . Plans of firms to move from the malls
OUTPUTS Physical structures of the malls	. Number and size of units provided
Provision of services	. Type of material support services . Type of specialized advisory services
Subsidies	. Level of subsidies . Type of leasing arrangements
INPUTS Funds	Expenditures
Schedules	Type and size of delays

3.2 SUMMARY OF THE EVALUATION

Although it is somewhat early to do a complete evaluation of the effectiveness of this project, it appears that the incubator malls have been successful in achieving their expected results.

In effect,

- the occupancy rate is 70%,
- the level of employment is reasonable, (an average of 3 to 4 persons per firm),
- the five year occupancy period is likely to be respected,
- seven of nine firms established are new firms in the desired economic sectors,
- the expected rental arrangements have been followed in detail,
- the services provided correspond very closely to those anticipated,
- facilities were constructed as planned with only minor delays and with slightly lower expenditures than expected.

User comments were also all very favourable. Tenants were in total agreement with the utility of the mall concept and underlined the importance of the rent subsidies in maintaining their firms' viability. There were, however, comments concerning particular operational problems associated with the physical structures of the malls and with the provision of services.

Overall, it appears that the goals and objectives of this project will be attained very successfully.

3.3 PROJECT EFFECTIVENESS

3.3.1 The Inputs

The principal inputs to the Industrial Malls Project were program funds and schedules. Input effectiveness is indicated by project expenditures and adherence to schedules.

Expenditures

The Industrial Malls Project was completed using slightly less than its approved budget of $2 840 000. The funds provided were generally sufficient to allow the malls to be constructed in accordance with the terms of the Project Brief.

Adherence to schedules

Minor problems were experienced in the construction of the malls which delayed their opening by several months.

3.3.2 The Outputs

The major outputs of the Industrial Malls Project fall into three categories: physical structures, services, and subsidized rents.

Physical structures

Two multi-user industrial incubator mall facilities were constructed as planned in the selected sites: Debert Industrial Park and Kentville Industrial Park. Both malls are very similar in structure, each containing 27 000 sq. ft. of rentable industrial space subdivided into 10 units ranging in size from 1 500 to 4 200 sq. ft., as well as an administration unit.

Services

The industrial incubator malls were expected to provide both material services and advisory services. Material services were to include office support services such as secretarial, telex, photocopying, meeting rooms, temporary office space, display areas, and mailing facilities in addition to grounds maintenance, refuse collection, snow removal and outdoor lighting. Advisory services were expected to provide counselling in business practices such as accounting, bookkeeping, production, marketing and management. General business advice was to be provided in the malls, while specific information requirements, such as market studies, plant layout and product development would be referred to Halifax.

Material and advisory services actually provided to the mall users corresponds very closely to the expected services outlined above. All the expected material services have been provided with the exception of mailing facilities. As expected, advisory services are provided both on-site by the DOD district or regional manager or else by referral to Halifax for specialized services.

While mall tenants may benefit from close contact with on-site DOD personnel, similar advisory services are available to firms operating outside the mall, providing they meet general criteria for assistance.

Rent and Service Subsidies

The expected leasing arrangement for the industrial malls was established at a maximum occupancy period of five years. Leases were to be granted for one year, with up to four options for one-year renewals. The rent was based on mall tenants paying 25 percent of a commercial net-base rate in their first two years of occupancy, with the yearly percentage increased until year five, when mall tenants would be charged slightly above the commercial rate. Provision was made to adjust mall rents as the price of commercial space changed. Also,

firms could be asked to start at a rate higher than 25 percent of the commercial rate. The expected leasing arrangement outlined above has been followed in detail since the malls have opened.

The level of subsidies on material services was not specified prior to the construction of the industrial malls. Most material services actually involve users' access to space or services already existing within the administration unit. Tenants are charged on a use-basis for telex and photocopying facilities and pay, as well, a proportion of fixed costs. The subsidies required on these services are therefore minimal. Refuse ands snow removal, outside lighting and general ground maintenance are subsidized. However, part of these subsidies are absorbed in the general budgets of the parks in which the malls are located.

It was expected that DOD personnel located in the malls would be available for business advisory service. Presently mall tenants are not charged for general advisory services, while specific information requirements, such as market studies, may be eligible for government assistance under provincial programs such as the Rural Industry Program, Trade Expansion Program or Consulting Assistance Program.

3.3.3 The Goals

The main goal of the Industrial Malls Project is to permit the establishment of certain small, potentially viable firms and to allow them to attain financial viability and/or improve their efficiency and growth potential.

Three expected outcomes have been identified at the goal level. First, new small industries were expected to establish in the malls. Second, the new firms were expected to become more efficient and evolve into financially viable operations faster within the malls than independently. Finally, successful operations would move from the mall to their own facilities within five years.

Establishment of new firms

New small manufacturing and processing industries as well as selected service industries were expected to establish in the malls. According to the project brief, emphasis was to be placed "on industries having import substitution implications or directing their products towards export markets, or industries arising from the identification of opportunities for new business". The intention was to avoid undercutting the viability or potential growth of existing firm.

Currently nine small firms, all falling within the categories of manufacturing, processing or service industries, have established in the malls. Of the nine firms, seven are newly established operations while two moved to the malls from outside the immediate area. Few if any of the mall tenants are in direct competition with established local firms. A large proportion are enterprises with import substitution implications or producing for an export market, albeit on a small scale. Thus, expectations appear to have been generally met with respect to the type of new enterprises being attracted, although most of the industries established are not involved in highly innovative undertakings.

Evolution of the firms

The ultimate success or failure of the Industrial Malls Project depends largely on the evolution of the tenants' financial viability, management ability and dependance on services. The firms operating in the malls were expected to benefit from the subsidies and the services provided, becoming more efficient and evolving into financially viable operations faster than they would have on their own.

At present some of the tenants are in the process of setting up their operations while others have been in operation less than two years. Therefore, in most cases, it is too early to evaluate tenants' actual evolution with respect to expected evolution.

Information obtained from the mall tenants indicates that the subsidies, including rent and services, have assisted their firms early development. However most tenants felt they could have developed the same management skills on their own.

With five of the nine mall tenants in their first year of operation, it is difficult to determine whether occupancy in the mall is accelerating the tenants growth. However the subsidies, especially on rent, were identified by the tenants as being an important factor in establishing their firm's viability.

Successful Operations Move from Mall

It was expected that successful firms would move out of the mall within five years thus providing space for other new, small industries.

Generally the mall tenants have no definite plans for leaving the mall but intend to be out within five years. Two of the most successful firms intend to move from the mall within the next two years. Thus it appears the expected maximum five year occupancy period will be respected.

3.3.4 The Objective

The objective of the mall project was to contribute to the encouragement and accommodation of industrial growth in the province.

In order to assess the effectiveness of the project in meeting its objective, the following indicators are used: occupancy rates, number of jobs created, and income levels. While specific expectations regarding the indicators were not documented, general expectations can be inferred.

Occupancy Rates

It may be assumed that an occupancy rate of 100 percent, with allowance for tenant turnover was expected. Currently the malls have a 70 percent occupancy rate with very little promotion having been done. Mall administrators are fairly satisfied with the present occupancy and it was felt the demand for mall units would be much higher if promoted extensively. A large promotion effort is not planned because there are very few units still available in the mall.

Number of Jobs Created

The industrial malls were intended to accomodate certain "small" potentially viable firms and to assist their development. Expectations of employment generated by the new firms would tend to be similar to other small firms initially, with employee requirements growing as the firm evolved. However, it was expected that the mall tenants would grow faster than they would have on their own, thus accelerating the usual job creation rate. The firms operating in the malls now employ a total of 30 to 35 people or an average of 3 to 4 persons per firm. This is a reasonable level of employment for small firms in their earliest stages of operation. However, it is too early to determine if the tenants' rate of job creation will be higher than that of other young firms.

Income Level

While there were no expected income figures stated for the Industrial Malls Project, one intention of the Industrial Parks and Related Infrastructure Program was to create employment in the above average income range. The information obtained from mall users indicates that generally incomes are about average. Thus the actual value falls short of the expected income level.

3.3.5 Summary

Although it is somewhat early to do a complete effectiveness evaluation of the Industrial Malls Project, it appears the project has been successful in meeting its expected results. At the input and output levels, actual outcomes were very close to those expected, while at the goal and objective levels actual outcomes will have to be viewed over a longer time period. However, initial results are tending toward expected outcomes.

SUMMARY OF PROJECT EFFECTIVENESS

INCUBATOR MALL PROJECT

OBJECTIVE	EXPECTED OUTCOME	ACTUAL OUTCOME
Encourage and accomodate industrial growth	Occupancy Rate 100 percent occupancy with allowance for turnover Employment Initial employment level similar to other small new firms but accelerating faster than firms operating outside the mall Income levels Above average wages	Occupancy Rate 70 percent occupancy after 18 months and with little promotion Employment Current total of 30-35 employees is reasonable. Too early to determine growth rates Income levels Generally average wage levels
GOAL	EXPECTED OUTCOME	ACTUAL OUTCOME
Permit establishment of small new firms and allow them to attain financial viability and/or improve their efficiency and growth	Type of firm New small manufacturing and processing industries, and selected service industries. Emphasis on new business opportunities, industry geared toward import substitution and export orientated industry. Evolution of firms's viability Mall tenants to become financially viable and more quickly than firms outside malls.	Type of firm 7 out 9 tenants are new enterprises. All firms either manufacturing processing or service industries. Tenants not in direct competition with existing local firms. Evolution of firms's viability Too early to determine. Early indications that management skills not developing more quickly among mall tenants than elsewhere. CONT'D

		Rent subsidies beneficial to tenants' financial viability.
	Relocation from mall	Relocation from mall
	Successful operations to move from the mall within 5 years.	Too early to determine.
		Tenants plan or intend to move from mall within 2 to 5 years.
OUTPUTS	EXPECTED VALUES	ACTUAL VALUES
Physical structures	Two multi-user industrial "incubator" malls	Two multi-user industrial "incubator" malls
Services	Material services	Material services
	Advisory services	Advisory services
Rental units at Subsidized rates	Subsidies provided but declining over 5 year period	Subsidies provided but declining over 5 year period
INPUTS	EXPECTED VALUES	ACTUAL VALUES
Funds & Schedules	$2 840 000	$2 818 972
	Construction to be completed spring 1979	Construction completed summer 1979

3.4 USERS' ASSESSMENT

Interviews were conducted with eight of the industrial malls' nine tenants. The purpose of the interviews was to establish the tenants' perception and assessment of the operation of the industrial malls. The interviews were designed to analyse the malls' operation with respect to services provided, subsidies, and design issues. This section contains a detailed presentation of the findings.

The nine tenants of the industrial malls occupy 14 units of a total of 20. Seven of the mall tenants are newly established firms. The other two firms moved to the malls from outside the immediate region.

Occupancy of the malls has proceeded gradually, with four firms locating in the malls between April and August 1979 and the remaining five firms entering the malls in 1980.

All the mall tenants fall into the category of small manufacturing, processing or service industries. Tenants' estimates of their annual sales volume ranged from $75 000 to $500 000 with an approximate average of $200 000 per year.

3.4.1 Results of Mall User Survey

The results of the user survey are presented under three large categories: services, subsidies, design consideration. For purposes of clarity, the category "services" is further divided in six subsections.

A. Services

A list of services available to mall users was compiled with the aid of mall administrators.

The services available to mall tenants include:

- Meeting room
- Temporary office space
- Display areas
- Limited secretarial services
- Photocopying facilities
- Telex
- Market consultants
- Managerial guidance or advisory services
- Financial services
- Refuse and snow removal
- Outside lighting

The first four services on the list are available to the tenants but not actively promoted by the mall administrators. The first three are part of the malls' physical structure and involve very little additional operational costs to the mall. Limited secretarial services are provided by the permanent administration office staff.

The advisory services, which include market consultants, managerial guidance or advisory service, and financial services, are provided on-site by DOD personnel or, in some instances, from the Halifax office.

Tenants' Perception of Services Available

Tenants were asked what services were available to them through their occupancy in the industrial mall. All the users interviewed stated they had access to photocopying facilities and telex while several users also noted refuse and snow removal. Other services were occasionally, but not regularly, identified.

Discussion with the tenants indicated that, in fact, the tenants generally did know of the existence of the services that they had failed to

identify, although in isolated instances tenants were unaware of particular services. For example, one tenant was unsure of his bookkeeping methods and did not know advice on such matters was provided by DOD personnel. Similarly, there was not a high level of awareness of the availability of even limited secretarial service. However, it appears that tenants who were unaware of particular services had made no attempt to find out if the services were provided. Generally tenants identified services they most frequently utilized, ignoring services they seldom or never used.

Frequency of Utilization

The services most frequently used by mall tenants are the photocopying facilities, telex and regular refuse collection. The business advisory services were used on a regular basis by only two of the tenants. The other services provided in the mall received only occasional use or were not used at all.

Quality

A large majority of the tenants assessed the quality of the services they had utilized as very good to excellent.

Accessibility

Almost all the tenants rated the accessibility of the services they had utilized as excellent. However, another aspect of the accessibility of services relates to knowledge that the service is available. It was noted above that some tenants were unaware of certains service thus, in a sense, these were not accessible. While the lack of knowledge of available services was generally attributable to low interest in using the service, accessibility may have been hampered by minimal promotional efforts on certain services, such as the meeting room, temporary office space, display areas and limited secretarial services.

Improvements to Services

While tenants were generally satisfied with the services provided, there were several suggestions concerning improvement.

(i) Improvements to existing services

Two of the mall users would like to see improvements in the advisory services. One user felt advisory personnel did not keep in close touch with the tenants and inform them of the available advisory services. Another user felt the advisory services were inadequate. The user had requested financial, bookkeeping and product development assistance but had not received assistance to his satisfaction.

(ii) Improvement through additional services

One user would like to have mail service provided at the malls. Currently users must go into town themselves to pick up and deliver their mail.

Importance of Services

The material services provided by the industrial malls were regarded by the tenants more as a convenience than as a factor in maintaining their firm's viability. The business advisory services were important to two of the mall tenants but most tenants placed little importance on them. It should be noted that the advisory services provided by DOD are, in theory, available to any firm in the Province meeting certain criteria. In general, services provided through the industrial malls were considered much less important than were the rent subsidies.

B. Subsidies

Almost all the mall tenants agreed that the subsidies, including rent and services, were very important during their first year of operation and also very important in the current year of operation. Five out of the nine mall tenants are currently in their first year of operation.

Mall tenants were asked to estimate the dollar value to their firm of the subsidies on rent and services. All tenants were aware of the level of subsidies they received on their rent and were able to provide an estimate of their savings. Tenants based their calculations of savings on the percentage of the commercial base rate ($250 per sq.ft) they were charged. These ranged from $500 to $1300 per month depending on the total area rented by the firm. One tenant noted that the actual commercial rate may be higher than the established base rate. Thus actual rent saving with respect to market rates may be understated by the tenants' estimates.

The value of subsidies on services was estimated by the tenants to be in the order of $100 per month. Comparing the tenants' estimates of rent subsidies and service subsidies shows the relative importance of the former.

Since mall tenants are relatively small, new firms, it is evident that the rent subsidies in particular, are quite important to the firm's financial viability.

C. Design Considerations

While it is not within the mandate of this evaluation to examine the efficiency of the industrial malls at the design level, several noteworthy comments were made by the mall users.

It was generally felt that the size of individual units in the mall were too small. While provision was made to connect adjoining units,

this was not always possible. For instance, in one case, as the firm's space requirements grew the adjoining unit was already occupied. In addition, several users felt that too much space within the units had been devoted to office area at the expense of production area.

Another common grievance dealt with poor loading dock facilities at the rear of the mall. Most complaints were attributed to the height of the loading docks while one tenant required a larger entrance to his production area.

Two tenants stated the electrical power supply provided to the units was not sufficient for their production needs. Other problems identified were expensive and bulky heating systems, poor lighting system and fumes between units.

3.4.2 Synthesis of User Evaluation

When asked to evaluate the utility of the industrial "incubator" mall concept, user comments were all very favorable. "Best thing IEL ever did", "Excellent," "Terrific", to quote a few. While all mall tenants favored the mall concept, several operational problems associated with the physical structures and provision of services were identified, and are contained in this report. Generally, material services were regarded as a convenience while advisory services were not utilized regularly.

Most tenants did not believe they had developed any managerial skills which they would not have been able to develop if they had located elsewhere. The most common explanation was that the advisory services available to mall tenants are also available to firms located outside the malls.

In summary, the user survey indicated that tenants were in total agreement on two points: first, the utility of the mall concept and

second, the importance of the rent subsidies in maintaining the firms' viability. Another important benefit of the industrial malls is the fact they have made production facilities available in areas where such inexpensive production space is scarce. Therefore the malls enable the establishment of local firms in the area rather than forcing space to be sought elsewhere.

3.5 VALIDITY OF THE MALL CONCEPT

3.5.1 Evaluation of the Concept

The concept underlying industrial "incubator" malls may be summarized as follows:

> Providing a partially sheltered environment and selected services will permit new firms to become viable or grow more rapidly than would otherwise be the case.

The sheltered environment involves two elements:

(i) subsidized rental space and availability of basic office services used in operating a business (subsidies to be on a declining basis).

(ii) more flexibility on the part of the building managers with respect to the needs and constraints of the mall users than would be the case in private space (e.g. more willingness to be flexible in collection of rents etc.)

In addition, the viability and growth of the young firms is to be aided by the provision of advisory services covering basic financial, managerial and market aspects of operating a private enterprise.

To determine whether, in fact, the sheltered environment and services do accomplish their purpose, it is necessary to compare the evolution of the viability and growth rates of firms within the malls with similar firms outside the malls.

The analysis of the firms' evolution has to be undertaken over a period of several years. Five years would be a minimum, since this is the maximum length of time which users are expected to remain in the malls. Preferably, however, the monitoring would continue for several years

following this, in order to compare the performance of mall users after leaving the mall with similar firms which had not begun in a mall.

Since it is too soon after the opening of the malls to conduct the full investigation required, the analysis of the validity of the concept will have to remain preliminary and be based primarily on the results of the user survey reported in the previous section.

The survey indicated that the most important aspect of the mall concept was the provision of subsidized rents. All users indicated these were either essential or very important to their viability. A second element of the malls which was important but unpredicted in the concept, was the simple fact of the availability of suitable space in areas where such "incubator" space was lacking.

The advisory services provided some support to the enterprises, but were generally considered of secondary importance. As might be expected, they were most important for the financially marginal firm.

What was often considered useful, were informal discussions with the mall administrator who could provide casual advice on management, markets, sources of information, etc. For this reason, selecting mall administrators of high quality, with broad experience and good human relation skills should be given a high priority.

Generally, however, users did not attribute the mall situation with helping to improve their managerial skills more than would have been the case had the firms been located outside the malls. Interpreting this response is difficult, however, since there may be a natural tendency to downgrade any help which was actually received.

The office services provided were also considered secondary by the users. They are a much welcomed convenience but are not critical to maintaining the firms' viability nor to promoting their growth.

The one minor exception to this might be the telex. All firms interviewed, had they been located outside the malls, would have done without the telex. However, its availability may give certain tenants access to a broader market, thereby increasing growth potential.

In summary, it would appear that the critical element in the mall concept is the subsidy on rent. A second element is the creation of suitable incubator space.Services may be considered as very convenient accessories, but are non-essential.

It is too early to properly assess the firms' evolution with respect to similar non-mall firms, since no firm is more than a year and a half old. However, early results are impressive. The firm mortality rate is, to-date, zero. Two of nine users may be considered marginal. These firms have benefited from a wide range of services[1] offered and their financial situations may be improving. Total jobs created are about 35 or an average of between 3 and 4 per firms. All firms anticipated greater profits in their second year than in their first. Several are already in various stages of considering or planning to move out of the malls.

Therefore, early indications are very positive. As well, both mall administrators and users express enthusiasm and support for the concept. However, it is not surprising that recipients of subsidies should be supportive of the subsidies.

The evaluation of the mall concept must also consider the cost to the government of operating the malls. The projected total 1980/81 deficit for the two incubator malls is only $56,000. This includes both net

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1. Many of these would have been available to them outside the malls as well, but their being located in the malls has increased accessibility to them.

expenses and depreciation on the buildings[1]. In the third year of occupancy, tenants' subsidies drop from 75 percent to 50 percent. By next year, many of the tenants will be in that position and so the total deficit should be substantially reduced. It can be expected that the deficit will be cyclical for several years. It will decrease as tenant subsidies decline and the malls may even become profitable. Then, as old tenants leave and are replaced by new ones at higher subsidy levels, the deficit will once again increase. However, this cycle should gradually stabilize since tenants' length of occupancy will vary.

In conclusion, early indications are that the mall concept is useful and that the cost of providing them is relatively low. However, it is too early to reach a final judgement on the matter. Furthermore several potential pitfalls in the concept may be identified. These are discussed in relation to the recommendations which follow.

3.5.2 Synthesis and Recommendations

The recommendations below are made in view of the following considerations:

On the positive side,

(i) the malls appear, on the basis of an early assessment, to be improving the viability of new firms and making space available to young firms in areas where suitable space is lacking,

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1. The deficit is covered by IEL, which provided these figures based on the first 10 months of the fiscal year. Certain other expenses are not reflected in these figures. For instance, at Debert the mall administrator is also the park administrator. His entire salary is absorbed in the park budget. The same is true of the cost of the park maintenance team. At Kentville, the cost of maintenance is kept very low by use of students and unemployed persons; the cost of hiring them is covered by other government programs.

(ii) both mall users and administrators are enthusiastic in their support of the concept

(iii) the malls can be provided at quite a low direct cost to the government

(iv) immediate employment return has been acceptable.

However, it is too early to undertake the full evaluation necessary to test the mall concept. Consequently,

(i) there is a danger that inefficient, poorly managed firms will be subsidized over long periods, thereby imposing on society the social and economic costs of maintaining non-viable firms.

(ii) there is the danger that if the number of malls is multiplied there will be a tendency to try to keep them full at undue costs, including subsidizing marginal firms over much longer periods than appropriate

(iii) there is the danger of society providing space at a relatively high cost in areas where an adequate supply is already available on the private market (old warehouses, garages, etc.)

Therefore, it is recommended:

(i) that the existing malls be continued,

(ii) that a limited number of new malls be built in selected and varied settings,

(iii) that, other than under exceptional circumstances, firms be subjected to high penalties for remaining in the malls beyond five years,

(iv) that a special program be established to carefully monitor over a longer term (5 to 8 years) the progress, results and effects of each of the malls established,

(v) that until the conditions for the success and failure of industrial incubator malls are better known, the number of malls NOT be permitted to multiply indiscriminately.

CHAPTER 4

EVALUATION OF THE ASSISTANCE TO INDUSTRIAL COMMISSIONS PROJECT

4.1 DESCRIPTION OF THE PROJECT

The intent of this project was to provide assistance to park industrial commissions. The project was included in the Industrial Parks and Related Infrastructure program because it was felt that subsidizing the commissions was the best way of developing attractive, well-run and effectively promoted parks. It was hoped that the funds provided the commissions would, in part, be used in upgrading their management and promotional abilities, thereby ensuring proper management and promotion of the industrial parks.

The Logical Framework for the project is presented on the next page.

LOGICAL FRAMEWORK

ASSISTANCE TO INDUSTRIAL COMMISSIONS PROJECT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS
OBJECTIVE Encourage and accommodate industrial growth	. Increase in industrial activity
GOAL Ensure proper management and promotion of industrial parks	. Type and quality of park management . Type and quality of promotion
OUTPUTS Active industrial commissions. Upgrading of management and promotional abilities	. Number of active industrial commissions . Number of commissions using assistance . Type of activities undertaken with funds
INPUTS Funds	. Expenditures

4.2 SUMMARY OF THE EVALUATION

The overall effectiveness of the Assistance to Industrial Commissions project was very long.

There is, in effect, little indication that the funds provided for this project were responsible for significant upgrading of the commissions's capabilities. Only two parks were able to take full advantage of the subsidies. Those interviewed considered the management of the parks effective, but their promotion weak. Finally, only 41% of the allocated funds were used.

The observed effectiveness is, therefore, very low at each level (input, output, goal, objective) of the project.

4.3 PROJECT EFFECTIVENESS

4.3.1 The Inputs

Funds were the only input required by the Assistance to Industrial Commissions Project. Input effectiveness is indicated by the level of expenditure.

Expenditures

The project was expected to subsidize up to 50 percent of approved administrative costs incurred by industrial commissions managing parks funded under the Agreement.

In practice, commissions did have 50 percent of their eligible costs subsidized. However, actual total project expenditures were far below those projected in the Project Brief. Approximately $118 000 were spent from a total budget of $285 000[1]. The reason for the underspending was that only two industrial commissions received assistance throughout the life of the project. Two other commissions received assistance only in the late stages of the project while one was not eligible for assistance.

Due to the late entry into the Agreement of the Bridgewater Industrial Park, assistance to Bridgewater's Development Commission was not included in the project's expected expenditures, nor has the Commission received funds under the project. The Bridgewater Development Commission will consequently be excluded from the remainder of this project evaluation.

4.3.2 The Outputs

The expected output of this project were active industrial commissions in the industrial parks funded under the Agreement. It was anticipated that the subsidies would encourage the commissions to upgrade their

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1. Estimated expenditure to the end of the Agreement (March 31, 1981). However, it is possible that funding of the commissions will continue for one further year.

ability to manage and promote the parks by undertaking studies to help meet their objectives, by having members enrol in special training courses, or by under-taking other suitable activities.

Currently four of the five parks have active commissions eligible for assistance(1). The Debert Park is without one and is therefore ineligible for funds under the Agreement(2).

The Assistance to Industrial Commissions Project was intended to assist industrial commissions with their administrative and promotional expenses during the period from 1977-78 to 1980-81. However, major delays in the construction of two parks, Stellarton and Windsor, resulted in these commissions not being eligible for assistance until the final months of the project.

The executive secretaries of three of the commissions have used project funds to attend a special training course offered at the University of Waterloo.

In summary, only two of the industrial commissions were active and received funds during the entire course of the project. Two other commissions have so far been prevented from taking full advantage of the project due to a poor phasing of the park construction project and this assistance project. Three persons undertook training courses as a result of the project.

Overall, therefore, while some results were achieved, project effectiveness at this level was poor.

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(1) The Stellarton Park uses the Pictou County Research and Development Commission (PICORD) as it is industrial commission.

(2) The Truro and Area Industrial Commission was not interested in operating the Debert Park. IEL, with its office in the Debert Park, therefore manages the park directly.

4.3.3 The Goal

The goal of the project was to ensure proper management and promotion of the industrial parks.

Effectiveness of Management and Promotion

The industrial parks were expected to be effectively managed and promoted jointly by the local Commissions and IEL. Commissions were to conduct the day-to-day operation and administration of the parks and to be responsible for the local promotion of the parks while IEL was to be involved in policy decisions and promotion above the local level.

Commissions which exist are responsible for the day-to-day operations of the parks. Longer term management is the joint responsibility of the commissions and IEL although, in reality, the commissions make the policy decisions which are then ratified by IEL. Local promotion at the parks is done by the commissions while IEL promotes the province nationally and internationally.

Management of the industrial parks was generally considered effective by persons interviewed, but promotion at the parks was identified as being somewhat weak.

The sophistication of the commissions' promotional efforts varied considerably from park to park. Except as a result of any spin-off benefits from the additional training received by those executive secretaries who attended the University of Waterloo course, the project itself has not substantially enhanced the quality of promotional efforts (1).

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(1) According to an IEL official, IEL has placed most of its efforts into the construction of the parks, to the detriment of the broader promotional efforts required. According to the same official, with the completion of the parks, more efforts will now be directed towards general promotion of the province and the parks.

Overall the project has had only a minor impact in improving the managerial and promotional capabilities of the commissions.

4.3.4 The Objective

The objective of this project was to contribute to the encouragement and accommodation of industrial growth.

While recognizing the important contributory role that the commissions may play in accommodating industrial growth through the proper management of the parks as well as their role in encouraging industrial growth through the promotion of the parks, it is nonetheless difficult to evaluate what proportion of industrial growth attained can or should be attributed directly to activities of the commissions.

Furthermore, this evaluation is not to focus on the performance of the commissions, per se, but rather on the effectiveness of this project in aiding the commissions to attain their objective.

The fact that only two parks were able to take full advantage of the subsidies, in itself indicates that the project's contributions to the objective was poor. As explained earlier, this was a result of an unfortunate phasing of the construction and assistance projects. Extension of the funding by one year will go a little way to mitigating the problem. However, even without this, the project may have had little success in reaching its objective. There appears to be a fundamental weakness in the project design. Merely covering fifty percent of the commissions' operating costs in itself provides little incentive for the commissions to actually change and upgrade the quality or type of activity they undertake. Commissions are just as likely to continue operating as they always did. In practice, this tended to be born out, although three executive secretaries did attend special training courses. However, promotional efforts, for instance, remained inconsistent. Generally, there is little indication that the funds provided under this project were responsible for significant upgrading of the commissions' capabilities. Consequently, the project's contribution to the accommodation and encouragement of industrial activity was also very limited.

SUMMARY OF PROJECT EFFECTIVENESS

ASSISTANCE TO INDUSTRIAL COMMISSIONS PROJECT

OBJECTIVE	EXPECTED RESULTS	ACTUAL RESULTS
To encourage and accomodate industrial growth.	Industrial Commissions' efforts to result in increased industrial activity.	Very little increased industrial activity attributable to Industrial Commissions' efforts.
GOAL	EXPECTED RESULTS	ACTUAL RESULTS
To ensure proper management and promotion of industrial	Effective management and promotion of Parks.	Management of Parks satisfactory, while promotion is generally weak.
OUTPUTS	EXPECTED VALUES	ACTUAL VALUES
Active Industrial Commissions capable of discharging their responsibilities for administration and/or promotion of the industrial parks.	All parks to have active commissions and to receive 50% subsidies on approved administrative costs. Commissions to undertake activities to upgrade and improve their managerial and promotional capabilities	Commissions established at Amherst, Kentville, Stellarton, Windsor, (Debert run by IEL). Only Amherst and and Kentville able to receive full benefits of project. Three commissions executive secretaries attended special training course, but generally project contributions to improving quality of commissions was limited.
INPUTS	EXPECTED VALUE	ACTUAL VALUE
Funds	Agreement: $350 000 Project Brief: $285 000	$118 000(to March'81)

4.4 RECOMMENDATIONS

The preceding analysis indicated a low level of project effectiveness in achieving its goal and objective. Nonetheless, a project to improve the quality of park promotion and management is considered an appropriate complement to infrastructure construction. It is therefore recommended:

(i) that project expenditures not be approved unless they are directed towards specific activities;

(ii) that these activities must contribute to directly improving the quality of management or promotion of the parks (e.g. through subsidizing of professional promotional literature or programs);

(iii) that the simple subsidization of on-going activities is not appropriate in the context of this Agreement.

CHAPTER 5

INDUSTRIAL PARKS AND RELATED INFRASTRUCTURE PROGRAM - A SYNTHESIS

5.1 DESCRIPTION OF THE PROGRAM

The Industrial Parks and Related Infrastructure program is the sum of its three constituent projects. However, at the program level a new set of objectives is added. These are directly related to the goals of the Subsidiary Agreement. The three program objectives are:

- The development of new employment opportunities in N.S. in the secondary and tertiary sectors of the economy;

- The development, expansion and increased efficiency of indigenous enterprise;

- The increased variety of employment opportunities available, with particular attention to higher wage, higher skill categories.

As indicated in the Logical Framework presented on the following page, each of the other levels of the program is constructed by aggregating the different elements of the three projects included in the program. For instance, the goals of all the projects together constitute the outputs of the program. Since each project has been evaluated separately in the preceding chapters, the evaluation at this level is limited to the program objectives.

LOGICAL FRAMEWORK

INDUSTRIAL PARKS AND RELATED INFRASTRUCTURE PROGRAM

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS
OBJECTIVES The development of new employment opportunities in N.S. in the secondary and tertiary sectors of the economy. The development, expansion and increased efficiency of indigenous enterprise. The increased variety of employment opportunities available.	Number of jobs created Wage level of these jobs Sectorial composition of those jobs Previous location of firms
GOAL Objective of the projects	
OUTPUTS Goals of the projects	
INPUTS Outputs of the projects	

5.2 ATTAINMENT OF OBJECTIVES

In the following section, a summary of program results are presented under four headings: number of jobs created, skill and wage levels, sectoral composition, previous location of firms.

Number of Jobs Created

Total full-time employment to date associated with the program is between 270 and 432. This number is disappointingly low. However, it is still very early to assess total program impact on employment. Furthermore, the parks have been constructed at a difficult economic time during which industrial growth generally has been low.

New employment, that is total employment less relocated employment, is between 222 and 299. This includes all the employment from the Incubator Mall project plus the employment associated with out-of-province firms. The employment results are summarized, by project, in the following table.

	Industrial Park Development	Incubator Malls	Assistance to Industrial Commissions	Total employment
Total Full-time	240-397	30-35	---	270-432
Part-time or seasonal	80-92	-	---	80-92
Total Full-time NEW employment	192-264	30-35	---	222-299

Finally, however, to put the results in their proper perspective, it must be remembered that not all projects or parks contributed equally to the objective. The large majority of both total and new employment was contributed by one park - the Debert Air Industrial Park.

Skill and Wage Levels

Although a few individual firms may be providing higher skill and wage employment, the program as a whole has not focused on such enterprises. With respect to this objective, program effectiveness has been very low.

Sectoral Composition

The program was intended to promote the secondary and tertiary sectors of the economy, and to encourage diversification of employment opportunities.

Much more success was achieved in accommodating manufacturing enterprises than service enterprises, with these latter representing less than 10 percent of the total employment associated with the program.

The program contained no mechanism for selecting or encouraging particular types of enterprises. Generally, the program impact to date on diversifying employment opportunities has been minimal.

Previous Location of Firms

The program as a whole has supported indigenous enterprises. This was the main thrust of Incubator Mall project. As well, two-thirds of the firms locating in the industrial parks were indigenous, many of these being from the immediate locality of the parks. On the other hand, the majority of employment was provided by the one-third out-of province firms, all of whom located in the Debert park.

5.3 RECOMMENDATIONS

Recommendations dealing with each of the projects in the program were presented at the end of the appropriate chapters. However, at the level of the program, two recommendations emerge which transcend any of the particular projects.

The first concerns the relative timing of projects. Inappropriate phasing of projects or activities can lead to low levels of project or program effectiveness as was seen in the case of the Industrial Commission project. It is therefore important that the overall time-frame of the program be detailed and that projects be carefully scheduled within this. Where appropriate, consideration might, in the future, be given to structuring an agreement in which each of the constituent programs and projects need not have the same time-frames but might operate for inter-related specific periods within the longer time-frame of the agreement.

The second recommendation follows from the disappearance of the Park Association sub-project without any formal notification. It is necessary that the discarding of approved projects be explained in writing. It is insufficient to simply justify the addition of the project which replaces it. Rather, it must be demonstrated that the new project is more appropriate to achieving project goals and objectives than the one being discarded.

In summary, it is recommended:

(i) that close attention be given to specifying the relative phasing of projects within the overall time-frame of the program;

(ii) that consideration be given, where appropriate, to including projects of various lengths and phasing within the longer time-frame of an Agreement;

(iii) that the discarding of any approved project or activity be explained in writing;

(iv) that this explanation include a demonstration of why the new project is more appropriate to the program than the one being discarded.

CHAPTER 6

EVALUATION OF THE INDUSTRIAL INFRASTRUCTURE PROGRAM

6.1 DESCRIPTION OF THE PROGRAM

The Industrial Infrastructure Program is an outgrowth of the fourth element in the strategy of the Subsidiary Agreement. Its intent is to support selected industries and developments outside industrial park locations by providing any necessary infrastructure.

The following table outlines the Logical Framework employed in the evaluation of this program.

LOGICAL FRAMEWORK

INDUSTRIAL INFRASTRUCTURE PROGRAM

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS
OBJECTIVES	
Development of new employment opportunities in the secondary and tertiary sectors.	. Number of jobs created . Sectorial composition of these jobs . Wage level of these jobs.
GOAL	
Support certain specific industrial opportunities outside industrial parks	. Location of opportunities supported . Importance of the support provided
OUTPUTS	
Infrastructure for selected industries	. Number of projects undertaken . Size of projects undertaken
INPUTS	
Funds Selection criteria	Expenditures List of selection criteria applied

6.2 SUMMARY OF THE EVALUATION

The results observed in the Industrial Infrastructure Program indicate that program effectiveness was relatively high.

In effect,

- 262 jobs have already been created; this is more than the 225 jobs forecast in Schedule "A" of the Agreement;
- the cost-efficiency of the program is very high when it is considered that only 20% of budgeted funds were used;
- the infrastructure that was constructed under the program accelerated development in the industries concerned.

On the other hand,

- the projects carried out are in the primary sector of the economy;
- few requests for aid were received and only two small projects were undertaken.

6.3 PROGRAM EFFECTIVENESS

The results summarized above emerge from a detailed analysis of the inputs, outputs, goals and objectives of the program.

6.3.1 The Inputs

Expenditures

Initially, the Susidiary Agreement (June, 1976) provided for a budget of $3 000 000 to be accorded to this program. It was not until April 1978, twenty-two months after the signing of the Agreement that the first activity was undertaken: The Gays River Road South Power Supply Project. One month later, Amendment No. 3 was signed cutting $1 600 000 from the program to provide funds for carrying out the Incubator Mall Project. In October, 1978, a second and last project, the Salmon River Road Project, was approved.

The total cost of the two projects was $602 993, approximately 20% of the amount originally budgeted for the program.

If the evaluation were to be limited to a comparison of budgeted and disbursed funds, it would necessarily be concluded that the program had a very low level of effectiveness. Nevertheless, such an evaluation would ignore an important characteristic of this program. The Subsidiary Agreement did not specify any particular projects to be included in the program; rather, a number of examples were given of the type of project expected. The budget proposals made at the time must therefore be seen as arbitrary, with actual expenditures to being dependent on the specific projects to be identified. For this reason, while it is important to be aware of the significant disparity between budgeted funds and those actually spent, no final judgment can be made on this basis.

The Selection Criteria

In order to ensure that projects proposed under the program would meet the overall requirements of the Subsidiary Agreement, six criteria of eligibility were established for judging projects.

The two projects carried out under the program were selected in accordance with these eligibility criteria. The Project Briefs for both projects dealt explicitly with them. The only qualification relates to the number of jobs to have been created by the Salmon River Road Project. The Project Brief estimated that 60 jobs would be created, whereas the sixth criterion called for a minimum of 75 jobs. Nevertheless, in light of the very small number of applications received under this program, this disparity appears minimal, particularly since the number of jobs actually created by the project is significantly higher than project estimates had foreseen.

6.3.2 The Outputs

Since no specific projects had been defined under this program, expected results were formulated in only a most general way. Schedule "A" of the Subsidiary Agreement merely notes that industrial infrastructure will be constructed "for a very small number of reasonably large projects". This "reasonably" small number of large projects is estimated at three $1 000 000 projects.

The results observed indicate that two projects, involving an average of $301 496 of financial support each, were carried out. If the budget estimates are rigidly accepted, this implies a large discrepancy between the scale of the projects actually executed and those originally forecast. However, when the difficulty in making precise estimates of non-existent projects is taken into account, it becomes clear that a complete judgement of the results must only be made in the context of the full range of program results.

6.3.3 The Goal

The goal of this program was to support certain specific industrial opportunities outside industrial parks. Schedule "A" of the Agreement specifies, as well, that this support is intended for new facilities which require additional infrastructure before being able to proceed.

The Project Briefs of both projects clearly indicate that the infrastructure constructed would permit the development of new facilities. In accordance with the requirements, both projects relate to facilities outside industrial parks. Persons interviewed during the data collection phase of the evaluation, stressed the actual importance of the support afforded both these projects. In both cases, the projects fostered accelerated growth on the part of the benefiting companies.

It may therefore be concluded that the goal of this program was largely achieved.

6.3.4 The Objective

The main objective of the program was to contribute to the development of new employment opportunities in the secondary and tertiary sectors of the Nova Scotia economy.

Schedule "A" of the Subsidiary Agreement notes that projects carried out under this program should create a minimum of 225 new jobs (three projects x 75 jobs).

The actual new employment created since the projects were completed is between 262 and 264 full-time jobs(1). Not only is this higher than the estimates contained in the Agreement, it is also higher than the projected employment contained in the Project Briefs themselves.

At the level of the objectives, therefore, the program was highly effective. As well, the results were achieved with considerably less inputs than anticipated, making the program very cost-effective. On the other hand, the program helped fewer projects than anticipated which tends to reduce somewhat the evaluation of its overall effectiveness.

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(1) Sources at the Gay River project indicated that the hourly wage of employees there was generally considerably above the provincial average. No confirmation was possible on whether the same was true at the Salmon River project.

SUMMARY OF PROGRAM EFFECTIVENESS

INDUSTRIAL INFRASTRUCTURE PROGRAM

OBJECTIVE	EXPECTED OUTCOME	ACTUAL OUTCOME
Development of new employment opportunities in the secondary and tertiary sectors	Support of projects creating a minimum of 225 new jobs	Support of projects creating 262-264 new full-time jobs Employment was in primary sector
GOAL	**EXPECTED OUTCOME**	**ACTUAL OUTCOME**
Support certain specific industrial opportunities outside industrial parks	Support of projects which cannot locate within parks Support to permit implementation of the projects	Projects could not have located in parks Support accelerated rate of implementation of the projects
OUTPUTS	**EXPECTED VALUES**	**ACTUAL VALUES**
Infrastructure for selected industries	Small number of reasonably large projects (budget estimates: 3 projects at $1 000 000 each)	2 projects at average of $301 496 each
INPUTS	**EXPECTED VALUES**	**ACTUAL VALUES**
Funds Selection criteria	$3 000 000 6 criteria as specified in Program Brief	$ 602 993 Projects selected on basis of declared criteria

6.4 CRITICAL OVERVIEW OF THE PROGRAM AND RECOMMENDATIONS

It was seen in the previous section that only about 20% of the program budget was actually spent. The remainder was transferred to other programs. Nonetheless, the fact that funds allocated to program were gradually reduced is not an indication that the program was not useful. It means simply that eligible projects were limited over the life of the Agreement. The analysis contained in the previous section indicated that the program was effective in creating jobs and was also highly cost-effective. Furthermore, the program provided two types of flexibility:

(i) Flexibility to respond quickly to the needs of a particular industry, in order to take advantage of opportunities as they presented themselves.

(ii) Flexibility over the entire Agreement, by providing a reserve of funds potentially transferable to other programs when requirements there appeared to be more pressing.

However, the provision of a reserve of funds for projects not yet identified raises several interesting issues.

With only two projects having been undertaken over the five-year life of the Agreement, the question may be raised as to whether opportunities should not have been more actively sought and whether stronger promotion should not have been undertaken.

The program was aimed particularly at large enterprises which required certain specific infrastructure in order to proceed. All three parties implicated in the Agreement - DREE, DOD and IEL - should each have been fully aware of any undertakings which were being considered for the province and which were of the scale required. Consequently, it is difficult to conceive of any eligible project which would have remained unknown. Special program promotion should therefore not have been necessary.

It would seem clear from the Agreement that the intent was not to use the program to attract new enterprises (it is doubtful whether the program as structured could be effectively used in that way) or to actively seek industry. The main focus was on quick response to remove specific impediments affecting a particular undertaking. It is considered that this is the appropriate role for such a program. The active seeking of new opportunities is best handled through other programs and the appropriate departments or development agencies. The program was designed as a tool for facilitating development in special cases. It fulfilled this role and active promotion or seeking of new projects would not have been appropriate and, most likely, would not have been fruitful.

The second issue which may be raised relates generally to any program in which the definition of projects depends upon external factors which cannot be foreseen at the start of the program.

How long should the funds be kept available before they are transferred elsewhere in the Agreement? The danger of transferring them too early is that sufficient funds may not be available should a project later be identified. On the other hand, not using the funds implies an opportunity cost, and a danger that the money may not be spent at all during the term of the agreement.

It would seem impossible to define any hard and fast rule to govern the transferring of funds, since such a decision necessarily involves judgments concerning the value of the activities to which the funds are to be transferred, the expected value of projects which may in the future be identified under the original program, and a weighing of the risk that no projects will be identified. On the other hand, in order

to avoid the premature release of funds, it may be useful in future agreements to define a rule of thumb concerning when and under what circumstances funds may be transferred out of such a program(1).

To summarize, a flexible program for the building of infrastructure(2 can be effective and should be continued. However, dangers of abuse exist. To avoid these and maintain the effectiveness achieved in this program, it is recommended:

(i) that the program be strictly responsive in nature and that the initiation of opportunities be included under other, more appro-) priate programs;

(ii) that strict and precise eligibility criteria be maintained;

(iii) that transferring of funds out of the program for use elsewhere in the agreement be permitted, but that guidelines governing the timing of transfers be established;

(iv) that the emphasis be maintained on rapid response to opportunities as they arise and, accordingly, that cumbersome bureaucratic procedures be avoided.

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1. A simple rule may establish, for instance, that no funds are to be transferred during a fixed initial period, perhaps 2 years. Thereafter, funds might be transferred in proportion to the amount of time remaining in the program. Thus, after half the Agreement has expired, if no projects were forseeable, up to half the funds might be transferred elsewhere. Normally, major undertakings have a substantial lead-time and officials should be aware some time in advance of the possibility of a given project being undertaken. This lead-time should be considered when establishing the time at which the final funds might be transferred. For instance, if a normal lead-time was 1 year, in a 5 year program if no project was in sight after 4 years, the remaining program funds would be permitted to be transferred for use elsewhere in the Agreement.

2. Consideration might be given to broadening the definition of infrastructure to include the requirements of the tertiary or quaternary sectors of the economy e.g. more sophisticated communication systems etc.

Evaluation of the Subsidiary Agreement and Recommendations

CHAPTER 7

EVALUATION OF THE SUBSIDIARY AGREEMENT

7.1 DESCRIPTION OF THE SUBSIDIARY AGREEMENT

Preceeding chapters were devoted to the evaluation of programs and projects included in the Subsidiary Agreement. This chapter deals with

(i) an aggregation of results previously evaluated concerning the goals of the Agreement and,

(ii) a critical overview of the mix and types of programs included under the Agreement.

Recommendations conclude the chapter.

The following table outlines the Logical Framework of the Subsidiary Agreement. As indicated, the objectives of the Agreement are, in fact, its contribution to the attainment of the broad goals of the General Development Agreement. However, it was not in the Plansearch mandate to evaluate this level of objectives. The focus of the evaluation is on the degree of attainment of the three Agreement goals. The evaluation is essentially an aggregation of all the results observed at the program level.

The Agreement inputs and outputs have already been discussed through the evaluation of each program and will not be taken up again in this chapter.

LOGICAL FRAMEWORK

INDUSTRIAL DEVELOPMENT SUBSIDIARY AGREEMENT

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS
OBJECTIVES Facilitate joint federal-provincial cooperation in initiatives for the economic and socio-economic development of N.S.	Not Applicable
GOALS Support the development of new employment opportunities in Nova Scotia in the secondary and tertiary sectors of the economy; Encourage the development, expansion and efficiency of indigenous enterprises in Nova Scotia; and Increase the variety of employment opportunities available, with particular emphasis on higher skill and higher wage employment, and with particular emphasis on certain intermediate-sized communities in Nova Scotia.	. Number of jobs created . Skill and wage level of these jobs . Sectoral composition of these jobs . Support for indigenous enterprises
OUTPUTS	
GOALS OF PROGRAMS	
INPUTS	
OUTPUTS OF PROGRAMS	

7.2 DEGREE OF ATTAINMENT OF GOALS

The effectiveness of the Agreement is evaluated using four indicators: number of jobs created, skill and wage levels of these jobs, sectoral composition of these jobs and degree of support of indigenous enterprise.

Number of Jobs Created

The first goal of the Agreement was the development of new employment opportunities in Nova Scotia. To date, total full-time employment associated with the Agreement is between 716 and 1020. This includes employment already created and employment likely to be created in the near future as a result of activities or committments already undertaken. The following table presents employment broken down by program and project.

TOTAL EMPLOYMENT ASSOCIATED WITH PROJECTS AND PROGRAMS

Opportunity (1) Identification		Industrial Park Development		Incabutor Malls		Industrial Infra-structure	TOTAL employment
minimum	maximum	minimum	maximum	minimum	maximum		
183	325	240	397	30	35	263	716-1020
107	107	80	92	-	-	-	187-199

Total employment represents both new and relocated employment. It may be reasonably assumed that all employment associated with the Opportunity Identification is new. The same is true of the Incubator Mall and the Industrial Infrastructure programs. A proportion of the jobs

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1. Figures do not include employment to be generated by third Venture Founders workshop.

associated with the Industrial Parks project, however, are simply relocations. In chapter 2.3.5, it was established that total new employment associated with the project is between 192 and 264. Total new employment which was supported to date through the programs and projects of the Agreement is therefore between 668 and 887(1). Not included in this are jobs to be generated through the third Venture Founders workshop.

In the future, these totals should increase as more industry is attracted to the parks and the incubator malls continue to support young firms. For these latter two projects, the problems associated with assessing their performance so close to the termination of the Agreement have already been discussed. Even so, the overall effectiveness of most of the programs and projects at the level of employment creation was seen to be relatively low. Consequently, the same conclusion must be reached for the Agreement as a whole. However, it is possible that the longer term impacts will be greater, particularly if the economy as a whole improves. More effective promotional efforts might also contribute to improving the employment impacts of the industrial parks in particular.

Skill and Wage Levels

The explicit goal of Agreement was to encourage higher skill and higher wage opportunities. It was with respect to this goal that Agreement performance was least effective.

No mechanism was included in the Agreement or in any of its programs by which such opportunities could be particularly targerted. The Opportunity Identification program might have done so but, as was seen, for practical reasons it did not.

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1. These are not all incremental jobs. Some of the new employment in the Industrial Parks and Related Infrastructure program would probably have been created even in the absence of the parks. Similarly, the two projects supported by the Industrial Infrastructure program would have gone ahead in any case, although program support accelerated their development.

In practice, while certain individual firms may have provided higher skill and wage employment, at the Agreement level there was no particular concentration or focus on such opportunities(1).

Sectoral Composition

The Agreement was to support new employment in both the secondary and tertiary sectors of the economy. It was also to contribute to the diversification of employment opportunities.

In practice, the sectoral distribution of employment created was somewhat different from what was intended. Between 25 percent and 37 percent of total employment associated with the programs was in the primary sector, a function of the opportunities supported under the Industrial Infrastructure program. On the other hand, only in the vicinity of 5 percent of the employment was in the service sector. The warehousing-distribution sector was similarly very poorly represented. The Agreement, however, was more successful in attracting and supporting manufacturing opportunities (approximately 60-70 percent of total employment).

Overall, the Agreement was responsive in nature. There was little emphasis placed on higher technology enterprises and no significant impact was made on diversifying the type of employment opportunity available.

Support of Indigenous Enterprises

The Agreement did contribute to the support of indigenous enterprises. The Opportunity Identification program and the Incubator Mall project

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1. A general idea of the total income implications of the new jobs created may be obtained as follows: Number of new jobs in the mining sector is about 260 (Industrial Infrastructure Program). Average wage in the mining sector in N.S. is $18 070 per annum (based on June 1980 figures). Income generated in one year is therefore $4 698 200. Assuming that the remaining 515 new jobs (average of the maximum and minimum new employment figures) were all paid at the average industrial composite wage of N.S. ($13 850 per annum, based on June 1980 figures), the total income generated in one year would be $7 132 750. Total income in one year (1980) for new jobs associated with the Agreement is therefore in the order of $11 830 950.

were, in practice, almost exclusively oriented in that direction. Similarly, a majority of the new users of the parks are indigenous enterprises (although they account for a minority of the employment generated). In total, between about 260 and 490 jobs were created through native Nova Scotia firms. This is particularly significant when the small average size of the these is considered, indicating the fairly large number of indigenous enterprises which were, in some way, supported.

Given the relative success of the Agreement with respect to this goal, it is ironic that this was the one element which the Agreement clearly stated was to be supported entirely by the Province through other existing provincial programs. It was not to be primary goal of the programs included in the Agreement.

In summary, the effectiveness of the Agreement with respect to the three enunciated goals is varied. The poorest performance was in focusing on development in higher skill and wage categories and in sectors which would diversify the provincial economy. The tertiary sector was largely ignored.

Some success in generating new employment was achieved, but performance to date has been disappointing. Nonetheless, facilities to accommodate growth have been created and future performance could certainly improve.

A relatively high proportion of Agreement funds have gone to supporting indigenous enterprises.

7.3 CRITICAL OVERVIEW OF THE AGREEMENT

In this section, the appropriateness of the mix of programs and types of programs included under the Agreement will be discussed. The success with which the theory and concepts underlying the Agreement were translated into specific activities will be addressed.

Two concepts will be analysed. The first is the spatial aspect of the Agreement: the central growth corridor. The second is the issue of the logical links between each of the elements of the Agreement.

The spatial element is included in this discussion because the Agreement pointed out that recent growth in the province had been concentrated in medium-sized communities, particularly in the province's central corridor, and that, essentially, the "Agreement [was] aimed at reinforcing and stimulating this growth"(1). As described, this seemed to have been intended as one of the organizing and unifying principles of the Agreement.

The only program which clearly contained a spatial dimension was the industrial parks program. Yet the original choice of parks implied a very loose understanding of the geographic extent of the corridor. Kentville, Stellarton and Windsor are all outside the high growth corridor and were included for reasons not entirely in keeping with the goal of reinforcing the corridor(2).

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(1) The Subsidiary Agreement, June 22, 1976; p. 21.

(2) Post-facto justifications of their inclusion were developed, but these did not reflect the prime political-economic motivations underlying the choices.

Later amendments to the Agreement further diluted the concept. The addition of the Bridgewater park was clearly not intended to enhance growth in the development corridor, but was a reaction to more local economic needs. Similarly, the addition of the Sysco program in Cape Breton, while not directly affecting any of the other Agreement activities, seemed to be a further indication that the corridor concept was, indeed, not a key organizing principle of the Agreement.

Aside from the parks program, none of the other programs was designed to specifically reinforce the growth corridor. Opportunity Identification was non-spatial in conception and, particularly in the manner in which it developed, contained no mechanism by which it could be used to encourage growth in any particular geographic area. The Industrial Infrastructure program, almost by definition, was most likely to encourage growth outside the corridor(1).

Neither DREE nor IEL were willing to apply the full weight of their other programs to ensuring that industries, where practicable, would locate in the industrial parks. In general, they were not willing to risk development in one region to encourage growth in the corridor and, in particular, in the parks.

If the corridor concept added an attractive geographic element to the Agreement, it also seemed to add an element of inflexibility with which both the drafters and the implementors of the Agreement did not feel comfortable. If the inclusion of those activities and projects which tended to dilute rather than bolster the corridor concept are considered politically and economically justifiable, then consideration should

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(1) As discussed in Chapter 6, this does not necessarily undermine its usefulness. On the contrary, as indicated there, it is considered a particularly successful program and the idea of having reserve of funds available for use on well-defined types of activities, is considered commendable.

be given in the future to removing the geographic element from a general industrial development agreement or, at least, to downgrading its ostensible role in the development of the Agreement concept.

The Agreement clearly attempts to lay out a logical sequence linking all the programs and projects. Analytical efforts were to lead to the identification of product opportunities. These, in turn, were to be studied, and the viable ones to be promoted to private enterprise.

In parallel with this, infrastructure to accommodate industrial growth was to be prepared and assistance given to industrial commissions to ensure the efficient local management of the infrastructure. Provision was made to deal with those (rare) opportunities which could not be accommodated within the new park system.

The logical links between these activities, and particularly the analytical approach to identifying and promoting opportunities, is closely related to the conception of an industrial development process as outlined in an appendix to the first Project Brief. The main proponent of such an approach was DREE.

The Agreement and the industrial development process were attempts to introduce a systems approach to industrial development in Nova Scotia. While such an approach has theoretical and practical merit, two major difficulties were encountered which effectively undermined its application.

The first problem was that the Agreement apparently did not recognize how experimental the opportunity identification approach actually was. The assumption seemed to have been that in a simple sense, analysis would lead to the identification of viable opportunities which in turn,

would lead to the creation of jobs[1]. The reality was that none of these steps was a foregone conclusion. In particular, the identification of a viable opportunity does not automatically indicate that an enterprise will be interested in pursuing it. Other factors must be taken into account, such as the opportunity cost of the capital which would be required and the perceived risk to the investment.

The Opportunity Identification program was sometimes considered as having been intended to fill the industrial parks[2]. This implied that even in the short-term, opportunity identification was assumed to provide a high employment return. In other words, the link between identified opportunities and the creation of jobs was seen to be strong. In theory, this need not necessarily be so and, in practice, the earliest program experience with the promotion of opportunities was most disappointing. It is ironic that in moving towards trying to improve the links between identified opportunity and job creation [3], i.e. by becoming client-responsive, the initial link between analysis and the identification of opportunities was discarded.

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(1) While several indications of this may be found in the Agreement and Project Briefs, the most explicit is contained in the description of the industrial development process, quoted earlier in this study: "Under normal circumstances it is expected that promotional efforts will be continued until one or more firms are convinced of the validity of the opportunity and interested in pursuing the matter further". Appendix I, p. 2, first Project Brief, Opportunity Identification.

(2) Allusions to this may be found in the Agreement. However, the conception of the Opportunity Identification Program as being the "engine" of the parks program tended to find its most explicit expression amongst DREE officials.

(3) This is what DOD officials apparently understood in describing their change in orientation as being a "pragmatic" one.

The speculative nature of analytical efforts must be recognized. Whether the final results of the program might have been better had more sophisticated analysis been undertaken must remain a moot point. However, the results would have been more uncertain, and the Agreement should have been structured to reflect this. In effect, in not recognizing this, concrete and certain activities were being made dependent on the uncertain results of experimental activities.

The first point which emerges from this is that analytical efforts must be treated as being closer to the realm of "pure" research than as being one concrete activity amongst others. Analysis remains important, but it must be viewed in the medium to long-term and the pressure for the immediate return on employment must be relaxed. As such, highly analytical efforts such as the ones intended in the Agreement are not best undertaken as part of an industrial development subsidiary agreement(1). Funding of appropriate research activities at public or semi-public institutions may be more effective(2), in conjunction with a plan to improve communication between implementors of industrial development strategies and the researchers.

The second major difficulty with the systems approach as embodied in the Agreement and in the description of the industrial development process, was the lack of attention given to its operation within the existing organizational structure. The current distribution of responsibilities between government departments and agencies does not correspond to the lines of responsibility required by the desired process. It was therefore natural that DREE should propose a joint federal-provincial tripartite body to accept responsibility for it. However,

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(1) A somewhat paradoxical sideline to this issue is that DREE, who conceived the process and maintained the strongest vision of how it should have been conducted, was not involved in the nitty-gritty of its implementation. Evidently, however, both organizationally and politically, this would not have been possible.

(2) Consideration might also have been given to including it in the Planning Subsidiary Agreement.

such a solution was politically unrealistic and unacceptable. In fact, the proposal itself contributed to developing mistrust between the protagonists.

More particularly, DOD did not have the analytic experience nor the full complement of necessary promotional arms to undertake all the activities required under the Opportunity Identification program. By the same token, IEL was not properly suited to taking on the task. By its nature, IEL is necessarily oriented to short-term, concrete results. As well, its promotional role is limited to out-of-province. What emerges is that opportunity identification as designed and, by implication, the industrial development process itself, had no natural "home" in the existing governmental structure. It is not surprising therefore, that the nature of the program was gradually transformed to correspond to a type of activity which could be handled by its "host" (DOD) department.

A program must be designed to correspond to the capacities of the body which is responsible for its implementation. If a series of activities are defined which are necessarily linked but which must be undertaken by separate bodies, the chance of their functioning effectively as a whole is greatly reduced. The normal tendency will be for each department or agency to internalize as much of the sequence of activities as possible. Given the different mandates and perspectives of each body, this will necessarily lead to a breakdown of the Agreement as originally conceived. This is very close to what occurred in the implementation of the Opportunity Identification program.

The implication is not that coordination between departments and agencies is impossible. On the contrary, communication and coordination should be encouraged wherever as possible. However, the responsibilities of each body must be clearly delineated and the necessary links between activities conducted between bodies should be reduced where possible, so that the activities of one department are not entirely dependent on the outputs from another department.

In summary, while individual elements of the Agreement were effective to varying degrees, the Agreement did not function effectively as a whole, despite the clear indications that it was so intended.

(i) The corridor concept was not clearly maintained and was not, in practice, used as an organizing principle in the Agreement or during its implementation.

(ii) The difficulties inherent in the analytical approach were seriously underestimated. There was insufficient recognition given to the experimental and speculative nature of the analytical efforts required. The assumption that the efforts would be translated directly into the creation of jobs was a contributing factor to the orientation finally adopted by the program.

(iii) The extent of the linkage between the "soft" and "hard" dimensions of the Agreement was not clear and no consensus existed between involved parties on the issue.

(iv) The overriding concept of the industrial development process embodied in the Agreement, and particularly in its "soft" elements, was not translated into activities which corresponded to the capacities of individual departments or agencies to implement.

(v) The responsibilities of each of the bodies implicated in the implementation of the "soft" activities was not clearly delineated and, similarly each of the activities was not clearly assigned to a particular department or agency.

7.4 REVIEW OF RECOMMENDATIONS

For the convenience of the reader, the full list of recommendations contained elsewhere in this report is assembled below.

Opportunity Identification, Analysis and Promotion Program

It was suggested in section 7.3, that consideration be given to removing strongly analytical efforts from future industrial development agreements. Instead, appropriate research might be encouraged in various semi-private institutions. Alternatively, a project might be included within a planning agreement. However, investigation of the basic rationale of the programs was outside the mandate of this evaluation. For this reason, the following recommendations are made on the assumption that a program similar to one defined in the past Agreement were to be included in a future agreement.

Given:

- that critical elements of the program were ill-defined;
- that changes in both the methods and goals of the program were made gradually without explicit recognition that these changes were being made;
- that, as designed, the program did not respect existing organizational structures and that responsibility for particular activities was not always clearly assigned;
- that the experimental nature of the program was not properly recognized;
- that serious conflicts regarding the program were never resolved and remained largely unaddressed by senior management;

It is recommended:

(i) that promotional activity be more precisely defined and that it be separated into a distinct part of the program, equivalent in stature to each of the other three parts (opportunity identification; market and feasibility studies; computerized reference system);

(ii) that, if changes be made in the methods designated for achieving the outputs, these be fully documented and justified in writing;

(iii) that when new activities are proposed which have not been previously defined in the Project Brief (e.g., Venture Founders), a written justification be presented detailing their contribution to program goals and objectives; this would permit the effects of the new activities on the total program to be documented and anticipated;

(iv) that discarding of approved activities (e.g., computerized reference system) be explained in writing;

(v) that each part of the program be assigned to a specific responsible agency and the extent of their responsibilities be clearly defined (e.g., "agency X has a role to play" or "agency Y could be useful in this" is unacceptable);

(vi) that, where doubt exists on the effectiveness of designated technical procedures or methods, an initial period for experimenting be defined, to be followed by a formal evaluation of the procedures' utility and appropriateness;

(vii) that, once the procedure(s) have been finalized, regular progress reports be prepared listing activities undertaken; these reports should include an evaluation of the degree to which the activities are appropriate to achieving program goals and objectives; the evaluation criteria should include both qualitative and quantitative measures;

(viii) that these progress reports serve as a basis for an annual evaluation;

(ix) that all expenditures be classified according to predetermined activity categories appropriate to the indicators to be used in the evaluations.

Industrial Parks and Related Infrastructure Program

The recommendations presented here relate only to problems at a "program level"; that is, problems which transcend individual projects. Recommendations by project are presented in the subsequent sections.

Given:

- that difficulties can arise in the phasing of inter-related projects;

- that one sub-project was dropped(1) without any official notification to that effect;

It is recommended:

(i) that close attention be given to specifying the relative phasing of projects within the overall time-frame of the program;

(ii) that consideration be given, where appropriate, to including projects of various lengths and phasing within the longer time-frame of an Agreement;

---

(1) The Parks Association sub-project.

(iii) that the discarding of any approved project or activity be explained in writing;

(iv) that this explanation include a demonstration of why the new project is more appropriate to the program than the one being discarded.

Assistance to Industrial Park Development Project

Given:

- that the final success of such a project is largely dependent on external economic factors;

- that, consequently, realistic forecasts are important in the planning and monitoring of such a project;

- that the employment and income forecasts as undertaken prior to the signing of this Agreement were poorly executed and employed inconsistent assumptions;

It is recommended:

(i) that forecasts be based on serious studies which take into account the particularities of each park;

(ii) that all forecasts be established according to the time-frame of the Agreement, taking into account the particular phasing of the activity being forecast (e.g., employment must begin from projected date of the end of construction, taking into account also the time required for Project Brief approval);

(iii) that the variables forecast adhere strictly to the performance indicators to be used in later project evaluations;

(iv) that forecasts be reviewed annually;

(v) that the explanations and justifications for any modifications to the forecasts be detailed in writing.

Incubator Mall Project

Given:

- that early results tend to confirm the validity of the mall concept;
- that reasonable success has been achieved to date at relatively low cost;
- that it remains too early to fully evaluate the concept or to determine the criteria for the success of the malls;
- that certain potential pitfalls can be identified;

It is recommended:

(i) that the existing malls be continued;

(ii) that a limited number of new malls be built in selected and varied settings;

(iii) that, other than under exceptional circumstances, firms be subjected to high penalties for remaining in the malls beyond five years;

(iv) that a special program be established to carefully monitor over a longer term (5 to 8 years) the progress, results and effects of each of the malls established;

(v) that, until the conditions for the success and failure of industrial incubator malls are better known, the number of malls NOT be permitted to multiply indiscriminately.

Assistance to Industrial Commissions Project

Given:

- that a project to improve the quality of park promotion and management is considered an appropriate complement to infrastructure construction;

- that the simple subsidization of operating costs does not include the incentives necessary to have the commissions change and upgrade the quality or type of activity they undertake;

It is recommended:

(i) that project expenditures not be approved unless they are directed towards specific activities;

(ii) that these activities must contribute to directly improving the quality of management or promotion of the parks (e.g., through the subsidization of professional promotional literature or programs);

(iii) that the simple subsidization of on-going activities is not appropriate in the context of this Agreement.

Industrial Infrastructure Program

Given:

- that the program may be considered a general success;
- that such a program can provide important flexibility both in responding to the needs of industry and by providing a reserve of funds for possible use elsewhere in the Agreement;
- that dangers of abuse exist in a discretionary program;

It is recommended:

(i) that the program be strictly responsive in nature and that the initiation of opportunities be included under other, more appropriate programs;

(ii) that strict and precise eligibility criteria be maintained;

(iii) that transferring of funds out of the program for use elsewhere in the agreement be permitted, but that guidelines governing the timing of transfers be established;

(iv) that the emphasis be maintained on rapid response to opportunities as they arise and, accordingly, that cumbersome bureaucratic procedures be avoided.

Appendices

APPENDIX I

Summary of Amendments to the Agreement

SUMMARY OF AMENDMENTS TO

INDUSTRIAL DEVELOPMENT SUBSIDIARY AGREEMENT

Amend-ment — Description

No.1 Approved October 28/76

An error in the terms of the Agreement is corrected as follows:

"Delete the following:	Add the following:
6.6 The costs to be shared by Canada do not exclude any costs relating to the acquisition of lands or interests in lands, or costs arising from conditions of acquisition.	6.6 The costs to be shared by Canada do not include any costs relating to the acquisition of lands or interests in lands, or costs arising from condition of acquisition".

No.2 Approved February 10/77

Opportunity Identification, Analysis and Promotion:
The three parts of the budget combined into one single budget. No changes to total program budget.

No.3 Approved May 17/78

Industrial Parks and Related Infrastructure:

Estimated Total Cost increased from $10,279,000 to $11,879,000
Increase of $1,600,000.

(A) Amherst: estimated Total Cost: dropped from $1,581,000 to 1,341,000 (for Phase II only)
Reduction of $240,000.

(F) Pilot Projects: estimated Total Costs increased from $850,000 to $2,690,000.
Increase of $1,840,000 ($240,000 from Amherst and $1,600,000 from Ind. Infrastructure).

Industrial Infrastructure:

Estimated Total Costs reduced from $3,000,000 to $1,400,000
Reduction of $1,600,000

Effect of Amendment No.3: Money for the Industrial Malls was made available by transferring funds from the Industrial Infrastructure Program, and shifting funds from Amherst.

No.4 Approved May 2/78

A. Gays River Road & Power Supply Project defined.
Estimated Costs: $210,650.

No.5 Approved June 9/78

Industrial Parks and Related Infrastructure:

(A) Amherst Phase II: $1,341,000 to $1,266,000
Reduced $75,000.

(C) Kentville: $1,690,000 to $1,765,000
Increase $75,000

Effect: $75,000 shifted from Amherst to Kentville.

No.6 Approved September 11/78

Industrial Parks and Related Infrastructure:

(D) Stellarton $1,000,000 to $400,000
Reduced $600,000

(E) Windsor $1,200,000 to $600,000
Reduced $600,000.

(H) Bridgewater added $1,200,000
Increase $1,200,000

Effect: Funds taken from Stellarton and Windsor to enable Bridgewater to enter the Agreement. (Later, funds for Stellarton and Windsor partially replaced - Amendment No.11).

No.7 Approved November 11/78

Industrial Infrastructure:

(B) Salmon River Road Project defined
Estimated cost: $300,000.

No.8 Approved November 20/78

Industrial Parks and Related Infrastructure:

(B) Debert $1,520,000 to $1,615,000
Increase $ 95,000

(D) Stellarton $ 400,000 to $ 155,000
Reduced $ 245,000

(E) Pilot Projects $2,690,000 to $2,840,000
Increase $ 150,000

Effect: Funds taken from Stellarton to cover increased costs of Debert and industrial malls.

No.9 Approved March 30/79

Industrial Infrastructure:

(A) Gays River Road & Power Supply Project: Estimated total cost raised from $210,650 to $240,210.
Increase of $29,560.

No.10 Approved August 20/79

Industrial Parks and Related Infrast: $11,879,000 to $12,676,000
Increase $797,000.

Industrial Infrastructure: $1,400,000 to $603,000
Reduced $797,000

Effect: Amendments No.3 and No.10 transfer $2,397,000 from Industrial Infrastructure to Industrial Parks and Related Infrastructure.

No.11 Approved September 17/79

(A) Amherst $3,354,000 to $3,321,000
Decrease $33,000

(D) Stellarton $ 155,000 to $ 675,000
Increase $520,000

(E) Windsor $600,000 to $975,000
Increase $375,000

(G) Assistance to Industrial Commissions $350,000 to $285,000
Decrease $65,000

Effect: Funds transferred from Industrial Infrastructure to Industrial Parks and Related Infrastructure in Amendment No.10, plus reductions in Amherst and Assistance to Industrial Commissions were used to partly restore funds to Stellarton and Windsor.

No.12 Approved October /79

Addition of SYSCO Capital Repair program.
Total estimated cost: $7,500,000

Agreement budget raised by required amount.

No.13 Approved March 31/80

Salmon River Road Project: increased from $300,000 to $362,700.

APPENDIX II

Opportunity Identification,
Analysis and Promotion Program

Contents:

. Expenditures by category
. Number of studies undertaken
. Source of product ideas
. Private sector participation
  in consultant studies
. Most likely direct job creation

OPPORTUNITY IDENTIFICATION - EXPENDITURES BY CATEGORY; NUMBER OF STUDIES

	CONSULTANT STUDIES				Industrial Intelligence	European Contact	Venture Founders	Staff Contracts	TOTAL
	Product & Technical Studies	Opportunity Identification-related	Background, Policy & Misc.	Sub-Total					
Expenditures	796 300	64 800	197 000	1 058 100	122 200	245 000	1 290 700 (1)	134 000	2 850 000

1. estimated expenditure in Canadian dollars; includes expenditures related to Venture Founders activities as well as direct payments to the group.

	CONSULTANT STUDIES			IN-HOUSE	TOTAL
	Product & technical	Opportunity Identification-related	Background Policy & Misc.		
No. of Studies	56	4	9	130	199
No. of Viable Opportunities Identified (1)	31			8	39

1. Does not include conditionally positive or qualified opportunities.

OPPORTUNITY IDENTIFICATION

Source of Product Ideas

	Under First Project Brief	Under Second Project Brief	TOTAL
Private Sector			
Direct	11	19	30
Through: consultants	1	8	9
DREE	2	-	30
MIL	2	-	2
IEL	3	9	12
DOD (field staff)	20	28	32
Project staff	-	12	12
SCIDA	-	3	3
Other	-	5	5
TOTAL	39	84	123
Consultants	4	-	4
Governments			
DREE	3	1	4
MIL	2	-	2
IEL	7	5	12
DOD	19	-	19
Other	4	-	4
TOTAL	35	6	41
Other or Joint		11	11
TOTAL	78	101	179

PRIVATE SECTOR PARTICIPATION IN CONSULTANT STUDIES

	Under First Project Brief	Under Second Project Brief	TOTAL
No. of Studies (Product & Technical)	10	46	56
No. of studies with private sector participation	2	25	27
Total private sector financial participation	$3 000	$91 650	$94 650
Total private sector participation/Total public expenditures	2.1%	14.1%	11.9%
Private sector participation as % of cost of studies in which they participated	12.3%	19.0%	19.7%

OPPORTUNITY IDENTIFICATION

MOST LIKELY DIRECT JOB CREATION

PROJECT NAME	MINIMUM JOB CREATION		MAXIMUM JOB CREATION
	Full-Time	Part-Time	
A. Implemented:			
Stretch Belts	2		2
Power Factor Correction Capacitors	6		20
Portion Pak Foods	8		15
Plastic Windows	1	2	11
Industrial Clothing: Job Preservation & New	41		41
	58	2	89
B. In Implementation:			
Rings and Links	6		6
AM Transmitters	15		
Low Power Transmitters			35
Sardine Cannery	6	107	6
Pultrusion	15		15
	42	107	62
C. Client Attempting Implementation:			
Polyethylene Cord & Twine	6		6
Hydraulics Lab	4		5
Kitchen Cabinets	4		5
Residential Greenhouses	5		10
Vinyl Siding	15		20
Numerical Controlled Machining	10		15
	44		61
D. Venture Founders	83[1]		83[1]

1. Not including employment generated by third workshop.

(Source: DOD official, except Venture Founders figures for which were taken from Venture Founders' own report).

APPENDIX III

Interview Grids

- Sample Part I interview sheet
- Part II interview sheet
- Incubator mall user interview sheet

PLANSEARCH INC.

EVALUATION OF INDUSTRIAL DEVELOPMENT SUBSIDIARY AGREEMENT

Interview: Part 1

Name:

Position:

Telephone:

Interviewer:

Date:

Industrial Infrastructure

1. Type of infrastructure constructed

2. Was industry established?

3. Would industry have been built otherwise?

4. No.of jobs created,income

5. List of selection criteria

6. Expenditures

Bridgewater Industrial Park

7. No.of users

8. Types of users (light manuf., wrhsing-distribution)

9. Occupancy rates

10. No.of jobs created,income

11. Previous locations of firms

12. Reasons for choosing park

13. Range of services/amenities

14. Quality of services

15. Classification of site

16. No.of serviced sites

17. Total serviced area

18. Rents & Pricing System

PLANSEARCH INC.

EVALUATION OF INDUSTRIAL DEVELOPMENT SUBSIDIARY AGREEMENT

Interview: Part 2

Name:

Position:

Telephone:

Interviewer:

Date:

Place:

Length of interview:

1/ Do you feel that the results/ objectives of the program have been achieved?

2/ What factors explain your evaluation?

3/ Might any changes have been made to the program to improve the results? (specify the suggested changes)

4/ Are there any factors external to the program which contributed to its successes or help explain any lack of success?

5/ What are the significant changes which have been made to the program since its inception (e.g. budget,objectives,organization...)?

6/ Have the effect of these changes been positive or negative?

Please answer questions 7-10 using the following table as a guide.

7) Which if any of the suggested PROBLEM AREAS would you identify as representing the most serious difficulties for the program?

8) Can you provide any concrete examples to illustrate these problem areas?

9) What were the effects of these problems on the effectiveness of the program?

10) What lessons may be drawn regarding these areas for the improvement of future programs?

PROBLEM AREAS IDENTIFIED	PRACTICAL ILLUSTRATION	EFFECTS ON THE PROGRAM	LESSONS TO BE DRAWN FOR FUTURE PROGRAMS	
DELAYS IN IMPLEMENTATION	➡			
DISPUTES WITH RESPECT TO OBJECTIVES AND APPROACH (SPECIFY PARTIES)	➡			
LACK OF COORDINATION BETWEEN INTERESTED DEPARTMENTS, AGENCIES OR OTHER BODIES	➡			
LACK OF COORDINATION BETWEEN PROJECTS AND BETWEEN PROGRAMS	➡			
INTERNAL ORGANIZATIONAL OBSTACLES (SPECIFY)	➡			
LEVEL OF FUNDING	➡			
OTHER (SPECIFY)	➡			

5. What was the prime reason you moved into the mall and where did you hear about the mall?

Mall Evaluation

6. What services are available to you from the Mall?
(Note: allow user to specify- Do not suggest any)

1- Meeting room
2- Temporary office space
3- Secretarial services
4- Display areas
5- Photocopying facilities
6- Mailing facilities
7. Telex
8. Book-keeping
9- Market consultants
10- Managerial guidance or advisory services
11- Financial services
12- Other

---

7. How important do you feel this package of services is or has been in maintaining your firm's viability?

essential	important	not very important	not at all important
1	2	3	4

---

8. Please evaluate the importance of each service to your firm's viability or to increasing your efficiency or rate of growth?

(use scale on next page)

PLANSEARCH INC.

EVALUATION OF SUBSIDIARY INDUSTRIAL DEVELOPMENT AGREEMENT

Industrial Mall User Questionnaire
(All answers will remain confidential)

Name of firm:

Interviewer:

Date:

Name of person interviewed :

Length of interview:

Position in firm:

Background Data

1. Product:

2. First year of operation:

3. Year moved to mall:

4. Number of employees (if applicable, including years prior to locating in mall)

year	office	production

10. How would you assess tne quality of the services?

	excellent	very good	acceptable	poor
1. Meeting room	1	2	3	4
2. Temporary office space	1	2	3	4
3. Secretarial services	1	2	3	4
4. Display areas	1	2	3	4
5. Photocopying facilities	1	2	3	4
6. Mailing facilities	1	2	3	4
7. Telex	1	2	3	4
8. Book-keeping	1	2	3	4
9. Market consultants	1	2	3	4
10. Managerial guidance or advisory services	1	2	3	4
11. Financial services	1	2	3	4
12. Other	1	2	3	4

11. How would you assess the accessibility of the services?

	excellent	very good	acceptable	poor
1. Meeting room	1	2	3	4
2. Temporary office space	1	2	3	4
3. Secretarial services	1	2	3	4
4. Display areas	1	2	3	4
5. Photocopying facilities	1	2	3	4
6. Mailing facilities	1	2	3	4
7. Telex	1	2	3	4
8. Book-keeping	1	2	3	4
9. Market consultants	1	2	3	4
10. Managerial guidance or advisory services	1	2	3	4
11. Financial services	1	2	3	4
12. Other	1	2	3	4

8- cont...

	important to maintaining viability	important in increasing efficiency or growth rate			
		essential			not at all important
1. Meeting room		1	2	3	4
2. Temporary office space		1	2	3	4
3. Secretarial services		1	2	3	4
4. Display areas		1	2	3	4
5. Photocopying facilities		1	2	3	4
6. Mailing facilities		1	2	3	4
7. Telex		1	2	3	4
8. Book-keeping		1	2	3	4
9. Market consultants		1	2	3	4
10. Managerial guidance or advisory services		1	2	3	4
11. Financial services		1	2	3	4
12. Other		1	2	3	4

9. How frequently do you use each of the available services?

	often	quite frequently	add occasion	never
1. Meeting room	1	2	3	4
2. Temporary office space	1	2	3	4
3. Secretarial services	1	2	3	4
4. Display areas	1	2	3	4
5. Photocopying facilities	1	2	3	4
6. Mailing facilities	1	2	3	4
7. Telex	1	2	3	4
8. Book-keeping	1	2	3	4
9. Market consultants	1	2	3	4
10. Managerial guidance or advisory services	1	2	3	4
11. Financial services	1	2	3	4
12. Other	1	2	3	4

11) Other comments on the program:

15. How important were subsidies during your first year of operation (including rent and services subsidies)?

year	very important			not at all important
	1	2	3	4

16. How important are mall subsidies to your operation this year?

very important			not at all important
1	2	3	4

17. Are there any services which should have been provided or which might have been provided which are not available?

service (specify)	necessary	useful
	1	2
	1	2
	1	2

18. Were the size of the units reasonable for your needs when you first arrived?

YES NO

12. What type of improvements to the services would increase their usefulness?

13. Could you estimate the dollar value to your firm of the subsidies on rent and services?

	1977	1978	1979	1980	1981
Rent					
Services					

14. What were your total annual revenue and expenditures during your first year of operation in the mall as well as your estimate for the current year?

year	revenue	expenditures

19. Are the size of the units reasonable for your current needs?

YES NO

20. Overall, are unit sizes approrpriate for such a mall?

YES NO

If no, explain:

21. Do you have any plans to move from the mall?

YES NO

Year:

Reason for move;

Where will you move to?

22. Has being located in the mall permitted you or helped you to develop certain managerial skills which you would not have been able to do had you located elsewhere?

YES NO

Please explain how or why not?

23. Overall, how do you evaluate the utility of the mall concept?