

PROPOSED CAPITAL  
EVALUATION STRATEGY

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PROPOSED  
CAPITAL EVALUATION STRATEGY

Prepared by  
Program Evaluation Branch  
for  
Capital Management Committee  
October, 1979



## EXECUTIVE SUMMARY

In 1978, the Executive Planning Committee identified the evaluation of capital expenditures as the third priority for evaluation after education and social assistance.

In 1979, an Headquarters Capital Management Subcommittee was established to oversee and guide the development of the strategy for capital evaluation. A Progress Report was prepared and Headquarters and Regional Officials of the Indian and Inuit Affairs Program concerned with capital expenditures surveyed for identifying evaluation priorities.

Based on the Progress Report and the Survey, as well as a review of other work currently underway, the Subcommittee recommends and the Capital Management Committee concurs, that the following prioritized evaluations take place during the next two to three years:

1. operational review of capital program planning, to start in one pilot region;
2. evaluation of Federal Band Schools, to focus on the meeting of physical and social objectives, delivery mechanisms, control procedures and standards;
3. evaluation of water and sewer expenditures, to focus on meeting of physical and social objectives, delivery mechanisms control procedures and standards;
4. evaluation of Joint Schools to focus on master agreements and standards;
5. evaluation of the Housing Program, to follow the completion of internal work underway now, and
6. evaluation of maintenance, subsequent to the establishment of a maintenance system which is currently being developed by the Engineering and Architecture Branch.

The Program Evaluation Branch would also respond to urgent capital evaluation requests in areas other than those above, and, of course, all evaluations would follow established procedures involving headquarters and regional officials and Bands as necessary.



### THE NEED FOR A CAPITAL EVALUATION STRATEGY

In 1978, the Executive Planning Committee identified the evaluation of capital expenditures as the third priority for evaluation after education and social assistance.

The capital budget forms a large part of the Indian and Inuit Affairs Program. In FY 78/79, \$130 million were forecast, but only \$118 million spent on capital works. Although the percentage of the total IIA budget spent on capital works has declined from 21% in FY 73/64 to 17% in FY 78/79, in total amount of dollars expenditures have increased 5 to 10% per annum, on the average, during the same period. Of the \$118 million capital expenditures in FY 78/79, \$82 million were spent on housing and infrastructure, \$34 million on education and \$2 million on other items.

The need for capital expenditures evaluation relates not only to the large and growing dollar volume of the program but also to:

1. the complexity of roles and responsibilities for capital expenditures;
2. the gradual shifting of responsibility for delivery of capital program from IIA to Bands with concurrent accountability arrangements, and
3. the potential for capital expenditures to achieve community improvement objectives not only in physical but social terms as well - e.g., job creation.

Also impacting on the need for evaluation are directives and studies emanating from the central agencies. Treasury Board Circular 1977-47 calls for the periodic review of all federal programs and Circulars 1978-46 and 1979-20 have significant impact on the management of, and accountability for, capital projects. The Office of the Auditor General investigated the IIA school construction program in 1978 (The SPICE report) and is currently engaged in other evaluations of IIA activities. The Office of the Comptroller General is also working with IIA in drawing up a comprehensive plan for the evaluation of all IIA programs, of which this particular evaluation strategy will become a part.

Finally, evaluation is an integral component of the IIA Capital Management System now under development and implementation. The system components are Program Planning, Project Control, Asset Inventory, Maintenance Management and the subject project, Evaluation Strategy (see Chart 1 following).

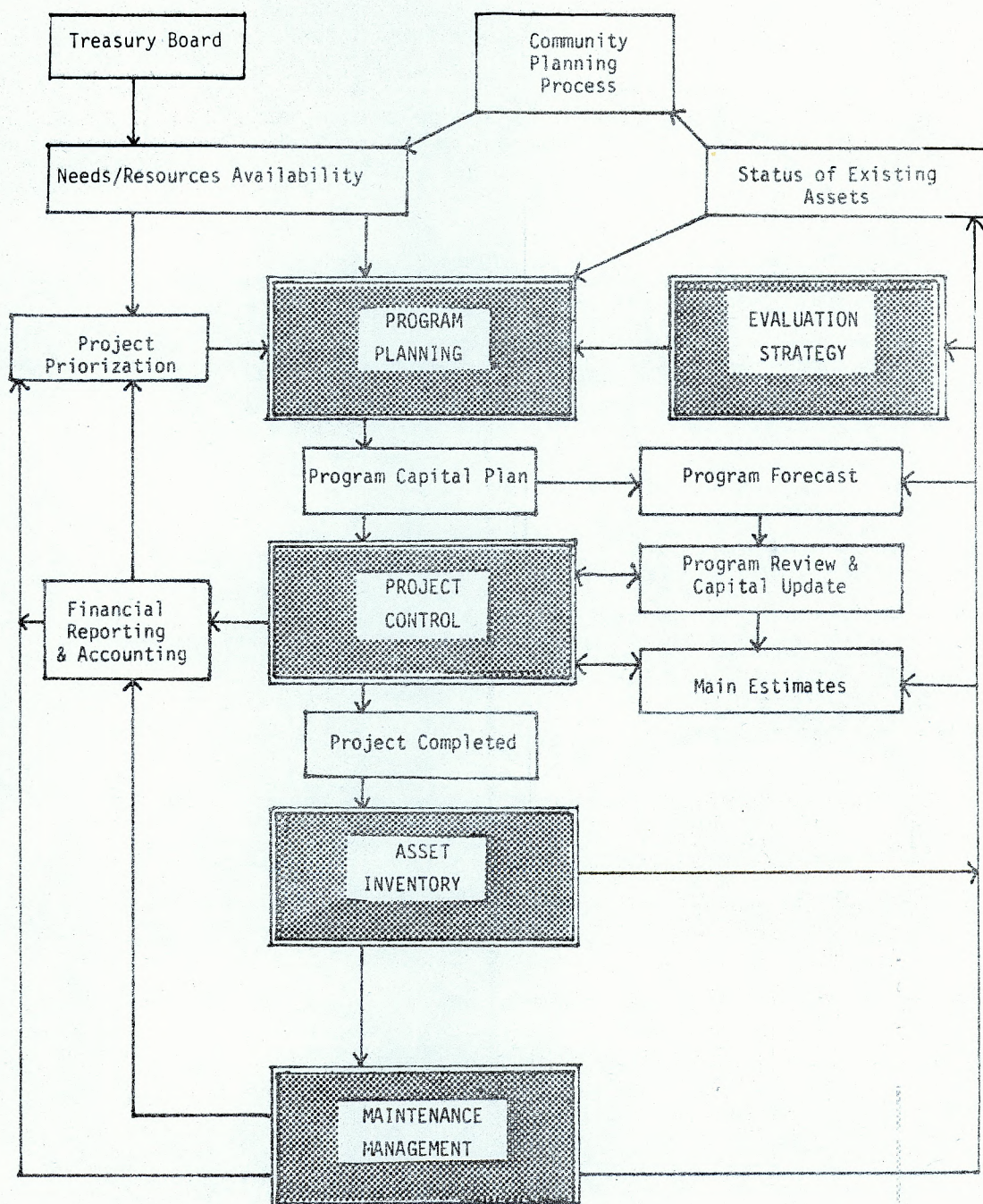
In the absence of a fully developed capital evaluation strategy two ad hoc evaluations associated with IIA capital expenditures have already been completed; one on day-labor versus the contracting approach to construction and the other on electrical agreements in Manitoba.



# CHART I

# CAPITAL MANAGEMENT SYSTEM

INDIAN & INUIT AFFAIRS PROGRAM





### THE CAPITAL EVALUATION STRATEGY

In the simplest possible terms, a program is evaluated when inputs, delivery and outputs are critically examined. A focus on input variables in terms of the cost of resources would result in an evaluation of program "economy". A focus on delivery mechanisms, administrative procedures, guidelines and organizational arrangements would result in "efficiency" investigations. And a focus on the extent to which program objectives are achieved by the outputs are "effectiveness" evaluations; the ultimate purpose of the capital evaluation strategy.

The latter type of evaluation would require clearly defined program objectives as well as measurable outputs which directly follow from the objectives. But clear-cut objectives do not always exist and conflicting views often surround any assessment of achievements. The housing program may be illustrative in this context. Is the objective perceived to be: assistance to housing; the provision of housing; job creation or the opportunity for Bands to assume local government functions? And should we measure output, or the housing unit, in terms of: number of units constructed; IIA space and material standards; satisfaction by users; the life-cost of a unit and its relationship to maintenance or possibly in terms of a reduction in incidence of health problems? Using various combinations of objectives and output measures, a variety of assessments may result.

An effectiveness evaluation looks at the "final outputs" of the program; the basic results it is designed to achieve. It inquires, "given the objectives this program is supposed to be achieving, how well is it performing relative to those objectives? What is the impact of the program on the general public? How many jobs have been created? Has the program met the expectations that cabinet or parliament had when it was created?"

Failing to have a clear set of program objectives to which measurable objectives can be related, efficiency studies may be undertaken, alternatively called operational or functional reviews. Such reviews focus on the management of the program, its procedures and general organization. The following factors could be considered: the clarity of operating objectives, internal roles and relationships; the clarity and appropriateness of procedures; the quality of input from all participants and potential and actual problem areas in need of improvements. These reviews may provide program managers with the opportunity to review, correct or modify objectives. It is these reviews that eventually can lead to "effectiveness" evaluations.

Economy evaluations generally focus on the cost of inputs: labor, overhead, capital equipment, materials, transportation and so on. It is important that these resources be acquired at an appropriate level of quality for the lowest possible cost. An examination of economy would deal with issues such as: how are contracts awarded? What procedures exist to ensure costs are not excessive? Although effectiveness evaluation is the ultimate purpose, other types of evaluations may have to be undertaken first in order to clarify some of the IIA capital program components.



### PROCESS FOLLOWED IN THE DEVELOPMENT OF A CAPITAL EVALUATION STRATEGY

An Headquarters Capital Management Subcommittee was established early in 1979 to oversee and guide the development of the strategy for capital evaluation. Representation on the committee was from Program Support, Engineering and Architecture and Program Evaluation (see Appendix 1).

A Progress Report on the development of an Evaluation Strategy was prepared by the Program Evaluation Branch using readily available information by June, 1979. The Report:

1. describes the resource inputs to, and physical outputs resulting from, capital expenditures;
2. traces historically the authorizing mandates and policy directives guiding the delivery of program components, and
3. identifies capital planning processes and issues and priority evaluation areas.

The Report also attempts to outline the objectives for the various capital program components described in the documents such as T.B. submissions and approvals.

In July 1979, the Report, along with a survey questionnaire, was sent by the Capital Management Committee to headquarters and regional officials concerned with the capital program for review and feedback. The purpose was to receive the views of a cross-section of staff involved in the capital program (program managers, engineers, financial people and planners) on evaluation priorities using a matrix consisting of:

1. program components on one axis (housing, water and sewer, roads and bridges, electrification, Federal Band schools, Joint Schools and community buildings), and
2. functions on the other axis (meeting objectives, job creation, delivery, maintenance, user satisfaction, standards and program planning).

For each square in the matrix the respondent was to identify whether there was an immediate requirement or whether work should be undertaken in 1980-81, 1981-82, some future date or none at all.

Twenty-five detailed responses were received from headquarters and seven regions. Subsequently, consultations were held with some of the respondents in the Ontario, Manitoba, Alberta and British Columbia Regions to further discuss priority evaluation issues (see Appendix 2 for survey participants).

### SURVEY RESULTS

A Report was prepared on the survey results, summarized for the purposes of this paper. As shown on Chart 2 immediately following, three functions and three program components are identified by the survey for priority investigation and evaluation.



## CHART II

### Summary of SURVEY RESULTS

Shaded areas indicate eleven or more responses calling for immediate work or for work to be done in 1980-81. Eleven responses constitute 44% of the 25 respondents. Consequently, the chart shows that 44% or more of the respondents consider the shaded areas important for immediate or high priority evaluation.

Focus for Evaluation	On-Reserve Housing	Water and Sewer	Roads and Bridges	Electrifi- cation	Federal/Band Schools	Joint Schools	Community Buildings
Meeting Objectives	Shaded	Shaded		Shaded	Shaded	Shaded	
Skill Training	Shaded						
Job Creation							
Band Delivery	Shaded						
DPW Delivery							
DINA Delivery							
Joint Fed/Band Delivery							
Amount of Maintenance	Shaded	Shaded			Shaded		
Quality of Maintenance	Shaded	Shaded			Shaded		
User Satisfaction	Shaded			Shaded			
Materials Used	Shaded						
Design Standards		Shaded					
Allocation of \$'s	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
Planning	Shaded	Shaded	Shaded		Shaded	Shaded	Shaded
Approval process	Shaded				Shaded	Shaded	Shaded



### Functions

1. Capital program planning process (allocation of dollars, the program planning approval process and community planning),
2. meeting of objectives;
3. maintenance;

### Program Components

4. Housing;
5. water and sewer, and
6. Federal Band schools

#### 1. Capital Program Planning Process

The capital program planning process, the top priority for evaluation identified by the questionnaire as well as the consultations, commences with proposals to include specific capital works in the Program Forecast and ends when a set of capital works is approved by all necessary authorities. The process stops before delivery begins. There are a number of reasons for this item being accorded such a high priority:

- (a) The allocation of dollars to Regions and to Bands within the Regions raises a number of issues. Should it be based on a per capita allocation? On need? On the resources available to the different Bands? "Worst" first? On past performance of Bands in delivery? Or possibly based on federal priorities for housing? One or a combination of these methods is used at headquarters and in the regions. Is there a preferred way to allocate funds to Bands? Would there be a benefit in using a preferred method in all of the Regions and between Regions? For housing and infrastructure projects the per capita allocations may be equitable because most reserves need more physical improvements than funds are available for construction. For schools, however, the demographic profile of the student population would appear to require specific sums each year.
- (b) The program planning approval process has been considered by some to be unnecessarily long, cumbersome, rigid and the paper work onerous. In some regions Capital Management Committees coordinate program planning; are these committees desirable and effective? Should such committees be used in all of the Regions? There also seems to be a clear-cut conflict in procedures in those Regions where funds are allocated on a per capita basis leaving the initiative for Bands to decide on capital needs while at the same time attempting to satisfy Treasury Board requirements for identifying proposed projects for approval and funding.
- (c) Community planning has been suggested as the proper basis for a capital program. Such planning should be done by Indian and Inuit people. Band controlled community planning is increasingly being



viewed as an essential element in the determination of both the requirement for capital needs at the community level as well as determining how capital resources will be deployed within communities.

A number of Indian communities in each of the regions have either prepared their own community plans or had plans prepared for them during the past ten or fifteen years. More recently, there have been a number of excellent examples of community planning processes initiated by the Band themselves and yet in numerous instances, the recommendations of these plans have not been incorporated into the IIA capital and O&M expenditure plans.

There can be little hope that Indian communities will continue to have an interest in planning unless it can be shown conclusively that attempts to undertake community planning will in fact be met with the possibility of implementation.

## 2. Meeting of Objectives

The meeting of objectives is a complex subject in that respondents discussed numerous program objectives and a variety of measures for their achievement.

- (a) Do we agree on objectives? Capital works have frequently been proposed to serve multiple and often conflicting objectives. Should capital works be used for job creation, skill training, the assumption of local government functions as well as serving program needs? And to what extent should economy in program delivery be traded off against social objectives? Stating objectives with some precision is also important, otherwise measurement is impossible. Many current objectives for capital programs are loosely stated.
- (b) Do we know when we achieve an objective? Can we measure achievements? What factors do we use to measure the achievement of objectives: satisfaction of user groups; conformance to material and space standards specified by IIA; the achievement of the capital program within the estimated time and budget? Do we have any information on achievement? For example, many Regions do not fully monitor housing construction resulting in a dearth of information on output.

## 3. Maintenance

Maintenance is a vital factor in achieving objectives, especially when a longer time frame is considered. Housing construction may achieve annual numerical targets, but if the units are not maintained, premature replacement may be necessary, raising questions about the cost effectiveness of the program. Maintenance is probably the one most important function to consider with regard to school construction; the responses indicated that the lack of funds for maintenance is achieving critical proportions.



#### 4. Housing

Housing appears to be a most controversial program in terms of:

- (a) basis for calculating subsidy;
- (b) assemblage and coordination of funding packages;
- (c) operation and maintenance of housing;
- (d) monitoring of construction relative to standards and materials;
- (e) the current shortage of housing and condition of existing inventory, and
- (f) limited funds available for housing.

Charging user or rental fees has been mentioned with obvious implications for social assistance funds. The increased use of CMHC low-interest mortgages is still another area for investigation.

#### 5. Water and Sewer

Water and sewer systems construction is a priority area for review according to the surveyed IIA officials, maintenance, planning and meeting of objectives were mentioned as areas for examination. Water and sewer construction also relates to high profile health problems.

#### 6. Federal Band Schools

The construction of schools serves the Education Activity and the adequacy of funds for school construction has been questioned in merely keeping up with needs. Delivery is a related issue when the range of methods from DPW to Band delivery are considered. Finally, current standards and their appropriateness to Indian schools has been suggested for review.

### RECOMMENDED STRATEGY FOR EVALUATION

The Capital Management Committee, on the advice of the Subcommittee for Evaluation, recommends the following six prioritized areas for various evaluation studies to be undertaken during the next two to three years:

1. capital program planning;
2. Federal Band Schools;
3. water and sewer;
4. Joint Schools;
5. housing, and
6. maintenance.

The changes from priorities established by the survey are the result of:

1. meeting objectives is treated on a component by component basis;
2. housing and maintenance evaluations will await the completion of ongoing work by Program Support and Engineering and Architecture respectively, and



3. Joint Schools is a priority item for evaluation primarily in terms of master agreements and standards.

In the following, a brief description of the six priority evaluation tasks is presented.

1. Capital Program Planning Review

Evaluation should focus on clarifying roles and responsibilities in capital program planning and thereby assist program managers. Starting in one region as a pilot, an operational review should be made of the Capital Program Planning process which includes, amongst other items:

- (a) how capital projects get into the capital program;
- (b) the role and success of community planning in getting projects into the capital program;
- (c) what allocation formulas are used;
- (d) who is responsible for what particular function, and
- (e) are there any overlaps/conflicts, troublesome areas in program planning.

Such a review will be of benefit to program managers in the program planning process. It is also an area identified by the Capital Management Committee for further development. Whether all regions need a program planning review will be determined after the completion of such a review in one region.

2. Federal Band Schools

An evaluation of the Federal/Band School program should be undertaken to focus on:

- (a) meeting physical and social objectives;
- (b) delivery mechanisms;
- (c) control procedures, and
- (d) availability and adequacy of standards.

3. Water and Sewer

An evaluation should be undertaken with focus on:

- (a) delivery mechanisms;
- (b) control procedures, and
- (c) achievement of objectives other than the narrowly defined construction of water systems and sewerage (e.g., job creation, reduction in the incidence of health problems related to sanitation and so forth).

4. Joint Schools

A thorough review of the operation of Joint Schools is required primarily in terms of master agreements and standards.



5. Housing

A review of the Housing Program is underway at Headquarters. Current issues in program design and delivery are being investigated by Program Support with the purpose of improving the effectiveness of the program. Evaluation will take place subsequent to completion of work under way.

6. Maintenance

Maintenance of capital works is a priority for evaluation. The maintenance activities of the IIA program are being examined as part of the Maintenance Management System development by the Engineering and Architecture Branch with pilot projects.

The Program Evaluation Branch will, of course, respond to urgent needs for the evaluation of capital concerns in areas other than those above.

The evaluation process would follow the usual procedure established by the Program Evaluation Branch: Steering Groups for specific evaluations would be established with representation from all affected parties--Bands, the Associations, and regional and headquarters staffs. Terms of Reference and the selection of outside consultants to carry through with evaluation studies would be the task of the Steering Groups, as well as the guiding of the project to completion.



APPENDIX 1

Members of Headquarters  
Capital Management Subcommittee  
on the Development of Strategy  
for Capital Program Evaluation

Peter Fillipoff	- Program Evaluation, Chairperson
Gerry Berigan	- Engineering and Architecture
Bill Clevette	- Engineering and Architecture/Program Support
Andy Greiner	- Program Evaluation, Project Manager
Nancy Mitchell	- Program Support
Toru Uno	- Program Evaluation



APPENDIX 2

Survey Respondents,  
\* indicates consultations as well

British Columbia Region

- \* Jan Van de Voort,  
Housing and Community Facilities
- \* Vic Janzen,  
Education
- G.A. Burrett,  
Williams Lake District
- Gerry Watt,  
Vancouver District

Alberta Region

- \* Duncan Marshall  
Long Range Planning and Liaison
- \* Mike Kartushyn  
Community Infrastructure
- \* Bob Pinney  
Education

Saskatchewan Region

Rabi Alam,  
Planning

Bill Reese  
Capital Program

Manitoba Region

- \* Betty Nowicki,  
Planning
- \* Bob Holloway,  
Engineering and Architecture
- \* Brian Eardley  
Local Government
- \* John Bogacki  
Education

Ontario Region

- Ian Howes,  
Peterborough District
- \* Bhoo Agarwal,  
Planning
  - \* Vern Robinson  
Community Improvement
  - \* Bill Garand,  
Local Government
  - \* Gary Maxwell,  
Education

Quebec Region

Yves LeClerc,  
Planning

Atlantic Region

Charles Gorman,  
Education

J.W. Touchie,  
Local Government

Headquarters

Henry Rogers,  
Social Development

Paul Bisson,  
Education

Bill Clevette,  
Community Infrastructure/E&A

J.H. McMorro  
Management Consulting Service