

Strategic Projects Assessment Framework

Final Report

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I. Preface

In fulfillment of its new mandate, the Government of Yukon's Department of Economic Development is working to implement a new economic strategy for the Yukon. A key facet of the strategy, as described in *A New Direction: Building a Sustainable Yukon Economy*, is the encouragement and support of strategic projects. As outlined in *A New Direction*, strategic projects are those that:

*"...hold strategic importance to economic development; that is, they not only have potential to provide an immediate economic stimulus, they also have potential for secondary benefits. These downstream benefits may include purchases of local goods and services, opening up new export markets, or creating an "icon" that will attract further investment. They include public and private sector as well as joint initiatives. They are typically projects with potential for significant economic or regional benefits."*¹

The Government of Yukon desires that the encouragement and support of strategic projects be undertaken in a wise manner. Specifically, projects selected for assistance must demonstrate a) a valid and viable role for government and b) that positive long-term economic benefits are a reasonable expectation of the project. Accordingly, the purpose of this project is to develop a project assessment framework which will assist Department of Economic Development officials with the objective identification and assessment of potential strategic projects.

The primary methodology used in the preparation of this paper was a review and synthesis of relevant theoretical and administrative resource materials. The use of direct assistance in the form of grants and subsidies by governments in Canada has become much less prevalent in the last decade. As a result, much of the material reviewed was sourced from organizations which focus on economic development in less-developed countries including the World Bank, the Asia Development Bank and the European Bank for Reconstruction and Development. Canadian sources of review material included the Department of Indian Affairs and Northern Development and the Treasury Board of Canada.

2. Background and Principles

Governments which enjoy an extensive range of delegated powers, such as the Government of Yukon, may encourage and support economic development activities in a variety of ways. Instruments such as grants, contributions, loans, purchase guarantees, loan guarantees, tax measures, equity or quasi-equity stakes have all been used by governments in Canada. As the approach to the objective identification and assessment

¹ *A New Direction: Building a Sustainable and Competitive Yukon Economy*, Yukon Economic Development, January 2004, page 15.

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of potential strategic projects will vary with the type of funding instrument, the analysis which follows relies on three simplifying assumptions about the type of instrument that will be used. First, all strategic project investments are assumed to be in the form of equity contributions which confer no right of ownership on the Government of Yukon. Second, contributions are further assumed to be non-repayable to the extent that the performance conditions stipulated in the contribution agreement are fulfilled.

A third assumption of the analysis is that the Government of Yukon will consider equity participation in a project only where it can be shown that all other potential sources of funding have been considered. Project applications must also demonstrate that the maximum possible amount of funding from those sources has been secured. Thus, the Department of Economic Development is a funder of last resort for strategic projects.

To ensure that strategic projects be encouraged and supported in a wise manner, the following principles underlie the design of the project assessment framework:

- Government of Yukon funding assistance must maintain level playing fields for Yukon businesses;
- Government of Yukon funding shall not foster unfair competition within the Yukon business community;
- Financial risk must be shared between funding proponents and the Government of Yukon; and
- All funding assistance provided by the Government of Yukon must be designed to provide long-term benefits to the Yukon economy.

3. Project Assessment Framework

The project assessment framework has been designed to facilitate the objective identification and assessment of potential strategic projects with a degree of rigour that will allow it to be used as a Management Board decision document. The proposed framework consists of four parts. Each part is described in general terms in Table 1 and the assessment criteria specific to each part are outlined in detail further below.

Element	Description
A. Role for government	a demonstration of market failure in a strategic sector that justifies government intervention in the economy via project funding
B. Financial analysis	assessment of the financial viability of the project
C. Economic analysis	assessment of the economic viability of the project
D. Monitoring & evaluation	a demonstration that the proponent is aware and in agreement with the requirements for monitoring and evaluation which must necessarily accompany the financial assistance

A. Role for Government

It is a basic tenet of welfare economics that perfectly functioning competitive markets require no government intervention to improve economic efficiency. No action by government can improve on the free-market result. In such a world, all questions of economic efficiency would be answered by the free market and governments would need to concern themselves only with matters of equity. Alas, in the real world, not all markets are perfectly competitive nor perfectly functioning. Furthermore, examples of market failure are more likely to be found in small frontier economies like the Yukon's than in larger, more developed economies.

Market failure, and the corresponding rationale for government intervention to improve economic efficiency, presents itself in a variety of guises including natural monopolies, public goods, externalities and incomplete markets. Each is discussed in turn below.

Natural monopolies

In some markets, a single firm can supply the entire market while operating within a cost structure where the average cost of additional supply is declining. In consequence, potential competitors cannot supply the market at a lower price on a sustained basis than the firm already in the market and, as a result, face a barrier to entry into the market. Such a situation is termed a natural monopoly. With their corresponding market power, natural monopolies will set prices at levels which maximize their profits. In consequence, a smaller quantity is supplied into the market and consumers face a higher price than if the market was competitive – an inefficient result. Governments can intervene to improve market efficiency through some form of market regulation.

Public goods

All goods feature two properties. The first property is excludability. If a good is excludable, one person can exclude another person from using it. Conversely, if a good is non-excludable, people cannot be excluded from using it. The second property is rivalry. If a good is rival one person's use of the good diminishes other people's use of the good.

Goods that are excludable and rival are termed private goods. For example, if Sam buys a chocolate bar he can exclude others from using it by not sharing it. And once Sam has eaten the chocolate bar his use of it has certainly diminished others use of it. Thus, a chocolate bar, being both excludable and rival, is a private good. Private goods are abundantly common.

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Public goods, conversely, are both non-excludable and non-rival. For example, use of the Robert Campbell bridge on the Yukon River is non-excludable as all are free to use it as often as they wish. The bridge is non-rival since a crossing of the bridge by one individual does not preclude use of it by another. Because the bridge is non-excludable and non-rival there is little incentive for a single individual or firm to supply the bridge. However, since many individuals can benefit from the bridge once it is built, there is a valid role for government to use tax revenues collected from the same individuals who will benefit from use of the bridge to construct the bridge. True public goods are relatively rare.

Externalities

Externalities are created when an activity undertaken by an individual has an impact on the well-being of a bystander. If the impact of the activity is beneficial, the activity is said to create a positive externality. In contrast, if the activity has a negative impact, it is said to create a negative externality.

Governments use a variety of measures including regulation, taxes, subsidies and patents to encourage the production of positive externalities and to restrict the production of negative externalities. In the context of economic development, a valid role for government to intervene in an economy can exist when a project is expected to exhibit positive externalities. Partial funding of the project can encourage an increase in supply of the good in question and a corresponding increase in the volume of the positive externality created.

Incomplete markets

In a graphical sense, markets are incomplete when the demand and supply schedules for a particular good do not result in a demand and supply curves which cross. Since it takes two to tango in any market, the consequence of demand and supply curves which do not cross is a failed transaction – no quantity of the good is supplied into the market. When supply of the good in question is determined to serve the public interest, a valid role for government may exist to cause a shift in one or both of the demand and supply curves so that the market becomes complete.

For example, if the risk premium associated with a project is considered too high to attract the interest of private capital providers, governments may intervene to lower the risk premium (causing a downward shift in the capital supply curve). Alternatively, the expansion or creation of one market may require the encouragement of a complementary market. To give a Yukon example, the development of a high-end adventure tourism market has been aided by the financial support provided to Air North by the federal government.

Targeting factors

In addition to the identification of a market failure, a precondition to government intervention is that the market failure occur within one of the seven strategic sectors identified by Yukon Economic Development in *A New Direction*:

- . Mining
- . Oil and gas
- . Forestry
- . Tourism
- . Information technology
- . Culture and arts
- . Construction

The encouragement and support of strategic projects in a wise manner also requires that assistance only be provided by the Government of Yukon where it can be demonstrated that:

- . the purpose and intent of the project is clearly within the general public interest;
- . providing financial assistance would not be contrary to existing commitments and policies of the Government of Yukon; and
- . the support for a project does not fall within the mandate of another government.

B. Business Case

To ensure that it is providing assistance to businesses in a wise manner, the Government of Yukon must be satisfied that the proposed project is financially viable on the basis of a well-developed and specific business case. In addition to demonstrating a favourable internal rate of return (IRR), the business case must speak to several factors, both quantitative and qualitative, related to financial viability. The factors fall into six categories: identification, financial, management, market, accounting and regulatory.

Identification

- | | | |
|---------------------|---|--|
| Ownership & control | ○ | legal structure of the project (e.g., corporation, First Nation development corporation, partnership, proprietorship, trust company) |
| Products/services | ○ | the products and services to be produced by the project (at commencement of operations and over the first five years of operations) |
| Timing | ○ | major project milestones (project development begins/ends, construction begins/ends, commencement of operations) |

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Identification (continued)

- Partners ○ degree of financial participation by private financiers and by other governments (First Nation, federal, municipal, other Government of Yukon Departments)
- Location ○ physical location of the project and description of the land owner
- Strategic interest ○ an assessment of how important the project is to the proponent's overall business operations

Financial

- Internal rate of return ○ estimate of the internal rate of return for the project
- Financial ratios ○ on the basis of pro forma financial statements, a calculation of the relevant financial ratios related to profitability, liquidity and equity
- Breakeven analysis ○ a determination of the minimum project output and associated revenue required to cover a) fixed costs and b) variable costs on a quarterly and annual basis
- Risk premium ○ a demonstration of the risk premium associated with the project and an estimation of the difference between the premium and the appetite for risk in the private capital market
- "Tail in the door" ○ estimation of the share of at-risk financial capital being contributed by the project proponent and each of the partners listed in the identification section above
- Third-party review ○ confirmation of financial viability of the project via an independent valuation of the project by a qualified third party
- Disclosure note review ○ an assessment of the reasonableness of all assumptions made in the disclosure notes which accompany the pro forma financial statements for the project
- Technical assessment ○ an assessment of whether the project involves a) *bona fide* innovation, b) an adaptation of a proven technology or c) alchemy
- Credit terms ○ a description of the credit terms to be made available to customers and expected to be received from suppliers

Management

- Key personnel ○ on the basis of a description of roles and responsibilities of key project personnel plus their a) credentials, b) track record, c) level of time commitment to the project and d) terms of employment, an assessment of whether the key project personnel are capable of successfully undertaking the project
- External services ○ an explanation of the roles and responsibilities of external service providers (e.g., lawyers, engineers, architects, marketing consultants, other consultants, etc.)
- Training and recruitment ○ confirmation that training and recruitment plans are in place that will perpetuate the integrity of the management structure

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Market

- Market demand ○ estimated value of demand from a) the existing customer base and b) the potential customer base including a discussion of the assumptions on which projected sales levels have been based
- Seasonal impacts ○ expected impact of seasonal factors on the value of quarterly and annual demand
- Long-term demand ○ an assessment of the long-term demand prospects for each of the project's products and services
- Major competitors ○ an analysis of anticipated major competitors covering their a) strengths, b) weaknesses and c) probable response to increased competition
- Additional market entrants ○ a description of the anticipated impacts of an additional entrant to the same or similar market on a) the proponent's market share and b) the financial viability of the project
- Pricing ○ a description of the proposed pricing structure for the major products and services supplied by the proponent and the intended impact of the pricing structure on potential market share
- Market share ○ an estimate of the anticipated market share of the proponent and each of the principal competitors at annual intervals for next five years
- Marketing materials ○ an assessment of the reasonableness and quality of the marketing plan and collateral marketing materials

Accounting

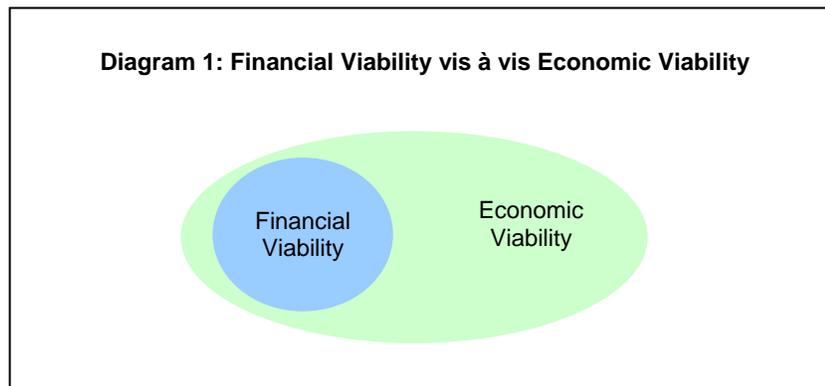
- Accounting systems ○ describe the accounting systems to be implemented to ensure the financial integrity of the project and identify the level of financial statement review to be undertaken annually
- Accounting team ○ indicate the name and qualifications of the project's financial accounting team
- Management services ○ describe the nature of any management services to be provided by the accounting team and the degree of financial control to be granted to external service providers

Regulatory

- Permit identification ○ identification of all permits that will be required broken out according to the project development, construction and operations phases of the project
- Permit timing ○ an assessment of the amount of time required to obtain each of the required permits
- Permit costs ○ an estimate of the costs associated with obtaining each of the permits

C. Economic Analysis

An economic analysis of a project considers a much broader set of factors than is the case for a financial analysis of a project (Diagram 1). Whereas the financial analysis of a project estimates the profit accruing to the project proponent, an economic analysis attempts to measure the effect of the project on an economy.² Thus, financial analysis seeks to ascertain the private returns associated with a project while economic analysis is intended to describe the social returns of a project, or the economic rate of return (ERR). “For a project to be economically viable, it must be financially sustainable, as well as economically efficient. If a project is not financially sustainable, economic benefits will not be realized.”³



A variety of factors can be used to assess the economic viability of a project. The factors fall into six categories: consumer effects, labour market effects, complementary demand, crowding out, community effects and public policy considerations. Each of the factors are described in turn below.

Consumer effects

- Consumer choice ○ assessment of whether Yukoners will benefit from improved consumption choices as a result of the project
- Consumer prices ○ assessment of whether Yukoners will face improved prices as a result of the project (i.e., increased consumer surplus)

Labour market

- Number of jobs ○ calculation of labour market demand created by the project (i.e. number of jobs) during the construction and operations phases of the project
- Labour income ○ calculation of labour income associated with increased employment during the construction and operations phases of the project
- Labour availability ○ determination of the skill set required by the project and an assessment of labour availability

² Adapted from *Guidelines for the Economic Analysis of Projects*, Asia Development Bank, 2003, page 8.

³ *Guidelines for the Economic Analysis of Projects*, Asia Development Bank, 2003, page 8.

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Labour Market (continued)

- Training opportunities ○ scope and scale of opportunities for individuals to increase human capital through training opportunities provided by the project
- Labour leakage ○ assessment of the degree to which labour needed during the construction and operations phases of the project will be sourced from outside the Yukon

Complementary demand

- Forward linkages ○ assessment of whether the project will result in the supply of complementary goods and services (i.e., spin-off businesses)
- Backward linkages ○ assessment of project impacts on existing suppliers of goods and services used as input in the production of the project's products and services
- Input supply leakage ○ assessment of the degree to which inputs needed during the construction and operations phases will be sourced from outside the Yukon
- Additional public investment ○ whether the information provided by the proponents suggest a need for complementary investments by the public sector in related projects

Crowding out

- Labour market ○ assessment of whether the project will result in crowding out in the labour market (i.e., whether wage differentials will cause other businesses to face labour shortages)
- Existing businesses ○ identification of similar businesses operating within the Yukon and a determination of whether any will be adversely affected by Government of Yukon assistance to the project proponent

Community effects

- Profit taxes ○ a calculation of the value of profit taxes expected to accrue to territorial, First Nation and federal governments as a result of the project
- Income taxes ○ a calculation of the value of taxes on labour income expected to accrue to territorial, First Nation and federal governments as a result of the project
- Other taxes ○ a calculation of the value of other taxes (e.g., sales, commodity, excise) expected to accrue to territorial, First Nation and federal governments as a result of the project
- Positive externalities ○ identification and description of any potential positive externalities associated with the project (e.g., expanded markets, new or improved infrastructure, demonstration effects, network effects)
- Negative externalities ○ identification and description of any potential negative externalities associated with the project (e.g., adverse environmental effects, adverse social pressures, pressure on cultural assets, increased land prices, overuse of existing public infrastructure)
- First Nation participation ○ a description of the scope and degree of First Nations participation in the project

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Community effects (continued)

- Desirability analysis ○ an evaluation of community support (or opposition) for the proposed project
- Exit strategy ○ a description of the Government of Yukon's exit strategy for the project, under both successful and unsuccessful scenarios
- Protectionism ○ determination of whether any provisions of the Agreement on Internal Trade are triggered by any aspects of Government of Yukon assistance to the proposed project

Public policy

- Value for money analysis ○ to an appropriate level of detail, an economic analysis of the project in the form of cost-benefit analysis (both inputs and outputs measured in monetary terms) or cost-effectiveness analysis (inputs measured in monetary terms and outcomes measured in non-monetary quantitative terms)
- Project alternatives ○ confirmation that alternatives to the proposed project have been considered by the Government of Yukon to ensure that more appropriate and/or cost-effective approaches to achieving the same economic development objectives have not been overlooked
- With-and-without analysis ○ an assessment of whether the project will provide incremental net gains to the regional economy or whether it will substitute for goods and services that would have been provided anyway
- Risk assessment ○ an identification of the various types of risk associated with the project (e.g., financial, public policy, environmental) and an assessment of how each of the risks are distributed amongst the proponent and financial partners
- Project stacking analysis ○ whether the share of total public sector project financing relative to total private sector financing corresponds to the strength of the role for government identified in the 'role for government' section
- Sector stacking analysis ○ an aggregation of the total amount of Government of Yukon assistance already provided to the strategic sector in question, whether directly or indirectly
- Relative funding level ○ a determination of the size of funding requested by the proponent relative to other projects funded under the same program
- Government as consumer ○ a determination of the extent to which the Government of Yukon will be a consumer of the project's products and services
- Last-resort confirmation ○ confirmation that the project proponent has exhausted all other possible sources of project financing
- Winners and losers ○ an identification of segments of the community a) likely to benefit from a project and b) likely to be worse off as a result of the project

D. Monitoring and Evaluation

Intervention in the Yukon economy by government must be justified by a reasonable expectation of long-term economic benefits in the form of business expansion and employment creation. In consequence, the project assessment must demonstrate (in addition to a valid role for government, financial viability and economic viability) that the proponent is aware and in agreement with the requirements for monitoring and evaluation which must necessarily accompany financial assistance provided by the Government of Yukon.

Funding terms

- Performance conditions ○ certification of understanding by the project proponent that contributions are non-repayable only to the extent that the performance conditions outlined in the contribution agreement are satisfied
- Specified purposes only ○ confirmation of understanding by the project proponent that assistance provided by the Government of Yukon may only be used for purposes as outlined in the contribution agreement
- Dispute resolution ○ demonstration of mutual agreement between the Government of Yukon and the project proponent on the type and timing of dispute resolution mechanisms (e.g., discussion, mediation, arbitration, litigation) to be invoked in the event of disagreement concerning the performance conditions outlined in the contribution agreement

Performance reporting

- Outcomes and outputs ○ in cooperation with the project proponent, identification of the project outputs and outcomes
- Employment creation ○ confirmation that the proponent agrees to report on the number of hours of employment created and the associated labour income on a quarterly basis (reporting of same by the Government of Yukon will acknowledge the relative contribution of other funding partners)
- Revenue generation ○ confirmation that the proponent agrees to report on a measure of the revenues generated by the project on a quarterly basis (reporting of same by the Government of Yukon will acknowledge the relative contribution of other funding partners)
- Project evaluation participation ○ demonstration of agreement by the proponent to participate in any reviews, evaluations, impact assessments or quality assurance undertakings within seven years from the first receipt of funding

Financial reporting

- Financial statement review ○ demonstration of agreement by the proponent that the results of the annual review or audit of project financial statements must be provided to the Government of Yukon on a regular and timely basis

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