

STUART MACKAY

President



- ▶ President, MMK Consulting (2001-present)
- ▶ KPMG Consulting and predecessor firms (1980-2001)
 - Leader BC Consulting (1999-2001)
 - Partner-in-Charge, BC Planning and Economics Practice (1991-2001)
 - Founder of International KPMG Business Cost Comparison “*Competitive Alternatives*” (1994-2006)
 - Director of more than 200 consulting projects, ranging in size from \$5,000 to \$1.5 million
- ▶ Transportation research and planning (1977-80)
 - BC Government (1978-80)
 - University of BC (1977-78)
- ▶ M. Phil. (Management), Oxford (1977)
 - Economics of Industry
 - Transportation Policy and Planning
- ▶ B. Commerce, University of British Columbia, Hons. (1975)
 - Transportation and Utilities

Key areas of Practice

Financial Analysis/ Business Strategy	Tourism and Hospitality
Performance Measurement and Improvement	Private-Public Partnerships
Site Location Analysis	Healthcare Economics
Market Research and Analysis	Public Policy
Transportation and Logistics	Program Evaluation

Examples of Relevant Assignments

Strategic and Business Planning

- ▶ **Strategic Planning: Major Consumer Electronics Retailer.** Assisted one of Canada’s largest Consumer Electronics firms in developing a strategic plan for 2003/04, including identifying and setting priorities for strategic initiatives over the next 24 months and beyond.
- ▶ **Service Expansion: Financial Institution** — On behalf of a B.C. credit union, directed an assignment to develop a strategy for expanding the range of wealth management services. The scope of the assignment included prioritizing strategic initiatives, determining the preferred partner relationships, and evaluating potential business partners.
- ▶ **Strategic Business Plan: Breakbulk Marine Carrier** — On behalf of a marine carrier providing breakbulk service between Canada and Japan, developed a strategic business plan based on current and projected future markets for lumber, pulp, and other breakbulk cargo.



- ▶ **Business Plan: Major International Airport** — On behalf of the Vancouver International Airport Authority, developed a comprehensive business plan to assume operating responsibility for Vancouver International Airport, including construction of more than \$200 million in runway and terminal improvements. This plan was successfully presented to Transport Canada and a major Canadian bank, leading to a transfer in airport operating authority to the new agency.
- ▶ **Business Acquisition: Food Industry** — On behalf of a Western Canadian food processor, directed the development of a strategic business plan to acquire another significant processor. The assignment included an examination of market research, development of a combined-firm operating model, analysis of financing option, and development of the market and financial projections.
- ▶ **Organizational Restructuring: Crown Corporation** — On behalf of a large British Columbia crown corporation, performed a comprehensive review of the organizational structure at senior management levels. Conducted interviews with senior management, developed the revised organizational structure, and assessed candidates for the new positions.

Private-Public Sector Partnerships

- ▶ **Private-Public Program Design: Transportation Infrastructure** — Assisted the BC Government and the Greater Vancouver Transportation Authority in the design of a program to provide approximately \$3 billion in road and bridge infrastructure, using private-public partnerships.
- ▶ **Private-Public Partnership: Container terminal** — On behalf of a large BC-based marine terminal operator, performed a pre-feasibility study for a \$360 million containerport terminal to be financed through a variety of public and private sector resources. Coordinated the technical site planning and market assessments, and estimated the cashflow potential and risks for both the public and private sector partners, under alternate financing assumptions.
- ▶ **Program Design: Highways Maintenance Contracting** — On behalf of the B.C. Government, developed a methodology for requesting, receiving, and evaluating highways maintenance contracting proposals from private contractors. The methodology has been applied in three separate rounds of contracting, involving contracts totalling more than \$1 billion.
- ▶ **Contract Negotiation: Major Highways Contracts** — On behalf of the B.C. Ministry of Transportation and Highways, negotiated the terms and conditions of highways maintenance contracts in British Columbia. Negotiated ten major contracts with a total value of \$250 million.

- ▶ **Program Review: Highway Maintenance Privatization** — Assisted the B.C. Ministry of Transportation and Highways in developing a comprehensive document reviewing the contracting of highways maintenance services in British Columbia. The Ministry's report included a description of the B.C. Ministry of Transportation & Highways, a discussion of the privatization process, an assessment of the impact on various stakeholders, and future options and transition requirements.

Site Location Analysis

- ▶ **“Competitive Alternatives: Published Comparisons of International Business Costs** — Founder and Executive Director of seven published comparisons (1996 to 2008) of relative business costs in developed countries. The 2006 edition of the “Competitive Alternatives” covered 17 industries, nine countries and 128 cities. Has also presented the findings at more than 60 business seminars throughout North America, Europe, Japan and Australia, and has performed many expert interviews for television, radio, and print media.
- ▶ **Site Relocation Analysis: Beverages Firm** — On behalf of a large North American producer/importer of alcoholic beverages, evaluated the financial potential of a proposed relocation of three company divisions (quality control, treasury, telephone support) to lower-cost North American jurisdictions.
- ▶ **Site Location Analysis: Major Computer Chip Fabricating Facility** — Directed a detailed pre-feasibility analysis of locating a \$1.3 billion computer chip manufacturing facility in several likely North American jurisdictions.
- ▶ **Site Relocation Analysis: Small Manufacturer** — On behalf of a British Columbia-based firm with California manufacturing operations, directed an assignment to analyze the relative cost-attractiveness of a number of potential California and British Columbia relocation sites.
- ▶ **Comparative Cost Analysis of Atlantic Canada and the Eastern U.S.** — On behalf of the Atlantic Canada Opportunities Agency, directed a comparison of business costs and other factors for 22 Atlantic Canada and comparable U.S. jurisdictions. The results were published and presented to the media at a press conference, and the study has received considerable publicity.
- ▶ **Site Location Studies: Municipal Agencies** — On behalf of a number of Canadian municipalities, has directed several assignments to examine site-specific comparative factors influencing private firms' site location decisions.

Economics and Planning

- ▶ **Competitiveness Indicators: Economic Benchmarking** —Directed a detailed analysis of a provincial government's competitive position in attracting business investment and encouraging economic development, relative to six competing state and provincial jurisdictions. More than 50 key indicators were identified and benchmarked.
- ▶ **Market-based Cost Escalation Trends: Highways Construction** —Recently completed a project to review North American cost escalation trends, and their impact on market rates and tendered contract prices. The study examined market trends 2003-2005, and the outlook to 2008. Factors examined include labour, fuel, material (steel, concrete, etc.) and other cost factors.
- ▶ **Market-based Cost Escalation Trends: Highways Construction** —Recently completed a project to review North American cost escalation trends, and their impact on market rates and tendered contract prices. The study examined market trends 2003-2005, and the outlook to 2008. Factors examined include labour, fuel, material (steel, concrete, etc.) and other cost factors.
- ▶ **Construction Cost Escalation Trends:** — BC Hydro, UBC Renew and Translink (Evergreen Line)
- ▶ **Cost Analysis: Olympics Sports Facilities** — On behalf of the Organizing Committee for the 2010 Olympic Games, evaluated the impact of construction cost escalation on facilities costs.
- ▶ **Economic Impact Analysis: Mining** — Kemess Mine
- ▶ **Economic Impact Study** – BC salmon industry
- ▶ **Investor Perceptions: Business Investment Attraction** — Conducted a personal interview program of senior executives of corporations with significant invests in multiple North American jurisdictions. Investigated the decision-making site selection process for major investment decision, and the key factors which influence site evaluations and the ultimate investment decision.
- ▶ **Sectoral Competitiveness: BC Mining industry**
- ▶ **Fiscal Impact Study: District Municipality** — On behalf of the District of Squamish, evaluated the fiscal impact (revenues and costs) of the establishment of an accredited private University, including a risk assessment of alternate development scenarios.

- ▶ **Economic Impact Study: Healthcare industry** — On behalf of an alliance of medical research agencies and institutes, directed an assignment to measure the economic impacts (using input-output model analysis), commercialization opportunities, and socio-economic impact resulting from medical research activities in British Columbia.
- ▶ **Profile of the BC High-Tech industry** — On behalf of the BC Government, directed an assignment to profile the growth and current status of British Columbia's high technology industries, with particular focus on pharmaceutical and medical research.
- ▶ **State of the High Technology Sector in British Columbia** — On behalf of the BC Science Council, and under the direction and guidance of a multi-stakeholder advisory committee, directed an assignment to create a framework and develop performance measurement indicators to benchmark the BC high tech industry against other jurisdictions.
- ▶ **Taxation Study: Banking Industry** — On behalf of the Canadian Bankers Association, directed an analysis of the relative costs faced by the banking industry in Canada and the United States.
- ▶ **Review of CORE Report: East Kootenay Regional District** — Directed an assignment to review the reasonableness of the assumptions underlying the projected impacts of a proposed Land Use regulatory initiative to reduce the amount of land available for forest industry activities.
- ▶ **Consumption of Tax-supported Services: Major Municipality** — On behalf of the City of Vancouver, directed a detailed review of \$350 million in tax-supported City services, in terms of consumption patterns among residential, business, light industry, and other property classes. Identified and assessed the impact of tax policy options, in the context of the study results.
- ▶ **Future Taxation Costs under Alternate Growth Strategies: Municipal Government** — On behalf of the City of New Westminster, directed an assignment to forecast the cost impact of alternative Official Community Plan growth strategies, in terms of the future impacts on costs of each of the City's Departments.
- ▶ **Pricing/Costing Strategy: Canada Post** — Extensively involved in a project to address pricing and costing issues facing the Canada Post Corporation. Developed recommendations on pricing and marketing strategies, and assessed the implications for costing and management information systems.
- ▶ **Fiscal impact of a proposed healthcare facility on provincial agencies** — On behalf of UBC, we are currently reviewing the net fiscal impact (revenues and costs) of a proposed new public health clinic with an annual capacity of 50,000 patient visits, as they impact on a number of provincial agencies. Fiscal impacts are being assessed in terms of both clinical

services (direct costs of service, hospitalization costs avoided, etc.) and in terms of clinical research activities (provincially-supported research, grants attracted from other sources, etc.).

▶ **Financial Review of Recreational and Cultural Services: Municipal Government**

▶ **Financial Review of Vehicle & Equipment Fleet: Municipal Government**

Tourism and Hospitality

▶ **Cost Analysis: Olympics Sports Facilities** — On behalf of the Organizing Committee for the 2010 Olympic Games, evaluated the impact of construction cost escalation on facilities costs.

▶ **Pre-feasibility and economic impact study: Major Resort** — On behalf of a private consortium, directed a pre-feasibility study for a proposed \$800 million business and resort complex incorporating a convention centre, major hotel, restaurants, retail outlets, casino, and entertainment centres. The study included a review of market potential, employment impacts, economic impacts including taxation and other factors.

▶ **Position Paper: Casino Industry** — On behalf of the British Columbia Casino Management Council, developed a position paper on this \$50 million industry. Also performed a financial and economic review of the industry, and assisted the industry in developing and presenting to government its position on key legislative and regulatory issues.

▶ **Market/Financial Feasibility Review: Hotel Venture** — For a group of private investors, managed a project to review their market and financial projections for a proposed \$8 million hotel project. Evaluated the reasonableness of their projections in the context of market trends and hotel operating costs, and also provided follow-up advice concerning financing alternatives.

Healthcare Planning Economics

▶ **Cost Adjudication: Health Industry** — On behalf of a jointly-sponsored study by the B.C. Ministry of Health and the B.C. Medical Association, directed a major assignment to determine the costs to B.C. physicians of converting to a computerized system for Medical Services Plan billings. The assignment involved adjudicating costs of more than \$10 million, as well as recommending a compensation system for individual physicians.

▶ **Survey of Overhead Expenses: B.C. Physicians** — On behalf of the B.C. Medical Association, directed a comprehensive survey of physicians' office and professional expenses. The financial practice statements of 1,000 physicians were examined in detail,

classifying expenses by category. Separate expense measures were developed for thirty specialty areas. The results were used to establish fee schedules and for disability insurance purposes.

- ▶ **Manpower Training Requirements: Health Industry** — Participated in a major study evaluating manpower training requirements for health services in western Canada. This project forecast manpower requirements by occupational type, documented available training facilities and other sources of personnel, forecast future attrition rates, and assessed the resulting requirements for improved training facilities.
- ▶ **Impact of GST: Canadian Physicians** — On behalf of the Canadian Medical Association, directed an assignment to estimate the impact of the introduction of the Goods and Services Tax (net of Federal Sales Tax reductions) in all Canadian jurisdictions.
- ▶ **Fiscal impact of a proposed healthcare facility on provincial agencies** – On behalf of UBC, we are currently reviewing the net fiscal impact (revenues and costs) of a proposed new public health clinic with an annual capacity of 50,000 patient visits, as they impact on a number of provincial agencies. Fiscal impacts are being assessed in terms of both clinical services (direct costs of service, hospitalization costs avoided, etc.) and in terms of clinical research activities (provincially-supported research, grants attracted from other sources, etc.).

Rail Transportation

- ▶ **Rail Rate Structure Review: Forest Products Industry** — On behalf of the B.C. Council of Forest Industries, managed a major engagement to review the rate structure on lumber and plywood moving from B.C. origins to eastern Canadian destinations. The assignment analyzed cost and market factors in various originating regions, and assessed the potential of a rate structure differentiated by type of commodity and/or originating area.
- ▶ **Railway Movement Costing/Rate Negotiations: Mining Industry** — On behalf of a sizable mining corporation, analyzed rail carriers' costs on their major concentrate haul. Provided counsel during concurrent rate negotiations with the carrier.
- ▶ **Railway Losses Analysis: Mining Industry** — On behalf of a major mining corporation, analyzed the unavoidable losses resulting to its rail carrier as a result of the mine's failure to deliver contracted tonnages for shipment. Provided strategic advice to the law firm preparing to argue a lawsuit on the amount of damages. This assistance contributed to an out-of-court settlement.
- ▶ **Railway Traffic: Computer Modelling/Forecasting** — Participated extensively in a computer analysis of the B.C. Railway's future financial performance under alternative corporate strategies. This report was submitted to the B.C. Railway Royal Commission.

Marine Transportation

- ▶ **Analysis of Vessel Routing/Scheduling Options: Marine Breakbulk Carrier** — On behalf of a marine carrier providing service between Japan/Korea and the US/Canada West Coast, evaluated vessel routing/scheduling options in terms of costs, customer service impact, and impact on intermodal delivery capabilities.
- ▶ **Major Capital Project Review: Provincial Ferries Service**(BC Ferries 2004)—Reviewed a proposed major capital project related to vessel replacement. The objective of this review, which was required under statute, was to determine whether the proposed capital expenditure was, in whole or in part, reasonably required.
- ▶ **Strategic Business Plan: Breakbulk Marine Carrier** — On behalf of a marine carrier providing breakbulk service between Canada and Japan, developed a strategic business plan based on current and projected future markets for lumber, pulp, and other breakbulk cargo.
- ▶ **Business Assessment and Pre-valuation: Marine Transportation Firm** — On behalf of a major forest products firm, directed a competitive market analysis for the services provided by a subsidiary transportation firm, and provided recommendations concerning the alternative valuation methods for each service. Our recommendations were used by the client in considering divestiture and other options.
- ▶ **Port Tariffs Analysis** — Participated in a study assessing the sensitivity of traffic volumes through major Canadian ports to changes in tariff structures and levels. Liaised with Port of Vancouver officials to gather and analyze information.
- ▶ **Traffic Forecasting and Impact Study** — On behalf of B.C. Ferries, performed a consulting project to forecast the traffic impact of proposed changes in ferry routes between Vancouver Island and the B.C. Mainland, and was the senior author of the resulting publication. Factors examined included shifts in route choice, travel times and highway congestion.
- ▶ **Feasibility Study: Marine Shipper** — For a private firm, analyzed the feasibility of year-round shipping, using ice-strengthened vessels, in the St. Lawrence Seaway. Areas examined included the costs of different size vessels, technology risk, vessel ownership constraints, inventory carrying costs, commodity flow logistics, and overall project feasibility.
- ▶ **Economic Costing Model: Ferry Operations** — On behalf of B.C. Ferries, developed and implemented a long-run marginal costing model to determine the marginal impact on capital and operating costs of alternate traffic growth patterns and changes in other operating parameters (e.g. federal crewing regulations).

- ▶ **Costing Accounts Review: Railway Industry** — Represented the Province of B.C. in federal government reviews of the Uniform Classification of Accounts. Developed provincial positions on proposed amendments.
- ▶ **Impact of Legislative Change: Railway Industry** — Extensively involved in a project assessing the impact of the 1967 National Transportation Act on individual negotiations between rail carriers and shippers. Conducted numerous interviews and developed case studies. The project findings were subsequently published.

Air Transportation

- ▶ **Passenger Air Traffic Analysis: Canada-Japan** — On behalf of an international air carrier, directed an assignment to examine air traffic patterns between Canada and Japan. Areas examined included seasonal demand patterns, traveller demographics, load factors, reconciliation of data sources, impact of "sixth-freedom" carriers, and other factors.
- ▶ **Master Plan for Airport/Industrial Park** — Managed a multi-disciplinary consulting team that developed a master plan for aerospace/commercial aviation facilities at a B.C. airport site. Performed the financial and socio-economic analysis of the development, considering factors such as safety, energy use, employment effects, financial potential and risk, etc. Was also extensively involved in the overall project design and report write-up.

Road Transportation

- ▶ **Market-based Cost Escalation Trends: Highways Construction** — Recently completed a project to review North American cost escalation trends, and their impact on market rates and tendered contract prices. The study examined market trends 2003-2005, and the outlook to 2008. Factors examined include labour, fuel, material (steel, concrete, etc.) and other cost factors.
- ▶ **Program Design: Highways Maintenance Contracting** — On behalf of the B.C. Government, developed a methodology for requesting, receiving, and evaluating highways maintenance contracting proposals from private contractors. The methodology has been applied in three separate rounds of contracting, involving contracts totalling more than \$1 billion.
- ▶ **Contract Negotiation: Major Highways Contracts** — On behalf of the B.C. Ministry of Transportation and Highways, negotiated the terms and conditions of highways maintenance contracts in British Columbia. Negotiated ten major contracts with a total value of \$250 million.

- ▶ **Program Review: Highway Maintenance Privatization** — Assisted the B.C. Ministry of Transportation and Highways in developing a comprehensive document reviewing the contracting of highways maintenance services in British Columbia. The Ministry's report included a description of the B.C. Ministry of Transportation & Highways, a discussion of the privatization process, an assessment of the impact on various stakeholders, and future options and transition requirements.

Logistics, Distribution, Intermodal Goods Movement

- ▶ **Newsprint Logistics: Forestry Firm** — On behalf of a two-plant producer of pulp and paper products, directed an assignment to review current logistics operations and to coordinate the activities of sales offices, the logistics group (scheduling production, coordinating delivery) and the producing mills.
- ▶ **Distribution Cost Analysis Model: Forest Products Industry** — On behalf of a major B.C. forest products firm, directed a project to develop a model for comparing transportation costs from several B.C. and Alberta sawmills to various U.S. and Canadian marketplaces. The computer-based model was designed to facilitate carrier and routing decisions in an environment of rapidly changing carrier rate policies.
- ▶ **Transportation and Logistics Study: Forestry Firm** — On behalf of a major Canadian forest products firm, directed a major assignment to develop a comprehensive plan for the physical distribution of over 800,000 tonnes/year of lumber, plywood, pulp and paper from a single originating area. The study examined marine, rail and truck options for accessing various markets, and estimated the overall systems costs (over \$60 million per year). These results were applied in developing a long-term physical distribution strategy for the client.
- ▶ **Warehouse/Distribution Planning: Grocery Chain** — On behalf of a large grocery chain, evaluated the economic feasibility of alternate warehouse/distribution systems by modelling the firm's operations. Factors examined included differentials in purchase costs of goods, distribution costs, warehousing and inventory costs, and administrative and labour costs.
- ▶ **Trucking Feasibility Study: Grocery Chain** — For a large grocery retailer, performed a feasibility study of replacing the firm's existing contract carrier with an in-house trucking service. Factors examined included land and equipment purchase costs, contractual arrangements with drivers, security of equipment supply, backhaul opportunities, and management requirements. Assisted the client in using the study findings to negotiate favorable contract terms with its carrier.
- ▶ **Risk Management/Disaster Recovery Plan: Product Distribution** — On behalf of a large B.C. retailer, developed an emergency plan to deal with unexpected interruptions in delivery service to retail outlets. The plan included identification of service interruptions causes, an

assessment of their likelihood, planning of organizational responses and responsibilities, identification of alternate sources of supply, and recommendations for reducing both the risk of occurrence and the expected impact of interruptions.

Vehicle and Fleet Management

- ▶ **Vehicle Cost Control System Review: Private Utility** — Performed a study to evaluate alternative systems for controlling vehicle costs of a major B.C. utility. Particular attention was given to analyzing the feasibility of a direct charge to user departments.
- ▶ **Company Car Policy: Private Utility** — Evaluated the economic and organizational implications of providing company cars to a sales force of over 100 persons. Analyzed alternative programs and developed a recommended vehicle package.
- ▶ **Vehicle and Equipment Fleet Management: Municipal Government** — Designed a system and wrote a costing manual to assist a municipality's vehicle and equipment managers in making decisions regarding fleet size, charge-out rates and replacement strategies. Assisted fleet managers in implementation of new system.
- ▶ **Heavy Equipment Leasing: Public Utility** — On behalf of a large B.C. utility, designed a standardized tender format for seeking comparable bids on leased construction equipment. Liaised extensively with the leasing community to develop a standard package to which many firms could respond.
- ▶ **Financial Review of Vehicle & Equipment Fleet: Municipal Government**

Performance Improvement

- ▶ **Cost reduction program: Sugar Refinery** — On behalf of a large B.C. refinery, analyzed their operations and designed a number of cost reduction initiatives incorporating inventory control, production scheduling, and purchasing policies/procedures. (May 6, 1993)
- ▶ **Business Process Measurement and Improvement: Insurance Industry** — On behalf of a large insurance company, performed and directed a series of performance improvement assignments over a thirteen-year time span, including:
 - Identification of business processing improvements for claims handling by adjusters, estimators, and claims and administrative staff.
 - Major surveys of tasks and times, as a basis for workload measurement and staffing guidelines.
 - Evaluation of specific operational initiatives including:
 - automated claims work management system

- vehicle towing/estimating/repair options
- customer service enquiries.
- Independent measurement of productivity trends. (April 17, 1995)
- ▶ **Business Process Improvement: Airline Industry** — Analyzed the procedures for controlling the daily flow of approximately 50,000 documents. Designed and wrote a manual documenting the system and identified areas for improvement and streamlining.
- ▶ **Business Process Improvement: Motor Carrier Regulation** — On behalf of a provincial government's motor carrier regulatory agency, managed an assignment to simplify operational procedures for processing of licence applications. Assisted the province's motor carrier commission in setting criteria for granting and refusing licence applications in a changing regulatory environment.
- ▶ **Workloads and Staffing Review: Court Services** — On behalf of the Court Services Branch of the Government of British Columbia, reviewed the methodology for estimating the workloads associated with various caseloads, and applied these findings to determine staffing complements for court services staff throughout the Province.

Market Research and Planning

- ▶ **Market Plan: Clothing Industry** — Assisted a well-known British Columbia producer of high-quality outerwear in developing a comprehensive market plan. Also independently reviewed the sales projections and their reasonableness.
- ▶ **Marketing Plan: Lighting Industry** — On behalf of a Vancouver-area manufacturer of high-technology lighting systems, directed a market survey of architects and building designers to determine the potential for alternate marketing strategies in penetrating the United States indoor custom lighting market. Assisted the firm in interpreting the results and determining its marketing strategy.
- ▶ **Viability Review: Clothing Industry** — On behalf of a major financial institution, evaluated the financial viability of a clothing manufacturer. Analyzed markets for the major product lines and prepared financial projections based on forecast sales and costs. Assessed the implications for the security position of the firm's major creditor.
- ▶ **Market Analysis: Confectionery Industry** — On behalf of an international firm, investigated the market for chocolate confectionery and related products in Canada and B.C. Conducted interviews with manufacturers and retailers, reviewed industry statistics, and developed and presented conclusions regarding market opportunities.

- ▶ **Public Attitudes Survey: Credit Union Insurance Agency** — On behalf of a provincial agency which insures the deposit accounts of credit union members, managed a province-wide survey to determine the public's awareness of the agency and its role. The survey also measured public attitudes towards a possible name change for the organization, based on which the organization was re-named.
- ▶ **Market Research: Federal Department** — On behalf of the Federal Department of Energy, Mines and Resources, trained staff in applying market research techniques to energy-related issues. Provided follow-up advice and assistance in the conception, design and implementation of a market research and intervention project.
- ▶ **Business Planning: Insulated Panelboard Firm** — Assisted a firm to develop a business plan to produce and market insulated panelboard for use in cold storage and controlled atmosphere buildings. Worked closely with company principals to undertake market research, analyze costs, make financial projections and develop a management and implementation plan.
- ▶ **Market Review: Video Productions** — On behalf of a video production company preparing to list on the Vancouver Stock Exchange, reviewed the company's market potential and sales projections. Developed commentary for inclusion on the company's prospectus.
- ▶ **Market and Financial Evaluations: Agriculture Industry** — On behalf of a federal-provincial agricultural support program, directed or performed numerous assignments to evaluate proposed value-added production plants. Areas of analysis included market potential, sales strategy, production planning, and project costs and financing. Projects examined included:
 - A poultry processor.
 - A B.C. shellfish hatchery.
 - Several fruit packing houses.
 - A producer of apple confections.
 - A pet foods manufacturer.
 - A vegetable cooling/hydrating plant.
- ▶ **Market Survey/Technical Report: Marine Nav aids** — On behalf of a firm developing high technology marine navigational aids, managed a project to survey potential markets (exploration vessels, commercial freighters, ferries, etc.) and develop a marketing strategy.

Public Policy

- ▶ **Economic Regulation of Trucking: B.C. Government** — On behalf of the British Columbia Government, directed an assignment to identify and evaluate policy options for the province in introducing changes to motor carrier (truck) economic regulations in British Columbia.

- ▶ **Review of Marine Lightstations: B.C. Government** — On behalf of the British Columbia Government, directed an assignment to determine the financial feasibility of the Province assuming responsibility for British Columbia's staffed lightstations.
- ▶ **Program Design: Training and Licensing of Commercial Vehicle Operators** — On behalf of a joint industry-government initiative, designed a comprehensive program to establish a graduated licensing and training program for commercial vehicle (truck) operators in British Columbia.
- ▶ **Program Design: Fishing Industry** — On behalf of a federal ministry, participated in the design of a major program to rationalize the West Coast Canadian fishing industry. Evaluated the impact of alternate program features, and recommended a preferred approach.
- ▶ **Federal/Provincial Transportation Policy** — On behalf of the B.C. government, extensively involved in developing provincial transportation policies in areas relating to:
 - Federal legislative and policy thrusts (amendments to the National Transportation Act, Canada Ports Act, Transportation of Dangerous Goods Act, etc.).
 - Provincial issues (general policy, freight rate policies, grain and coal transportation, railway subsidy/abandonment issues, passenger services, ferries, etc.).

Program Evaluation

- ▶ **Program Evaluation: Canadian Studies Support Program** — On behalf of the federal Department of the Secretary of State, performed an evaluation assessment of the \$3.8 million National Program of Support for Canadian Studies. Conducted interviews across Canada, wrote a profile document describing the program, and played a major role in identifying evaluation alternatives and assessing their appropriateness.
- ▶ **Program Evaluation: Fisheries Improvement Loans Act** — Participated extensively in an evaluation of the federal program which guarantees low-interest loans to fishermen. Assessed the impact of the program on the Pacific Coast through an interview program with bankers and fishermen.
- ▶ **Program Evaluation: Physical Oceanography** — On behalf of the federal Department of Fisheries and Oceans, conducted an evaluation of the activities of the physical oceanography programs at two marine institutes. This assignment involved an extensive telephone and personal interview survey.

Consulting to First Nations

- ▶ **Program Evaluation: First Nations Healthcare Worker Training** — Directed an evaluation of the training provided to Community Health Representatives and NAADAP workers. The Medical Services Branch in British Columbia is responsible for providing training to Native Health Workers. Medical Services Branch had funded this training for five years and required an independent evaluation. We conducted an evaluation that involved obtaining input from nearly 200 First Nation communities in British Columbia.
- ▶ **Business Planning Seminar: First Nations** — Prepared and delivered a seminar on "How to Develop a Business Plan" to the Centre for Indian Training and Research.
- ▶ **Feasibility Review: First Nations Business Venture** — On behalf of a federal support program, evaluated an application for financial assistance in establishing an indoor rodeo arena, motel and western gear store in the B.C. Peace River region. Analyzed the commercial outlook for each component of the venture, and provided funding recommendations.
- ▶ **Market/Feasibility Study: First Nations Agricultural Lending Firm** — On behalf of a federal support program, managed a major assignment to review the market demand for a lending institution for First Nations farmers and ranchers in British Columbia, and to prepare a comprehensive business plan for the proposed institution. Conducted a market survey of over 200 potential borrowers to analyze the likely market demand for this loan fund. Based on the market results, directed the preparation of a comprehensive business plan for a self-sustaining financial institution involving initial capitalization of \$5.3 million.
- ▶ **Market/Feasibility Study: Commercial Complex** — On behalf of a federal program, examined the market and financial feasibility of building a commercial hotel/restaurant/grocery/clothing store complex at Pukatawagan, Manitoba. Liaised with site architects in defining space requirements. Our review led to the project being built.
- ▶ **Investment Analysis: First Nations Clothing Manufacturer** — On behalf of a First Nations-owned garment manufacturer, analyzed the feasibility of investing in an automated assembly line system for the manufacture of the firm's product line.

Higher Education Institutions

- ▶ **Business Planning: Bamfield Marine Sciences Centre** — On behalf of member universities (British Columbia, Victoria, Simon Fraser, Alberta, Calgary), developed a strategic business plan for BMSC, including a land and facilities development strategy in support of MBSC's academic, ancillary, and commercial operations.

- ▶ **UBC Bookstore** — Directed a five-year business plan developed in cooperation with Bookstore staff at the University of British Columbia.
- ▶ **UBC Faculty of Agricultural Sciences' Field Operations** — Directed a five-year plan for Agricultural Sciences' Field Operations which covered four sites and a range of agricultural/dairy operations.
- ▶ **UBC Food Services** — Led a five-year business and financial plan for University Food Services.
- ▶ **UBC Parking and Transportation** — Directed a five-year strategic plan for Parking and Transportation, including specification of Traffic Demand Management (TDM) initiatives.
- ▶ **UBC Utilities** — Developed the initial business plan for establishing UBC Utilities as a financially independent provider of utility services to the campus.
- ▶ **UBC Capital Assets Management Strategy** — Working closely with the President's Office, Mr. MacKay developed and authored a position paper outlines UBC's long-run strategy for managing its capital assets.
- ▶ **UBC Infrastructure Facilities (Classroom) Management** — Directed the development of a management strategy for scheduling, maintaining, operating and tracking utilization for classrooms throughout campus.
- ▶ **UBC Museum of Anthropology** — Directed a five-year strategic plan for the Museum of Anthropology.
- ▶ **UBC Intercultural Communications Centre** — Directed a three-year plan for the future development of Intercultural training and resource services.
- ▶ **UBC Plant Operations** — Directed a five-year business plan for UBC Plant Operations.
- ▶ **University Gathering Place** — Directed a benchmark survey of other Universities "Gathering Places", and examined the financial potential of a similar agency at UBC.
- ▶ **Asset Management Strategy** — Working closely with UBC administrative staff, designed and directed an assignment to review the security and risk management strategies for major campus capital and current assets.
- ▶ **Fiscal impact of a proposed healthcare facility on provincial agencies** – On behalf of UBC, we are currently reviewing the net fiscal impact (revenues and costs) of a proposed new public health clinic with an annual capacity of 50,000 patient visits, as they impact on a number of provincial agencies. Fiscal impacts are being assessed in terms of both clinical

services (direct costs of service, hospitalization costs avoided, etc.) and in terms of clinical research activities (provincially-supported research, grants attracted from other sources, etc.).

▶ **Major Capital Projects: UBC Faculty of Pharmaceutical Sciences**