

PROCUREMENT: COMPETITION AND RESPONSIBILITY IN AN INDUSTRIAL COMMUNITY

by

Donna Gasper

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ABSTRACT

Over the 50 years that Alcan has been present in Kitimat, globalization has changed the economic and social environment in which the smelter and the larger organization operate. These changes have produced pressure points that affect different functional and organizational levels. This paper examines these changes through the challenge of developing procurement policies and practices that maximize value while maintaining stakeholder relations.

Kitimat is an interesting site in which to analyze these challenges because Alcan is the most significant economic unit in this relatively remote community. Abrupt shifts from a policy of giving preference to local suppliers to a strict policy of cost reduction could jeopardize community relations; however, to continue to support suppliers who are unable to compete globally is also counterproductive.

This paper analyzes these issues and recommends policies and practices that support a balanced approach to improve relationships and reduce tensions that could arise from competitive pressures.

DEDICATION

To Brett, Derek and Benjamin

Thank you for allowing me to expand my horizons. You all have grown up so much over the last four years. I cannot express how much I appreciate your patience and understanding while I worked endless hours to complete my courses. You have given me the freedom and opportunity to grow.

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1 INTRODUCTION

Alcan Inc. is a US\$19.5 billion company employing more than 70,000 people across 510 operating facilities in 55 countries around the world. Alcan's reach is extensive. The company is the second largest primary aluminum producer in the world. The Primary Metal division operates, and/or has interest in, 24 smelters with a total capacity of 3.4 Mt/y. In addition to Primary Metal, the publicly traded company has 3 other major divisions: Bauxite and Alumina, Packaging and Engineered Products.

Alcan Primary Metal, British Columbia (APM-BC), which is a subdivision of Primary Metal, operates an aluminum smelter that has a capacity of 275,000 tonnes per year at Kitimat, B.C. This facility is powered by a 1,000-megawatt capacity hydroelectric generating station at Kemano, located 77-km southeast of Kitimat. The smelter, which resides in a relatively remote northern location, is part of Alcan's large global network.

1.1 Problem Statement

APM-BC, like the majority of other manufacturing companies, is constantly adjusting to the reality of competing in a global market. One challenge facing APM-BC is that it is the major employer operating in a sparsely populated area. As the company strives to remain competitive through cost reduction initiatives, it also faces the dilemma of what to do with local Suppliers¹ who, for historic reasons, may have become dependent on APM-BC and are unable to compete in the global market.

¹ Suppliers located in Kitimat, Kitimaat Village, Terrace and Kitwanga.

When APM-BC first began its operations in 1954, local Suppliers were needed in order to support the smelter's operations. To secure goods and services in the local region, the company implemented a preferred local vendor purchasing policy in order to attract and retain local Suppliers.

As a result of globalization and advances in technology and communication, APM-BC gained access to a larger number of acceptable suppliers, who could competitively serve the plant's requirements. This gained access has diminished the overall need for local Suppliers. Even though there is a reduced need, maintaining 'good' relationships with the local Suppliers and the larger community has become an important component of APM-BC's social responsibility framework.

In parallel with managing local Supplier interests, APM-BC also had to adjust to the impacts of globalization. The reduced trade barriers, coupled with advances in technology, changing energy markets, and low-wage jurisdictions have had a significant impact on the aluminum industry. To compete in today's market, the smelter has little choice but to compete on cost. One of the many means of achieving cost reduction is through the supply chain. By being part of a large corporation, APM-BC is in a position to leverage its purchasing power in order to achieve substantive savings. To realize this opportunity, in 2002, Alcan modified its purchasing practices with the objective of moving toward a smaller number of suppliers who would be able to serve a multitude of Alcan's facilities or provide a broader range of goods and services at a lower cost. Since this change, as depicted in Figure 1.1, Northwest B.C.'s expenditures have declined from \$66.5 million in 2002 to \$45.2 million in 2004. Although there may be other underlying factors, the change has contributed to the \$20.3 million decrease in purchases in Northwest B.C.

Figure 1.1 APM-BC Expenditures, 1995 to 2004

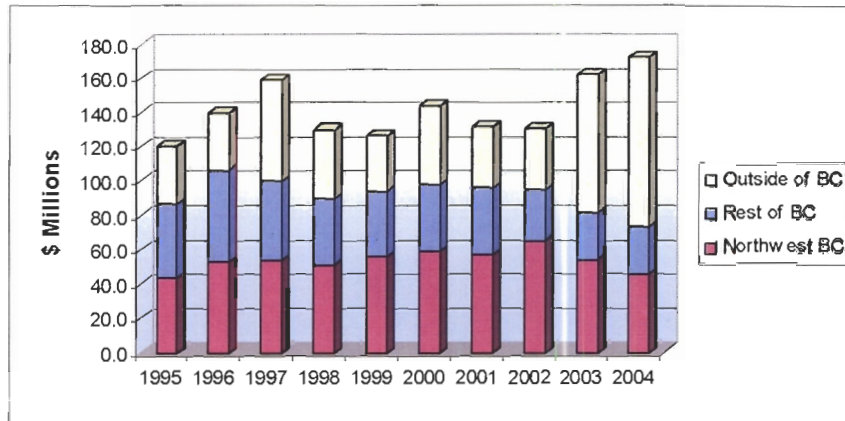


Figure created by author; data source: Eric Vance & Associates, Kitimat Works' Contribution to the Economy of British Columbia, April 2004

Of particular concern is the \$12.3 million decline in the local Kitimat-Terrace region. As illustrated in Figure 1.2, the monetary spend declined from \$54.8 million in 2002 to \$42.5 million in 2004, a 22 percent reduction.

Figure 1.2 APM-BC Local Kitimat-Terrace Expenditures - 1995 to 2004

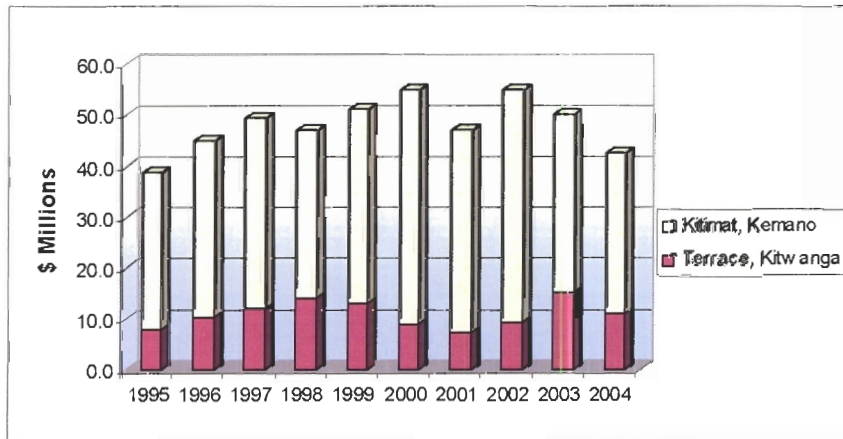


Figure created by author; data source: Eric Vance & Associates, Kitimat Works' Contribution to the Economy of British Columbia, April 2004

The change in the purchasing practices has several implications, particularly for local Suppliers who are struggling to survive in today's global economy. Although cost reduction is a

primary focus for APM-BC, a significant challenge facing the smelter is to develop a strategy on how to achieve savings while taking into account the interests of its stakeholders, including Shareholders, Employees, Communities, Governments and Suppliers. Without a strategy, the plant will be further exposed to public scrutiny and loss of stakeholder support, which ultimately impacts the company's bottom line.

The purpose of this paper is to analyze the impact of the changes in purchasing practices. These changes produce pressure points that affect different functional areas within the plant and affect different levels within the entire organization. This assessment will take into consideration existing strategies that APM-BC is using in order to conduct business in a socially responsible manner while it strives to reduce the overall cost of goods and services. Subsequent to reviewing existing strategies, the company's strengths, weaknesses, opportunities and threats will be assessed in order to make recommendations on how APM-BC can obtain its cost-saving objectives and still maintain its social commitment to the local region.

1.2 Methodology

This paper has been organized in the following manner. First, a general overview of the company will be presented. This will include a brief history of APM-BC in the Pacific Northwest. APM-BC's historic beginnings will be followed by a discussion of the smelter's major products and markets. Next, an external analysis will be done in order to gain an understanding of the major factors that have significantly impacted the aluminum industry. The external analysis will also include a discussion on the evolution of Corporate Social Responsibility. Following the external analysis, APM-BC's competitive stance will be analyzed in order to gain an understanding of the smelter's need for value maximization. After assessing the company's competitive position, the paper will explore the various cost-saving opportunities that can be achieved through changes in the procurement practices. Subsequent to the

discussion, the importance of managing cost reduction in a socially responsible fashion will be examined. Procurement's overall strategic sourcing framework will then be presented. Upon presenting the strategic framework, the paper will explore the potential socio-economic impacts to the local community and to the local suppliers. A summary of the current situation including APM-BC's strengths, weaknesses, opportunities and threats will be analyzed. This paper will conclude by recommending a strategy on what steps should be taken in order to maximize value and still maintain stakeholder relations.

1.3 Background

In response to the U.S. Government's competition concerns, Alcan was spun off as an independent company from Aluminum Co. of America (Alcoa) in 1928. At that time, Frederick Knewstubb, chief hydraulic engineer with B.C. government's water rights branch, recognized the potential of the Kitimat region for hydroelectric power generation. Shortly after Knewstubb's findings, Alcan was invited by the province to develop in the area; however, the Second World War delayed Alcan's decision. Following the war, demand for aluminum was unprecedented and the plants that Alcan had constructed in northern Quebec could not keep pace. In 1950, an agreement was reached between the B.C. Government and Alcan, and construction commenced in 1951. Alcan spent \$500 million (\$5 billion in today's figures) and employed 10,000 people to construct a hydroelectric generation facility at Kemano and an aluminum smelter at Kitimat. Kemano came to life on July 15, 1954 and the Kitimat Smelter poured its first ingot on August 3, of that same year.

Prior to APM-BC's arrival to Kitimat, the region was quite isolated. After the company's arrival, other industries entered the region and the community grew and prospered. As the town developed, retail stores entered to serve the needs of the growing population. However due to the

sheer size of APM-BC relative to other industries, the company remains the leading employer in the region and constitutes a major percentage of revenue for the local service industries.

1.4 Market and Product Mix

APM-BC serves primary aluminum markets in North America, Japan, and Korea; and to a lesser degree, it also serves the United Kingdom, China and other Southeast Asian nations. Approximately 85 percent of ingots produced by APM-BC are shipped to the Asia Pacific, with the balance going to North America.

The Smelter produces billet, sheet and trilok ingot, which in turn, are sold to other manufacturing facilities. These ingots are produced from raw materials that are shipped to Kitimat from around the world, including alumina from Australia, pitch from Korea, and petroleum coke from North America.

When APM-BC first began its operations, the bulk of its production was trilok ingot, a pure metal product designed to be remelted and alloyed by the end customer. Since those early years, APM-BC has invested well over \$75 million to upgrade and expand the smelter's casting centres in order to produce more profitable value-added sheet and extrusion billet. Unlike trilok, sheet and billet are produced according to customer order requirements. The receiving customers further process these ingots by passing them through extrusion presses or rolling mills to obtain the desired final shape.

The smelter's current focus is to maximize the proportion of sheet and billet production, while reducing the proportion of remelt trilok ingot. Value-added products not only deliver higher premiums, but they also maximize the company's return on capital invested.

2 FORCES OF CHANGE

Rapid technological and social change, pressure to respond to increased global competition, high expectation of customers, and pressure to do more with limited resources are some of the challenges facing business organizations.²

When APM-BC first began its operations, the company needed supply partners to provide goods and services in an efficient manner. This need was opportunistic for many suppliers as it provided certain long-term growth and prosperity. For years, the relationship between APM-BC and its suppliers co-existed with minimal disruption. Even with advances in technology and logistics, local suppliers felt secure, knowing that they were deemed to be the ‘suppliers of choice’ due to APM-BC’s preferred local vendor purchasing policy and the Company’s commitment to the community. However, external forces have changed the world in which APM-BC and its local Suppliers operate.

The purpose of this chapter is to gain an understanding of the changes that have occurred in the aluminum industry. This chapter will also explore the history of Corporate Social Responsibility in order to gain an understanding on why it has become a necessary element of doing business.

² Mohammed Naved Khan and Feza Tabassum Azmi, “Reinventing Business Organisations: The Information Culture Framework,” *Singapore Management Review*: 27, 2 (2005): 37.

2.1 Aluminum Industry's Competitive Forces

For years following the Second World War, the aluminum industry was attractive. Profits dipped somewhat in the late 1980s; however, it was not until the early 1990s that the competitive forces really started to take effect.

Just like any industry in which there is a profit-making potential, new entrants disrupted the market. One of the most significant disruptions that occurred was when Russia entered the global market in the early 1990s. Their entry caused a major drop in prices due to the excessive metal that the country dumped into the global market. In response, the aluminum industry curtailed production in order to lower inventories. In time, the market did again reach equilibrium; however, cost reduction became a primary focus for the industry.

In addition to Russia, another low-cost entrant was China. The impact of China's entry remains 'unknown'. On one hand, the opening of its doors has the potential to inject new life into an existing mature market. On the other hand, the country's low capital and labour cost advantages pose a threat to high-cost Western producers. This threat has been somewhat reduced in that the projected annual consumption growth (10 to 11 percent) of China will exceed its annual production (8 to 9 percent) for several years. In addition to China's demand exceeding its production capacity, the incentive to export aluminum has also diminished. When China first opened its doors, one of the means that the Government used to fuel the economy was to grant the aluminum producers a 15% value-added-tax (VAT) rebate on all exported metal. This rebate which was given to companies who produced and exported aluminum ceased in January 2005. Other deterrents are China's high cost of power, limited alumina resources, significant government involvement and immature legal systems. Even with these deterrents, the potential for profit in China's developing economy is attracting many firms to the industry, and in turn, destabilizing the market. In response to the increased competition, Western producers either try

Western producers either try to set up production facilities in low-cost countries or focus on methods to reduce their existing operating costs.

Another entrant that will further increase competition is South Africa. Although South Africa is relatively new to the industry, their entry will intensify competition. With new facilities coming on line, coupled with low labor costs, Western high-cost producers will be further challenged.

Rising fuel costs are also encouraging the transportation industry to evaluate other materials in order to achieve weight reduction and increase fuel efficiency. While aluminum serves as a substitute for steel; so do composites serve as a substitute for aluminum. The price sensitivity of customers is another factor. As a result of China's high demand, aluminum prices have risen, which ultimately increases the risk of substitutes being preferred within the transportation, construction, electrical and packaging industries.

Customer demands have also increased. Because aluminum is a commodity in which product differentiation is difficult, customers can change suppliers without incurring high switching costs. To maintain customers, aluminum producers compete on cost, quality, consistency and customer service. These elements have become the industry norm and companies are expected to deliver a consistent, high-quality product throughout market price fluctuations.

In addition to recent technological advances enabling a more efficient extraction of alumina from bauxite, improved energy efficiencies have changed the industry dynamics. In prior years, vertically integrated companies always had a strong competitive advantage due to the significant cost of raw materials and electricity. However these technological advances, coupled with low labour costs, are offsetting the competitive advantage that vertically integrated

companies used to have. Although new modern facilities generally have lower operating costs, high-cost producers remain in the industry because of their previous huge capital investments.

Within recent years, there has been considerable consolidation within the industry: Alumax, Inespal, Almix and Reynolds have been acquired by Alcoa; Alusuisse and Pechiney have been acquired by Alcan; and Russian smelters and CIS refineries have been consolidated to form RUSAL and SUAL. This consolidation has further heightened the competition within the industry.

In summary, the aluminum industry is competitive and unattractive. Because aluminum is a commodity, companies must compete on cost. High-cost producers are particularly vulnerable to market price fluctuations. China's developing economy has the potential to breathe new life into an existing mature market; however, the increased demand and high aluminum prices is also attracting new entrants and destabilizing the market. Due to ongoing technological advances, substitute products that offer superior performance at lower prices pose a threat to the industry.

2.2 Evolution of Corporate Social Responsibility

In recent years, Corporate Social Responsibility (CSR) has come to the forefront for all leading organizations. To gain a better understanding of the evolution of CSR, it is instructive to examine how changes in society's culture and values have impacted business over the last four decades.

In the 1960s, social pressures on corporations began to emerge. At that time, various disenfranchised groups felt that powerful vested economic interests that were protected by a captive political system were denying their rightful share of opportunities and rewards. These perceived inequities made people doubt the legitimacy of large corporations that were identified

with socio-economic disorder. Although social pressures started to emerge, for the most part, companies paid little attention. At that time, it was felt that heeding to interest groups' concerns would do nothing but legitimize their credibility.

In the 1970s, there was some resolution to past socio-economic injustices. Blatant, large-scale inequalities were outlawed and compensation for past injustices was given to some individuals or groups. These resolutions of past inequalities have become institutionalized in a plethora of new rights and entitlements.³ Today these entitlements are expected as most Western World people claim rights to education, a fair standard of living, family support, and a clean environment. Although companies also started to pay more attention to society's concerns, the narrowing of the gap between sheer profit making and societal pressures was due in part to institutionalized law.

In the 1980s, single-issue causes and narrowly based political groups emerged. These single advocacy groups, now mature and sophisticated, brought about a shift in power from producer to consumer. These groups also brought about a change in outlook from that of optimism and growth to that of pessimism and limited resources. In addition to activists becoming more sophisticated, corporations also became more skilled in managing society's expectations. Confronted with well-organized adversarial groups, rhetoric was substituted with substance. Companies not only began to speak out on social issues and advocate certain public policies, but they also began to question the motives of various activist groups. Rather than working together to address socio-economic injustices, often the relationship between activists and corporations became more strained.

³ Prakash S. Sethi and Paul Steidlmeier, "The Evolution of Business' Role in Society," *Business and Society*, Summer95, iss. 94 (1974): 10.

The period from the 1990s to date has been dominated by two major events, the economic shift toward South and East Asia and the collapse of socialism in the former Soviet Union. The outcome of these two events is still unfolding. Although the emergence of South and East Asia from mass poverty is positive, the socio-economic implications are more complex. Companies who wish to take advantage of low-cost countries for the acquisitions of goods and services, not only have to address potential public scrutiny, but they also have to address the socio-economic impact on existing communities and stakeholders.

In summary, the events leading up to today have had a significant impact on the evolution of business' role in society. This role cannot be dismissed or taken lightly as it has a bearing on company's financial strategy and corporate governance. Although there are different opinions and viewpoints on how corporations should address socio-economic issues, companies can no longer ignore CSR. In April 2002, the Mining and Minerals Sector initiated a project to examine how the industry was currently contributing to sustainable development and how this contribution could be increased. The purpose of the Mining, Minerals and Sustainability Development (MMSD) Project was to highlight major industry challenges, create a vision for the future, and provide a framework for improving the sector's contribution to sustainable development.

As denoted in the MMSD report, the use of environmental, social and sustainability reports to engage stakeholders will continue to increase. Half of all fund managers now believe that companies add shareholder value by effectively managing intangibles, such as reputation and social image. Although cost reduction is a primary focus for the aluminum industry, 'enlightened' corporations now recognize their responsibilities to stakeholders other than just the owners of the business. Rather than solely addressing shareholder interests, companies now have to address employees, suppliers, customers, governments and community members whose interests may be affected by corporate decisions.

3 COMPETITIVE STANCE

Globalization has proven historically to be one of the primary avenues for successfully growing a business. Unfortunately, the complexities of globalization are challenging even for some of the largest, most successful multi-national manufacturers.⁴

APM-BC has been wrestling with external economic forces for a number of years. To maintain its competitive stance, APM-BC has made massive capital investments in potroom modernization and casting production technology. APM-BC's strategy is to maximize the production of the more profitable value-added sheet and billet ingots. These products are in increasing demand, particularly in the Pacific Rim, but due to the nature of the industry, the company is vulnerable to price fluctuations and economic downturn. Coupled with the volatile industry conditions, the company is under constant threat of emerging low-cost producers who are also looking to establish a larger presence in the speciality product market.

The purpose of this chapter is to gain an understanding on APM-BC's need for value maximization, which includes reducing costs, improving efficiencies and increasing sales. Prior to analyzing the smelter's competitiveness, a financial analysis will be done comparing Alcan Inc. to its main competitor, Alcoa. The purpose of this analysis is to gain an understanding of the competitive pressures that the entire company is faced with. This will set the stage to discuss the performance pressures that Alcan Inc.'s business units are currently under. Following the financial analysis, an assessment of APM-BC will be done. By using Michael Porter's value chain framework, his chapter will review the smelter's primary and secondary activities in order

⁴ Jane Perrin, "Challenges of Globalization," ACNeilson Trends & Insights, (2005).

to highlight APM-BC's cost advantages and disadvantages. After reviewing the value chain, a market prognosis and an assessment of APM-BC's main competitors will be undertaken in order to gain a further understanding of the smelter's competitiveness. The importance that APM-BC's rivals place on Corporate Social Responsibility and Supply Chain Management will be assessed within the competitor analysis.

3.1 Financial Analysis

The need for cost reduction not only stems from the forces described in Chapter 2, but also from the maximizing-value objectives set out by Travis Engen, Alcan's President and CEO. For Alcan Inc. to achieve its target of doubling its value every five years, the company must:

- Increase operating earnings per share by 15% per year
- Establish a additional US\$400 million per year free cash flow
- Become Economic Value Add positive by 2006

In order to achieve these objectives, the company has restructured its assets beginning with the Alusuisse Group Ltd. (Algroup) merger in October 2000. Subsequent to the merger, the Alcan implemented a restructuring program in 2001, which constituted a workforce reduction plus various plant sales, closures and divestments. In February 2004, Alcan acquired full ownership of Pechiney, which moved the company to the position of being the second largest primary metal producer in the world. Alcan's most recent restructuring was in January 2005 when it spun off the majority of its Rolled Products division to form the new independent company, Novelis. In addition to the aforementioned portfolio modifications, the company has made several other acquisitions and divestitures in all its business sectors including Bauxite and Alumina, Primary Metal, Packaging and Engineered Products. To improve its operational performance, Alcan has implemented a worldwide continuous improvement program using 'Six Sigma and Lean Manufacturing' principles.

The industry forces along with the asset restructuring initiatives have had a significant effect on the company's profitability. To gain an understanding of the effects, Alcan's standard financial ratios have been benchmarked against the company's main competitor, Alcoa. Even though standard accounting measures or ratios are lagging indicators and do not measure shareholder value or economic rents, they still serve as an indicator of the company's past performance relative to its rivals. To supplement the ratio analysis, common-size financial statements⁵ for Alcan and Alcoa are included in Appendixes A and B, respectively. The key indicators, percentages and ratios for the past five years are presented in Table 3.1 below.

Table 3.1 Alcan and Alcoa Financial Ratio Comparison - 2000 to 2004

		2000	2001	2002	2003	2004
Profitability						
Return On Equity (%)	Alcan	7.35	0.02	-4.28	0.63	2.44
	Alcoa	13.06	8.60	4.25	7.80	9.89
Net Profit Margin (%) <i>(Net income / Sales)</i>	Alcan	6.76	0.02	-2.79	0.46	1.04
	Alcoa	6.47	3.97	2.06	4.45	5.58
Return On Net Assets (%) <i>(EBIT / Net assets)</i>	Alcan	6.01	2.34	5.69	2.68	3.44
	Alcoa	12.05	8.53	4.92	7.44	9.07
Operating Profit Margin (%) <i>(EBIT / Sales)</i>	Alcan	10.51	2.87	6.93	5.13	3.75
	Alcoa	14.21	8.80	6.15	9.60	10.54
Asset Management						
Net Asset Turnover <i>(Sales / Net assets)</i>	Alcan	0.57	0.81	0.82	0.52	0.92
	Alcoa	0.85	0.97	0.80	0.78	0.86
Plant, Property, Equipment Turnover <i>(Sales / Plant, Property and Equipment)</i>	Alcan	0.91	1.29	1.32	0.98	1.87
	Alcoa	1.78	1.91	1.68	1.69	1.86
Inventory Turnover Days <i>(Inventory x 365 days / Cost of Goods Sold)</i>	Alcan	108.53	71.58	67.75	119.68	72.79
	Alcoa	56.89	51.73	53.97	54.57	58.17
Trade Receivable Turnover Days <i>(Trade Receivables x 365 days / Cost of Goods Sold)</i>	Alcan	68.67	34.86	40.64	77.40	47.41
	Alcoa	27.39	18.89	24.93	50.83	50.25
Financial Leverage						
Trade Payable Turnover Days <i>(Trade Payables x 365 days / Cost of Goods Sold)</i>	Alcan	124.54	85.08	90.34	158.34	98.72
	Alcoa	39.48	33.32	36.24	42.66	43.63
Debt to Equity <i>(Debt / Equity)</i>	Alcan	0.54	0.49	0.48	0.96	0.90
	Alcoa	0.72	0.63	0.87	0.61	0.43
Interest Coverage <i>(EBIT / Interest Expense)</i>	Alcan	12.32	4.01	4.37	3.35	2.70
	Alcoa	7.59	5.42	3.58	6.45	9.16

Table created by author; data source: Alcan and Alcoa Financial Statements, 2000 - 2004

⁵ A common-size balanced sheet presents each asset and each liability as a percentage of total assets. A common-size income statement scales all items in proportion to net sales.

3.1.1 Profitability

Alcan's Return on Equity (ROE) declined by 11.63% between 2000 and 2002. The increase from minus 4.28% in 2002 to a positive 2.44% in 2004 is primarily due to increase in aluminum and alumina prices. Asset Turnover, Financial Leverage, and Profit Margin levers contribute to the company's Return on Equity.

The company's Return on Net Assets, has declined from 6.01% in 2001 to 3.44% in 2004; most notably, is the decrease in 2001 and 2003. In 2001, Alcan incurred \$236 million in asset restructuring charges, which included a series of plant sales, closures and divestments, as well as an approximate 6% workforce reduction. In 2002, the company's Net Profit Margin declined from a plus 0.02% in 2001 to a minus 2.79%. Although the restructuring program and the Algroup merger integration synergies were yielding positive results, Alcan realized a goodwill impairment loss of \$748 million, reflecting the decline in end-market conditions in the period from the Algroup merger in October 2000 to January 2002. In 2003, the London Metals Exchange (LME)⁶ which rose to \$1,428/t, 5% higher than the previous year's price of \$1,365/t, boosted earnings; however, the sharp decline of the U.S. dollar had an adverse effect on the year's reported income. In 2004, the continued high LME prices contributed positively to the company's profitability; but the increased fuel prices, freight costs, and raw material costs (e.g. coke, pitch, plastics and resins) coupled with the weakened U.S. dollar, had a negative effect on Alcan's profit margin.

Compared to Alcan, Alcoa has achieved higher profit margins for the past five years. Alcoa's higher margins are primarily attributed to the increased LME prices for aluminum and alumina plus the company's reduced operating costs. Even though Alcoa incurred an increase in

⁶ The London Metals Exchange serves as a benchmark pricing indicator for aluminum and a number of other base metals. The price is denominated in US dollars.

foreign currency exchange rates, bad debt expenses, and stock awards, the Alcoa's overall sales costs as a percentage of sales of decreased from 95.57% in 2002 to 90.61% in 2004, a 4.96% decrease compared to Alcan's 2.98% increase. Alcoa's percentage of sales cost reductions, depicted in the common-size income statement in Appendix B, were a result of procurement savings, productivity improvements, and headcount reductions.

3.1.2 Asset Management

Alcan's Plant, Property and Equipment Turnover which measures the sales generated per dollar of fixed capital has ranged from a low of 0.91 in 2000 to a high of 1.87 in 2004. Alcan's Inventory Turnover Days, which includes raw materials and finished goods relative to Cost of Goods Sold, has fluctuated over the past five years resulting in an average of 88 days. The company's Trade Receivable Days has also fluctuated between 2000 and 2004 resulting in an average of 54 days. The merger and acquisition of Algroup and Pechiney in 2000 and 2003, respectively, are the primary factors that negatively impacted Alcan's Asset Management ratios.

Between 2000 and 2003, Alcoa's Plant, Property and Equipment Turnover has been on average 0.64 times higher than Alcan's. Alcoa has also managed a consistent Inventory Turnover, which has resulted in an average of 55 days, 33 days less than Alcan's. With respect to Trade Receivable Days, between 2000 and 2003, Alcoa has managed to collect payment anywhere from 16 to 41 days sooner than Alcan. However in 2004, Alcan's Receivable collections reduced by 30 days, resulting in Alcan collecting its Receivables, on average, 2 days earlier than Alcoa.

3.1.3 Financial Leverage

Alcan's Trade Payable Days fluctuated in the 5-year span from a low of 85 days to a high of 158 days with an overall average of 111 Days. Without having access to detailed negotiated payment terms and penalty clauses, one can assume that the number of Payable Days, which is on average 57 days greater than the average number of Receivable Days, has a positive effect on the Company's working capital. Due to the Pechiney acquisition, the Debt to Equity ratio increased from 0.48 to 0.90 between 2002 and 2004. Since the 2003 Pechiney acquisition, Alcan is more highly levered than Alcoa. As a result of the increased debt, Alcan's Interest Coverage has declined from 4.37 in 2002 to 2.70 in 2004.

Between 2002 and 2004, Alcoa has reduced its Debt to Equity ratio from 0.87 to 0.43; however, the span between its Trade Payables and Trade Receivables does not appear to be well managed. Although Alcoa's Trade Payable days have increased from 33 days to 44 between 2001 and 2004, the company's Trade Receivable days have also increased from 19 to 50, resulting in an overall decrease in working capital. While the company appears to have come back to an impressively high ROE, like Alcan, it was largely due to increased aluminum prices.

3.1.4 Financial Assessment Implications

Based on external financial information, Alcan's improved ROE between 2002 and 2004 appears to be largely attributed to the increase in aluminum prices and increased financial leverage. Although Alcan is in the midst of its restructure, as indicated Figure 3.1, Alcoa's financial performance over the past five years has been stronger than Alcan's.

Figure 3.1 Alcan and Alcoa Return on Equity, 2000 to 2004

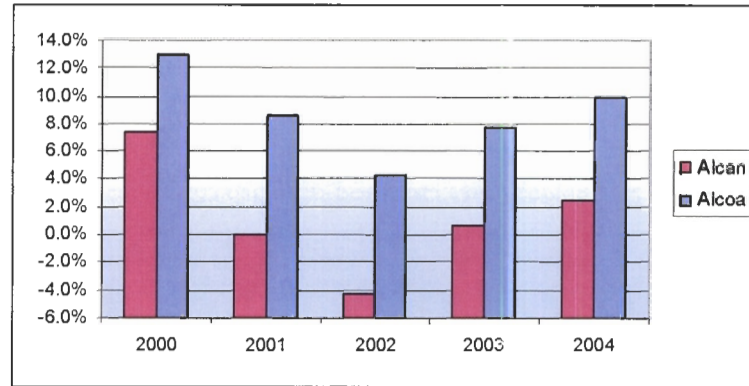


Figure created by author; data source: Alcan and Alcoa Financial Statements, 2000 - 2004

For years, these two companies have been competing for increased market share and financial growth. One of the means of ensuring future investment is for Alcan to maintain a high Return on Equity by increasing the Profit Margin, improving the Asset Turnover or increasing the Financial Leverage.

In summary, one can assume that Alcan has completed its major asset restructuring and through gained synergies, the company will continue to improve its profitability. However, in order for Alcan to achieve its value maximization objectives, the business units will have to improve their profit margin by increasing sales, improving efficiencies and reducing costs.

To gain an understanding of APM-BC's competitiveness; the smelter's value chain will be analyzed. The advantage of the value chain is that it reflects the primary activities associated with producing a product, as well as the secondary activities required for support. It further serves to identify whether APM-BC has a cost or differentiation advantage.

3.2 Value Chain

APM-BC’s primary functions include Inbound Logistics, Reduction, Casting, Outbound Logistics, Marketing and Sales, and Technical Services. Secondary functions include Firm Infrastructure, Human Resources Management, Technology Development and Labour. As illustrated in Figure 3.2 below, the combined interconnection between primary and secondary or supporting activities contributes to the overall profit margin.

Figure 3.2 APM-BC Value Chain

Secondary					M A R G I N
Firm Infrastructure					
Human Resources Management					
Technology Development					
Procurement					
Primary					
Inbound Logistics	Operations		Outbound Logistics	Marketing and Sales	Technical Services
	Reduction	Casting			

Core Operation Inputs: Raw Materials, Energy, and Labour

Figure created by author

3.2.1 Core Operation Inputs

To produce aluminum, several inputs are required. The core inputs that significantly impact the cost are Raw Materials, Energy and Labour.

3.2.1.1 Raw Materials

Alumina, which is extracted or refined from bauxite, is the primary raw material for making aluminum. Basically, it is a 2 to 1 ratio. Approximately 2 tonnes of bauxite are required

in order to produce 1 tonne of alumina; and 2 tonnes of alumina are required to produce 1 tonne of aluminum. Historically, alumina prices have been set at 11 to 13 percent of the London Metals Exchange (LME) price for aluminum. Based on the market price of aluminum, which currently ranges between US\$1,650 to US\$1,850, the average smelter spends between US\$430 to US\$480 on alumina for every tonne of metal produced. While some smelters buy their alumina on a spot market basis, others have long-term contracts with alumina producers. Typically these contracts take the form of a fixed market price with standard escalation.

In order to secure supply and manage raw material costs, Alcan has backward integrated into the bauxite and alumina industries. Alcan's Bauxite and Alumina group (B&A) owns or is in a joint venture with seven bauxite mines and ten alumina refineries. This division also purchases alumina from third parties. Approximately 60 percent of the alumina produced and purchased is used to meet Alcan's own smelting requirements.

The B&A group have secured long-term supply agreements with the various smelters. Even though these agreements are in place, alumina remains a significant cost to APM-BC due to the high prices charged by the B&A in order to remain profitable. An increase is forecasted in alumina prices for the next few years due to China's increased demand on the alumina industry, which is already operating at full capacity.

3.2.1.2 Energy

Energy is another significant cost factor. On average, 18-megawatt hours are consumed for every tonne of aluminum produced. The world average grid price is US\$19 per megawatt hour (excluding China);⁷ therefore, smelters in the industry are incurring an energy cost of approximately US\$350 for every tonne of aluminum produced. Due to technological advances,

⁷ Information obtained from internal company article: China's Aluminum Industry, Setting The Record Straight, Industry Analysis Department – Alcan Inc., March 2004.

world-class companies are only consuming 13- or 14-megawatt hours versus 18 consumed by the average smelter.

The 1950 Agreement between Alcan and the provincial government was the major factor in Alcan's decision to build a smelter in Kitimat. The low cost of power, provided by Kemano's hydropower facility, is vital for ongoing operations. Even though the cost of power for APM-BC is relatively low, the smelter consumes a significant amount of energy compared to new modern plants. APM-BC also consumes more energy than the amount consumed by world-class smelters that have similar technology; therefore, there is opportunity for the plant to reduce its costs by decreasing its consumption levels.

3.2.1.3 Labour

Labour is the third major cost factor for producing aluminum. There is a substantial disparity between Western World and Developing Country wages. The average hourly wage for the manufacturing sector in the Western World is US\$22⁸ per hour compared to hourly rates as low as US\$1.50⁹ per hour in developing economies. In addition to wages, companies in the Western World are also incurring employee health and benefit costs. Another factor that affects labour costs is deployed technology, which will be further discussed in section 3.2.2.2 Reduction.

To maintain its operation, the company is currently employing approximately 1,550 employees. APM-BC's old technology requires a significantly higher number of people compared to new modernized facilities. Because of the increased percentage of required workers plus assuming that Kitimat's wages are slightly higher than the industry average, APM-BC has a labour cost disadvantage.

⁸ Andy Shinnan, and Kristina Shimmons, "Manufacturing Statistics Canada, Construction and Energy Division, Primary Metals Industries," 2000, Issue 8410: 9.

⁹ Approximate low-cost country hourly wage based on internal Management knowledge

3.2.2 Primary Activities

Primary activities are those that contribute to getting the product closer to the customer. The main purpose of this section is to review the major linkages and costs in order to gain a better understanding of APM-BC's cost competitiveness.

3.2.2.1 Inbound Logistics

Kitimat's deep-sea port is another important factor in Alcan's initial investment decision. The majority of APM-BC's raw materials are shipped to Kitimat by vessel. Because of economies associated with large vessel holds, shipping alumina, pitch and coke from Australia, Korea and North America, respectively, is relatively low as compared to the actual cost of the raw materials.

3.2.2.2 Reduction

Alumina is electrolytically reduced into molten aluminum. This reaction occurs in Hall-Heroult reduction cells (called cells or pots) where the bound oxygen in the alumina reacts with carbon electrodes to form carbon dioxide gas and aluminum.

Two basic kinds of technology perform this process. The older technology is known as 'Soderberg'. The two types of Soderberg aluminum reduction technology are horizontal stud soderberg (HSS) and vertical stud soderberg (VSS). The other technology is known as 'Prebake'. The two types of Prebake are centerwork prebake (CWPB) and sidework prebake (SWPB). CWPB is generally the cleanest, most efficient and most automated technology, and ongoing improvements in CWBB design have further increased the energy efficiency relative to the older technologies. Soderberg technologies demand more energy and emit more fluorine, carbon dioxide and perfluorocarbons (highly potent greenhouse gases) than do the Prebake technologies.

Due to the large capital investments required to modernize existing smelter technology, all four technologies are still in use; however fewer and fewer smelters utilizing Soderberg technology remain in operation.

APM-BC's older vertical stud Soderberg technology offsets its energy cost advantage. Even though the company has made significant capital investments in order to optimize the Soderberg potrooms, the high labour costs remain a concern. Out of the total workforce, approximately 45 percent of the employees (i.e. 700 personnel) work in Reduction. Using an average hourly rate of approximately US\$22 plus employee benefits, it costs the company approximately US\$173¹⁰ per tonne in labour and benefits for every tonne of hot metal produced. When you factor in the additional manpower requirements plus the average hourly wage received by Reduction employees, it is safe to assume that APM-BC could be absorbing almost double the labour cost compared to world-class and developing-country smelters that use the newer Prebake technology.

3.2.2.3 Casting

APM-BC produces three different product families: Remelt, Billet and Sheet. Remelt is hot metal which is cast or 'solidified' without being alloyed;¹¹ whereas cylindrical Billet and slab Sheet are alloyed into a wide range of different products and cast into varying dimensions and lengths according to customer specifications. Pricing for Billet and Sheet value-added products is based on the LME primary aluminum price plus negotiated premiums. The Cost Insurance Freight (CIF) market premium, set by suppliers and traders on a quarterly basis, is influenced by the LME base price for primary aluminum. The CIF Japan price forms the basis of pricing for the

¹⁰ US\$32 (\$US22 salary plus benefits) per hour * 2080 hours per year * 700 employees / 270,000 metric tonnes hot metal production capacity

¹¹ Additional metals such as iron, copper, magnesium, etc. are added to the molten aluminum to produce different products.

Japanese and the Korean markets. In North America, the market premium is known as the Midwest Premium.

In addition to the CIF and Midwest premiums, Alcan's sales representatives and customers negotiate premiums for various products (i.e. alloy, diameter, cut-length, and packaging) on an annual basis. Because the majority of value-added products are in fact commodities, Alcan has limited bargaining power other than premiums for certain speciality value-added products.

As stated above, the production process for Remelt, Sheet and Billet varies. Remelt is simply cast and bundled¹² for shipping whereas Sheet is alloyed, cast, cut and inspected. Due to the size of the product, bundling or strapping Sheet pieces together is not required. Billet has the greatest number of steps in the production process. In addition to being alloyed, cast, and inspected, the product is also heat-treated, cut to length and bundled for shipping.

Sheet and Billet products command similar product premiums. Although APM-BC would like to increase its Sheet to Billet ratio, the smelter has physical and capital constraints. Approximately 50 percent of APM-BC production is presently Billet. The extra processing requirements for producing Billet, coupled with high labour costs and older Billet cast-house technology, puts APM-BC in a cost disadvantage. World-class smelters have gained casting cost advantages by using continuous inspection and heat-treating processes.

With respect to Sheet, although APM-BC's high labour costs puts the company at a cost disadvantage, the cost disparity is less because APM-BC has state-of-art sheet technology and also the product requires fewer processing steps. Table 3.2 illustrates APM-BC's approximate casting costs per tonne compared to world-class smelters. Note: The approximate US\$1,000

¹² Pieces are strapped together to facilitate shipping.

Hot Metal cost includes raw materials, energy and labour. Although there may be some variation, the Hot Metal cost has been held constant for comparison purposes.

Table 3.2 APM-BC Production Costs per Metric Tonne

	Hot Metal US\$	Casting US\$	Total US\$
World Class			
Remelt	1,000	30	1,030
Billet	1,000	150	1,150
Sheet	1,000	120	1,120
APM-BC			
Remelt	1,000	100	1,100
Billet	1,000	250	1,250
Sheet	1,000	150	1,150

Table created by author; data source: Internal Alcan Resources

3.2.2.4 Outbound Logistics

Approximately 85 percent of APM-BC's ingots are shipped to Asia by vessel. The majority of North American shipments are by rail or truck. Shipments by water and rail is relatively inexpensive as compared to raw material and labour costs. It is worth noting that competitors in the Middle East and Russia do have a logistics cost advantage over APM-BC because of their proximity to Asia, and also because of the available low-cost container back-haul rates.

3.2.2.5 Marketing and Sales

Marketing and Sales is considered a minor cost factor compared to raw material, energy, labour costs; however, it is a critical primary activity, specifically in the Asian market.

Because of the high energy costs to produce aluminum, Japan imports all of its primary remelt, which it then remelts and turns into to value-added Sheet or Billet. Japan's existing

casting facilities are able to meet approximately 90 percent of the country's requirements. For APM-BC to be part of the outstanding 10 percent, the company invests a significant amount of time building relationships and working closely with customers to further understand their needs. In addition to quality, the established trust is a significant factor in the customers' willingness to pay slightly more for APM-BC's products and services.

3.2.2.6 Technical Service

Technical Service is also a critical primary activity. The Metallurgical Department and Production Specialists, who are supported by Alcan's Research and Development Centres, work with the customers to assist them in resolving their production issues. This close working alliance builds close relationships, which gives APM-BC a competitive advantage.

3.2.3 Secondary Activities

The primary activities described above are supported by secondary activities. The efficiency of these functions and how they interrelate can further increase or decrease an organization's profit margin.

3.2.3.1 Firm Infrastructure

The core functions that support APM-BC's primary functions are Finance, Legal, Corporate Affairs, Regional Industrial Development, Maintenance, Engineering, Environment, Health and Safety. Nearly all of these supporting functions are performed in-house. Like the primary functions, the secondary functions are also focused on cost reduction. To assist the different functions (i.e. Reduction, Casting, Maintenance, etc.) in managing their costs, each have dedicated Management Accountants who assist the area with their operational budgets, and continuous improvement initiatives.

Legal services, which oversees patents, contracts and other miscellaneous requirements, is a critical function. Unfortunately the company is incurring additional expenses to manage the pending litigation between Alcan and the District of Kitimat with respect to the use of Alcan's Water Rights. Even though the particulars of the issue is not within the scope of this assessment, there is a connection to what the District believes to be Alcan's social-economic responsibilities. This will be further discussed in Chapter 4.

The Corporate Affairs function plays an important role in managing external communications and stakeholder relations. Stakeholder management is a necessity in order to maintain license to operate and attract investment; therefore, Corporate Affairs invests a significant amount of time and money to promote the company's social image.

The relatively new Regional Industrial Development function is also essential to the operation. The primary goal of this function is to work with local stakeholders in order to foster economic growth in the surrounding region. By the company increasing the socio-economic fabric within the local region, will in turn, assist the company in becoming more prosperous. The vital role that this function plays to ensure long-term viability of the company is further discussed in Chapter 6.

The other main area is Maintenance. Due to the extensive nature of the operation and the age of the plant, APM-BC incurs significant material and labour costs. For 2006, the function is targeting to reduce its maintenance expenditure by \$1 million. This target further emphasizes Procurement's supporting cost-saving role.

3.2.3.2 Human Resource Management

Managing the internal culture, labour relations, employee development and recruiting all affect costs. Employee retention and acquisition in northern B.C. is a primary concern for the

Human Resources function. Although a certain amount of turnover brings in 'fresh' ideas and processes, excessive turnover is costly. Not only does APM-BC incur high recruitment costs, but the company also loses valuable expertise.

3.2.3.3 Technology Development

Even though the majority of value-added Sheet and Billet products are commodities, APM-BC has managed to differentiate a number of Sheet and Billet products. These products are in high demand in niche markets in the Asia Pacific; and in turn, APM-BC receives a high premium. To date, APM-BC's competitors are not in a position to serve these speciality markets because they do not have the technical knowledge and expertise to produce this product. However, it should be noted that these products serve niche markets; therefore, their demand is more vulnerable to economic downturn.

3.2.3.4 Procurement

The Procurement function includes purchasing, warehousing and used-equipment disposal activities. Up until recent years, with the exception of raw materials, the local Procurement Department in Kitimat has autonomously negotiated contracts and purchased goods and services to support the entire operation. However, due to globalization and cost-reduction pressures, the function is in the process of transitioning to a centralized structure in order to gain further economies. Although the transition is slow, the Central Procurement function in Montreal is starting to play a more active role in negotiating contracts for goods and services that are considered strategic or widely used by a number of Alcan smelters. One of the main strategies being pursued is to consolidate goods and services in order to obtain volume price discounts from suppliers who are able to serve more than one of Alcan's facilities or who are able to provide a broader range of goods and services at a lower cost. This transition has huge implications for

local Suppliers and other Stakeholders. The strategies, potential savings, and economic implications and impacts on local Suppliers will be further discussed in Chapters 5, 6 and 7, respectively.

3.3 Market Prognosis

In addition to assessing APM-BC's cost advantages and disadvantages, market projections offer further insight into upcoming challenges and opportunities for APM-BC. The emerging economy of China has opened the door for increased market trading. This increased trading is expected to accelerate over the next 15 to 20 years due to the increased requirement of infrastructure needs like transportation systems, communication systems, schools, hospitals, houses and consumer goods. Based on the requirements of emerging countries, global aluminum consumption is projected to grow at a rate of 3 to 4 percent per year. With this predicted growth, coupled with the speculation that there will be a continued smelting capacity shortage for the next few years, world inventories should decline. With declining inventories, aluminum prices are projected to remain high.

Even though a favourable market prognosis is forecasted for the industry over the next decade, many variables still exist. These variables could have a major impact on projected consumption levels, particularly for emerging economies such as India, China, and the rest of Southeast Asia. Economic downturns, political changes and technological advances are hard to predict. The only 'sure thing' is that cost reduction will remain a priority for producers in the industry.

3.4 Competitor Landscape

The competitor analysis was done from an external perspective, without having access to privileged information. This section serves two purposes. First, to give a brief overview in order

to highlight the strengths of APM-BC's major rivals and to provide a better appreciation of APM-BC's competitive landscape. Second, to assess whether or not APM-BC's competitors place a high importance on CSR or on supply chain management in order to gain a competitive advantage.

APM-BC's main competitors in North America and Asia Pacific for sheet and extrusion billet are Alcoa, Comalco, Dubai Aluminum Company Limited, and RUSAL.

3.4.1 Alcoa

Alcoa is the world's leading producer of primary aluminum, fabricated aluminum, and alumina. Like Alcan, the company is vertically integrated and serves diverse industries including the aerospace, automotive, packaging, building and construction, commercial transportation, and industrial markets. The company employs 131,000 people in 43 countries. Alcoa's business system, which is an integrated set of tool and principles to assist the company in making improvements and eliminating waste, has been instrumental in their cost-saving program. At the end of 2003, the company achieved a saving of US\$2.2 billion over the course of two three-year cost challenge programs that began in 1998. In 2004, the company announced another three-year challenge, calling for a further reduction of US\$1.2 billion. Provided that the company is successful, upon completion of their 1998-2006 program, Alcoa will have eliminated over US\$3.3 billion dollars.

From an external perspective, it is evident that Alcoa considers sustainability and community investment to be strategic elements in enhancing its brand image, reducing its business risk, and gaining further market access. The company's Internet site is designed in a fashion that permits the public to obtain instant access to the donation details including cause, city, state/province, country, and donation value.

From an external perspective, there is no evidence to determine whether or not Alcoa places a high importance on supply chain management.

3.4.2 Comalco

Comalco, a wholly owned subsidiary of Rio Tinto, sells more than 820,000 tonnes of aluminum per year, which are produced at its four smelters located in Australia, New Zealand and the U.K. The company produces a wide product mix, including rolling slab, extrusion billet, foundry ingot/T Bar, high purity ingot, EC ingot/T Bar and standard ingot/T Bar. This global company has sales offices in major business centres around the world including Australia, Japan, Korea, South East Asia, New Zealand, USA and Europe. Comalco is vertically integrated with a 38.6 percent entitlement to the alumina produced at the Queensland Alumina Limited refinery in Gladstone, and a 56.2 percent entitlement to alumina produced at Eurallumina SpA refinery in Sardinia, producing 3.6 and 1.0 million tonnes of alumina, respectively. The company is expanding its alumina producing capability with a 1.4 million tonne refinery, scheduled to start production in 2005.

From an outside perspective, the company appears to have a high focus on CSR. In addition to producing an impressive sustainability report, the company's Internet site projects an image of social goodwill. To elaborate further – the site is designed in a manner that if one wishes to find out more information on a particular 'production' facility, the individual would have to access on one of the 'community' pages. Each 'community' page also contains information on the contributions that the company makes for that particular region, upcoming community events, etc. It is difficult to determine the extent that CSR played in improving the company's safety, environmental and operational performance; however, the image portrayed is that of a company with high social values.

With respect to Suppliers, the company appears to have a strong focus on establishing alliances. The company clearly establishes minimum requirements and expectations, including competitive pricing, transaction cost reductions, accuracy, quality, service and speed. The company is in the process of implementing e-Procurement (e.g. Quadrem¹³), which will enable the company to further leverage its purchasing power.

3.4.3 Dubai Aluminum Company Limited

This single site aluminum smelter, located in Dubai, United Arab Emirates, incorporates a 1450-megawatt power station and water desalination plant capable of producing 30 million gallons of fresh water daily. The 25-year old prebake smelter produces 536,000 metric tonnes per annum in the form of foundry alloy, extrusion billet and high purity aluminum. The Dubai Aluminium Company Limited (DUBAL) is accredited to the ISO 9002 quality standard and awarded the ISO 14001 environmental standard. Using its adjacent dock facility, the company ships products to over 200 customers across the globe on a 'just in time' basis. The smelter's location, coupled with its port facilities, enables the plant to receive alumina, petroleum coke and pitch from suppliers in Australia, United States and Korea, respectively. The port also provides the company with the ability to expedite shipments to markets in the Far East, Asia, USA and Europe.

The company's competitive strength appears to be its 'just in time' production process. Since Supplier development is one of the elements in ISO 9002, an assumption can be made that the company spends a great deal of resources ensuring supplier capability in order to support their 'just in time' competitive strength. Although safety and environmental protection are elements of

¹³ Quadrem is an electronic procurement (e-Procurement) and an electronic catalogue (e-Catalog) system that supports reverse auctions, request for quotations, bid analysis, etc. for suppliers around the world. Various Alcan divisions are currently using Quadrem. APM-BC is targeting to implement Quadrem in 4th Quarter, 2005.

sustainability, compared to Alcoa and Comalco, the company does not seem to place a high importance on community development and social well being.

3.4.4 RUSAL

RUSAL was founded in 2000. The company is actually an amalgamation of Russian aluminum smelters and alumina refineries that are owned and operated by core shareholders in Sibirsky Aluminium (since renamed Basic Element) and the major Russian oil company, Sibneft. RUSAL is one of the world's fastest-growing companies, producing primary aluminum, semi-finished products, packaging material, cans and alloys for customers around the world. RUSAL employs over 50,000 people in seven Russian regions and eleven foreign countries.

To increase its competitive stance, the company is increasing its production efficiencies and securing its raw material supply. In 2004, the company produced 2.7 million tonnes of aluminum and annual sales were reported to be over US\$5.4 billion. The company also invested over US\$534 million to increase its production capability. The reported productivity gains per person are impressive – from 77 metric tonnes per person to 137 metric tonnes between 2000 and 2004. To secure its raw material supply, between 2000 and 2004, the company changed its purchased-to-owned alumina percentage ratio from 65:35 to 40:60. The company's posted 10-year strategy is to increase primary aluminum production to 5 million tonnes per year and to increase alumina production to 8 million tonnes per year.

From an outside perspective, social responsibility does appear to factor into RUSAL's image and competitive strategy. The company's smelters in Bratsk, Sayanogorsk and Krasnoyarsk are ISO 14001 certified (International Standard of Environmental Management). The company has also plans to implement Occupational Health & Safety Assessment Series (OHSAS 18001) throughout its facilities by the end of 2005.

To improve its corporate image, the company does make charitable donations and provides solution support for identified problems within the various regions. RUSAL spends \$50 million a year on the maintenance and renovation of amenities, on outdoor sports grounds and gyms, on social events, and on various other charities. Although all companies have a strategic sustainability framework, what is somewhat ‘unusual’ is that the company openly publicizes its strategic approach to charity work. To elaborate, the company posts on their Internet site that it will only initiate projects that would –

- “ - stir wide public interest and receive coverage in the mass media as a result of actual (affordable, noticeable and visual) help to people;
- promote involvement in charity work among authorities of all levels, community leaders, clubs of youth and children and employees at RUSAL enterprises”¹⁴

Although other companies may be more discreet, the above posting emphasizes the fact that RUSAL views CSR as a strategic means of gaining public support, obtaining free publicity and securing shareholder interest.

3.4.5 Aluminium Bahrain

Aluminium Bahrain (Alba), shared by the Government of Bahrain (77 percent), the SABIC Industrial Investments (20 percent) and Breton Investments (3 percent), produces 500,000 tonnes of aluminum per annum. This large single-site producer is geographically well situated to obtain raw materials from Australia and to serve markets in Asia, Europe, and the Americas. Alba has its own power generating facilities with a total generating capacity of 1,504 megawatts.

Alba’s history is similar to APM-BC. In the mid 1960s, the Bahrain Government was seeking to ‘diversify’ its economic base from being heavily dependent on oil. The Government’s

¹⁴ RUSAL, Objectives and Tasks, Charity Work 2004 [online], 2005.

objective was to establish an industry that would provide valuable export earnings, develop the country's resources, and provide training and employment for people in the region.

With respect to sustainability, the company does recognize safety and is also ISO 14001 certified (International Standard of Environmental Management). Aside from operational safety and environmental compliance, RUSAL shows little regard for philanthropy. The fact that the company is government owned could be a contributing factor on why the company places little emphasis on CSR, as those services are provided directly by the government itself.

4 EXISTING STRATEGY

A firm adds value to a product when it improves the product's quality, provides a service to the consumer, or customizes the product to consumer needs in such a way that the consumer will pay more for it or select the product; that is, when the firm differentiates the product from that offered by competitors.¹⁵

Alcan's financial analysis and the discussion on APM-BC's value chain and key competitors have provided an overview of the smelter's need to reduce costs in order to remain competitive. The competitor analysis explored whether or not the competitors placed a high emphasis on CSR and supply chain management. In addition to rivalry and intra-company competition, APM-BC must also ensure that it pays close attention to CSR. The purpose of this chapter is two-fold – first, to gain an understanding of APM-BC's current cost reduction and CSR strategies; and second, to gain an understanding on why CSR cannot be ignored even when the company is under extreme pressure to reduce costs.

4.1 Cost Reduction

Currently APM-BC has a energy cost advantage and is serving a niche market with its differentiated sheet and billet products, but it is only a matter of time before the smelter's competitors acquire technology and sufficient expertise to compete in those markets. In addition to external rivalry, the 2004 Pechiney acquisition has also increased intra-company competition. Prior to the acquisition, Kitimat was uniquely positioned within the Alcan system to serve the

¹⁵ Charles W. L. Hill, "Competing in the Global Marketplace," *International Business*, third edition, Irwin/McGraw-Hill (2000): 379.

Asian market. Not only did the plant have a low-cost energy advantage, but it also had a location advantage with its Pacific Ocean deep-sea port.¹⁶ Subsequent to the Pechiney acquisition, APM-BC's Australian sister plant, Tomago, is also in a position to serve Alcan's Billet customers located in the Pacific Rim.

In response to existing economic pressures, APM-BC has modernized its facility, downsized its workforce, reduced its operational budget and implemented a continuous improvement program. These measures have been effective, but continued efforts to remain competitive in the global market are required. In recent years, the company has realized that there is potential to achieve significant savings in managing indirect non-revenue-generating expenditures, more commonly termed as MRO (maintenance, repair and operational expenditure). According to Barry¹⁷, indirect spend refers to the following types of expenditures:

- Electrical and mechanical parts and equipment (including materials to support capital projects)
- Electronic parts and equipment (including computers and peripherals)
- Professional equipment and supplies
- Industrial supplies (including general maintenance supplies)
- Safety and healthcare equipment, parts and supplies
- Machine shop supplies (industry machinery, equipment and tools)
- Office supplies and equipment
- Chemical supplies and equipment
- Vehicle and fleet parts, equipment and supplies

Given the breadth of materials and services covered, and the multiple channels through which these items are procured, MRO is deemed a highly complicated area to manage. Because

¹⁶ Sailing times from Northwest B.C. are approximately 30 hours less than any other ports in North America.

¹⁷ J. Barry, "The Purchasing Handbook: A Guide for the Purchasing and Supply Professional," McGraw-Hill, New York, NY 1999: 833.

of the potential cost savings, Procurement has begun to take a more structured approach to managing this area.

4.2 Stakeholder Management

The requirements for cost reduction create internal tension in that the smelter must manage these reductions without compromising its social responsibility. The notion that corporations need to attend to social, environmental and economic demands imposed by stakeholders, as well as financial demands coming from shareholders is no longer an option. It will no longer do for a company to go quietly about its business, break no laws, sell its products and make money. Today, all companies, especially large corporations such as Alcan, pay elaborate obeisance to the principles of corporate social responsibility. There are two fundamental reasons for this attention. First, society's ability to scrutinize corporate behaviour has never been higher. Using mass media, activist groups are able to make the public aware of corporate misbehaviour with greater speed and detail than ever before. Second, companies are more vulnerable to criticism because their share value is also based on intangibles such as brand equity and social license to operate. This makes companies more prone to sharp drops in share price; and because customers flee controversy, companies deemed as socially irresponsible are more prone to drops in market share as well.

APM-BC's stakeholders, illustrated in Figure 4.1, are not only impacted by the plant's decisions, but they also have a major influence on the smelter's success. Because business and society are interwoven rather than distinct entities, APM-BC's cost cutting initiatives must take into consideration various aspects related to CSR. These aspects include creating product differentiation, building reputational capital, attracting investment and maintaining license to operate.

Figure 4.1 APM-BC Stakeholders

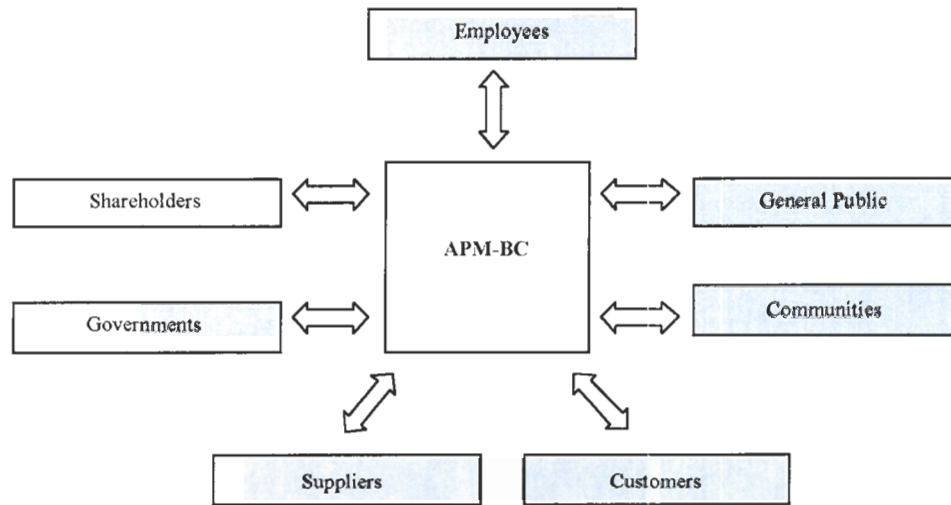


Figure created by author

4.2.1 Create Product Differentiation

The practical need for Corporate Social Responsibility as brand insurance comes from changing social expectations, affluence, and globalization.¹⁸ Alcan makes significant investments in this area in order to differentiate or brand their product. As discussed in section 3.3 Competitor Landscape, Alcan’s strategy is not unique. Alcoa, Comalco, RUSAL, and other competitors pay close attention to their social performance in order to ensure that their products are associated with a socially responsible company. To better understand Corporate Social Responsibility as a product differentiation strategy, economic supply and demand principles can be applied.

Because a customer’s reputation is based on whom they do business with, it is natural to assume that they will want to do business with a ‘reputable’ company that provides the quality

¹⁸ David Chandler and Willian B. Werther, “Strategic Social Responsibility as Global Brand Insurance,” *Business Horizons*. Greenwich. vol. 48, iss. 4 (Jul/Aug 2005): 317

products at competitive prices. In today's business climate, it takes more than product quality and service to establish a good reputation. Customers are now 'demanding' products from socially responsible companies. Through the purchase of these products, customers are indirectly supporting a cause and rewarding companies that are socially and environmentally responsible. Corporate Social Responsibility also involves intangible attributes such as the company's reputation for quality and reliability. The presumption is that firms that actively support social and environmental causes are more reliable and, therefore, the products are of higher quality.¹⁹

4.2.2 Build Reputational Capital

Corporate Social Responsibility can also build a company's reputational capital. Building reputational capital is in essence increasing the company's corporate image or goodwill, which then acts as a buffer to protect the corporation from negative situations. When a firm establishes a positive reputation, it has a strategic asset, which if put to good use, can help ward off future problems. Bad publicity can ruin any company. Mass media, either positive or negative, raises awareness for those who prefer to purchase products manufactured by socially responsible companies.²⁰ Journalists often provide free publicity to companies who have or lack commitment to Corporate Social Responsibility. This free publicity heightens public awareness, reduces information asymmetry, and influences demand.

¹⁹ Abagai McWilliams and Donald Siegel, "Corporate Social Responsibility: A theory of the Firm Perspective," *Academy of Management, The Academy of Management Review*, vol. 26, iss. 1 (2001): 117.

²⁰ Wexler, M. "Confronting Moral Worlds." Prentice Hall Canada Inc. (2000): 39.

APM-BC makes significant investments to build reputational capital. In 2004, approximately \$1.1 million dollars was invested in a diverse range of projects. Examples of these projects include:

- the Alcan Omnimax Theatre at Science World
- the Alcan International Dragon Boat Festival
- the Recycling Council of BC
- the Pacific Salmon Foundation

In addition to the above investments, the company strives to address local issues through various business partnerships. An example is the Three Nations Forest Stewardship Initiative, in which the company is working with three local First Nations to address the infestation of Mountain Pine Beetle on forested lands near the Nechako Reservoir. The project entails harvesting approximately 400,000 cubic meters of affected timber. To quote, Travis Engen, Alcan's President and Chief Executive Officer, "The program creates jobs, economic opportunity and revenue for our partners, establishes a community legacy fund and the forest is managed under proper sustainability principles."²¹

4.2.3 Attract Investment

There is also a growing interest by investment world in the link between shareholder value and non-financial corporate performance. An indication of this change is the recent decision by Standard & Poors (S&P) to partner with the UK-based think tank SustainAbility, and the United Nations Environment Programme, in the production of a highly regarded international

²¹ "Responsibility and Leadership – The Value of Relationships," Notes for an address by Travis Engen, President and Chief Executive Officer, Alcan Inc., to the Vancouver Board of Trade, Vancouver, Canada, (2005).

review of corporate non-financial reporting.²² S&P, a global provider of financial analysis and risk assessment stated that the management of social and environmental risks facing a corporation should explicit board oversight.

4.2.4 Maintain License to Operate

As society's views regarding acceptable standards of corporate behaviour evolve, items migrate from the realm of corporate discretion to that of regulatory compulsion. Historical examples include workplace safety, racial discrimination, environmental protection, minimum wages, etc. As businesses incur greater accountability, the pressure to push behaviour from discretion to regulatory compulsion will intensify. Just recently, Canada passed a law making it easier to lay criminal charges against corporations for workplace health and safety violations.

In addition to social obligations, organizations must attend to demands of those in its environment that provide resources necessary for its survival. Each stakeholder community provides resources that are critical to the firm's long-term success. For example, stockholders can bring in capital, suppliers can give access to material resources or immaterial knowledge; local communities can offer infrastructure and location; employees and managers can grant expertise, leadership, and loyalty; customers can provide loyalty and positive word of mouth and the media can help spread positive corporate images.²³ Today, stakeholders have the ability to withdraw needed organizational resources.

A historical example is the government's cancellation of the Kemano Completion Project (KCP) in January 1995. Prior to the cancellation, Alcan had spent \$535 million in order to complete the 2nd phase of the initial 1950 Agreement in which the B.C. Government granted

²² Mark Schacter, "Boards Face New Social Responsibility," CA Magazine, (2005).

²³ Isabelle Maignan and O.C. Ferrell, "Corporate Social Responsibility and Marketing: An Integrative Framework," Journal of the Academy of Marketing Science, vol. 32, no. 1: (2004): 8.

Alcan the right to reverse the flow of the Nechako River in order to create hydro electricity to power the smelter. Like the current litigation between the District of Kitimat and Alcan, the KCP case was complicated and involved many stakeholders. The inability to address the interests of the Department of Fisheries and Oceans (DFO) with respect to the amount of water to be released to the Nechako River resulted in the DFO obtaining a B.C. Supreme Court injunction in 1980. Between 1980 and 1984, the government of B.C., DFO and Alcan tried to reach a consensus on appropriate flows. Alcan took the matter to court in 1985. Eventually, a tri-party out-of-court agreement was achieved by the 1987 Settlement. In this agreement, Alcan relinquished water rights to the Nanika River and the Nechako Fisheries Conservation program (NFCP) was established. Even though there were many positive aspects to the agreement, various local organizations and environmental groups had concerns about the impact to the surrounding area. After much public debate and court action, the Kemano Completion Project, which started in 1988, was suspended in 1991. A study was performed by the B.C. Utilities Commission in order to analyze the impact of completing the project. Even though the 1994 B.C. Utilities Commission report neither approved nor disapproved KCP, Alcan had already lost the necessary stakeholder support, and ultimately the project was cancelled in 1995.

APM-BC is again experiencing this withdrawal. Due to failed relations and misunderstandings, the Kitimat Council has filed a lawsuit against Alcan and the Provincial Government stating that the company is not honouring the 1950 Agreement. The pending litigation with respect to power sales has several implications. In addition to the legal and public relation costs, the conflict with the District has created an uncertainty, which ultimately could impact future investment, customer sales and supplier relations.

In summary, stakeholder management is central to putting any conception of CSR into practice.²⁴ It involves taking into account the impact of the firm's actions on various internal and external groups. Although APM-BC must focus on cost reduction in order to remain competitive, the smelter must also take into account the various stakeholders that are affected by its actions. The company must also recognize that it cannot be made responsible for all social issues. Before responsibilities can be assigned and before APM-BC can be held accountable for its cost reduction initiatives, it is necessary to develop a systematic method of determining what is and what is not a social issue for the plant. This recognition allows the company to pursue cost-saving initiatives within the local region. Undoubtedly, any MRO cost-reduction initiative will have an impact on the various stakeholders, particularly local Suppliers, but this does not mean that the company should not implement cost-saving measures. What APM-BC must do; however, is to pursue those initiatives in a socially responsible manner.

The next chapter will further explore various means and strategies that Procurement is using in order to assist the company to become more cost competitive.

²⁴ R. Freeman, "A Stakeholder Approach," Strategic Management, Boston: Pittman.

5 PROCUREMENT'S CONTRIBUTION TO COST COMPETITIVENESS

To ensure long-term availability of critical materials and components at competitive cost, a host of manufacturers will have to come to grips with the risks and complexities of global sourcing. This calls for nothing less than a total change of perspective: from purchasing (an operating function) to supply management (a strategic one).²⁵

Procurement has been lagging behind other departments in acknowledging and adjusting to worldwide economic changes. For years, the function has been primarily tactical in nature, accepting disruption to the supply of goods and services from their established supplier network. To minimize supply risk and to take advantage of the potential buying power, the function is in the process of restructuring their organization and establishing best practices in order to assist Alcan in becoming more cost competitive.

The purpose of the following chapter is to present Procurement's strategic direction and to explore how this could significantly affect the current relationship between APM-BC and their local Suppliers. To gain a better understanding of how Procurement's role has changed in recent years, industry trends are presented. Following the industry trends, the chapter will review Alcan's 'Supplier Portfolio Management' framework. This framework highlights the various methods that Alcan plans to use in order to minimize supply risk and leverage buying power. The chapter will also discuss APM-BC's purchasing strategy that could have a significant impact on its existing Suppliers.

²⁵ P. Kraljic, "Purchasing Must Become Supply Management," Harvard Business Review, vol. 83, iss. 5 (1983): 1.

5.1 Future Industry Trends

Electronic commerce (e-commerce) has become the standard method for companies to conduct transactions. Most Canadian manufacturers use electronic business technologies for communication and access to information, while about one third use e-business for marketing, publishing product catalogues, interaction with customers and business partners, purchasing and sales.²⁶ With respect to MRO, the application of e-commerce tools available to manage the purchase of goods is exploding. Although low in cost, these items require a high level of internal service time. One of the key advantages that e-commerce offers is the ability to consolidate individual purchases at predetermined intervals which reduces transaction costs and allows companies to take advantage of large volume discounts. According to Perrin, over the next 10 years, e-commerce will become the standard method of conducting business.

Third-party purchasing of non-strategic items is also expected to increase. Companies will buy most of their non-tactical products and services under master contracts. These contracts will be either negotiated by consortiums or by third-party companies who have both leverage and buying expertise. Large companies, who have substantive clout, may not have the need to use consortiums and third-party companies; however, their energies will be focused on strategic sourcing rather than tactical purchasing. Third-party purchasing will also intensify competitive bidding and negotiation.

As a result of globalization, core competencies have or are becoming the primary focus for organizations. Many firms are selectively outsourcing manufacturing, operations, services, logistics, design and development. Organizations will increasingly concentrate their consolidation efforts across worldwide buying units. This usually involves selecting suppliers

²⁶ Perrin Beatty, "Manufacturing Transforms as its Faces Global Realities," *Plant*, Willowdale, vol. 63, iss. 14, (2004): 34.

that have global design, production, and technical support capabilities. Strategic sourcing or supplier alliances will further become the basis for gaining a competitive advantage.

In summary, worldwide forces make it impossible for an organization to sustain a policy that ignores global resources. Whether we like it or not, we all work in a one-world economy. Tactical purchasing activities such as ordering, quoting, and expediting will be automated or outsourced to full-service providers. This will allow Procurement to concentrate their energies on building strategic alliances with selected suppliers who can assist the organization in the acquisition of goods and services through their global reach.

5.2 Alcan's Procurement Strategies

The Central Procurement function, located in Alcan's head office in Montreal, is continually evaluating best practices within the industry to help the various business units achieve cost savings. Following the results of an external and internal benchmarking audit, the function is in the process of reorganizing internal structures, increasing shared services and streamlining various processes. The new direction given is to adopt a centralized model in order to gain economies on expenditures that are deemed critical and/or are of significant cost. A significant component being added to the organization structure is the 'Procurement Value Team' (PVT). PVTs will be organized according to commodity groupings. Each major commodity grouping will have a commodity manager. The purpose of the PVT is to consolidate the goods and services in order to leverage Alcan's buying power with an objective of obtaining savings of 15 percent or higher. To support this new centralized structure, the function is in the process of implementing 'Supplier Portfolio Management' as a best practice. This practice, which has been successfully implemented by several large companies (e.g. Shell, Philips, Siemens, etc.), will have a significant impact on current supplier relationships, specifically APM-BC's local vendors.

5.2.1 Supplier Portfolio Management

Alcan's Supplier Portfolio Management framework is adapted from a model developed by Kraljic (1983). Although slightly altered, the principles remain the same.

Alcan has classified products according to 1) supply risk and 2) monetary spend. Supply risk is assessed according to item availability, number of suppliers, competitive demand and substitution possibilities. Monetary spend is defined in terms of volume purchased or total cost to the organization. Depending on the product classification, various purchasing strategies are explored. These strategies vary in complexity according to the strategic implications of the product or service being purchased. Figure 5.1 below summarizes Alcan's product classifications and recommended purchasing strategies.

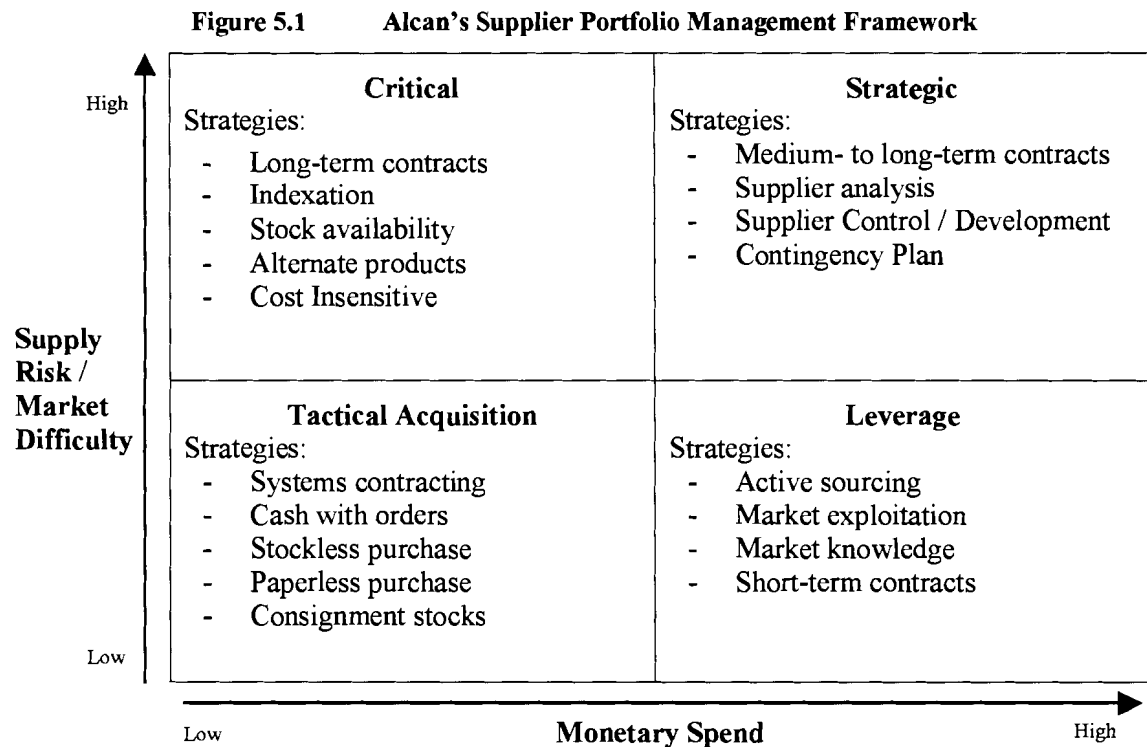


Figure created by author; data source: internal presentation, APMG Procurement Organization, 2002

5.2.1.1 Critical Items

Critical items are products and services that have high asset specificity and/or have a limited number of suppliers in the market place. In either case, an assessment should be done to determine if there is an opportunity to increase buying power and reduce supplier dependence prior to entering into a long-term contract. By broadening the specifications and finding alternatives, items that were previously classified as ‘critical’ change to ‘leverage’. MRO items are especially eligible for this move. Due to the technical nature of Alcan’s business and also due to the fact that the business units work largely in an autonomous fashion, MRO items have a high potential of ‘overspecification’. Standardizing the product across the business units, where possible, removes supplier dependency and allows the company to take advantage of volume discounts.

5.2.1.2 Tactical Acquisition Items

Commodities such as office supplies, standardized safety and industrial supplies, and administrative support are classified as ‘tactical acquisition’ items because of the low complexity and dollar value. The main objective for Alcan is to reduce transaction and holding costs through efficient processing, product standardization, order consolidation and inventory optimization.

One way to reduce costs is through preferred supplier contracts that allow customers to place orders directly to the supplier without manual intervention from Procurement. Although somewhat effective in reducing transaction and holding costs, additional strategies such as stock consignment and e-commerce (i.e. paperless purchase) are being pursued.

Stock consignment is when vendors store and manage material goods within the company’s warehouse. Actual monetary exchange does not occur until the item is issued to the

company. The main advantage to stock consignment is that the goods are on site but the company does not have to incur inventory holding costs.

E-commerce allows nearly the entire purchase to be completed through an electronic catalogue and ordering system. Although this technology offers a significant opportunity to achieve cost-savings, the company will only achieve the desired savings by pooling or consolidating their purchases across several, if not all, business units. It should be noted; however, that pooling is not always possible. Some commodities may be unique to a particular business unit or there may be special geographic or other circumstances that prevent the business from consolidating its purchases.

5.2.1.3 Leverage Items

Leverage items include purchases that are relatively easy to manage but have a high dollar cost. Obtaining a low total cost is critical. Management of these commodities allows Alcan to exploit the global market and utilize its full purchasing power. By combining the supply requirements of the various business units, Alcan increases its ability to leverage large volume discounts.

5.2.1.4 Strategic Items

The items classified as 'strategic' encompass purchases that are difficult to manage and strategically important to Alcan. Because of their importance, recommended strategies include developing medium to long-term contracts with 'selected' world-class suppliers. Successful strategic partnerships are difficult to maintain unless the supplier has both satisfactory price performance and co-design capability. In order to minimize supplier dependency and/or improve the existing partnership, supplier development is an option. Through supplier development, the supplier becomes, to a degree, an extension of Alcan.

5.2.2 Purchasing Strategy Within APM-BC

As previously stated, Alcan's Supplier Portfolio Management framework was developed as a guideline to assist the various business units in leveraging their buyer power. This framework will also be supplemented by changes to negotiated contracts in that the Supplier will have to deliver measurable dollar savings based on total cost of ownership. Even though the Procurement function is in its infancy in implementing a number of these best practices, there could be a significant impact to existing Suppliers who are unable to compete in terms of price, quality and service. Along with the portfolio framework, the company is also in the process of implementing various tools and technologies throughout the whole organization. One of the key technologies being implemented is Quadrem, which is scheduled to be installed in Kitimat in 4th quarter, 2005.

Quadrem is a global e-commerce system that many companies are actively deploying. The main features of Quadrem include electronic Request for Quotation (e-RFQ), Reverse Auction capability, electronic Catalogue (e-Catalogue), electronic Purchase Order generation, electronic Invoicing and Spend Analysis reporting. With this system, there is a potential to significantly reduce daily transactional costs. The electronic Purchase Order and Invoicing components are advantageous in that it reduces order and invoice reconciliation. The e-Catalogue system maintains active, up-to-date material price lists. This not only increases customer service, but also improves order and invoice accuracy, which in turn reduces transactional costs. Another major benefit of the system is that it helps firms to identify new relevant suppliers who would be able to provide goods and services at competitive prices.

Currently the Quadrem global database contains over 13,500 registered suppliers. These suppliers can also reap rewards from using the system. Improved order and invoice price accuracy allows suppliers to receive payments in a shorter period of time, which in turn increases

their cash flow. Another significant opportunity is the ability to grow new business using a single access point to a global pool of buyers. This single access point coupled with e-Catalogue, reduces transaction, marketing and sales costs.

Even though this system offers many benefits, there are also inherent risks, especially for local Suppliers. One of the major risks that local Suppliers face is the risk of losing margins. Access to global suppliers that have the ability to volume source, coupled with e-Catalogue and Spend Analysis tools, further eases APM-BC's ability to do 'buy-the-market' purchases. While there is an opportunity for registered local Suppliers to grow new business, they will be faced with the reality of having to compete in a global market. For Suppliers who have catered their business specifically to meet APM-BC's requirements, competing globally will likely be a difficult transition. This transition will be especially difficult for Suppliers who currently have limited computer and global market knowledge.

APM-BC also incurs risk. If margins erode too drastically, the company may alienate local Suppliers or even put some of them out of business. This bears not only a cost to the supplier but to the company as well. Damaged relationships, especially with primary stakeholders, could ultimately cost the company a substantial amount of money in trying to repair its social image. The other aspect to consider is the lost opportunity to acquire value-added local services. Even though strong relationships may not be necessary for MRO purchases, often, long-term established business relations result in a partnership where both parties can achieve mutual benefits and savings.

In summary, the implementation of Quadrem raises opportunities and risks for both the Company and the local Suppliers. APM-BC should carefully consider the economic and social implications of using this tool. The next chapter will explore further, the potential impacts of lost revenues in the local community.

6 COST REDUCTION IMPLICATIONS

Social performance is a key factor in ensuring a company's success, in terms of its acceptability, its ability to deliver quality and value, and its impact on your own reputation.²⁷

The previous chapter introduced a strategic framework that Procurement is fostering across the organization in order to leverage their purchasing power within the global market. The model is generic and does not take into account the potential implications to the community or to existing suppliers. The purpose of this chapter is to take a step back in order to gain an understanding of economic implications of cost reduction in a relatively remote region. By paralleling Kitimat's situation with another remote community, the chapter will compare the similarities and differences of the two regions.

²⁷ Fiona Brookes, Heloise Buckland, Dr. Andy Johnston, and Elizabeth White, "Purchasing for Sustainability," Higher Education Partnership for Sustainability (2005): 23.

6.1 Reduction in Local Spending

Through the years, APM-BC has monitored its annual contribution to the economy. The monitoring, which has occurred since 1979, assists the company in assessing the impact of the smelter's expenditure within the province, and particularly within the Kitimat-Terrace region.

Between 1995 and 2004, APM-BC has spent an average of \$141 million per year on goods and services (excluding raw materials). A number of capital projects were undertaken in 2003 and 2004 which accounts for the significant increase in worldwide expenditure of \$162.3 million and \$172.1 million, respectively.²⁸ These capital projects included: transformer bank replacements, generator breaker replacements, turbine needle upgrades, Kemano high voltage cable replacements, and station service power upgrades.²⁹

Although APM-BC increased its overall capital expenditure in 2003 and 2004, as depicted in Figure 6.1, the dollars spent on goods and services in the local Kitimat-Terrace region have declined. Between 2002 and 2004, expenditures dropped from \$54.8 million to \$42.5million, a 22.5 percent reduction.

It would be presumptuous to conclude that Alcan's procurement strategies, which include supplier rationalization and leverage volume buying, are the sole source of the decline; but it would also be erroneous to dismiss Procurement's cost reduction strategies as having no impact on the existing suppliers and local economy. In general, APM-BC is in a mode of cost reduction in order to compete in the global market. This mode of cost reduction, along with the change in procurement practices, ultimately has an impact on the local economy.

²⁸ Between 2002 and 2003, the Worldwide expenditure increased by \$32.3 million. Between 2003 and 2004, the Worldwide expenditure increased by \$9.8 million.

²⁹ Eric Vance and Associates, "Kitimat Works' Contribution to the Economy of British Columbia: 2004," (June 2005): 2.

Figure 6.1 APM-BC Local Region Expenditures, 1995 to 2004³⁰

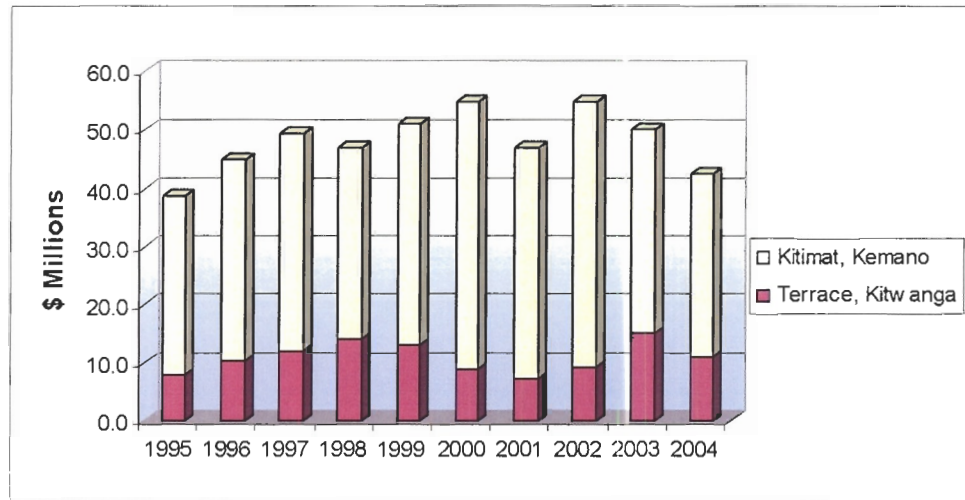


Figure created by author; data source: Eric Vance & Associates, Kitimat Works' Contribution to the Economy of British Columbia, April 2004

Kitimat's situation is not unique. As a result of globalization and advances in technology and logistics, companies are now able to source goods and services from every region in the world. Further, capital mobility, trade barrier breakdown and economic liberalization have increased the potential for profitable offshore production. In Canada and the US, this phenomenon has become increasingly visible as NAFTA has led hundreds of companies to move their operations to Mexico to take advantage of reduced production costs in the form of lower wage rates and less stringent labour and environmental standards and enforcement.³¹ Subsequent to the introduction of NAFTA, low-cost countries such as India and China have also entered the picture.

Although offshore production or relocation is not within the context of this paper, the above example does reinforce the complexities of globalization, capital markets and social responsibility. With APM-BC being the primary employer in the region, the effects of any changes in company or plant level policies are magnified. The intricacy of Kitimat's situation

³⁰ A consumer price index was applied to reflect 2004 values.

³¹ L. Panitch, "Globalization and the State," Socialist Register, Merlin Press, London (1994).

can perhaps better be understood by exploring further the economic dependency of other remote communities, the traditional government solutions to the problem, and the current role of business and government with respect to economic development.

6.2 Economic Dependency

Like Kitimat, many communities are, or have been, economically dependent on a single industry or employer. In other words, underdevelopment and regional disparity are not only international problems affecting developing countries, but are also “intranational” problems. Outside of the main industrial belt that runs between Montreal and Windsor and the areas surrounding the provincial capitals, Canada is largely composed of non-metropolitan areas, many of which are geographically isolated. Generally speaking, geographically isolated economies are resource-based (i.e. agriculture, fishing, forestry, mining) who suffer, to varying degrees, some form of dependency, underdevelopment and regional disparity. Cape Breton characterizes the plight that many isolated regions face. Because coal, steel and fishing industries have declined in recent decades, traditional sources of employment and economic viability are on the wane in that region of Canada. In addition to the inability to attract and retain new ‘job-creating’ investments, housing and various forms of social services in the region have been compromised. This combination of conditions generally leads to sentiments of neglect among local communities and the harbouring of feelings of resentment against national and regional power centres.³²

Although Cape Breton and other communities may be on the far side of the continent, their plight bears a resemblance to the difficulties that APM-BC and the surrounding region currently face. Like Cape Breton, many Kitimat constituents are finding it difficult to come to terms with the existing local economic situation and their dependency on APM-BC. Evidence of

³² G. MacLeod, “New Dawn Enterprises,” The Community Business Series, Thompkins Institute, Sydney, NS (1991).

their 'discomfort' is the pending litigation between Kitimat Council and Alcan with respect to power sales. There is no question that the dispute between Alcan and the District is complex, but, perhaps a portion of the District's underlying concerns is that they feel that Alcan and the provincial government have neglected the economic issues that the community now faces.

6.3 Traditional Business and Government Solutions

Traditionally, business has proposed two solutions for addressing the economic disparity problem. The first is the free-market approach where business argues that, given free reign, the market will naturally come to equilibrium. The problem with this approach is that world markets do not always clear, particularly labour markets. In addition to financial costs, workers or people tend to be attached to their families or places of origin. Further, this solution does not take into account the moral aspects and does not factor in the cost of breaking up families.

The second approach is one of government intervention and has been a means of addressing problems of regional disparity and underdevelopment in remote geographic locations. One approach used by the Canadian government is the promotion of behaviour that aligns itself to that of the market. Government policies (e.g. mobility allowances, retraining programmes, etc.) that encourage labour migration are prime examples. In Cape Breton's case, the government used labour migration incentives at the end of the Second World War when many of the coalmines started to close. This approach was unpopular with local residents who channelled their energies into trying to keep the mines open. Even though they were able to extend the life of some mines through political activity, ultimately economic reality resulted in Cape Bretoners having to leave the vicinity in order to follow labour market demand.

Another way in which governments sought to address the problem is by encouraging firms to locate to such regions by offering companies incentives (i.e. tax breaks, subsidies, etc.).

This strategy, which was predominant in the 1960s and 1970s, was not always successful. Firms, who took advantage of incentives being offered, were often foreign entrepreneurs and showed little commitment to the region and its development. These programs were not only costly to operate, but in some instances, the government lost billions of dollars.

Like the federal government who employed incentives for companies to relocate to Cape Breton, the provincial government of B.C. offered attractive water rights to Alcan to encourage economic development. In some respects, the Cape Breton case does bear a remarkable resemblance to Kitimat; but there is a significant difference in the economic outcome, particularly for Kitimat and the surrounding region. There is also a difference in how APM-BC managed stakeholder interests while the smelter was undergoing market fluctuations and the affects of globalization. To gain a better understanding, a recap of APM-BC's history to present day conditions is required.

When APM-BC began its operations in 1954, the company had to make a significant investment in the community. This investment was required in order to respect the agreement with the provincial government, and also to attract and retain employees and suppliers in the remote region. When Russia flooded the market with aluminum in the early 1990s, the surplus supply resulted in a huge drop in prices. In response, APM-BC curtailed its production, downsized its workforce and reduced its operational spending. To minimize the negative local economic affect of these actions, APM-BC made a concerted effort, with a preferred local vendor policy, to source more goods and services in Northwest B.C. As depicted in Figure 6.2, from 1992 through to 2002, there was an overall upward expenditure trend, particularly for Kitimat suppliers.

Figure 6.2 APM-BC Northwest Expenditures, 1980 to 2004

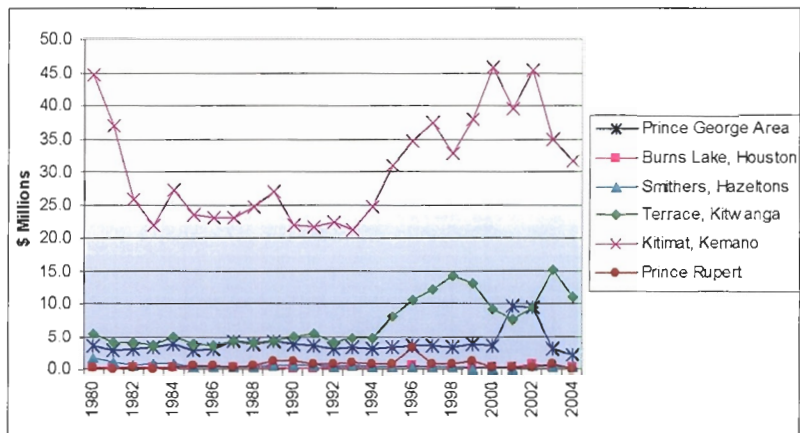


Figure created by author; data source: Eric Vance & Associates, Kitimat Works' Contribution to the Economy of British Columbia, April 2004

The preferred local vendor policy is both positive and negative. On the positive side, the policy protected the Supplier and fostered economic stability. However, for some local Suppliers, the protection may have also contributed to further dependency resulting in the inability to compete in today's global market.

With the focus on cost reduction, Alcan changed its purchasing practices to include moving towards purchasing from a smaller number of suppliers who are able to serve more than one of Alcan's operations and/or who are able to provide a broader range of goods and services at lower cost. In addition to the change in practices, APM-BC is targeted to receive e-commerce in 4th quarter 2005. The e-commerce system will facilitate global sourcing from low-cost suppliers, including China and India. Easy access to global sourcing could further reduce the expenditure in the local region. As illustrated in Figure 6.2, local Suppliers are already feeling the effect of the change in procurement practices. Between 2002 and 2004, the monetary expenditures for Kitimat suppliers has declined from \$45.4 million to \$31.6 million. A portion of the decline is due to APM-BC's overall cost reduction objectives, but a portion can also be attributed to the change in purchasing practices. Unless further action is taken, one can assume that this may be the beginning of a more permanent trend.

6.4 Current Role of Business and Government

In recent years, economic development or economic diversification has become a means to address the problem of regional disparity and underdevelopment. Both government and business now recognize that the communities themselves not only have the greatest interest in promoting their own development, but also have the most knowledge with respect to their particular problems and available resources. Through active support, self-sufficient community businesses develop, resulting in increased local economic growth. In Canada, a series of government programs were initiated, one of them being to establish local 'business development centres'. These centres received money from the federal government to permit them to work with non-metropolitan areas in order to create new businesses and jobs.

There are a number of groups whose objectives are to develop economic growth in the region. More recently, the Kitimat-Terrace Industrial Development Society was formed and officially registered on March 11, 2005. In order to foster economic growth, Alcan's Regional Industrial Development department works directly with the Kitimat-Terrace Industrial Development Society in order to promote new business and attract investment.

Since the formation of this function, Alcan and the Haisla First Nation have signed a letter of intent on June 2, 2005, in order to promote economic development within local region. This letter opens discussions with the Haisla First Nation for transferring six parcels of Alcan land in the Minette Bay area to the Haisla Nation. Another significant development is the signing of various agreements between Alcan, Arthon Construction Ltd. and Cascadia Materials Inc., which includes an option to purchase and develop Alcan's lands for a new port facility.

Local economic development also encourages creation of local business. As illustrated in Figure 6.3, between 2002 and 2004, the number of Kitimat suppliers has increased from 144 to

164. Although the smelter is active in this endeavour, it is too premature to determine the extent of economic growth that will actually occur within the region.

Figure 6.3 APM-BC Northwest Suppliers, 1980 to 2004

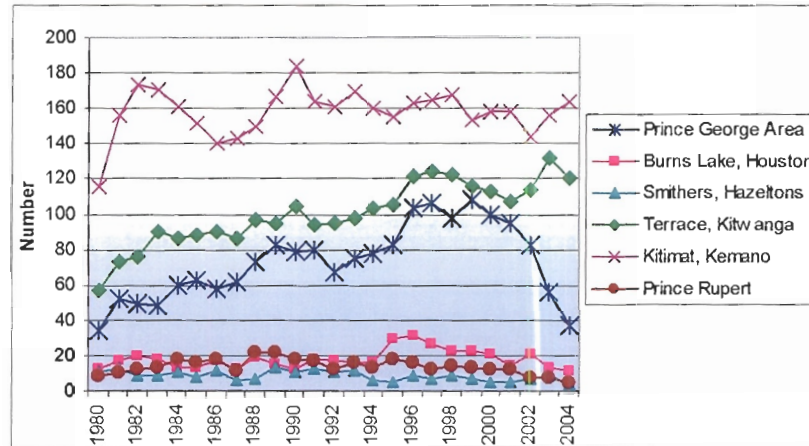


Figure created by author; data source: Eric Vance & Associates, Kitimat Works' Contribution to the Economy of British Columbia, April 2004

What is important to note is that the Regional Industrial Development function acts as a catalyst to promote new business. In order to foster socio-economic growth within the region, a 3-pillar strategy has been developed.

The first pillar is to help to 'Brand' the region so that businesses and other potential investors become more aware of what the region has to offer. The second pillar is to identify 'Winning Conditions'. Within this pillar, the function has identified a number of key strengths (i.e. Forestry, Eco-tourism, Energy, etc.) that can be leveraged within the region. The third pillar is 'Project Generation by Industrial Clusters'. The key aspect to this pillar is the generation of businesses that are self-sustaining, which in turn will enhance the economic prosperity of the region.

This strategy requires active involvement and support by all stakeholders. This means that a cluster group must be more than a committee of industry representatives and should include

a collaborative of producers, suppliers and the spectrum of public or private agencies and institutions that impact upon how each industry performs.³³

6.5 Implication Summary

In today's competitive market, the prime objective for Procurement is to assist the organization in achieving cost savings. While the function is in the process of rationalizing suppliers and implementing leverage volume purchasing, Corporate Affairs is working on CSR strategies. Albeit that CSR has become an element of doing business in order to retain license to operate, create reputational capital, attract investment and maintain stakeholder relations, APM-BC's 'level' of commitment to its local Suppliers is exceptional. Up until the 2002 change in purchasing practices, the organization's preferred local vendor policy stayed in effect even though the company had already been experiencing external economic pressures.

This policy, on its own, acts as a double edge sword. On one hand, the policy may have protected some suppliers from the realities global competition, but it may have also enabled them to become further dependent and uncompetitive.

In addition to the 'independent' policy, there appears to be a 'disconnect' between the CSR and cost reduction initiatives. To elaborate, while Alcan's Regional Industrial Development department expends significant time to stimulate new local business through investment and support, Procurement endeavours to achieve cost-savings through supplier rationalization and low-cost country sourcing. Although both are acting in the best interest of the company, there is a risk that ultimately, the company will achieve a polarized outcome. To minimize the risk, careful strategic co-ordination is required to ensure that the strategic cost-saving and CSR initiatives don't 'sabotage' each other.

³³ James Gollub, *The Local Reality of Globalization*, (2005): 4.

7 SUPPLIER ANALYSIS

Globalization of markets ties the sustainability of small firms to the competitiveness of the industries in which they participate. This occurs as firms within an industry in a country or region increasingly must compete—even in local markets—with firms and industries from across the globe.³⁴

Through the years, the Procurement function in APM-BC has achieved cost-savings primarily through contract negotiation with established Suppliers. Even though cost-savings have been achieved, the Company is pursuing further opportunities for savings. The current strategies being ensued, which include supplier rationalization, leverage volume buying, and global sourcing, could have a significant impact on the local Suppliers and the local economy. Although Alcan is in the early stages of implementing these strategies, the Company's intent is to do a full deployment across the entire organization.

The purpose of this chapter is to gain a better understanding of the potential impacts to local Suppliers. This assessment was done in conjunction with Procurement professionals who have been working in Procurement and with the local Suppliers for a number of years. Their tacit knowledge and understanding of cost-saving opportunities and potential risks to Suppliers was used as a means to determine the overall effect if local Suppliers were to lose APM-BC's business.

³⁴ US Aid, "3 Value Chain Approach to Poverty Reduction: Equitable Growth in Today's Global Economy"

7.1 Supplier Profile

APM-BC obtains goods and services from local, regional, provincial and worldwide suppliers. As depicted in Table 7.1, the local Suppliers include those that reside in Kitimat, Kitimaat Village, Terrace and Kitwanga.

Table 7.1 APM-BC Supplier Categories

Supplier Category	Location
Local	Kitimat, Kitimaat Village, Terrace, Kitwanga
Regional	Northwest B.C. Suppliers including Prince Rupert, Hazeltons, Smithers, Burns Lake, Houston, and Prince George area
Provincial	Suppliers within B.C.
Worldwide	All existing APM-BC Suppliers

Table created by author

Currently APM-BC procures goods and services from 284 local Suppliers. The profile of local Suppliers ranges from private independent companies whose existence depends entirely on APM-BC to local branch offices of large multi-billion dollar corporations. The years in business varies significantly, with some that are newly established to those that have been in business, serving the local region since Alcan came to the region some 50 years ago. To gain an understanding of the potential impact to local Suppliers if they were to lose APM-BC's business, an assessment was done according to the major industrial supply sectors.

7.2 Industrial Sector Assessment

The Industrial Sector Assessment includes only those Suppliers who capture a significant portion of APM-BC's annual goods and services expenditures. Although local Suppliers also serve other businesses, it is important to note that APM-BC is the primary employer in the region

and potentially constitutes a significant portion of the local Supplier's existing business. As illustrated in Table 7.2 below, the Suppliers have been aggregated into 5 major business sectors.

Table 7.2 Industrial Sector / Commodity and Service Matrix

Industrial Sector	Commodity and Service Description
Construction and Contracting	Landscaping, Painting, General Contracting, Excavating, Plumbing, Roofing, Electrical Work
Manufacturing	Machining, Metal Fabrication, Welding, Wood
Transportation and Utilities	Marine, Trucking Services, Natural Gas
Wholesale and Retail	Motor Vehicles and Parts, Machinery and Equipment, Tools, Oil and Fuel, Welding Supplies, Electrical Supplies, Plumbing Supplies, Office Equipment and Supplies, Food
Services	Printing, Building Maintenance, Engineering, Environmental Services, Computer Consulting, Training, Security Services, Courier Services, Equipment Maintenance and Repair

Table created by author; data source: Eric Vance & Associates, Kitimat Works' Contribution to the Economy of British Columbia, April 2004

To gain an understanding of the potential impact that cost-saving initiatives might have on existing suppliers, the Supplier Portfolio Management framework strategies that were introduced in Chapter 5 were used. For each Business Sector, local Kitimat, Kitimaat Village, Terrace and Kitwanga Suppliers have been categorized according to the core services or goods that they provide. The goods and services were classified according to monetary spend and complexity of supply. Depending on the percentage of total annual purchase cost, goods and services were given a 'high', 'medium' or 'low' rating.³⁵ Following the classification by cost, the goods and services were rated according to supply risk in terms of availability, number of suppliers, and substitution possibilities. Based on the product and service classification, an assessment was done in order to determine what the impact would be on the Supplier if APM-BC were to pursue various cost-saving strategies that are associated to monetary spend and supplier risk ratings. It is important to note that this analysis was done at a very high level. The primary

³⁵ High, Medium and Low ratings were based on the percentage of APM-BC's total annual expenditures. Percentage ratings withheld from this report in order to respect supplier revenue confidentiality.

purpose of this assessment is to gain a better understanding of the potential impacts that various strategies could have on local Suppliers. Further detailed analysis would be required to determine actual cost-saving strategies and actual impacts.

7.2.1 Construction and Contracting

Construction and Contracting work has been rated as medium in supply risk and medium in cost. Depending on the project, construction projects may require a large number of building material suppliers and labor specialities. The organization and management of a construction project almost invariably involves interlinkages between a number of organizations that will have different levels of involvement throughout the construction project. As depicted in Table 7.3, the major categories within Construction and Contracting include General Contracting, Roofing, Plumbing and Painting.

Table 7.3 Construction and Contracting – Cost Saving / Supplier Impact Matrix

	Complexity / Supply Risk	Cost	Current Position	Opportunity	Supplier Impact
General Contracting	Medium	Medium	Leverage	Active Sourcing Short-term Contracts	Medium
Roofing, Plumbing, Painting	Low	Low	Tactical	Active Sourcing Short-term Contracts	Medium

Table created by author

Two independent firms plus three branch offices perform the majority of the Construction and Contracting work for APM-BC. Typically, work is awarded according to lowest qualified bid proposal. Because the firms are bidding for continued work, market pressures encourage high supplier performance and competitiveness. Although APM-BC does

provide a source of revenue, the majority of the firms are also serving other industries; therefore, the impact would be felt, but it would not force business closure.

Two independent firms provide the majority of Roofing, Plumbing and Painting work. The overall cost of this work relative to other goods and services procured is low; however, based on the number of Suppliers providing this service, the impact to the Supplier has been rated as medium.

7.2.2 Manufacturing

The primary goods and services provided within the Manufacturing Business sector by local suppliers are Machining, Fabrication, and Wood.

Table 7.4 Manufacturing – Cost Saving / Supplier Impact Matrix

	Complexity / Supply Risk	Cost	Current Position	Cost-Saving Opportunity	Supplier Impact
Machining, Fabrication	Low/Medium	High	Leverage	Active Sourcing Market Exploitation	High
Wood	Low	Low	Tactical	Consolidation, Market Exploitation	High

Table created by author

Machining and Fabricating is customizing or developing equipment according to specified requirements or engineered drawings. APM-BC expenditures for specialized parts and equipment (i.e. potroom tools, gas skirts, burner doors), specifically for the Reduction area is high; however, due to the availability of suppliers within the North American market, risk of supply is considered low to medium. Currently there are five local Suppliers who provide the majority of the Machining and Fabrication requirements for APM-BC. Most of these Suppliers are small, privately owned businesses that have been in Kitimat for over 25 years. In terms of cost competitiveness, the local Suppliers have proven successful. With respect to quality, the

majority of the Suppliers are currently working on or have already acquired their ISO certification. If APM-BC were ever to source machined and fabricated parts externally, local Suppliers would be severely impacted.

The two Wood Manufacturing Suppliers are small family-owned businesses, one of which has been in business for over 25 years. Each of the Suppliers fills a specific need – one manufactures runners and pallets which are used for packing the metal into the vessel holds; the other provides pine poles³⁶ which are consumed in the Reduction area. The existing manufacturing facilities are not highly modernized; therefore preparing and treating the wood products is costly. Through consolidation and external sourcing, APM-BC could achieve cost-savings from Suppliers who offer less-expensive substitute products or who are able to manufacture these products more efficiently. Loss of existing contracts would be detrimental to both local Suppliers.

7.2.3 Transportation and Utilities

Transportation³⁷ and Utilities consists of Marine, Trucking, Natural Gas, and Telephone. With respect to Trucking, external Suppliers provide the majority of APM-BC’s existing requirements. As reflected in Table 7.5, Marine, Trucking and Natural Gas are the primary expenditures involving local Suppliers.

Table 7.5 Transportation and Utilities – Cost Saving / Supplier Impact Matrix

	Complexity / Supply Risk	Cost	Current Position	Opportunity	Supplier Impact
Marine, Trucking	Low/Medium	Low	Tactical / Critical	Long-term contracts	Low / High
Natural Gas	Medium/High	High	Critical / Strategic	Long-term contracts	Low

Table created by author

³⁶ Treated pine poles are poked into the pots in order to release hot metal gases.

The Natural Gas industry in northern B.C. is a regulated monopoly in which APM-BC has little bargaining power. Because there is limited opportunity for Procurement to leverage cost reductions through consolidation and volume discounts, existing local Suppliers are not at risk.

Currently, three local Suppliers provide Marine and Trucking services for APM-BC. Due to the remoteness of the region and limited number of Suppliers, market difficulty or access to supply is rated as medium. Out of the three Suppliers, two are part of larger companies. Because these Suppliers serve other industries, they are not highly dependent on APM-BC as their sole source of revenue. The one privately owned Marine business; however, would be impacted if APM-BC were able to source transportation services from another supplier.

7.2.4 Wholesale and Retail Trade

Wholesale and Retail Trade includes Motor Vehicles, Motor Vehicle Parts, Machinery, Equipment, Tools, Oil and Fuel, Welding Supplies, Electrical Supplies, Plumbing Supplies, Office Equipment and Supplies, and Food.

Within Wholesale and Retail Trade, a significant portion of Motor Vehicles, Machinery and Equipment is designed and manufactured specifically for producing aluminum. Currently, the majority of specialized equipment, vehicles and parts are purchased from external Suppliers requiring a high level of technical knowledge and manufacturing experience. To meet the company's requirements, Procurement is doing global sourcing. Equipment that used to be purchased in North America is now being acquired from low-cost countries.

Since these goods are provided by external Suppliers and would not be significantly impacted by Procurement's cost reduction strategies, they have been excluded from the assessment below.

³⁷ Transportation does not include metal and raw material shipping.

Table 7.6 Wholesale Saving / Supplier Impact Matrix and Retail – Cost

	Complexity / Supply Risk	Cost	Current Position	Opportunity	Supplier Impact
Machinery & Equipment	Low	Low	Tactical / Critical	Consolidate Market Exploitation	Low / Medium
Motor Vehicles and Parts	Medium	Medium	Tactical / Critical	Market Exploitation Alternate Products	Medium
Oil, Fuel	Low	Low	Tactical	Paperless Purchase	Low
Office Equipment & Supplies	Low	Low	Tactical	Paperless, Cash Purchase	Medium
Power Generating Equip. & Electrical	High	Medium	Critical	Alternate Products, Long-term Contracts	High
Safety & Industrial Supplies	Low / Medium	Medium	Leverage	Market Exploitation, Short-term Contracts	High

Table created by author

Machinery and Equipment purchased locally in Kitimat and Terrace is low in complexity and cost. Savings could potentially be achieved through consolidation, external sourcing and e-Procurement (e.g. Reverse auctions). By consolidating this commodity, the Company could leverage its buying power. Because of the relatively low annual expenditure, an assumption can be made that the majority of local Suppliers are not highly dependent on APM-BC as sole source of their revenue.

The Motor Vehicles and Parts are purchased from a number of local Suppliers in both Kitimat and Terrace. Because the goods procured from local Suppliers have low asset specificity, Procurement could source these goods externally to potentially achieve cost savings. With the exception of three Suppliers, the majority of them are not dependent solely on APM-BC as a source of their revenue. Out of the three Suppliers, one would be severely impacted, and the other two would probably have to downsize their current businesses in order to survive.

Oil and Fuel industries are oligopolies in which APM-BC has little bargaining power. Because providers have significant power, there is limited opportunity for Procurement to leverage cost reductions through consolidation and volume discounts; therefore, existing local Suppliers are under no threat.

Office Equipment and Supplies are both low in complexity and cost. These goods can be purchased 'off-the-shelf'; therefore, there is opportunity for the company to consolidate the smelter's requirements and potentially receive further volume discounts. Because of the relatively low dollar value, typically, companies pursue initiatives to reduce transaction costs versus actual monetary costs. Procurement credit cards, e-catalogues, and automated bill payments are common methods to achieve transaction cost savings. Although APM-BC does provide a source of revenue, Suppliers also service other businesses within the local area. If any pursued initiatives resulted in a loss of APM-BC's business, the impact to the existing local Suppliers would not be detrimental; however, it may result in the Suppliers having to downsize.

Power Generating Equipment and Electrical can be sub-divided into speciality and standard goods. The risk of supply for Power Generating Equipment and Electrical Supplies is dependent on its purpose or if it is specialized. Typically, Power Generating Equipment is specialized equipment; therefore, there is a limited supply base. Currently, there are two major Suppliers who provide these goods for the smelter. There is opportunity to pool 'standardized' electrical supplies in order to achieve economies. Based on APM-BC's annual expenditure, one can assume that 'total' loss of the existing contracts would be a considerable setback for either of the suppliers.

Safety and Industrial Supplies covers a broad spectrum. The majority of these products are standard within the industry. APM-BC purchases these goods from a number of Suppliers; however, four would be considered major providers. Because Safety and Industrial Supplies do

not have high asset specificity, various initiatives could be pursued in order to achieve cost savings. Potential loss of business, specifically for the Suppliers who are currently providing a significant portion of these goods, would have a severe impact on their business. Although the impact would be considerable, these Suppliers are branch offices of large companies; therefore, the impact to the company, itself, would not be devastating.

7.2.5 Services

The primary services that are provided by local Suppliers are Administration, Education, Engineering, and Environmental.

Table 7.7 Services – Cost Saving / Supplier Impact Matrix

	Complexity / Supply Risk	Cost	Current Position	Opportunity	Supplier Impact
Administration, Education, Misc.	Low	Low	Tactical	Paperless Purchase	High
Engineering	Medium	High	Critical / Strategic	Supplier Control, Active Sourcing	Medium / High

Table created by author

The local Suppliers that provide Administration, Educational and Miscellaneous services are small privately owned companies. Although these Suppliers do serve other industries within the community, the majority of these businesses are highly dependent on APM-BC for a significant portion of their revenue.

Engineering services are deemed as medium to high in both risk of supply and cost. Currently, six local firms provide the majority of Engineering services that are required to supplement APM-BC's existing internal Engineering staff, two of which are small, privately-owned companies. In terms of competitiveness, these firms are measured on an ongoing basis in

that contracts are awarded through competitive bidding amongst local and external firms. If APM-BC were sole source, or enter into a long-term contract or a partnership arrangement with a particular Engineering firm to achieve cost savings, based on the smelter's existing annual expenditure, one can assume that the local firms currently have a medium to high dependency on the smelter for continued business. Although the impact would be considerable, four of the six Engineering firms are satellite offices; therefore, the overall affect to the corporation itself would be minimal.

7.3 Supplier Assessment Summary

Based on the above analysis, the degree to which local Suppliers would be affected if APM-BC were to launch an aggressive cost-saving program would depend on various factors. As depicted in Figure 7.1 below, the local Suppliers who provide ‘critical’ or ‘strategic’ goods and services are less vulnerable than suppliers who provide ‘tactical’ and ‘leverage’ goods and services.

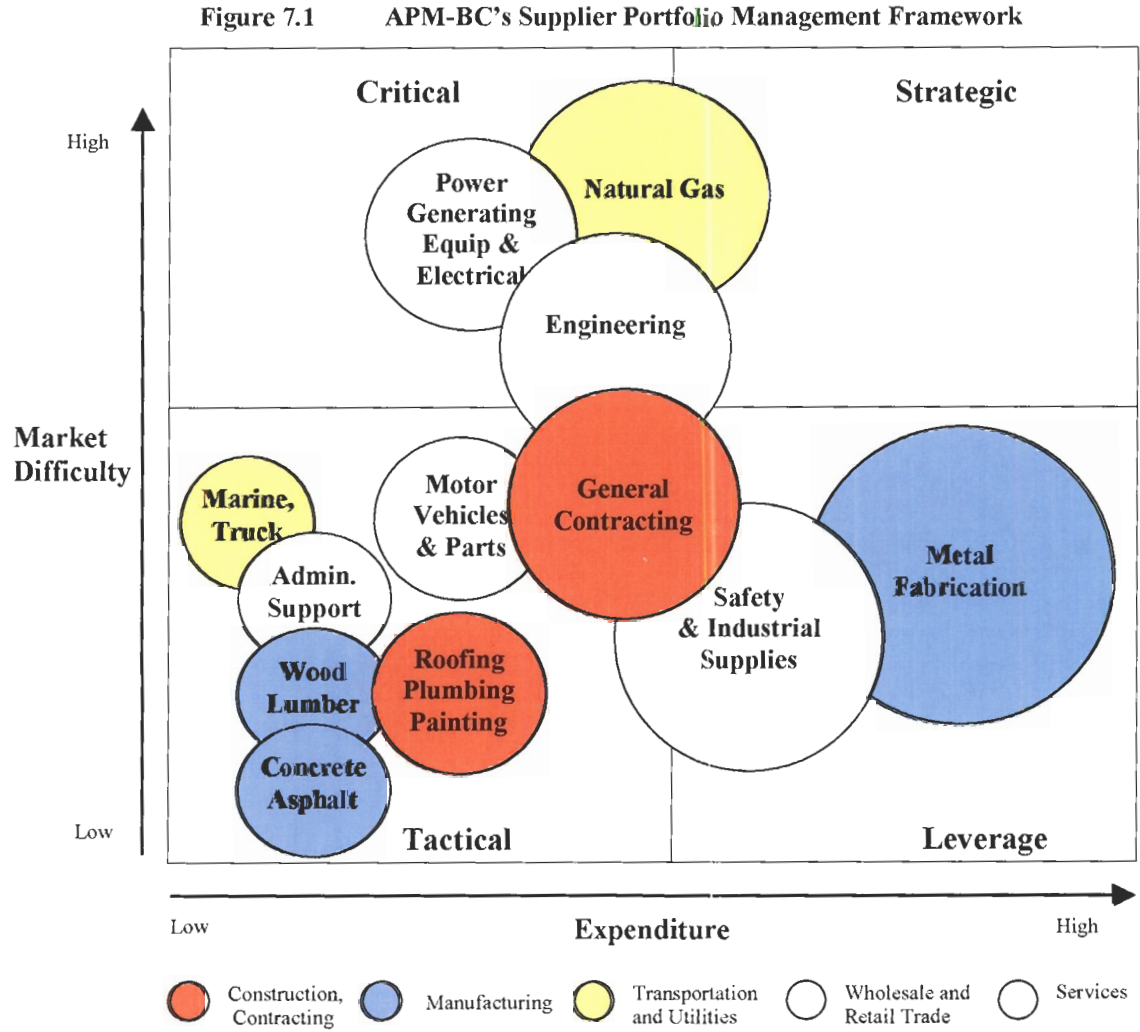


Figure created by author; data source: internal company supplier information

Critical commodities, such as Natural Gas and Power Generating Equipment, have limited global threat. Not only is the plant highly dependent on these goods, but there are limited suppliers in the market. Because of these factors, local Suppliers remain secure even if APM-BC were to launch an aggressive cost-saving program. With respect to Engineering, one of the key advantages that these firms have is the ‘intimate’ knowledge of APM-BC’s operations and equipment. Although the close proximity and knowledge does provide local firms with some competitive advantage, advances in technology and communication also enable external Engineering firms to service the plant’s requirements.

Tactical commodities, which include Motor Vehicles, Manufactured Wood, etc., can be sourced globally; therefore, unless local Suppliers are able to compete on cost, quality and service, they are under potential threat of lost revenue from APM-BC.

Leverage goods and services that have a high monetary spend and low market complexity provide the most opportunity for APM-BC to achieve cost-savings. As previously depicted in Figure 7.1, local Suppliers who provide Metal Fabrication, Safety and Industrial Supplies are highly exposed to global competition.

With Procurement’s current cost reduction focus, suppliers must be able to provide goods and services throughout Alcan’s global network. Even if the supplier has historically provided excellent service for a particular location, there is a high risk that the supplier will lose the contract unless he can demonstrate that he is able to provide consistent, cost-effective goods and services throughout all of Alcan’s required sites

The change in practices is already having an effect. As depicted in Figure 7.2, Construction and Contracting, Manufacturing and Wholesale and Retail Trade expenditures are declining.

Figure 7.2 APM-BC Industrial Sector Expenditures, 1995 to 2004³⁸

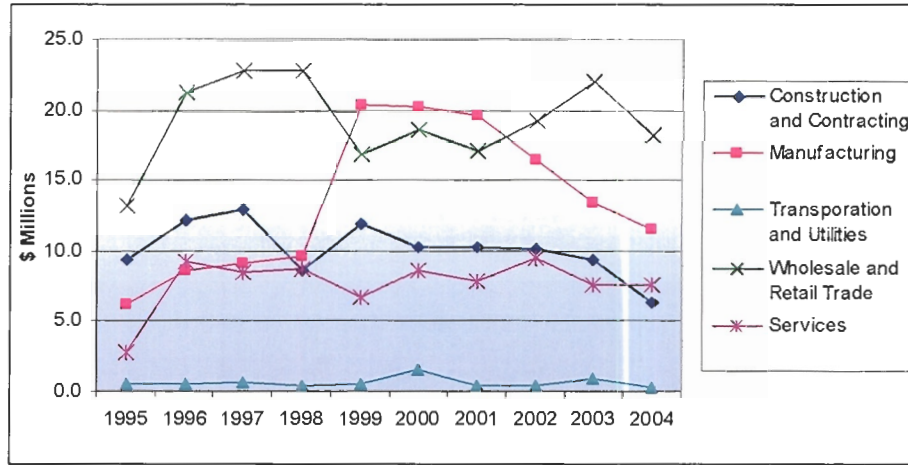


Figure created by author; data source: Eric Vance & Associates, Kitimat Works' Contribution to the Economy of British Columbia, April 2004

In addition to the expenditure decline, the actual as illustrated in Figure 7.3, the actual number of vendors, specifically for Wholesale and Retail have declined.

Figure 7.3 APM-BC Industrial Sector Suppliers, 1995 to 2004

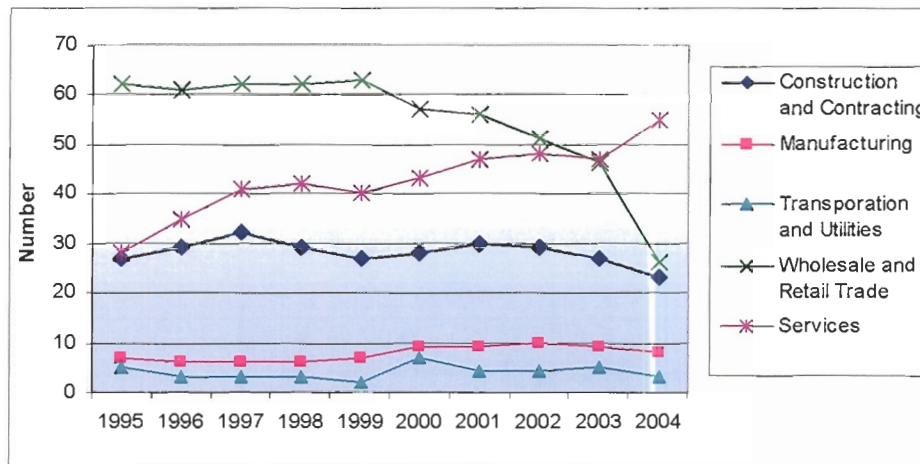


Figure created by author; data source: Eric Vance & Associates, Kitimat Works' Contribution to the Economy of British Columbia, April 2004

³⁸ Consumer price index applied to reflect 2004 values. 2001 and 2002 Construction and Contracting expenditures were smoothed to compensate for the major capital investment (e.g. alumina unloader project).

Suppliers, who are not able to differentiate themselves through service and quality, will have to compete on cost in order to remain in the market. It is very difficult in today's global market to compete solely on cost. As indicated in Figure 7.3, the number of vendors providing services has continued to increase through the years. Because of the value-added activities provided, these suppliers are at less risk than commodity suppliers who primarily compete on cost.

In summary, threat of entry into the local region is high. With today's technological advances, there are minimal obstructions for external Suppliers wishing to provide goods and services in Kitimat's local market. Even though APM-BC has not yet taken full advantage of e-commerce offerings, the company is no longer restricted to local and regional suppliers. The Internet with its online catalogues permits Procurement to establish new vendors globally. Because commodities have low asset specificity, local Suppliers are at risk of continued revenue decline.

This threat is somewhat offset by costs incurred to switch to a new supplier and resistance to change. This is a double-edge sword for local Suppliers. Once business has been established between the company and the supplier, APM-BC is reluctant to switch to a different supplier. That may be to the supplier's advantage or disadvantage. Historically, APM-BC will continue to foster business with vendors even though the quality of goods and services received does not always meet internal customer requirements. This type of business relationship is costly to both the supplier and to APM-BC. Not only does the Supplier's inability to compete on quality, service and cost hurt the Company's bottom line, but it also hinders the Supplier from being able to compete in the global market.

7.4 Potential Savings Scenario

To gain a better understanding of the potential savings versus the impact to local Suppliers, a scenario assessment, based on an aggressive cost-cutting program, was undertaken.

In this case scenario, the following assumptions were made:

- A 3 percent annual saving is achievable if APM-BC were to source goods and services outside of the local region.
- An overall 20 percent annual saving could be realized if Procurement were to source goods from low-cost countries such as China and India.
- Based on the existing Supplier power within the Transportation and Utilities industrial sector, savings would only be realized through long-term contract negotiation with the various suppliers.
- With the exception of Construction and Contracting, Transportation and Utilities and Services, sourcing of goods and services from low-cost countries such as China and India for various industrial sectors is feasible.

As depicted in Table 7.8, based on the 3 and 20 percent scenarios, APM-BC could annually realize between \$1.5 to \$6.2 million, or an average of \$3.8 million (refer to Appendix C for further details). If the company were to implement an aggressive cost-reduction program without taking into consideration any local socio-economic impacts, the \$3.8 million annual-saving case scenario appears to be 'achievable' when compared to the actual \$4.8 million and \$7.5 million cost reduction realized in 2003 and 2004, respectively.

Table 7.8 Potential Annual Cost Saving / Supplier Impact Matrix

Industrial Sector	Commodity and Service Description	Previous Average 5-Year Spend (\$ mil)	3% Saving (\$ mil)	20% Saving (\$ mil)	Overall Supplier Impact
Construction and Contracting	Landscaping, Painting, General Contracting, Excavating, Plumbing, Roofing, Electrical Work	8.1	0.2	N/A	Medium
Manufacturing	Machining, Metal Fabrication, Welding, Wood	14.6	0.4	2.9	High
Transportation and Utilities	Marine, Trucking Services, Natural Gas	0.6	0.0	N/A	Low
Wholesale and Retail	Motor Vehicles and Parts, Machinery and Equipment, Tools, Oil and Fuel, Welding Supplies, Electrical Supplies, Plumbing Supplies, Office Equipment and Supplies, Food	16.5	0.5	3.3	Medium / High
Services	Printing, Building Maintenance, Engineering, Environmental Services, Computer Consulting, Training, Security Services, Courier Services, Equipment Maintenance and Repair	7.5	0.2	N/A	Medium / High
Total		47.3	1.5	6.2	Medium / High

Table created by author

Although the above savings may appear to be very attractive, other considerations need to be made. The value-added services that local Suppliers provide in terms of warehousing and face-to-face technical support is extremely valuable to APM-BC. The other aspect that needs to be considered is the additional transaction costs associated conducting business with vendors in

different countries and time zones who may not have a good understanding of APM-BC's business.

The socio-economic cost also needs to be considered. As previously illustrated in Table 7.8, the overall impact to the local Suppliers could be potentially high, especially if they are the sole owners of their business. Because of the ripple effect that occurs from businesses transacting with one another, any direct loss of business with APM-BC ultimately results in a loss of revenue for the entire region.

With respect to APM-BC, the smelter would also have to manage the potential cost of bad publicity and loss of stakeholder support. As many companies have already experienced, it takes minutes to lose the investments made in obtaining social image, brand image and license to operate.

8 CURRENT SITUATION SUMMARY

Strategies, posture, and behaviour that are active, defensive, accommodative, or proactive can be demonstrated by the presence or absence of policies and programs concerning relevant issues and by the corporation's performance in implementation.³⁹

The purpose of this chapter is to summarize the existing situation with respect to APM-BC's cost reduction initiatives and CSR strategies. Up until now, the external and internal analysis has provided a significant amount of information. By using a S.W.O.T. analysis framework as an interpretative filter, this chapter will classify the internal aspects of the company as strengths or weaknesses and the external situational factors as opportunities or threats. By understanding these four aspects of the existing situation, APM-BC can leverage its strengths, correct its weaknesses, capitalize on its opportunities, and deter its threats. Using the S.W.O.T. analysis framework to examine APM-BC's cost reduction initiatives and CSR strategies will ultimately lead to a set of recommended actions that will finalize this paper.

8.1 S.W.O.T. Analysis

APM-BC's internal capabilities and its external influences are assessed against the following goals or success factors:

³⁹ Max B.E. Clarkson, "A Stakeholder Framework for Analyzing and Evaluating Corporate Social Performance," *Academy of Management, The Academy of Management Review*. 20, 1, (1995): 97

- Achieve cost savings

In today's competitive climate, it is essential that APM-BC reduce its operational costs. The aluminum industry is an unattractive industry in which product differentiation is difficult and its rivals compete on cost. Even though APM-BC currently has an energy cost advantage and is serving a niche market with its differentiated sheet and large billet products, it's only a matter of time before the smelter's competitors acquire technology to produce equivalent or superior products at a lower cost.

- Maintain or increase stakeholder support

Society's ability to scrutinize corporate behaviour has never been higher. Because business and society are interwoven rather than distinct entities, APM-BC's stakeholders are not only impacted by the plant's decisions, but they also have a major influence on the smelter's success.

- Reduce or eliminate existing local Supplier dependency

Worldwide forces make it impossible for an organization to sustain a policy ignoring global resources. It is not economically viable for APM-BC to continue to foster a dependent relationship with local Suppliers. By protecting local Suppliers from the global market limits their ability to remain competitive, which in turn is costly for both the Supplier and for APM-BC.

8.1.1 Strengths

Although APM-BC has many strengths, the five key strengths that are specific to stakeholder management and cost reduction are: financial leverage, high commitment to CSR,

established continuous improvement program, highly motivated and knowledgeable Procurement staff, and an long-standing relationship with local Suppliers.

8.1.1.1 Financial leverage

APM-BC is part of Alcan's large global network, which has extensive reach and capital power.

Although Alcan is striving to match the financial performance of its main rivals following the recent acquisitions, it is a successful organization with considerable financial strength and market presence that can be leveraged when required. Not only does Alcan's financial solvency ensure that it does not have to be co-dependent on others, but it also allows the company to fund and partner in a number of arenas, ranging from research and development to sustainable investment. Due to the extensive reach or clout, the company has high buying power and can leverage various volume price breaks.

8.1.1.2 High commitment to Corporate Social Responsibility

APM-BC is well known for supporting community projects. Through their company-wide community sponsorship objectives, the company is active in supporting health research, art, education, and sports programs. APM-BC is also actively involved in economic diversification for the local region.

It should be noted APM-BC's high socio-economic commitment is consistent with Alcan's corporate values. The company's objectives and initiatives related to sustainability are impressive. The actions taken by the company clearly demonstrates that Alcan understands the importance of managing economic, social and environmental aspects. Alcan scores highly on the

Jantzi Social Index and its respected for its integrity and triple bottom line reporting. This demonstrates the commitment, strategy and attitude that investors are looking for.

8.1.1.3 Established continuous improvement program

Alcan's 'Lean Manufacturing Six Sigma' continuous improvement program puts the necessary building blocks in place to allow APM-BC to make better use of its equipment, as well as to improve the quality and efficiency of its products and internal processes.

This program was co-developed by Alcan, Pechiney and The George Group in order to integrate the existing continuous improvement principles and best practices that the companies were using. These principles were incorporated with 'Lean Manufacturing' which focuses on waste elimination and 'Six Sigma' which focuses on quality and customer satisfaction.

A key strength of this program is that it has been deployed across the entire enterprise. The full deployment of the program helps to instil a continuous improvement culture at all levels of the organization. This cultural change, which is supported by a comprehensive set of tools and training program, aids Alcan in becoming a more financially sound and sustainable company.

8.1.1.4 Motivated and knowledgeable and Procurement staff

The existing staff members are highly skilled and knowledgeable with respect to commercial transactions. Their high-level of professionalism is imperative when negotiating contracts and dealing with suppliers. The respective skill level and motivation of the staff, at times under stressful conditions, is recognized throughout the plant.

8.1.1.5 Established relationship with local Suppliers

APM-BC has a long-standing relationship with many of its local Suppliers. Through repeated business transactions, a sense of trust has developed between the company and its Suppliers. This established relationship is beneficial to both APM-BC and to the local Suppliers as it reduces the amount of transactional costs associated with contract management.

8.1.2 Weaknesses

In the context of developing procurement policies and practices that maximize value while maintaining stakeholder relations, the primary weaknesses are: corporate responsibility not internalized, lack of communication and co-ordination, goals and objectives not well aligned, full impact of cost-saving initiatives not well understood, key stakeholders not involved in business decision, and business transfer to external supplier not well managed.

8.1.2.1 Corporate Social Responsibility not internalized within the Procurement function

The overall social values, objectives, and strategies are not well understood and are not thoroughly considered throughout the various organizational levels. For the most part, CSR is peripheral and regarded as the responsibility of the Corporate Affairs and the Regional Industrial Development functions.

In addition to CSR not being internalized, there is no process in place to assist Procurement in making this paradigm shift. At this time, the function's primary focus is to assist the organization in achieving cost savings. Not only is cost reduction the Procurement's primary goal, but it is also their measure of success.

8.1.2.2 Lack of Communication and Co-ordination

Currently there is a lack of communication and co-ordination between plant and corporate Procurement personnel. While there are opportunities to leverage Alcan's buying power through consolidation of goods and services, these initiatives are not done in collaboration with all levels of the organization. Periodically contracts have been negotiated at a national or international level, without active involvement at the local level. The local Procurement function also negotiates contracts in an autonomous fashion. This lack of close co-ordination between the different organizational levels ultimately results in lost opportunities for achieving cost savings and maintaining stakeholder relations.

Communication between Procurement and the plant personnel is also lacking. Historically, Procurement has been viewed as a tactical function whose primary purpose was to procure goods and services, ideally at the lowest possible cost. Procurement's strategic role in assisting the company to become more competitive is not understood; therefore, any cost-saving initiatives that negatively impact local Suppliers are often met with high resistance.

There is also a lack of consistent communication or feedback to Suppliers on upcoming changes and on how well they are performing. Within APM-BC, Procurement is currently overwhelmed with the day-to-day transactional processing requirements. Because of existing inefficient processes, procedures and tools, the function is ineffective in doing formalized Supplier evaluations and providing Suppliers with the necessary information on upcoming changes that ultimately have an impact on them. Although a continuous improvement Black Belt project is currently underway, additional projects or improvements will be required to further streamline the existing processes and to utilize the existing personnel more effectively.

8.1.2.3 Goals, objectives and initiatives are not well aligned

The Procurement, Corporate Affairs and Regional Industrial Development departments do not have a strong working alliance to assist the organization in reducing its costs while at the same time, respecting stakeholder interests. Although all three functions are working in the best interests of the company, their goals, objectives and initiatives are not well aligned.

Currently, Procurement is focused on achieving cost-savings. To achieve savings, the function is rationalizing the number of suppliers to those who would be able to serve more than one of Alcan's facilities or who would be able to provide a broader range of goods and services at a lower cost. This change in purchasing practices, along with various other means to achieve savings, will likely reduce the amount of expenditures in the local region.

While the outcome of Procurement's cost-saving initiatives could end up in an overall reduction in local expenditures and a reduction in local Suppliers, the Regional Industrial Development department is actively involved in economic diversification in order to promote business development in the local region. Economic development in the local region is a fundamental element for the company's success.

In addition to the Regional Industrial Development department working on local economic development, Corporate Affairs actively addresses other stakeholder interests. By working with various interest groups, making various donations, and providing ongoing communication, Corporate Affairs endeavours to build the company's reputational capital.

Although the company has a high moral values and regional commitment, without close collaboration between the functions, stakeholders may perceive that APM-BC is solely interested in profit generation at the expense of the local region. This negative perception ultimately results in a loss of stakeholder support. Given the significance of today's socio-political issues,

maintaining support from suppliers, communities, local and provincial governments is a critical element of doing business.

8.1.2.4 Full impact of cost-saving initiatives not well understood or fully assessed

Potential costs are not ‘fully’ taken into account when trying to achieve cost-savings. Although Procurement may achieve their annual targeted savings, the savings gained may ultimately cost the company a significant amount of money trying to restore the company’s reputation and regain stakeholder support; or worse, may actually contribute to the loss of a major challenge or court case.

The importance of maintaining stakeholder support can not be overstated. The pending litigation between Alcan and the District with respect to the 1950 Agreement is a prime example. Even if the company wins the court case, it could take several years to re-establish relations with the District and other stakeholders. The strained relations could also impact future investment opportunities.

8.1.2.5 Key stakeholders not always involved in business decision

Procurement does not take all required stakeholder interests into account when awarding new contracts. The function is purely driven by cost reduction. Although there may be higher levels of awareness throughout the function, for the most part, the Procurement function primarily considers only the interests of the Suppliers and the interests of the Company. The impact of economic loss to the surrounding set of stakeholders is not well understood nor taken into account. Further, there is no formal approval process in place to ensure that the socio-economic aspects of the business decision have been considered. Only if the local Supplier is going to be ‘severely’ impacted, will there be a discussion or assessment done at the senior management

level. Because these assessments are rare, there is no benchmark or any formalized evaluation to guide a consistent process.

8.1.2.6 Business transfer to external supplier not well managed

Transfer of business from one supplier to another is done primarily from a commercial aspect only. Currently, Procurement attempts to minimize the immediate monetary ramifications to the former Supplier, but there is no process in place to address other socio-economic impacts or issues.

8.1.3 Opportunities

Globalization coupled with advances in technology and logistics produces a number of opportunities for APM-BC, including the ability to achieve further cost savings, increase internal customer satisfaction and build reputational capital.

8.1.3.1 Achieve further cost savings

Procurement's strategic sourcing framework will assist the organization in achieving further dollar savings. In addition to leveraging the company's buying power, negotiated contracts will also include clauses requiring the supplier to deliver measurable dollar savings based on total cost of ownership.

With the implementation of the e-commerce system, Quadrem, in 4th quarter 2005, APM-BC has the potential to gain access to global suppliers who are more competitive in terms of price, quality and service; and to formalize a 'supplier of choice' agreement or partnership with them. The terms and conditions of any agreement could be implemented on a regional, national or international basis, and may be of a short-term or long-term duration. The attractiveness of

this arrangement is that the global suppliers may have hidden qualities, services and solutions that become evident as the transactional relationship grows and matures.

The Quadrem system could facilitate local Suppliers in becoming more competitive. With increased competition, local Suppliers will have to find innovative ways to bring increased value to their business and to APM-BC. Various means could include inventory management, joint-cost reduction initiatives, active sourcing, proactive order tracking, and other value-added services. This system also provides registered local Suppliers the opportunity to reach a global pool of buyers from a single access point. This access could potentially assist local Suppliers in growing or expanding their volume of business, and in turn, provide the ability for Suppliers offer APM-BC further volume discounts.

The other key aspect of the system is the ability to maintain up-to-date material lists which allows the buyer and the seller to efficiently process transactions and reduce overall transactional costs.

8.1.3.2 Increase internal customer satisfaction

Through increased competition, local Suppliers will need to be more aggressive in terms of price, quality and service. As competition continues to intensify, APM-BC's internal customers will obtain higher levels of service. This service could be further augmented by enhancing existing supplier relationships or cultivating new ones.

8.1.3.3 Build reputational capital

APM-BC has the opportunity to work closely with their local Suppliers to ensure that they are less dependent on the company for continued revenue growth. By putting various

measures in place, the company can assist the local Suppliers in becoming more competitive in terms of price, quality and service.

In addition to working with the Suppliers, continued active participation in economic diversification and other community programs will assist the company to build its reputational capital and gain further stakeholder support.

8.1.4 Threats

Two major threats related to APM-BC's cost reduction and CSR initiatives are loss of CSR investment and loss of stakeholder support.

8.1.4.1 Loss of Corporate Social Responsibility investment

The substantive investment that the company has put in to date with respect to charitable donations, economic diversification, and employee benefit programs in order to build reputational capital, attract investment, and gain stakeholder support, could be lost in a short period of time if APM-BC were to base its commercial decisions solely on lowest material price. Removing business from local Suppliers without putting other measures in place will likely tarnish the company's social image and reputation. Once the image has been lost, it may take years for the company to rebuild its reputation and be viewed once again, as a socially responsible company.

8.1.4.2 Loss of stakeholder support

Continued erosion of local expenditure without putting any other initiatives or programs in place to address the issue has a high potential of alienating key stakeholders (i.e. Suppliers Communities, NGO's). Stakeholder support is a valuable asset to APM-BC not only for current but also for future investment. This support is intangible and cannot be measured as such, yet it is of huge importance, both strategically and financially.

A historical example is the government's cancellation of the Kemano Completion Project (KCP) in January 1995. Prior to the cancellation, Alcan had spent \$535 million. Like the current litigation between the District of Kitimat and Alcan, the KCP case was complicated and involved many stakeholders. Alcan's inability to address the interests of the Department of Fisheries and Oceans and various other local organizations and environmental groups with respect to Nechako water flows ultimately suspended the project in 1991. Even though the 1994 BC Utilities Commission report neither approved nor disapproved KCP, Alcan had already lost the necessary stakeholder support to complete the project.

Due to failed relations and misunderstandings, Alcan is again experiencing stakeholder withdrawal. The pending litigation with respect to power sales has several implications. In addition to legal and public relations costs, the uncertainty could impact future investment opportunities.

9 RECOMMENDATIONS AND CLOSING REMARKS

Sustainable development is about achieving a balance between environmental constraints, social aspirations, and economic objectives.⁴⁰

This analysis has revealed that the change in purchasing practices to assist the organization in reducing its costs has serious implications. While it is necessary to reduce costs to remain competitive, the company must also ensure that the socio-economic impacts to the surrounding region are also addressed. The purpose of this chapter is to make recommendations in order to assist APM-BC in achieving their cost-saving objectives while still respecting stakeholder interests.

9.1 Recommended Strategies

Based on the APM-BC's strengths, weaknesses, opportunities, and threats, a number of strategic actions can be undertaken in order to leverage existing strengths in order to maximize opportunities, while minimizing weaknesses in order to defend against threats.

⁴⁰ Fiona Brookes, Heloise Buckland, Dr. Andy Johnston, and Elizabeth White, "Purchasing for Sustainability," Higher Education Partnership for Sustainability: 23.

Table 9.1 S.W.O.T. Strategy Matrix

	<p>Strengths</p> <ul style="list-style-type: none"> ▪ Financial leverage ▪ High commitment to CSR ▪ Established continuous improvement program ▪ Highly motivated and knowledgeable Procurement staff ▪ Long-standing relationship with local suppliers 	<p>Weaknesses</p> <ul style="list-style-type: none"> ▪ Lack of communication and co-ordination ▪ CSR is not internalized ▪ Goals and objectives not well aligned ▪ Full impact not assessed ▪ Key stakeholders not always involved in decision process ▪ Business transfer to external supplier not well managed
<p>Opportunities</p> <ul style="list-style-type: none"> ▪ Reduce regional disparity ▪ Improve internal customer satisfaction ▪ Achieve cost savings ▪ Build reputational capital 	<p>SO Strategies</p> <ul style="list-style-type: none"> ▪ Extend suppliers as part of Alcan’s continuous improvement program ▪ Develop ‘selected’ suppliers that are deemed as high risk 	<p>WO Strategies</p> <ul style="list-style-type: none"> ▪ Collaborate on cost savings, stakeholder relations, and economic diversification strategies ▪ Adjust existing purchasing policy to take into account globalization and CSR
<p>Threats</p> <ul style="list-style-type: none"> ▪ Loss of CSR investment ▪ Loss of Stakeholder support 	<p>ST Strategies</p> <ul style="list-style-type: none"> ▪ Assist local Suppliers to enter global markets 	<p>WT Strategies</p> <ul style="list-style-type: none"> ▪ Develop an internal CSR culture ▪ Implement a risk assessment tools and procedures ▪ Develop a formal approval process ▪ Implement a formal change management process

Table created by author

9.1.1 Short-term

The following recommended short-term strategies should be undertaken within the next year. These strategies will foster awareness, increase interdepartmental collaboration and foster stakeholder relations.

9.1.1.1 Develop an internal Corporate Social Responsibility culture

Corporate Social Responsibility has become an essential aspect of doing business. To change the existing culture, an awareness training program needs to be developed and deployed across the entire organization. The awareness program should include reasons why social responsibility is so important, acceptable standards of corporate behaviour, stakeholder relations, etc. Creating a higher awareness is not only the first step, but it is a necessary step for the entire organization. For functions that directly interface with various stakeholders, a higher understanding is required.

Procurement, who conducts commercial transactions with Suppliers on a daily basis, must not only understand, but must also apply sustainability principles. To increase Procurement's knowledge level, a socio-economic component should be added to Procurement's '5-Phases of Sourcing' training package that is currently being developed by the Centralized Procurement function. Moving the function from awareness to understanding is not an easy task as cultural or mindset changes take time to develop; therefore, several follow-up or refresher courses should be done with proper evaluations to see that there is uptake at the level of behaviour change. In addition to training, ways to reinforce a cultural change include Intranet articles, magazine subscriptions, guest speakers, etc.

9.1.1.2 Collaborate on cost-savings, stakeholder relations and economic diversification strategies

A fundamental change that needs to occur is a stronger working alliance between Procurement, Corporate Affairs and Regional Industrial Development functions both at corporate and at site levels. Critical to the company's success is for the functions to establish a clear understanding on the value that each brings to the organization and for the functions to develop unified goals and measurable objectives. Once the objectives have been established, on-going communication and co-ordination are required to ensure that cost-savings, stakeholder relations, and economic diversification strategies are aligned.

9.1.1.3 Implement risk assessment tools and procedures

To ensure the social and economic impacts of commercial decisions are better understood, the company should incorporate a formalized risk assessment process. The risk assessment should include potential impacts to the various stakeholders if ABM-BC were to award business to an external supplier. Included in the risk assessment should be a set of mitigation strategies that could be undertaken in the event of lost business to the local region.

The risk assessment should also be supported by a standard tool that weights the socio-economic risks of external contract award against the proposed benefits or savings. Developing and implementing a standard tool would also aid the company in doing a more consistent impact evaluation.

9.1.1.4 Develop a formal approval process

Once the benefits, costs and risks have been identified, a formalized approval process should be done to ensure that both local and corporate management are in agreement. Having a formalized sign off fosters improved communication and collaboration between the various

departmental and organizational levels. It also helps to ensure that management has been provided sufficient information on which to base their decision.

9.1.1.5 Adjust existing purchasing policy

The existing purchasing policy should be amended to ensure that it addresses both the commercial aspects of competing in a global market plus the necessary considerations that need to be taken into account when operating in a remote community. This policy should help to instil a 'common' set of principles and guidelines for both local and corporate Procurement. While it is necessary for the function to assist the organization in reducing its costs, it must be done with a higher socio-economic awareness.

9.1.2 Mid-term

Mid-term strategies should be undertaken within the next 1 to 2 years. These actions are primarily focused on working directly with the local Suppliers to assist them in becoming more independent. By assisting the Suppliers, the company will achieve cost-savings, improved quality and better service.

9.1.2.1 Implement a formal change management process

A change management process to address impacts to stakeholders should be implemented. First, APM-BC must develop an effective communication strategy to ensure that its stakeholders gain a better understanding of APM-BC's need for cost reduction and the smelter's strategic intent. The most critical element that needs to be addressed is how the local Suppliers and surrounding region could be potentially impacted. Once an understanding has been achieved, APM-BC should work with the local stakeholders to assist them in developing an action plan to help them be better prepared for upcoming changes.

The second level that needs to be addressed is when the local Suppliers are directly impacted by the company's commercial decision. In addition to minimizing the monetary impacts, APM-BC must work with the impacted Suppliers to better prepare them for the change.

9.1.2.2 Assist local Suppliers to enter global markets

With the implementation of the e-commerce system, Quadrem, APM-BC should also ensure that local Suppliers utilize the tool in the most opportunistic fashion. As described earlier, this tool could assist local Suppliers in reducing their transactional costs, growing their business and ultimately, becoming more competitive. Additional coaching would assist those Suppliers who do not readily adapt to technological advances. Training and coaching helps to remove fear and also assists APM-BC in maintaining positive stakeholder relations.

The B.C. Chamber of Commerce is also establishing access to the Global Enterprise and Innovation Centre through the World Chambers Network for its members. APM-BC should promote using the Global Enterprise access for any Supplier who does not require or wish to use Quadrem as a means of conducting business.

APM-BC should also work with other local industries (i.e. Eurocan, Methanex) and the local Chamber of Commerce to sponsor a program that educates local Suppliers of market conditions outside of the local region. Once an understanding has been achieved, the company should use its connections within the supply chain to promote or assist local Suppliers wishing to enter the global marketplace. By helping Suppliers to make contact with various manufactures in low-cost countries would enable the Supplier to become more cost-competitive. A key component in this strategy is to include local Suppliers in Alcan's global logistic network. This inclusion would further aid the Supplier to source and sell goods and materials to external markets.

9.1.3 Long-term

APM-BC does have the opportunity to implement a cutting edge solution of ‘cost versus return’ by instilling a ‘development program’ along with a ‘continuous improvement program’. These recommendations are deemed long-term to ensure that the necessary building blocks are in place to support these ‘on-going’ recommended actions.

9.1.3.1 Extend Suppliers as part of the company’s continuous improvement program

The key element of the continuous improvement program is to establish a clear set of expectations. Once the expectations have been clearly understood and agreed to, APM-BC should work with the local Suppliers to develop action plans and performance measures for continual improvement. It is important to note that the Supplier bears a responsibility in the continual improvement process. In order for APM-BC to receive a return on investment, the Supplier must be held accountable. If the suggested program was rolled out gradually, the impact on the local Suppliers and the Community would be minimized and the adjustment or learning curve that would have to be undertaken could be addressed in small increments, as opposed to large changes which would require significant resources to manage.

9.1.3.2 Develop ‘selected’ suppliers that are deemed to be high risk

The company should include ‘selected’ Suppliers who are highly dependent on APM-BC as a main source of their revenue to be part of their economic diversification strategy. It is important that the program support the Regional Industrial Development department’s strategy whereby the Supplier becomes independent and viable. Including these Suppliers in the company’s economic development strategy would ultimately increase the company’s social image and increase their stakeholder support.

9.2 Closing Remarks

Globalization is a reality that APM-BC and its local Suppliers must adjust to. Critical to APM-BC's success is to ensure 'best value'. Best value does not mean lowest bid price, and it does not mean lowest total cost including quality and service. Best value means taking into account local community and economic regeneration, social inclusion, equalities and sustainability when procuring goods and services. APM-BC is well equipped to address these factors, and has the necessary building blocks in place to manage the risks and opportunities of globalization within the local community. In summary, balancing corporate investment with community investment is the way of the future.

APPENDICES

Appendix A Alcan's Financial Statements

Table A.1 Alcan Consolidated Income Statement

Consolidated Statement of Income

(In millions of US\$)

Year ended December 31

	2004	2003	2002	2001*	2000*
Sales and operating revenues	24,885	13,850	12,483	12,385	9,148
Costs and expenses					
Cost of sales and operating expenses	20,203	11,171	10,032	9,786	7,113
Depreciation and amortization	1,337	862	772	798	545
Selling, administrative and general expenses	1,612	758	580	544	405
Research and development expenses	239	190	115	135	81
Interest	346	212	198	252	78
Restructuring, impairment and other special charges				654	
Goodwill impairment	154	28			
Other expenses (income) - net	406	131	119	112	43
	24,297	13,352	11,816	12,281	8,265
Income from continuing operations before income taxes and other items	588	498	667	104	883
Income taxes	375	258	287	44	254
Income from continuing operations before other items	213	240	380	60	629
Equity income	54	38	44	3	4
Minority interests	(15)	(16)	(3)	13	1
Income from continuing operations before amortization of goodwill	252	262	421	76	634
Amortization of goodwill				72	16
Income from continuing operations	252	262	421	4	618
Loss from discontinued operations	6	(159)	(21)	(2)	
	258	103	400	2	618
Cumulative affect of accounting change, net of income tax		(39)	(748)		
Net Income	258	64	(348)	2	618
Dividends on preference shares	6	7	5	8	10
Net income (loss) attributable to common shareholders	252	57	(353)	(6)	608

* Statements are not restated - values taken from the 2000 and 2001 annual reports

Table created by author; data source: Alcan Annual Reports, 2000 to 2004

Table A.2 Alcan Common-Size Consolidated Statement of Income

Consolidated Statement of Income

Common-Size

(In millions of US\$)

Year ended December 31

	2004	2003	2002	2001*	2000*
Sales and operating revenues	100.00%	100.00%	100.00%	100.00%	100.00%
Costs and expenses					
Cost of sales and operating expenses	81.19%	80.66%	80.37%	79.01%	77.75%
Depreciation and amortization	5.37%	6.22%	6.18%	6.44%	5.96%
Selling, administrative and general expenses	6.48%	5.47%	4.65%	4.39%	4.43%
Research and development expenses	0.96%	1.37%	0.92%	1.09%	0.89%
Interest	1.39%	1.53%	1.59%	2.03%	0.85%
Restructuring, impairment and other special charges	0.00%	0.00%	0.00%	5.28%	0.00%
Goodwill impairment	0.62%	0.20%	0.00%	0.00%	0.00%
Other expenses (income) - net	1.63%	0.95%	0.95%	0.90%	0.47%
	97.64%	96.40%	94.66%	99.16%	90.35%
Income from continuing operations before income taxes and other items	2.36%	3.60%	5.34%	0.84%	9.65%
Income taxes	1.51%	1.86%	2.30%	0.36%	2.78%
Income from continuing operations before other items	0.86%	1.73%	3.04%	0.48%	6.88%
Equity income	0.22%	0.27%	0.35%	0.02%	0.04%
Minority interests	-0.06%	-0.12%	-0.02%	0.10%	0.01%
Income from continuing operations before amortization of goodwill	1.01%	1.89%	3.37%	0.61%	6.93%
Amortization of goodwill	0.00%	0.00%	0.00%	0.58%	0.17%
Income from continuing operations	1.01%	1.89%	3.37%	0.03%	6.76%
Loss from discontinued operations	0.02%	-1.15%	-0.17%	-0.02%	0.00%
Cumulative affect of accounting change, net of income tax	0.00%	-0.28%	-5.99%	0.00%	0.00%
Net Income	1.04%	0.46%	-2.79%	0.02%	6.76%

* Statements are not restated - values taken from the 2000 and 2001 annual reports

Table created by author; data source: Alcan Annual Reports, 2000 to 2004

Table A.3 Alcan Consolidated Balance Sheet

Consolidated Balance Sheet

(In millions of US\$)

Year ended December 31

ASSETS	2,004	2,003	2,002	2001*	2000*
Current assets					
Cash and time deposits	184	686	97	116	261
Trade receivables	3,232	2,937	1,390	1,183	1,721
Other receivables	936	686	676	526	559
Deferred income taxes	214	49			
Inventories	3,179	2,840	1,573	1,551	1,716
Packaging operating segment	850	823	289	368	399
Current assets held for sale	817	1,093	116	73	
Total current assets	9,412	9,114	4,141	3,817	4,656
Long-term assets					
Deferred charges and other assets	2,877	1,563	1,178	715	719
Deferred income taxes	870	892	189	83	
Property, plant and equipment	13,293	14,158	9,435	9,566	10,033
Intangible assets, net of accumulated amortization	1,230	1,160	452	285	330
Goodwill	5,496	4,686	2,136	2,874	2,669
Long-term assets held for sale	163	375	230	201	
Total long-term assets	23,929	22,834	13,620	13,724	13,751
Total assets	33,341	31,948	17,761	17,541	18,407
LIABILITIES AND SHAREHOLDERS' EQUITY					
Current liabilities					
Payables and accrued liabilities	5,464	4,846	2,483	2,281	2,427
Short-term borrowings	2,486	1,764	378	553	1,080
Debt maturing within one year	569	341	249	652	333
Deferred income taxes	23	81			
Current liabilities of operations held for sale	714	559	69	49	
Total current liabilities	9,256	7,591	3,179	3,535	3,840
Long-term liabilities					
Debt not maturing within one year	6,345	7,437	3,120	2,884	3,195
Deferred credits and other liabilities	4,975	4,306	1,996	1,130	874
Deferred income taxes	1,543	1,696	1,010	1,069	1,227
Long-term liabilities of operations held for sale	260	238	14	21	
Minority interests	236	403	150	132	244
Total long-term liabilities	13,359	14,080	6,290	5,236	5,540
Shareholders' equity					
Redeemable non-retractable preference shares	160	160	160	160	160
Common shareholders' equity					
Common shares	6,670	6,461	4,731	4,687	4,597
Contributed surplus	112	128	42		
Retained earnings	3,362	3,331	3,467	4,074	4,290
Common shares held by a subsidiary	(35)	(56)			
Accumulated other income (loss)	457	253	(108)	(151)	(20)
Total shareholders' equity	10,726	10,277	8,292	8,770	9,027
Total liabilities and shareholders' equity	33,341	31,948	17,761	17,541	18,407

* Statements are not restated - values taken from the 2000 and 2001 annual reports

Table created by author; data source: Alcan Annual Reports, 2000 to 2004

Table A.4 Alcan Common-Size Consolidated Balance Sheet

Consolidated Balance Sheet

Common-Size

(In millions of US\$)

Year ended December 31

ASSETS	2004	2003	2002	2001*	2000*
Current assets					
Cash and time deposits	0.55%	2.15%	0.55%	0.66%	1.42%
Trade receivables	9.69%	9.19%	7.83%	6.74%	9.35%
Other receivables	2.81%	2.15%	3.81%	3.00%	3.04%
Deferred income taxes	0.64%	0.15%	0.00%	0.00%	0.00%
Inventories	9.53%	8.89%	8.86%	8.84%	9.32%
Packaging operating segment	2.55%	2.58%	1.63%	2.10%	2.17%
Current assets held for sale	2.45%	3.42%	0.65%	0.42%	0.00%
Total current assets	28.23%	28.53%	23.32%	21.76%	25.29%
Long-term assets					
Deferred charges and other assets	8.63%	4.89%	6.63%	4.08%	3.91%
Deferred income taxes	2.61%	2.79%	1.06%	0.47%	0.00%
Property, plant and equipment	39.87%	44.32%	53.12%	54.54%	54.51%
Intangible assets, net of accumulated amortization	3.69%	3.63%	2.54%	1.62%	1.79%
Goodwill	16.48%	14.67%	12.03%	16.38%	14.50%
Total long-term assets	71.77%	71.47%	76.68%	78.24%	74.71%
Total assets	100.00%	100.00%	100.00%	100.00%	100.00%
LIABILITIES AND SHAREHOLDERS' EQUITY					
Current liabilities					
Payables and accrued liabilities	16.39%	15.17%	13.98%	13.00%	13.19%
Short-term borrowings	7.46%	5.52%	2.13%	3.15%	5.87%
Debt maturing within one year	1.71%	1.07%	1.40%	3.72%	1.81%
Deferred income taxes	0.07%	0.25%	0.00%	0.00%	0.00%
Current liabilities of operations held for sale	2.14%	1.75%	0.39%	0.28%	0.00%
Total current liabilities	27.76%	23.76%	17.90%	20.15%	20.86%
Long-term liabilities					
Debt not maturing within one year	19.03%	23.28%	17.57%	16.44%	17.36%
Deferred credits and other liabilities	14.92%	13.48%	11.24%	6.44%	4.75%
Deferred income taxes	4.63%	5.31%	5.69%	6.09%	6.67%
Long-term liabilities of operations held for sale	0.78%	0.74%	0.08%	0.12%	0.00%
Minority interests	0.71%	1.26%	0.84%	0.75%	1.33%
Total long-term liabilities	40.07%	44.07%	35.41%	29.85%	30.10%
Shareholders' equity					
Redeemable non-retractable preference shares	0.48%	0.50%	0.90%	0.91%	0.87%
Common shareholders' equity					
Common shares	20.01%	20.22%	26.64%	26.72%	24.97%
Contributed surplus	0.34%	0.40%	0.24%	0.00%	0.00%
Retained earnings	10.08%	10.43%	19.52%	23.23%	23.31%
Common shares held by a subsidiary	-0.10%	0.79%	-0.61%	-0.86%	-0.11%
Accumulated other comprehensive income (loss)	1.37%	0.79%	-0.61%	-0.86%	-0.11%
Total shareholders' equity	32.17%	32.17%	46.69%	50.00%	49.04%
Total liabilities and shareholders' equity	100.00%	100.00%	100.00%	100.00%	100.00%

* Statements are not restated - values taken from the 2000 and 2001 annual reports

Table created by author; data source: Alcan Annual Reports, 2000 – 2004

Appendix B Alcoa's Financial Statements

Table B.1 Alcoa Consolidated Income Statement

Consolidated Statement of Income

(in millions of US\$)

Year ended December 31

	2004	2003	2002*	2001*	2000*
Sales and operating revenues	23,478	21,092	20,351	22,859	22,936
Costs and expenses					
Cost of goods sold	18,623	16,754	16,327	17,857	17,342
Selling, administrative and general expenses	1,284	1,250	1,157	1,276	1,108
Research and development expenses	182	190	214	203	194
Provision for depreciation, depletion and amortization	1,204	1,175	1,111	1,253	1,207
Goodwill Impairment			44		
Restructuring and other charges	(21)	(27)	425	566	
Interest expense	270	314	350	371	427
Other income (net)	(268)	(274)	(179)	(308)	(154)
	21,274	19,382	19,449	21,218	20,124
Income from continuing operations before taxes on income	2,204	1,710	902	1,641	2,812
Provision for taxes on income	557	417	291	525	942
Income from continuing operations before minority interests' share	1,647	1,293	611	1,116	1,870
Less: Minority interests' share	245	238	135	208	381
Income from continuing operations	1,402	1,055	476	908	1,489
Loss from discontinued operations	(92)	(70)	(90)		
Cumulative effect of accounting change		(47)	34		(5)
Net Income	1,310	938	420	908	1,484

* Statements not restated - values taken from the 2000, 2001 and 2002 annual reports

Table created by author; data source: Alcoa Annual Reports, 2000 to 2004

Table B.2 Alcoa Common-Size Consolidated Statement of Income

Consolidated Statement of Income

Common-Size

(in millions of US\$)

Year ended December 31

	2004	2003	2002*	2001*	2000*
Sales and operating revenues	100.0%	100.0%	100.0%	100.0%	100.0%
Costs and expenses					
Cost of goods sold	79.32%	79.43%	80.23%	78.12%	75.61%
Selling, administrative and general expenses	5.47%	5.93%	5.69%	5.58%	4.83%
Research and development expenses	0.78%	0.90%	1.05%	0.89%	0.85%
Provision for depreciation, depletion and amortization	5.13%	5.57%	5.46%	5.48%	5.26%
Goodwill impairment			0.22%		
Restructuring and other charges	-0.09%	-0.13%	2.09%	2.48%	0.00%
Interest expense	1.15%	1.49%	1.72%	1.62%	1.86%
Other income (net)	-1.14%	-1.30%	-0.88%	-1.35%	-0.67%
	90.61%	91.89%	95.57%	92.82%	87.74%
Income from continuing operations before taxes on income	9.39%	8.11%	4.43%	7.18%	12.26%
Provision for taxes on income	2.37%	1.98%	1.43%	2.30%	4.11%
Income from continuing operations before minority interests' shares	7.02%	6.13%	3.00%	4.88%	8.15%
Less: Minority interests' share	1.04%	1.13%	0.66%	0.91%	1.66%
Income from continuing operations	5.97%	5.00%	2.34%	3.97%	6.49%
Loss from discontinued operations	-0.39%	-0.33%	-0.44%	0.00%	0.00%
Cumulative effect of accounting change	0.00%	-0.22%	0.17%	0.00%	-0.02%
Net Income	5.58%	4.45%	2.06%	3.97%	6.47%

* Statements not restated - values taken from the 2000, 2001 and 2002 annual reports

Table created by author; data source: Alcoa Annual Reports, 2000 to 2004

Table B.3 Alcoa Consolidated Balance Sheet**Consolidated Balance Sheet**

(In millions of US\$)

Year ended December 31

ASSETS

	2004	2003	2002*	2001*	2000*
Current assets					
Cash and cash equivalents	457	576	344	512	315
Short term investments				15	56
Trade receivables	2,738	2,492	2,361	2,577	3,461
Other receivables	261	351	171	288	354
Inventories	2,968	2,505	2,414	2,531	2,703
Deferred income taxes	279	266	469	410	385
Prepaid expenses and other current assets	790	493	506	459	304
Total current assets	7,493	6,683	6,265	6,792	7,578
Long-term assets					
Properties, plants and equipment	12,592	12,500	12,110	11,982	12,850
Goodwill, net of accumulated amortization	6,541	6,443	6,379	5,733	6,003
Investments	2,066	2,005			
Assets held for sale	3,707	3,288	4,438	3,848	5,260
Other assets	210	792	618		
Total long-term assets	25,116	25,028	23,545	21,563	24,113
Total assets	32,609	31,711	29,810	28,355	31,691

LIABILITIES AND SHAREHOLDERS' EQUITY**Current liabilities**

Short-term borrowings	267	50	39	142	2,719
Commercial paper	630				
Accounts payable, trade	2,226	1,958	1,621	1,630	1,876
Accrued compensation and retirement costs	1,021	948	936	889	928
Taxes including taxes on income	1,019	737	814	903	702
Other current liabilities	1,078	866	966	1,336	1,302
Long term debt due within one year	57	523	83	103	427
Total current liabilities	6,298	5,082	4,459	5,003	7,954

Long-term liabilities

Long-term debt, less amount due within one year	5,346	6,693	8,366	6,388	4,987
Accrued pension benefits	1,513	1,568			
Accrued post retirement benefits	2,150	2,220	2,319	2,513	2,719
Other concurrent liabilities and deferred credits	1,727	1,820	2,867	1,968	2,126
Deferred income tax	790	815	520	556	969
Liabilities of operations held for sale	69	98	59		
Total long-term liabilities	11,595	13,214	14,131	11,425	10,801
Total liabilities	17,893	18,296	18,590	16,428	18,755

Minority interests

	1,416	1,340	1,293	1,313	1,514
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Shareholders' equity

Preferred stock	55	55	55	56	56
Common Stock	925	925	925	925	925
Additional capital	5,775	5,831	6,101	6,114	5,927
Retained earnings	8,636	7,850	7,428	7,517	7,127
Treasury stock, at cost	(1,926)	(2,017)	(2,828)	(2,706)	(1,717)
Accumulated other comprehensive loss	(165)	(569)	(1,754)	(1,292)	(896)
Total shareholders' equity	13,300	12,075	9,927	10,614	11,422

Total liabilities and shareholders' equity

	32,609	31,711	29,810	28,355	31,691
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* Statements not restated - values taken from the 2000, 2001 and 2002 annual reports

Table created by author; data source: Alcoa Annual Reports, 2000 to 2004

Table B.4 Alcoa Common-Size Consolidated Balance Sheet

**Consolidated Balance Sheet
Common-Size**

(In millions of US\$)

Year ended December 31

ASSETS

	2004	2003	2002*	2001*	2000*
Current assets					
Cash and cash equivalents	1.40%	1.82%	1.15%	1.81%	0.99%
Short term investments	0.00%	0.00%	0.00%	0.05%	0.18%
Trade receivables	8.40%	7.86%	7.92%	9.09%	10.92%
Other receivables	0.80%	1.11%	0.57%	1.02%	1.12%
Inventories	9.10%	7.90%	8.10%	8.93%	8.53%
Deferred income taxes	0.86%	0.84%	1.57%	1.45%	1.21%
Prepaid expenses and other current assets	2.42%	1.55%	1.70%	1.62%	0.96%
Total current assets	22.98%	21.07%	21.02%	23.95%	23.91%
Properties, plants and equipment	38.62%	39.42%	40.62%	42.26%	40.55%
Goodwill, net of accumulated amortization	20.06%	20.32%	21.40%	20.22%	18.94%
Investments	6.34%	6.32%	0.00%	0.00%	0.00%
Assets held for sale	11.37%	10.37%	14.89%	13.57%	16.60%
Other assets	0.64%	2.50%	2.07%	0.00%	0.00%
Total long-term assets	77.02%	78.93%	78.98%	76.05%	76.09%
Total assets	100.00%	100.00%	100.00%	100.00%	100.00%

LIABILITIES AND SHAREHOLDERS' EQUITY

Current liabilities

Short-term borrowings	0.82%	0.16%	0.13%	0.50%	8.58%
Commercial paper	1.93%				
Accounts payable, trade	6.83%	6.17%	5.44%	5.75%	5.92%
Accrued compensation and retirement costs	3.13%	2.99%	3.14%	3.14%	2.93%
Taxes including taxes on income	3.12%	2.32%	2.73%	3.18%	2.22%
Other current liabilities	3.31%	2.73%	3.24%	4.71%	4.11%
Long-term debt due within one year	0.17%	1.65%	0.28%	0.36%	1.35%
Total current liabilities	19.31%	16.03%	14.96%	17.64%	25.10%

Long-term liabilities

Long-term debt, less amount due within one year	16.39%	21.11%	28.06%	22.53%	15.74%
Accrued pension benefits	4.64%	4.94%	0.00%	0.00%	0.00%
Accrued post retirement benefits	6.59%	7.00%	7.78%	8.86%	8.58%
Other concurrent liabilities and deferred credits	5.30%	5.74%	9.62%	6.94%	6.71%
Deferred income tax	2.42%	2.57%	1.74%	1.96%	3.06%
Liabilities of operations held for sale	0.21%	0.31%	0.20%	0.00%	0.00%
Total long-term liabilities	35.56%	41.67%	47.40%	40.29%	34.08%

Total Liabilities

54.87% 57.70% 62.36% 57.94% 59.18%

Minority interests

4.34% 4.23% 4.34% 4.63% 4.78%

Shareholders' equity

Preferred stock	0.17%	0.17%	0.18%	0.20%	0.18%
Common Stock	2.84%	2.92%	3.10%	3.26%	2.92%
Additional capital	17.71%	18.39%	20.47%	21.56%	18.70%
Retained earnings	26.48%	24.75%	24.92%	26.51%	22.49%
Treasury stock, at cost	-5.91%	-6.36%	-9.49%	-9.54%	-5.42%
Accumulated other comprehensive loss	-0.51%	-1.79%	-5.88%	-4.56%	-2.83%
Total shareholders' equity	40.79%	38.08%	33.30%	37.43%	36.04%

Total liabilities and shareholders' equity

100.00% 100.00% 100.00% 100.00% 100.00%

* Statements are not restated - values taken from the 2000, 2001 and 2002 annual reports

Table created by author; data source: Alcoa Annual Reports, 2000 to 2004

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